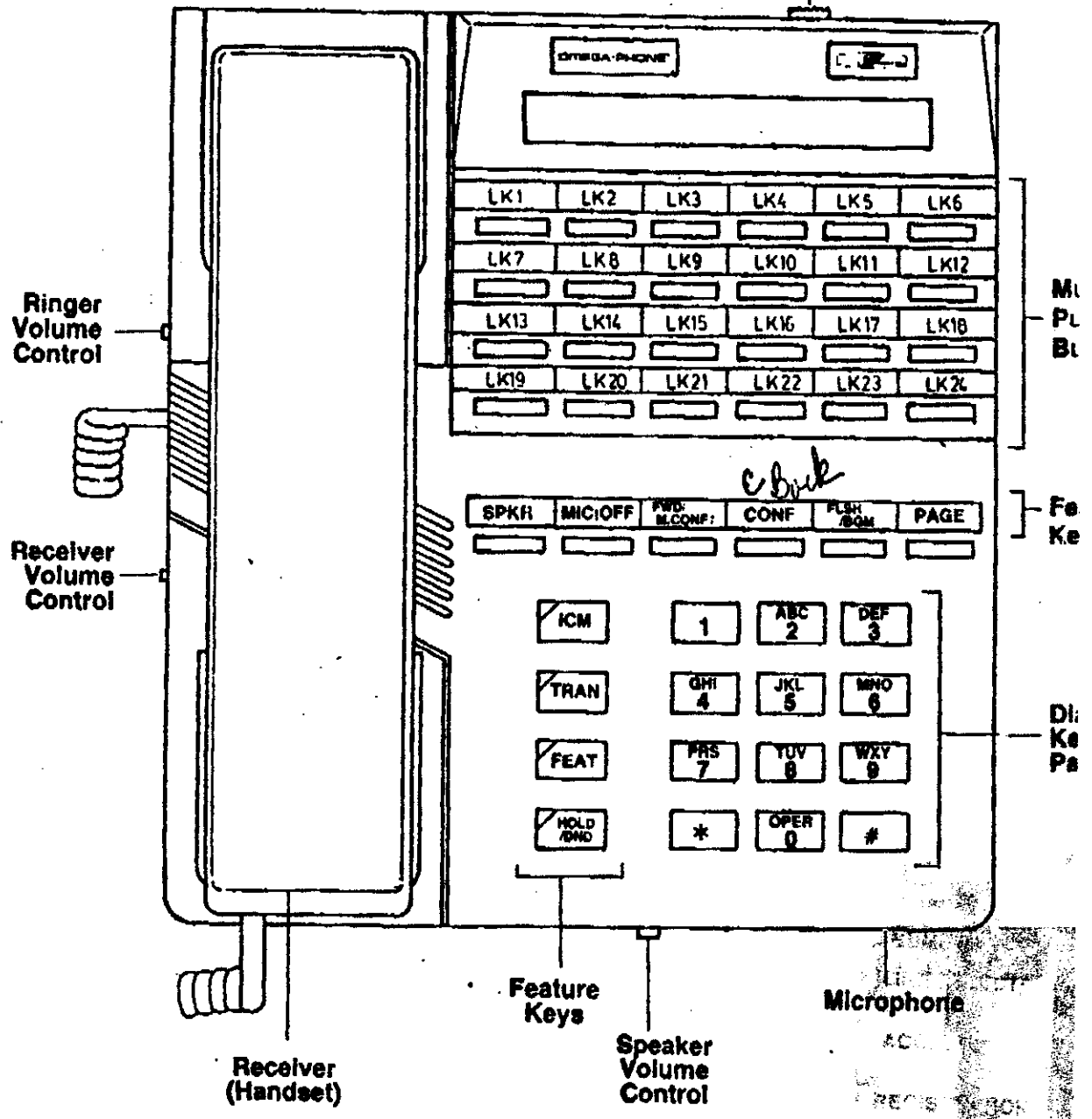


TABLE OF CONTENTS

1	INTRODUCTION	9	INTERCOM VOICE/ TONE OVERRIDE
2	BASIC FUNCTIONS	9	LAST NUMBER REDIAL
3	DSS CONSOLE OPERATION	9	MESSAGE, ABSENCE
4 14	ADVANCED FEATURES	10	MESSAGE, REMINDER
4	ACCOUNT CODES	10	MESSAGE (ABSENCE OR REMINDER), TO CANCEL
4	BACKGROUND MUSIC	10	MESSAGE WAITING
4	BUSY LINE CALLBACK (CO TIMED TRUNK QUEUE)	10	MESSAGE WAITING, TO ANSWER
4	BUSY NUMBER CALLBACK (CO CALLBACK QUEUE)	10	MESSAGE WAITING, TO CANCEL
5	BUSY NUMBER/LINE CALLBACK, TO CANCEL	11	MESSAGE WAITING, TO CANCEL FROM DESTINATION
5	CALL FORWARD, ALL	11	PAGING, ALL CALL
5	CALL FORWARD, BUSY	11	PAGING, ALL GROUP
5	CALL FORWARD, NO ANSWER	11	PAGING, ALL ZONE
5	CALL FORWARD, TO CANCEL	11	PAGING, GROUP 1-4
6	CALL FORWARD TO GROUP HUNT	12	PAGING, ZONE 1-4
6	CALL PARK	12	PASSWORD
6	CALL PARK PICKUP	12	PICKUP, DIRECT CALL
6	CALL SPLIT	12	PICKUP, GROUP CALL
6	CONFERENCE CALL, ADD-ON	12	PICKUP, LINE HOLD
7	CONFERENCE CALL, MULTI-LINE	12	PICKUP, UNIVERSAL NIGHT ACCESS (U.N.A.)
7	CONFERENCE CALL, TRUNK-TO-TRUNK	13	PRIVACY RELEASE
7	DIAL TONE REORDER	13	REMOTE CONTROL
7	DO NOT DISTURB	13	RECALL NUMBER
7	DOORPHONE ACCESS	13	SPEED DIAL (LINE SELECT)
8	EXCLUSIVE HOLD	13	SPEED DIAL, AUTOMATIC ACCESS
8	GROUP HUNT	14	SPEED DIAL, SPEED DIAL PERSONAL REGISTRATION
9	INTERCOM (ICM) CALLBACK	14	HELPFUL TIPS FOR DIAL PERSONAL SPEED DIAL REGISTRATION
9	INTERCOM CALLBACK, TO CANCEL	14	HELPFUL TIPS FOR PERSONAL SPEED REGISTRATION
9	INTERCOM TONE OVERRIDE	15	HELPFUL TIPS FOR PERSONAL SPEED REGISTRATION

Display Control

24



INTRODUCTION

Multi-Purpose Buttons—Can be programmed for a specific function, such as outside lines, individual extensions, or advanced features.

Button Lamps—Light up or flash when someone is using the line indicated by that button.

Green Lamp—Means that you are using that line.

Red Lamp—Means that someone else is using that line.

SPKR—Without lifting the receiver, the **SPEAKER** button allows you to dial or receive outside or internal calls, as well as converse, for "hands-free operation."

MIC OFF—This "MIC OFF" or mute button prevents any voices or sounds to be heard by the person on the other end of your call, while allowing the other person's voice to be heard at your end. Pressing the MIC button again permits your voice to be heard by the other person once more.

FWD/M.CONF—This button is used to **FORWARD** calls, or to set up **MULTI-LINE CONFERENCE** or trunk-to-trunk conference calls.

CONF—The **CONFERENCE** button is used to set up add-on conference calls (using only one outside line, or all internal extensions).

3-10-91
FLSH/BGM—The **FLASH** button is used to get an immediate dial tone, for either an intercom or outside call, at any time after picking up and while you are using your phone. The **BACKGROUND MUSIC** function allows music to come through your telephone speaker, if a source has been connected to your **ZT-D** telephone system.

PAGE—Enables you to **PAGE** someone or make an announcement from your telephone.

ICM—This button connects you from an ongoing outside call to an internal call, and the **INTERCOM** lamp always lights when you are speaking to another extension. The intercom system is the internal network used to communicate between telephone extensions in your organization.

TRAN—Allows you to **TRANSFER** a call on your extension to another extension.

FEAT—The **FEATURE** button is used to help operate certain special and advanced features available through **ZT-D**.

HOLD/DND—This button is used to put a call on **HOLD**, or to set the **DO NOT DISTURB** function to prevent any calls from getting through or ringing on your extension.

BASIC FUNCTIONS

FEATURE	STEPS FOR FEATURE OPERATION
CALLING THE OPERATOR (DSS Console)	<ul style="list-style-type: none"> ● Lift receiver, and when you hear the dial tone, ● Dial 0 <p>Or, if there are 2 operators</p> <ul style="list-style-type: none"> ● Dial 0 1, or 0 2
MAKING AN OUTGOING CALL	<ul style="list-style-type: none"> ● Lift receiver ● Press button for outside line, and when you hear the dial tone, ● Dial telephone number <p>Make a dialing mistake?</p> <ul style="list-style-type: none"> ● Just press FLASH button to get new dial tone FLASH - BGM
RECEIVING AN INCOMING CALL	<ul style="list-style-type: none"> ● Your phone rings, lamp flashes ● Just lift receiver, and call is connected <p>If your phone does not have AUTOMATIC ANSWER</p> <ul style="list-style-type: none"> ● Your phone rings, lamp flashes ● Lift receiver ● Press button with flashing lamp, and call is connected
PUTTING A CALL ON HOLD	<ul style="list-style-type: none"> ● Press HOLD button HOLD OND ● Green lamp flashes on your phone, and red lamp flashes on other extension ● Call on hold can be picked up from any phone ● If call is not picked up, call will return to your phone and ring again
PICKING UP A CALL ON HOLD	<ul style="list-style-type: none"> ● Simply press button with either the red or the green flashing lamp to pick up call being held on that line
CALLING AN EXTENSION (Internal)	<ul style="list-style-type: none"> ● Lift receiver, and when you hear the dial tone, ● Dial extension number (120-194) <p>Or, if your phone has a direct call button assigned for that extension</p> <ul style="list-style-type: none"> ● Lift receiver, and when you hear the dial tone, ● Press assigned extension button
RECEIVING A CALL FROM ANOTHER EXTENSION	<ul style="list-style-type: none"> ● When you hear the intercom call signal—either the caller's voice, or a beep to ● Pick up the receiver, and the call is connected <p>To answer internal call while on an outside line</p> <ul style="list-style-type: none"> ● Press HOLD button to hold original call HOLD OND OR Go to next step first, and original call will be disconnected ● Press INTERCOM button to connect internal call ICM
TRANSFERRING A CALL TO ANOTHER EXTENSION	<ul style="list-style-type: none"> ● While speaking on outside line, press TRANSFER button TRAN ● When you hear the intercom dial tone, ● Dial extension number (120-194) <p>OR Press assigned extension button</p> <ul style="list-style-type: none"> ● Announce call when the extension answers ● Hang up receiver

DSS CONSOLE OPERATION

The DSS Console can be attached to any ZT-D key telephone in order to make an operator or attendant station. DSS (Direct Station Select) means that each extension is assigned to one button. The lamps on the DSS Console—called a Busy Lamp Field—show whether each extension is busy on a call, or available to receive a call.

The operator can call any extension simply by pressing its assigned DSS button.

Other functions can only be operated through the DSS Console, as explained on this page.

FEATURE	STEPS FOR FEATURE OPERATION
CONNECTING AN OUTSIDE OR INTERNAL CALL TO AN EXTENSION	<ul style="list-style-type: none"> • Press assigned DSS extension button where call is being transferred • Press CONNECT button CONNECT
DISCONNECTING OR RELEASING A CALL CONNECTION	<ul style="list-style-type: none"> • While speaking on an outside or intercom call, • Press RELEASE button RELEASE • Call will be disconnected
RECALLING A TRANSFERRED CALL THAT WAS NOT ANSWERED	<ul style="list-style-type: none"> • If call is not answered at extension within a certain period of time, it will return to your DSS Console and ring again • RECALL button will flash • Press RECALL button RECALL • Call will be reconnected to you at DSS Console
DIALING AN OUTSIDE CALL FOR SOMEONE ON ANOTHER EXTENSION	<ul style="list-style-type: none"> • Someone at another extension calls you and asks you to place an outside call • Press HOLD button to put that extension on hold HOLD DND • Press button for outside line, and when you hear the dial tone, • Dial outside telephone number • Press CONNECT button CONNECT
SETTING UP SERIAL CALL TO MORE THAN ONE EXTENSION	<ul style="list-style-type: none"> • Someone calls and wants to be connected to one person, and then to another person (serial call) • Press TRANSFER button TRAN • When you hear the intercom dial tone, • Dial extension number (120-194) of first extension requested • Press SERIAL CALL button to connect the call to the first extension SERIAL CALL • When first call is over, caller will return to DSS Console to be transferred to second extension
NIGHT MODE OPERATION SETTING (Programmed Station Only)	<ul style="list-style-type: none"> • Press the NIGHT MODE button, and lamp will light Or, to release system from night mode operation • Press the NIGHT MODE button again, and lamp will go out

ADVANCED FEATURES

ZT-D special features are designed to be easy to use. A brief definition is included with each feature, to explain what it actually does. By following the simple, step-by-step instructions, you can utilize any of the advanced features offered by your ZT-D Key Telephone System.

FEATURE	STEPS FOR FEATURE OPERATION
<p>ACCOUNT CODES (Requires optional SCDR, Station Call Detail Recorder printer)</p>	<p>Add an account code to each outside call to be included on call information for identification, billing, recordkeeping, etc.</p> <ul style="list-style-type: none"> ● While speaking on an outside call (not before or after) ● Press FEATURE button and dial 0 FEAT + 0 OR Press ACCOUNT CODE button (if assigned) ● Press account code (up to 6 digits) ● Press * to end operation
<p>BACKGROUND MUSIC</p> <p>To turn music on</p> <p>To turn music off</p>	<p>Music source may be connected to telephone system to provide background music.</p> <ul style="list-style-type: none"> ● Do not lift receiver ● Press BACKGROUND MUSIC (BGM) button FLSH - BGM <p>To turn music off</p> <ul style="list-style-type: none"> ● Do not lift receiver ● Press BACKGROUND MUSIC button again FLSH - BGM
<p>BUSY LINE CALLBACK (CO Timed Trunk Queue)</p>	<p>If outside line you want to use is busy, you can tell the telephone system to reserve the line and call you back when it becomes available.</p> <ul style="list-style-type: none"> ● Press button showing busy outside line, and when you hear the busy tone, ● Press FEATURE button and dial 9 FEAT + 9 OR Press CALL BACK button CBACK (if assigned) ● Dial number you want to call ● Hang up <p>When that outside line becomes available, the system calls you back.</p> <ul style="list-style-type: none"> ● Lift receiver ● Number is dialed automatically
<p>BUSY NUMBER CALLBACK (CO Callback Queue)</p>	<p>If outside number you have called is busy, you can tell the telephone system to call you back and to try again later.</p> <ul style="list-style-type: none"> ● When you get a busy signal after dialing an outside number, do not hang up ● Press FEATURE button and dial 9 FEAT + 9 OR Press CALL BACK button CBACK (if assigned) ● Hang up <p>After a certain period, the telephone system calls you back to try again.</p> <ul style="list-style-type: none"> ● Lift receiver ● Number is dialed automatically

FEATURE**STEPS FOR FEATURE OPERATION****BUSY NUMBER/LINE
CALLBACK, TO CANCEL**

Cancel callback instructions for outside calls.

- Lift receiver

OR Press CALLBACK button (if assigned) **CBACK**

CALL FORWARD, ALL

Transfer and forward all calls arriving at your telephone to another extension.

- Lift receiver
- Dial extension (120-194) where calls will be forwarded
- Press CALL FORWARD button, and the lamp will flash **FWD MCONF**
- Dial **0**
- CALL FORWARD lamp will begin to flash quickly
- Hang up

CALL FORWARD, BUSY

If you are busy on another call, forward any further calls to another extension.

- Lift receiver
- Dial extension (120-194) where calls will be forwarded while your line is busy
- Press CALL FORWARD button, and the lamp will flash **FWD MCONF**
- Press *****
- CALL FORWARD lamp will stay lit
- Hang up

**CALL FORWARD,
NO ANSWER**

If you are unable to answer a call within a specified time or within a certain number of rings, you can have the call forwarded to another extension.

- Lift receiver
- Dial extension (120-194) where calls will be forwarded when you are unable to answer your telephone immediately
- Press CALL FORWARD button, and the lamp will flash **FWD MCONF**
- Press *****
- CALL FORWARD lamp will flash slowly
- Hang up

**CALL FORWARD,
TO CANCEL**

Cancel the forwarding commands on your telephone extension.

- Press CALL FORWARD button again **FWD MCONF**
- CALL FORWARD lamp will go out

To reactivate Call Forwarding commands that were registered most recently

- Press CALL FORWARD button again **FWD MCONF**
- CALL FORWARD lamp will light

FEATURE**STEPS FOR FEATURE OPERATION**

**CALL FORWARD,
TO GROUP HUNT**
(not available with Version
1.0 or Version 2.0 software)

Forward all of your calls to a group of several extensions. The first non-busy extension in that group will ring, and if that extension does not answer within a certain period, the next available non-busy extension in that group will ring. This feature can only be used with Call Forward, All (not with Call Forward, Busy or No Answer).

- Do not lift receiver
- Press FEATURE button and CALL FORWARD button
FEAT + **FWD MCONF**
- Dial group number (71-74)
- CALL FORWARD lamp will flash.

CALL PARK

Put or "park" a call someplace where it can be reached from another telephone. For example, when you are not at your phone, operator parks your incoming call, then pages you. You answer page, then retrieve the call through Call Park Pickup.

- To put an outside call in a "Call Park" space,
- When you are on an outside call,
- Press FEATURE button and dial **2**

FEAT + **2**

OR Press CALL PARK button (if assigned) **CALLPRK**

CALL PARK PICKUP

Pick up a call that is being held on Call Park.

- Lift receiver
- Dial **3**

OR Press CALL PARK button (if assigned) **CALLPRK**

- Dial extension number (120-194) of telephone where call is parked

CALL SPLIT

While talking on an outside or intercom call and getting another intercom call, put call on hold, and switch to second call automatically.

- Press FLASH button **FLSH BGM**
- You are now connected to second call from internal extension
- First call is on hold

To reconnect with first call

- Press FLASH button again **FLSH BGM**
- You are now reconnected with the first call
- Second call is on hold

**CONFERENCE CALL,
ADD-ON**
(3 Inside; or 1 Outside
and 3 Inside)

While talking on an outside line or an internal call, you want to add up to 2 internal extensions, and make it an add-on conference call.

- When you are on an outside call, and want to add another internal extension to your conversation,
- Press TRANSFER button **TRAN**
- When you hear the dial tone,
- Dial the number of the extension (120-194) you want to add to the conference call
- When that extension answers, press the CONFERENCE CALL button, and lamp will flash **CONF**

All of the parties will be connected to the conference call
To add another extension, repeat same procedure

FEATURE**STEPS FOR FEATURE OPERATION****CONFERENCE CALL,
MULTI-LINE
(2 Outside and 1 Inside)**

While talking with someone on an outside line, you want to call someone else on another outside line and add that person to the conversation, making a multi-line conference call.

- Your two-party call is connected to an outside line
- Press the HOLD button to put the first outside call on hold **HOLD DND**
- Press button for another outside line
- When you hear the dial tone, dial telephone number for second call
- When that party answers, press the MULTI-LINE CONFERENCE CALL button, and lamp will flash **FWD MCONF**
- Press outside line button of first call that was on hold
- The FWD/MCONF lamp will go out, and then the CONF lamp will start flashing
- All three parties will be connected to the multi-line conference call

**CONFERENCE CALL,
TRUNK-TO-TRUNK
(2 Outside, Minus
1 Inside)**

While talking with two other parties, both on separate outside lines, you want to leave the conference call, but the other two want to continue their conversation.

- Press the MULTI-LINE CONFERENCE CALL button **FWD MCONF**
- Outside line buttons will change from green flashing lamps to red flashing lamps
- Hang up
- The two outside parties are still connected
- If you want to reenter the conversation (multi-line conference), press one of the outside line buttons

**DIAL TONE
REORDER**

At the end of an internal call, you want to get an internal dial tone to call another extension, without hanging up the receiver.

- Press FLASH button **FLASH RGM**
- Internal dial tone will be restored, and you can then dial another extension number

DO NOT DISTURB

If you do not wish to be disturbed, your extension can be set to prevent any calls from getting through or ringing on your phone.

- Do not lift receiver
- Press DO NOT DISTURB (DND) button **HOLD DND**
- Lamp on DO NOT DISTURB button will flash

To cancel do not disturb

- Press DO NOT DISTURB (DND) button again **HOLD DND**
- Lamp on DO NOT DISTURB button will go out

DOORPHONE ACCESS

Talk from your telephone through speaker phone at outside door.

- To call a doorphone, lift the receiver
- Dial number for doorphone access: 191, 192, or 193
- OR Press DOORPHONE ACCESS button (if assigned) **DOOR**

To receive doorphone calls

- If your phone rings.
- Lift receiver

FEATURE**STEPS FOR FEATURE OPERATION****EXCLUSIVE HOLD
(on Outside Line)**

Put your outside call on exclusive hold that can only be picked up from your extension.

- Press button for outside line you are already using
- The green lamp on that outside line button will flash slowly on your phone (red lamp will stay lit at other extensions)

To retrieve the call from exclusive hold

- Press the same outside line button once again, from your telephone

GROUP HUNT

Call anyone in a group of several extensions, and the first non-busy extension in group will ring. If that extension does not answer within a certain period, the call will then jump to the next available non-busy extension in that group, and so on.

- Lift receiver
- Dial access number for group: 71, 72, 73, or 74
- First available extension will ring

**INTERCOM (ICM)
CALLBACK**

If internal extension you have called is busy or not answering, you can tell the system to remind you to try again later.

Only one ICM CALLBACK instruction at a time can be handled by each telephone extension.

- When you call another extension and get a busy signal, or there is no answer, do not hang up

OR Press INTERCOM CALLBACK button (if assigned) **IBACK**

- System will disconnect call
- Hang up

When the busy extension becomes available, the system will call you back.

Or, if the extension does not answer, the system will call you back later, after a certain period of time.

- Lift receiver, and you will be connected to the extension

**INTERCOM CALLBACK,
TO CANCEL**

Cancel callback instruction to have the system remind you to call extension that was busy.

- Lift receiver

OR Press INTERCOM CALLBACK button (if assigned) **IBACK**

**INTERCOM TONE
OVERRIDE**

If the extension you call is busy, you can signal that extension with a tone, letting the person know that someone is calling.

However, if the busy extension is on speakerphone, the tone override feature cannot be used.

- Extension you are calling is busy

- Do not hang up
- Dial **7** to send tone

OR Press OVERRIDE button (if assigned) **OVER**

FEATURE**STEPS FOR FEATURE OPERATION**

**INTERCOM VOICE/
TONE OVERRIDE**
(not available with
Version 1.0 software)

If the busy extension you are calling is an Executive phone (model 24X or 12X), you can talk to the person on that phone through a speaker on the phone.

For example, a secretary may interrupt the conversation on the Executive phone in order to tell the chief executive that there is an important call on another line.

- Executive phone you are calling is busy
- Do not hang up
- Dial ***** to connect you with Executive phone

OR Press **OVERRIDE** button (if assigned) **OVFR**

**LAST NUMBER
REDIAL**

Your telephone always remembers the last outside number you have dialed. So you can call that number again without redialing.

- Lift receiver
- Dial *****
- Saved last number will be dialed automatically

To use saved last number on a specific outside line

- Press outside line button
- Dial *****
- Saved last number will be dialed automatically

Note: This feature will not work if you are using the **SAVE DIALED NUMBER** feature instead.

MESSAGE, ABSENCE

You can leave a message on your telephone to be broadcast to callers when you are going to be away from your desk.

- Lift receiver
- Press **FEATURE** button then **SPEAKER** button
- Press message number, followed by information numbers

9 7 - Return at time - Then press numbers for specific time of return

Note: Use military time, i.e. Dial **0 8 1 7** = 8:45 a.m.

Dial **1 1 7 2** - 2:23 p.m.

OR

6 3 - Return on day - Then press numbers for specific day of return

Codes for days of week

66 - Monday

88 - Tuesday

93 - Wednesday

84 - Thursday

37 - Friday

72 - Saturday

78 - Sunday

OR

- **6 1** - Call phone number - Then press phone number where you can be reached
- Hang up

FEATURE**STEPS FOR FEATURE OPERATION****MESSAGE, REMINDER**

You can tell your telephone to remind you with a tone at a specified time. For example, your telephone could give you a call to remind you of an important meeting.

- Lift receiver
- Press FEATURE button then SPEAKER button
FEAT + **SPKR**
- Dial message reminder number, **6 1**
- Dial specific time that you want the reminder tone, using military time (see Message, Absence)
- Hang up

MESSAGE (ABSENCE OR REMINDER), TO CANCEL

You want to cancel the previous reminder or absence message that you left on your telephone.

- Lift receiver
- Press FEATURE button and SPEAKER button
FEAT + **SPKR**
- Dial message number—must be the same as the original message number (61-6)
- Press DO NOT DISTURB button **HOLD DND**
- Hang up

MESSAGE WAITING

When extension you are calling is busy or does not answer, leave a message in the form of a flashing lamp at that extension to tell that person someone tried to call.

- Do not hang up after calling extension
- Dial **6**
- OR Press MESSAGE button (if assigned) **MSG**
- FEATURE lamp or MESSAGE lamp will flash at that extension
- If the calling telephone has a display, the message will appear on that display.

MESSAGE WAITING, TO ANSWER

You want to answer a message waiting signal, indicated by a feature or message lamp flashing on your telephone.

- Feature lamp is flashing on your telephone
- Lift receiver
- Dial **6**
- OR Press MESSAGE button (if assigned) **MSG**
- Automatically calls the extension that left the message

MESSAGE WAITING, TO CANCEL

You want to cancel a message you left at another extension.

- Lift receiver
- Dial extension number (120-194) where message was left
- Dial **6**
- OR Press MESSAGE button (if assigned) **MSG**
- (If you have Version 1 software, please dial **6** instead of **1**)

FEATURE**STEPS FOR FEATURE OPERATION**

MESSAGE, WAITING, TO CANCEL FROM DESTINATION
(not available with Version 1.0 or Version 2.0 software)

- If there is a Message Waiting lamp flashing at your extension, you can cancel it from your phone.
- Your message lamp is flashing
 - Do not lift receiver
 - Dial **5** and **▼**

PAGING, ALL CALL
(Internal and External)

- Make announcement or page to all telephone extensions, and through all external speakers, if used.
- Lift receiver
 - Dial **8 0**
 - OR Press PAGE button (if assigned) **PAGE**
 - Make announcement or page into receiver
 - Hang up

PAGING, ALL GROUP
(Internal)

- Make announcement or page to all groups at once through telephone extensions (no external speakers).
- Lift receiver
 - Dial **8 ***
 - OR Press ALL GROUP PAGING button (if assigned) **ALL GROUP**
 - Make announcement or page into receiver
 - Hang up

PAGING, ALL ZONE
(External)

- Make announcement or page to all zones at once, through external speaker system.
- Lift receiver
 - Dial **8 7**
 - OR Press ALL ZONE PAGING button (if assigned) **ALL ZONE**
 - Make announcement or page into receiver
 - Hang up

PAGING, GROUP 1-4
(Internal)

- Make announcement or page through all telephone extensions within any one of four groups.
- 1 2 3 4
- Lift receiver
 - Dial group number: 85, 86, 87, or 88
 - OR Press one of GROUP buttons (if assigned) **GROUP**
 - Make announcement or page into receiver
 - Hang up

1-aj
2-clerk

FEATURE**STEPS FOR FEATURE OPERATION****PAGING, ZONE 1-4
(External)**

Make announcement or page to any one of four zones, through external speaker system.

- Lift receiver
- Dial zone number: 81, 82, 83, or 84

OR Press one of ZONE buttons (if assigned)

- Make announcement or page into receiver
- Hang up

ZONE**PASSWORD**

You can lock your telephone so that no one else may use it. Do not lock your phone unless you know your PIN.

- Lift receiver
- Press FEATURE button, then SPEAKER button, then DO NOT DISTURB button
- **FEAT** + **SPKR** + **HOLD DND**
- DO NOT DISTURB lamp will be on

To cancel lock on your telephone

- Do not lift receiver
- Press TRANSFER button **TRAN**
- Dial your 4-digit PIN (Personal Identification Number) code

PICKUP, DIRECT CALL

Answer an incoming call that is ringing at another extension.

- Lift receiver
- Dial **4**
- Dial extension number (120-194) of ringing phone
- Incoming call will be connected to your extension

PICKUP, GROUP CALL

Answer an incoming call to any extension in your pickup group without dialing the extension number.

- Lift receiver
- Dial **3**
- Incoming call is connected to your extension

PICKUP, LINE HOLD

You can pick up an incoming call on a line that has no button on your telephone.

- Operator or another extension tells you the number of the outside line that the caller is using
- Lift receiver
- Dial **5**
- Dial the console number of the outside line that you want to pick up
- Note: Each outside line has an assigned number from 01 through 24.
- Your phone is connected to that line

**PICKUP, UNIVERSAL
NIGHT ACCESS (U.N.A.)**

If your ZT-D system utilizes a group or pool of outside lines, accessed by a "float" button, then you can still pick up a call that is ringing on another line when the system is operating in the night mode.

- Lift receiver, and when you hear the dial tone,
- Dial **1 0 0**
- Your extension is connected to incoming call

FEATURE**STEPS FOR FEATURE OPERATION****PRIVACY RELEASE**

Each call is private, and no other extension can join your ongoing conversation, unless you want to release that privacy.

You can admit another extension into your ongoing conversation and make it a conference call.

- While you are talking on an outside call,
- Press CONFERENCE CALL button, and lamp will light **CONF**
- At this time, if another extension presses the button for the outside line you are using, that extension can join the call
- Up to 3 extensions can join in conference call on one outside line

REMOTE CONTROL

Operate a remote control device, such as the outside door lock, through a button on your ZT-D telephone.

- Lift receiver
- Dial number assigned to remote control switch: 75, 76, 77, or 78
- OR Press REMOTE button (if assigned) **REMOTE**

SAVE DIALED NUMBER

The phone number you just dialed can be saved for further calls to that number.

- At any time after you dial a number on an outside line, and before you hang up,
- Press FEATURE button **FEAT**
- Dial **7**
- The phone number you dialed has been saved

To dial the saved number

- Lift receiver
- Dial **7**

Note: The saved number can only be used once. If you still wish to save the number after redialing, repeat the same steps as above.

SPEED DIAL (Line Select)

You want to speed dial a telephone number, and an outside line must be selected and utilized.

The ZT-D system can memorize 80 frequently dialed telephone numbers using a 2-digit speed dial code number (00-79) called System Speed Dial.

Your telephone can memorize up to 20 of its own frequently dialed numbers using a 2-digit speed dial code (80-99) called Station Speed Dial.

- Lift receiver
- Press button for outside line
- Dial **7**
- OR Press SPEED DIAL ACCESS button (if assigned) **SPD**
- Dial speed dial code number (00-99)
- System will automatically dial number

SPEED DIAL, AUTOMATIC ACCESS

You want to access and use a number from the speed dial memory bank.

- Lift receiver
- Dial **7**

OR Press SPEED DIAL ACCESS button (if assigned) **SPD**

- Dial speed dial code number (00-99)
- The telephone number registered for the speed dial code number will be dialed automatically

Note: This procedure may not work for certain system configurations. In this case, please use the operation for Speed Dial (Line Select).

FEATURE

STEPS FOR FEATURE OPERATION

SPEED DIAL, PERSONAL REGISTRATION

You want your extension to memorize up to 20 telephone numbers you call most frequently, so that you can speed dial them in the future.

The personal speed dial memory bank includes numbers 80-99. You can choose one of these numbers to represent each speed dial telephone number.

- Lift receiver
- Press **FEATURE** button and **SPEAKER** button

FEAT + **SPKR**

- Dial *****
- Dial the desired speed dial code number (80-99)
- Dial the console number of the outside line that you want to use. Each outside line has an assigned number, from 01 through 24. To be able to speed dial numbers using any outside line in a group or pool, represented by a "float" button, dial 3 and the dial group number (1-9). To utilize Optimized Routing for the lowest cost available long distance carrier, **(This option is not available with Version 1.0 software)**

80
37-
MUR #
97 #

HELPFUL TIPS FOR PERSONAL SPEED DIAL REGISTRATION

1. You can use the **FEATURE** button to register a pause in the telephone number to be dialed.
For example, if your system requires the dialing of a 9 before getting connect, an outside line, the entire number can be registered as follows:
 - Press **FEATURE** button and **SPEAKER** button and **STAR** button
 - **FEAT** + **SPKR** + *****
 - Dial speed dial code number (80-99)
 - Dial line or group number (1-9)
 - Press the **FEATURE** button to produce the pause **FEAT**
 - Dial telephone number
2. To register several personal speed dial numbers at the same time without hang up or issuing preliminary commands again and again, follow this procedure to register a speed dial number.
 - After registering the telephone number, press the **FORWARD** button **FWD MCONF**
 - Then the next number can be registered under the following speed dial code number.
3. If a telephone number is longer than 16 digits, two speed dial code numbers can be combined in tandem in order to memorize the entire phone number.
 - Register 13 or fewer digits in the first speed dial
 - Press the **HOLD** button **HOLD END**
 - Press the speed dial code number you want to combine
 - Register the rest of the phone number under the second speed dial code

TONE/VOICE CHANGE

You can switch from sending a tone signal to speaking with your own voice, or vice versa, when overriding an ongoing conversation.

- Dial extension number (120-194) you want to call
- Dial ***** to change from voice calling to tone signalling, or vice versa

TO SWITCH BACK AGAIN, REPEAT SAME STEPS

NOTES

In some cases, feature operation may differ from the instructions in this User Guide, depending on the software, hardware, and programmed functions in your Iwatsu ZT-D Key Telephone System. Check with your authorized Iwatsu distributor for features and procedures that may be specific to your system.

ZT-D Software Version _____



IWATSU AMERICA, INC.

Carlstadt, N.J.

3-WAY

STATE OF CALIFORNIA

OFFICE MEMO

STD. 100 (REV. 10/87)
87-44331

DATE

8-23-89

TO:

SDOA STAFF

ROOM/STA NO

FROM:

RENEE

PHONE NUMBER

ATSS

ROOM/STA NO

SUBJECT:

INSTRUCTIONS FOR SETTING UP TELEPHONE HRGS

THE FOLLOWING ARE MY INSTRUCTIONS TO SET

UP A 2, 3 AND 4-WAY PHONE HEARING FROM

SDOA HEADQUARTERS

DEPRESS AN OUT LINE #5

(BEST TO USE ANY TWO
LINES NEXT TO EACH OTHER)

DIAL 9-1ST NUMBER

(USE AREA CODE AND/OR -1
IF LONG DISTANCE)

DEPRESS FLSH/BCM

DIAL 9-2ND NUMBER

DEPRESS FLSH/BCM

(YOU NOW HAVE CALLS 1, 2
AND YOURSELF ON LINE)

DEPRESS HOLD/DND

DEPRESS AN OUT LINE #6

DIAL 9-3RD NUMBER

DEPRESS M.CONF/FWD

DEPRESS OUT LINE #5

(YOU NOW HAVE CALLS 1, 2,
3 AND YOURSELF ON LINE)

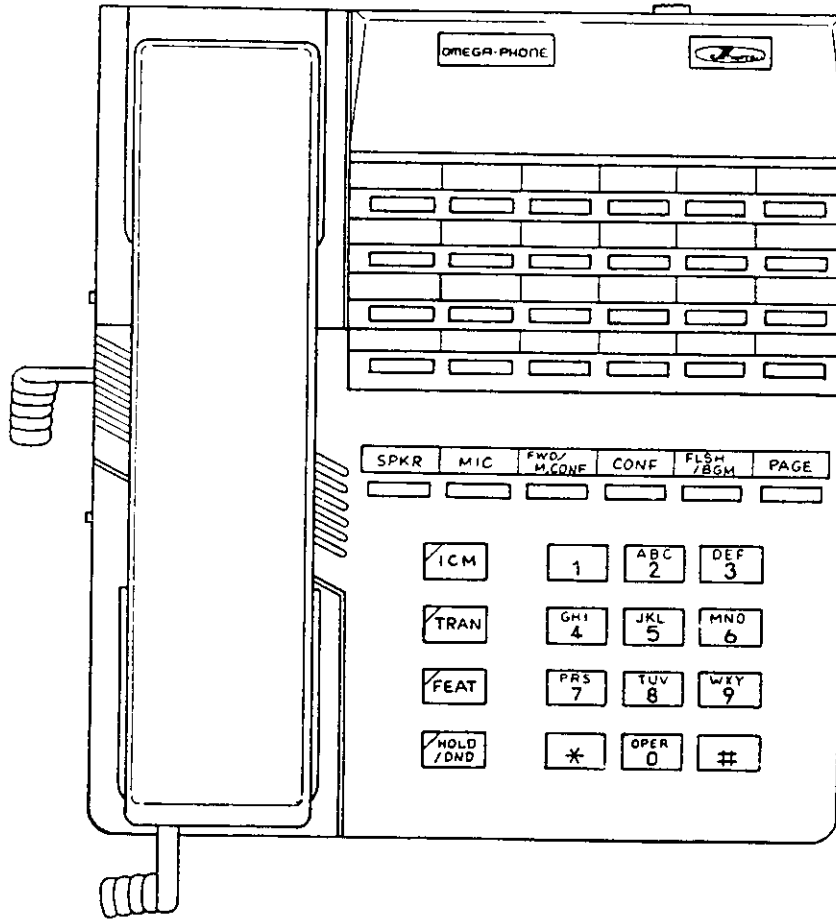
DEPRESS M.CONF/FWD

(YOU MAY HANG UP & OTHERS
STAY CONNECTED)

Put your thoughts to work. Submit a MERIT AWARD SUGGESTION.
LINES #5 & #6 WILL PULSE FLASH. THE ALJ NEEDS TO NOTIFY
YOU WHEN HIS CONFERENCE CALL IS CONCLUDED TO DISCONNECT.



SERIAL NO. -1



ZT-D SERIES

ELECTRONIC KEY TELEPHONE SYSTEMS

INSTALLATION MANUAL

ZT-D SERIES ELECTRONIC KEY TELEPHONE SYSTEMS TABLE OF CONTENTS

CONTENTS	PAGE	CONTENTS	PAGE
SECTION 1 — INTRODUCTION		SECTION 4 — EQUIPMENT INSTALLATION	
1.00 INTRODUCTION	1-1	1.00 INTRODUCTION	4-2
2.00 ORIENTATION	1-1	2.00 SYSTEM PREPARATION	4-2
3.00 GENERAL DESCRIPTION	1-1	3.00 SYSTEM LOCATION/ENVIRONMENT	4-4
4.00 FEATURES AND OPERATION	1-1	4.00 KEY SERVICE UNITS	4-6
5.00 INSTALLATION	1-2	5.00 STATION/COMPONENTS INSTALLATION	4-29
6.00 PROGRAMMING	1-2	6.00 OPTIONAL SYSTEM EQUIPMENT	4-45
7.00 GENERAL	1-2	7.00 CABLING	4-45
		8.00 OPTIONAL EQUIPMENT INSTALLATION	4-53
SECTION 2 — GENERAL DESCRIPTION		SECTION 5 — SYSTEM PROGRAMMING	
1.00 INTRODUCTION	2-1	1.00 INTRODUCTION	5-2
2.00 SYSTEM DESCRIPTION	2-1	2.00 BASIC PROGRAMMING	5-2
3.00 SYSTEM COMPONENTS	2-3	3.00 SYSTEM INITIALIZATION	5-2
4.00 SYSTEM SPECIFICATION	2-3	4.00 PROGRAMMING INTRODUCTION	5-4
5.00 SYSTEM FEATURES	2-6	5.00 SYSTEM DATABASE	5-5
6.00 COMPONENT DESCRIPTIONS	2-8	6.00 SYSTEM FEATURE PROGRAMMING	5-5
7.00 PROGRAMMING	2-20	7.00 SYSTEM TIME PARAMETERS	5-10
		8.00 LINE SPECIFICATION PROGRAMMING	5-13
		9.00 STATION CLASS OF SERVICE PROGRAMMING	5-17
SECTION 3 — SYSTEM FEATURES/ FUNCTIONS		APPENDIX A — PLANNING/PROGRAM WORKSHEETS	
1.00 INTRODUCTION	3-1		
2.00 SYSTEM FEATURES	3-1		
3.00 ELECTRONIC KEY TELEPHONE FEATURES	3-7		
5.00 SINGLE LINE TELEPHONE FEATURES	3-8		
6.00 STATION FEATURE OPERATION	3-9		
7.00 STATION/DSS DATA BASE	3-17		
8.00 OPTION/MISCELLANEOUS FEATURE OPERATION	3-19		



SERIAL NO.

ZT-D SYSTEM SERIES

TO ASSURE THAT THIS MANUAL WILL REMAIN UP-TO-DATE AND BE OF MAXIMUM ASSISTANCE TO YOU, PLEASE COMPLETE AND RETURN THIS CARD TO IWATSU AMERICA INC.

NAME: _____

COMPANY: _____

STREET: _____

CITY: _____

STATE: _____

FUTURE MANUAL REVISIONS WILL BE SENT ONLY IF THIS
CARD IS RETURNED.

MAIL TO:

IWATSU AMERICA INC.
430 COMMERCE BLVD.
CARLSTADT, N.J. 07072

ATTN: ENGINEERING DEPARTMENT

ZT-D SYSTEM ELECTRONIC KEY TELEPHONE SYSTEM SECTION 1 — INTRODUCTION

CONTENTS	PAGE
1.00 INTRODUCTION	1-1
2.00 ORIENTATION	1-1
3.00 GENERAL DESCRIPTION	1-1
4.00 FEATURES AND OPERATION	1-1
5.00 INSTALLATION	1-2
6.00 PROGRAMMING	1-2
7.00 GENERAL	1-2

1.00 INTRODUCTION

1.01 This reference manual is designed to serve different functions for different users. Engineers, customer service representatives and tech support personnel will find the entire manual a useful resource for the ZT-D system. Installers will find the chapters on installation and programming an invaluable tool for installation, troubleshooting, programming and component replacement.

1.02 This reference manual is designed to be used as a guide for system planning, product information, installation, servicing and programming. It is divided into five sections:

1. Orientation
2. General Description
3. ZT-D Features and Operations
4. Installation and Troubleshooting
5. Programming

2.00 ORIENTATION

2.01 Section 1 contains a description of the Omega-Phone IV ZT-D System Reference Manual, a brief synopsis of each section and instructions on how to use the manual as a reference.

3.00 GENERAL DESCRIPTION

3.01 Section 2 introduces the technology, hardware and programming of the ZT-D system. The technology section describes what the system will provide, the capacities of CO/PBX lines, and the number of extensions permitted for each system configuration. There is also a brief discussion of the system architecture (including international standards, microprocessors, speech paths, digital control, and system expansions). Listing of system specifications are provided.

3.02 The system hardware section details how the ZT-D can be configured by using the various hardware components. The section specifies which of the three Key Service Unit (KSU) meets user's needs. Finally there is a discussion on the physical features of the eight electronic key telephone models and the direct station signaling console (DSS) as well as industry standard single line telephones.

3.03 Ease of programming is a major benefit of the ZT-D system. The programming section describes the programming features and introduces the system's local and remote programming capabilities.

4.00 FEATURES AND OPERATION

4.01 Section 3 discusses the ZT-D system's features. Many features require operations activated by the station user. This section differentiates between system and station features, and divides station features into electronic key telephone, DSS and single line telephone extensions. Conditions, key inputs for key telephones and dialing sequence for single line (SL) telephones are included with feature descriptions.

4.02 The last section of features and operation provides descriptions for the optional features. Here the reader will find information regarding toll restriction, outgoing restriction, OCC and "equal access" carrier

considerations, and the station call detail recorder (SCDR).

5.00 INSTALLATION

5.01 Section 4 includes all aspects of the installation process for the ZT-D system. It is divided into sections pertaining to component identification, system planning/configuration, common equipment placement and environment, cabling, station equipment installation.

6.00 PROGRAMMING

6.01 Section 5 is divided into three sub-sections:

1. Programming Orientation and Instructions
 2. System Parameters for Programming
 3. Program Items
- The first section instructs the reader on how to program the system.
 - The second section details all preparatory sequences and directs the reader to user programming guides.
 - The third section itemizes the actual programs for input of system data.

7.00 GENERAL

7.01 In addition to the sections outlined above, Appendices, Tables, a Glossary and an Index are included. These sections are designed to be used as cross-reference sources for the manual.

ZT-D SYSTEM

ELECTRONIC KEY TELEPHONE SYSTEM

SECTION 2 — GENERAL DESCRIPTION

CONTENTS	PAGE
1.00 INTRODUCTION	2-1
2.00 SYSTEM DESCRIPTION	2-1
SYSTEM ARCHITECTURE	2-2
SYSTEM OVERVIEW	2-3
3.00 SYSTEM COMPONENTS	2-3
SYSTEM HARDWARE	2-4
4.00 SYSTEM SPECIFICATION	2-3
SYSTEM CAPACITY	2-3
SYSTEM CABLING	2-5
SYSTEM VISUAL INDICATIONS	2-5
SYSTEM AUDIBLE INDICATIONS	2-5
5.00 SYSTEM FEATURES	2-6
6.00 COMPONENT DESCRIPTIONS	2-8
ZT-D SERIES KSU	2-8
ZT-D KSU PCB's	2-8
OPTIONAL KSU HARDWARE	2-12
ELECTRONIC KEY TELEPHONE	2-12
DIRECT STATION SELECTION UNIT	2-19
SINGLE LINE TELEPHONE	2-20
7.00 PROGRAMMING	2-20

1.00 INTRODUCTION

1.01 This section provides an overview of the ZT-D Electronic Key Telephone System. The system is previewed from the feature/function standpoint as well as a technology overview is presented.

1.02 The section defines the hardware that makes up the system as well as provides details of the various types of station equipment that can be utilized.

1.03 The section provides listings of operational specifications of the system including a general feature listing.

2.00 SYSTEM DESCRIPTION

2.01 The Iwatsu ZT-D Series Electronic Key Telephone System is a newly developed, state-

of-the-art electronic communication system providing up to twenty-four (24) CO/PBX lines and sixty-four (64) extensions.

2.02 The system utilizes high speed eight (8) mega-hz. Z-80 eight-bit microprocessor control and stored program technology to provide both small and medium size system users a wide variety of features and functions.

2.03 The system architecture utilizes the international standard PCM 32 with time division speech paths and digital control techniques to simplify system installation. System components and expansion are modular. Figure 2-1 illustrates system architecture.

2.04 Three system configurations are available based upon KSU cabinet capacities: ZT-616, ZT-824 and ZT-2464 Key Telephone Systems. The smallest configuration, ZT-616 provides for up to six (6) trunks and sixteen (16) extensions. The intermediate configuration, ZT-824 provides for up to eight (8) trunks and twenty-four (24) extensions. The largest configuration, ZT-2464 provides for a maximum of twenty-four (24) trunks and sixty-four (64) extensions. Circuit cards and telephone instruments are compatible to all key service units.

2.05 Eight (8) models of electronic key telephones may be utilized on the system; fully featured electronic key telephones with flexible feature assignment keys and a sixteen (16) digit alpha-numeric display are provided in four of the models. Also, industry standard single line telephones, both 2500/500 type, are available for on-premise and off-premise applications.

2.06 Included with the station equipment is an optional direct station selection (DSS) unit, that serves as an attendant position. A DSS Console has thirty-two (32) DSS buttons and LED Lamp indicators. There is no limitation to the number of DSS Consoles which may operate on the system, one electronic telephone can operate with a maximum of two (2) DSS Units to have access to all sixty-four (64) extensions. However, the number of DSS Units equipped on a system will reduce system extension capacity.

2.07 The electronic key telephones provide a wealth of station features and functions. All models of the

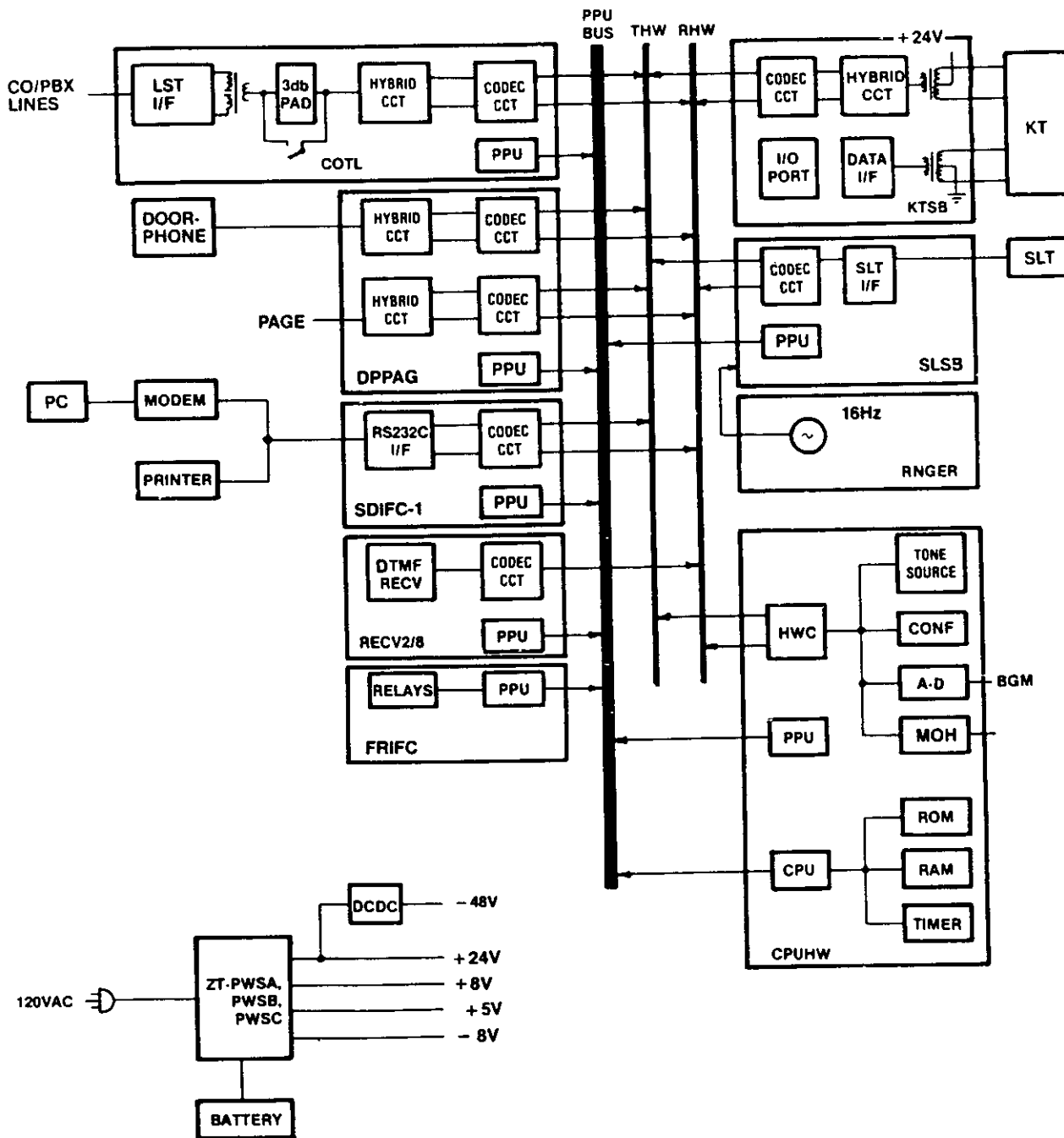


FIGURE 2-1 SYSTEM ARCHITECTURE

electronic key telephone have a total of ten (10) feature keys and differ only by the number of flexible function assignment keys. Keys can be individually assigned as function keys or line pick-up keys. Twenty-three (23) different functions are available for assignment for convenient one-button feature operation. Additionally, a station user may still select most of the features through dial pad operation. Hands-free reply to intercom calls when the station is on-hook, and optional hands-free operation on CO/PBX calls are available. Also included are station speed dialing (20 numbers), private lines, secretarial features and many other programmable features.

2.08 For programming the system at initial installation or for making changes to the program as the needs of the user change in day to day operation, the system features programming of all system parameters through the DSS Unit. All programming is accomplished utilizing the station alpha-numeric display with easy to understand, plain language commands. The program mode includes the ability to change the more than twenty (20) assignments, as well as all system operational features.

2.09 In addition to the DSS Console programming, the system provides for optional programming through an IBM compatible personal computer. The customer database may be entered locally or remotely through a telephone modem. This programming terminal when used remotely, provides ease of system programming/diagnostics when the problem is caused by inadequate feature/service programming.

2.10 System features include: 10 Digit Toll Restriction, "Equal Access" features and a fully programmable station call detail recorder (SCDR) unit. Toll Restriction may on an individual station basis, restrict or allow calls up to 10 digits in length from either electronic or single line telephone sets. The "Equal Access" feature provides easy access to OCC services and automatic personal identification number code entry. The SCDR provides real time call details that are programmed by the DSS unit to meet the individual user's needs or parameters.

2.11 The system provides optional alpha-numeric station message features. Station users can select from a menu of messages which include: Adding real time of day reminders, approximate time of return to office, or calling directions. Callers to the station automatically receive the message on their LCD station display.

2.12 For extensions that do not need the fully featured key telephones, industry standard single line telephones can be used on the system. The industry standard single line telephones, either rotary or DTMF dial, provide a wealth of features which include: Call Forwarding, Speed Dialing, Last Number Redial and Call Back.

3.00 SYSTEM COMPONENTS

3.01 The ZT-D Series Key Telephone System is comprised of three (3) major components:

1. Models ZT-616, ZT-824 and ZT-2464 Key Service Units.
2. Electronic Key Telephones consisting of eight (8) models, four (4) of which have sixteen digit alpha-numeric LCD displays for more advanced features. All models are compatible with any of the ZT Series Key Service Units.
3. The Direct Station Selection (DSS) Unit that serves as the attendant position, is also the programming terminal used at initial installation or for making changes to the program as the needs of the user change in day to day operation. The system features programming of all system parameters through the DSS Unit.

3.02 FIGURE 2-2 illustrates the ZT-D Series Electronic Key Telephone system components.

4.00 SYSTEM SPECIFICATIONS

4.01 Capacities of the ZT-D Series System are listed in TABLE 2-A.

TABLE 2-A
ZT-D SERIES SYSTEM MAXIMUM CAPACITIES

FUNCTION	ZT-616	ZT-824	ZT-2464	NOTES
CO/PBX Lines	6	8	24	
Extensions (Total)	16	24	64	1
Electronic KT (Max)	16	24	64	1
On-Premise SLT (Max)	16	24	64	1
Off-Premise SLT (Max)	8	12	32	1
DSS Console (Max)	16	24	64	1,3
ICM Lines		Non-Blocking		
Doorphones	3	3	3	2

NOTES:

- 1) Total number of electronic key telephones (KT), single line telephones (SLT) and DSS Units, cannot exceed the maximum capacities of the extensions in the table.
- 2) Doorphones do not affect extension capacity.
- 3) Use of the DSS Console must be associated with an electronic telephone.
- 4) Dedicated Attendant ICM Paths are not required since the system is non-blocking.

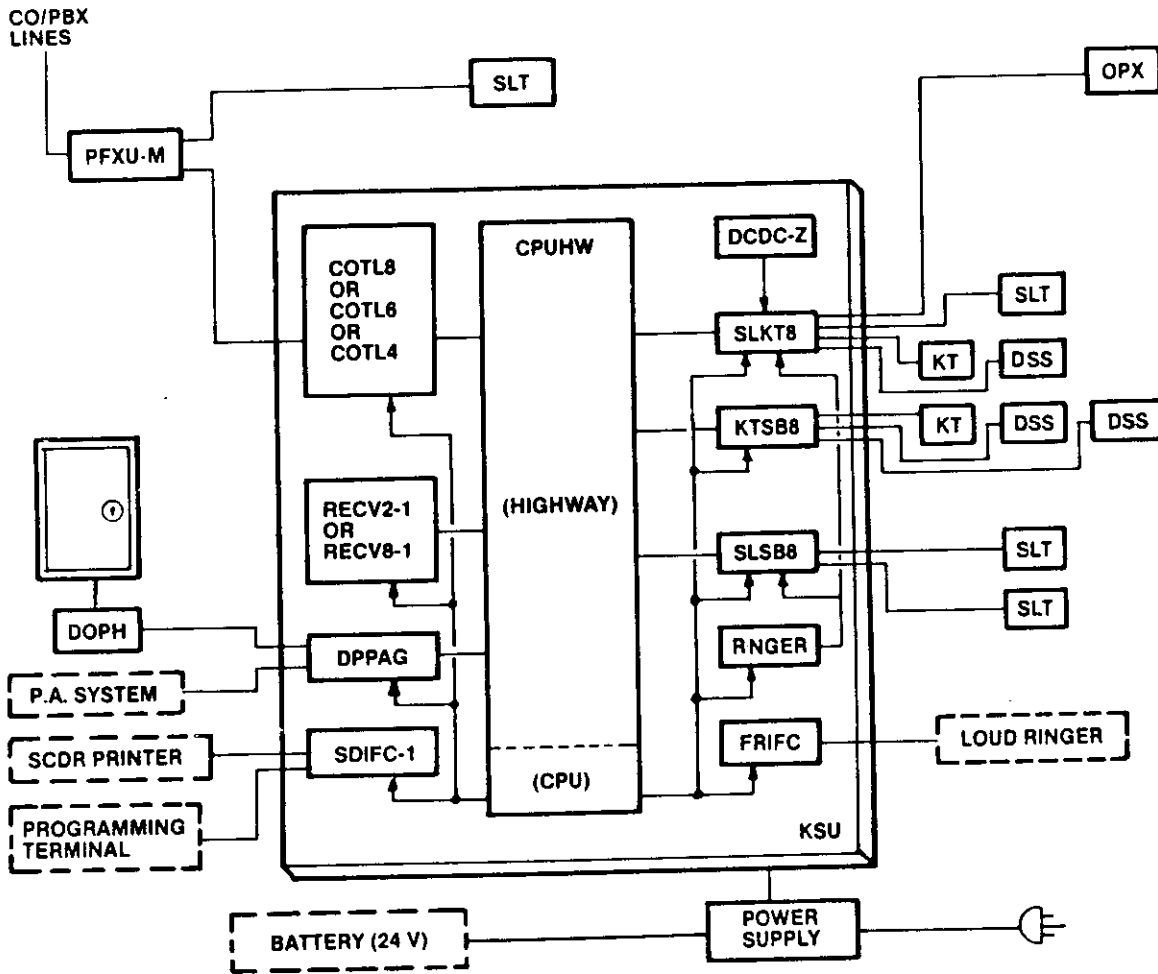


FIGURE 2-2 ZT-D SYSTEM COMPONENTS

4.02 Cabling requirements for the system are listed in TABLE 2-B.

TABLE 2-B SYSTEM CABLING REQUIREMENTS

EQUIPMENT	CABLE
ZT-K/D Electronic Key Telephones	2 pair (twisted) #22/24 AWG
ZT-32C Direct Station Selection Unit	2 pair (twisted) #22/24 AWG
Single Line Telephone 500/2500	1 pair (quad) #24 AWG
Doorphones	1 pair (quad) #24 AWG

4.03 System cable loop limits are listed in TABLE 2-C

TABLE 2-C SYSTEM LOOP LIMITS

FUNCTION	LOOP LIMIT	NOTES
ZT-K/D Key Telephones	60 Ohms (1100 ft.)	1
ZT-32C DSS Unit	60 Ohms (1100 ft.)	1
On-Premise SLT	600 Ohms	2
Off-Premise SLT	1200 Ohms	2

NOTES:

- 1) Feet indicated based upon using #24 AWG cable.
- 2) Resistance indicated includes internal resistance of the single line telephone.

4.04 System visual indications are listed in TABLE 2-D.

TABLE 2-D SYSTEM VISUAL INDICATIONS

FUNCTION	VISUAL INDICATIONS
I-Use (Green)	Modulated Steady (On)
CO Incoming/Call Forward	0.1 sec. on, 0.9 sec. off
I-Hold (Green)	0.5 sec. on, 0.5 sec. modulated on
System Hold/Non-Privacy	0.1 sec. off, 0.9 sec. on
Recall, ICM Incoming, MSG	0.7 sec. off, 0.3 sec. modulated on
Busy, DND	Steady (On)

4.05 System audible indications are listed in TABLE 2-E.

TABLE 2-E SYSTEM AUDIBLE INDICATIONS

FUNCTION	-tone INDICATION	REPETITION RATE
ICM Busy Tone	480/620 hz	0.5 sec. on-off, repeat
CO Incoming/Ringback	440/480 hz	1 sec. on, 3 sec. off repeat
ICM Incoming/Camp-on	440 hz	1 sec. on, 3 sec. off repeat
CO Recall	440/480 hz	0.4 sec. on, 0.2 sec. off, 0.4 sec. on, 3.0 sec. off, repeat
ICM Incoming/Ringback	440/480 hz	1 sec. on, 0.2 sec. off
ICM Recall	440 hz	0.4 sec. on, 0.2 sec. off
ICM Dial Tone	440 hz	Steady
CO Override/ICM Burst	440 hz	1.0 sec. burst
Door Ring #1	Chime	5 sec. on, 2 sec. off
Door Ring #2	Chime	6 sec. on
Door Ring #3	Chime	4 sec. on, 3 sec. off
Warning Tone	480/620 hz	0.2 sec. on-off, repeat
CO Busy By-pass Tone	1K hz	0.2 sec. on, 0.2 sec. off, 0.2 sec. on, 20 sec. off, repeat
ICM Busy By-pass Tone	1K hz	0.5 sec. on, 20 sec. off, repeat

4.06 System power supply specifications are listed in TABLE 2-F

TABLE 2-F SYSTEM POWER SUPPLY SPECIFICATIONS

FUNCTION	ZT-616	ZT-824	ZT-2464
AC Input	120 VAC + 10% 50-60 hz	120 VAC + 10% 50-60 hz	120 VAC + 10% 50-60 hz
DC Output #1	+24 VDC	+24 VDC	+24 VDC
DC Output #2	±8 VDC	±8 VDC	±8 VDC
DC Output #3	+5 VDC	+5 VDC	+5 VDC
Ringer for SLT	+90 VAC	+90 VAC	+90 VAC

4.07 System numbering plan is listed in TABLE 2-G

TABLE 2-G SYSTEM NUMBERING PLAN

FUNCTION	DIAL PLAN	NOTES
Operator Call	0 or 01.02	
Universal Night Answer	100	
Dial Intercom	120-183	4
Doorphone Access	191-193	4
Call Park	2	4
Call Park Pick-up	2 + (Ext. No.)	4
Group Call Pick-up	3	
System Hold Pick-up	501-524	
Absence Message Set	(62-64) + (Message)	
Message Wait	6	4
Time Reminder	61 + (Time)	
Floating Group CO Access	91-99	4
Master Group Hunt	71-74	
Remote Control	75-78	4
Call Back	7	2
Call Forward - All Calls	79-0	
Call Forward - Busy	79 + *	
Call Forward - No Answer	79 + #	
All Call Page	80	4
All Call Page - Internal	8 + *	4
All Call Page - External	8 + #	4
Zone Page - Internal	85-88	4
Zone Page - External	81-84	4
Account Code	9	4
Busy By-Pass Tone Calling	*	1,4
System Speed Dial	* + 00-79	1,4
Station Speed Dial	* + 80-99	1,4
Tone/Voice Calling	#	1,3
Repeat Dialing	#	1,3

NOTES:

- 1) Not available on Rotary SLT.
- 2) Not available on SLT's.
- 3) Not available on DTMF SLT.
- 4) May be assigned to the flexible keys.

5.00 SYSTEM FEATURES

5.01 Features of ZT-D Series system are divided into categories.

1. System Features
2. Electronic Key Telephone Features
3. DSS Features
4. Industry Single Line Telephone Features

5.02 Standard and optional system features of the ZT-D Series are listed in Table 2-H.

TABLE 2-H
STANDARD AND OPTIONAL SYSTEM FEATURES

System Features	Standard	Optional	Notes
Add-on Conference (CO-ICM)	X		
All Call Page (Internal/External)	X		2
Area/Office Code Restriction	X		
Automatic Station/Line Release	X		
CO/PBX Pick-up Restriction	X		
Distinctive Ringing (CO/ICM)	X		
Doorphones		X	1
DTMF/Dial Pulse Trunks	X		
Equal/OCC Access Service	X		
External Loud Ringers		X	1
Flexible Night Service	X		
Flexible Day Ringing Assignments	X		
Flexible Timing Functions	X		
Group Hunting	X		
Key System/Multi-Function System FCC Designation	X		
Multiple Answering Position	X		
Multi-line Conference	X		
Multi-Digit Restriction	X		
Music-on-Hold	X		
Off-Premise (OPS) and On-Premise (ONS) Single Line Interface	X		
Optional Distinctive CO Ring	X		
Outgoing Restriction	X		
Page Access Restriction	X		
Power Failure Transfer - Memory	X		
Power Failure Transfer - Station/Line		X	1
Power Failure Transfer - System		X	
Privacy on all Calls	X		
Remote Programming		X	1
Remote Relay Control		X	1
Remote CO/PBX Call Forward	X		
Screened/Unscreened Transfer (CO/ICM)	X		
Single Line Telephone Capability	X		
Station Call Detail Recorder		X	1
System Direct Programming	X		
System Background Music		X	1
System Hold/Pick-up	X		
System Real Time Clock	X		
System Program Terminal (Local)		X	1
System Speed Dialing	X		
Tenant Service	X		
Through Dialing	X		
Trunk-Trunk Conference	X		
Universal Night Answer	X		
Voice/Tone Calling - (ICM)	X		
Zone Page (PA)		X	2

NOTES:

- 1) Optional hardware required.
- 2) Customer provided device required.
- 3) Future Feature

5.03 Standard and optional electronic station features of the ZT-D Series are listed in Table 2-I.

**TABLE 2-I STANDARD AND
OPTIONAL ELECTRONIC STATION FEATURES**

Station Features	Standard	Optional	Notes
Abbreviated Calling	X		
Account Code Entry		X	
Alpha-Numeric LCD Display (16 Digits)	X		2
Automatic Answering	X		
Automatic Callback - ICM	X		
Call Forward - All Calls/Ext. Busy	X		
Call Forward - No Answer	X		
Call Hold - CO/ICM	X		
Call Park/Park Pick-up	X		
Class of Service	X		
Consultation Hold	X		
Group Call Pick-up	X		
Dial Page Access	X		
Direct CO/PBX Termination	X		
Direct CO/PBX Group Access	X		
Direct Ext. Termination w/BLF Indication	X		
Do-not-Disturb	X		
Exclusive Hold	X		
Executive Override	X		
Flash Key	X		
Float Key - CO/PBX Group Access	X		3
Hands-free Operation (CO)		X	1
Hands-free Reply (ICM)	X		
Hold Recall	X		
I-Hold/I-Use	X		
Memo-of-Call	X		
Message Pick-up	X		
Message Waiting	X		
Microphone Cut-off	X		
On-hook Dialing	X		
Pound/Star Key DTMF Generator	X		
Pre-selection	X		
Programmable Station Feature/ Function Keys	X		
Protected Extension	X		
Save/Repeat Number Dialed	X		
Secretary ICM Termination	X		
Single Key CO/PBX Access	X		
Station BGM	X		
Station Speed Key	X		
Station Headset Adaptor		X	1
Station Amplified Handset		X	1
Station Lock-out	X		
Station Noise Cancelling Handset		X	1
Station Directory Tray	X		
Station Speed Keys	X		
Timed Reminder	X		
Timed Trunk Queuing	X		
Trunk Queuing (Line/Trunk Group)	X		
User Prompts (Display Key Telephone)	X		2
Wall Mounting	X		

NOTES:

- 1) Optional hardware required.
- 2) Display model only.
- 3) Flexible key assignment required.

5.04 Standard and optional DSS features of the ZT-D Series are listed in Table 2-J.

**TABLE 2-J
STANDARD AND OPTIONAL DSS FEATURES**

DSS Features	Standard	Optional	Notes
Assignable DSS Keys	X		
Attendant Busy Lamp Field	X		
Attendant Busy Override/DND Override	X		
Attendant Callback	X		
Attendant Camp-on	X		
Attendant Dedicated ICM	X		
Attendant DSS Call	X		
Attendant Priority	X		
Automatic Hold	X		
Automatic Recall	X		
Chain Calling	X		
Page Access	X		
Serial Call	X		
Night Service Control	X		

5.05 Standard and optional industry standard single line features are listed in Table 2-K.

**TABLE 2-K
STANDARD AND OPTIONAL SINGLE LINE FEATURES**

Single Line Features	Standard	Optional	Notes
Account Code Capability (SCDR)		X	
Add-on Conference (CO/ICM)	X		
Call Forward - All Calls/Busy	X		
Call Forward - No Answer	X		
Call Hold	X		
Callpark/Park Pick-up	X		
Class of Service	X		
Consultation Hold	X		
Dial Tone Reorder (ICM)	X		
Data Security/Off-hook Signal (Deny)	X		
Dial Call Pick-up	X		
Directed Call Pick-up	X		
Distinctive Ringing	X		
DP/MF Station	X		
Message Wait Activation	X		
Save/Repeat Number Dialed	X		
System Speed Dial Access	X		

6.00 SYSTEM COMPONENT DESCRIPTION

6.01 ZT-D ELECTRONIC KEY SERVICE UNIT (KSU)

- a. The Key Service Unit forms the nucleus of the ZT-D Series system. Three (3) models are available; ZT-616 KSU, ZT-824 KSU and ZT-2464 KSU for easy and economical system configurations. The Key Service Unit utilizes a printed circuit backplane for all circuit card modules. The Key Service Unit may be wall, floor or rack mounted, an optional wall/rack mount unit (KSU/WM) may be used for all three (3) models. The system's power supply is externally mounted and also has three (3) models, the ZT-PWSA (616 KSU), ZT-PWSB (824 KSU) and ZT-PWSC (2464 KSU).
 - The ZT-616 KSU provides for system configuration up to six (6) CO/PBX trunks and sixteen (16) extensions.
 - The ZT-824 KSU provides for system configuration up to eight (8) CO/PBX trunks and twenty-four (24) extensions.
 - The ZT-2464 KSU provides for system configuration up to twenty-four (24) CO/PBX trunks and sixty-four (64) extensions.
- b. The printed circuit card positions for all Key Service Units, all specifically designated for system common control, CO/PBX line interface, extension interface and others.
- c. The ZT Series system is FCC registered as a fully protected Hybrid key telephone system. The FCC registration number is BD687Y-72879-MF-E with a ringer equivalence of 0.4A/0/8B. A standard USOC RJ-21X is utilized for CO/PBX line interfacing to the ZT-D system. On the system along with RJ-11 for the first eight (8) CO line appearances.
- d. Future plans call for registration of the ZT-D Series of systems as a fully protected Key Telephone System. The FCC number for this registration will be BD687Y- -KF-E. This FCC registration number will retain the same "means of connection" and ringer equivalence. Whether the KF reg. number or MF reg. number is utilized is dependant upon which model of CPUHW circuit card is equipped.
- e. FIGURE 2-3 illustrates the ZT-D Series Key Service Units.
 - FIGURE 2-3a illustrates the model ZT-616 KSU.
 - FIGURE 2-3b illustrates the model ZT-824 KSU.
 - FIGURE 2-3c illustrates the model ZT-2464 KSU.

6.02 Printed circuit cards are common to all ZT-D configurations.

- a. The CPUHW circuit card contains the system eight-bit microprocessor and software control circuitry. In addition, the card contains the system generic program utilizing E-PROM's, working Random-Access Memory (RAM) and user database Random-Access Memory, as well as provisions for optional feature modules. Two models of CPUHW circuit cards are available.
 - MCPUHW is utilized on all "MF" (Hybrid) FCC registered systems.
 - KCPUHW is utilized on all "KF" (Key) FCC registered systems.
- b. The COTL8 trunk interface circuit card provides eight (8) loop start trunks.
- c. The COTL6 trunk interface circuit card provides six (6) loop start trunks.
- d. The COTL4 trunk interface circuit card provides four (4) loop start trunks.
- e. The KTSB8 circuit card provides an interface for eight (8) electronic key telephones either display or non-display or direct station selection units. Up to two (2) circuit cards may be installed in the ZT-616 key service unit, three (3) in the ZT-824 key service unit and eight (8) in the ZT-2464 key service unit.
- f. The SLKT8 circuit card provides interface to four (4) electronic key telephones and four (4) off-premise single line (-48v) extensions. Up to two (2) circuit cards may be installed in the ZT-616 KSU, three (3) in the ZT-824 KSU and eight in the ZT-2464 KSU. A -48v talk battery is supplied by the DCDC-Z for the 824 and 2464 systems, the 616 utilizes the DCDC-Z1 Unit.
 - The RNGER, DCDC-Z and DCDC-Z1 Units are required for Single Line telephone operation.
 - In addition, the MFR/RC2 or MFR/RC8 circuit card is required to operate 2500 type (DTMF) single line telephones.
- g. The SLSB8 circuit card provides an interface for eight (8) on-premise single line extensions with talk battery (+24 volts) being supplied from the system power supply. Up to two (2) circuit cards may be installed in the ZT-616 KSU, three (3) in the ZT-824 KSU and eight (8) in the ZT-2464 KSU.
 - The RNGER Unit is required for single line telephone operation.

FIGURE 2-3 ZT-D SERIES KSU

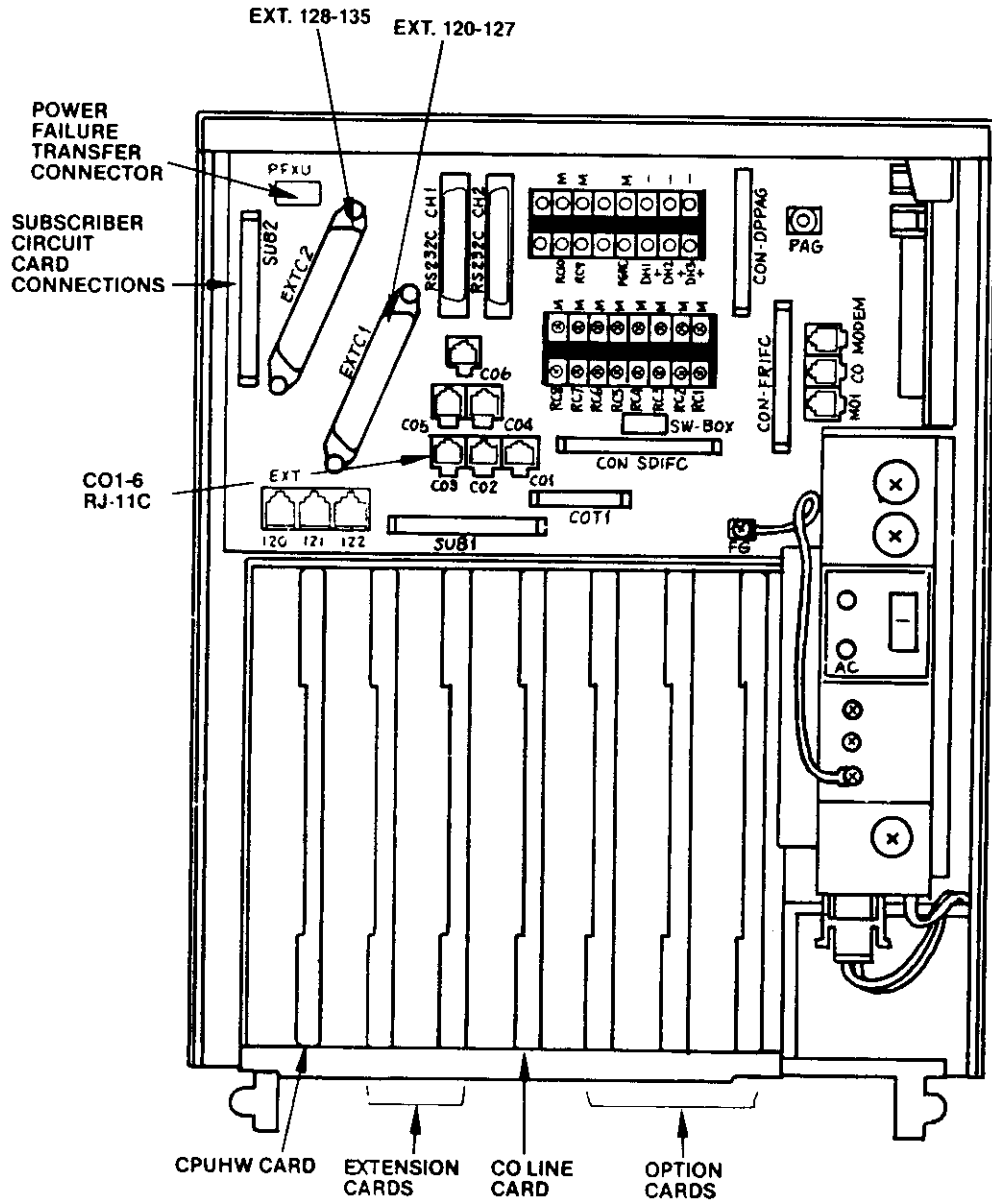


FIGURE 2-3a
ZT-616 KEY SERVICE UNIT (KSU)

FIGURE 2-3 ZT-D SERIES KSU

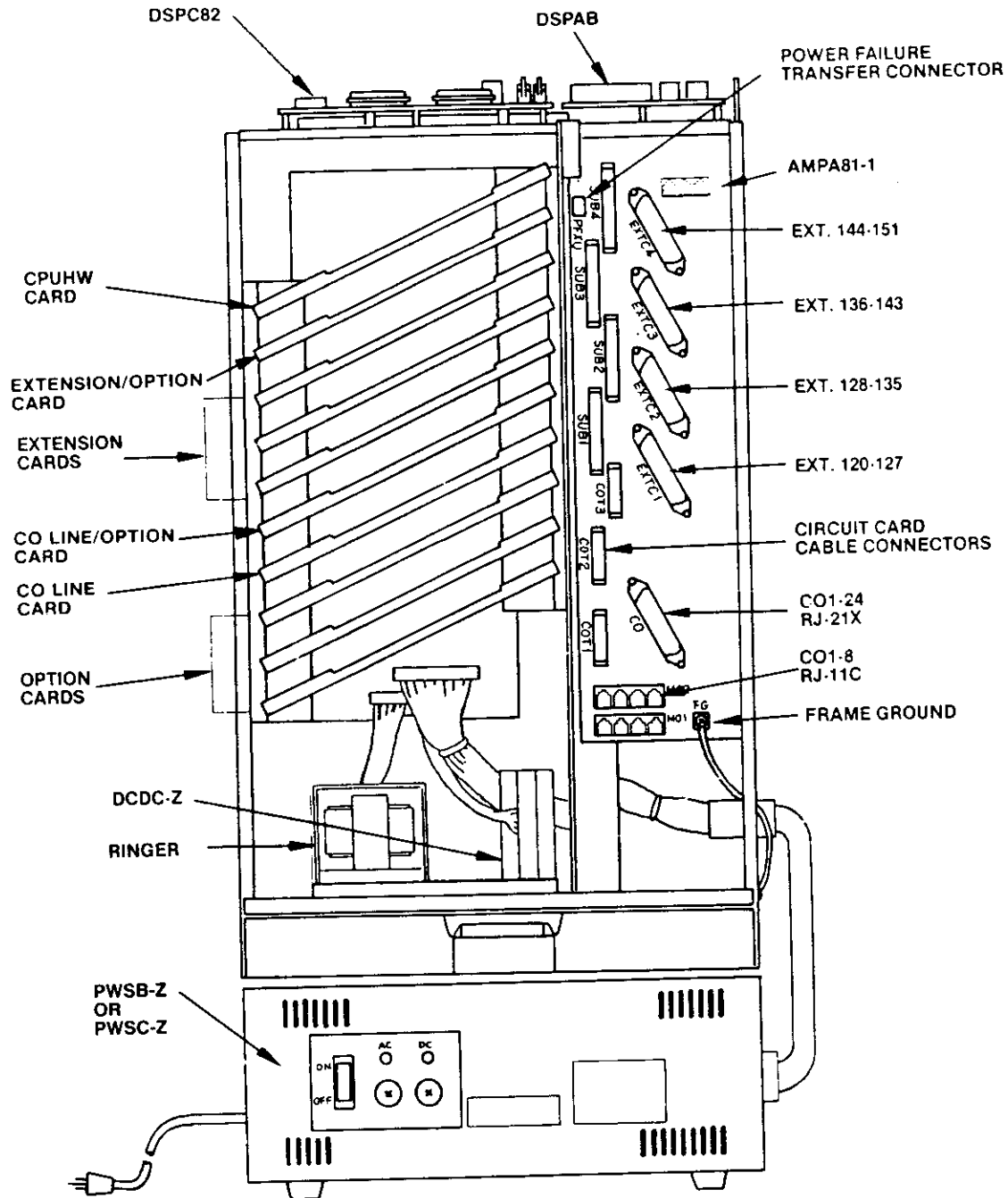


FIGURE 2-3b
ZT-824 KEY SERVICE UNIT (KSU)

FIGURE 2-3 ZT-D SERIES KSU

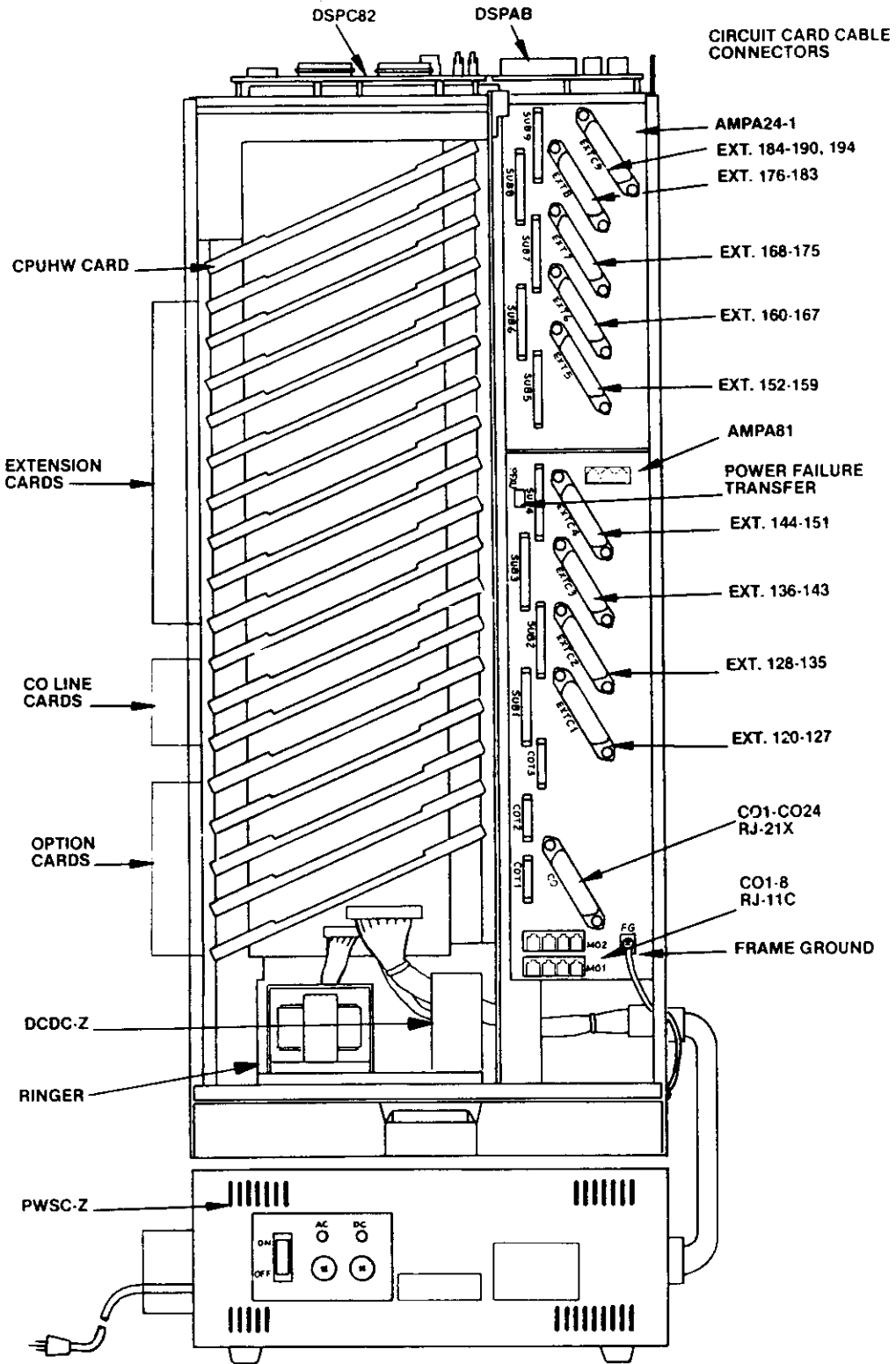


FIGURE 2-3c
 ZT-2464 KEY SERVICE UNIT (KSU)

- In addition, the MFRC2 or MFRC8 circuit card is required to operate 2500 type (DTMF) single line telephones.
- h. The DPPAG circuit card provides interface to three (3) doorphones as well as an external (P.A.) page circuit which supplies four (4) external page zones and all (P.A.) page.
- i. The RINGER ringing generator circuit card provides 20hz ringing for industry standard single line telephones that are equipped on the system. The unit is self-contained, utilizing DC inverter type circuitry to convert system 24 Volt DC battery to 90v-20hz AC operation.
- j. The DCDC-Z Power Converter provides -48 Volt DC talk battery for up to thirty-two (32) off-premise (OPS) single line telephones. The ZT-616 utilizes the DCDC-Z1 Unit.
- k. The SDIFC circuit card - serial data interface card provides two (2) channels to interface an IBM compatible personal computer for on-site system programming or remote programming via a modem. The maximum speed utilizing the modem is 300/1200 bps. Also provided is a RS232 interface for the SCDR printer.
- l. The FRIFC circuit card provides for ten (10) relays which can be utilized for control of loud ringing bells, remote control, etc.
- m. The RECV2 circuit card provides for two (2) DTMF receiver circuits for DTMF type single line instruments.
- n. The RECV8 circuit card provides for eight (8) DTMF receiver circuits for DTMF type single line instruments.

6.03 OTHER COMPONENTS THAT MAKE UP THE ZT-D SYSTEMS INCLUDE:

a. PFXU-M:

The Power Failure Transfer Unit provides for the automatic transfer of CO/PBX lines to single line stations - 500/2500 type. An in-house single line station will become a power failure transfer station during a commercial power outage.

6.04 ELECTRONIC KEY TELEPHONES

- a. The Omega-Phone IV ZT-D Series system utilizes both electronic key telephones and standard single line telephones to reduce system installation requirements. There are eight (8) models of the key telephones for all ZT-D configurations.
 - The electronic key telephones have low profile cosmetics which is made possible

by using the latest surface mount technology. Each station provides a wealth of features and functions, many of which are processed by their own local microprocessors.

- Voice circuits in the system are digital. Although the electronic instrument does not utilize a standard voice network, components to allow use of standard telephone ancillary devices such as headsets, hard of hearing handsets, etc., are available.
 - Electronic telephone processors control two (2) signal paths, one pair for the voice transmission and the second pair carries data for digital communication between the central microprocessor (CPUHW) in the key service unit and the local station microprocessor.
 - All station dialing is push-button, dialing being by digital data flow from the station to the common equipment dial sender. The DTMF and DP (dial pulse) CO/PBX lines can be mixed on the same system.
 - A number of optional station equipment are offered. Included is full hands-free station adaptor (SSPU-Z) a station miscellaneous adaptor (SMSA-Z) for the connection of an external speakerphone, loud ringing bell and headset. Other optional components include: the SNHD-Z - Noise Cancelling Handset, the SHHD-Z - Station Hard-of-Hearing Handset and the SHND-Z - Station Hearing Aid Handset.
- b. The Omega-Phone IV ZT-D Series features eight (8) models of electronic stations:
1. The model ZT-6K non-display and model ZT-6D display
 - The ZT-6K electronic key telephone, as illustrated in FIGURE 2-4, features six (6) working keys that can be programmed to meet a user's individual requirements. All other station feature/function keys are non-programmable.
 - The ZT-6D electronic key telephone as illustrated in FIGURE 2-5, is identical to the ZT-6K (above), except it is equipped with a 16 digit (LCD) alpha-numeric display.
 2. The model ZT-8K non-display and model ZT-8D display
 - The ZT-8K electronic key telephone as illustrated in FIGURE 2-6, features eight (8) working keys that can be programmed to a user's individual requirements. All other station feature/function keys are non-programmable.

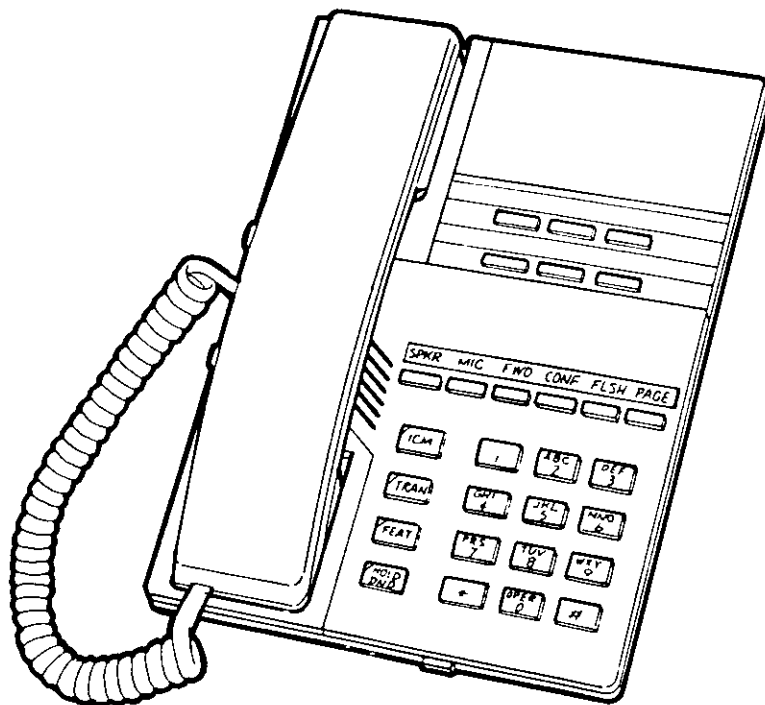


FIGURE 2-4
ZT-6K SIX-BUTTON KEY TELEPHONE



FIGURE 2-5
ZT-6D SIX-BUTTON KEY TELEPHONE

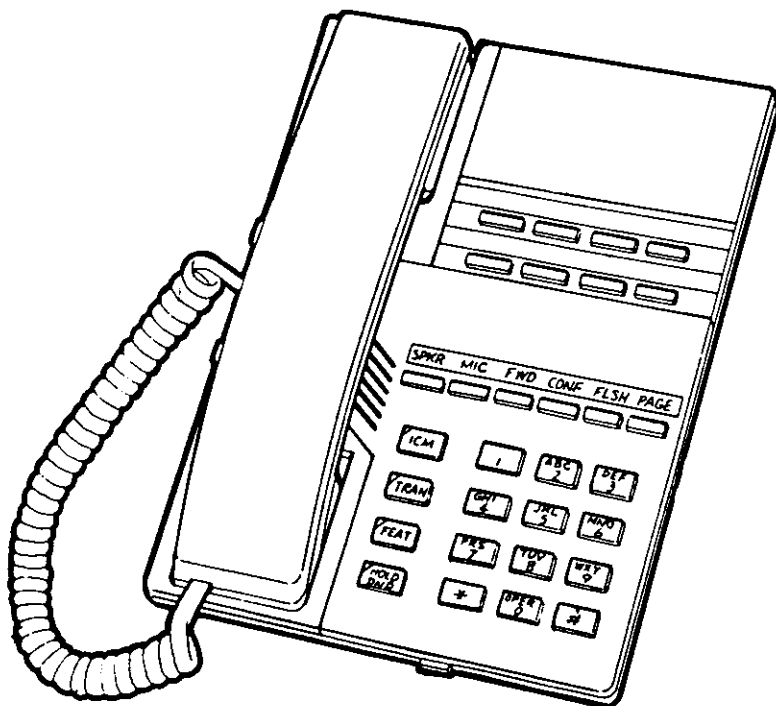


FIGURE 2-6
ZT-8K EIGHT-BUTTON KEY TELEPHONE



FIGURE 2-7
ZT-8D EIGHT-BUTTON KEY TELEPHONE

- The ZT-8D electronic key telephone, as illustrated in FIGURE 2-7, is identical to the ZT-8K (above), except for it is equipped with a 16 digit (LCD) alpha-numeric display.
 - 3. The model ZT-12K non-display and model ZT-12D display
 - The ZT-12K electronic key telephone as illustrated in FIGURE 2-8, features twelve (12) working keys that can be programmed to a user's individual requirements. All other station feature/function keys are non-programmable.
 - The ZT-12D electronic key telephone, as illustrated in FIGURE 2-9, is identical to ZT-12K (above), except for it is equipped with a 16 digit (LCD) alpha-numeric display.
 - 4. The model ZT-24K non-display and model ZT-24D display
 - The ZT-24K electronic key telephone, as illustrated in FIGURE 2-10, features twenty-four (24) working keys that can be programmed to a user's individual requirements. All other station feature/function keys are non-programmable.
 - The ZT-24D electronic key telephone, as illustrated in FIGURE 2-11, is identical to ZT-24K (above), except for it is equipped with a 16 digit (LCD) alpha-numeric display.
 - c. Each of the eight (8) models of electronic key telephones have a total of ten (10) feature/function keys. These standard operating keys include:
 1. SPKR - SPEAKER KEY:

This key controls operation of the station "on-hook dialing" and "call monitor" function. In addition, when the station is equipped with the operational hands-free unit for both CO/PBX calls and ICM calls; operation of the key implements the feature.
 2. MIC OFF - MICROPHONE OFF KEY

This key controls operation of the station microphone during CO/PBX and ICM calls. Basically utilized during "hands-free" station operation to mute any conversation heard through the microphone.
 3. FWD - CALL FORWARD KEY:

This key operates the "call forward", "busy call forward", call forward "no answer", function. An indication lamp is provided to indicate when the station is in the "call forward" mode.
 4. CONF - CONFERENCE KEY:

This function key is used to add two (2) CO/PBX lines together (multi-trunk conference), as well as operate the trunk-trunk conference feature. In addition, the key is used to effect an automatic add-on feature. An associated LED lamp indicator provides an indication when the station user is in the "conference mode" or when all conference circuits are busy.
 5. FLSH - HOOK SWITCH FLASH KEY:

This key is used to operate the CO/PBX line "flash" signal for reordering CO/PBX dial tone, as well as operating various Centrex/PBX features. Flash duration time is programmable.
 6. PAGE - ALL CALL PAGE KEY:

This key is used to operate the system "All Call" feature. The associated LED lamp indicator is used to indicate when the feature is busy.
 7. ICM - INTERCOM KEY:

This key is used for all internal calls on the telephone. All incoming ICM calls to the station are terminated on this key, including attendant calls.
 8. TRAN - TRANSFER KEY:

This key provides automatic hold of a CO/PBX line and connection to an intercom (ICM) path, automatically when the key is operated.
 9. FEAT - FEATURE KEY:

This key, in conjunction with the station dial pad, is used to access specific features associated with the station dial pad key number. Use of the FEAT key is optional, depending upon the operational condition of the station when the desired feature is implemented.
 10. HOLD/DND - HOLD/DO-NOT-DISTURB KEY:

This key is used to place either CO/PBX lines or ICM calls on "system hold." In addition, operation of the key implements the DO-NOT-DISTURB (DND) feature, if allowed by class of service.
- d. Four non-locking type switches are provided on the station for control of station features/functions:
1. Speaker volume control adjusts voice output of the station speaker.



FIGURE 2-8
ZT-12K TWELVE-BUTTON KEY TELEPHONE



FIGURE 2-9
ZT-12D TWELVE-BUTTON KEY TELEPHONE

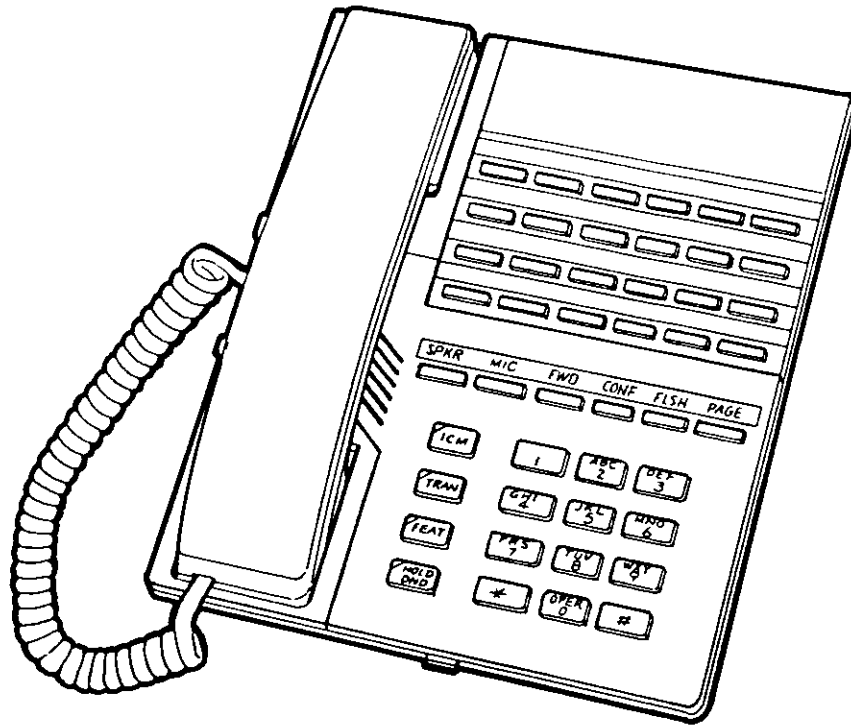


FIGURE 2-10 ZT-24K
TWENTY-FOUR-BUTTON KEY TELEPHONE



FIGURE 2-11 ZT-24D
TWENTY-FOUR-BUTTON KEY TELEPHONE

2. Tone volume control adjusts tone output of the station speaker.
 3. Handset volume control adjusts the level from the handset receiver in three steps as HIGH-NORMAL-LOW.
 4. Intensity Control - adjusts the intensity of the 16 digit LCD alpha-numeric display on display telephones.
- e. The functions/features that may be assigned to the flexible keys of the electronic telephones are the following:
1. DIL:
Direct CO/PBX line pick-up key terminates CO/PBX lines, as on a key system.
 2. FLT:
Floating loop CO/PBX line pick-up key allows sections of a group of CO/PBX lines by access code, 1 through 9 (9 groups).
 3. FLT1/FLT9:
Direct floating line pick-up key selects a group of CO/PBX lines without the need of dialing an access code.
 4. SPD1/SPD20:
Station speed dial access can be programmed on any vacant pick-up key. Operation of the key gives direct access to the speed dial number.
 5. CALBAK:
The CO/PBX line callback key reserves the use of a CO/PBX line, either a direct termination or floating termination when all are busy. This key is also utilized for timed callback in the event the outside (CO/PBX) party is busy or unanswered.
 6. ICALBAK:
Use of the intercom callback key assures automatic callback when a busy called extension completes their call.
 7. DSS1/DSS64:
Any pick-up key can be programmed as a station DSS key to automatically call the respective station when depressed. The LED lamp also indicates station status of the respective station.
 8. PARK:
Operation of the park key automatically places the CO/PBX line in the station park orbit for remote retrieval by another station user.
 9. ACCNT:
The account code key initiates the account code entry which is to be printed on the SCDR unit for billing/recording calls.
 10. DOOR1/DOOR3:
The direct doorphone access key allows direct access to one of the 3 doorphone units via an intercom path.
 11. REMOTE1/REMOTE4:
The remote control key allows activation of a customer provided auxiliary device, i.e.: an electronic door lock.
 12. ZONE0:
External "all call" key allows direct access to the page circuit which requires a customer provided P.A. system.
 13. GRPO:
Internal "all call" key allows direct access to the extension speakers programmed to receive all call paging.
 14. ZONE1/ZONE4:
Zone page key used to page through a specific external zone through a customer provided P.A. system.
 15. GRP1/GRP4:
The group call key allows direct access to a specific group of extensions.
 16. MSG:
The message key allows a station to leave a message indication at other extensions. It is also utilized to respond to messages left by other extensions.
 17. AUTANS:
The automatic answering key allows a station user to answer any incoming (CO/PBX and ICM) calls by simply going off-hook.
- f. The following program option keys are usually associated with the attendant extension or DSS Unit.
1. SERIAL:
Serial call key provides for the attendant to be automatically called when the local extension is through with an outside call.
 2. RELEASE:
The release key provides for attendant release of a call processed through the DSS unit with reconnection back to the last CO/PBX placed on hold (if applicable).

3. **OVER:**
The override key provides for the attendant to override a busy station or voice connection.
4. **CONNECT:**
The connect key allows the attendant to connect or "camp-on" an outside call to an extension in the system with both audible and visual indication at the extension.
5. **NT:**
The night transfer key allows the activation of night ringing service.

6.05 DIRECT STATION SELECTION (DSS) UNIT

- a. The ZT-32C Direct Station Selection Unit, illustrated in FIGURE 2-12, is an optional system control unit that is used at the attendant (main answer position) in the system. The ZT-32C offers an efficient method for answering and distribution of CO/PBX calls to extension, as well as being utilized for program features/functions associated with the ZT-D system stations.
 - The ZT-32C, features thirty-two (32) individual station keys with associated LED lamp indicators, as well as eight (8) feature/function keys.
 - There are no limitations to the number of direct station selection units. However, each DSS unit equipped on the system will reduce system extension capacity by one (1).
 - An electronic key telephone may be equipped with two (2) DSS units for total system extension capacity (64 extensions).
 - Unused DSS keys can be assigned with other features such as station speed dialing keys.
- b. The ZT-32C Direct Station Selection Unit utilizes numerous non-locking feature/function keys. Included are the following feature/function keys.

1. **EXTENSION DIRECT STATION KEYS:**
Each extension is provided with a direct termination on the DSS with an associated BLF indicator. The LED lamp indicator provides various lamp indications to indicate station status.
2. **NIGHT SERVICE - NT:**
The NT key is utilized by the attendant to enter the system into the "night service" mode, if allowed, by COS assignment.

3. **CALLBACK:**
The callback key allows the attendant to operate a CO/PBX Callback to a busy CO/PBX access key or times a CO/PBX Callback.
4. **SERIAL CALL - SERCALL:**
The "Sercall" key provides for serial calls at the attendant position. Operation of this key provides for the attendant to be automatically recalled when the local extension is through with an outside call.
5. **RECALL:**
The "Recall" key is utilized to answer recalls to the attendant positions. All station recalls that time-out or overflow to the attendant position are answered by the RCL key.
6. **OVERRIDE - OVER:**
The "Over" key provides for the attendant to override a busy station or voice connection. Use of the "Over" key defeats stations DND, but not "protected extension" status.
7. **MESSAGE - MSG:**
The "Message" key allows stations to leave a message indication at the DSS Unit. To retrieve messages, the attendant simply depresses the "MSG" key. The DSS also leaves message indications at stations with this key.
8. **CONNECT:**
The "Connect" key allows the attendant to connect or "camp-on" an outside call to an extension in the system with both audible and visual indication at the extension. No "camp-on" tone is given to busy single line telephones when this feature is operated.
9. **RELEASE:**
The "release" key provides for attendant release of a call processed through the DSS Unit with reconnection back to the last CO/PBX line (if applicable).

6.06 INDUSTRY STANDARD SINGLE LINE TELEPHONE

- a. The ZT-D Series system can be equipped with industry standard single line telephones. Single line telephones can be either rotary dial or DTMF type instruments in any mixture.
 - Single line telephones can access either DTMF or rotary trunks. Up to nine (9) trunk groups are provided for access by single line telephones.

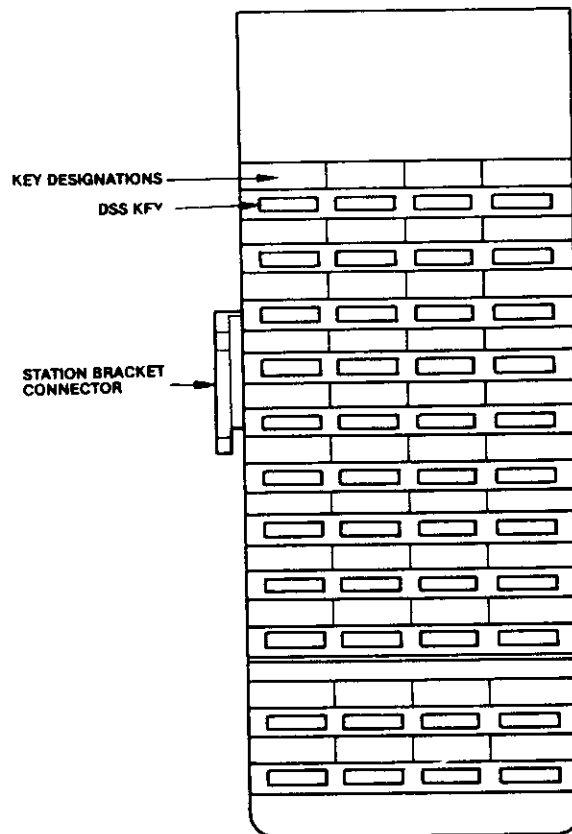


FIGURE 2-12
ZT-32C DIRECT STATION SELECTION UNIT

- DTMF single line telephones require DTMF receivers to be added to the system. Up to eight (8) DTMF receivers can be equipped on the system.
- b. FIGURE 2-13, illustrates the DTMF telephone feature plan and optional faceplate masks available.
- c. The dial plan for single line telephones differ between rotary and DTMF single line telephones.
- d. Use of single line telephones on the system requires use of the following equipment:
 1. SLKT8: -48V/4CKT Subscriber Card
 2. SLSB8: +24V/8CKT Subscriber Card
 3. RINGER: Ringing Generator
 4. DCDC-Z: (-48volt) Power Supply (824/2464)
 5. DCDC-Z1: (-48volt) Power Supply (616)
 6. RECV2: 2 CKT DTMF Receiver Card
 7. RECV8: 8 CKT DTMF Receiver Card

7.00 PROGRAMMING

7.01 Ease of programming is a major benefit of the ZT-D system. Programming can be accomplished locally or from a remote site. At the local level, the ZT system features a DSS console for programming at the initial installation or for changes in day-to-day operation. Programming is done at the operator position using the DSS and a KT with display. Programming is accomplished with easy-to-understand plain language.

7.02 In addition to local programming, optional remote site programming is available using an IBM XT compatible personal computer. The computer may be located on-site or off-site. The customer database, containing user program information, is entered via a modem. Off-site programming, using remote terminals, permits diagnostic servicing and upgrades by customer service representatives if inadequate feature/service programming has been initially entered.

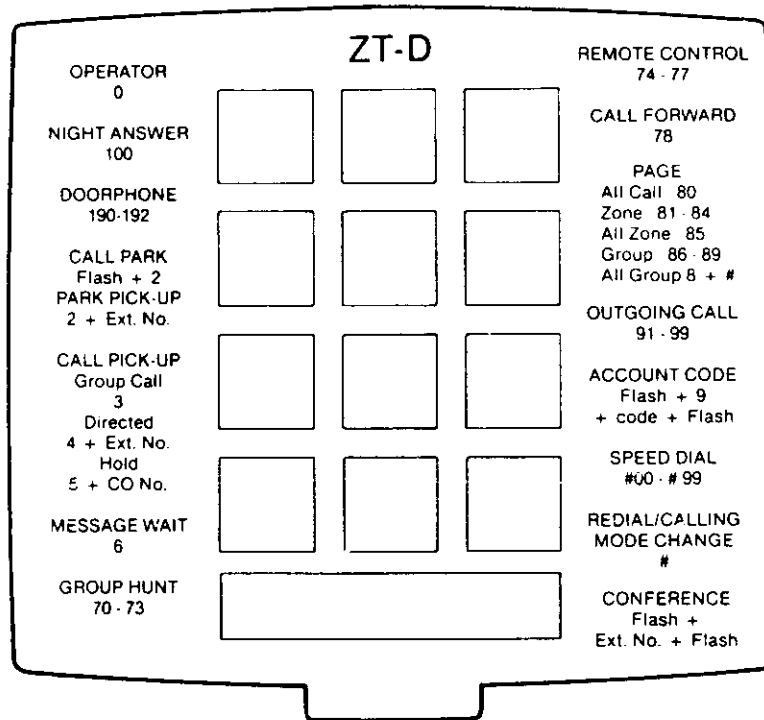


FIGURE 2-13 DTMF SINGLE LINE DIAL MASK



ZT-D SYSTEM

ELECTRONIC KEY TELEPHONE SYSTEM

SECTION 3 — SYSTEM FEATURES/FUNCTIONS

CONTENTS	PAGE
1.00 INTRODUCTION	3-1
2.00 SYSTEM FEATURES	3-1
3.00 ELECTRONIC KEY TELEPHONE FEATURES	3-4
4.00 DIRECT STATION SELECTION FEATURES	3-7
5.00 SINGLE LINE TELEPHONE FEATURES ..	3-8
6.00 STATION FEATURE OPERATION.....	3-9
7.00 STATION/DSS DATA BASE	3-17
8.00 OPTION/MISCELLANEOUS FEATURE OPERATION	3-19

1.00 INTRODUCTION

1.01 This section lists both system and station features on the ZT-D system. Since all hardware and software are compatible for each model of KSU, all features are available on each model and operates in the same manner.

1.02 Some features require optional equipment to be implemented. Refer to the Section 2 General Description feature listings and the feature description contained here-in for determining whether a feature is standard or optional.

2.00 SYSTEM FEATURES

2.01 The Omega-Phone IV ZT-D Series System offers a variety of standard and optional system features, many of which are both Key and PBX type. Standard (STD) and optional (OPT) features are indicated.

a. **ADD-ON CONFERENCE (CO/ICM) — STD:**

The system allows for conference of up to three (3) parties on an individual CO/PBX line and three (3) parties on an ICM path without additional hardware. Add-on conferences can be effected either manually or by automatic means.

b. **ALL CALL VOICE PAGE (INTERNAL/EXTERNAL) — STD/OPT:**

Utilizing either direct key access or dial code access for electronic telephones, (dial code only on single line instrument) all call page both to external speakers and electronic stations whose class of service permit, is provided as a standard service feature.

c. **AREA/OFFICE CODE RESTRICTION — STD:**

Toll calls can be monitored based upon individual area/office/subscriber codes programmed on an allow/disallow basis. Provision is also included for system terminations on a distant PBX or OPS line. Fifteen (15) toll plans are available as well as programming arrangements for equal access, OCC and speed dial numbers.

d. **AUTOMATIC STATION/LINE RELEASE — STD:**

Stations are released from CO/PBX lines and ICM paths after detection of a disconnect signal. (CO/PBX or specific time out period for dialing or completing calls.) CO/PBX disconnect timing is programmable on an individual trunk basis.

e. **CO/PBX PICK-UP RESTRICTION — STD:**

This feature allows specific station line keys to be restricted from a specific line or lines in the system; visual indication is seen on a line that is pick-up restricted. There is call forward or transfer of a pick-up restricted line.

- f. **DISTINCTIVE RINGING (CO/ICM) — STD:**
Distinctive ringing tones are provided to both electronic and single line telephones to indicate whether the call is an incoming CO/PBX or ICM call.
- g. **DTMF/DIAL PULSE TRUNKS — STD:**
Both DTMF and dial pulse trunks can be used on the system. Each CO/PBX appearance is programmed for the type of signalling required. All network address signalling is senderized under the control of the system processor.
- h. **OCC SERVICE — STD:**
Specific codes and programming arrangements are provided for OCC access. Included are provisions for automatic dial of the local OCC number, pause timing and entry of the user's authorization code. Provision is also included for user entry of personally assigned authorization codes.
- i. **EXTERNAL LOUD RINGER — OPT:**
As a hardware option, a loud ringer bell can be connected to the system for each CO/PBX line equipped. Relay contacts (dry) can be wired to achieve any single or group ringing arrangement.
- j. **FLEXIBLE NIGHT SERVICE — STD:**
Both universal night answer (UNA) and assigned night answer (ANA) are provided on the system. During night service, relay contacts provide control for loud ringing bells as well as CO/PBX ring tone connection to the PA output for lines assigned to UNA. A specific dial code is printed for UNA pick-up.
- k. **FLEXIBLE DAY RINGING ASSIGNMENT — STD:**
Any CO/PBX lines equipped on the system can be assigned to ring at any extensions. CO/PBX lines programmed for "night service" replace day ringing assignment when the system is in night service.
- l. **FLEXIBLE TIMING FUNCTIONS — STD:**
The system includes provision for individual programming of time controlled functions. This includes functions associated with the CO/PBX interface to the Telco network, as well as timing parameters associated with operational features, such as recall functions.
- m. **GROUP HUNTING — STD:**
Four (4) station hunt groups are provided in the system. Any number of extensions can be programmed in the same group. Hunt groups utilize a pilot number and do not use any extension assignments. Group hunting bypasses extensions that are in the "call forward" or "DND" mode.
- n. **KEY/MULTI-FUNCTION SYSTEM
FCC DESIGNATION — STD:**
This feature allows for the use of both key and multi-function FCC designation. On a system not utilizing single line instruments, (KF) key designations can be used for reduced local telephone company tariffs.
- o. **MULTIPLE ANSWERING POSITION — OPT:**
DSS units can be equipped on the system serving as the attendant position. Each DSS unit can operate independently and/or simultaneously. The DSS unit can also serve as the system program terminal.
- p. **MULTI-LINE CONFERENCE — STD:**
An electronic key telephone can initiate and talk on a multi-line conference where an internal party is connected to two (2) outside lines.
- q. **MUSIC-ON-HOLD — STD:**
A Music-On-Hold (MOH) interface is provided to the system where an external music source can be connected for music on a "held CO/PBX line." Control relay contacts are provided for start/stop operation. In addition, the system contains two different music synthesizer melodies that may be used instead of an external service.
- r. **OFF PREMISE/ON PREMISE
SINGLE LINE INTERFACE — OPT:**
Two types of single line interface circuit cards are available — a 24-volt card for "in house" single line station and a 48-volt card for OPS applications.
- s. **MULTI-DIGIT RESTRICTION — STD:**
The ZT-D Series System may be programmed to restrict all calls outside of the local area for users who do not need to place long distance calls.
- t. **OUTGOING RESTRICTION — STD:**
Any station can be restricted from any individual CO/PBX line in the system. For outgoing call service, the restricted station can access the line when ringing or while on "hold." There are sixty-four (64) levels of outgoing restriction provided.

- u. **PAGE ACCESS RESTRICTION — STD:**
As a class of service (COS) mark, individual extensions can be restricted from accessing any system voice paging function.
- v. **POWER FAILURE TRANSFER — MEMORY — STD:**
All user data is stored in RAM Memory supported by a battery that will retain the memory for a minimum of five (5) days.
- w. **POWER FAILURE TRANSFER — STATION/LINE — OPT:**
Optional hardware is available to transfer CO/PBX lines to single line extensions during commercial power failure. Included is the ability for CO/PBX lines to be transferred to working single line stations in the system. Electronic key telephones cannot operate during transfer operation utilizing this feature.
- x. **POWER FAILURE TRANSFER — SYSTEM — STD:**
A system battery support array is available to maintain complete system operation during commercial power failure. The system power supply includes a built-in charger and provisions for connecting a 24-volt DC battery array.
- y. **PRIVACY ON ALL CALLS — STD:**
Both CO/PBX lines and ICM paths are private to the stations engaged in the call. Electronic key stations include provisions to manually release the privacy to allow other extensions into the call.
- z. **REMOTE PROGRAMMING — OPT:**
The system has provision for a remote programming interface circuit card which needs a modem operating at 300/1200 baud for remote programming utilizing a (PC) personal computer.
- aa. **SCREENED/UNSCREENED TRANSFER (CO/ICM) — STD:**
Both CO/PBX and ICM calls can be transferred by either key telephones or single line stations. When transferring calls, the call can either be "screened" with intended party or immediately "camped-on" by the transferring extension.
- bb. **SINGLE LINE TELEPHONE (500/2500) CAPABILITY — STD:**
Both rotary dial and DTMF single line telephones can be equipped on the system. Extension card slots in the common equipment can accept either electronic or single line stations.
- cc. **STATION CALL DETAIL RECORDER — OPT:**
As an option, a call detail recorder providing call details to a real time printer or call management system is available. Call details include the following:
 - Call sequence number
 - Trunk/station number
 - Originating/transferred extension number
 - Call start and duration time
 - Number dialed up to twenty-six (26) digits
 - Account code up to six (6) digits
 - Call identification: incoming, outgoing, attendant, toll, tenantProgrammable functions as to call details include:
 - Outgoing and/or incoming calls
 - Call for which an account code was entered
 - Toll Call only
 - Calls on specific extensions/trunks
 - Calls exceeding a programmed time
- dd. **SYSTEM BACKGROUND MUSIC — OPT:**
Background music can be connected to the external PA system, as well as system electronic stations. BGM, when allowed, can be turned off at the individual station under the control of the station user.
- ee. **SYSTEM HOLD/PICK-UP**
As a standard system features CO/PBX lines that have been placed on "system hold" can be retrieved by other extensions, even if the extensions are not equipped with that CO/PBX line appearance. Specifically used when the system is equipped with single line instruments or electronic instruments that are programmed with floating loop keys.
- ff. **SYSTEM REAL TIME CLOCK — STD:**
The system contains provision for real time clock supported by battery back-up. Real time displays are provided on electronic stations equipped with displays.
- gg. **SYSTEM PROGRAM TERMINAL — LOCAL — OPT:**
The DSS unit functions as the system programming terminal. Programming can be accomplished during actual system operation without effecting operation of system extensions.
- hh. **SYSTEM SPEED DIALING — STD:**
Up to eighty (80) telephone numbers can be stored and accessed by all system extensions utilizing the speed dialing function. The numbers are programmed from the operator station.

ii. TENANT SERVICE — STD:

System stations and trunks can be separated by using the "tenant service" feature. Four (4) tenants are available with each tenant assigned individual CO/PBX lines and stations. Complete divorced operation is established with common link between systems.

jj. THROUGH DIALING — STD:

Allows a station user to transfer CO/PBX dial tone to an extension which has been denied line access through programming.

kk. TRUNK-TRUNK CONFERENCE — STD:

Two (2) CO/PBX Lines can be joined together by either electronic or single line extensions. When the extension exits the conversation, the connection is maintained between the CO/PBX lines unless the lines release, whereas the connection becomes released from the system. CO/PBX disconnect signalling must be supplied from the central office.

ll. UNIVERSAL NIGHT ANSWER (UNA) — STD:

CO/PBX lines can be assigned to UNA during night service operation. Provisions include loud ringer capability, as well as PA connection of CO/PBX ringing tone.

mm. TONE/VOICE CALLING (ICM) — STD:

ICM calls between extensions can utilize either tone or voice calling. The calling extension has the ability to change the mode of calling by depressing the pound key.

nn. ZONE PAGE (PA) — OPT:

Four (4) zones of PA paging are available with the optional zone page card. Background music can be provided to the zone. Provisions are included for all zone paging as well (not available ZT-616).

oo. DOOR-PHONES — OPT:

When equipped with the optional door-phone adaptor, three (3) door stations may be placed on the system. Door stations do not reduce station capacity. The door stations can be assigned to ring any station. Door stations can be accessed by dial code or direct key.

pp. REMOTE CO/PBX CALL FORWARD — STD:

As a standard feature, CO/PBX lines can be assigned to be automatically answered and call forwarded via the system conference circuit to another telephone number.

qq. OPTIONAL DISTINCTIVE CO/PBX RING — STD:

As a program option, the system provides for selection from two (2) ringing tones on an individual CO/PBX line basis.

3.00 ELECTRONIC KEY TELEPHONE FEATURES

3.01 The Omega-Phone IV ZT-D Series System provides a number of standard and optional features on the electronic telephones. The features include:

a. ABBREVIATED CALLING — STD:

When the station is busy, camp-on calls, recalls or callbacks utilize abbreviated ringing so as not to disturb the existing conversation.

b. ACCOUNT CODE CAPABILITY — OPT:

When the SCDR Call Detail Recorder is equipped, the station user can enter a six (6) digit account code anytime during the duration of the call without the distant party aware of the input.

c. ALPHA-NUMERIC DISPLAY (16 DIGIT) — OPT:

A sixteen (16) digit alpha-numeric liquid crystal (LCD) display can be equipped on the key telephone. The display provides enhanced station operation in identify calls income and outgoing from the station. Display functions include:

- Account Code Input
- Forwarding Extensions
- ICM Calling Extensions
- Called Party Status: Busy/DND
- Number Dialed (including Speed Dial)
- Recall: CO/ICM
- Callback: CO/ICM
- Camp-on: CO/ICM
- Message/Memo of Call
- Real Time (Clock)
- Call Timer

d. AUTOMATIC ANSWERING — STD:

As a COS mark, automatic answering of either incoming CO/PBX and/or ICM calls by taking the handset off-hook can be achieved. The first call into the station is automatically connected.

- e. **AUTOMATIC CALLBACK (ICM) — STD:**
When an ICM call is made to a busy extension, the caller can request an automatic callback when the called party is free (on-hook). Operating the callback feature signals the original calling party first, who upon answering the callback, automatically dials the other extension.
- f. **CALL FORWARD — ALL CALLS/STATION BUSY - STD:**
As a COS assignment, an extension can be allowed either call forward all calls or call forward busy. Both CO/PBX and ICM calls are forwarded. Forwarded calls can advance two times in the system. Lines that are pick-up restricted cannot be call forwarded.
- g. **CALL FORWARD — NO ANSWER — STD:**
When a station user utilizes call forward no answer, both CO/PBX and ICM calls will be forwarded.
- h. **CALL HOLD (CO/ICM) — STD:**
Both CO/PBX lines and ICM lines can be placed "on hold." Operation of the hold key places CO/PBX lines on "system hold." "I hold" indication is provided on the individual CO/PBX line.
- i. **CLASS OF SERVICE (COS) — STD:**
Twenty (20) COS marks are available for each electronic telephone. COS marks include the following:
- | FEATURE: | DEFAULT: |
|---------------------------------|----------|
| 1-System Speed Toll Restriction | Disable |
| 2-System Speed Dial Restriction | Disable |
| 3-Auto Answer | Enable |
| 4-Hold Recall | Enable |
| 5-Page Access | Enable |
| 6-Page Receive | Enable |
| 7-Group Page Access | Disable |
| 8-Group Page Receive | Disable |
| 9-Zone Page Access | Disable |
| 10-Speakerphone | Disable |
| 11-Do-Not-Disturb | Enable |
| 12-Executive Station | Disable |
| 13-Station Protect | Disable |
| 14-Secretary Hotline | Disable |
| 15-Toll Restriction Class | Disable |
| 16-Flexible Key Assignment | Disable |
| 17-Incoming Pick-up Group | Disable |
| 18-ICM Group (tenant) | Disable |
| 19-Station Password | Disable |
| 20-Night Assignment | Disable |
- j. **CONSULTATION HOLD — STD:**
The station initiating a transfer call can place the CO/PBX call on hold and return it to the original call if no transfer or conference is to be effected.
- k. **CALL PARK/PARK PICK-UP — STD:**
Both CO/PBX lines and ICM paths can be placed into station "call park." Operation of the call park (CAL PRK) key will accomplish this feature. Each electronic station in the system can be programmed with a call park key.
- l. **GROUP PICK-UP — STD:**
An incoming call to a pick-up group can be answered by any extension in the pick-up group an extension can appear in more than one group.
- m. **DIAL/DIRECT PAGE ACCESS — STD:**
The electronic telephone station can dial any page function, as well as a direct page access key for "all call" paging. Direct page access can be utilized while talking on a CO/PBX or ICM line.
- n. **DIRECT CO/PBX LINE TERMINATION — STD:**
Each line key on the electronic telephone can be programmed for an individual CO/PBX line appearance.
- o. **DIRECT FLOAT LOOP TRUNK GROUP ACCESS — STD:**
Extensions can be programmed for CO/PBX trunk group access without the need of dialing an access code.
- p. **DIRECT STATION TERMINATION — STD:**
Any unused pick-up keys on the electronic telephone can be programmed to direct signal another extension with BLF indication of station status.
- q. **DIRECTED CALL PICK-UP — STD:**
A station user can answer incoming calls at an individual extension by using the directed call pick-up feature.
- r. **DO-NOT-DISTURB — DND — STD:**
The electronic station user can place the instrument into DND by COS allowance at the press of a key. A LED indication is provided. The DSS, as well as "executive override" can defeat DND.
- s. **EXCLUSIVE HOLD — STD:**
Any CO/PBX line can be placed on "exclusive hold;" no other extension can pick-up the call. "I hold" indication is provided on the individual CO/PBX line. Recalls change call status to "system hold."

- t. EXECUTIVE OVERRIDE — STD:
Executive override is a COS option that allows the user to enter into any conversation by direct key access, or existing conversations involving single extensions. Executive override defeats DND and off-hook signaling-deny. Splash tone is given to party whose call is entered.
- u. FLASH KEY OPERATION — STD:
A flash key is provided for "flashing" CO/PBX or ICM lines for reordering dial tone.
- v. FLOAT KEY — TRUNK GROUP ACCESS —STD:* (Not available on KF system).
Extensions can access specific CO/PBX trunk groups through the use of a floating loop key and a dial code. There are nine (9) trunk groups available on the system.
- w. HANDS-FREE OPERATION (CO/ICM) — OPT:
An optional hands-free unit which mounts internally to the multi-button telephone provides full hands - free operation on CO/PBX and ICM calls.
- x. HANDS-FREE REPLY (ICM) — STD:
The multi-button key telephone station user can reply to all ICM calls hands-free. (Station Idle).
- y. HOLD RECALL — STD:
Any call placed "on hold" at the extension will recall to the extension if the time out period is passed. Station recall time is programmable from 16/240 seconds.
- aa. I-HOLD/I-USE — STD:
As a standard feature, a station user will know which CO/PBX line has been placed on either system or exclusive hold flash.
- bb. GROUP CALLING — STD:
Extensions can be assigned to local paging groups, four (4) groups are available; an extension can appear in more than one group.
- cc. MEMO-OF-CALL — OPT:
The ZT Series telephone station with display provides a memo indication of up to four (4) extensions. One is dedicated for operator use.
- dd. MESSAGE WAITING/PICK-UP — STD:
Any station leaving a memo-of-call or message waiting indication can be called by pressing the message function key.
- ee. MICROPHONE CUT-OFF — STD:
A switch is provided to turn off the station microphone, preventing eavesdropping while allowing calls to be announced.
- ff. ON-HOOK DIALING/CALL MONITOR — STD:
The station user can initiate CO/PBX calls with the handset on-hook utilizing the station speaker in a monitor (one way) mode. The station speaker can be used at any time as a call monitor.
- gg. POUND/STAR KEY DTMF GENERATOR — STD:
Both the pound and star key will generate DTMF signals, so that DTMF signals can be transmitted for Centrex, PBX, computers and tape recorder applications.
- hh. PRE-SELECTION — STD:
The station user can pre-select a CO/PBX line key or ICM before taking the handset off-hook. "I-use" indication is provided on any function selected.
- ii. PROGRAMMABLE STATION FEATURE/ FUNCTION KEYS — STD:
All line keys except the fixed feature keys are flexible.
- jj. PROTECTED EXTENSION — STD:
A "protected extension" is an extension with a higher level of do-not-disturb. As a COS option enabling the feature, a busy protected extension cannot be called by any station.
- kk. SAVE/REPEAT NUMBER DIALED — STD:
The extension user can save a number that was dialed on a CO/PBX line and redial the number automatically when desired. Only one (1) number can be saved.
- II. SECRETARIAL HOTLINE TERMINATION — STD:
A "secretary ICM" termination provides a hotline to a dedicated station which will override a stations DND Mode.
- mm. STATION BACKGROUND MUSIC — STD:
As a standard feature, a station user can turn on and off their station music. Station music is automatically muted whenever a station is signalled or goes off-hook.
- nn. STATION SPEED DIAL — STD:
Each station in the system has twenty (20) station speed numbers which the user can program. Each speed number can contain up to sixteen (16) digits and can be accessed by codes 80 through 99.
- oo. STATION HEADSET ADAPTOR — OPT:
As a hardware option, a station can be

- equipped with a headset with a handset adaptor for high traffic CO/PBX calls.
- pp. STATION AMPLIFIED HANDSET — STD:
As a station option, a user can amplify a conversation where CO/PBX line conditions or background noise reduces conversation volume.
- qq. STATION LOCK-OUT — STD:
A station user can disconnect their station through the use of a personal identification number (PIN) which prevents the unauthorized use of telephones when station users are away from their instruments.
- rr. STATION NOISE CANCELLING HANDSET — OPT:
Designed for use in noisy areas where background noise will inhibit a station user from hearing the station conversation properly.
- ss. STATION DIRECTORY TRAY — STD:
Each electronic station is equipped standard with a system directory tray for listing station dial codes.
- tt. STATION SPEED KEY — STD:
Any unused line key or line key programmed for pick-up restriction can be programmed as a station speed key. This feature duplicates station speed dial numbers and is useful when operating behind a PABX.
- uu. TIMED REMINDER — STD:
A station user can initiate a "time reminder." The user enters the time of day that the system will return the message.
- vv. TIMED TRUNK QUEUEING — STD:
A station user, after completing dialing of a call and upon encountering a distant party busy, no answer can operate the time queue feature. After a period of one to fifteen minutes (system program option) the station will ring and the callback line is indicated. Upon going off-hook and operating the line key, the distant number is automatically dialed.
- ww. TRUNK QUEUEING (LINE/TRUNK GROUP) — STD:
A station user, upon encountering a busy line, can queue to the line key and enter the telephone number. When the outside line becomes free, that station rings and the call back line is indicated. Upon answering, the outside telephone number is dialed. Only one queue is allowed per station. Callback tone ringing operates for twenty (20) seconds and disconnects if the station does not answer.

- xx. USER PROMPTS
(DISPLAY KEY TEL. ONLY) — STD:
A key telephone can leave one of three visual messages which will be viewed by display telephone calling via the ICM Path.
- yy. WALL MOUNTING — OPT:
With an optional wall mount bracket, either the key telephone or DSS can be wall mounted.

4.00 DIRECT STATION SELECTION UNIT

4.01 The Omega-Phone IV ZT-D Series System provides a number of features for answering the distribution of calls in the system. The features include:

- a. ASSIGNABLE DSS KEY — STD:
Each DSS/BLF key has flexible extension assignment so that frequently signalled stations can be assigned specific keys.
- b. ATTENDANT BUSY LAMP FIELD — STD:
An integral busy lamp field is provided on the DSS. Different lamp indications are provided to indicate extension status. Included are indications for station busy/ringing, DND, camp-on and message waiting.
- c. ATTENDANT BUSY/DND OVERRIDE — STD:
Utilizing the "OVER (Override) key on the DSS unit, the attendant can override an existing conversation taking place at a called extension. The attendant cannot override a "protected extension."
- d. ATTENDANT CALLBACK — STD:
When the attendant signals a busy extension, the "callback" key will effect a station callback. Once the busy extension becomes idle, both stations will begin to ring.
- e. ATTENDANT CAMP-ON — STD:
After calling a system extension, the attendant can "camp" the call onto the extension. If the extension called is busy, abbreviated ring tone is heard through the station speaker, with line lamp flash indication.
- f. ATTENDANT DSS CALL — STD:
The attendant can call any station in the system by depressing a single DSS key.
- g. ATTENDANT PRIORITY — STD:
The attendant station has priority when accessing functions such as paging circuits.
- h. AUTOMATIC HOLD — STD:
When the attendant transfers a CO/PBX call

via the DSS unit, the CO/PBX line is automatically placed on "hold" upon depression of a DSS key.

- i. **AUTOMATIC RECALL — STD:**
Transferred calls which have "timed out" will automatically recall the attendant position. Calls will return to the DSS unit under the "recall" key.
- j. **CHAIN CALLING — STD:**
The attendant can depress a second or third DSS key without the need to hook-switch, flash or depress the release key when searching for an employee.
- k. **PAGE ACCESS — STD:**
The attendant has direct access to system "all call" (PA and extensions).
- l. **SERIAL CALL — STD:**
The attendant, upon answering an incoming call, can utilize the serial call feature to reconnect the attendant to the outside party when the first internal party finishes the call. The attendant is automatically recalled when the internal party goes on-hook.
- m. **NIGHT SERVICE CONTROL — STD:**
The attendant controls the operation of night ringing service.

5.00 SINGLE LINE TELEPHONE FEATURES

5.01 The Omega-Phone IV ZT-D Series System provides a number of features for the industry standard single line telephone. The features include:

- a. **ACCOUNT CODE CAPABILITY (SCDR) — OPT:**
When the optional SCDR feature is equipped, six (6) digit account codes can be entered from single line telephones.
- b. **CALL FORWARD — ALL CALL/STATION BUSY — STD:**
The single line station can operate the call forward, all call or station busy feature. Provisions are included for cancelling the call forward.
- c. **CALL FORWARD — NO ANSWER — STD:**
When a station user utilizes call forward no answer, both CO/PBX and ICM calls will be forwarded after ten (10) seconds.
- d. **CALL PARK/PARK PICK-UP — STD:**
A CO/PBX line can be placed in station "call park." Operation of the call park feature will accomplish this feature. The CO/PBX call

can then be retrieved by any extension in the system.

- e. **CLASS OF SERVICE — STD:**
All single line instruments have the following class of service settings. Each are programmable for allow or deny status. Single line telephones have various class of service assignments for allowing/disallowing certain operating features. Section 5 details the programming requirements of each.
- f. **CONSULTATION HOLD — STD:**
The single line telephone, while talking to an internal or external party, can place the call on "consultation hold" when attempting either to conference, camp-on or screen a second party.
- g. **DIAL TONE REORDER — STD:**
Allows the station user to reorder intercom dial tone and to place another internal call.
- h. **DATA SECURITY/OFF-HOOK SIGNAL (DENY) — STD:**
Single line telephones can prevent interruption by camp-on tones during off-hook conditions. This is useful during data transmission to prevent disruption of data.
- i. **GROUP CALL PICK-UP — STD:**
The single line station can be assigned to any of the four (4) pick-up groups in the system. Any station in a pick-up group can answer a call coming into the group by dialing a code.
- j. **DIRECTED DIAL CALL PICK-UP — STD:**
The single line station can answer any call at any other extension by using the call pick-up feature.
- k. **DISTINCTIVE RINGING (CO/ICM) — STD:**
This feature allows the station user to note the difference between an incoming CO/PBX call or ICM call.
- l. **DTMF/DP STATIONS — STD:**
Either DTMF or DP (Dial Pulse) stations can be used on the system. DP stations operate features in a different manner and are limited to specific feature operation.
- m. **MESSAGE WAITING ACTIVATION — STD:**
The single line station can leave a memo-of-call indication at any key telephone. The single line telephone has no message waiting lamp.
- n. **LAST NUMBER REDIAL — STD:**
A single line telephone can save up to thirty (30) digits to be redialed at a later time. DTMF type telephone activates save/repeat

by dialing pound (#), dial pulse telephones, dial eleven (11).

o. TRUNK GROUP SELECTION/ACCESS — STD:

The single line stations can access trunk groups. CO/PBX lines in the system can be assigned to any one (1) trunk group. Lines seized by single line telephones show busy on key telephones.

p. TRUNK GROUP SELECTION/RESTRICTION — STD:

Station users can be restricted from accessing a specific trunk group or specific CO/PBX line within a trunk group.

6.00 STATION FEATURE OPERATIONS

6.01 This section lists alphabetically each station feature and details its operation. Not all features can be accessed by SLTs. Features that are accessible with a single line telephone DP type are indicated. Operations are stated for each appropriate extension.

6.02 Many features require an operation by the station user. The user. The following section describes each feature and specifies how to activate it at an individual extension.

TABLE 3-A OPERATION SYMBOLS

Condition: Status before activity.	
[_]	Push specified operation button(s) on key telephone or SLMF.
[DSSn]	DSS flex keys 120-183
⓪	Lift handset off-hook.
/HF/	Hook flash, press and release hookswitch on telephone.
📞	Hang up, put handset on-hook (or press SPKR ICM).
(N)	Dial number such as a phone number, an account code, or extension number.
KT FLEX:	Operations performed on a key telephone with a flex key programmed for that function.
KT DEF:	Operations performed on a key telephone using standard default functions.
SL-MF:	Single Line Multi Frequency (push button) telephone.
SL-DP:	Single Line Dial Pulse (rotary) telephone.

a. The operations detailed in this section use the "Operation Symbols" to specify what action is required by the user. The following is an example of how the symbols are used.

KT Flex: ⓪ ... [DSSn] wait for busy tone
[*]
[ICM]

This means:

On a Key telephone with flexibly assigned direct station selection keys lift the handset off-hook, press a DSS key 120-183, wait for the busy tone, then press the * key and the ICM (intercom) key to override a call on another extension.

b. Table 3-A identifies all the operational symbols and abbreviations utilized.

6.03 Feature Operation - Key Telephone and SL Stations

Feature operation of the electronic key telephone and industry standard single line telephone are listed below. Figure 3-1 illustrates a ZT-24D model key telephone for reference.

a. Account Code

Account codes are used to identify individual calls for record keeping purposes. They are entered at each station while engaged with an outside line. Account codes are used in conjunction with the SCDR and will be displayed on "D" model telephones.

Condition:

⓪ ... while engaged on a CO/PBX line.

KT DEF: [FEAT] [O] [N] [N] [N]
(up to 6 digits)

KT Flex: [ACCNT] [N] [N] [N]
(up to 6 digits)

SL-MF: /HF/ [9] [N] [N] [N] (up to 6 digits)

SL-DP: /HF/ (dial up to 6 digits.) /HF/

b. Add-on Conference

A station user engaged on an outside line can add two additional internal extensions. This permits three-way internal conferencing.

Condition:

⓪ ... while engaged on a CO line.

KT DEF: [TRAN] (Extension number)

KT Flex: [TRAN] [DSSn] [CONF]

c. All Call Page-External

To announce over the public address system speakers, dial "85" on the ICM or press the flex key assigned 'ZONE O' (zone 0).

Condition:

Idle or ⓪ ... while engaged on a CO line.

- KT DEF: [8] [5] [ICM] state announcement
[LK] to resume conversation
KT Flex: [ZONEO] state announcement
SL-MF: /HF/ [8] [5] state announcement
SL-DP: /HF/ (85) state announcement
/HF/ to resume conversation
- d. All Call Page: Zone/Group
To make an announcement through the public address system and the ZT station speaker, dial "80" on the ICM or press the "PAGE" Key.
Condition:
Idle or $\text{\textcircled{C}}$... while engaged on a CO line.
KT DEF: [8] [*] state announcement
[LK] to resume conversation
DT Flex: [PAGE] state announcement
SL-MF: /HF/ [8] [*] state announcement
/HF/ to resume conversation
- e. All Page-Stations
Station users can announce to all ZT stations via the internal speaker by dialing "8*" or by pressing the Flex Key assigned "GPAGEO" (Group Page 0).
Condition:
Idle or $\text{\textcircled{C}}$... while engaged on a CO line.
KT DEF: [8] [*] state announcement
[LK] to resume conversation
KT Flex: [GPAGEO] state announcement
SL-MF: /HF/ [8] [*] state announcement
/HF/ to resume conversation
- f. Answer-Hold and Split
To toggle between two calls, while on a KT, press the "FLASH" key. To use this feature on a single line telephone, flash the hook switch.
Condition:
Engaged with an intercom or CO call while another call rings station. Use with intercom to intercom or intercom to CO/PBX call.
KT DEF: Conversation 1 [FLSH/BGM]
Conversation 2 [FLSH/BGM]
Conversation 1
- g. Automatic Answering
To answer an incoming call on a Key Telephone without pressing the specific CO/PBX line key or to answer an intercom call without picking up the handset, press the "SPKR" key. The "AUTOANS" key on a key telephone will enable or disable this feature.
Condition:
Handset on-hook, speaker off; incoming CO/PBX or ICM call
- KT Flex: [AUTO ANS]
KT DEF: not available
- h. Background Music: Internal/External
An external music source (e.g., an FM tuner) can be connected to the ZT-D system in order to provide background music through the internal station speaker or over the public address system. The music is automatically turned off when the station is in use or when the "FLSH" key is pressed.
Condition:
Idle
KT DEF: [FLSH/BGM]
- i. Built-in Speakerphone (OPTIONAL)
All CO/PBX calls can be engaged through an internal speakerphone (optional) rather than through the handset. This feature is not available on an SLT without the use of optional equipment manufactured by other companies.
Condition:
Station ringing
KT DEF: [LK] answer call
Condition:
To make call; line selector or automatic
KT DEF: [LK] (phone number)
- j. Busy Bypass Tone Calling/Override
While engaged on an CO/PBX call or an intercom call, a key telephone can receive a muted interrupt tone through the station speaker. The interrupt tone is a signal that another call (outside line or an intercom call) is waiting. A CO/PBX call is distinguished from an intercom call by a different tone. The outside party on the original call will not hear the interrupt tone. This feature will override an SLT engaged with an outside line without any warning or interrupt tone to the SLT. This feature is programmed on a per station basis.
Condition:
After dialing another extension and hearing a busy tone
KT DEF: [*] to interrupted extension
KT Flex: [OVER] to interrupted extension
SL-MF: [*] talk to interrupted extension
- k. Call Forwarding: All Calls
All calls can be programmed by the station user to be forwarded to another extension. Two chained forwardings are allowed by the system. The [FWD] key will flash if the station is in a call forward mode.

Condition:
Station idle, user desires to forward all calls to another extension.
KT DEF: Ⓣ... (Extension number) [FWD] [0] ... Ⓣ
KT Flex: Ⓣ... [DSSn] [FWD] [0] ... Ⓣ
SL-MF: Ⓣ... (Extension number) [0] ... Ⓣ
SL-DP: Ⓣ... (Extension number) [0] ... Ⓣ

l. Call Forwarding: Busy

When the station is busy, calls can be forwarded to a preprogrammed extension.

Condition:
Station idle, user desires to forward calls to another extension when station is busy.
KT DEF: Ⓣ... (Extension number) [FWD] [*] ... Ⓣ
KT Flex: Ⓣ... [DSSn] [FWD] [*] ... Ⓣ
SL-MF: Ⓣ... (Extension number) [*] ... Ⓣ

m. Call Forwarding Remote: CO/PBX Line

Incoming calls to the system can be automatically rerouted to an outside destination via the system conference circuit. The system can be programmed to handle four CO-to-CO forwarding groups for tenant services. Remote Call Forwarding can be activated by individual stations or from one station only (operator).

Condition:
Station idle, user desires to activate remote call forwarding.

KT DEF: Ⓣ... [FEAT] [SPKR] [TRAN]

n. Call Forwarding: No Answer

If a station call goes unanswered, it will be forwarded to a preprogrammed extension.

Condition:
Station idle, user desires to set station to forward calls if calls go unanswered
DT DEF: Ⓣ... (Extension number) [FWD] [#] ... Ⓣ
KT Flex: Ⓣ... [DSSn] [FWD] [#] ... Ⓣ
SL-MF: Ⓣ... (Extension number) [#] ... Ⓣ

o. Call Park/Pick-up

CO/PBX calls can be placed into a station's "call park". The call can be picked up by that extension or answered from another extension by dialing the specific call park extension number. One call park is allowed for each station. The parked call recalls the station if it is not answered within the programmed time of 16 seconds to 4 minutes.

Condition:
Ⓣ... and engaged on a CO/PBX line.

KT DEF: [FEAT] [2]
KT Flex: [PARK]
SL-MF: /HF/ [2] /HF/
SL-DP: /HF/ (2) /HF/

Condition:
To pick up a station call park from another extension.

KT DEF: [2] (Extension number) answer
KT Flex: [PARK] (DSSn) answer
SL-MF: Ⓣ... [2] (Extension number) answer
SL-DP: Ⓣ... (2) (Extension number) answer

p. Camp On

Incoming calls that are transferred to a busy station are automatically put on hold until the busy station becomes available. When the station is free, the call automatically rings through and connects the calling line that has been waiting. The camped-on call recalls the transferring station if it is not picked up within the programmed time of 10 seconds to 2.5 minutes. If the called station has an LCD, the transferring extension's number will be displayed.

Condition:
Engaged on a CO/PBX line, need to transfer that call to another extension.

KT DEF: [TRAN] (Extension number) ... Ⓣ
KT Flex: [TRAN] [DSSn] ... Ⓣ
SL-MF: /HF/ (Extension number) ... Ⓣ
SL-DP: /HF/ (Extension number) ... Ⓣ

q. System Hold/Pickup

As a standard system feature, CO/PBX lines that have been placed on "system hold" can be retrived by other extensions, even if the extensions are not equipped with that CO/PBX line appearance. Specifically used when the system is equipped with single line instruments or electronic instruments that are programmed with floating loop keys.

Condition:
Station idle, need to pick up CO/PBX line.

KT DEF: Ⓣ... [501/524] ... Ⓣ
SL-MF: Ⓣ... [501/524] ... Ⓣ
SL-DP: Ⓣ... [501/524] ... Ⓣ

r. CO/PBX Line Access

A maximum of nine incoming and/or outgoing trunk groups can be assigned to the ZT-D system. Each group may be accessed

by using the "FLT" function key or by using the assigned "FLT1" through "FLT9" station Flex Keys. Trunk groups may be used for tenant services and pick-up/toll call restrictions. CO/PBX Lines may be assigned to individual line keys for direct access.

Condition:

Station idle, need to pick up CO/PBX line to call out.

KT DEF: [LK] (Phone number)

KT Flex: [FLTn] (Phone number) or [FLT]
[1] through [9] (Phone number)

SL-MF: Ⓣ ... group number (91) through
(99) (Phone number)

SL-DP: Ⓣ ... group number (91) through
(99) (Phone number)

s. CO/PBX Line Queueing

If all outside CO/PBX lines are busy, a user may reserve access to a line in order to make a call. The user will be notified by a tone when a line becomes available.

Condition:

CO/PBX lines busy; user desires to make an outside call.

KT DEF: [LK] [FEAT] [9] (Phone number)

KT Flex: [LK] [CALBAK] (Phone number)

t. CO/PBX Timed Trunk Queueing

A Station user can operate the "time queue" feature after encountering a "distant party busy," "no answer," or "callback request." After a period of one to twenty minutes, the station will ring and the callback line will be indicated. Upon going off-hook and pressing the line key, the distant number will automatically be dialed.

Condition:

After dialing out on a CO/PBX line and the line is busy or goes unanswered.

KT DEF: [FEAT] [9]

KT Flex: [CALBAK]

u. Consultation Hold

This feature permits a call to be put on hold while the first extension notifies another of the call. A call put on Consultation Hold will ring the second extension if it remains on hold longer than the duration set by the hold recall timing.

Condition:

To transfer a CO/PBX call to another station after screening call.

KT DEF: [TRAN] (Extension number) ... Ⓣ

KT Flex: [TRAN] [DSSn] ... Ⓣ

SL-MF: /HF/ (Extension number) ... Ⓣ

SL-DP: /HF/ (Extension number) ... Ⓣ

v. Dial Tone Reorder

A user can make a second intercom or CO/PBX call while engaged on a line by pressing the "FLSH" button on a key telephone to reorder the dial tone. The hook-switch on an SLT puts the CO/PBX line on hold and intercom dial tone is reordered.

Condition:

Engaged.

KT DEF: [FLSH] (Number)

SL-MF: /HF/ (Number)

SL-DP: /HF/ (Number)

w. Directed Call Pick-up

A station can answer any call ringing at any other extension by using the dial codes assigned for the feature.

Condition:

Any station ringing.

KT DEF: Ⓣ ... [4] (Extension number)
Answer

KT Flex: Ⓣ ... [4] [DSSn] Answer

SL-MF: [4] (Extension number)
Answer

SL-DP: Ⓣ ... [4] (Extension number)
Answer

x. Doorphone Access

Doorphones (1 through 3) can be accessed from any extension.

Condition:

Station idle

KT DEF: Ⓣ ... (191) through (193)

KT Flex: Ⓣ ... [DOORn]

SL-MF: Ⓣ ... (191) through (193)

SL-DP: Ⓣ ... (191) through (193)

y. Do Not Disturb (DND)

A user can initiate a "Do Not Disturb" message indicator lamp if permitted by the station class of service. An LED on a KT indicates if the status is a station-on-hold or DND (do not disturb). Calls made from the DSS Console with the Executive Override feature will override "DND".

Condition:

Station idle.

KT DEF: [HOLD/DND]

z. Exclusive Hold

An individual station can put a CO/PBX call on Exclusive Hold, ensuring that no other

station can pick up that call. The busy indicator lamp will remain lit. The "I-HOLD" lamp will flash at the originating station. Any line not removed from Exclusive Hold will automatically recall the originating station within 1 to 7.5 minutes.

Condition:
Talking on CO/PBX line.
KT DEF: [LK]

aa. Executive Override

With Executive Override, a user at an executive station can interrupt and enter any conversation between an extension and an outside line or intercom call. The Executive Override feature will defeat a DND or "Off-hook" signal.

Condition:
To access a busy CO/PBX line.
KT DEF: Ⓣ ... busy [LK]

Condition:
To signal a busy extension.
KT DEF: Ⓣ ... (Extension number) wait for busy tone [*] [ICM]
KT Flex: Ⓣ ... [DSSn] wait for busy tone [*] [ICM]

bb. Group Call Pick-up

Incoming calls to a group of extensions may be answered from any extension within the group using the proper dial codes.

Condition:
Any station ringing.
KT DEF: Ⓣ ... [3]
SL-MF: Ⓣ ... [3]
SL-DP: Ⓣ ... (3)

cc. Group Page

The ZT station intercom speakers may be separately assigned to four groups. Each group can be accessed by dialing the appropriate intercom number or by pressing "GRP1" (group 1) through "GRP4" (group 4) Flex Keys. SLTs can access group page but cannot receive group page.

Condition:
Station idle.
KT DEF: Ⓣ ... [8] [5] through [8] [9] state announcement
KT Flex: Ⓣ ... [GRPN] state announcement
SL-MF: Ⓣ ... [8] [5] through [8] [9] state announcement
SL-DP: Ⓣ ... (85 through 89) state announcement

dd. Intercom Call

Each key telephone (KT) has an intercom and is capable of accessing other KT key by three-digit dialing or DSS key operation.

Condition:
Station idle, set for tone signalling.
KT DEF: Ⓣ ... (Extension number) state announcement
KT Flex: Ⓣ ... [DSSn] state announcement
SL-MF: /HF/ (Extension number) state announcement
SL-DP: /HF/ (Extension number) state announcement

ee. Intercom Callback

If an intercom is busy, the ZT-D will alert the calling station when the called station becomes available. Picking up the handset when the call back tone is heard will automatically redial the extension number. If the call back tone is not answered within a programmable time of up to 20 seconds, the "call back" is cancelled.

Condition:
Station off-hook; calling another station on ICM
KT DEF: [ICM] (Extension number) hear busy tone [FEAT] [Z]
KT Flex: [DSSn] hear busy tone [ICALBAK] ... Ⓣ

ff. Intercom Tone/Voice Signal

A station user has the choice of voice or tone signalling when calling another extension. With voice signalling, the user speaks into the intercom after dialing. With tone signalling, a tone precedes the intercom call. The called extension must lift the handset or press the speaker key to respond to the call.

Condition:
Station idle, set for tone/voice signal, change to voice/tone signal.
KT DEF: Ⓣ ... [ICM] (Extension number) [#]
KT Flex: Ⓣ ... [DSSn] [#]
SL-MF: Ⓣ ... (Extension number) [#]

gg. Master Hunt Group

When an intercom hunt group number is dialed, the call bypasses extensions in the group which are busy, call forwarded, or in a do-not-disturb mode. If the station does not answer within 20 seconds, the call proceeds to the next available station in the group. This feature does not allow voice calling.

Condition:
Station off-hook on ICM

KT DEF: [7] [1] through [7] [4]
SL-MF: [7] [1] through [7] [4]
SL-DP: (71 through 74)

hh. Message Display Absence

A "K" or "D" key telephone can leave a message at a key telephone that has an LCD. Display Phones are prompted with "RETURN AT (time)"; "RETURN ON (date)"; and "CALL (number)." Non-display phones can leave a message without prompting. Either model can activate message indicator lamps. In order to leave the above messages, the following codes must be entered.

CODE	MESSAGE
2	Return at (military time 24 hour clock)
3	Return on (day of week)
66	Monday
88	Tuesday
93	Wednesday
84	Thursday
37	Friday
72	Saturday
78	Sunday
4	Call (Phone number up to

Condition: 10 digits
To leave message at a display model phone.

KT DEF: Ⓣ... [FEAT] [SPKR] [6]
message code number
KT Flex: Ⓣ... [FEAT] [SPKR] [MSG]
message code number

Condition:
To cancel messages.

KT DEF: Ⓣ... [FEAT] [SPKR] [6] [*]
KT Flex: Ⓣ... [FEAT] [MSG] [*]

ii. Message Waiting/Call Back

If the station on ICM does not answer, the calling station can activate a message waiting lamp at the called station. A called KT station with an illuminated message waiting lamp can automatically return the call to the calling station if the "MSG" key is pressed. If there is no "MSG" key, the "FEAT" key will be illuminated.

Condition:
Called a station, no answer, to leave a message for call back or to call back.

KT DEF: [FEAT] [6]
KT Flex: [MSG]
SL-MF: HF/ (6)

Condition:
To cancel message
KT Station: [6] [*]
SLT: [6]

jj. Microphone Cut-off

The microphone cut-off switch enables the station user to toggle the station microphone on and off. This provides for room privacy during an intercom or CO/PBX line conversation.

Condition:
Station idle or engaged, Microphone on or off.

KT DEF: [MIC]

kk. Multi-Line Conference

A key telephone may initiate or access two CO/PBX trunk lines together and maintain communication to form a three-party conference. The initiate or access two CO/PBX trunk lines together and maintain communication to form a three-party conference. The initiating station may drop from the conference forming a trunk-to-trunk conference.

Condition:
Station idle.

KT DEF: Ⓣ... [LK1] (Phone number)
[HOLD/DND] [LK2] (Phone number) [FWD/M.CONF] [LK1]
resume conversation

ll. Night Service

Day ringing assignments may be changed to a preprogrammed night assignment (night mode) by pressing the "NT" key (See FLEXIBLE NIGHT ASSIGNMENT, system features).

Condition:
Station idle.

KT Flex: [NT]

On-Hook Dialing/Call Monitoring

By pressing the line speaker keys, outgoing CO/PBX calls can be made without using either the speaker in the telephone or the handset. The station user must use the handset to talk to the outside party once the call has been answered. The station speaker can be used to monitor a conversation.

Condition:
Station idle, handset on-hook.

KT DEF: [LK] [SPKR] (Phone number) pick up handset if call is answered
[SPKR] to terminate if call is busy or goes unanswered

mm. Operator Call

The attendant/operator may be contacted without dialing a three-digit intercom number. Dial "0" for single operator or "01" or "02" for dual operator.

Condition:

Station Idle.

KT DEF: Ⓣ ... [0] or [01] or [02]

KT Flex: Ⓣ ... [DSSn]

SL-MF: Ⓣ ... [0] or [01] or [02]

SL-DP: Ⓣ ... (0) or (01) or (2)

nn. Privacy Release

All CO/PBX line and intercom calls are private to the stations engaged in the call. However, a key telephone may release privacy by pressing the "CONF" (conference) key in order to permit additional stations (three maximum) to join the call. The call returns to privacy by pressing the "CONF" key again.

Condition:

Engaged in a CO/PBX call.

KT DEF: Originating station [CONF], other station joins by pressing [LK]

oo. Save/Repeat Dialing

A KT station will automatically redial up to 32 digits of the last number dialed. A dialed number can also be stored in the dial memory and used on a later call. If a number is to be saved for a later call, it must be saved after each use.

Condition #1:

To save number for later redial while dialing.

KT DEF: Ⓣ ... [LK] (Phone number)
[FEAT] [#]

Condition #2:

To redial last or saved number.

KT DEF: Ⓣ ... [#] or [SPKR] [#]

SL-MF Ⓣ ... [#]

(Not available on KF system).

pp. Secretarial Hot Line

A DSS key can be exclusively assigned to call a secretarial extension using the system intercom. Secretarial hot line automatic call overrides an ICM call in progress in the voice calling mode.

Condition:

Station idle.

KT Flex: Ⓣ ... [DSSn]

qq. Serial Call Attendant Feature

The system operator can sequence incoming calls to cycle back to the operator station

after each extension has finished with the call.

Condition:

Engaged with a CO/PBX call.

KT Flex: [SERIAL] ... Ⓣ

rr. Station Restriction Password

For security and/or call restriction, a station user may deactivate the station by using a PIN (personal identification number). The PIN must be programmed or changed at the operator DSS console.

Condition #1:

To disable an extension.

KT DEF: Ⓣ ... [FEAT] [SPKR]
[HOLD/DND] ... Ⓣ

Condition #2:

To activate a disabled extension.

KT DEF: Ⓣ ... [TRAN] [PIN]

ss. Speed Dial

The ZT-D can store a maximum of 80 System Speed Dial numbers (assigned 00-79). A KT extension can store a maximum of 20 Station Speed Dial numbers (assigned 80-99) of 16 digits. Each Speed Dial number can be accessed manually by dialing the appropriate code (00-99) or by using station speed dial keys SPD1 through SPD20, assigned to the Flex Keys. Use program number 25 to program speed dial numbers. On KF systems, CO line must be manually accessed.

Condition #1:

To access system/station speed dial.

KT DEF: Ⓣ ... or [SPKR] and [*] (SPD number, NN)

KT Flex: Ⓣ ... or [SPKR] and [SPDn]

SL-MF: Ⓣ ... [*] (SPD number, NN)

Condition #2:

To access a speed dial number with another phone number.

KT DEF: Ⓣ ... [HOLD] (SPD number, NN)
[FWD] (Phone number)

tt. Time Reminder

A KT unit with an LCD can be set to remind the station user of the time. At the set time, the station will ring and display the time.

Condition:

Station idle.

KT DEF: Ⓣ ... [FEAT] [SPKR] [6] [1]
enter time (military)

KT Flex: Ⓣ ... [FEAT] [MSG] [1]
enter time (military)

uu. Trunk-To-Trunk Conference

Two CO/PBX lines may be joined by any key telephone station and maintain connection when the initiating station hangs up.

Condition:

Engaged with two CO/PBX calls (multi-line conference).


KT DEF: [FWD/M.CONF] ... 


Universal Night Answering


By dialing the night call intercept code, any extension can answer an incoming call assigned to ring at a specific station.

Condition:

While in night mode

KT DEF:  ... [1] [0] [0] answer call

SL-MF:  ... [1] [0] [0] answer call


SL-DP:  ... (1) (0) (0) answer call


vv. Zone Page


A maximum of four public address paging groups may be assigned to the ZT-D system. These groups are called by manually dialing through the intercom or by using the "ZONE 1" (Zone 1) through "ZONE4" (Zone 4) station flex keys.


Condition:

Station idle.

KT DEF:  ... [ICM] [8] [N] (1-4)
state announcement

KT Flex:  ... [ZONE N]
state announcement

SL-MF:  ... [8] [N] (1-4)
state announcement

SL-DP:  ... (8) (N) (1-4)
state announcement

6.04 Direct Station Selection (DSS) Operation

a. The ZT-32C DIRECT STATION SELECTION CONSOLE (DSS) is utilized with a ZT-D key telephone. Its purpose is to provide additional keys for direct station selection signaling and feature/function keys. The ZT-32C DSS is recommended for use at the operator/receptionist position on 824 and 2464 systems.

b. The DSS Console is used for assigning station selection keys, operation of active features, and for local programming of all ZT-D systems (616, 824, 2664). The DSS is required for system programming unless an IBM compatible PC is used. The DSS is also used for making changes in the system's day-to-day operation.

NOTE: Do not confuse the Direct Station Selection Console (ZT-32C) with the key telephone direct station selec-

tion feature. All ZT-D key telephones have the ability to do "direct station selection" through available Flex Keys as a feature, whereas the ZT-32C is a device designed specifically for that specific purpose.


c. The DSS Console has eight function keys and 32 programmable station selection keys with indicator lamps. The function keys are set as default functions and cannot be changed. The DSS function keys perform the following functions:

- CALL BACK
- CONNECT
- MESSAGE
- NIGHT TRANSFER
- OVERRIDE
- RECALL
- RELEASE
- SERIAL CALL

d. Figure 3-Z illustrates the ZT-32C Direct Station Selection Unit.

e. The following are the operational aspects of each of the function keys on the DSS Unit.

- DSS Station Calling
[120] through [184] Direct Station Selection keys are used for one-button signalling of intercom extensions.

Operation:  ... [DSSn]
wait for answer and talk

- [CALBAK] The CALL BACK key enables the user to reserve the next use of a CO/PBX line if all lines are busy.

Operation: [CALBAK]
(Phone number) ... 

- [CONNECT] The CONNECT key is utilized to connect CO/PBX calls to extensions.

Operation: [LK] [DSSn] [CONNECT]

- [MSG] The MESSAGE key enables the user to activate the message waiting lamp on a called extension if the called extension is busy or does not answer.

Operation: [MSG]

- [NT] The NIGHT TRANSFER key changes system operation from day mode to night mode.

Operation: [NT]

- [OVER] The OVERRIDE key enables the user to interrupt a call in progress in order to communicate with an extension engaged in the call.

Operation: [DSSn] hear busy tone
[OVER]

- [RECALL] The RECALL key is utilized to answer recalls to the operator positions. All station recalls that are time queued or overflow to the operator are answered with this key.

Operation: [RECALL]

- [RELEASE] The RELEASE key enables the operator to end the current CO/PBX or intercom call and to automatically return to CO/PBX call.

Operation: [RELEASE]

- [SERIAL] The SERIAL key enables the user to return an outside caller to the operator position when the call has been completed.

Operation: Ⓣ ... [DSSn] [SERIAL]

7.00 OPERATOR/STATION DATABASE

7.01 Separate to the installer programmed system database, the system operator and the key telephone users can create and change the features of their own database. TABLE 3-A lists the features with the applicable stations. When a call comes into station engaged in the programming, a busy bypass tone is sent through the station speaker.

TABLE 3-A
 STATION DATABASE

FEATURE	OPERATOR STATION	KEY TELEPHONE
Night Mode		X
CO-to-CO Forwarding		X
Calender	X	
System Clock	X	
System Speed Dial	X	
- Other Station	X	
- Own Station	X	X
Reminder Message	X	X
Absence Message	X	X
Station Password	X	X

7.02 PROGRAMMING PROCEDURE

a. REMINDER MESSAGE

- **Station:** Operator and all Key Telephones
- **Procedure**

- (1) Wait for the station idle.
- (2) Pick up a handset and press [FEAT] and then [SPKR] key.
- (3) Press [6][1]. Display indicates

Reminder	10:54P
----------	--------
- (4) Enter four digits for military time (24 hr), i.e. [2][2][5][4] = 10:54 pm. Display changes to:

Reminder	10:54P
----------	--------

- (5) Hang up the handset.
NOTE: Press [MSG][1] instead of [6][1] if [MSG] key is provided on the instrument.

- (6) To erase the entry, press [FEAT] [SPKR][6][1][HOLD/DND]

b. ABSENCE MESSAGE

- **Station:** Operator and all Key Telephones
- **Procedure**

- (1) Wait for the station to become idle.
- (2) Pick up a handset and press [FEAT] and then [SPKR] key.
- (3) Press [6][2]. Display indicates

[62] -	Return at	nn:nn
[63] -	Return on	Wek
[64] -	Call=	

- (4) For "Return at" message, enter four digits of military time (24 hr) through the dial pad, i.e. [2][2][5][4] enters 10:54 pm and display changes to

Return at	10:54P
-----------	--------

For "Return on" message, enter two digits of week code:

- [7][8](SU) - Sunday
- [6][6](MO) - Monday
- [8][8](TU) - Tuesday
- [9][3](WE) - Wednesday
- [8][4](TH) - Thursday
- [3][7](FR) - Friday
- [7][2](SA) - Saturday

For example, [8][4] enters Wednesday and display changes to

Return on	WED.
-----------	------

For "Call Number" message, enter numbers to dial through the dial pad, i.e. [9][3][5][8][5][8][0] enters (935)-8580 and display changes to

Call=9358580

A "-" sign may be entered by using [FEAT] key for easy reading.

- (5) Hang up the handset.
NOTE: Press [MSG][2] through [MSG][4] instead of [6][2] through [6][3] if [MSG] key is provided on the telephone.

- (6) To cancel the message, press [FEAT][SPKR][6][*]

c. CALENDAR

- **Station:** Operator only
- **Procedure**

- (1) Wait for the station to be idle.
- (2) Pick up a handset and press [FEAT] and then [SPKR] key.
- (3) Press [2]. Display indicates

Date	MMDDYY WEK
------	------------

- (4) Enter two digits for month, two digits for day, two digits for year, then two digits for weekday,
i.e. [1][2]+[2][5]+[8][6]+[8][4] enters "December 25th, 1986, Wednesday" and display changes to

Date 122586 WED

NOTE: 1 MM-Month, DD-Day,
YY-Year, WED-Days of week
2 Day of week code: 78=SUN,
66=MON, 88=TUE, 93=WED,
84=THUR, 37=FRI and 72=SAT.

- (5) Hang up the handset.

d. SYSTEM CLOCK

- **Station:** Operator only

- **Procedure**

- (1) Wait for the station to be idle.
- (2) Pick up a handset and press [FEAT] and then [SPKR] key.
- (3) Press [3]. Display indicates

Current Time HHMM

- (4) Enter four digits of military time (24 hr) through the dial pad, i.e. [2][2][5][4] enters 10:54 pm and display changes to

Current Time 2254

NOTE: HH-Hour, MM-Minute

- (5) Hang up the handset.

e. SYSTEM SPEED DIAL/TENANT ASSIGNMENT

- **Station:** 120 only

- **Procedure**

- (1) Wait for the station to be idle.
- (2) Pick up a handset and press [FEAT] and then [SPKR] key.
- (3) Press [7][7][3]; then press [*][0][0] through [*][7][9] to assign the system speed dial codes. Example:

04G0C00= if [*][0][4] is entered.

- (4) Enter one digit (0 through 4) for the assigned ICM tenant group number and two digits for the CO line number. Then enter the dial number to be stored. For example,

*04-G3C24=123456 indicates speed dial number *04 has dial number "123456" for ICM Group 4 and it picks up CO line No. 24 automatically for "quick dialing" mode.

NOTES

1. [FEAT] key enters a three second pause.
2. [HOLD/DND]+([0][0]-[9][9]) chains other speed dial numbers.
3. The entry format is

*ss-Gf-Ctt=nnnnnn where

ss = Speed dial number 00 to 79,
f = ICM group number 0 to 4,
tt = CO trunk no. 00 to 24 or 3 + FLT group no. 1 to 9 (MF system only).
nnnnnn = telephone number.

- (5) Hang up the handset.

f. STATION SPEED DIAL - OWN STATION

- **Station:** Operator and all Key Telephones

- **Procedure**

- (1) Wait for the station to be idle.
- (2) Pick up a handset and press [FEAT] and then [SPKR] key.
- (3) Press [*][8][0] through [*][9][9] to assign the station speed dial code. Display changes to, for instance,

*80-C00=

- (4) Enter two digits for the CO line number then the dial number to be stored. i.e. *80-CO4=9358580 indicates the speed dial number *80 has (935)-8580 and it picks up CO line No. 4 automatically for "quick dialing" mode.

NOTES:

1. [FEAT] key enters a three second pause.
2. [HOLD/DND]+([8][0]-[9][9]) chains other speed dial numbers.
3. The entry format is *ss-Ctt=nnnnnn where
ss = Speed dial number 00 to 79,
f = ICM group number 0 to 4,
tt = CO trunk no. 00 to 24 or 3= FLT group no. 1 to 9 (MF system only).
nnnnnn = telephone number.

- (5) Hang up the handset.

g. STATION SPEED DIAL - INDIVIDUAL

- **Station:** Operator only

- **Procedure**

- (1) Wait for the station to be idle.
- (2) Pick up a handset and press [FEAT] and then [SPKR] key.
- (3) Press [1][2][0] through [1][8][3] for whichever desired extension(s) the operator will program the station speed dial. Display indicates, for instance,

Ext. 124 SPD Dial

- (4) The press [*][8][0] through [*][9][9] to access the specific station speed dial code. Display changes to, for instance,

*80-C00=

- (5) Enter two digits for the CO line number; then, the dial number to be stored, for example,

*80-CO4=9358580 indicates

speed dial number *80 has (935)-8580 and it picks up CO line No. 4 automatically for quick dialing mode.

(6) Hang up the handset.

h. NIGHT MODE SET/RESET

• **Station:** Key Telephones

• This operation is applicable only to the stations assigned by the system programming item <82>.

• **Procedure**

(1) Wait for the station to be idle.

(2) Pick up a handset and press [FEAT]=[SPKR]=[#] key.

(3) Hang up handset. At very first position on the station display, a character "N" appears to indicate that the system is now in the night mode.

i. CO-to-CO FORWARDING SET/RESET

• **Station:** Key Telephones

• **Description**

This operation is applicable only to the stations assigned by the system programming item <51>.

• **Procedure**

(1) Wait for the station to be idle.

(2) Pick up a handset and press [FEAT]=[SPKR]=[TRANS].

NOTE: The [TRAN] key flashes indicating the external call command is active.

numbers that are specific to business and geographical limitations are entered here. (See program 05.)

• One fixed basic table containing the North American Numbering Plan (NANP). This table is set and cannot be changed. (See program 28.)

• One flexible basic table. This table is used in place of the fixed basic data table. Users that are not limited to the NANP should program this table to meet regional numbering plans. (See program 28 and Table 8 in program 05.)

b. Class of Toll Restriction

Different extensions can be assigned varied levels of toll restricted calls. These are divided into 15 service classes that utilize the different basic and user data tables. (See program 77.)

c. Speed Dial Control

Calls initiated by speed dial functions at individual stations are not subject to toll restriction unless set by program parameters. (See program 63 in Toll Restriction Programming.)

d. OCC Access

The ZT-D permits the assignment of four O.C.C. numbers. These numbers can be used in conjunction with toll restriction or separately. Each number consists of an OCC table number (1-4), station authorization code, user toll-data table reference number, and calling number for the OCC office. (See programming guides and program number 15.)

8.00 OPTIONAL/MISCELLANEOUS FEATURES AND OPERATION

8.01 The ZT-D System is designed to reduce customer long distance billing by managing long distance calling. This is accomplished in three ways:

- Restricting outgoing toll calls to certain extensions and CO/PBX lines.
- Selecting the appropriate OCC line service.
- Recording incoming and outgoing calls for cost accounting and security purposes (SCDR).

8.02 Toll Restriction

a. Toll restriction is accomplished by limiting extensions to toll restricted numbers. Restricted numbers are organized into nine data tables which are accessible through the ZT-D programming. Data tables consist of the following:

- Seven programmable user data tables. These tables are programmed by the system user to meet individual company and "equal access" data needs. Toll and OCC

8.03 Station Call Detail Recorder (SCDR)

The SCDR is an optional unit that monitors line use by individual stations. Its primary function is to send call information to a designated printer or call management system for cost accounting or security monitoring. The SCDR requires the installation of a SDIFC board on the KSU and a system compatible printer.

a. SCDR Printout

There are two print formats for the SCDR printout; SCDR mode and Auxillary mode. The standard printer format (SCDR Mode) is useful for paper hardcopy with an 80 character printer. The Auxillary mode provides a serial output that is more conducive to call management systems or data storage/sorting devices.

- Call details include the following:
 - Call sequence number
 - Trunk/station number

- Originating/transferred extension number
- Call start and duration time
- Number dialed up to twenty-six (26) digits
- Account code up to six (6) digits
- Call identification: incoming, outgoing, attendant, toll, tenant
- Programmable functions to call details include:
 - Outgoing and/or incoming calls
 - Call for which an account code was entered
 - Calls on specific extensions/trunks
 - Calls exceeding a programmed time

ZT-D SYSTEM ELECTRONIC KEY TELEPHONE SYSTEM SECTION 4 — EQUIPMENT INSTALLATION

CONTENTS	PAGE	CONTENTS	PAGE
1.00 INTRODUCTION	4-2	STATION SPEAKERPHONE UNIT	4-35
2.00 SYSTEM PREPARATION	4-2	STATION MISCELLANEOUS ADAPTOR ...	4-35
FCC RULES/REGULATIONS	4-2	STATION HEADSET	4-40
INSTALLATION RECOMMENDATIONS ...	4-3	STATION WALL MOUNT	4-40
SYSTEM PLANNING GUIDE	4-3	NOISE CANCELLING HANDSET	4-41
OPTIONAL FEATURES	4-3	HEARING AID COMPATIBLE HANDSET ...	4-41
3.00 SYSTEM LOCATION/ENVIRONMENT	4-4	ZT-32C CONSOLE/DSS	4-41
ENVIRONMENTAL/STRUCTURAL CONSIDERATIONS	4-4	SINGLE LINE TELEPHONE	4-42
KSU LOCATION	4-4	DOORPHONES	4-44
AC POWER REQUIREMENTS	4-4	6.00 OPTIONAL SYSTEM EQUIPMENT	4-45
EARTH GROUNDING	4-5	POWER FAILURE TRANSFER PFXU	4-45
AC POWER TESTING	4-6	SCDR PRINTER	4-45
CO/PBX LINE CHARACTERISTICS	4-6	MODEM	4-45
4.00 KEY SERVICE UNITS	4-6	PC CONNECTION	4-45
GENERAL INFORMATION	4-6	7.00 CABLING	4-45
KSU DESCRIPTION	4-6	GENERAL REQUIREMENTS	4-45
KSU DISTRIBUTION PANELS	4-11	CO/PBX LINE CONNECTION	4-45
POWER SUPPLY UNITS	4-13	STATION CABLING	4-47
EMERGENCY BACK-UP POWER	4-16	OPTIONAL EQUIPMENT CABLING	4-50
KSU CARDS/COMPONENTS	4-17	8.00 OPTIONAL EQUIPMENT INSTALLATION ..	4-53
CPUHW PROCESSOR	4-17	EXTERNAL MOH	4-53
CO/PBX LINE INTERFACES	4-19	PA SYSTEM	4-53
SUBSCRIBER CARDS	4-21	ZONE PAGING	4-54
5.00 STATION/COMPONENTS INSTALLATION	4-29	BACKGROUND MUSIC	4-54
STATION EQUIPMENT — GENERAL	4-29	DAY/NIGHT LOUD RINGING	4-56
KEY TELEPHONES	4-29	DOORPHONES	4-57
KEY TELEPHONE OPTIONAL EQUIPMENT	4-35	SCDR	4-58
		REMOTE PROGRAMMING	4-59

1.00 INTRODUCTION

1.01 This section details the preparation for and installation of all system common equipment and station hardware. Description of each of the hardware components that make up the ZT-D series of systems is provided.

1.02 As a majority of common equipment hardware is upward and downward compatible with the ZT-D series, separate instructions are not provided for each of the three KSU cabinet sizes that comprise the system. Installation instructions reflect all three cabinet sizes and any differences are identified specifically.

1.03 Included in the section are relation FCC information as regards FCC Part 68 equipment registration as well as hard-of-hearing compliance.

1.04 Preparations for installation are underlined including determination of actual equipment hardware needed for meeting the user requirements.

2.00 SYSTEM PREPARATIONS

2.01 FCC Rules and Regulations

a. The ZT-D Electronic Key Telephone system is FCC, Part 68, registered as a fully-protected multi-function (hybrid) key telephone system. The following information shall be supplied to the local telephone operating company when requesting service terminating in the ZT-D system.

- System Model IWATSU OMEGA-PHONE IV, ZT-616, ZT-824, ZT-2464
FCC Registration No. BD687Y-72879-MF-E (multi-function)
Ringer Equivalence No. 0.4A/0.8B
Means of Connection: RJ11C (ZT-616), RJ21X. (ZT-824/2464)
- OPS LINE CARD
Facility Interface Code OL13A/OL13B/OL13C
Network Addressing Signalling Code E
Means of Connection: RJ21X

b. Future consideration call for registering the ZT-D series of systems as a Key Telephone-Fully Protected (KF) rather than Multi-Function-Fully Protected (MF) as indicated in paragraph a. above. When available, the selection between KF and MF type of FCC registration will be dependent upon the following:

1. KF registered system will allow for only direct CO line terminations or terminations that provided for individual access to any CO line through dialing specific codes.

2. MF registration will provide both direct CO line termination as well as pooled access facilities to single or multi trunk groups.
- c. The type of system utilized is dependent upon the user needs and local tariff compliance. Generally, MF type systems may not be connected to tariffs specifying direct terminations. Check the telephone company tariffs in the operating area in order to insure compliance.
- d. To provide for KF and MF system, two types of system CPU cards will be available. They differ only in operations software.
 - Model KCPUHW for KF systems
 - Model MCPUHW for MF systems
- e. Standard ZT-D key telephones are equipped with a non-hearing aid compatible handset. FCC rules require the use of hearing aid compatible equipment in certain locations. The optional SHAD-Z handset must replace the standard handset in order to meet these requirements. FCC regulations are as follows:
 - Any public or semi-public location where coin operated or credit card telephones are located.
 - Elevators, highways, tunnels, automobile, subway or pedestrian walkways where a person with impaired hearing might be isolated in an emergency.
 - Places where telephones are specifically installed to alert emergency authorities such as fire, police or medical assistance personnel.
 - Hospital rooms, residential health care facilities, convalescent homes and prisons, specifically where telephones are used for signalling life-threatening or emergency situations where alternative signalling methods are not-available.
 - Work stations for hearing impaired personnel.
 - Hotel, motel, apartment lobbies, in stores where telephones are used by patrons to order merchandise; in public transportation terminals where telephones are used to call taxis; or to reserve lodging or rental automobiles.
 - Hotel and motel rooms. (At least ten percent of the rooms must contain hearing aid compatible telephones or contain jacks for plug-in hearing aid compatible telephones which will be provided to hearing impaired customers upon request.)

- f. Single line telephones used on the system are also subject to FCC rules regarding hard-of-hearing capabilities. Refer to the model and type of telephone(s) used as to their eligibility. A card is provided with each KSU detailing FCC requirements as regards user rights and responsibilities when connecting public telephone company lines to the equipment. This card should be presented to the user and explained in accordance with FCC Part 68 regulations.

2.02 Installation Recommendations

- a. Although the ZT-D system is designed to operate with or without an assigned "system operator" (usually referred to as the "attendant") who serves as the main answering position, it is recommended that at least one operator is assigned per system tenant. ZT-D can accommodate up to two operators per system.
- The programming positions are fixed at extension port numbers 120, 121 and 122. It is not necessary to be an operator but the port No. 120 must be a key telephone. Otherwise, system reprogramming becomes impossible. Ports 121 and 122 are recommended to be assigned to a model ZT-32Cs DSS as a programming tool.
 - Maximum feature utilization can be accomplished at the operator position by using a ZT-24 key telephone with an LCD display. The ZT-24D provides flexibility for programming CO line keys ([LK]), feature operation keys, and direct station selection keys, while permitting the operator to monitor system status.
- b. The DSS Console gives additional flexibility to the operator station. The DSS Console can be used with the ZT-616, ZT-824 and ZT-2464 systems. The DSS Console may also be used as an autodialer with the ZT-D system. All keys on the DSS Console are flexible.
- c. All system and station features are accessible by any ZT-D electronic key telephone. Many features are available on both the DP and MF SLTs. The following features are associated with the operator position.
- Program Station Speed Dial for MF SLT and DSS
 - Calendar and Clock Set
 - Override Station Busy*
 - Program System Speed Dial
 - Night Transfer*
 - Message Wait*
 - Recall Pick-up*
- Notes:
- * Indicates that dedicated keys are provided on the DSS-32C Console.

2.03 System Planning Guide

- a. KSU, Power Supply and MDF
- Refer to Table 4-A to determine required KSU capacity, Power Supply and MDF by matching the system CO and station size.

TABLE 4-A KSU, POWER SUPPLY AND MDF

STATION MAX CAPACITY	CO LINE MAX CAPACITY			EXPANSION POWER HARDWARE SUPPLY	
	6	8	24	MDF	PWS
1 to 16	616KSU			—	—
to 24	824KSU	824KSU		—	PWSB
to 32	2464KSU	2464KSU	2464KSU	—	PWSC
to 64	2464KSU	2464KSU	2464KSU	AMPA24	PWSC

- b. CO/PBX Lines
- Refer to Table 4-B to determine type and quantity of CO line card model COTL required.

TABLE 4-B COTL REQUIREMENTS

NUMBER OF CO LINES TERMINATED	COTL MODEL		
	COTL4	COTL6	COTL8
Up to 4	1	0	0
Up to 6	0	1	0
Up to 8	0	0	1
Up to 12	1	0	1
Up to 14	0	1	1
Up to 16	0	0	2
Up to 20	1	0	2
Up to 22	0	1	2
Up to 24	0	0	3

- c. Extension Cards
- Table 4-C lists station type and capacity of each type of ZT-D system subscriber card. Fill in the required type and quantity of the extensions to determine the correct cards and quantity to be installed in the system.

TABLE 4-C SYSTEM SUBSCRIBER CARDS

TYPE CARD	EXTENSIONS/CARD		
	KT and DSS	SLT	OPX
KTSB8	8	0	0
SLSB8	0	8	0
SLKT8	4	0	4
Total	[]	[]	[]

- d. Optional Features
- Table 4-D lists system features and required optional KSU components. The maximum number of an optional component required is one, regardless of how many features are assigned to the component, e.g., PAGE and Doorphone features require only one DSPC82.

TABLE 4-D OPTIONAL COMPONENTS

	RECV2/8	FRIFC	SDIFC	DPPAG	DSPC82	RNGER	DCDC-Z/Z1	SW.BOX
On-premise SLT	(X)					X		
Off-premise SLT	(X)					X	X	
External Page				X	X			
External Ringer		X			X			
Remote Control		X			X			
Doorphone				X	X			
SCDR Printer			X	X	X			
Remote Programming		X	X		X			X

Note: RECV2/8 required when a SLT is DTMF (2500) type.

3.00 SYSTEM LOCATION AND ENVIRONMENT

3.01 Externally mounted power supplies, ZT-PWSB (824) and ZT-PWSC (2464) are UL listed, the ZT-616KSU is UL listed since the PWSA is internally mounted. However, environmental and structural considerations, AC power and grounding requirements, and CO line characteristics must be satisfied in order to operate the system properly. The following is a description of the above conditions.

3.02 Environmental And Structural Considerations

- a. It is important to comply with ample allowance, for ambient conditions specified for system installation. The system (KSU) location must be free of moisture, fumes, dust and vibration. Any deviation from the recommended environment may affect the proper operation of the ZT-D system.
- b. Insure that environmental conditions meet those requirements listed in Table 4-E prior to system operation.

TABLE 4-E ENVIRONMENTAL REQUIREMENTS

Operating temperature	-5°C to 45°C/23°F to 113°F
Storage temperature	-10°C to 50°C/14°F to 122°F
Relative humidity	10 to 90%
Static discharge	10 KV or less
AC line noise	1KV/10uS or less
Electromagnetic Interference	0.3 V/ft. or less
Ventilation	1 inch or more from all sides of KSU and power supply

3.03 KSU Location

- a. The same conditions are required for all ZT-D series KSU installations. Each KSU is designed to be mounted on a wall, rack or standing on the floor. When installing the KSU, make sure that all requirements for AC power and grounding are satisfied as per para. 3.03.

b. KSU Location Requirements:

- Mount the KSU within 5 feet of a dedicated three-wire grounded AC outlet.
- Install the KSU within 25 feet of the network interface provided by the local telephone company or the cross connect serving the area of the building where the KSU is installed.
- Allow enough space for the installation of additional equipment (e.g., MDF blocks, PFXU, SCDR, etc.) and air circulation.

c. CAUTION The KSU must NOT be placed in the following areas:

- Near sweating pipes, steam pipes or steam vents.
- In an extremely hot or cold area.
- In direct sunlight.
- In areas where corrosive fumes or exhaust from machinery is present.
- In areas where high power RF transmitter or the transmission cable is installed.

d. Figure 4-1 illustrates the recommended installation environment.

3.04 AC Power Requirements

- a. For proper operation of the ZT-D system, clean AC power and a good earth ground is required. The customer must provide a dedicated single-phase, 120 volt AC, 60Hz, 15 amp grounded outlet. This circuit should conform to the National Electrical Code and be capable of delivering noise-free power to the KSU power supply unit.
- b. Line noise in the form of electromagnetic interference (EMI) may cause certain problems in the ZT-D system. Some problems, which may occur if the system is not fully protected from EMI, are system shut-down, dropping CO/PBX calls in the middle of a conversation, and phantom ringing.

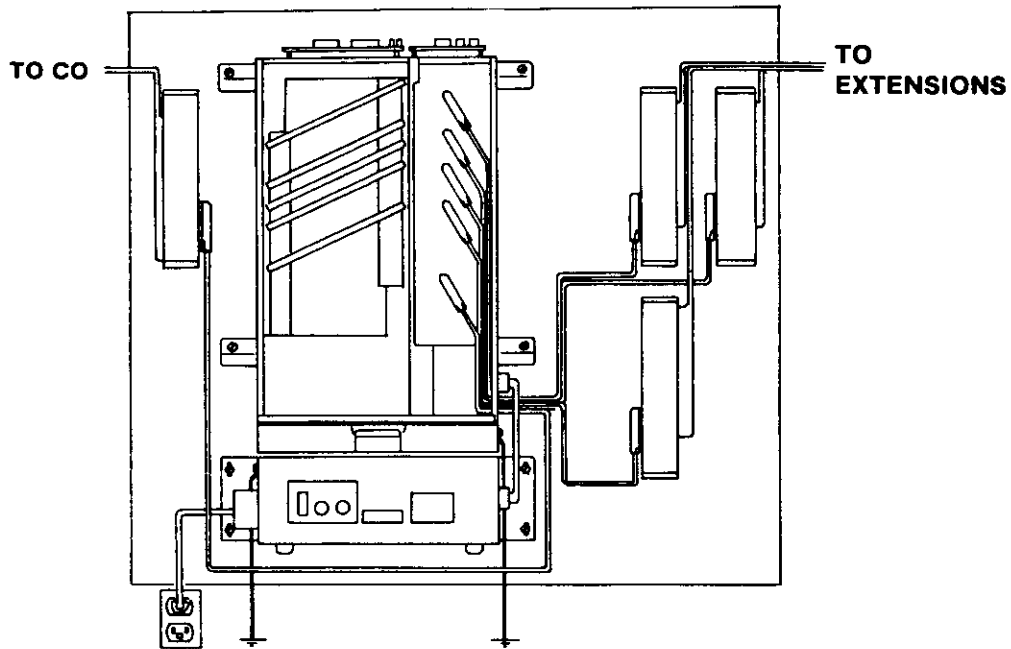


FIGURE 4-1 INSTALLATION LAYOUT

c. To protect the ZT-D system from EMI problems:

- Install a noise filter in the AC power input line to prevent noise interference from the AC line.
- Install a computer grade AC line stabilizer to compensate for line voltage fluctuations if they occur.
- Install a battery back-up to maintain proper system power if black-out occurs often.
- Use a dedicated AC circuit with an isolated ground.
- Do not place high-powered or heavy-duty machinery near the KSU.

c. A separate grounding conductor must be run from the ground terminal on the KSU power supply to the effective earth ground as described in the National Electrical Code. All grounding conductors should be a minimum AWG 14 or larger wire. The insulation should be green or green-and-yellow striped. Use crimp terminals for all stranded wire. Figure 4-3 shows the recommended termination for grounding on power supply units, and ground buses.

3.05 Earth Grounding

a. Of the various methods for protecting from interference, the simplest is to insure that the KSU and power supply are properly bonded to an earth ground. The system will be better able to withstand external interference, particularly static discharges to the KSU cabinet. Proper grounding is shown in Figure 4-3 (page 4-7)

b. It is important that ground wires be individually connected from each screw on each component to a separate grounding point. If the ground wires are bound together at any point, instead of being run separately, their common impedance will make the grounding less effective against interference.

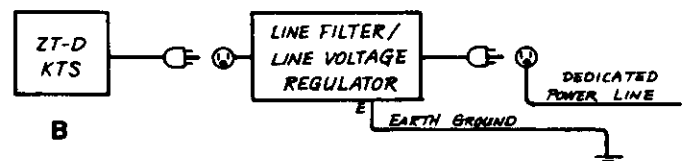
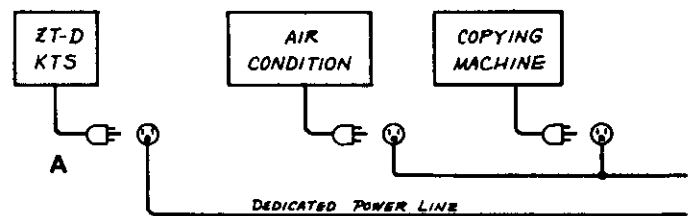


FIGURE 4-2 AC POWER CONNECTION

3.06 AC Power Testing

- a. Prior to installing the ZT-D KSU, check the following at the customer site:
- For daily working hour
 - Frequency of black-out
 - Frequency of brown-out
 - If any other computerized equipment in use
 - Existance of any problem on the operation
 - Power cable placement
 - Use of the AC power stabilizers
 - If any heavy duty machine in use
 - Neighboring businesses and possible effects

b. Using testing equipments available,

- With multimeter at AC voltage setting, check
 - Lowest line voltage — usually most busy business hours
 - Highest line voltage — usually off-business hours
 - Fluctuating line voltage — when heavy duty machinery such as air conditioning or heaters is turned on/off.
- When a line monitor is available
 - Record the line condition at least for a week at the outlet where the KSU is to be connected.

3.07 CO/PBX Line Characteristics

If transmission test equipment is available, insure that the telephone lines in service meet local tariff specifications as to attenuation and voice quality.

4.00 KEY SERVICE UNITS

4.01 General

- a. The ZT-D Key Service Unit (KSU) is the nucleus of the ZT-D system. There are three models available: the ZT-616KSU supports 6 CO/PBX lines and 16 extensions; ZT-824KSU supports 8 CO/PBX lines and 24 extensions; and the ZT-2464KSU supports 24 CO/PBX lines and 64 extensions. Additionally, there are three different power supplies due to the different power requirements of the KSUs.

- b. Each KSU consists of a single cabinet that contains a mother-board which accomodates plug-in circuit card modules, distribution panels for access to CO lines, extensions, and optional equipment. The KSU can be either wall mounted or floor mounted (a rack mount unit is provided with the KSUs).
- c. Use four screws provided to mount the two Wall Mounting Brackets to back of the KSU. Then mount the KSU to a plywood backboard that will support the KSU, Power Supply and MDFs as shown in Figure 4-4. (Page 4-7/4-8).
- d. Referring to Table 4-F, inspect all the accessories provided with the system components.

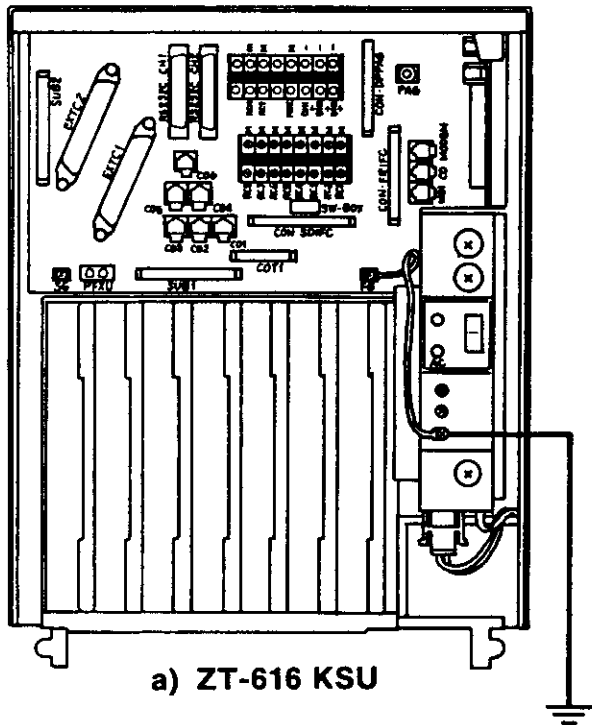
TABLE 4-F COMPONENTS ACCESSORIES

COMPONENTS	ACCESSORIES	Q'TY
ZT-616KSU	Wall Mounting Bracket	2
	Floor Mounting Bracket	2
	DC Power Cable	1
	Grounding Wire	1
	Mounting Screws	12
ZT-824KSU, ZT-2464KSU	Wall Mounting Bracket	2
	Floor Mounting Bracket	2
	DC Power Cable	1
	Grounding Wire	2
Power Supplies PWSB, PWSC CPUHW	Wall Mounting Brackets	2
	Mounting Screws	4
	MOH Cable	1
	BGM Cable	1
COTLs	16-cond. 1-ft. ribbon cable	1
KTSB, SLSB, SLKT	32-cond. 1-ft. ribbon cable	1
FDIFC, SDIFC, DPPAG	32-cond. 2.5-ft. ribbon cable	1
AMPA24	Mounting Screws	4
RNGER	Mounting Screws	2
DCDC-Z/Z1	Mounting Screws	2

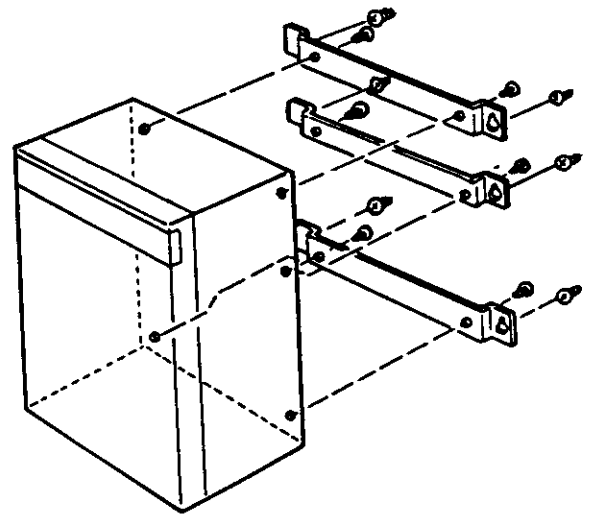
4.02 Individual KSU Descriptions

a. ZT-616 Key Service Unit

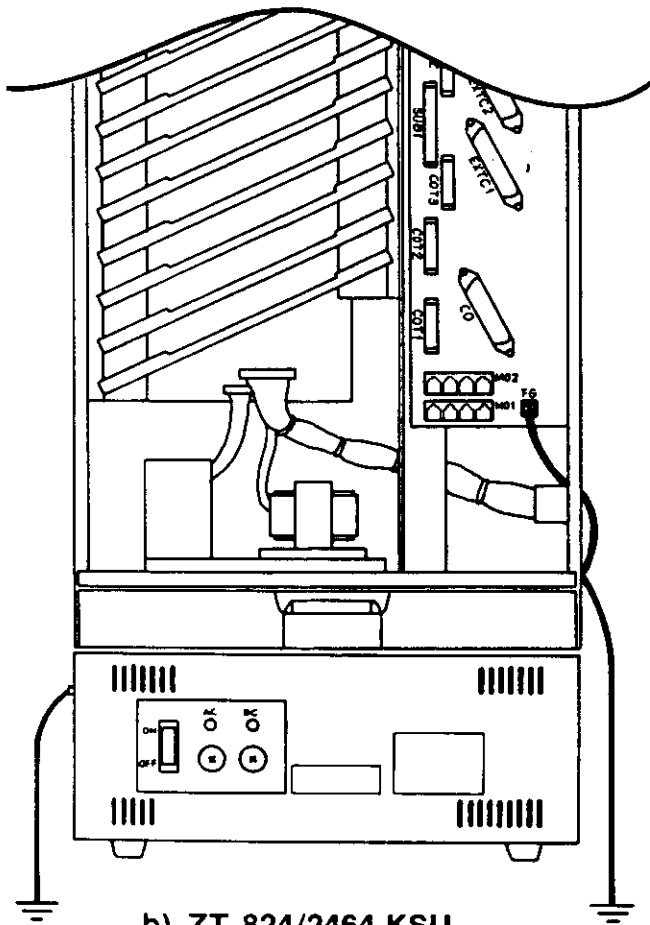
- The ZT-616 KSU provides for system configurations of up to six (6) CO/PBX lines and sixteen (16) extensions. Its power source is an internally mounted PWSA unit.
- Figure 4-5 illustrates a ZT-616 KSU with its cover removed and details the major components and card slot locations.



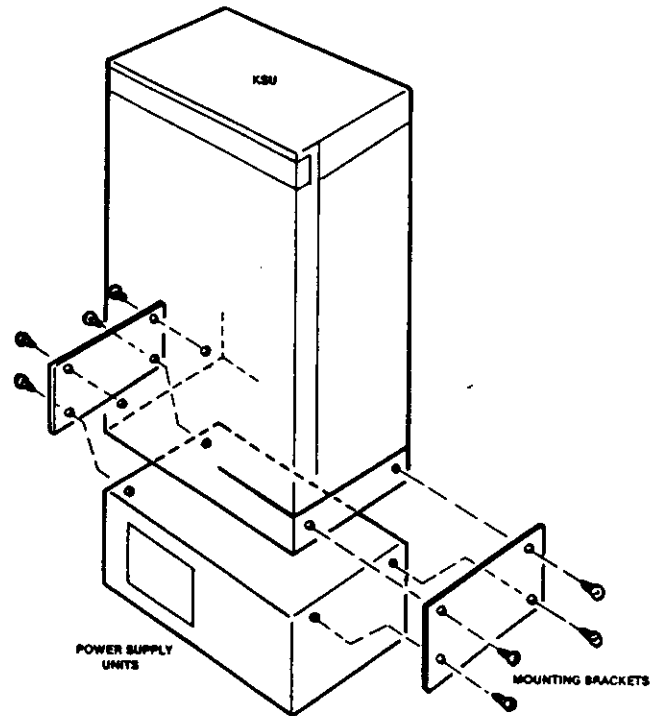
a) ZT-616 KSU



a) ZT-616 KSU



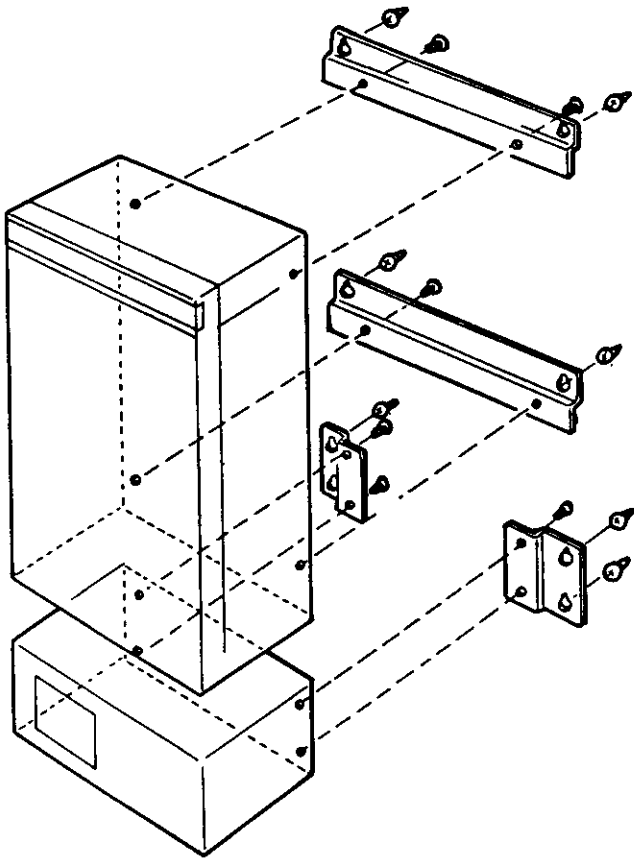
b) ZT-824/2464 KSU



b) ZT-824/2464 KSU

FIGURE 4-3 SYSTEM GROUNDING

FIGURE 4-4 ZT-D KSU AND MOUNTING



ZT-824/2464 KSU

- Wiring diagram for the ZT-616 KSU with PWSA, Batteries, ring generator RNGER and DCDC-Z1 circuit cards is shown in Figure 4-6 (Page 4-9).

b. ZT-824 Key Service Unit

- The ZT-824 provides for system configurations of up to eight (8) CO/PBX lines and twenty-four (24) extensions. Its power source is an externally mounted model ZT-PWSB power supply unit.
- Figure 4-7 illustrates a ZT-824 KSU with its cover removed and details the major components and slot locations. (Page 4-9).
- Wiring diagram for the ZT-824/2464 KSU with the power supply PWSA, Batteries, RNGER and DCDC-Z units is shown in Figure 4-8. (Page 4-10).

c. ZT-2464 Key Service Unit

The ZT-2464 provides the largest system configuration of up to twenty-four (24) CO/PBX lines and sixty-four (64) extensions. Its power source is an externally mounted model ZT-PWSC power supply.

Figure 4-9 illustrates a ZT-2464 KSU with its cover removed and details the major components and slot locations.

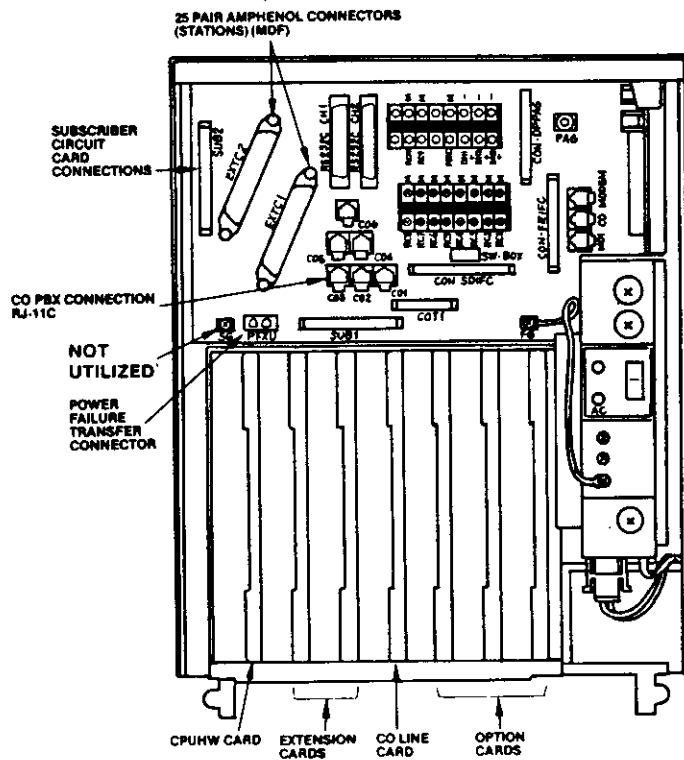


FIGURE 4-5 ZT-616 KSU

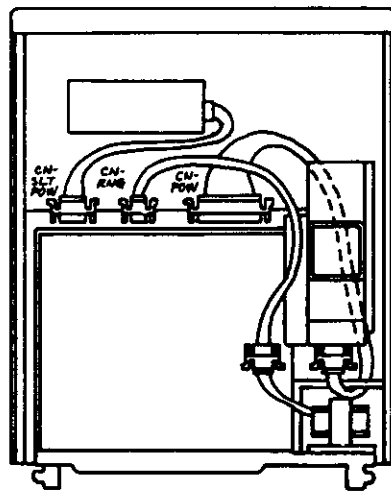


FIGURE 4-6
 ZT-616 POWER SYSTEM WIRING DIAGRAM

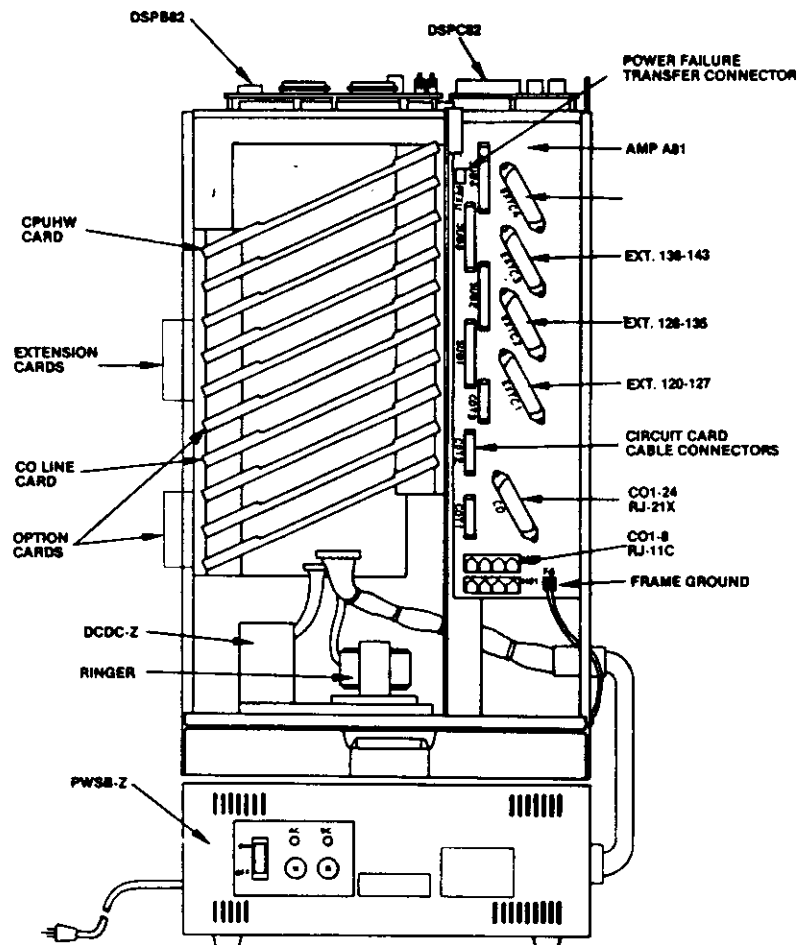


FIGURE 4-7 ZT-824 KSU

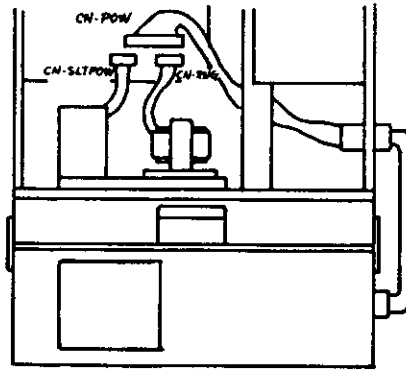


FIGURE 4-8 ZT-824/2464
POWER SYSTEM WIRING DIAGRAM

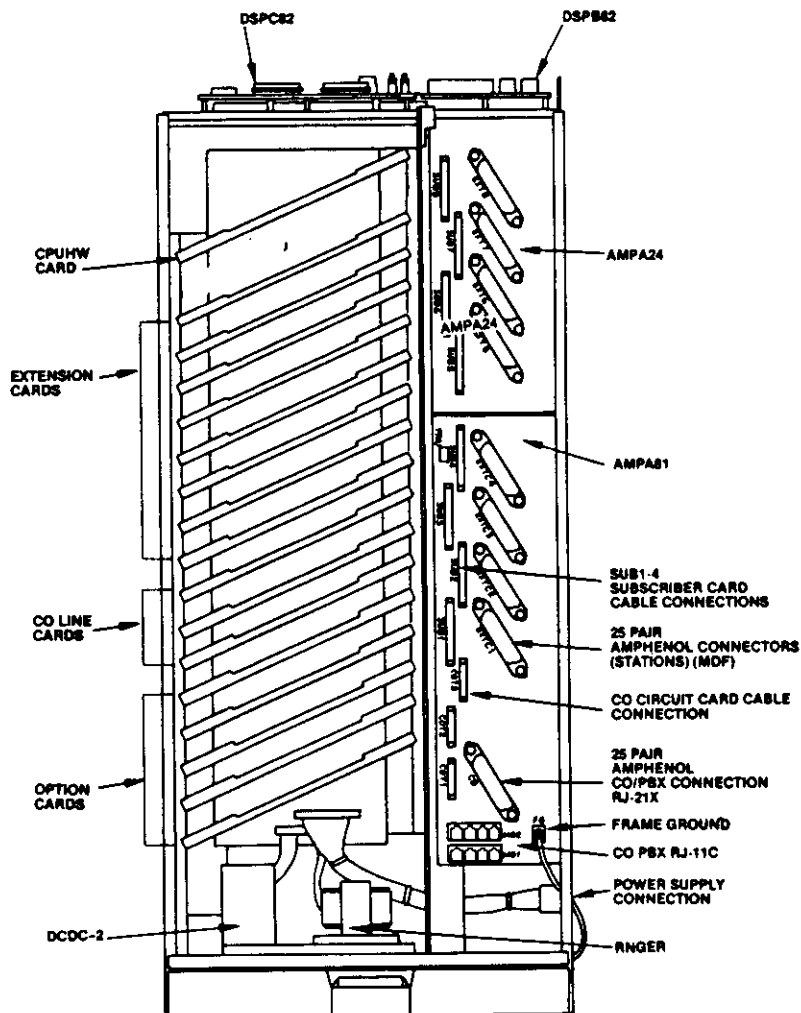


FIGURE 4-9 ZT-2464 KSU

4.03 KSU Distribution Panels

- a. Each KSU is equipped with distribution panels for connection of CO/PBX lines, extensions and customer provided equipment such as a P.A. System and SCDR Printer. Distribution and MDF panels come installed from the factory except the optional DSPC82 on the ZT-824KSU and the DSPC82 and AMPA24 on the ZT-2464 KSU. Installation of the distribution panels depends on the type of KSU system.
- b. Table 4-G lists the Distribution and MDF panels for each KSU.

TABLE 4-G KSU DISTRIBUTION POINTS

	ZT-616KSU	ZT-824KSU	ZT-2464KSU	
			2432	2464
AMPA6	S	—	—	—
AMPA24	—	—	—	O
AMPA81	—	S	S	S
DSPA6	S	—	—	—
DSPB82	—	S	S	S
DSPC82	—	O	O	O

Notes:

- 1. S: Standard with KSU, O: Optional

c. AMPA6 Distribution Panel

- Description: AMPA6 panel terminates CO lines. Power Failure Transfer Unit, intra-house station wiring, doorphones, P.A. system, external device control wiring, SCDR and Modem for remote programming for ZT-616KSU.

d. AMPA81 Distribution Panel

- Description: AMPA81 panel terminates CO lines. Power Failure Transfer Unit, intra-house station wiring for up to 32 extensions for ZT-824 and ZT-2464KSU.

e. AMPA24 Distribution Panel

- Description: AMPA24 panel terminates intra-house station wiring of additional 32 extensions for ZT-824 and ZT-2464KSU.

Mounting

- Use six screws and mount the AMPA24 board at the upper right front of the ZT-2464KSU as shown Figure 4-12.

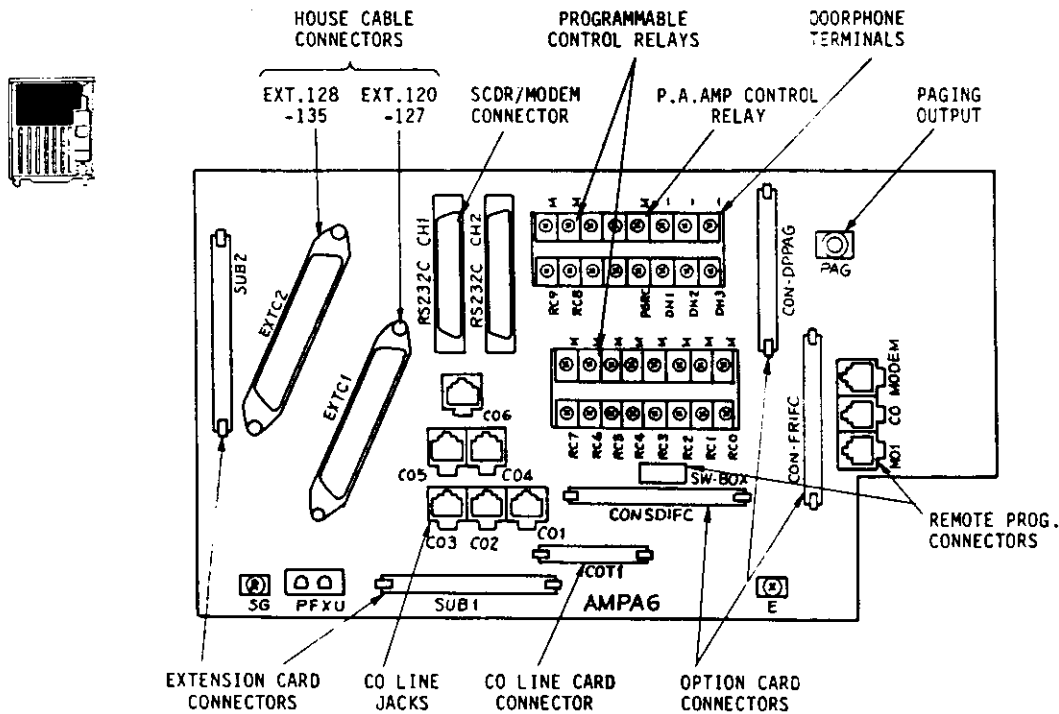


FIGURE 4-10
AMPA6 MDF PANEL (ZT-616 KSU)

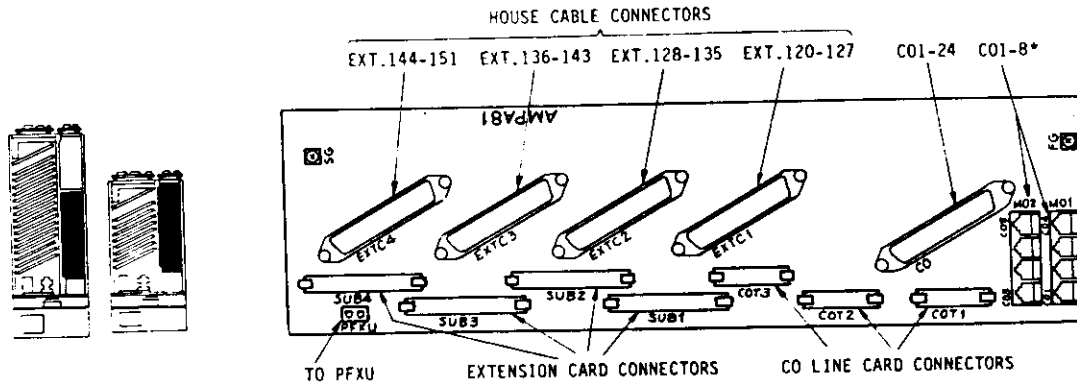


FIGURE 4-11
AMPA81 MDF PANEL (ZT-824/2464 KSU)

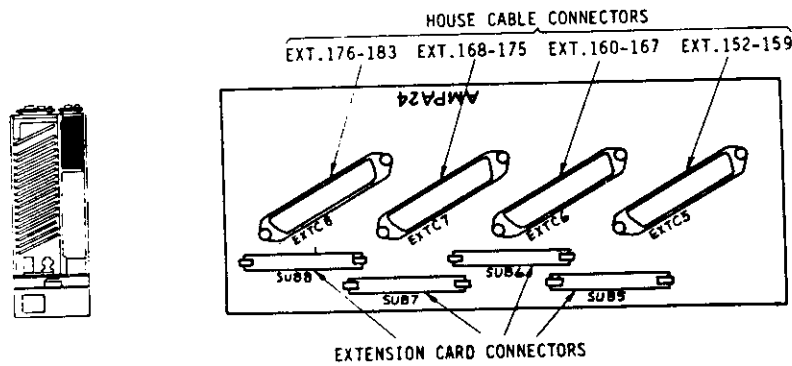


FIGURE 4-12
AMPA24 MDF PANEL (ZT-2464)

f. DSPA6 Distribution Panel

- Description: DSPA6 panel terminates MOH and BGM input circuits and BGM control wiring for the ZT-616KSU.

g. DSPB82 Distribution Panel

- Description: DSPB82 panel terminates MOH and BGM input circuits and BGM control wiring for the ZT-824/246KSU.

h. DSPC82 Distribution Panel

- Description: DSPC82 panel terminates doorphones, P.A. system, external device control wiring, SCDR and Modem for remote programming for the ZT-824 and ZT-2464KSU.

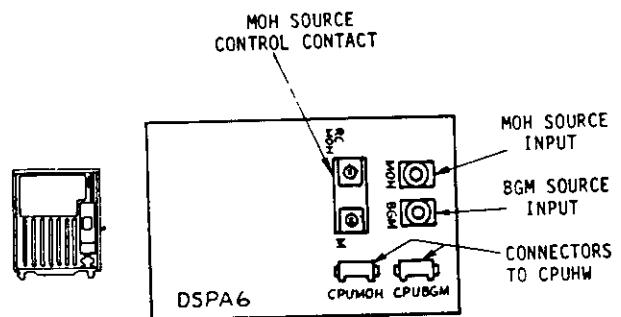


FIGURE 4-13
DSPA6 DISTRIBUTION PANEL (ZT-616 KSU)

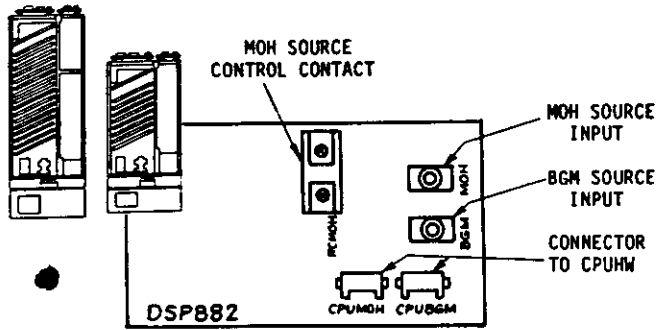


FIGURE 4-14 DSP882 DISTRIBUTION PANEL
 (ZT-824 AND ZT-2464 KSU)

Mounting

1. The DSPC82 is an optional MDF panel for installing a P.A. system, external device control relays, a SCDR printer and remote programming.
2. Position mounting holes of the DSPC82 over the plastic locking supports at top left of the ZT-824/2464KSU and push the board down into the supports one by one until all supports lock securely.

4.04 Power Supply Units

- a. The ZT-D system requires that each KSU have its own power supply unit. On the ZT-616 KSU, the power supply comes mounted internally. The 824 and 2464 KSUs have externally mounted power supply units that must be connected to the KSU.

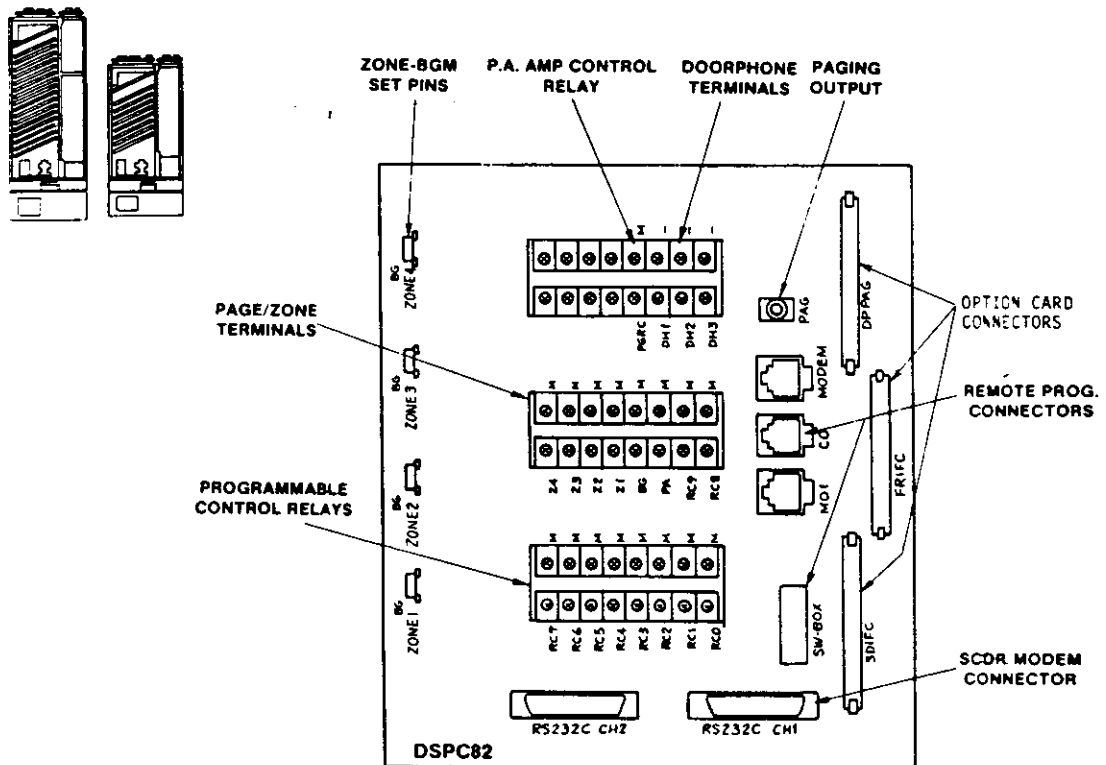


FIGURE 4-15 DSPC82 DISTRIBUTION PANEL
 (ZT-824 AND ZT-2464)

- The main power supply unit generates the necessary DC voltages required for system operation. In all three (3) system, the DC supply voltages are +5 Vdc, +8 Vdc and +24 Vdc. These voltages are converted from the 120v AC commercial power supply, or +24 Vdc, emergency back-up battery, at the main power supply unit.
 - An optional lightening arrester unit (Iwatsu ARST-S) is recommended in areas where lightening, which could cause system damage, frequently occurs.
- b. Table 4-H lists system power supply specifications.
- c. Figure 4-16 shows the main power supply units for each KSU.
- d. **Power Supply PWSA Connection**
- Power supply model PWSA is factory installed inside the ZT-616KSU.
 - Plug in 3-pin (blue, red, black) plastic connector from the Motherboard into the PWSA as shown in Figure 4-17.
 - Strap grey grounding wire between screw terminals, FG on AMPA6 and FG on PWSA.
 - To connect system backup batteries, loosen two screws at side of the power supply, remove cover plate and connect the batteries as shown in Figure 4-17.

TABLE 4-H
SYSTEM POWER SUPPLY SPECIFICATIONS

FUNCTION	ZT-616(ZT-PWSA)	ZT-824(ZT-PWSB)	ZT-2464(ZT-PWSC)
AC Input Voltage	120 Vac +10% 50-60 hz		
AC Input Current	1.8 amps.	1.8 amps.	4.5 amps.
DC Output (+24 Vdc)	2.5 amps.	2.6 amps.	8.8 amps.
DC Output (+8 Vdc)	0.4 amps.	0.6 amps.	0.6 amps.
DC Output (+5 Vdc)	2.5 amps.	2.5 amps.	3.0 amps.
DC Output (-8 Vdc)	0.4 amps.	0.6 amps.	0.6 amps.
Charger Out (27.3 Vdc)	0.2 amps.	0.2 amps.	0.5 amps.

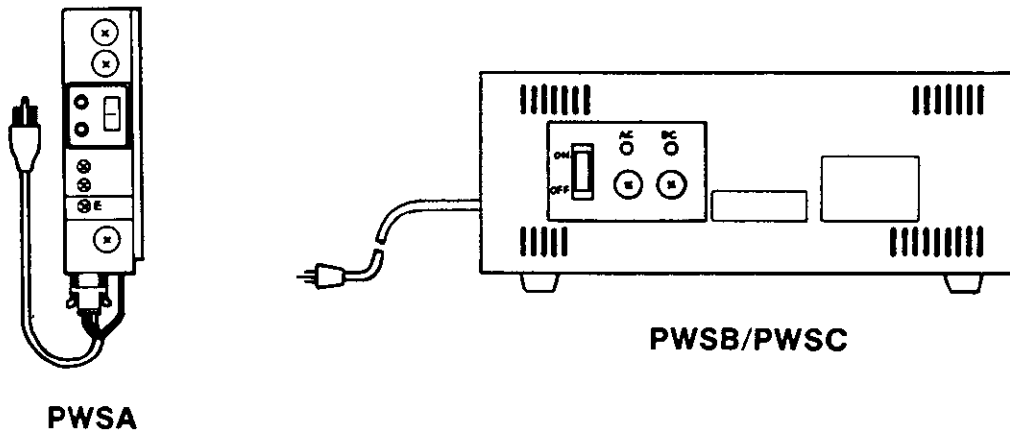


FIGURE 4-16 POWER SUPPLY UNITS

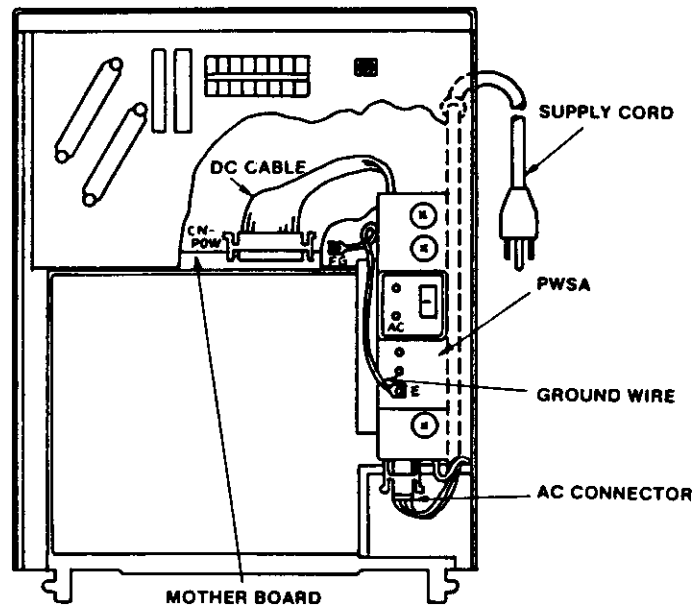


FIGURE 4-17 PWSA CONNECTION

e. Power Supply PWSB/PWSC Installation

- Power supply models PWSB and PWSC are externally mounted on the ZT-824KSU and ZT-2464KSU respectively.
- For wall mounting, use four screws and attach two Wall Mounting Brackets on the back of the power supply unit as shown in Figure 4-18.
- For floor mounting, use four screws and attach two Joint Brackets on both upper sides of the power supply unit. Then use another set of screws to connect the bracket to the bottom of the KSU as shown in Figure 18.
- Plug in 12-pin (nine-wire) plastic connector to connector J1 of the power supply and corresponding connector on the KSU as shown in Figure 18.
- Strap grey grounding wire between screw terminals, FG on AMPA81 and FG on the KSU frame.

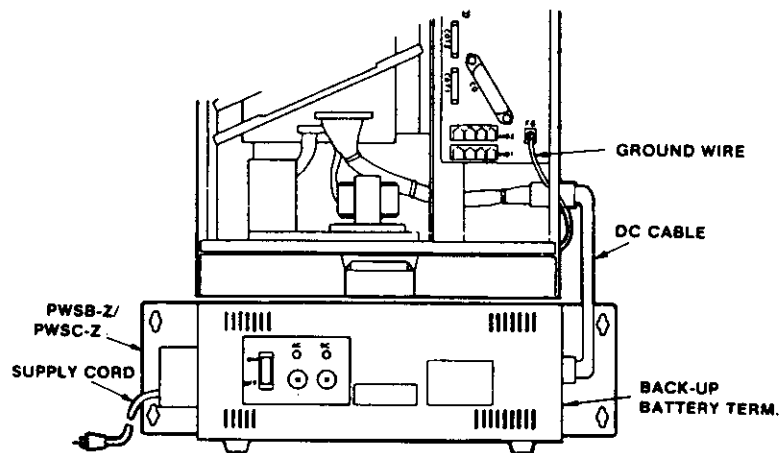


FIGURE 4-18 PWSB/C INSTALLATION

4.05 Emergency Power Back-up

a. There are three (3) types of emergency back-up available for the ZT-D system. The back-up systems consist of the following:

- MEMORY: Standard lithium battery back-up for the customer database on the CPUHW card.
- SYSTEM: External rechargeable battery (24 Vdc) connection to maintain the system operation during commercial power failure.
- STATION PFXU-M/LINE: Optional C/O line transfer unit PFXU-M that switches CO line over to SLT operation during a power failure.

b. **Database Memory Backup:** Standard back-up feature is a battery located on the CPUHW card. This battery maintains the system database in the event of a commercial power failure. The system's database will be maintained for approximately five days even if the CPUHW card is removed from the KSU. The ZT-D system will not be operational during a power failure. (See CPUHW, this section) The battery is unplugged from the card when shipped, to avoid unnecessary discharge.

c. **System Backup:** If the ZT-D system is to be operational during a commercial power failure, a set of customer-provided rechargeable batteries providing 24 volts must be installed. Rechargeable batteries connected to the power supply unit are charged while the system power is on. The battery support time varies depending upon the system configuration, call traffic, and the number of batteries in the system. Based upon average use of the 2464 type system, the typical support time with Globe Union (gel-cell type) batteries (model U128) is approximately one-half to one hour.

- Table 4-1 lists back-up power consumption of individual components of the ZT-D system. Calculate the total power consumption of the system to be installed and figure out the type and quantity of battery meets the customer's requirement, consulting the battery manufacturer's specification.
- Figure 4-19 shows how the external battery back-up is connected to each KSU.
- Use AWG#14 or larger wire for connecting the batteries to the ZT-824/2464KSU and the optional BACB-Z1 Cable for connecting the batteries the ZT-616KSU.

d. **Power Failure Transfer.** The third element of emergency back-up is the optional PFXU-M unit. The PFXU-M automatically transfers designated CO/PBX lines from the ZT-D system to single line telephones (SLT) in the event of a power failure. The SLTs may either be working in-house extensions or SLTs that have been reserved for power failure operation.

- Figure 4-20 shows the model PFXU installation.

TABLE 4-1 BATTERY BACK-UP SPECIFICATIONS

Cards	Backup Current	Cards	Backup Current
CPUHW	315mA	SDIFC	64mA
COTL4	25mA	RNGER	290mA
COTL6	35mA	DCDC-Z	250mA
COTL8	55mA	DCDCZ1	100mA
KTSB8	45mA	ZT-24D/K	35/135mA
SLSB8	170mA	ZT-12D/K	35/120mA
SLKT8	40mA	ZT-8D/K	35/115mA
RECV2	35mA	ZT-6D/K	35/115mA
RECV8	140mA	ZT-32C	28/180mA
DPPAG	125mA	SLT	0/25mA
FRIFC	5/90mA		

NOTE: IDLE/BUSY

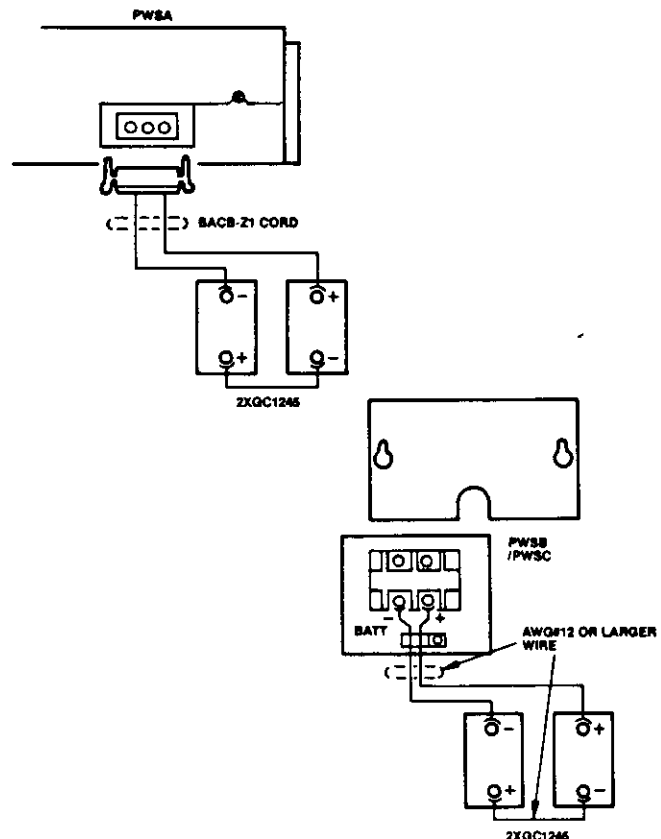
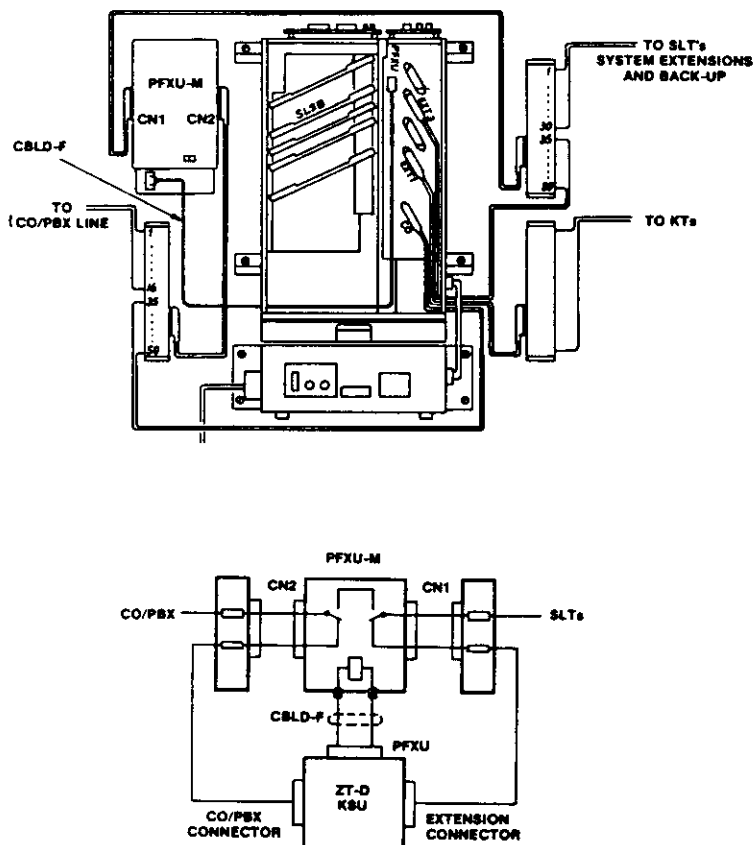


FIGURE 4-19
 BATTERY BACK-UP CONNECTION



CONN PIN NO.	HDF PIN NO.	CABLE COLOR	CN2 FUNCTION	CN1 FUNCTION
26	1	WH-BL	1T	1T
1	2	BL-WH	1R	1R
27	3	WH-OR	2T	
2	4	OR-WH	2R	
28	5	WH-GN	3T	2T
3	6	GN-WH	3R	2R
29	7	WH-BR	4T	
4	8	BR-WH	4R	
30	9	WH-SL	5T	3T
5	10	SL-WH	5R	3R
31	11	RD-BL	6T	
4	12	BL-RD	6R	
32	13	RD-OR	7T	4T
7	14	OR-RD	7R	4R
33	15	RD-GN	8T	
8	16	GN-RD	8R	
34	17	RD-BR		5T
9	18	BR-RD		5R
35	19	RD-SL		
10	20	SL-RD		
36	21	BK-BL		6T
11	22	BL-BK		6R
37	23	BK-OR		
12	24	OR-BK		
38	25	BK-GN		7T
13	26	GN-BK		7R
39	27	BK-BR		
14	28	BR-BK		
40	29	BK-SL		8T
15	30	SL-BK		8R
41	31	Y-BL		
16	32	BL-Y		
42	33	Y-OR		
17	34	OR-Y		
43	35	Y-GN	1T	1T
18	36	GN-Y	1R	1R
44	37	Y-BR	2T	
19	38	BR-Y	2R	2T
45	39	Y-SL	3T	3T
20	40	SL-Y	3R	3R
46	41	VI-BL	4T	4T
21	42	BL-VI	4R	4R
47	43	VI-OR	5T	5T
22	44	OR-VI	5R	5R
48	45	VI-GN	6T	6T
23	46	GN-VI	6R	6R
49	47	VI-BR	7T	7T
24	48	BR-VI	7R	7R
50	49	VI-SL	8T	8T
25	50	SL-VI	8R	8R

FIGURE 4-20
 STANDARD PFXU-M INSTALLATION

4.06 KSU Cards and Components

a. KSU cards and components facilitate the system features. These components contain the main operating program, user database, determine the types of extensions that are used on the system, and to what extent optional equipment may be included in the system. All circuit cards except a DCDC converter unit are interchangeable within the entire system family.

• CPUHW Cards

- KCPUHW KF Registered CPU/Highway Card
- MCPUHW MF Registered CPU/Highway Card

• CO/PBX Line Cards

- COTL8 8-ckt CO Line Card
- COTL6 6-ckt CO Line Card
- COTL4 4-ckt CO Line Card

• Subscriber Cards

- KTSB8 8-ckt key telephone subscriber card
- SLSB8 8-ckt SLT on premise (ONS) subscriber card
- SLKT8 4-ckt SLT(-48v) OPS/4-ckt KT subscriber card

• Optional KSU Cards and Components

- RECV2 2-ckt DTMF receiver card for DTMF SLT
- RECV8 8-ckt DTMF receiver card for DTMF SLT
- DPPAG Doorphone/P.A. system interface card
- SDIFC Serial data interface card
- FRIFC Flexible relay interface card
- RNGER Ringing generator for single line telephone
- DCDC-Z DCDC converter for SLKT8 (OPX) in ZT-824/2464KSU
- DCDC-Z1 DCDC converter for SLKT8 (OPX) in ZT-616KSU

b. Table 4-J lists the KSU components and circuit card assignments.

4.07 CPUHW Processor Card

a. Description: The KF/MF Central Processor/Highway Controller card contains the operating generic program and database for the ZT-D system. The KCPUHW card, associated with the Key System-Fully Protected (KF) FCC registration number, provides for CO/PBX lines with direct termination. The M CPUHW card, associated with the Multi Function-Fully Pro-

TABLE 4-J CIRCUIT CARD ASSIGNMENT

CARD SLOT	CARD NAME	616KSU	824KSU	2464KSU	REMARKS
CPU	KCPUHW or MCPUHW				Choice of 1
SUB1 SUB2 -SUB8	KTSB8 or SLKT8 KTSB8, SLKT8 or SLSB8	Up to 2	Up to 3	Up to 8	
COT1 -COT3	COTL8, COTL6 or COTL4	Up to 1	Up to 1	Up to 3	
OPT1 -OPT3	DPPAG, SDIFC, FRIFC, RECV2 or RECV8	Up to 3	Up to 4	Up to 5	No more than one for each type allowed

tected (MF) FCC registration number, provides both pooled access CO/PBX line terminations (floating group) and direct termination. The two cards are identical in circuitry and differ from each other only in the generic operations software. The CPUHW card is easily identified by its red colored handling strip.

NOTE: Determine which model of CPUHW card is to be utilized depending upon local tariff compliance.

b. Figure 4-21 shows the KCPUHW/MCPUHW card.

c. Installation

- Plug the Lithium battery wire into connector CN-BT on the card as shown in Figure 4-22.
- Plug two connecting cords, MOH (4-wire) and BGM (2-wire), into the connectors CN2/EX-MOH and CN3/BGM at right front of the card respectively.
- Insure that SW1 is set at RAM CLR (default) position and switch SW3 is set for the synthesized music preferred (M1: Home on The Range, M2: Green Sleeves).

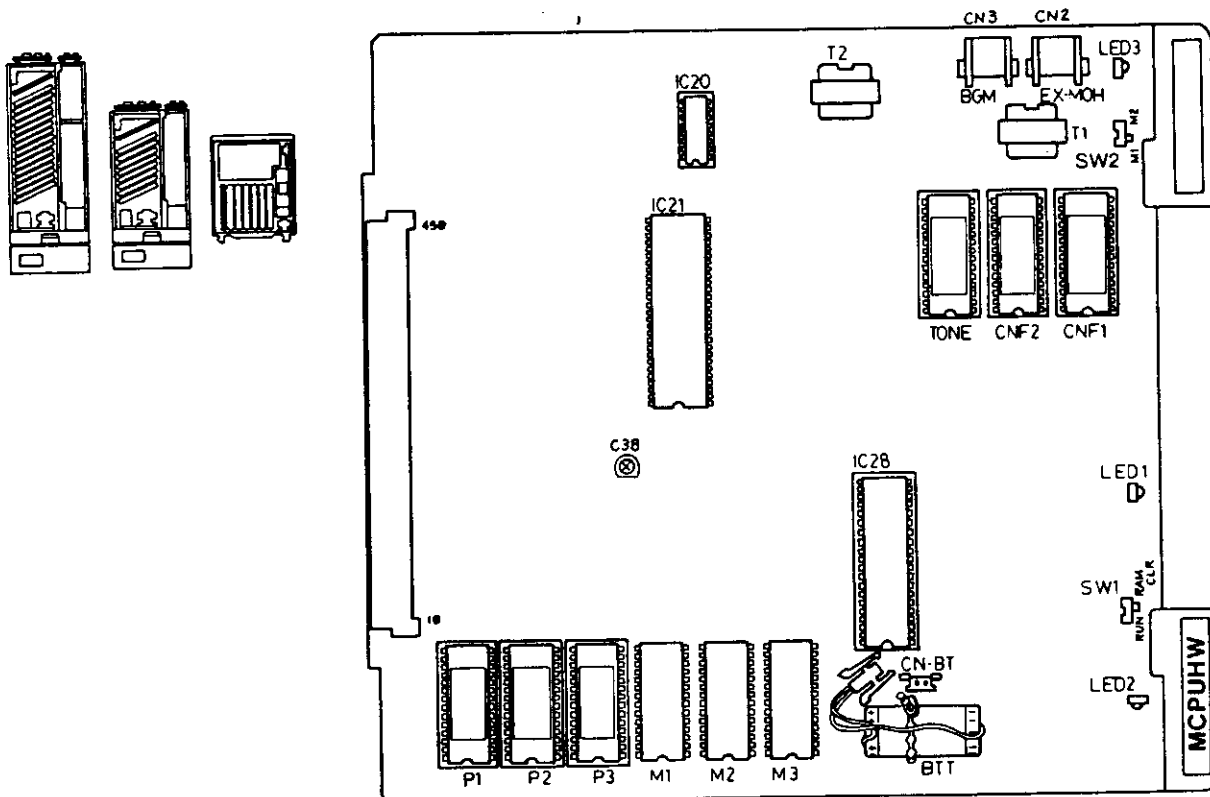


FIGURE 4-21 KCPUHW/MCPUHW CARD

- Insure that system power is turned off. Plug the card into the KSU slot assigned as "CPU". Insure that the card is inserted deep enough to make complete contact of all connector pins to those on the Mother-board.
- Plug in the MOH and BGM wires to the corresponding connectors, CPU-MOH and CPU-BGM on the DSPA6 (616KSU) or DSPB82 (824/2464KSU) panel.

CAUTION: DO NOT INSERT OR REMOVE CIRCUIT CARD WHILE KSU POWER IS ON. DAMAGE TO CIRCUIT CARD OR KSU MAY RESULT.

d. CPUHW Component Identification

C38: Determines clock accuracy. DO NOT TOUCH THIS CONTROL. The clock is adjusted before shipment.

Battery: Power source for customer database in the event of power failure.

System ROM: Three ICs containing system operational software. (96K-byte).

Tone ROM: Stores dial, busy, ring back, howler and DTMF tones.

CONF ROM: Stores conference call control software.

LED1: Indicates system clock: Blinking=normal. Steady on/off=failure.

LED2: Indicates system status: Off=system idle. Blinking=system busy.

LED3: Indicates the memory failure on HWPPU during system start-up: On=RAM/ROM failure, Off=normal, also On=External MOH in use

SW1: Select RUN (operating) or RAM CLR (default) status. (Factory Default: CLEAR)

SW2: Selects one of two melodies for internal MOH.

CN2: Input terminal for external MOH. Connects MOH phono jack input on the DSPB82 (824/2464) or the DSPA6(616) to highway on CPUHW.

CN3: Input terminal for BGM.

Reset terminal: Entire system can be reset by shorting this terminal; the contents of the RAM is not initialized by this operation. When the system is reset by setting SW1 to the RAM CLR side, the contents of RAM is initialized. The system will then go into operation with the initialized contents of RAM when switch SW1 is set to RUN after LED1 starts blinking.

Test terminal: Test the HWPPU, highway switch, tone LSI, and the internal MOH.

4.08 CO/PBX Line (COTL) Interface Cards

a. Description: There are three (3) types of CO/PBX line interface cards that terminate a different number of CO/PBX lines. The same circuit terminates either DTMF or DP lines as determined by programming. The number of CO lines each card can handle are as follows:

- COTL8 accommodates 8 CO/PBX lines
- COTL6 accommodates 6 CO/PBX lines
- COTL4 accommodates 4 CO/PBX lines

b. Indicator: Each card has an LED to indicate line status as "busy" or "idle" and has a make busy terminal for system maintenance during operation. The function disables a line in a FLT group or a direct appearance while it is temporary out of order.

c. On-Board Setting: Line loss can be adjusted by position of PAD switches, PAD1 through PAD8. PAD switches are numbered according to the number of CO lines that are available on each card. The factory default setting is DX.

- LC: CO/PBX line loss is less than 3dB
- DX: CO/PBX line loss is 3dB or more

CO line impedance can be adjusted to 600 ohms or 900 ohms by strapping jacks:

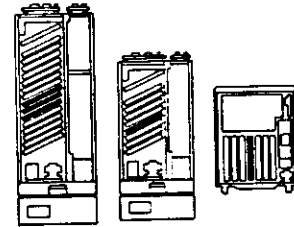
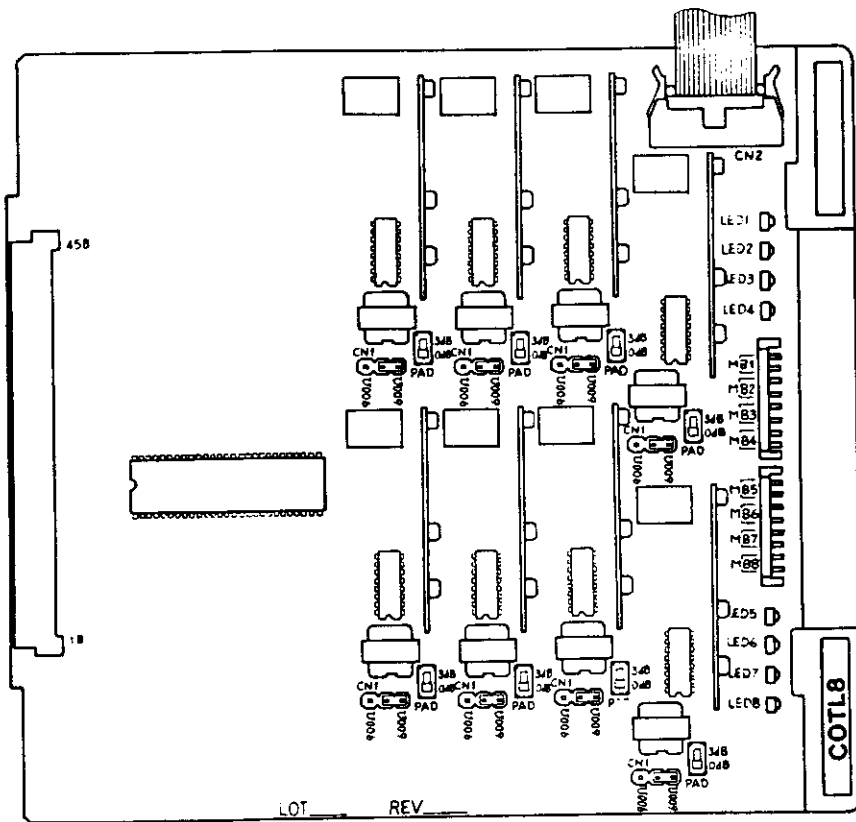
- CN11 through CN18 (COTL8 card)
- CN11 through CN16 (COTL6 card)
- CN11 through CN14 (COTL4 card)

d. Programming: System programming item (04) is used to identify CO terminations on COTL cards. The COTL card is easily identified by its light-blue handling strip.

e. Figures 4-22, 23, and 24 detail each COTL card with its appropriate pad switch and strapping jacks.

f. installation

- Plug the ribbon cable into connector CN2 on the card.
- Set CN11 through CN18 to meet the impedance (600 ohms or 900 ohms) of the CO lines which is terminated to that circuit referring to Figures 22 through 24.
- If the central office exchange is very close to the system, turn the corresponding switches, PAD1 through PAD8, into LC position.
- Plug the card into the KSU slot assigned as "COT". Make sure that the card is inserted deep enough to make complete contact of all connector pins to those on the Mother-board.
- Feed the cable through a cable clamp if for the ZT-824/2464KSU.

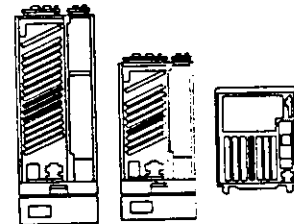
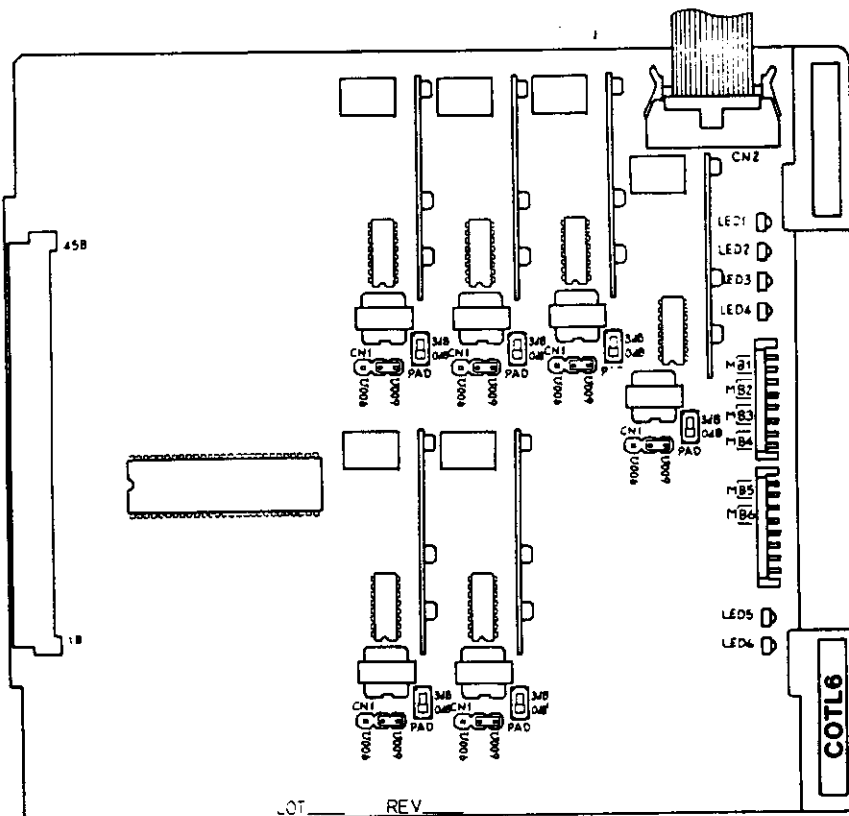


Make busy feature: circuits MB1 through MB8 at CN3 and CN4

CO LINE CKT NO.	IMPEDANCE ADJUST	LINE LOSS ADJUST
1	CN11	PAD1
2	CN12	PAD2
3	CN13	PAD3
4	CN14	PAD4
5	CN15	PAD5
6	CN16	PAD6
7	CN17	PAD7
8	CN18	PAD8

CAUTION: DO NOT INSERT OR REMOVE CIRCUIT CARD WHILE KSU POWER IS ON. DAMAGE TO CIRCUIT CARD OR KSU MAY RESULT.

FIGURE 4-22 8-CKT CO LINE CARD COTL8

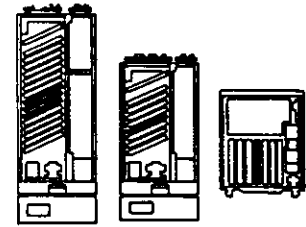
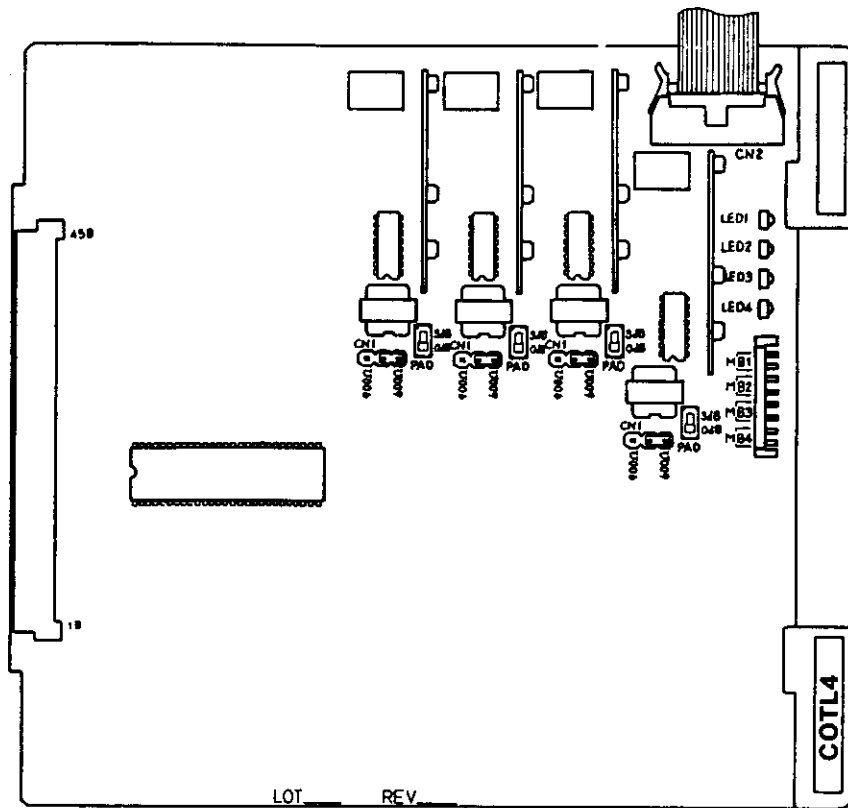


Make busy feature: circuits MB1 through MB6 at CN3 and CN4

CO LINE CKT NO.	IMPEDANCE ADJUST	LINE LOSS ADJUST
1	CN11	PAD1
2	CN12	PAD2
3	CN13	PAD3
4	CN14	PAD4
5	CN15	PAD5
6	CN16	PAD6

CAUTION: DO NOT INSERT OR REMOVE CIRCUIT CARD WHILE KSU POWER IS ON. DAMAGE TO CIRCUIT CARD OR KSU MAY RESULT.

FIGURE 4-23 6-CKT CO LINE CARD COTL6



Make busy feature: circuits MB1 through MB4 at CN3.

CO LINE CKT NO.	IMPEDANCE ADJUST	LINE LOSS ADJUST
1	CN11	PAD1
2	CN12	PAD2
3	CN13	PAD3
4	CN14	PAD4

CAUTION: DO NOT INSERT OR REMOVE CIRCUIT CARD WHILE KSU POWER IS ON. DAMAGE TO CIRCUIT CARD OR KSU MAY RESULT.

FIGURE 4-24 4-CKT CO LINE CARD COTL4

- Plug in the ribbon cable to the connectors, COT1 through COT3, on the AMPA6 (616KSU) or AMPA81 (824/2464KSU) panel so that the card slot number and connector number matches.

4.09 Subscriber Card

- a. There are three (3) types of subscriber cards available on the ZT-D system. They are KTSB8, SLKT8, and SLSB8. These subscriber cards are designed to interface key telephones, DSS consoles, off-premise SLTs, and on-premise SLTs with the ZT-D system. When SLTs are used with the system, additional cards and components must also be installed in the KSU:

- The KTSB8 is required for installing up to eight (8) key telephones/DSSs.
- The SLKT8 is required to install up to four (4) key telephones and/or DSSs and four (4) off-premise SLTs. The RNGER and the DCDC-Z (824 and 2464) or DCDC-Z1 (616) must be installed to operate the off-premise SLTs.
- The SLSB8 is required for installing up to eight (8) on-premise SLTs. The RNGER must be installed to operate on-premise SLTs.

- The RECV2 or RECV8 card is required if any of the SLTs are 2500 (DTMF) type telephones.

- b. The number of subscriber cards which can be installed in a system depends on the type of the KSU. Table 4-K lists the subscriber card capacities of each KSU.

TABLE 4-K SUBSCRIBER CARD CAPACITIES

CARD NAME	616KSU	824KSU	2464KSU
KTSB8	Up to 2	Up to 3	Up to 8
SLKT8	Up to 2	Up to 3	Up to 8
SLSB8	Up to 1	Up to 2	Up to 7
Maximum Q'ty	Up to 2	Up to 3	Up to 8

- c. Programming: System programming items (03), and (12) must be programmed in conjunction with the installation of subscriber cards. A subscriber card is easily identified by its green handling strip.

- d. Figures 4-25, 4-26, and 4-27 illustrates subscriber cards with descriptions of their functions.

e. KTSB8 Electronic Key Telephone Card

- Description: The KTSB8 provides eight circuits for installing eight key telephones and DSS Console.

- Installation
 1. Plug the ribbon cable into connector CN-TEL on the card.
 2. Plug the card into the KSU slot designated as "SUB". Insure that the card is inserted deep enough to make complete contact of all connector pins to the KSU Motherboard connector.
 3. Feed the cable through a cable clamp if for the ZT-824/2464KSU.
 4. Plug in the ribbon cable to the connectors, SUB1 through SUB8 (if applicable) on the AMPA6 (616KSU) or AMPA81/AMPA24 (824/2464KSU) panel so that the card slot number and connector number matches.

f. SLKT8 Single Line (OPS)/Key Telephone Card

- Description: The SLKT8 provides four (4) circuits for installing key telephones and/or DSS console(s) and four (4) circuits for off-premise SLTs providing -48vdc talk battery. Components RINGER and DCDC-Z (2464KSU) or DCDC-Z1 (616KSU) must be installed in conjunction with an SLKT8 card. If DTMF SLTs (2500 type) are used, the RECV2 or RECV8 card must also be installed.
- Indication: The SLKT8 card detects ground faults on the off-premise SLT circuits: LED "on" = fault, LED "off" = clear.

NOTE: Jumper wires JP1 through JP4 should be cut where lightening seldom occurs.

- Installation
 1. Plug the ribbon cable into connector CN-TEL on the card.
 2. Plug the card into the KSU slot designated as "SUB". Insure that the card is inserted deep enough to make complete contact of all connector pins to the KSU Motherboard connector.
 3. Feed the cable through a cable clamp if for the ZT-824/2464KSU.
 4. Plug in the ribbon cable to the connectors, SUB1 through SUB8 (if applicable) on the AMPA6 (616KSU) or AMPA81/AMPA24 (824/2464KSU) panel so that the card slot number and connector number matches.

g. SLSB8 Single Line (On Premise) Card

- Description: The SLSB8 provides eight (8) circuits for on-premise DP and DTMF SLTs. A RINGER unit must be used in conjunction with an SLSB card. If DTMF SLTs are used, a RECV card must be installed.
- Indication: The SLSB8 card detects ground faults on the on-premise SLT circuits: LED "on" = fault, LED "off" = clear.

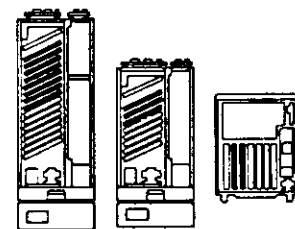
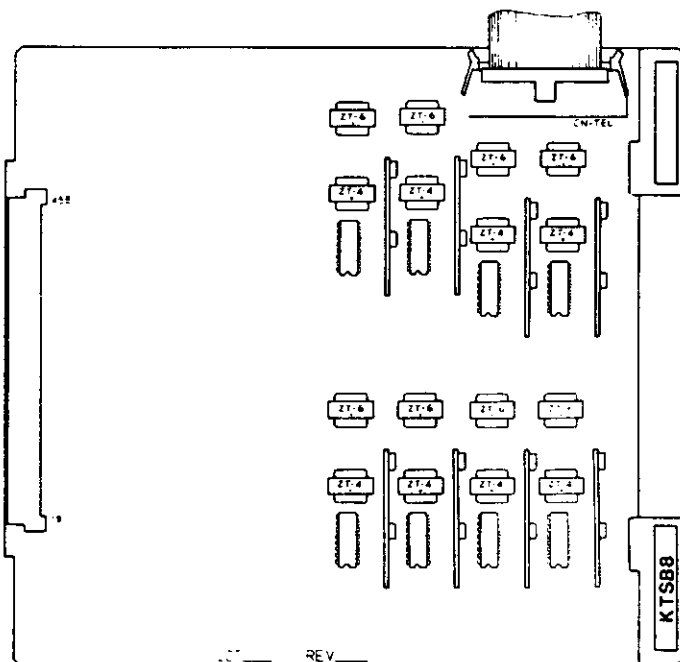


FIGURE 4-25 8-CKT KEY TELEPHONE SUBSCRIBER CARD (KTSB8)

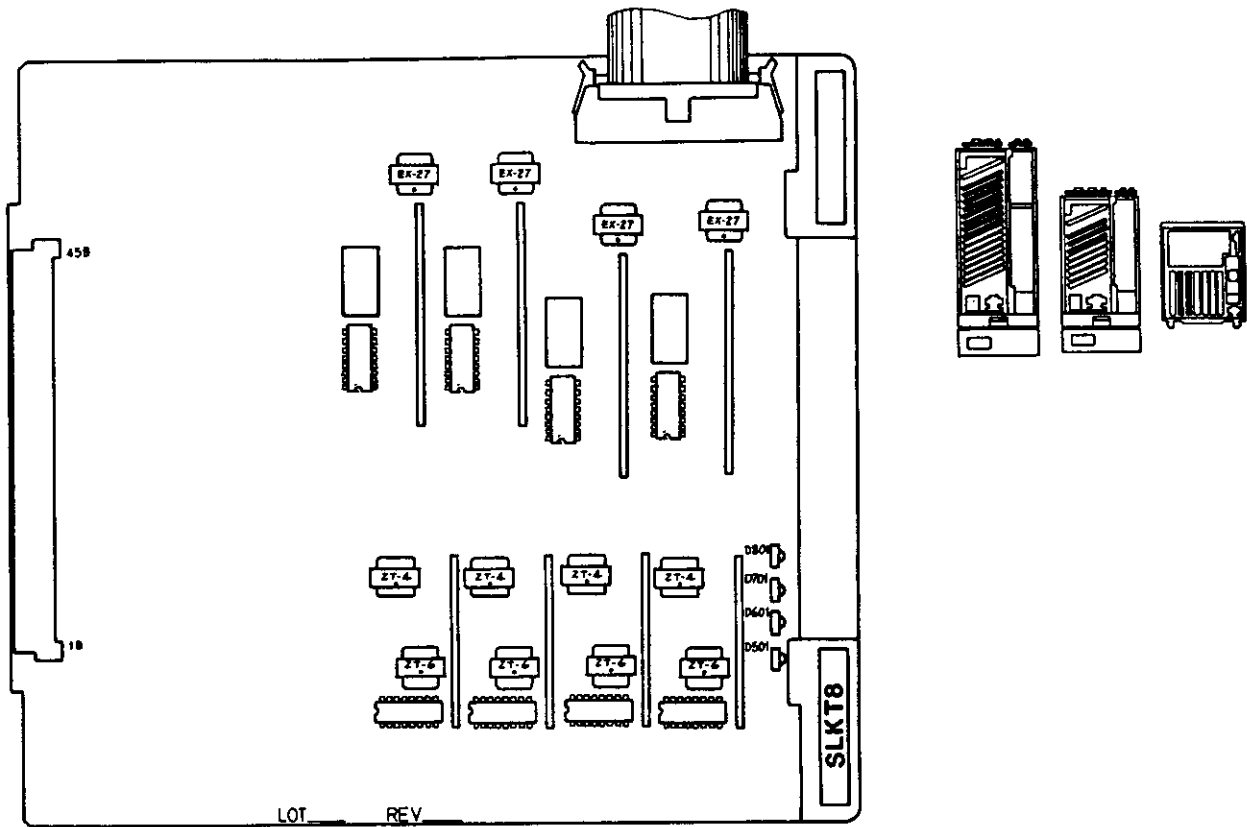


FIGURE 4-26 8-CKT KEY/SINGLE LINE TELEPHONE SUBSCRIBER CARD (SLKT8)

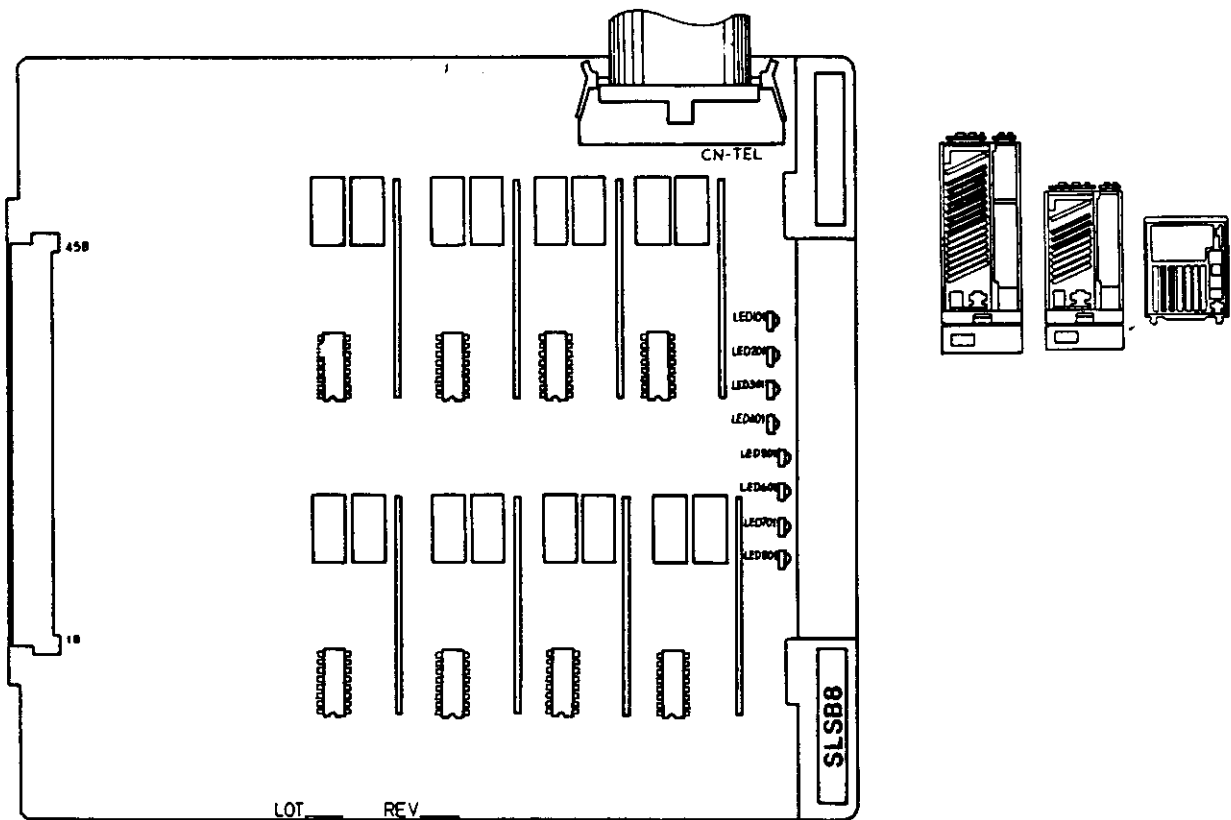


FIGURE 4-27 8-CKT SINGLE LINE TELEPHONE SUBSCRIBER CARD (SLSB8)

- Installation
 1. Plug the ribbon cable into connector CN-TEL on the card.
 2. Plug the card into the KSU slot designated as "SUB". Insure that the card is inserted deep enough to make complete contact of all connector pins to the KSU Motherboard connector.
 3. Feed the cable through a cable clamp if for the ZT-824/2464KSU.
 4. Plug in the ribbon cable to the connectors, SUB2 through SUB8 (if applicable) on the AMPA6 (616KSU) or AMPA81/AMPA24 (824/246KSU) panel so that the card slot number and connector number matches.

4.10 Optional KSU Cards and Components

- a. Optional KSU cards and components adds optional features that are not provided with the basic ZT-D system. These components supply the required DC voltages for SLTs and interface doorphones, P.A. systems, remote control devices, station call detail recorders and computer modems for remote system programming.

Optional KSU cards are easily identified by the dark-blue handling strip. Optional components are the RNGER and DCDC-Z' and DCDC-Z1 circuit card which mount on the bottom of the KSU and do not have handling strips.

- b. Capacity: The capacity of the optional cards installed in a system depends on the size of the KSU. Only one of each card can be installed at the same time in a KSU. It is possible to add several different cards to one system. Table 4-L lists the capacity of optional KSU cards that are permitted in each system.

TABLE 4-L OPTIONAL KSU CARD CAPACITY

CARD NAME	616KSU	824KSU	2464KSU
DPPAG	Up to 1	Up to 1	Up to 1
FRIFC	Up to 1	Up to 1	Up to 1
SDIFC	Up to 1	Up to 1	Up to 1
RECV2	Up to 1	Up to 1	Up to 1
RECV8			
Maximum Q'ty	Up to 3	Up to 4	Up to 5

- c. Figures 4-28 through 4-36 illustrates each optional card or component and details its functions.

d. RNGER Single Line Ring Generator

- Description: The RNGER is a component that generates a 20 Hz, 90 volt ringing signal for the SLTs. It is used in conjunction with a SLKT8 or SLSB8 card and is mounted at the base of the KSU.

NOTE: VR1, volume control knob is preset at the factory and should NEVER be adjusted.

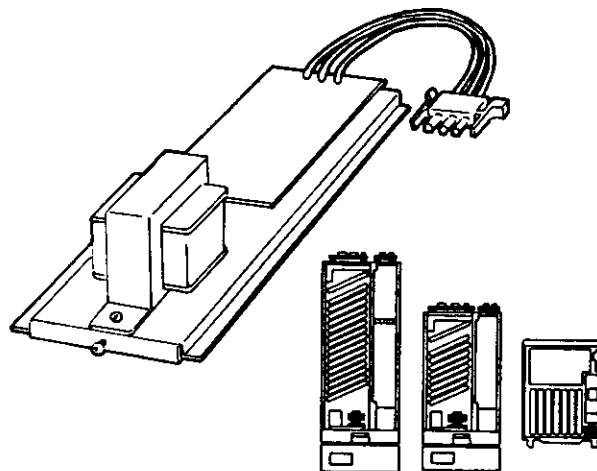


FIGURE 4-28 RINGING GENERATOR FOR SLTs (RNGER)

- Installation for ZT-824/2464KSU
 1. For ZT-824/2464KSU without the DCDC-Z unit, insert rear base plate (wiring harness side) of the RNGER into two tabs on the base of the ZT-824/2464KSU. Then secure the front to the base tab with a screw provided as shown in Figure 4-30.
 2. For ZT-824/2464KSU with the DCDC-Z unit, insert rear base plate (wiring harness side) of the RNGER into two tabs on the base of the DCDC-Z mounting plate. Then secure the front to the base tab with a screw provided.
 3. Plug the 3-pin connector into connector CN-RNG on the Motherboard.
- Installation for ZT-616KSU
 1. Slide the RNGER card into the right bottom space of the ZT-616KSU; affix the front to the base with two screws and a mounting plate provided as shown in Figure 4-29.
 2. Plug the 3-pin connector into a harness connector terminated at CN-RNG on the Motherboard.

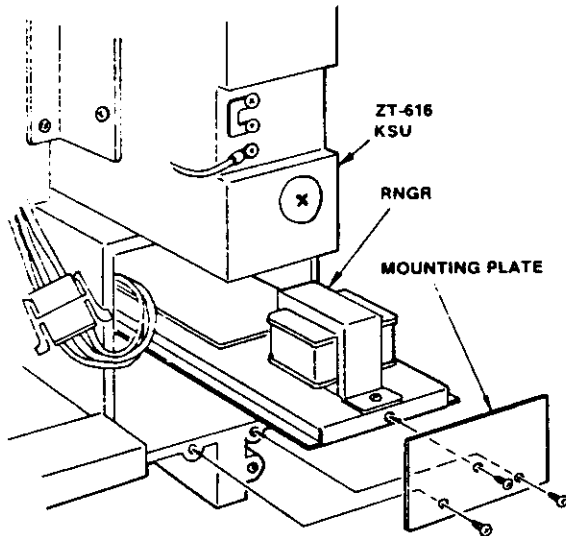


FIGURE 4-29
RINGER UNIT INSTALLATION FOR 616KSU

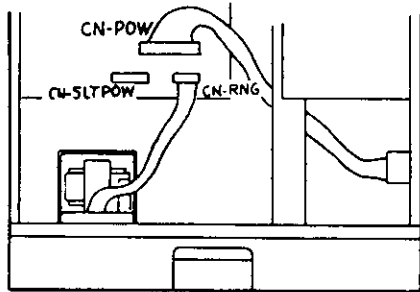


FIGURE 4-30 RINGER UNIT INSTALLATION FOR 824/2464KSU

e. DCDC-Z OPS DC Converter (ZT-824/2464 KSU)

- Description: The DCDC-Z converter generates -48 volts talk battery for off-premise SLT circuits on the SLKT8 subscriber card. The DCDC-Z is designed for use in the ZT-824 and the ZT-2464 KSUs. It provides enough power for up to 32 off-premise SLTs.

• Installation

1. Insert rear base plate (wiring harness side) of the DCDC-Z into two tabs on the base of the ZT-824/2464KSU. Then fix the front to the base tab with two screws provided as shown in Figure 4-31.
2. Plug the 4-pin connector into connector CN-SLTPW on the Motherboard.

f. DCDC-Z1 OPS DC Converter (ZT-616KSU)

- Description: The DCDC-Z1 converter generates -48 volts talk battery for off-premise SLT circuits on the SLKT8 subscriber card. The DCDC-Z1 is designed for use in the ZT-616KSU and it provides enough power for up to 8 off-premise SLTs.

• Installation

1. Remove top plastic panel of the ZT-616KSU by removing two screws in front.
2. Place the DCDC-Z1 at space on the top; then plug the 4-pin connector into connector CN-SLTPW on the Motherboard.

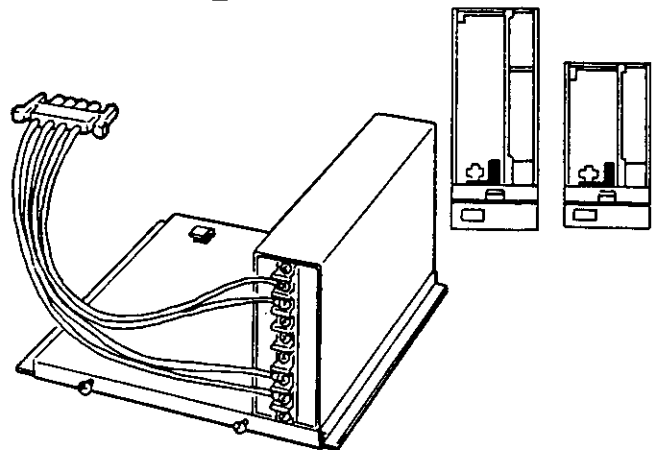
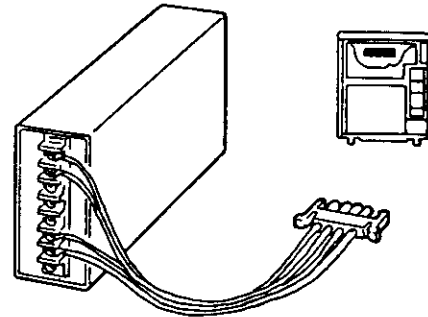


FIGURE 4-31 DC TO DC CONVERTER DCDC-Z AND DCDC-Z1

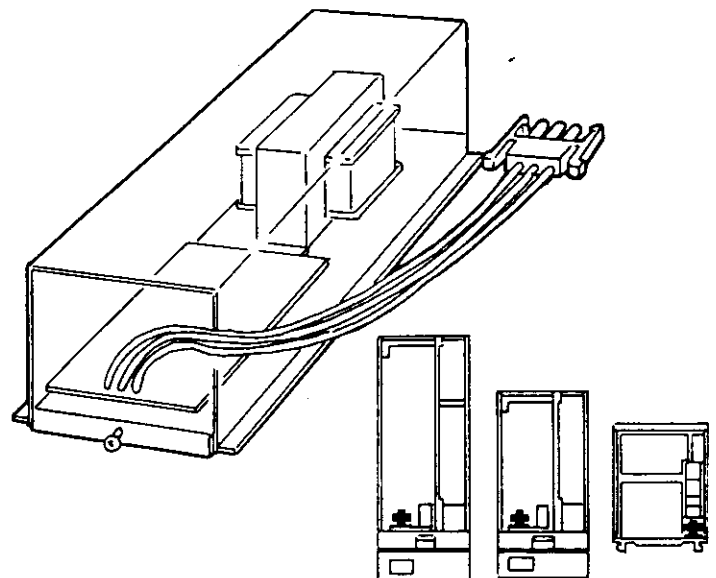


FIGURE 4-32 DCDC-Z UNIT INSTALLATION FOR 824/2464KSU

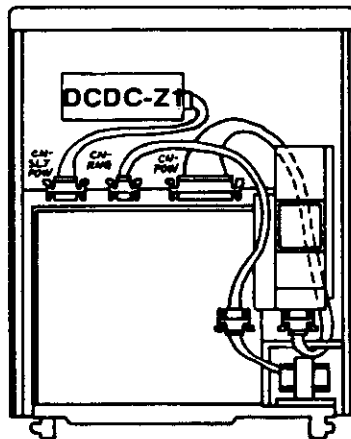


FIGURE 4-33 DCDC-Z1 UNIT
INSTALLATION FOR 616 KSU

g. RECV2/RECV8 DTMF Receiver Card

- Description: The RECV cards receive DTMF dialing signals from the DTMF SLTs and convert the signals so that the CPUHW card can discriminate the dial information. Additionally, RECV cards have a "Make Busy" switch for disabling access to individual DTMF receiver circuits.
- Installation:

Plug the card into the KSU slot assigned as "OPT". Insure that the card is inserted deep enough to make complete contact of all connector pins to those on the Motherboard.

CAUTION: DO NOT INSERT OR REMOVE CIRCUIT CARD WHILE KSU POWER IS ON. DAMAGE TO CIRCUIT CARD OR KSU MAY RESULT.

h. DPPAG Doorphone/P.A. Interface Card

- Description: The Doorphone/P.A. System Interface card adds an interface circuit to operate three doorphones, an external P.A. system, and a zone page switching relay control for external paging. This card can be installed in any model KSU. A DSPC82 must be installed for physical interface to the external P.A. system on the ZT-824 or ZT-2464 KSU.
- Installation
 1. Plug the ribbon cable into connector CN2 on the card
 2. Plug the card into the KSU slot assigned

as "OPT". Insure that the card is inserted deep enough to make complete contact of all connector pins to those on the Motherboard.

3. Feed the cable through a cable clamp if installing on the ZT-824/2464KSU.
4. Plug in the ribbon cable to connector CON-DPPAG on the AMPA6 (616KSU) or DSPC82 (824/2464KSU) panel.

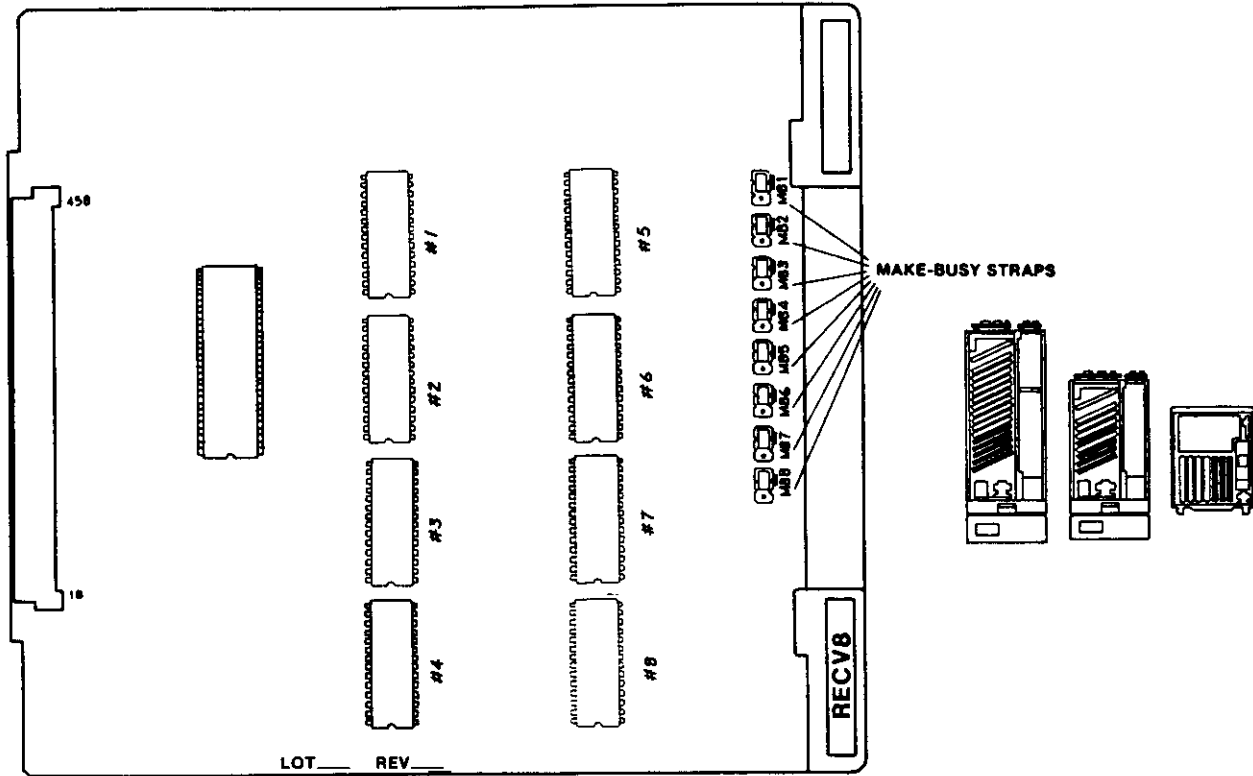
CAUTION: DO NOT INSERT OR REMOVE CIRCUIT CARD WHILE KSU POWER IS ON. DAMAGE TO CIRCUIT CARD OR KSU MAY RESULT.

i. FRIFC Flexible Relay Interface Card

- Description: FRIFC Card provides 11 relays to control external devices such as loud ringing bells. One relay is dedicated to Remote Programming Control. A DSPC82 Panel must be installed at the same time to terminate external wiring to these relays.
- Programming: Function assignment for each relay is required utilizing system programming, Item No. 27.
- Installation:
 1. Plug the ribbon cable into connector CN2 on the card.
 2. Plug the card into the KSU slot assigned as "OPT". Insure that the card is inserted deep enough to make complete contact of all connector pins to those on the Motherboard.
 3. Feed the cable through a cable clamp if installing on the ZT-824/2464KSU.
 4. Plug in the ribbon cable to connector CON-FRIFC on the AMPA6 (616KSU) or DSPC82 (824/2464KSU) panel.

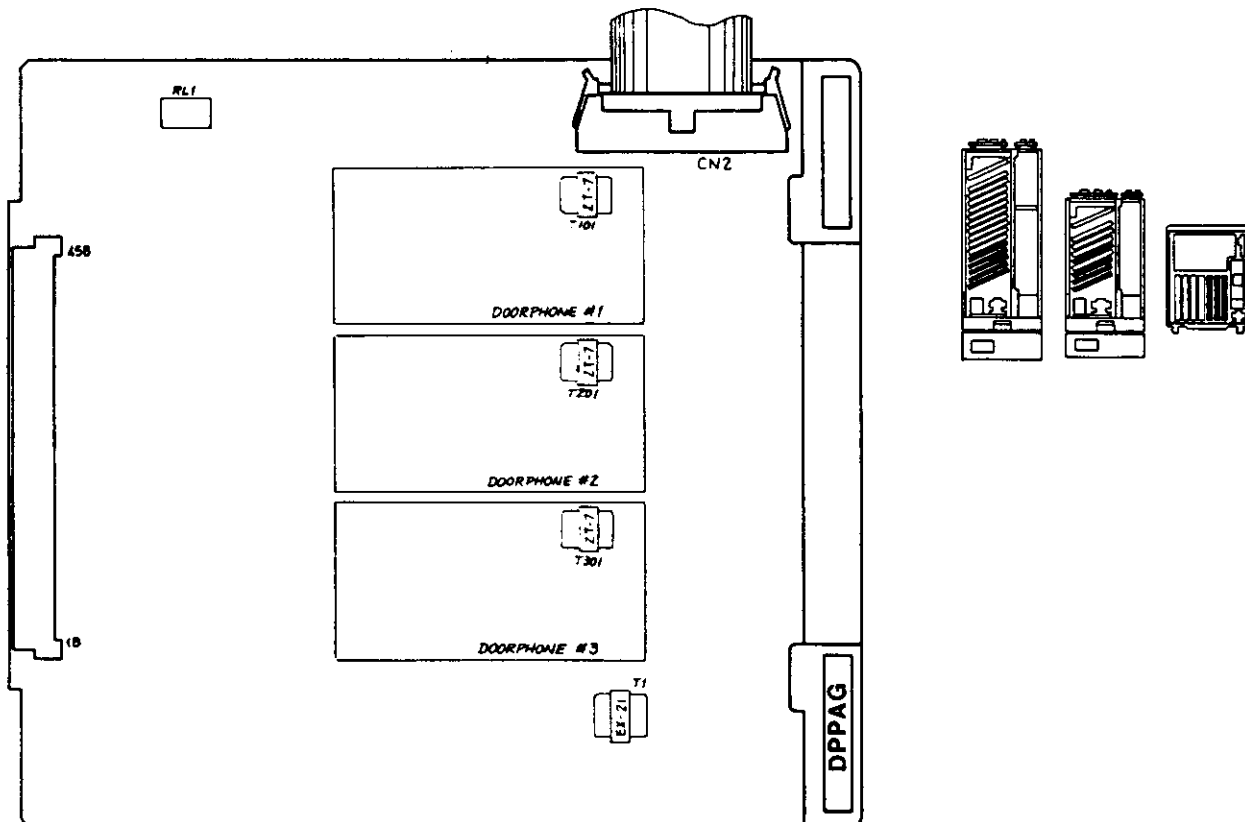
j. SDIFC Serial Data Interface Card

- Description: The serial data interface card provides two channels of RS232C ports interfacing a IBM-COMPATIBLE personal computer and a SCDR printer. The port provides for remote programming through a Hayes-compatible modem. Also, the RS-232C ports can be used for connecting a printer as an SCDR device. Connection terminals for these devices (personal computer, modem or SCDR printer) are provided on the DSPC82 (824 and 2464 KSU) or AMPA6 (616 KSU).
- Programming: The modem or PC data



NOTE: Circuits #3 to #8 and MB8 are not on RECV 2 card

**FIGURE 4-34 DTMF RECEIVER CARD
 (RECV2 AND RECV8)**



**FIGURE 4-35 DOORPHONE/P.A. SYSTEM
 INTERFACE CARD (DRPAG)**

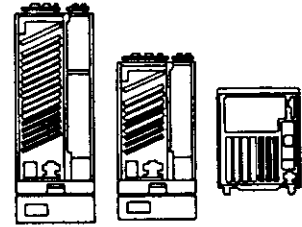
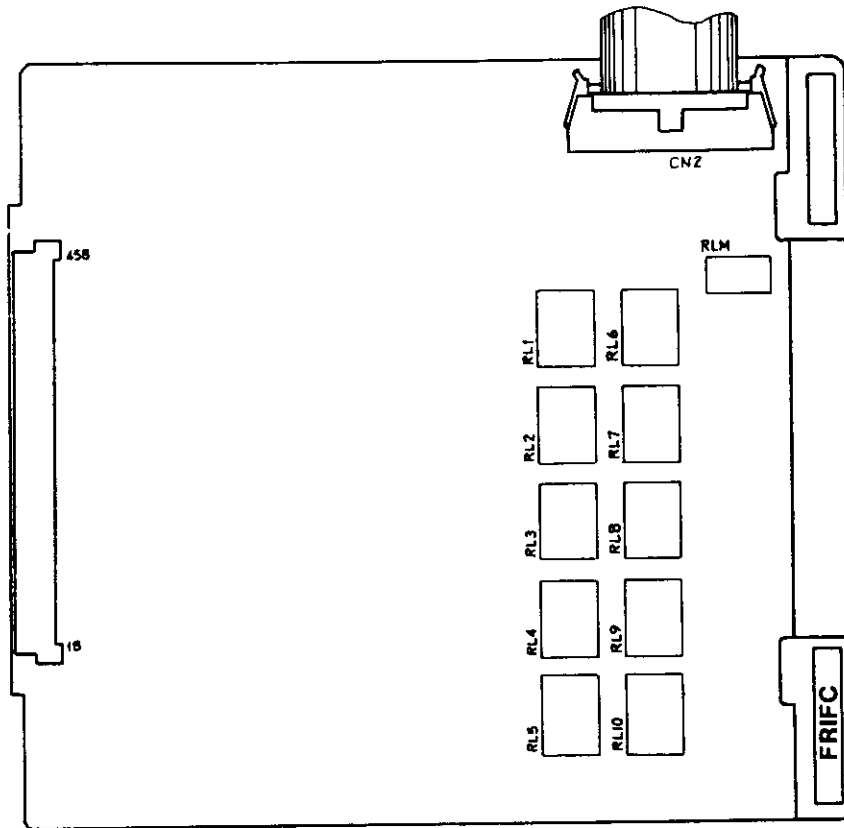


FIGURE 4-36A FLEXIBLE RELAY
 INTERFACE CARD (FRIFC)

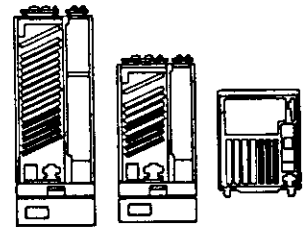
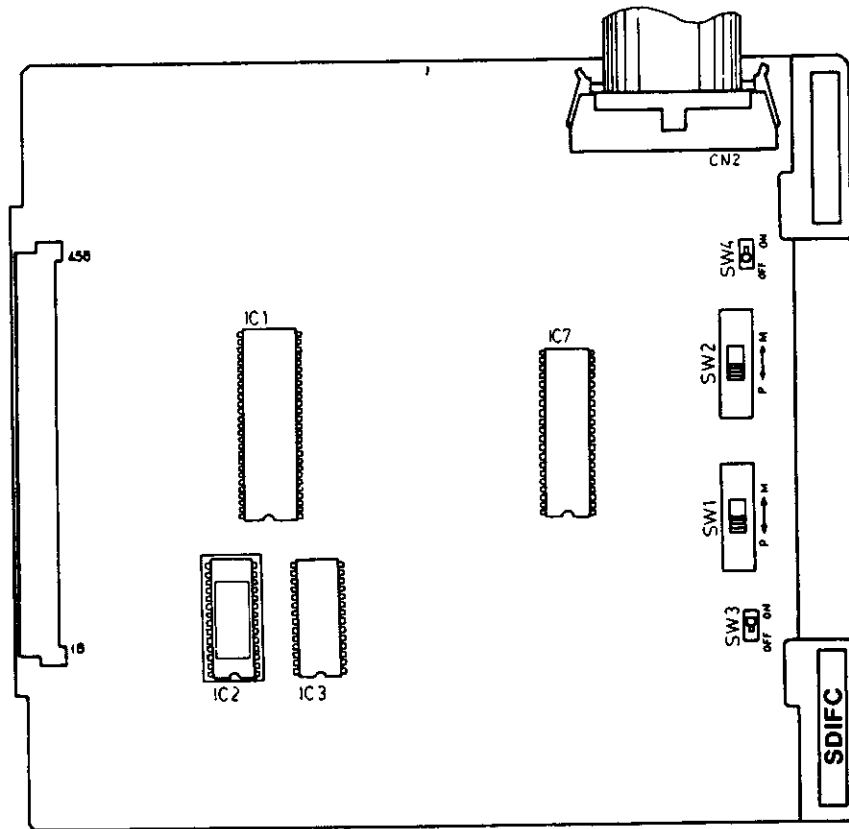


FIGURE 4-36B SERIAL DATA
 INTERFACE CARD (SDIFC)

transmission rates can be set through the system programming to 300 or 1200 bps.

- On-board Setting: Two switches are provided for each channel:

1. Channel 1:

- SW1: Changes RS232c Channel 1 (CH1) connector output pin arrangement between "P(rinter)" and "M(odem)".
- SW3: Turn "ON" and "OFF" the Channel 1 port.

2. Channel 2:

- SW2: Changes RS232c Channel 2 (CH2) connector output pin arrangement between "P(rinter)" and "M(odem)".
- SW4: Turn "ON" and "OFF" the Channel 2 port.

- Installation

1. Plug the ribbon cable into connector CN2 on the card.
2. Set two switches for each channel (CH1 and CH2) on the card as required to communicate to the external device.
3. Plug the card into the KSU slot assigned as "OPT". Insure that the card is inserted deep enough to make complete contact of all connector pins to those on the Motherboard.
4. Feed the cable through a cable clamp if installing on the ZT-824/2464KSU.
5. Plug in the ribbon cable to connector CON-SDIFC on the AMPA6 (616KSU) or DSPC82 (824/2464KSU) panel.

5.00 STATION AND COMPONENTS INSTALLATION

5.01 Station Equipment

- a. Station equipment originates and receives calls inside and outside the ZT-D system. Various access limitations may be assigned to them through system programming. Station accessories provide additional features to the key telephones. There are two kinds of station equipment available for the ZT-D:

- Key Telephones (KTs)
- Single Line Telephones (SLTs)

- b. Referring to Table 4-M, inspect all the accessories provided with the system components.

TABLE 4-M COMPONENTS ACCESSORIES

COMPONENTS	ACCESSORIES	Q'TY
Key Telephones	Handset (SSHD-Z)	1
	Handset Cord	1
	Modular Cord	1
	Feature Key Label	1 set
	Flexible Key Label	1 set
	Directory Card	1
	Directory Tray	1
	Dial Mask	1
DSS32C	DSS Label	1 set
	Modular Cord	1
	Joint Bracket	1
	Mounting Screw	1
STWM6/8, STWM12/24	Mounting Screw	2
DSSWM-Z	Mounting Screw	2
SMSA-Z	Mounting Screw	2
	Magnet	2
SHCB-Z	Mounting Screw	2
	Magnet	2
SSPU-Z	none	
SNHD-Z	none	
SHHD-Z	none	
SHAD-Z	none	
SSHD-Z	none	

5.02 Key Telephones

- a. Key telephones differ in the number of flex keys each model has, and whether it has an LCD message and system status display as listed in Table 4-N. Physical size changes between the ZT-8 and the ZT-12 models; ZT-12 model units are slightly wider than ZT-6 units.
- b. For more information regarding the key telephone, see System Hardware in Section Two and Station Features in Section Three.

TABLE 4-N ZT SERIES KEY TELEPHONES

MODELS	NUMBER OF FLEXIBLE KEYS	LCD DISPLAY
ZT-6K	6	
ZT-6D	6	X
ZT-8K	8	
ZT-8D	8	X
ZT-12K	12	
ZT-12D	12	X
ZT-24K	24	
ZT-24D	24	X

- b. Electronic Key Telephones on the ZT-D system are equipped with the following hardware feature control keys and knobs.
 - **SPKR** (Speaker key): used to turn on the speaker for call monitoring and on-hook dialing.

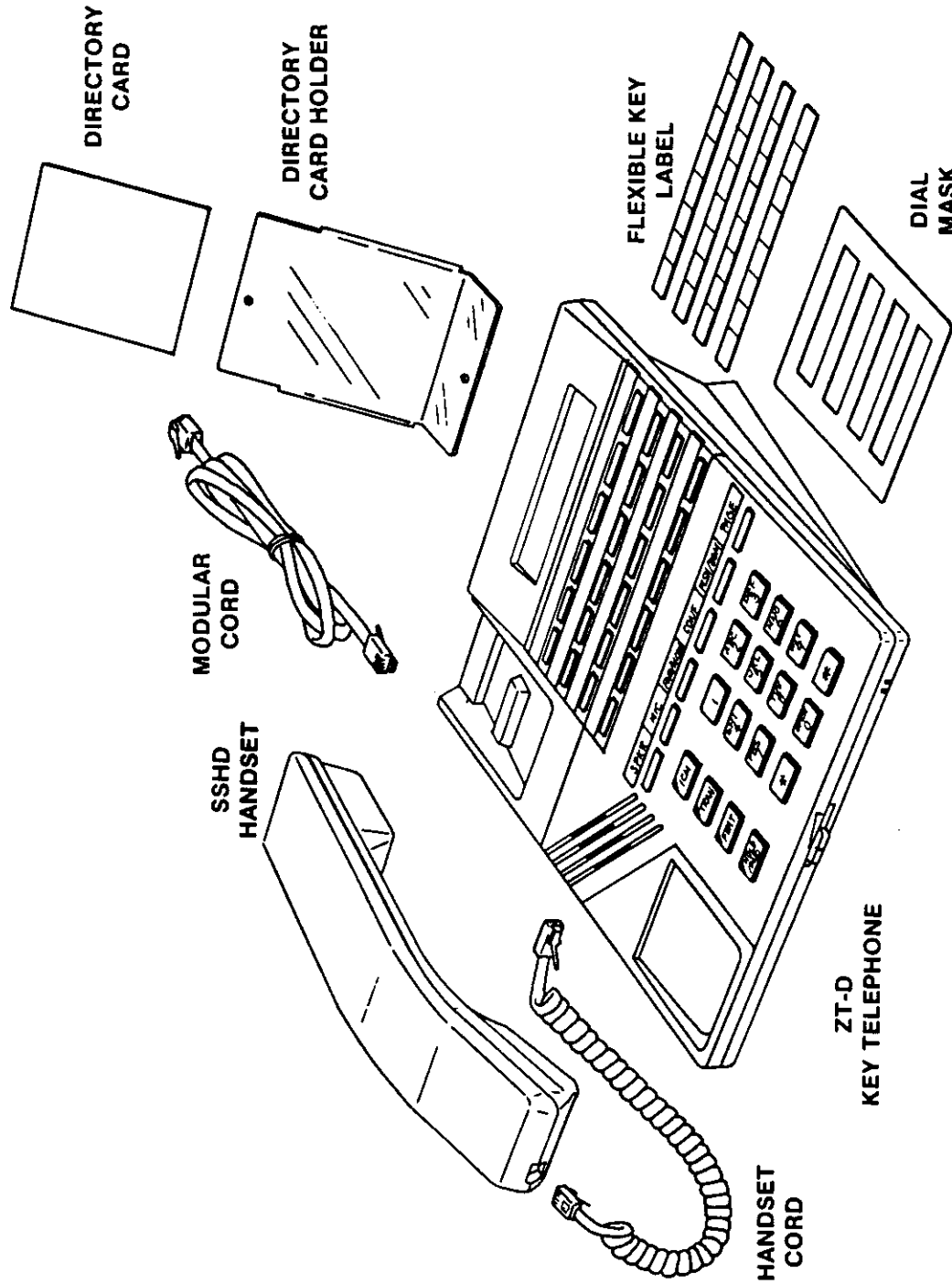


FIGURE 4-37
KEY TELEPHONE AND ACCESSORIES



FIGURE 4-38 ZT-6K KEY TELEPHONES



FIGURE 4-39 ZT-6D KEY TELEPHONES

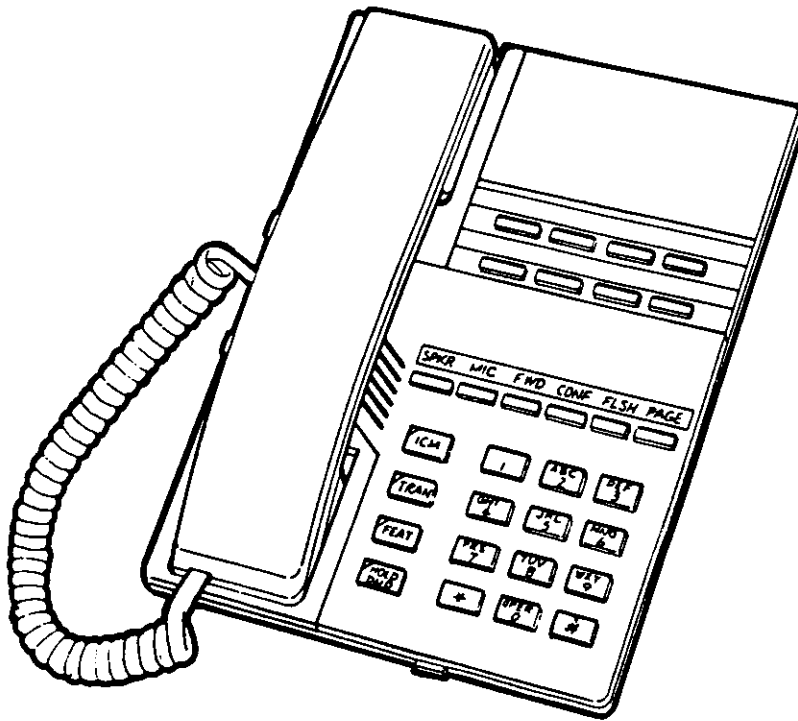


FIGURE 4-40 ZT-8K KEY TELEPHONES



FIGURE 4-41 ZT-8D KEY TELEPHONES

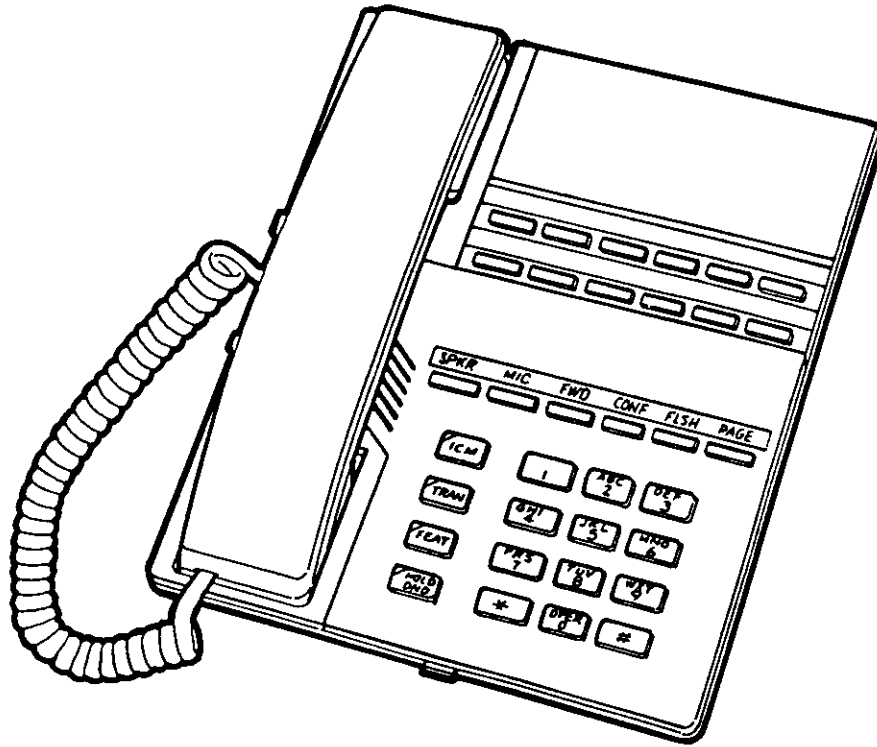


FIGURE 4-42 ZT-12K KEY TELEPHONES



FIGURE 4-43 ZT-12D KEY TELEPHONES



FIGURE 4-44 ZT-24K KEY TELEPHONES



FIGURE 4-45 ZT-24D KEY TELEPHONES

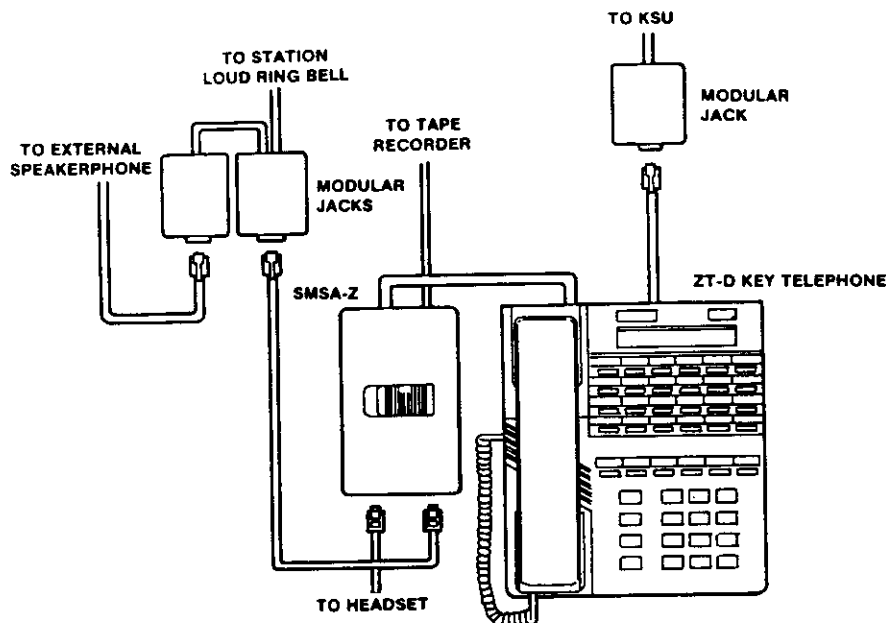


FIGURE 4-46 ZT-D KEY TELEPHONE COMPONENTS CONNECTION

- **MIC OFF** (Microphone-off key): turns off the station microphone used for the hands-free talkback on intercom to maintain privacy.
- **Speaker volume control**: adjusts output sound level of the station speaker.
- **Tone ringer volume control**: adjusts sound level of the station tone ringer in three steps.
- **Handset receiving volume control**: adjusts sound level from the handset earpiece in three steps: High-Normal-Low.

c. Connections of the ZT-D Key Telephone components are shown in Figure 4-46.

5.03 Key Telephone Optional Equipment

- a. Station optional components can be installed in any model of the ZT-D key telephones.
- b. Wiring diagram illustrating the ZT-D Key Telephone connections for optional units is shown in Figure 4-48. Remove six screws on the bottom housing to open the key telephone.
- c. **Station Speakerphone Unit (SSPU-Z1)**

- **Description**: The station built-in speakerphone card provides ZT-D KTs with a hands-free communication feature for communications with CO/PBX lines.
- **Programming**: The key telephones equipped with the SSPU-Z1 station speakerphone unit must be assigned by station class of service programming. (Item No. 72).

- **Installation**:

1. Change two strapping jack positions on the Station Circuit Card:
 Strap SPT: 2-3 to 1-2
 Strap SPR: 2-3 to 1-2
2. Plug the SSPU-Z1 unit into the CNSSP plug on the Station Circuit Card.
3. Adjust strapping and potentiometer if necessary as follows, referring to Figure 4-49:

Receiving Switch Power:

- Change strap RDET and Turn clockwise R4
- Receiving power for switch becomes stronger.

Transmission Switch Power:

- Change strap TXG
- Transmitting power reduced by 6 db.

Receiving Level Adjust:

- Change strap RATT
- Clockwise turn of the R32 increases attenuation of receiving voice.

d. Station Miscellaneous Adapter (SMSA-Z)

- **Description**: The station miscellaneous adapter provides an interface port for an external speakerphone, station loud ringer, cassette tape recorder and headset (AC011).
- **Installation**:
 1. Break off a square cut-out on the bottom housing of the key telephone and feed the SMSA-Z cable through the cutout.

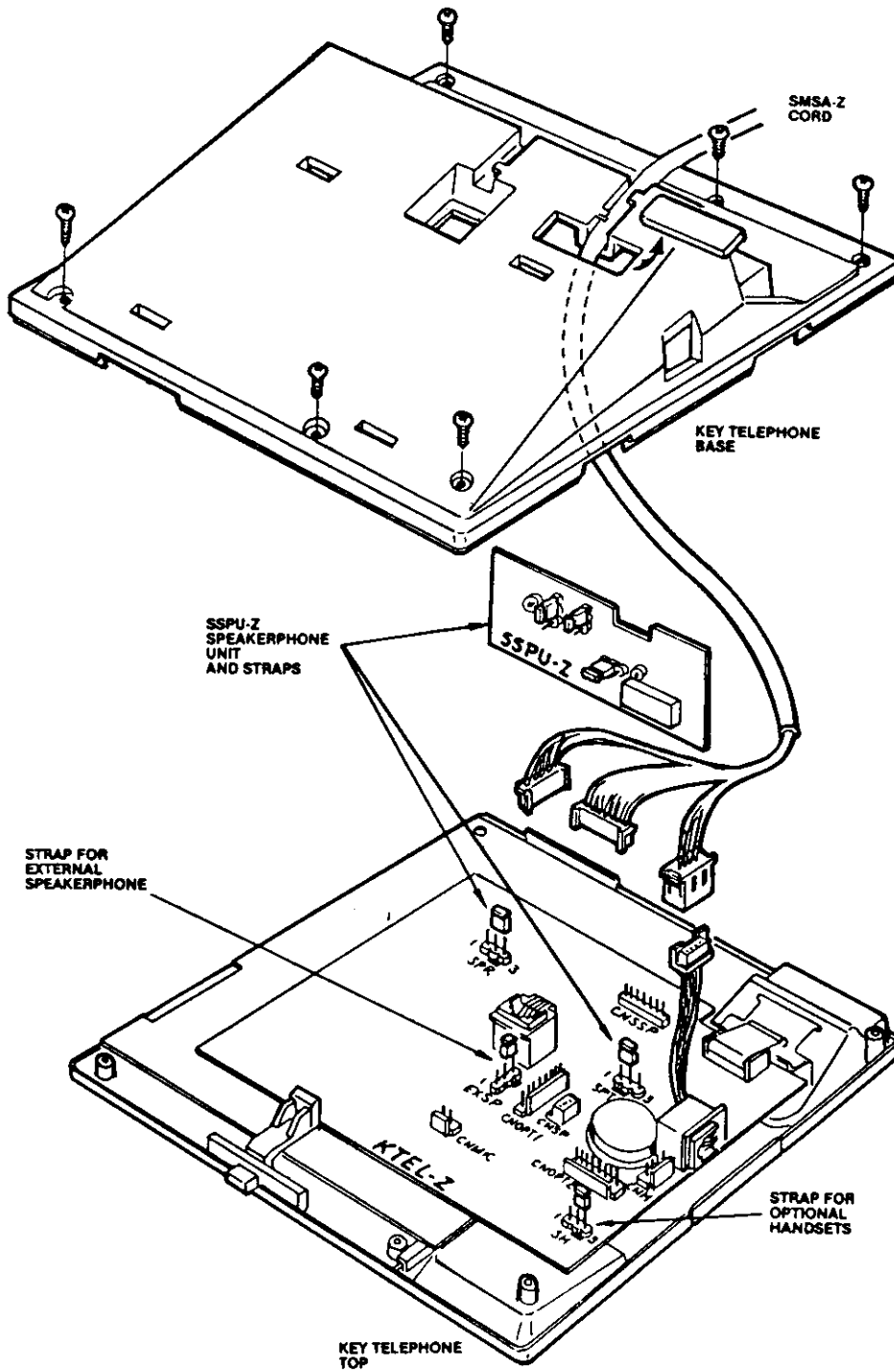


FIGURE 4-47
KEY TELEPHONE OPTIONAL COMPONENTS

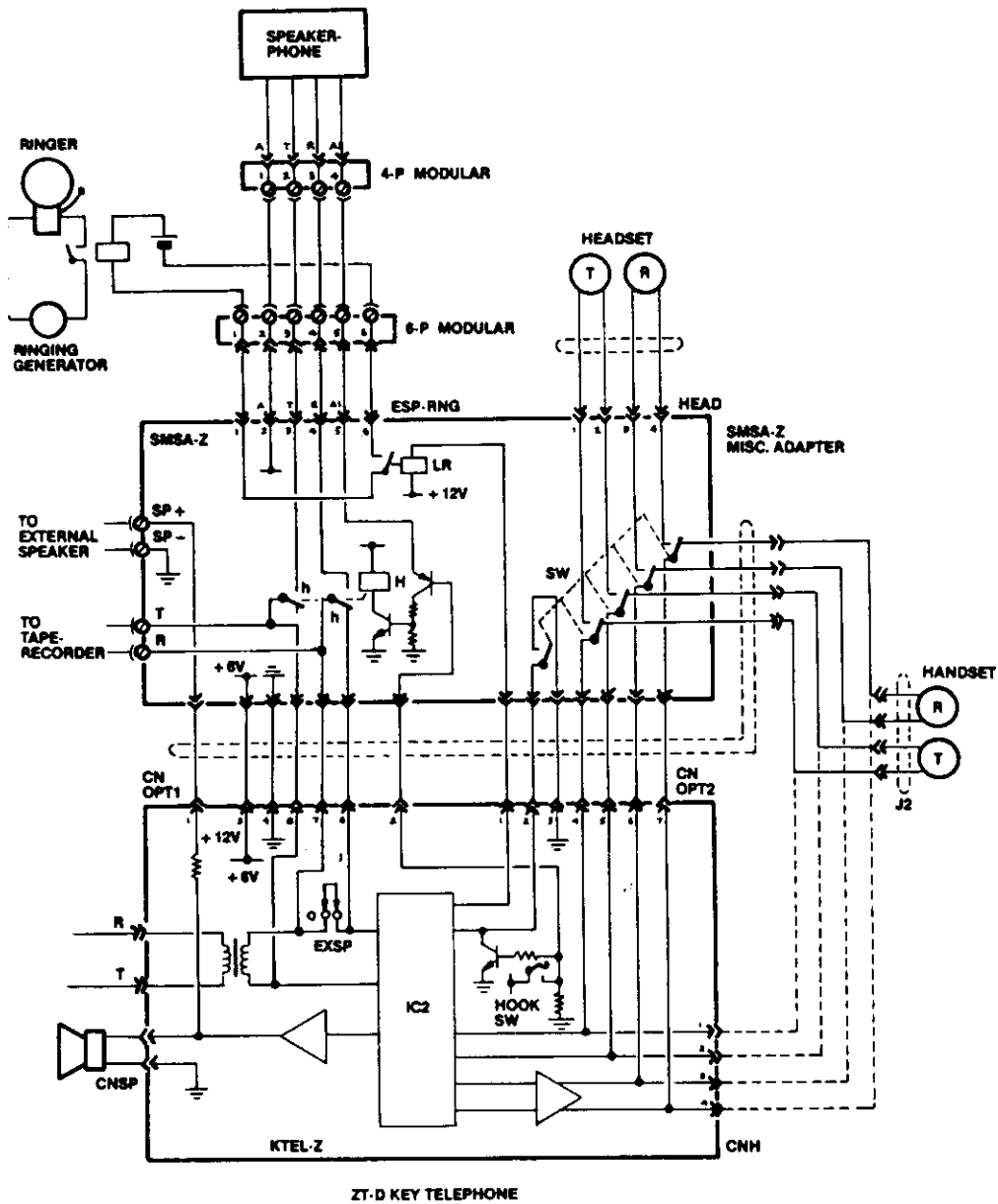
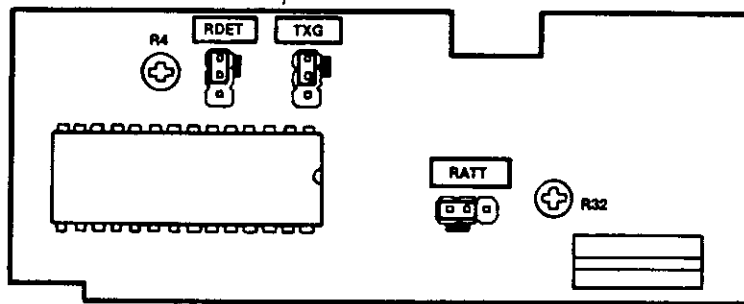
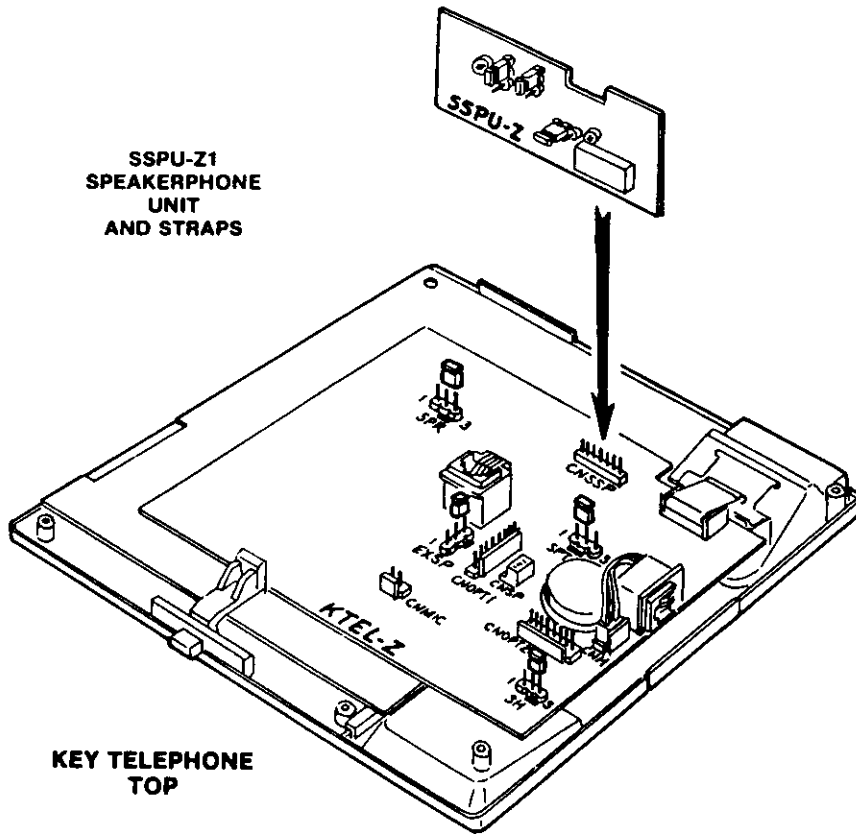
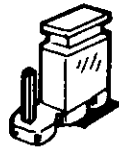


FIGURE 4-48
 ZT-D KEY TELEPHONE WIRING DIAGRAM



FIXED
POSITION



ADJUSTING
POSITION

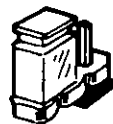


FIGURE 4-49 SSPU-Z1 INSTALLATION

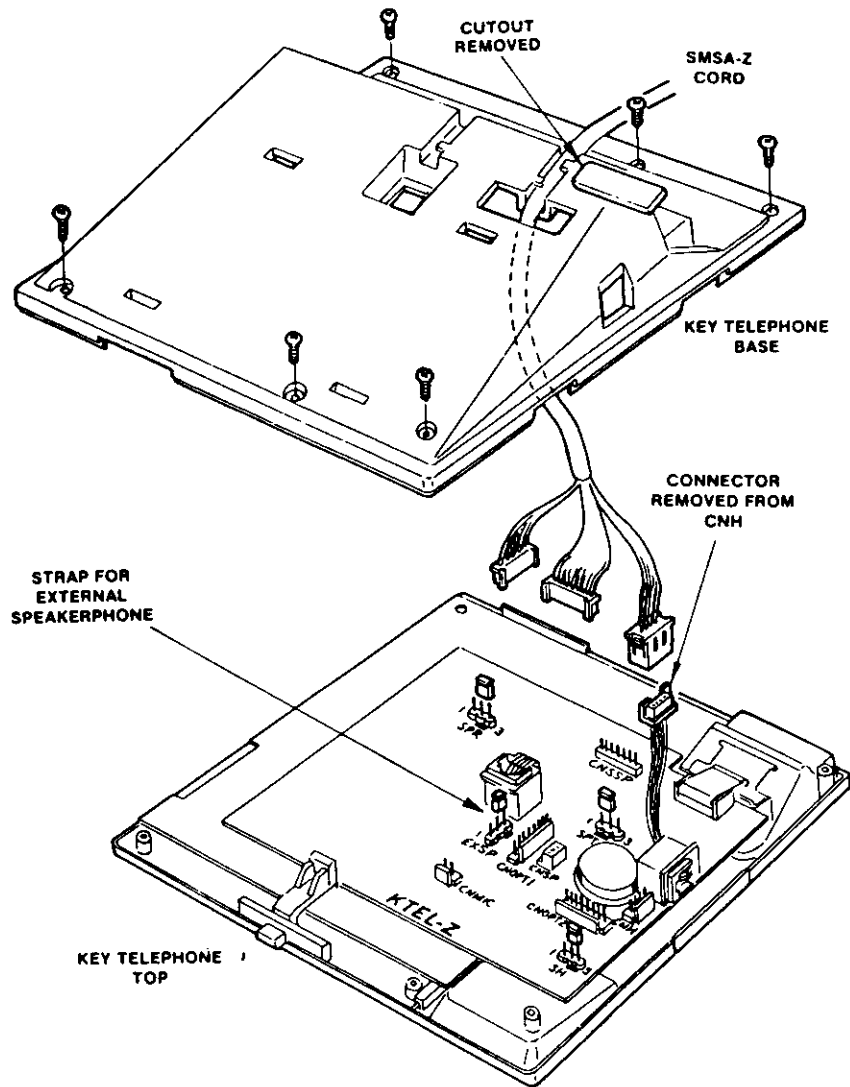


FIGURE 4-50 SMSA-Z INSTALLATION

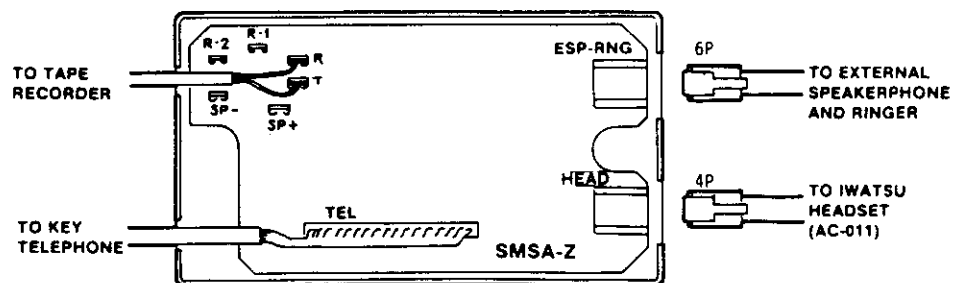


FIGURE 4-51 CONNECTION TO SMSA-Z

2. Plug two female connectors of the SMSA-Z cable into plug CNOPT1 (beige) and CNOPT2 (gray) on the Station Circuit Card.
3. Remove a harness connector from the CNH plug on the Station Circuit Card and connect it to a male connector of the SMSA-Z cable.
4. Change the following strapping jack position on the Station Circuit Card if an external speakerphone is connected:
Strap EXSP: 2-3 to 1-2

**e. Station Headset Connection Box (SHCB-Z)
(preliminary)**

- Description: The SHCB-Z provides an interface port to an industry standard headset by Plantronix or equivalent.
- Installation:
 1. Break off a square cut-out on the bottom housing of the key telephone and feed SHCB-Z cable through the cutout.
 2. Plug a female connector of the SHCB-Z cable into plug CNOPT1 on the Station Circuit Card.

3. Remove a harness connector from the CNH plug on the Station Circuit Card and connect it to a male connector of the SHCB-Z cable.
4. Plug a headset with a turn-key jack into phone jack on the SHCB-Z.

f. STWM-Z Station Wall Mount Unit

- Description: The station wall mount unit STWM6/8 provides a wall mount for the ZT-12K/D and ZT-24K/D.
- Installation:
 1. Mount the Station Wall Mount Bracket (SWMU-Z) on the wall using the two screws provided.
 2. Remove a Handset Hook assembly from the center of the SWMU-Z wall mount and insert it into the slot on the upper cradle of the key telephone as shown in Figure 4-53.
 3. Insert the bottom two tabs first into the slots on the back of the key telephone; then two upper tabs as shown in Figure.

• TO BE ISSUED AT A LATER DATE •

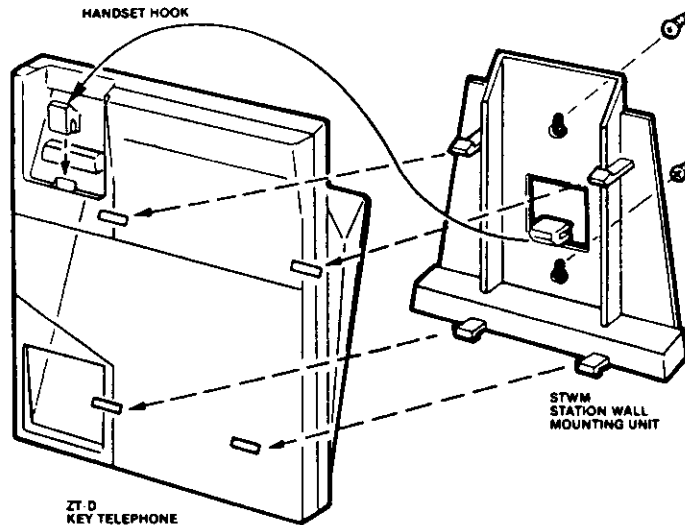


FIGURE 4-53
KEY TELEPHONE WALL MOUNTING

5.04 Key Telephone Handsets

a. Key Telephones require the use of a proprietary handset that comes with each unit. Optional handsets are available to meet the needs of the individual station user.

b. Station Noise Cancelling Handset (SNHD-Z)

- Description: The station noise cancelling handset is designed for use in locations where the environment may have loud or distracting noises. When used, environment noise is cancelled in the microphone so that user voice can be clearly transmitted.

- Installation:

1. Unplug a handset cord from the standard Handset.
2. Plug the cord into the model SNHD-Z Noise Cancelling Handset referring to Figure 4-54.

c. Station Hard-of-Hearing Handset (SHHD-Z)

- Description: The station hard-of-hearing handset has an amplifier with a volume control on the handset, enabling the station user to receive higher voice volumes from the receiver unit in the handset.

- Installation:

1. Unplug handset cord from the standard handset.

2. Plug the cord into the model SHHD-Z hard-of-hearing handset referring to Figure 4-54.

3. Change a strapping jack position on the Station Circuit Card:

Strap SH: 2-3 to 1-2

d. Station Hearing Aid Handset (SHAD-Z)

- Description: The station hearing aid compatible handset generates a magnetic field from the voice signal at the handset, enabling a user with a hearing aid to hear a clear voice. The SHAD-Z handset also provides acoustic amplification with a volume control.

- Installation:

1. Unplug handset cord from the standard handset.
2. Plug in the cord into the SHAD-Z handset referring to Figure 4-54.
3. Change a strapping jack position on the Station Circuit Card:

Strap SH: 2-3 to 1-2

5.05 ZT-32C DSS Console

a. The ZT-32C DSS Console has 32 direct station selection keys (with indicator lights) and eight feature/function keys. The DSS Console adds the convenience of direct station selection at the system operator/department receptionist station on ZT-D 824 and 2464 systems.

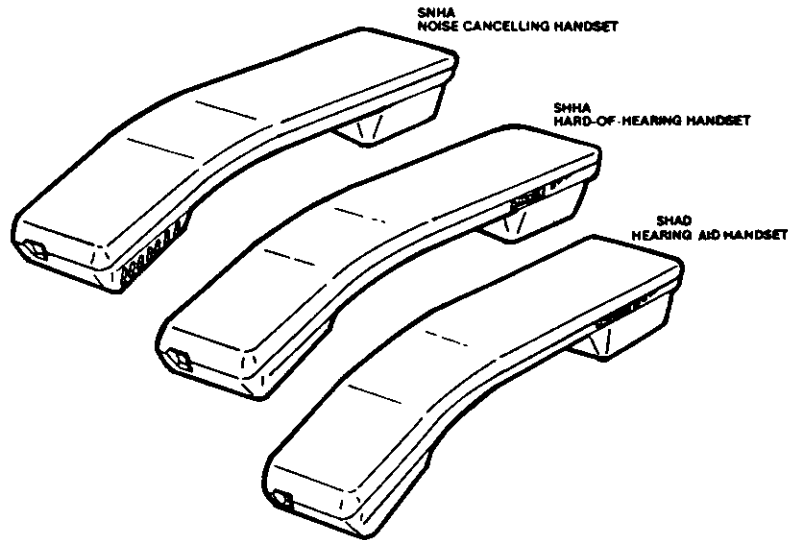


FIGURE 4-54 KEY TELEPHONE HANDSETS

- b. A DSS Console is required to program the system initially and, if needed, to make day-to-day changes in the programming. The alternative to programming terminal using a DSS is an IBM PC compatible computer for on and off-premise. For more information on the DSS Console, see System Hardware in Section Two and Features and Operations in Section Three.
- c. There is no limit to the number of DSS Consoles that can be installed on a system. Up to two DSS Consoles can be installed at each key telephone. However, each DSS subtracts from the number of available telephone extensions. Unused DSS keys can be programmed for up to 20 of the station speed dial numbers.
- d. Connection of the DSS-32C Console is shown in Figure 4-56.
- e. DSS Unit Wall Mounting
 - Mount the DSS Wall Mount Bracket (DSSWM-Z) on the wall using two screws.
 - Insert the bottom two tabs of the wall mount brackets first into the slots on the back of the DSS; then the two upper tabs as shown in Figure 4-57.

- b. For DTMF 2500 type telephone, affix Dial mask for convenient notation of the features.
- c. Figure 4-58 illustrates a single line 2500 type.
- d. Figure 4-59 illustrates the dial mask available for industry standard 2500 type telephones.

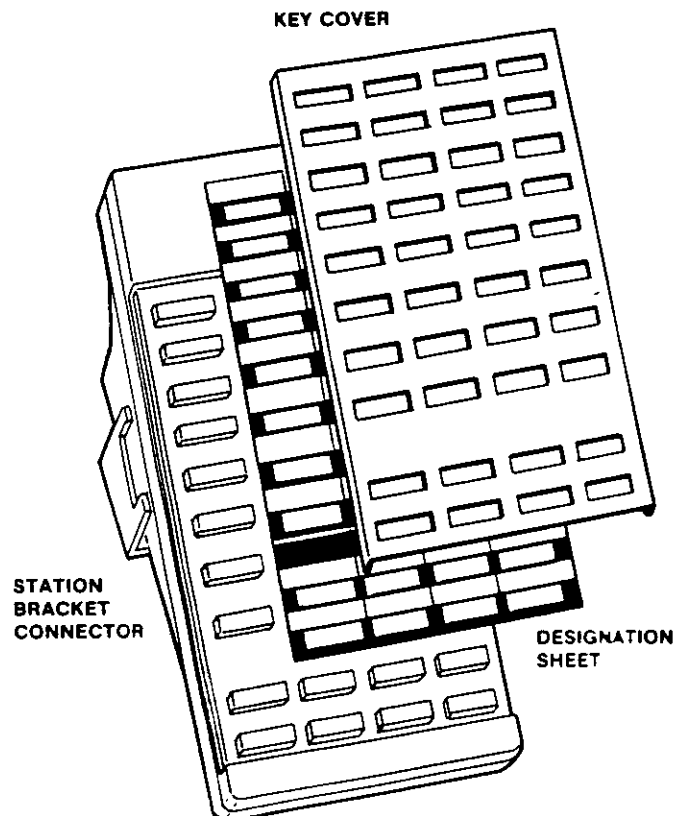


FIGURE 4-55 ZT-32C DSS CONSOLE

5.06 Single Line Telephones

- a. Both DP and DTMF SLTs can operate many ZT-D features. A dial mask for DTMF single line telephones (2500 type) phones is available to assist the user with feature operation.

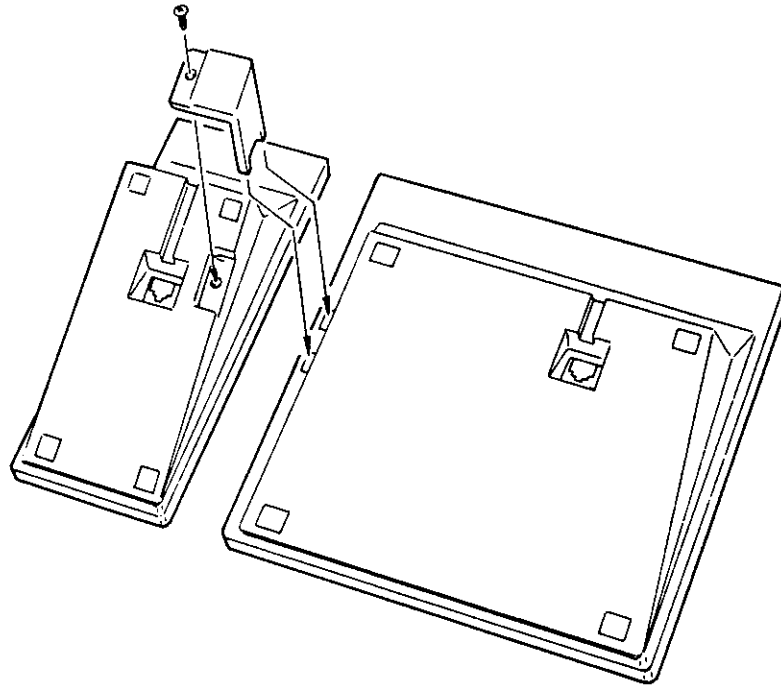


FIGURE 4-56
DSS-32C CONSOLE CONNECTION

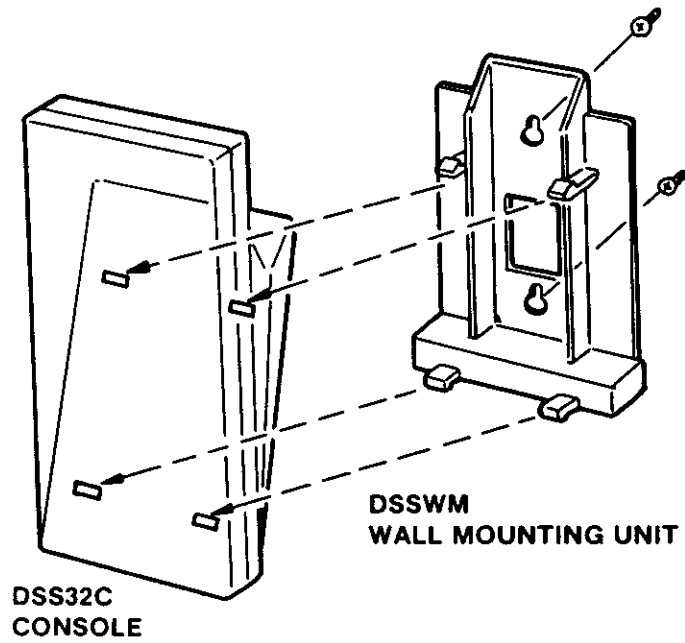


FIGURE 4-57
DSS CONSOLE WALL MOUNTING



FIGURE 4-58 SINGLE LINE TELEPHONE

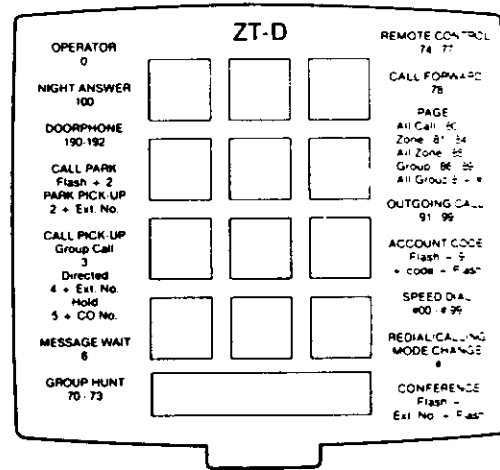


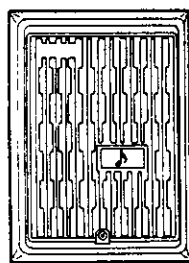
FIGURE 4-59 DTMF DIAL MASK

5.07 Doorphones (DOPH)

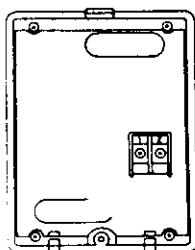
- a. Up to three (3) doorphones can be connected on the ZT-D system, providing a hands-free intercom station. The number of doorphones connected to a ZT-D system does not affect

the overall number of available extensions.

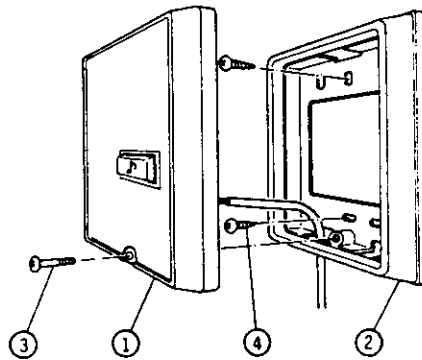
- b. Figure 4-60 illustrates the model DOPH Door-phone that can be utilized with the system.
- c. Single pair wiring is required for each door station.



FRONT VIEW



REAR VIEW



PARTS LIST

No.	Description	Qty
1	Upper Housing Assembly	1
2	Base	1
3	Screw	1
4	Mounting Screw	2

DOOR-PHONE JN (DOPH)

FIGURE 4-60 DOORPHONE UNIT (DOPH)

IWATSU ZT-D SERIES TELEPHONE SYSTEMPROGRAM REFERENCE GUIDE

<u>PROG.</u>	<u>PARAMETER</u>	<u>V.1.0</u>	<u>V.2.0</u>	<u>V.3.0</u>
03	Station Type Assignment	P. 5-6	ADDEN-15	ADDEN B-9
04	CO Line Assignment	P. 5-7		
05	Toll Restriction	P. 5-28		
06	SCDR Output Format	P. 5-7	ADDEN-15	
07	SCDR Output Mode	P. 5-7		
08	Outside USA/Canada	P. 5-28		
09	BGM Source	P. 5-8	ADDEN-11	
10	Tone/Voice Calling	P. 5-8		
11	P. A. System Assignment	P. 5-8		
12	DTMF Receiver Assignment	P. 5-9	ADDEN-15	
13	Doorphone Assignment	P. 5-9		
14	Modem Transmission Line	P. 5-9		
15	OCC Entry	P. 5-28		
16	Operator Camp-On Recall	P. 5-10		
17	Station Camp-On Recall	P. 5-11		ADDEN B-10
18	CO Flash	P. 5-11		
19	CO Disconnect Signal	P. 5-11		
20	Time Trunk Queing	P. 5-11		
21	Hold Recall	P. 5-11		ADDEN B-10
22	Page Time Out	P. 5-12		
23	DTMF Dial Duration	P. 5-12		ADDEN B-10
24	Master Group Hunt Timing	P. 5-12		
25	PBX Pause	P. 5-12		
26	Trk To Trk Conference	P. 5-13		
27	Flexible Relay	P. 5-9		ADDEN B-9

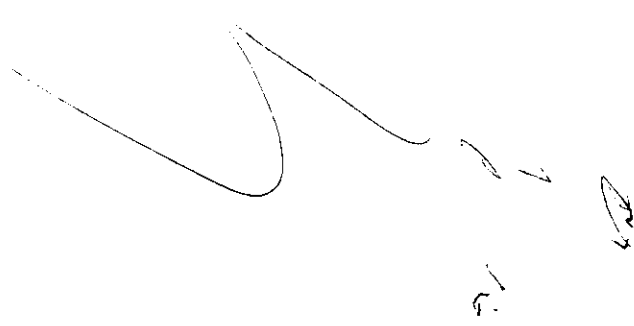
<u>PROG.</u>	<u>PARAMETER</u>	<u>V.1.0</u>	<u>V.2.0</u>	<u>V.3.0</u>	<u>V.4.0</u>
28	Conf. Level		ADDEN-15		
29	Floating CO Group	P. 5-13			
30	PBX Predial Entry	P. 5-14			
31	Optional CO Ringing	P. 5-14			
32	Dial Pulse Break Ratio	P. 5-14			
33	Protected CO Line			ADDEN B-10	
34	Utility Relay Assignment			ADDEN B-9	
35	DISA CO Line		ADDEN-17		
36	DISA Activating Station		ADDEN-17		
37	DISA Access Activation		ADDEN-17		
38					
39					
40	Station Day Ringing	P. 5-14			
41	Station Night Ringing	P. 5-15			
42	Doorphone Day Ringing	P. 5-15			
43	Doorphone Night Ringing	P. 5-15			
44	Ringing Group Assignment	P. 5-15			
45	Loud Ringing Bell Day	P. 5-15			
46	Loud Ringing Bell Night	P. 5-15			
47	PA Ringing Night	P. 5-15			
48	DP/MF Selection	P. 5-16			
49	10/20 PPS Dial Pulse	P. 5-16			
50	CO Disconnect Signal Detect	P. 5-16			
51	Auto CO to CO Fxding	P. 5-16			
52	Hunt CO Group Assignment	P. 5-16	4 GROUPS	ADDEN C-13	
53	External HOH Source Enable	P. 5-17			
53	Hunt ICM Group		ADDEN-16		
54	Barge-In Station			ADDEN B-11	
55	Dial Confirmation Tone		ADDEN-16		
56	Voice Mail Line		ADDEN-16		
57	Page Key Function Set		ADDEN-16		
58					

<u>PROG.</u>	<u>PARAMETER</u>	<u>V.1.0</u>	<u>V.2.0</u>	<u>V.3.0</u>	<u>V.4.0</u>
59					
60	Internal BGM Assignment	P. 5-17			
61	Outgoing Call Restriction	P. 5-29			
62	CO Line Pickup Restriction	P. 5-29			
63	System Toll Spd Dial	P. 5-29			
64	System Spd Dial Access	P. 5-29			
65	All Call Access	P. 5-17			
66	All Call Receive	P. 5-18			
67	Group Call Access	P. 5-18			
68	Group Call Receive	P. 5-18			
69	Zone Page Access	P. 5-18			
70	Auto Answer	P. 5-18			
71	Hold Recall Enable	P. 5-18			
72	Speakerphone	P. 5-19			
73	Do Not Disturb	P. 5-19			
74	Executive Station	P. 5-19			
75	Protected Station	P. 5-19			
76	Secretarial Hotline	P. 5-19			
77	Toll Restriction Class	P. 5-29			
78	Flex Key Assignment	P. 5-19			ADDEN-C,13
79	Off-Hook Signal		ADDEN-15		
80	Intercom Group	P. 5-20			
81	Station Restriction Password	P. 5-20			
82	Night Transfer Station	P. 5-20			
83	Station Pick-Up Group			ADDEN B-11	
84					
85	Optimized Routing Menu		ADDEN-17		
86	Call Park Timer			ADDEN B-10	
87	Call Fwd No Answer Time			ADDEN B-10	
88	Remote Relay Timer			ADDEN B-11	
91	Hunt CO Group Type			ADDEN C-15	

IWATSU ZT-D SERIES TELEPHONE SYSTEM
PROGRAM REFERENCE GUIDE
OPERATOR STATION PROGRAMMING

<u>PROG.</u>	<u>PARAMETER</u>	<u>V.1.0</u>	<u>V.2.0</u>	<u>V.3.0</u>
	Calendar	P.3-17		
	System Clock	P. 3-18		
	System Speed Dial	P. 3-18		
	Station Speed Dial (OWN)	P. 3-18		
	Station Speed Dial (Others)			
*	Night Mode	P. 3-19		
*	CO To CO Fwding	P. 3-19		
*	DISA Activation		ADDEN 3	

* This depends on other programming. Station 20 may or may not be activating station.



н CPU HW-1

6.00 OPTIONAL SYSTEM EQUIPMENT

6.01 The following components are standard devices that can be operated on the ZT-D system.

- PFXU-M
- SCDR PRINTER
- HAYES MICRO MODEM
- IBM XT PERSONAL COMPUTER

6.02 These components may be installed in the ZT-D system. Installation procedures related to the ZT-D are shown in the next section.

- a. **PFXU-M:** Used commonly throughout the Iwatsu Key Systems to transfer eight (8) CO lines to industry standard single line telephones. See Iwatsu ordering guide.
- b. **SCDR PRINTER:** Most commercially available printers with EIA Standard RS232C interface may be used for Station Call Detail Recorder. Individual connection to the printer may differ due to the RS-232C standards variation. Refer to the printer instruction for the proper connection.
- c. **HAYES MICROMODEM:** Smart-Com 1200 R is available to interface the ZT-D system to remote program the system utilizing a system compatible personal computer.
- d. **IBM XT PERSONAL COMPUTER:** An IBM XT Personal Computer with 10M-byte hard disk and 512K-byte RAM may be utilized for either on-site or off-premise programming.

7.00 CABLING

7.01 General Requirements

- a. Before cable termination, verify that the following has been completed:
 - All system planning guides have been completed.
 - System building plan with station locations, extension numbers, and type of device are indicated.
 - System hardware checked for completeness including installation material.
 - A suitable mounting space for the KSU and MDF has been selected.
- b. Insure that loop limits and wire sizes for KTs, SLTs and other optional equipment do not exceed the limits listed in Table 4-O.

TABLE 4-O ZT-D CABLING REQUIREMENTS

EQUIPMENT	CABLE
ZT-K/D Electronic Key Telephones	2-pair (twisted) #22/24 AWG
ZT-32C Direct Station Selection Unit	2-pair (twisted) #22/24 AWG
Single Line Telephones 500/2500 Type	1-pair (quad) #24 AWG
Doorphones	1-pair (quad) #24 AWG

TABLE 4-P SYSTEM LOOP LIMITS

FUNCTION	LOOP LIMIT	NOTES
ZT-K/D Key Telephone	60 ohms (1100 ft)	1
ZT-32C DSS Unit	60 ohms (1100 ft)	1
On-premise SLT (Rotary/DTMF)	600 ohms	2
Off-premise SLT (Rotary/DTMF)	1200 ohms	2

NOTES:

1. Feet indicated based upon using #24 AWG cable.
2. Resistance indicated includes internal resistance of the single line telephone.

7.02 CO/PBX Line Connection

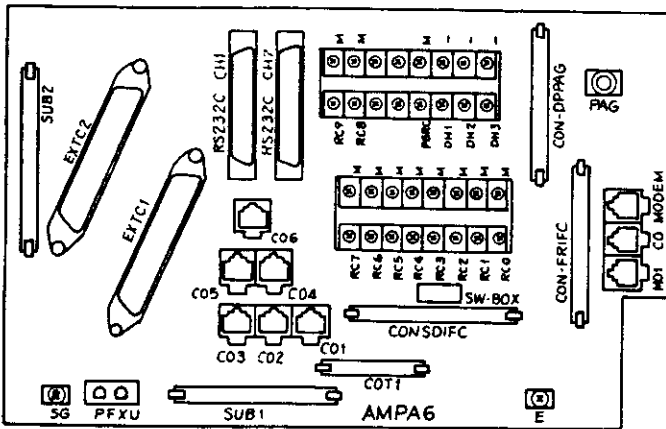
- a. Depending on the number of CO lines serving the system, the local telephone company should have installed the following network interfaces.
 - RJ11 for ZT-616 system.
 - RJ21 50 pin amphenol type connector for ZT-824/2464 system.

NOTE: The maximum CO line capacity for the ZT-D is 24 lines (ZT-2464 KSU).

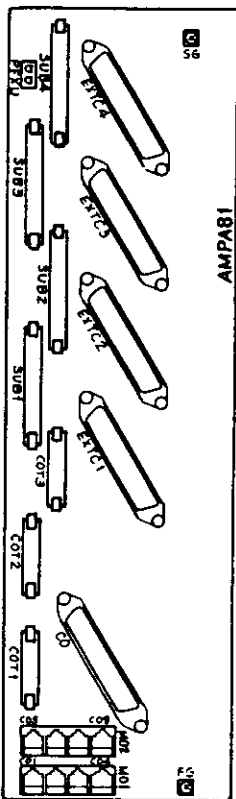
- b. There are two ways to terminate CO lines in the ZT-824/2464 system. There are individual RJ11C modular jacks for the first 8 CO line appearances and the RJ21, 50 pin amphenol type jack connector, that can terminate all 24 lines. Refer to the AMPA81 panel on 824/2464 KSU. The ZT-616 system terminates all 6 lines on RJ11C jacks on the AMPA6 panel.
 - Use a female 50-pin amphenol type (RJ21) connector at the KSU when the number of CO lines exceeds the total number of modular jack connectors, or when CO line service exceeds 8 pair cable. Do not use a combination of both RJ11 and RJ21 for terminating CO lines in the KSU simultaneously.
- c. Figure 4-61 shows where the CO/PBX lines terminate on the KSU. Table 4-Q lists the CO line designations on the cable between the KSU and the MDF terminal block.
- d. Terminations on a MDF terminal block to an

TABLE 4-Q CO/PBX LINE DESIGNATION

Function	616KSU Modular	824/2464KSU	
		Modular	Amphenol
CO 1 Tip	CO1 Red	CO1 Red	26
			Green
CO 2 Tip	CO2 Red	CO2 Red	27
			Green
CO 3 Tip	CO3 Red	CO3 Red	28
			Green
CO 4 Tip	CO4 Red	CO4 Red	29
			Green
CO 5 Tip	CO5 Red	CO5 Red	30
			Green
CO 6 Tip	CO6 Red	CO6 Red	31
			Green
CO 7 Tip		CO7 Red	32
			Green
CO 8 Tip		CO8 Red	33
			Green
CO 9 Tip			34
			Green
CO 10 Tip			35
			Green
CO 11 Tip			36
			Green
CO 12 Tip			37
			Green
CO 13 Tip			38
			Green
CO 14 Tip			39
			Green
CO 15 Tip			40
			Green
CO 16 Tip			41
			Green
CO 17 Tip			42
			Green
CO 18 Tip			43
			Green
CO 19 Tip			44
			Green
CO 20 Tip			45
			Green
CO 21 Tip			46
			Green
CO 22 Tip			47
			Green
CO 23 Tip			48
			Green
CO 24 Tip			49
			Green



ZT-616 KSU



ZT-824/2464 KSU

FIGURE 4-61 CO/PBX LINE TERMINATION

extension modular jack for KT's and/or SLT's is shown in Table 4-S. A group of eight stations terminates on one MDF terminal block.

- e. Extensions are connected from the MDF to the KSU using 25-pair cable with a male 50-pin amphenol (RJ21) type connector the KSU end. Eight extensions per 25-pair cable form an "extension set". Each "extension set" is connected to the corresponding female 50-pin amphenol connector on the AMPA MDF panel at each KSU. Figure 4-63 shows where the "extension sets" connect to the KSU.

- On the 616 KSU it will be the AMPA6 panel for extension sets one and two (EXTC1 - EXTC2, Ext. No. 120 - Ext. No. 135).
- On the 824/2464 KSU it will be the AMPA81

(EXTC1-EXTC4) and AMPA24 (EXTC5-EXTC8) panels for extension sets Ext. No. 120 - Ext. No. 151.

- f. Table 4-S lists the KSU-MDF station wiring termination for the "extension set" on the KSU.

This table is to be used for each "extension set". Refer to the appropriate EXTC connector number, extension numbers starting at 120 and proceeding in sets of eight, and tip and ring of station cables.

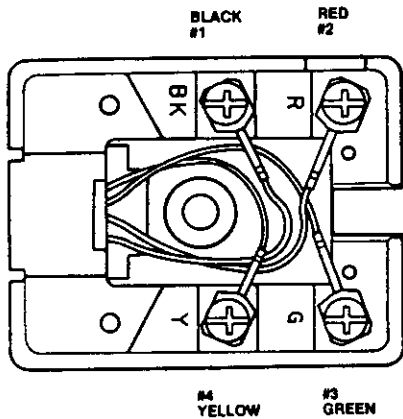


FIGURE 4-62 4-PIN MODULAR JACK

7.03 Station Cabling

- a. Station cabling refers to the wire termination of key telephones, DSS Consoles, and SLTs. When assigning station locations, start extension numbering with 120 and continue until reaching the maximum of extensions permitted on the system (extension 183 on the 2464 KSU).
- b. Operator station number may be assigned to any extension number but is limited to two stations. DSS Console(s) may also be installed at any extension with a key telephone and it must be assigned by programming.

NOTE: Each DSS Console is counted as one extension. Up to two DSS Consoles can be used on each KT. There is no limit as to the number of DSS Consoles on one system as long as they plus the number of KT and SLT do not exceed the maximum number of extensions permitted on the system.

- c. Key telephones require 2-pair twisted or quad type home run cables for connection to the MDF terminal block. These cables need not be shielded unless they run through where radio

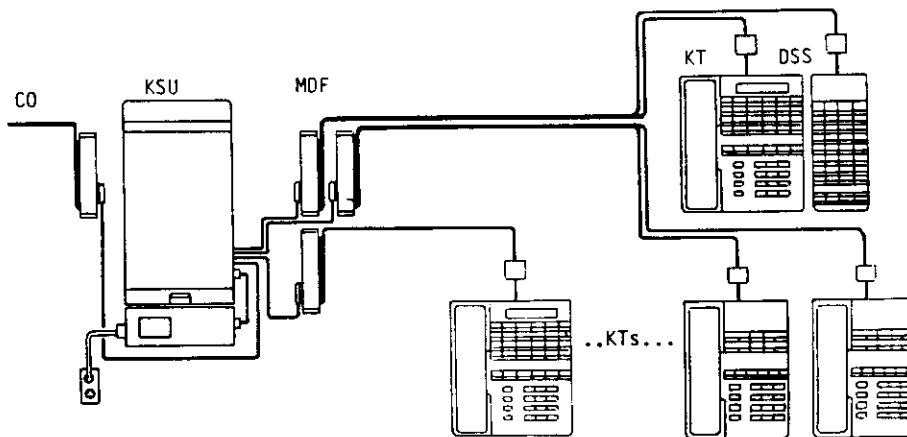


FIGURE 4-63
 MDF TO KSU EXTENSION CONNECTION

interference is expected. No. 22 to 26 AWG wire may be used; however, No. 24 AWG is normally used. Beside the standard tip and ring speech path, the KT requires data-tip and data-ring circuits.

- d. Each KT comes with a 4-pin full modular cable that connects the station to the house wiring modular jack. The system uses 4-pin modular jacks (RJ11C/W). Six-pin jacks may also be used. When using 6-pin modular jacks, the pins on each end (pins connected to the white wire and blue wire) are unused. Modular jack pin numbers are given in Table 4-R, using industry standard quad (4 cond) type cable, and the 4-pin modular jack is shown in Figure 4-62.

TABLE 4-R MODULAR JACK TERMINATION

JACK PIN	WIRE COLOR	DESIGNATION
1	Black	DR
2	Red	R
3	Green	T
4	Yellow	DT

TABLE 4-S KSU-MDF STATION WIRING
1. CONNECTOR EXTC1

CONN. 1 Ext. No.	Designation			Pin No.	MDF Pin No.	MDF Wire Color	Extension Modular	
	KTSB	SLSB	SLKT				Pin No.	Color
120	T	T	T	26	1	W-BL	3	GN
	R	R	R	1	2	BL-W	2	R
	DT	—	DT	27	3	W-O	4	Y
	DR	—	DR	2	4	O-W	1	BK
121	T	T	T	28	5	W-GN	3	GN
	R	R	R	3	6	GN-W	2	R
	DT	—	DT	29	7	W-BR	4	Y
	DR	—	DR	4	8	BR-W	1	BK
122	T	T	T	30	9	W-SL	3	GN
	R	R	R	5	10	SL-W	2	R
	DT	—	DT	31	11	R-BL	4	Y
	DR	—	DR	6	12	BL-R	1	BK
123	T	T	T	32	13	R-O	3	GN
	R	R	R	7	14	O-R	2	R
	DT	—	DT	33	15	R-GN	4	Y
	DR	—	DR	8	16	GN-R	1	BK
124	T	T	T	34	17	R-BR	3	GN
	R	R	R	9	18	BR-R	2	R
	DT	—	—	35	19	R-SL	4	Y
	DR	—	—	10	20	SL-R	1	BK
125	T	T	T	36	21	BK-BL	3	GN
	R	R	R	11	22	BL-BK	2	R
	DT	—	—	37	23	BK-O	4	Y
	DR	—	—	12	24	O-BK	1	BK
126	T	T	T	38	25	BK-GN	3	GN
	R	R	R	13	26	GN-BK	2	R
	DT	—	—	39	27	BK-BR	4	Y
	DR	—	—	14	28	BR-BK	1	BK
127	T	T	T	40	29	BK-SL	3	GN
	R	R	R	15	30	SL-BK	2	R
	DT	—	—	41	31	Y-BL	4	Y
	DR	—	—	16	32	BL-Y	1	BK

TABLE 4-S KSU-MDF STATION WIRING
2. CONNECTOR EXTC2

CONN 2 Ext. No.	Designation			Pin No.	MDF Pin No.	MDF Wire Color	Extension Modular	
	KTSB	SLSB	SLKT				Pin No.	Color
128	T	T	T	26	1	W-BL	3	GN
	R	R	R	1	2	BL-W	2	R
	DT	—	DT	27	3	W-O	4	Y
	DR	—	DR	2	4	O-W	1	BK
129	T	T	T	28	5	W-GN	3	GN
	R	R	R	3	6	GN-W	2	R
	DT	—	DT	29	7	W-BR	4	Y
	DR	—	DR	4	8	BR-W	1	BK
130	T	T	T	30	9	W-SL	3	GN
	R	R	R	5	10	SL-W	2	R
	DT	—	DT	31	11	R-BL	4	Y
	DR	—	DR	6	12	BL-R	1	BK
131	T	T	T	32	13	R-O	3	GN
	R	R	R	7	14	O-R	2	R
	DT	—	DT	33	15	R-GN	4	Y
	DR	—	DR	8	16	GN-R	1	BK
132	T	T	T	34	17	R-BR	3	GN
	R	R	R	9	18	BR-R	2	R
	DT	—	—	35	19	R-SL	4	Y
	DR	—	—	10	20	SL-R	1	BK
133	T	T	T	36	21	BK-BL	3	GN
	R	R	R	11	22	BL-BK	2	R
	DT	—	—	37	23	BK-O	4	Y
	DR	—	—	12	24	O-BK	1	BK
134	T	T	T	38	25	BK-GN	3	GN
	R	R	R	13	26	GN-BK	2	R
	DT	—	—	39	27	BK-BR	4	Y
	DR	—	—	14	28	BR-BK	1	BK
135	T	T	T	40	29	BK-SL	3	GN
	R	R	R	15	30	SL-BK	2	R
	DT	—	—	41	31	Y-BL	4	Y
	DR	—	—	16	32	BL-Y	1	BK

TABLE 4-S KSU-MDF STATION WIRING
3. CONNECTOR EXTC3

CONN 3 Ext. No.	Designation			Pin No.	MDF Pin No.	MDF Wire Color	Extension Modular	
	KTSB	SLSB	SLKT				Pin No.	Color
136	T	T	T	26	1	W-BL	3	GN
	R	R	R	1	2	BL-W	2	R
	DT	—	DT	27	3	W-O	4	Y
	DR	—	DR	2	4	O-W	1	BK
137	T	T	T	28	5	W-GN	3	GN
	R	R	R	3	6	GN-W	2	R
	DT	—	DT	29	7	W-BR	4	Y
	DR	—	DR	4	8	BR-W	1	BK
138	T	T	T	30	9	W-SL	3	GN
	R	R	R	5	10	SL-W	2	R
	DT	—	DT	31	11	R-BL	4	Y
	DR	—	DR	6	12	BL-R	1	BK
139	T	T	T	32	13	R-O	3	GN
	R	R	R	7	14	O-R	2	R
	DT	—	DT	33	15	R-GN	4	Y
	DR	—	DR	8	16	GN-R	1	BK
140	T	T	T	34	17	R-BR	3	GN
	R	R	R	9	18	BR-R	2	R
	DT	—	—	35	19	R-SL	4	Y
	DR	—	—	10	20	SL-R	1	BK
141	T	T	T	36	21	BK-BL	3	GN
	R	R	R	11	22	BL-BK	2	R
	DT	—	—	37	23	BK-O	4	Y
	DR	—	—	12	24	O-BK	1	BK
142	T	T	T	38	25	BK-GN	3	GN
	R	R	R	13	26	GN-BK	2	R
	DT	—	—	39	27	BK-BR	4	Y
	DR	—	—	14	28	BR-BK	1	BK
143	T	T	T	40	29	BK-SL	3	GN
	R	R	R	15	30	SL-BK	2	R
	DT	—	—	41	31	Y-BL	4	Y
	DR	—	—	16	32	BL-Y	1	BK

TABLE 4-S KSU-MDF STATION WIRING
4. CONNECTOR EXTC4

CONN 4 Ext No	Designation			Pin No	MDF Pin No	MDF Wire Color	Extension Modular	
	KTSB	SLSB	SLKT				Pin No	Color
144	T	T	T	26	1	W-BL	3	GN
	R	R	R	1	2	BL-W	2	R
	DT	—	DT	27	3	W-O	4	Y
	DR	—	DR	2	4	O-W	1	BK
145	T	T	T	28	5	W-GN	3	GN
	R	R	R	3	6	GN-W	2	R
	DT	—	DT	29	7	W-BR	4	Y
	DR	—	DR	4	8	BR-W	1	BK
146	T	T	T	30	9	W-SL	3	GN
	R	R	R	5	10	SL-W	2	R
	DT	—	DT	31	11	R-BL	4	Y
	DR	—	DR	6	12	BL-R	1	BK
147	T	T	T	32	13	R-O	3	GN
	R	R	R	7	14	O-R	2	R
	DT	—	DT	33	15	R-GN	4	Y
	DR	—	DR	8	16	GN-R	1	BK
148	T	T	T	34	17	R-BR	3	GN
	R	R	R	9	18	BR-R	2	R
	DT	—	DT	35	19	R-SL	4	Y
	DR	—	DR	10	20	SL-R	1	BK
149	T	T	T	36	21	BK-BL	3	GN
	R	R	R	11	22	BL-BK	2	R
	DT	—	DT	37	23	BK-O	4	Y
	DR	—	DR	12	24	O-BK	1	BK
150	T	T	T	38	25	BK-GN	3	GN
	R	R	R	13	26	GN-BK	2	R
	DT	—	DT	39	27	BK-BR	4	Y
	DR	—	DR	14	28	BR-BK	1	BK
151	T	T	T	40	29	BK-SL	3	GN
	R	R	R	15	30	SL-BK	2	R
	DT	—	DT	41	31	Y-BL	4	Y
	DR	—	DR	16	32	BL-Y	1	BK

TABLE 4-S KSU-MDF STATION WIRING
6. CONNECTOR EXTC6

CONN 6 Ext No	Designation			Pin No	MDF Pin No	MDF Wire Color	Extension Modular	
	KTSB	SLSB	SLKT				Pin No	Color
160	T	T	T	26	1	W-BL	3	GN
	R	R	R	1	2	BL-W	2	R
	DT	—	DT	27	3	W-O	4	Y
	DR	—	DR	2	4	O-W	1	BK
161	T	T	T	28	5	W-GN	3	GN
	R	R	R	3	6	GN-W	2	R
	DT	—	DT	29	7	W-BR	4	Y
	DR	—	DR	4	8	BR-W	1	BK
162	T	T	T	30	9	W-SL	3	GN
	R	R	R	5	10	SL-W	2	R
	DT	—	DT	31	11	R-BL	4	Y
	DR	—	DR	6	12	BL-R	1	BK
163	T	T	T	32	13	R-O	3	GN
	R	R	R	7	14	O-R	2	R
	DT	—	DT	33	15	R-GN	4	Y
	DR	—	DR	8	16	GN-R	1	BK
164	T	T	T	34	17	R-BR	3	GN
	R	R	R	9	18	BR-R	2	R
	DT	—	DT	35	19	R-SL	4	Y
	DR	—	DR	10	20	SL-R	1	BK
165	T	T	T	36	21	BK-BL	3	GN
	R	R	R	11	22	BL-BK	2	R
	DT	—	DT	37	23	BK-O	4	Y
	DR	—	DR	12	24	O-BK	1	BK
166	T	T	T	38	25	BK-GN	3	GN
	R	R	R	13	26	GN-BK	2	R
	DT	—	DT	39	27	BK-BR	4	Y
	DR	—	DR	14	28	BR-BK	1	BK
167	T	T	T	40	29	BK-SL	3	GN
	R	R	R	15	30	SL-BK	2	R
	DT	—	DT	41	31	Y-BL	4	Y
	DR	—	DR	16	32	BL-Y	1	BK

TABLE 4-S KSU-MDF STATION WIRING
5. CONNECTOR EXTC5

CONN 5 Ext No	Designation			Pin No	MDF Pin No	MDF Wire Color	Extension Modular	
	KTSB	SLSB	SLKT				Pin No	Color
152	T	T	T	26	1	W-BL	3	GN
	R	R	R	1	2	BL-W	2	R
	DT	—	DT	27	3	W-O	4	Y
	DR	—	DR	2	4	O-W	1	BK
153	T	T	T	28	5	W-GN	3	GN
	R	R	R	3	6	GN-W	2	R
	DT	—	DT	29	7	W-BR	4	Y
	DR	—	DR	4	8	BR-W	1	BK
154	T	T	T	30	9	W-SL	3	GN
	R	R	R	5	10	SL-W	2	R
	DT	—	DT	31	11	R-BL	4	Y
	DR	—	DR	6	12	BL-R	1	BK
155	T	T	T	32	13	R-O	3	GN
	R	R	R	7	14	O-R	2	R
	DT	—	DT	33	15	R-GN	4	Y
	DR	—	DR	8	16	GN-R	1	BK
156	T	T	T	34	17	R-BR	3	GN
	R	R	R	9	18	BR-R	2	R
	DT	—	DT	35	19	R-SL	4	Y
	DR	—	DR	10	20	SL-R	1	BK
157	T	T	T	36	21	BK-BL	3	GN
	R	R	R	11	22	BL-BK	2	R
	DT	—	DT	37	23	BK-O	4	Y
	DR	—	DR	12	24	O-BK	1	BK
158	T	T	T	38	25	BK-GN	3	GN
	R	R	R	13	26	GN-BK	2	R
	DT	—	DT	39	27	BK-BR	4	Y
	DR	—	DR	14	28	BR-BK	1	BK
159	T	T	T	40	29	BK-SL	3	GN
	R	R	R	15	30	SL-BK	2	R
	DT	—	DT	41	31	Y-BL	4	Y
	DR	—	DR	16	32	BL-Y	1	BK

TABLE 4-S KSU-MDF STATION WIRING
7. CONNECTOR EXTC7

CONN 7 Ext No	Designation			Pin No	MDF Pin No	MDF Wire Color	Extension Modular	
	KTSB	SLSB	SLKT				Pin No	Color
168	T	T	T	26	1	W-BL	3	GN
	R	R	R	1	2	BL-W	2	R
	DT	—	DT	27	3	W-O	4	Y
	DR	—	DR	2	4	O-W	1	BK
169	T	T	T	28	5	W-GN	3	GN
	R	R	R	3	6	GN-W	2	R
	DT	—	DT	29	7	W-BR	4	Y
	DR	—	DR	4	8	BR-W	1	BK
170	T	T	T	30	9	W-SL	3	GN
	R	R	R	5	10	SL-W	2	R
	DT	—	DT	31	11	R-BL	4	Y
	DR	—	DR	6	12	BL-R	1	BK
171	T	T	T	32	13	R-O	3	GN
	R	R	R	7	14	O-R	2	R
	DT	—	DT	33	15	R-GN	4	Y
	DR	—	DR	8	16	GN-R	1	BK
172	T	T	T	34	17	R-BR	3	GN
	R	R	R	9	18	BR-R	2	R
	DT	—	DT	35	19	R-SL	4	Y
	DR	—	DR	10	20	SL-R	1	BK
173	T	T	T	36	21	BK-BL	3	GN
	R	R	R	11	22	BL-BK	2	R
	DT	—	DT	37	23	BK-O	4	Y
	DR	—	DR	12	24	O-BK	1	BK
174	T	T	T	38	25	BK-GN	3	GN
	R	R	R	13	26	GN-BK	2	R
	DT	—	DT	39	27	BK-BR	4	Y
	DR	—	DR	14	28	BR-BK	1	BK
175	T	T	T	40	29	BK-SL	3	GN
	R	R	R	15	30	SL-BK	2	R
	DT	—	DT	41	31	Y-BL	4	Y
	DR	—	DR	16	32	BL-Y	1	BK

TABLE 4-S KSU-MDF STATION WIRING
8. CONNECTOR EXTC8

CONN. 8 Ext. No.	Designation			Pin No.	MDF Pin No.	MDF Wire Color	Extension Modular	
	KT SB	SLSB	SLKT				Pin No.	Color
176	T	T	T	26	1	W-BL	3	GN
	R	R	R	1	2	BL-W	2	R
	DT	—	DT	27	3	W-O	4	Y
	DR	—	DR	2	4	O-W	1	BK
177	T	T	T	28	5	W-GN	3	GN
	R	R	R	3	6	GN-W	2	R
	DT	—	DT	29	7	W-BR	4	Y
	DR	—	DR	4	8	BR-W	1	BK
178	T	T	T	30	9	W-SL	3	GN
	R	R	R	5	10	SL-W	2	R
	DT	—	DT	31	11	R-BL	4	Y
	DR	—	DR	6	12	BL-R	1	BK
179	T	T	T	32	13	R-O	3	GN
	R	R	R	7	14	O-R	2	R
	DT	—	DT	33	15	R-GN	4	Y
	DR	—	DR	8	16	GN-R	1	BK
180	T	T	T	34	17	R-BR	3	GN
	R	R	R	9	18	BR-R	2	R
	DT	—	—	35	19	R-SL	4	Y
	DR	—	—	10	20	SL-R	1	BK
181	T	T	T	36	21	BK-BL	3	GN
	R	R	R	11	22	BL-BK	2	R
	DT	—	—	37	23	BK-O	4	Y
	DR	—	—	12	24	O-BK	1	BK
182	T	T	T	38	25	BK-GN	3	GN
	R	R	R	13	26	GN-BK	2	R
	DT	—	—	39	27	BK-BR	4	Y
	DR	—	—	14	28	BR-BK	1	BK
183	T	T	T	40	29	BK-SL	3	GN
	R	R	R	15	30	SL-BK	2	R
	DT	—	—	41	31	Y-BL	4	Y
	DR	—	—	16	32	BL-Y	1	BK

7.04 Optional Equipment Cabling

- a. This section includes cable termination for devices that are normally provided by the customer and connected through various interface cards in the KSU. In most instances, optional equipment requires the installation of optional circuit cards in the KSU. (see Optional KSU Cards, Component Identification, Section Four)
- b. All optional equipment cables terminate on the distribution panels located at the top of each KSU (cover removed).
 - The AMPA6 and the DSPA6 are the distribution panels for the ZT-616 KSU.
 - The DSPC82 and the DSPB82 are distribution panels for the 824 and 2464 KSUs.

See Figure 4-10 AMPA6, Figure 4-13 DSPA6, Figure 4-14 DSPB82 and Figure 4-15 DSPC82 in Section 4.
- c. KSU distribution panels provide voice, data and relay contact interfaces of the system. The DSPA6 panel on the 616 KSU and the DSPC82 on the 824, 2464 KSUs' contain the same cable termination points. The AMPA6 panel for

the 616 KSU and the DSPC82 on the 824/2464 KSUs' contain the same termination points.

NOTE: The AMPA6 (616 KSU) does not have connections for zone page speakers. This size system does not accommodate the zone page through the P.A. system.

- d. Refer back to Figures 4-5 through 4-10 in this section on KSU Component Installation for location of termination points on the distribution panels.
- e. Most applications require use of a slave relay if the application circuit power exceeds the control circuit contact ratings. Install the slave relay with a protective diode IN4002 (or equivalent) across the coil, and an external power source conforming to the slave relay operating parameters. Figure 4-64 shows a standard relay connection with circuit protection and power source. Figure 63 shows relay contact cabling via a MDF block. Do not exceed the following internal relay contact specifications when these terminals are used:

CONTROL RELAY CONTACT

RATINGS 24 volt D.C., 1 Amp
 AUDIO JACK INPUT SENSITIVITY 0 to 1 volt
 INPUT IMPEDANCE 600 Ohms

- f. Relay contacts are assigned by programming Item [27] for day ringing with Item [15], for night ringing with Item [46]. P.A. system assignment is set by programming Item [11]. BGM switching is set by Item [09]. BGM reception for each key telephone is set by program number [60]. External MOH source is set by program [53]. Doorphone assignment is set by program number [13].
- g. Table 4-T lists location of termination points on the ZT-616 KSU of various features provided by optional devices. Table 4-U lists location of termination points on the ZT-824/2464 KSU.
- h. Figure 4-65 shows the cable raceway for running wire through the KSU to the distribution panels on the top of each KSU.

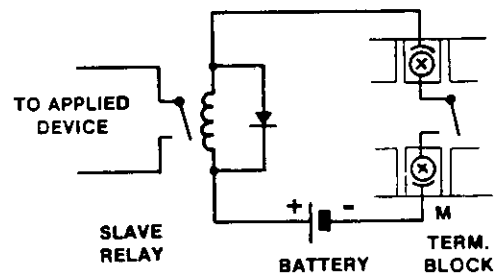


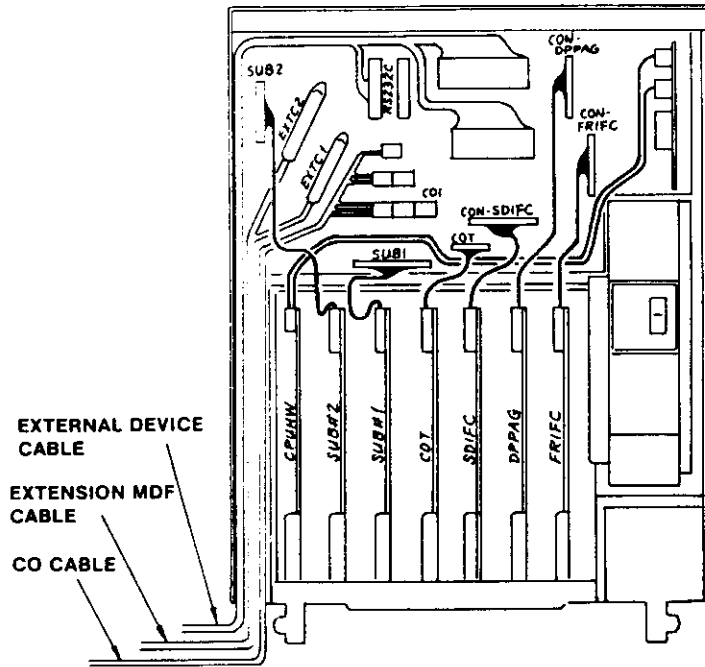
FIGURE 4-64
SLAVE RELAY ON DISTRIBUTION PANEL

TABLE 4-T ZT-616 TERMINATION AND SIGNALS

Terminal	Location	Description	Type Connection
MOH	DSPA6	Input for Music on Hold	Phono Jack
BGM	DSPA6	Input for Background Music	Phono Jack
RC-MOH	DSPA6	Music on Hold Control Contact	Screw Terminal
PAG	DSPC6	Output to P.A. Amplifier	Phono Jack
RC-PG/M	DSPC6	P.A. Amplifier Control Contact	Screw Terminal
DH1 +/-	DSPC6	Doorphone No. 1 Circuit	Screw Terminal
DH2 +/-	DSPC6	Doorphone No. 2 Circuit	Screw Terminal
DH3 +/-	DSPC6	Doorphone No. 3 Circuit	Screw Terminal
RC0/M	DSPC6	Flexible Contact No. 0	Screw Terminal
RC1/M	DSPC6	Flexible Contact No. 1	Screw Terminal
RC2/M	DSPC6	Flexible Contact No. 2	Screw Terminal
RC3/M	DSPC6	Flexible Contact No. 3	Screw Terminal
RC4/M	DSPC6	Flexible Contact No. 4	Screw Terminal
RC5/M	DSPC6	Flexible Contact No. 5	Screw Terminal
RC6/M	DSPC6	Flexible Contact No. 6	Screw Terminal
RC7/M	DSPC6	Flexible Contact No. 7	Screw Terminal
RC8/M	DSPC6	Flexible Contact No. 8	Screw Terminal
RC9/M	DSPC6	Flexible Contact No. 9	Screw Terminal

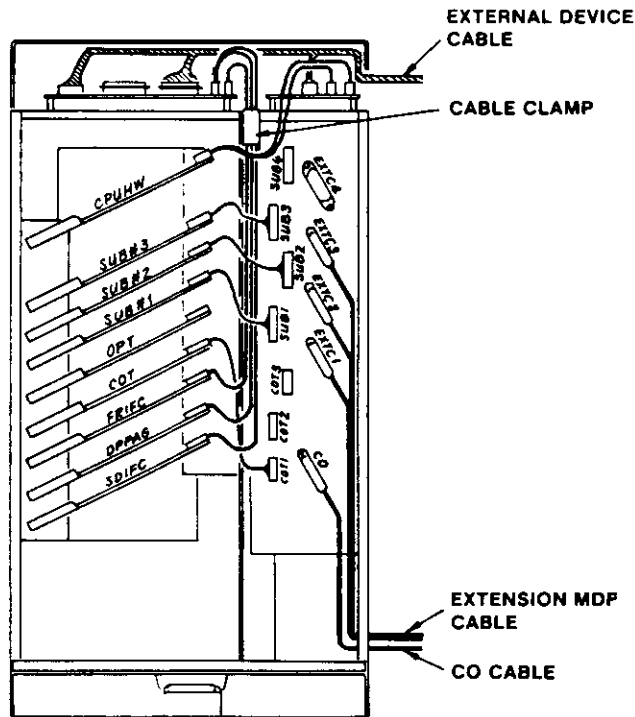
TABLE 4-U ZT-824/2464 TERMINATION AND SIGNALS

Terminal	Location	Description	Type Connection
MOH	DSPB82	Input for Music on Hold	Phono Jack
BGM	DSPB82	Input for Background Music	Phono Jack
RC-MOH	DSPB82	Music on Hold Control Contact	Screw Terminal
PAG	DSPC82	Output to P.A. Amplifier	Phono Jack
RC-PG/M	DSPC82	P.A. Amplifier Control Contact	Screw Terminal
PA/M	DSPC82	Zone Page Speaker Input	Screw Terminal
BG/M	DSPC82	Zone Page BGM Input	Screw Terminal
Z1/M	DSPC82	Page Speaker Zone 1 Speaker Output	Screw Terminal
Z2/M	DSPC82	Page Speaker Zone 2 Speaker Output	Screw Terminal
Z3/M	DSPC82	Page Speaker Zone 3 Speaker Output	Screw Terminal
Z4/M	DSPC82	Page Speaker Zone 4 Speaker Output	Screw Terminal
DH1 +/-	DSPC82	Doorphone No. 1 Circuit	Screw Terminal
DH2 +/-	DSPC82	Doorphone No. 2 Circuit	Screw Terminal
DH3 +/-	DSPC82	Doorphone No. 3 Circuit	Screw Terminal
RC0/M	DSPC82	Flexible Contact No. 0	Screw Terminal
RC1/M	DSPC82	Flexible Contact No. 1	Screw Terminal
RC2/M	DSPC82	Flexible Contact No. 2	Screw Terminal
RC3/M	DSPC82	Flexible Contact No. 3	Screw Terminal
RC4/M	DSPC82	Flexible Contact No. 4	Screw Terminal
RC5/M	DSPC82	Flexible Contact No. 5	Screw Terminal
RC6/M	DSPC82	Flexible Contact No. 6	Screw Terminal
RC7/M	DSPC82	Flexible Contact No. 7	Screw Terminal
RC8/M	DSPC82	Flexible Contact No. 8	Screw Terminal
RC9/M	DSPC82	Flexible Contact No. 9	Screw Terminal



NOTE: Cards in optional slots are for example.

ZT-616 KSU



ZT-824/2464 KSU

FIGURE 4-65 KSU CABLE RACEWAY

8.00 OPTIONAL EQUIPMENT INSTALLATION

a. External Music On Hold Source

- Description: Music on Hold can be either generated by the CPU card, or originated from an external source activated through programming item [53]. An FM tuner, tape player may be used as the MOH source.
- Wiring: Connect the output terminal from the MOH source to the "MOH" phono jack located on the KSU distribution panel (DSPA6 - 616 KSU or the DSPB82 - 824/2464 KSU). The MOH amplifier is switched on or off via a control relay. Connect the MOH amplifier control relay to the "MOH" screw terminal bus on the DSPA6 (616 KSU), or the DSPB82 (824/2464 KSU).

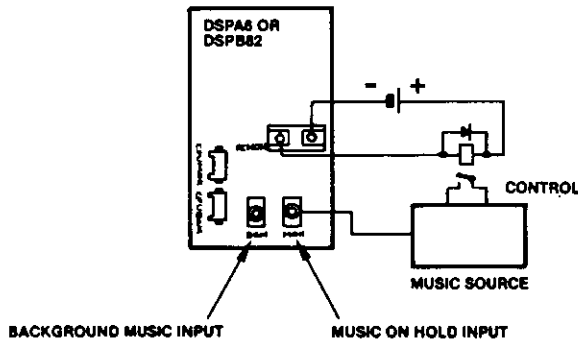
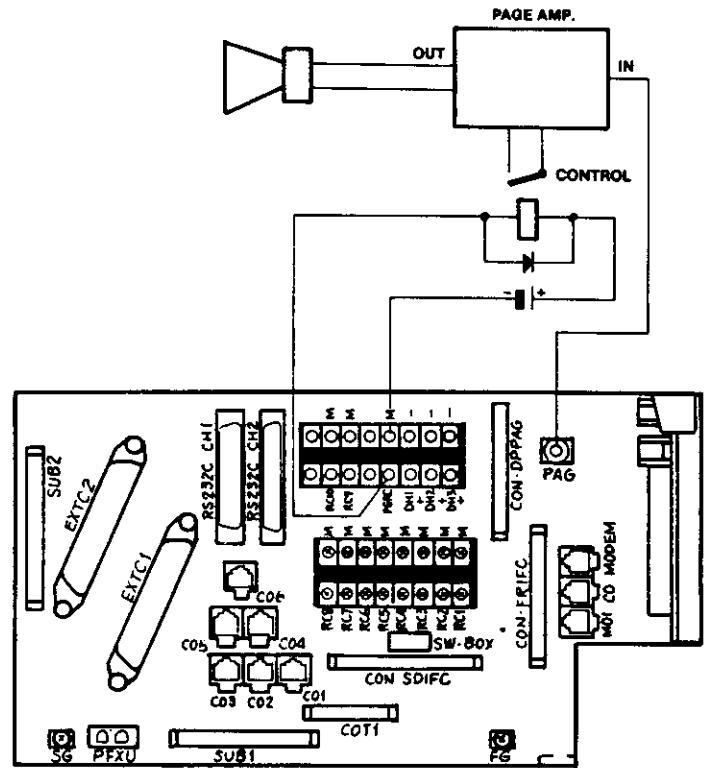


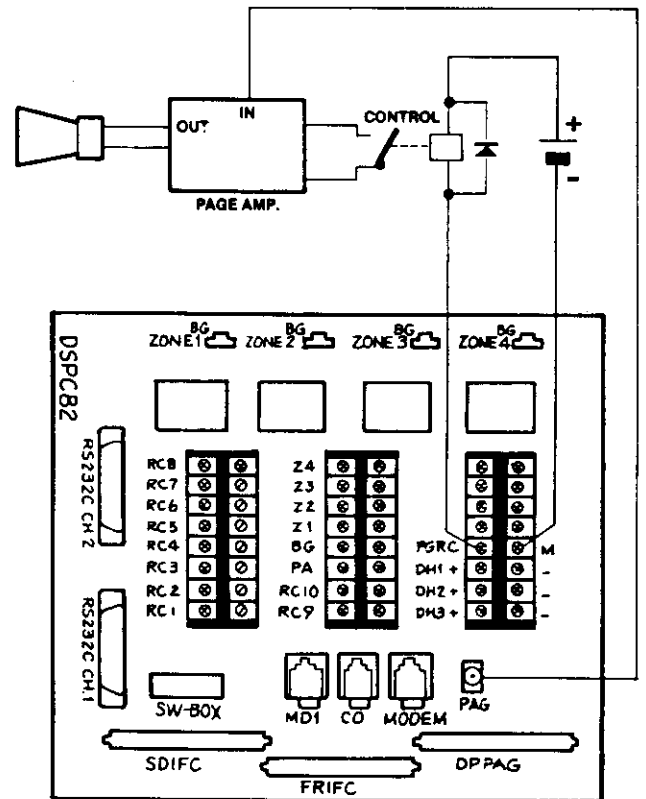
FIGURE 4-66 EXTERNAL MOH CONTROL RELAY CONNECTION

b. P.A. System

- Description: Interface to a P.A. system to the ZT-D requires the installation of the optional DOORPHONE/P.A. INTERFACE CARD (DPPAG). The DPPAG card plugs into the KSU mother board at an "opt" slot and terminates with a flat cable on the DSPC82 panel on the 824/2464 KSU or the AMPA6 panel on the 616 KSU. Refer to Figure 4-15, DSPC82 and Figure 4-10, AMPA6.
- P.A. Amplifier Wiring:
 1. Connect the phono audio input terminal of the paging amplifier to the "PAG" phono jack located on the KSU distribution panel. (AMPA6, 616 KSU or the DSPC82, 824/2464 KSU).
 2. Connect the page amplifier power control relay (SLAVE) to "PGRC and M" on the screw terminal bus "CON1" of the AMPA6 (616KSU) or the DSPC82 (824/2464 KSU).



a) ZT-616 KSU



b) ZT-824/2464 KSU

FIGURE 4-67 P.A. AMPLIFIER WIRING

c. Zone Paging (PA)

- Description: This feature is available only on the ZT-824/2464 systems. Interfacing a Zone P.A. system to the ZT-D requires the installation of the optional DOORPHONE/P.A. INTERFACE CARD (DPPAG). The DRPAG card plugs into the KSU mother board at an "opt" slot and terminates with a flat cable on the DSPC82 panel on the 824/2464 KSU and on the AMPA6 panel on the 616 KSU. Refer to Figure 4-15, DSPC82 and Figure 4-10, AMPA6.

- P.A. Amplifier Wiring:

1. Connect the phono audio input terminal of the paging amplifier to the "PAG" phono jack located on the KSU distribution panel. (AMPA6, 616 KSU or the DSPC82, 824/2464 KSU).
2. Connect the page amplifier power control relay (SLAVE) to terminals "PGRC and M" on the screw terminal block "CON1" of the AMPA6 (616KSU) or the DSPC82 (824/2464 KSU).
3. Connect the page amplifier output for the P.A. zone speakers to terminals "PA" on the screw terminal block "CON2" of the DSPC82 panel.

- Zone Speaker Wiring:

1. Connect the P.A. zone speakers (1 through 4) to terminals "Z1/M" through "Z4/M" on the screw terminal block "CON2" of the DSPC82 panel.
2. Figure 4-68 shows the relay connections for the P.A. system including the page amplifier, BGM amplifier, and zone speakers.

d. Background Music:

- Description: The ZT-D can send background music to be played through the P.A. speakers and/or the KT station speakers. A separate BGM amplifier may also be used for the P.A. amplifier to send uninterrupted BGM to other zones while one is being paged.
- BGM Input Wiring: Connect the output terminal of the BGM source to the "BGM" phono jack located on the KSU distribution panel (DSPA6, 616 KSU or the DSPB82, 824/2464 KSU).
- BGM Switch Wiring: The BGM amplifier may have a function to be switched on or off via a control input. The control input may be switched by using one of the flexible relays

(RC0 through RC9) located on the KSU distribution panel programmed by Item [27]. Connect the BGM amplifier control relay to the screw terminal blocks "CON1" or "CON2" of the AMPA6 (616 KSU), or the screw terminal block "CON3" or "CON2" of the DSPC82 (824/2464 KSU).

Connect the BGM amplifier output for the P.A. zone speakers to terminals "BG" on the screw terminal block "CON2" on the DSPC82 panel.

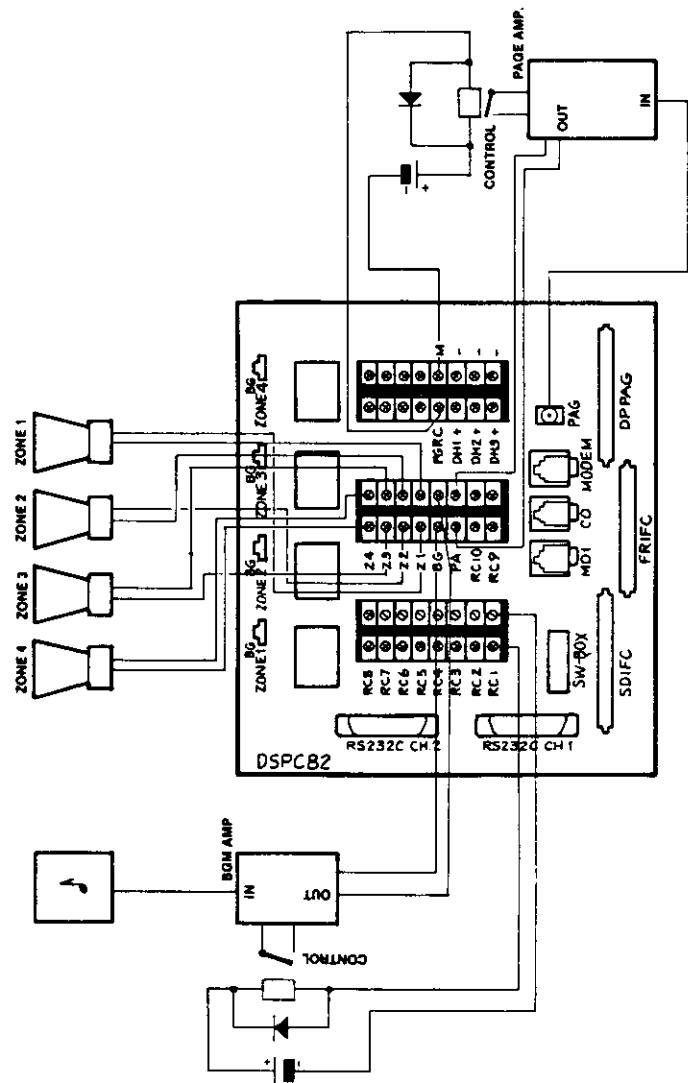
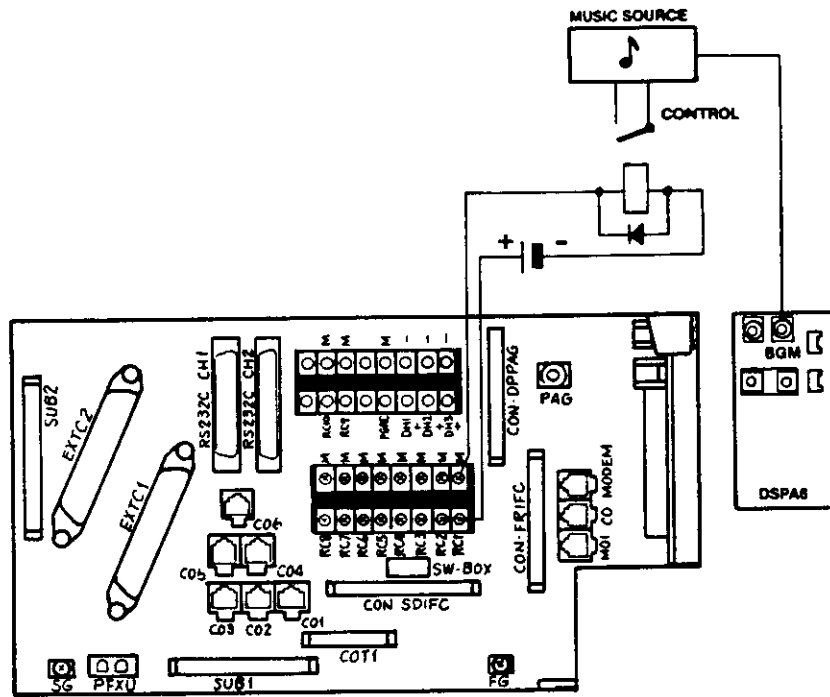
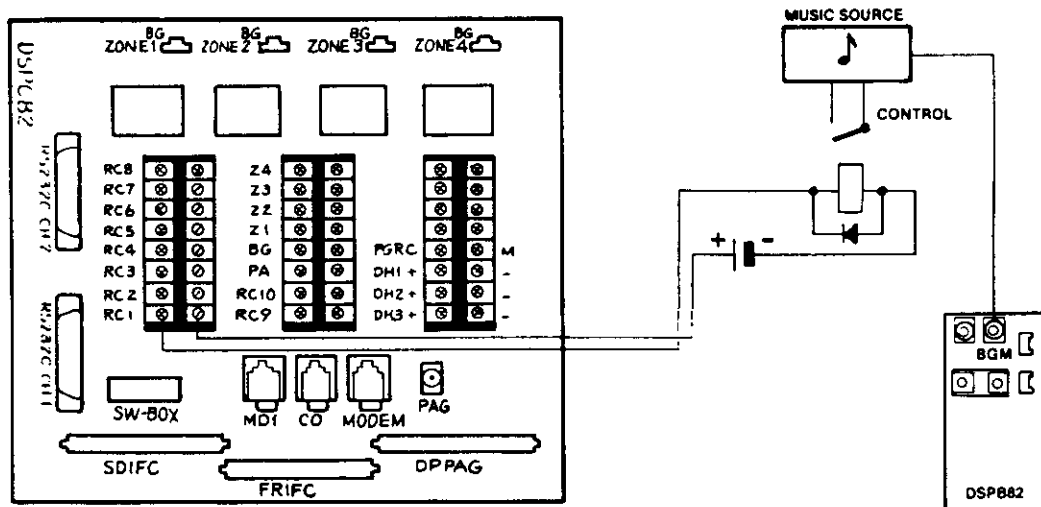


FIGURE 4-68 ZONE P.A. AMPLIFIER WIRING



a) ZT-616 KSU



b) ZT-824/2464 KSU

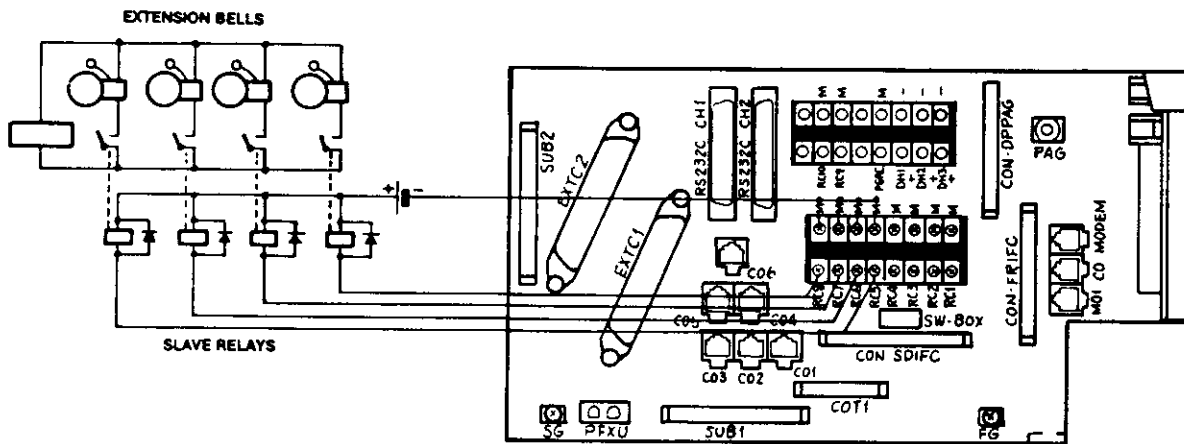
FIGURE 4-69 BGM
 CONTROL RELAY CONNECTION

e. Day/Night Loud Ringing Bell

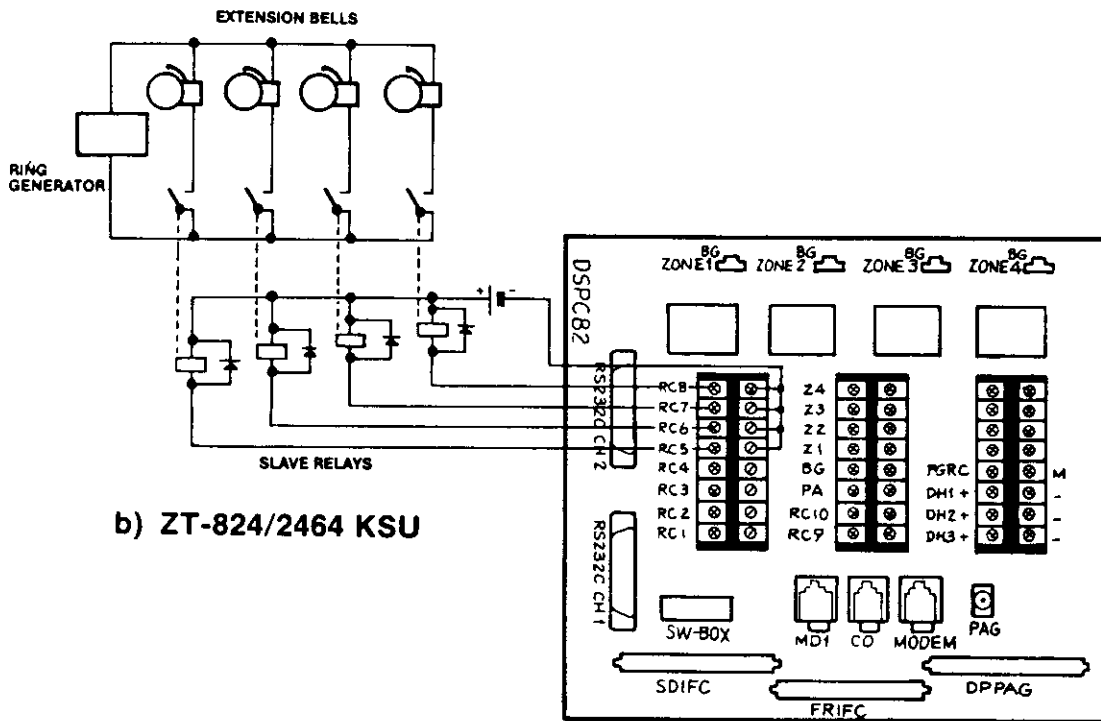
- Description: The flexible relay contacts on the optional FLEXIBLE RELAY INTERFACE CARD (FRIFC) can be programmed to operate external loud ringing bells upon CO/PBX incoming calls during day or night. The FRIFC card plugs into the KSU mother board at an "opt" slot and terminates with a flat cable on the DSPC82 panel on the 824/2464 KSU and at the AMPA6 panel on the 616 KSU. Refer to Figure 4-15, DSPC82 and Figure

4-10, AMPA6, in Component identification. Up to ten contacts may be used on any KSU.

- Programming: Programming item [27] assigns the ringing function to the contacts and items [45] and [46] assign the lines to operate specified relays during ringing.
- Wiring: Connect assigned flexible screw terminals, RC0/M through RC9/M to the slave relays which operate the external bells. Figure 4-70 shows the loud ringing bell connections.



a) ZT-616 KSU



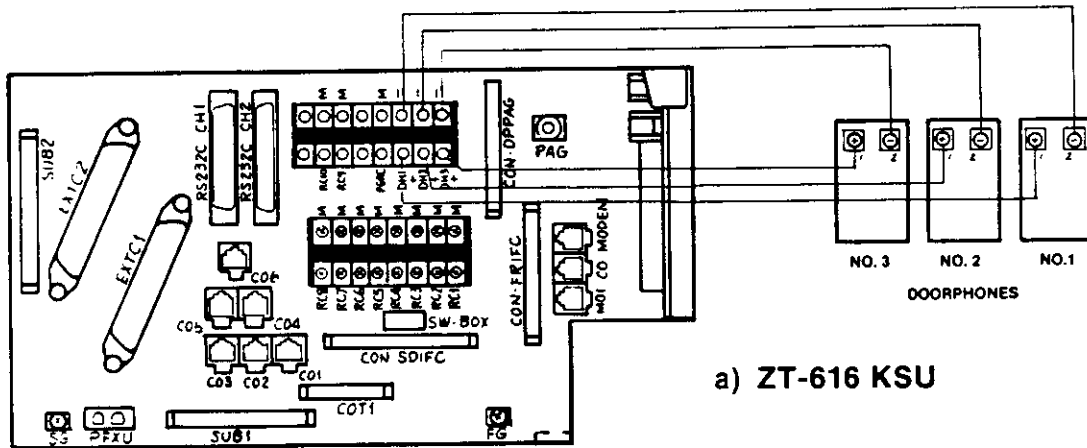
b) ZT-824/2464 KSU

FIGURE 4-70
 LOUD RINGING BELL CONNECTION

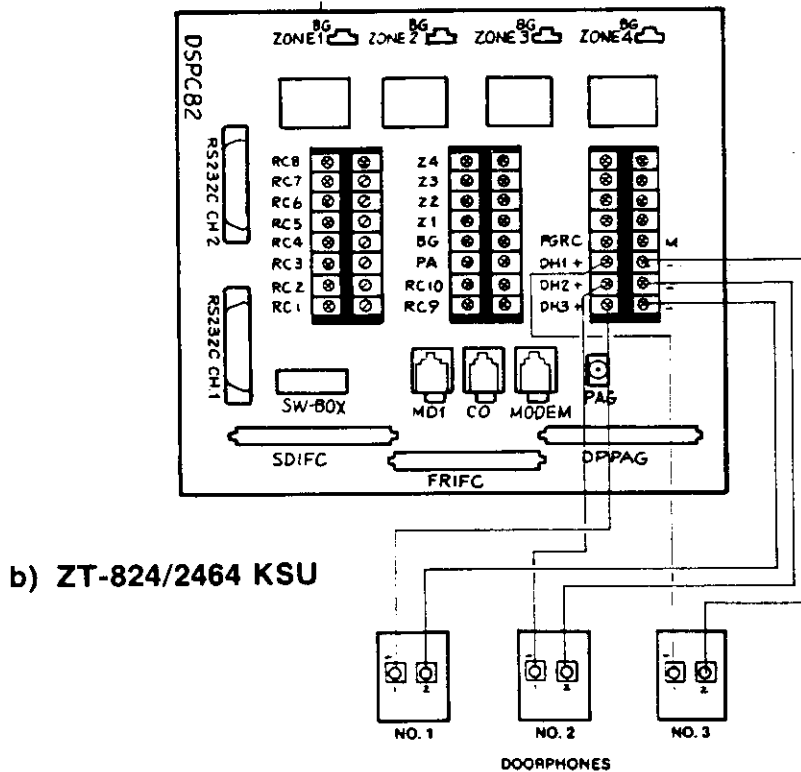
f. Doorphone Model DOPH

- Description: Interfacing doorphones model DOPH on the ZT-D requires the installation of the optional DOORPHONE/ P.A. INTERFACE CARD (DPPAG). The DRPAG card plugs into the KSU motherboard at an "opt" slot and terminates with a flat cable on the DSPC82 panel on the 824/2464 KSU and on the AMPA6 panel on the 616 KSU. Refer to Figure 4-15, DSPC82 and Figure 4-10, AMPA6. Up to three doorphones may be used on any KSU.

- Programming: The connected doorphone must be activated by program number [13] to indicate doorphone assignment.
- Wiring: Connect individual Doorphone Unit screw terminals (+) and (-) to the corresponding terminals pair for doorphone no. 1 through 3 (DH1 through DH3) on distribution panel AMPA6 - 616 KSU or the DSPC82 - 824/2464 KSU as shown in Figure 4-71. Make sure that the correct polarity is maintained when connecting the KSU terminals to the doorphones.



a) ZT-616 KSU



b) ZT-824/2464 KSU

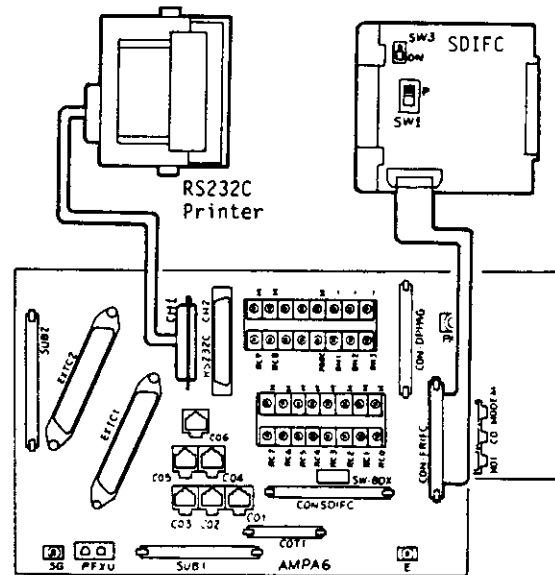
FIGURE 4-71 DOORPHONE WIRING

g. Station Call Detail Recorder

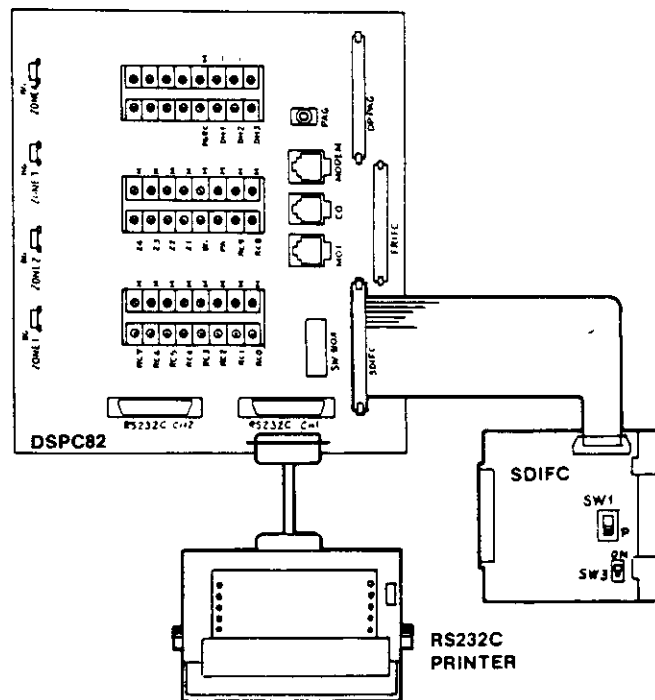
- Description: A printer with popular RS232C interface prints out detail of the telephone call made by individual system extensions. Each call print is accompanied with time of origin, duration time, the CO trunk number, and the engaged extension number. In addition a dialed number for outgoing calls and account code, when entered, are printed. For minimizing the print-out various limitations can be applied by programming. The SDIFC card and the AMPA6 (616KSU) or DSPC82 (824/2464 KSU) are required.
- Programming: Select printer output Format (Printer) by Item [06] and mode by Item [07] as required.
- Printer Setting: The printer must be equipped with RS232C port. Data transmission speed of 300 bps or 1200 bps and 8-bit ASCII with one start/stop bit must be available to communicate to the ZT-D system.
- On-board Setting: Switch 1 and Switch 3 on the SDIFC card must be at (Printer) and ON position (respectively.)
- Wiring: Refer to Figure 4-72 for a typical connection to the SCDR printer. Table 4-V lists the RS232C CH1 connector output pin assignment for the SDIFC P position. Refer to the table to arrange proper connection.

TABLE 4-V
 RS232C CONNECTOR
 PIN ASSIGNMENT
 PRINTER(P) POSITION

SDIFC		Direction	PRINTER	
Function	Pin #		Pin #	Function
FG	1	----->	1	FG
RxD	2	<-----	2	TxD
TxD	3	----->	3	RxD
CTS	4	<-----	4	RTS
RTS	5	----->	5	CTS
DSR	6	----->	6	CD
SG	7	----->	7	SG
DTR	8	----->	8	DCD
DCD	20	----->	20	DTR



a) ZT-616 KSU



b) ZT-824/2464 KSU

FIGURE 4-72
 SCDR CONNECTION

h. Remote Programming

- Description: An IBM PC, XT or equivalent, may be connected to the ZT-D system through Hayes Modem, Smartcom 1200 or equivalent, for remote access to the system programming. The SDIFC and FRIFC cards, and the AMPA6 (616KSU) or DSPC82 (824/264KSU) are required. It is recommended to provide the SWBX for manual transfer of the CO line to the Modem.
- Programming: Select CO line for Modem use by Item [14] and data transmission

speed by Item [07] as required. Note that the same speed must be set for Modem and SCDR printer if both are in use.

- On-board Setting: Switch 1 and switch 3 on the SDIFC card must be at M (Modem) and ON position respectively.
- Wiring: Refer to Figure 4-73 for a typical connection to the SCDR printer. Table 4-W lists the RS232C CH1 connector output pin assignment for the SDIFC P position. Refer to the list to arrange proper connection.

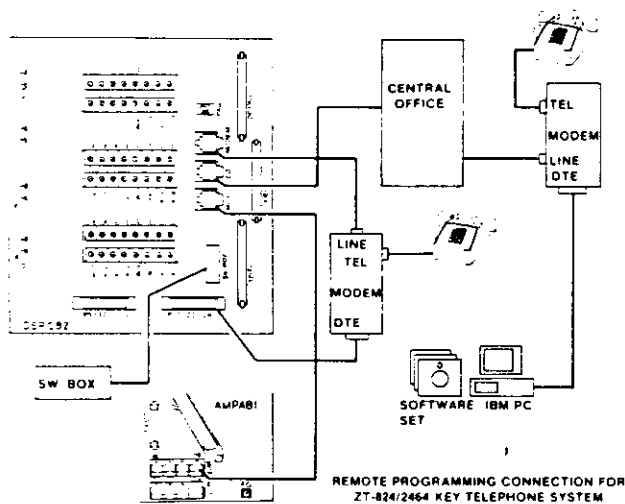
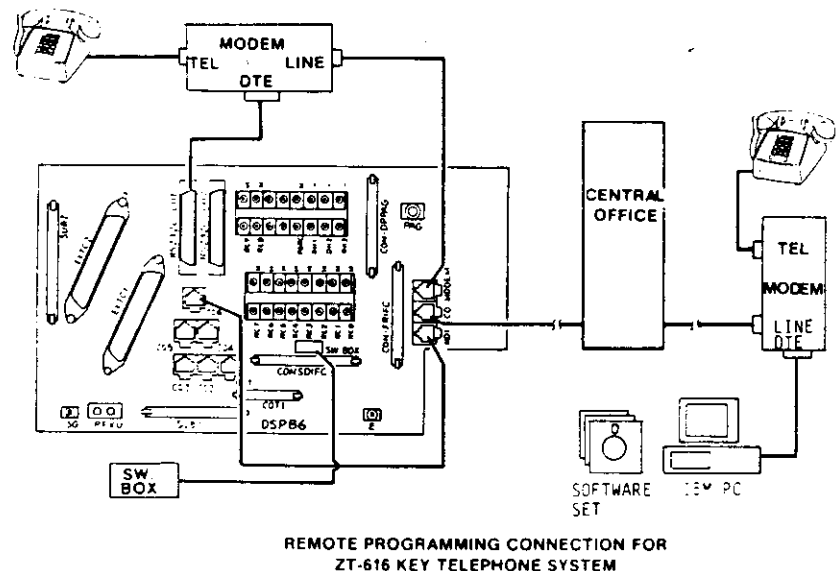


TABLE 4-W
RS232C CONNECTOR
PIN ASSIGNMENT
MODEM (M) POSITION

SDIFC		Direction	PRINTER	
Function	Pin #		Pin #	Function
FG	1	-----	1	FG
TxD	2	----->	2	RxD
RxD	3	<-----	3	TxD
RTS	4	----->	4	CTS
CTS	5	<-----	5	RTS
CD	6	<-----	6	DSR
SG	7	----->	7	SG
DCD	8	<-----	8	DTR
DTR	20	----->	20	DCD

Panasonic Easyphone

FIGURE 4-73
REMOTE PROGRAMMING
CONNECTION



— NOTES —

ZT-D SYSTEM ELECTRONIC KEY TELEPHONE SYSTEM SECTION 5 — SYSTEM PROGRAMMING

CONTENTS	PAGE	CONTENTS	PAGE
1.00 INTRODUCTION	5-2	8.00 LINE SPECIFICATION PROGRAMMING	5-13
2.00 BASIC PROGRAMMING	5-2	FLOATING CO GROUP	5-13
3.00 SYSTEM INITIALIZATION	5-2	PBX LINE/PRE-DIAL ENTRY	5-14
4.00 PROGRAMMING INTRODUCTION	5-4	OPTIONAL CO RINGING	5-14
5.00 SYSTEM DATABASE	5-5	DIAL PULSE BREAK RATIO	5-14
6.00 SYSTEM FEATURE PROGRAMMING ...	5-5	DAY RINGING	5-14
STATION TYPE ASSIGNMENT	5-6	NIGHT RINGING	5-14
CO LINE ASSIGNMENT	5-7	DOORPHONE DAY RINGING	5-14
SCDR OUTPUT FORMAT ASSIGNMENT	5-7	DOORPHONE NIGHT RINGING	5-15
SCDR OUTPUT MODE ASSIGNMENT ..	5-7	CO RINGING GROUP RINGING	5-15
BACKGROUND MUSIC SOURCE		LOUD RINGING BELL — DAY	5-15
ASSIGNMENT	5-8	LOUD RINGING BELL — NIGHT	5-15
TONE/VOICE CALLING ASSIGNMENT .	5-8	EXTERNAL P.A. RINGING	5-15
P.A. SYSTEM ASSIGNMENT	5-8	DP/DTMF DIALING	5-16
DTMF RECEIVER ASSIGNMENT	5-9	10/20 PPS PULSE DIAL	5-16
DOORPHONE ASSIGNMENT	5-9	AUTOMATIC CO RELEASE	5-16
MODEM TRANSMISSION CO LINE		AUTOMATIC CO FORWARDING	5-16
ASSIGNMENT	5-9	HUNT CO GROUP ASSIGNMENT	5-16
FLEXIBLE RELAY ASSIGNMENT	5-9	EXTERNAL MOH SOURCE	5-16
7.00 SYSTEM TIME PARAMETERS	5-10	9.00 STATION CLASS OF SERVICE	
OPERATOR CAMP-ON RECALL	5-10	PROGRAMMING	5-17
STATION CAMP-ON RECALL	5-11	BACKGROUND MUSIC	5-17
CO FLASH TIMING	5-11	PAGE ACCESS	5-17
REMOTE CO DISCONNECT SIGNAL ...	5-11	PAGE RECEIVE — ALL CALL	5-18
TIMED TRUNK QUEUEING	5-11	GROUP CALL ACCESS	5-18
SYSTEM HOLD RECALL	5-11	GROUP CALL RECEIVE	5-18
EXCLUSIVE HOLD RECALL	5-11	ZONE PAGE ACCESS	5-18
CONSULTATION HOLD RECALL	5-11	AUTOMATIC ANSWER	5-18
CALL PARK RECALL	5-11	HOLD RECALL	5-18
PAGE TIME-OUT	5-12	SPEAKERPHONE	5-19
DTMF DIAL DURATION	5-12	DO NOT DISTURB	5-19
MASTER GROUP HUNT	5-12	EXECUTIVE STATION	5-19
PBX PAUSE TIMING	5-12	PROTECTED STATION	5-19
TRUNK-TO-TRUNK CONFERENCE		SECRETARIAL HOT LINE	5-19
RELEASE	5-13	FLEXIBLE KEY ASSIGNMENT	5-19
		INTERCOM GROUP	5-20
		STATION PASSWORD	5-20
		NIGHT TRANSFER ACTIVATION	5-20

CONTENTS	PAGE
10.00 OTHER SYSTEM OPERATIONS	5-21
MEMORY CLEAR	5-21
SYSTEM PASSWORD	5-21
11.00 OUTGOING/TOLL RESTRICTION	
INTRODUCTION	5-22
TOLL RESTRICTION/EQUAL ACCESS ..	5-28
OUTSIDE USA/CANADA	5-28
OCC DATA ENTRY	5-28
PBX LINE/PRE-DIAL ENTRY	5-28
OUTGOING CALL RESTRICTION	5-29
CO LINE PICK-UP RESTRICTION	5-29
TOLL RESTRICTION — SYSTEM SPEED	
DIAL	5-29
SYSTEM SPEED DIAL ACCESS	
RESTRICTION	5-29
TOLL RESTRICTION CLASS SETTING .	5-29

TABLE 5-A PROGRAMMING KEYS AND LAMPS

KEYS/LAMPS	LOCATION	FUNCTION
Dial Pad [0] to [9], [*], [#]	KT	Enter the program index number, alpha-numeric data.
Dial Pad [#]	KT	Toggles function during programming
[FLSH] key	KT	Terminates programming after storing data.
[FWD] key	KT	Selects the next program index or data entry after storing data.
[FEAT]	KT	Selects the previous program index or data entry after storing data.
HLD/DND key	KT	Enters N code for User Table.
Line [LK] keys	KT	Programs line status.
Line lamps	KT	Indication of line status.
(DSS) keys	DSS	Programs station status.
BLF	DSS	Indication of station status.

1.00 INTRODUCTION

1.01 This section specifies methods and procedures of system database programming to assign custom tailored features for the ZT-D Key Telephone System.

1.02 Means of programming are discussed utilizing local hardware as well as remote hardware/software.

1.03 Planning and assembly of customer database is discussed.

2.00 PROGRAMMING BASIC

2.01 The ZT-T24D key telephone and the ZT-32 DSS console(s) are used as a programming terminal to assign all the programmable features. They must be placed in the station position "No. 120(KT), No. 121(DSS) and No. 122(DSS) (if more than 32 stations are on the system). The programmer or installer should assign password prior to starting programming following procedure <99> in order to prevent accidental change of the customer database. The primary extension, once assigned at the operator's position by system programming, can program day-to-day parameter changes such as date, time, and system speed dial numbers.

2.02 Keys and lamps indicated in TABLE 5-A are utilized on the ZT-24D Key Telephone and the ZT-32 DSS console(s) for the system database data programming.

2.03 FIGURE 5-1 illustrates both the ZT-24D Key Telephone and ZT-32 DSS unit when utilized as the system programming tool.

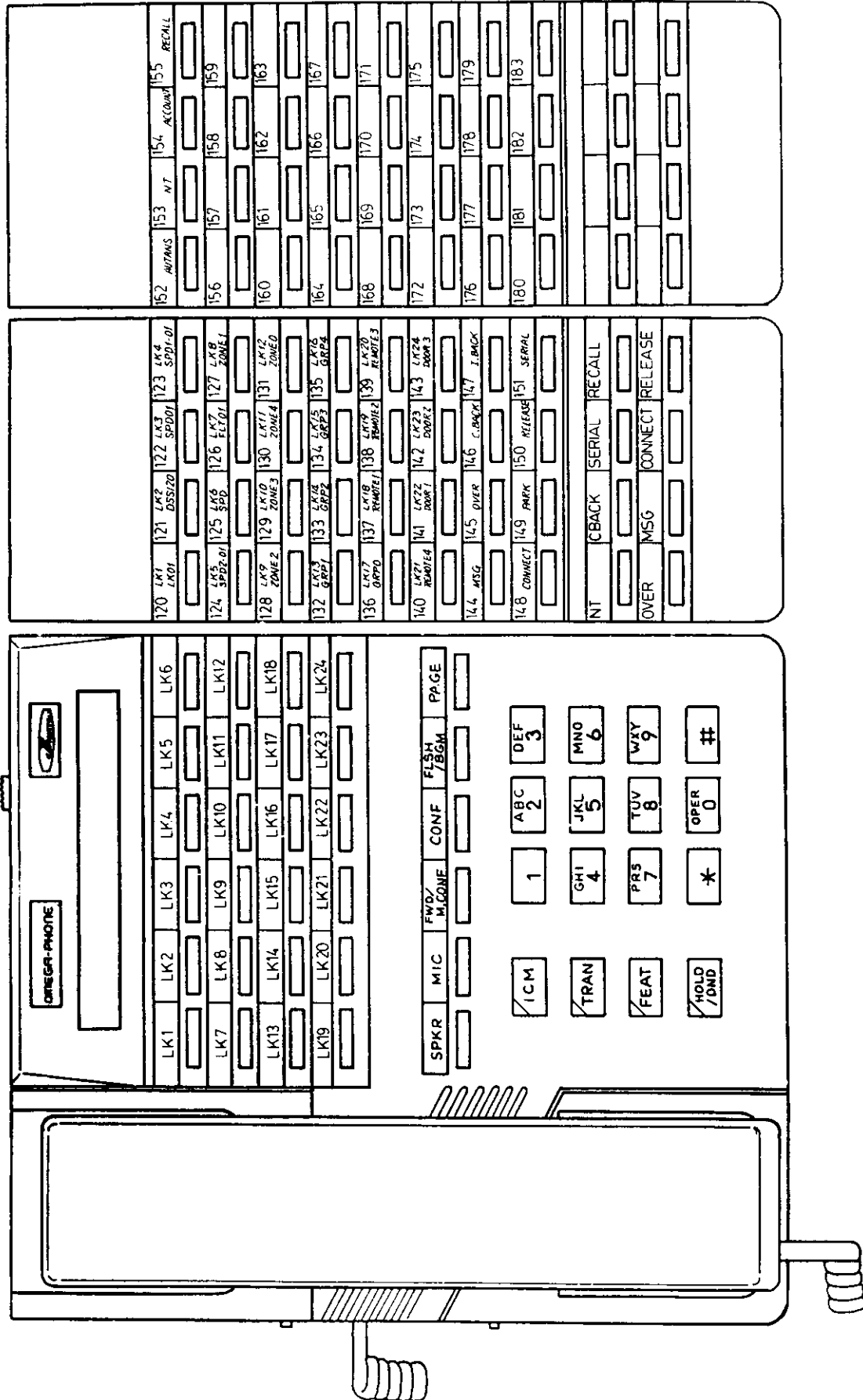
3.00 SYSTEM INITIALIZATION

3.01 This section describes the procedure of system program initialization after completion of hardware installation. Make sure that all hardware is properly installed before starting the process.

3.02 The following procedure is required to initialize the system.

- (1) SET switch SW1 on the CPUHW card for the "RAM CLR" (Default) position and turn on the system main power. FIGURE 5-2 illustrates the system CPU card.
- (2) SET switch SW1 to the "RUN" position as soon as LED1 on the CPUHW card turns on.
- (3) At the programming extension, (No. 120) with the headset on-hook (Speaker off), Enter [0] and a specific password to set the system into programming mode at the extension. Default password is [FEAT] [4] [9] [2].

NOTE Use a default switch on the CPUHW card if the factory original password has changed because of battery discharge etc.



120	LK1 LKO1	121	LK2 DSS/20	122	LK3 SPD/1	123	LK4 SPD/01	152	AUTANS	153	NT	154	ACOUNT	155	RECALL
124	LK5 SPD/01	125	LK6 SPB	126	LK7 FLD/1	127	LK8 ZONE1	156		157		158		159	
128	LK9 ZONE2	129	LK10 ZONE3	130	LK11 ZONE4	131	LK12 ZONE4	160		161		162		163	
132	LK13 GRP1	133	LK14 GRP2	134	LK15 GRP3	135	LK16 GRP4	164		165		166		167	
136	LK17 GRP5	137	LK18 REMO/E1	138	LK19 REMO/E2	139	LK20 REMO/E3	168		169		170		171	
140	LK21 DOOR1	141	LK22 DOOR2	142	LK23 DOOR3	143	LK24 DOOR3	172		173		174		175	
144	MSG	145	OVER	146	C.BACK	147	I.BACK	176		177		178		179	
148	CONNECT	149	PNPK	150	RELEASE	151	SERIAL	180		181		182		183	
	NT	CBACK	SERIAL	RECALL											
	OVER	MSG	CONNECT	RELEASE											

FIGURE 5-1 SYSTEM PROGRAM TOOL

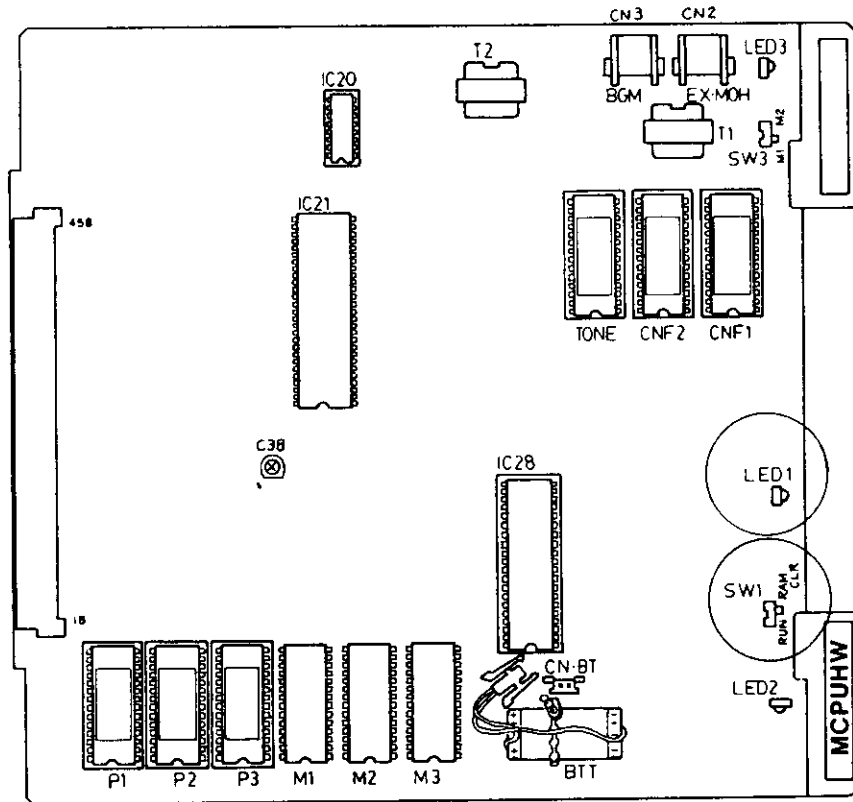


FIGURE 5-2 CPUHW CARD

NOTE The password is changeable by program item <99>. Hardware memory clear procedure is required on the CPU card if factory installed password does not work at initial installation. See instructions for the CPUHW card installation in Section 4 of the technical manual.

(4) Enter the desired Program Index Number to initiate the programming. The Program Index Numbers are listed in TABLES 5-B through 5-H.

4.00 SYSTEM FEATURE PROGRAMMING

4.01 After system hardware installation is completed, system operation functions must be identified in order to operate the ZT-D system properly. This paragraph describes the minimum programming requirements to set up the system to operate initially. Then the CO lines and the station features which may be programmed.

4.02 When programming the system, minimum system programming requirements, dependent upon hardware, must be addressed. The following constitutes minimum programming parameters on the system.

- BACKGROUND MUSIC THROUGH STATION/P.A. SYSTEM: Enable if a BGM source is connected.
- CO LINE APPEARANCE: Disable all the unused CO line ports.
- DOORPHONE: Enable whichever doorphones are installed.
- FLEXIBLE RELAY APPLICATION: Assign optional ten relays for the required functions.
- ON-PREMISE/OFF-PREMISE 2500 TYPE (DTMF) SINGLE LINE SET: Enable when the DTMF Receiver, RECV2 or RECV8 card, is installed.
- P.A. SYSTEM: Enable whichever paging zones are installed.
- REMOTE PROGRAMMING: Assign one CO line (MODEM CO Line) for remote programming use.
- SCDR: Assign Printer specification and types of calls to print.
- STATION TYPE: Assign appropriate station model type(s) to all station ports in use.
- TONE/VOICE CALLING: Determine which type of call takes place first on ICM, voice or tone.

4.03 System Line and station database worksheets are provided in Appendix A. These sheets identify individual station, trunk, and system operation parameters.

of those databases with the Item Number which corresponds to the actual programming process. The Toll Restriction programming is described in Paragraph 11.00

5.00 SYSTEM DATABASE

5.01 The system database contains five functional databases: SYSTEM FEATURE, SYSTEM TIMER, LINE SPECIFICATION, STATION CLASS OF SERVICE and OTHER SYSTEM OPERATIONS. TABLES 5-B through 5-G lists the individual features

6.00 SYSTEM FEATURE PROGRAMMING

6.01 After performing operations indicated in Paragraph 3.00 - System Initialization or entering programmed password, individual program modes can be accessed.

**TABLE 5-B
SYSTEM FEATURE PROGRAMMING**

Item	Feature	Item	Feature
<03>	Station Type Assignment	<10>	Tone/Voice Calling
<04>	CO Line Assignment	<11>	P.A. System Assignment
<06>	SCDR Output Format	<12>	DTMF Receiver Assignment
<07>	SCDR Output Mode	<13>	Doorphone Assignment
<09>	Background Music Source	<14>	MODEM Transmission Line

**TABLE 5-C
SYSTEM TIMER**

Item	Feature	Item	Feature
<16>	Operator Camp-on Recall	<22>	Page Time-out
<17>	Station Camp-on Recall	<23>	DTMF Dial Duration
<18>	CO Flash	<24>	Master Group Hunt
<19>	CO Disconnect Signal	<25>	PBX Pause
<20>	Timed Trunk Queueing	<26>	Trunk-to-Trunk Conf.
<21>	Hold/Call Park Recall	<27>	Flexible Relay Assignment

**TABLE 5-D
LINE SPECIFICATION PROGRAMMING**

Item	Feature	Item	Feature
<29>	Floating CO Group Assignment*	<46>	Loud Ringing Bell - Night (4)
<31>	Optional CO Ringing	<47>	P.A. Ringing - Night (4)
<32>	Dial Pulse Break Ratio	<48>	DP/MF Dialing Selection
<40>	Station Day Ringing	<49>	10/20pps Pulse Dial
<41>	Station Night Ringing	<50>	Automatic CO Release
<42>	Doorphone Day Ringing	<51>	Auto. CO to CO Forwarding
<44>	Doorphone Night Ringing	<52>	Hunt Group - CO/Station
<44>	CO Ringing Group (4)	<53>	External MOH Source Enable
<45>	Loud Ringing Bell - Day (4)		

*Not applicable to KF system.

**TABLE 5-E
 STATION CLASS OF SERVICE PROGRAMMING**

Item	Feature	Item	Feature
<60>	Background Music	<72>	Speakerphone
<65>	Page Access Enable	<73>	Do Not Disturb
<66>	Page Receive Enable	<74>	Executive Station
<67>	Group Call Access Enable	<75>	Protected Extension
<68>	Group Call Receive Enable	<76>	Secretarial Hot Line
<69>	Zone Page Access Enable	<78>	Flexible Key Assignment
<70>	Automatic Answering	<80>	Intercom Group
<71>	Hold Recall Enable	<81>	Station Restr. Password
		<82>	Night Transfer Station

**TABLE 5-F
 OTHER SYSTEM OPERATIONS**

Item	Feature	Item	Feature
<90>	Memory All Clear	<99>	System Password Change

**TABLE 5-G
 OUTGOING/TOLL RESTRICTION**

Item	Feature	Item	Feature
<05>	Toll Restr./Equal-Access	<62>	CO Line Pick-up Restriction
<06>	Outside USA/Canada	<63>	Toll Restr. - System SPD
<15>	O.C.C. Data Entry	<64>	Access Restr. - System SPD
<30>	PBX Line and Pre-dial Entry	<77>	Toll Restriction Class
<61>	Outgoing Call Restriction	<08>	Outside USA/Canada

a. **STATION TYPE ASSIGNMENT**

Item No.: 03

Default: All station are ZT-24D

Description: Station ports of the ZT-D system can utilize eight types of key telephones, (ZT-24D, ZT-24K, ZT-12D, ZT-12K, ZT-8D, ZT-8K, ZT-6D and ZT-6K), and two types of single line telephones (SLT). SLT's with DTMF Dial and with Pulse Dial, as well as DSS console(s) can be assigned. Each type must be assigned on each station port. In addition, up to two of the system operators must be identified over those of the key telephones, to operate some of the features assigned to them. (See Appendix for default key assignment)

Procedure:

(1) Display indicates

03. Type 24D

(2) Enter the number indicated in TABLE 5-H to designate the station type or press [FWD] key to select the successive station type.

**TABLE 5-H
 STATION TYPE ASSIGNMENT**

DIGIT	STATION TYPE	DISPLAY
1	ZT-24D Key Telephone	03. Type T24D
2	ZT-24K Key Telephone	03. Type T24K
3	ZT-12D Key Telephone	03. Type T12D
4	ZT-12K Key Telephone	03. Type T12K
5	ZT-8D Key Telephone	03. Type T08D
6	ZT-8K Key Telephone	03. Type T08K
7	ZT-6D Key Telephone	03. Type T06D
8	ZT-6K Key Telephone	03. Type T06K
9	ZT-32C DSS Console	*DSS Assignment
0	Operator Station	*Opr Station
*	SLT with DTMF Dial	03. Type SLTMF
#	SLT with Pulse Dial	03. Type SLTDP

CAUTION Do not assign Extension No. 120 to other than the key telephones to maintain programming function.

- (3) Press [DSS] keys to assign stations to the particular station type. Press [9] for Console Assignment (Step 8), or [0] for Operator Station Assignment (Step 5). Otherwise press [DSS] keys for more station assignment or go back to step (2).
- (4) Press [FWD] key to proceed to the successive station type or [FLSH] key to terminate the process.

Operator Station Assignment

- (5) You are in Operator Station Assignment while display indicates .
- (6) Press [DSS] key to assign the extension number to the operator. The BLF of the extension lights to indicate the operator position. Press [9] and go to step (8) to assign Consoles cooperate with the extension.
- (7) Press [0] and repeat step (5) to assign the second operator station.

DSS Console Assignment

- (8) Press [9] key to initiate KT-DSS assignment. The display changes to .
- (9) Press [DSS] key of the extension to cooperate with the DSS. The BLF of the extension flashes and the display changes to .
- (10) Press [DSS] key of the position where the DSS No. 1 for this extension is connected. The display changes to .
- (11) Press [FWD] key to assign the console No. 2 or [FLSH] key to terminate the process.

b. CO LINE ASSIGNMENT

Item No.: 04

Default: All trunks installed

Description: Since the system initially considers that all available CO line ports are connected, the CO line ports which are not in use must be identified so that the accidental access to the unused CO line can be avoided.

Procedure:

- (1) Display indicates .
- (2) Press line keys to toggle the status. The lighted line indicates an active line.
- (3) Press [FLSH] key to terminate the process.

c. SCDR OUTPUT FORMAT ASSIGNMENT

Item No.: 06

Default: Printer Output/1200bps

Description: When a local printer is connected to the system to print out call detail records, the SCDR OUTPUT FORMAT must be adjusted to that of the printer's and SCDR OUTPUT MODE must be assigned to determine which combination of the calls, (outgoing calls, long distance outgoing calls, calls with account code) to be printed out. The DSPC82 board and the SDIFC card are required in addition to the customer provided RS232C, 8 BIT, serial printer.

Procedure:

- (1) Display indicates .
- (2) Press [#] key to assign the SCDR output to "auxiliary" format, or press [FWD] to proceed to the data transmission speed assignment.
- (3) Display indicates .
- NOTE 1:** Two data speeds are selectable - 1200 bps. or 300 bps.
- (4) Press [#] to toggle the status between 1200 and 300 bps.
- (5) Press [FLSH] to terminate process.

d. SCDR OUTPUT MODE ASSIGNMENT

Item No.: 07

Default: Output All

Procedure:

- (1) Display indicates .
- (2) Press [DSS] keys and line keys to designate stations and lines, of which calls are to be printed out.
- (3) Enter SCDR Output control data to control SCDR output.
NOTE: SCDR output control data are as listed in TABLE 5-I.

TABLE 5-1
SCDR OUTPUT DATA ASSIGNMENT

DISPLAY	DESCRIPTION
07. SCDR . . .	:Print out all calls regardless of account code
07. SCDR T.	:Print out outgoing toll calls only.
07. SCDR O.	:Print out all outgoing calls.
07. SCDR A.	:Print out all incoming and outgoing calls with account code.
07. SCDR T. A.	:Print out outgoing toll calls and incoming calls with account codes.
07. SCDR O.A.	:Print out outgoing calls and incoming calls with account codes only.
07. SCDR T.O.A.	:Print out toll calls with account code.

NOTES:

- T (digit [8]): Print out dial data with toll mark.
- O (digit [6]): Print out outgoing calls only.
- A (digit [2]): Print out incoming and outgoing calls with account code.

- (4) Press [FWD] to proceed to "Minimum time for print out" programming which indicates *Duration 00 min. or press [FLSH] to terminate the procedure.
- (5) Enter 2-digit duration time data in minutes which range from [00] to [31] minutes.
- (6) Press [FWD] to resume the programming or [FLSH] to terminate programming.

e. BACKGROUND MUSIC SOURCE ASSIGNMENT

Item No.: 09

Default: BGM off

Description: This assignment provides BGM to the key telephone channels that they can be turned on and off locally. It is important to set BGM OFF when no BGM source is connected to the KSU to prevent possible noise through the station speakers. Assignment also determines if the BGM is sent to an external P.A. system when equipped.

Procedure:

- (1) Display indicates .
- (2) Press (#) key to toggle the status of Background Music between and .
- (3) Press [FWD] to proceed to the "P.A. Amplifier" assignment (step 4) (4) or [FLSH] to terminate the procedure.
- (4) Display indicates . Press [#] key to toggle the status between and .
- (5) Press [FLSH] to terminate the procedure.

f. TONE/VOICE CALLING ASSIGNMENT

Item No.: 10

Default: Voice

Description: This assignment determines whether voice or tone calling takes place for station to station calls after three-digit dialing on ICM.

Procedure:

- (1) Display indicates .
- (2) Press [#] to toggle the status between and .
- (3) Press [FLSH] to terminate the procedure.

g. P.A. SYSTEM ASSIGNMENT

Item No.: 11

Default: All zones enable

Description: Since the system initially considers that all four P.A. zones are in use, unused zone must be disabled from accidental access so that paging with no voice output would not take place. The DSPC82 board and the DPPAG card are required in addition to the customer provided P.A. system.

Procedure:

- (1) Display indicates .
- (2) Press P.A. zone numbers (1 through 4) through dial pad to designate the zones which are not operating with the key system. The disabled zone number disappears from the display, for instance as .
- (3) Press [FLSH] key to terminate the process.

h. DTMF RECEIVER ASSIGNMENT

Item No.: 12

Default: No receiver installed

Description: When single line telephones with DTMF dial are installed with the system, the RECV2 or RECV8 card must be installed into the optional KSU slot. The system must be programmed to accept the card or SLT telephones cannot break the ICM dial tone.

Procedure:

- (1) Display indicates , for no DTMF receiver installed.
- (2) Press [#] until the display indicates the number of the DTMF receivers (2 or 8) which are installed in the key system.
- (3) Press [FLSH] key to terminate the process.

i. DOORPHONE ASSIGNMENT

Item No.: 13

Default: No Doorphone installed

Description: The system initially considers that no doorphones are in use. This assignment indicates which doorphones are installed and to be activated. The DSPC82 board and the DPPAG card are required in addition to doorphone units.

Procedure:

- (1) Display indicates .
- (2) Press the doorphone numbers (1 through 3) which are installed in the key system.
- (3) Press the doorphone number again (1 through 3) when the doorphone is removed from the system.
- (4) Press [FLSH] key to terminate the process.

**j. MODEM TRANSMISSION
CO LINE ASSIGNMENT**

Item No.: 14

Default: No Modem Line

Description: A MODEM may be installed on the system to communicate to a remote IBM compatible PC for programming/changes. One of the incoming CO lines must be reserved for the MODEM for the remote access, but the line may be still used for the outgoing calls when necessary.

Procedure:

- (1) Display indicates .
- (2) Press a [CO] key to select a particular CO line where a Modem is connected for remote programming. The light of the assigned CO line turns on.

NOTE: Only one line can be assigned for this feature.

**k. FLEXIBLE RELAY ASSIGNMENT —
REMOTE CONTROL**

Item No.: 27

Default: None

Description: Ten relays are available on the optional FRIFC card and may be assigned for remote control and loud ringing bell use. CO ringing use (for 13 functions).

Procedure:

- (1) The display indicates: .

NOTE 1: The assignment of the relays is accomplished through the DSS-32C. Listed in TABLE 5-K are the DSS Key assignments of the 13 functions available.
- (2) Press the DSS key of the function selected, or press [0] to [9] on the dial pad to select a specific relay number. Then press the DSS key of the function selected.
- (3) Press [FLASH] to terminate the programming.

**TABLE 5-K
 FLEXIBLE RELAY ASSIGNMENT**

DSS KEY	FUNCTION	LCD DISPLAY
DSS Key 120	External Loud Ringer No. 1	27. Relay N Ext. Rng
DSS Key 121	External Loud Ringer No. 2	
DSS Key 122	External Loud Ringer No. 3	
DSS Key 123	External Loud Ringer No. 4	
KSS Key 124	Night Loud Ringer (UNA) No. 1	27. Relay N Nt Rng
DSS Key 125	Night Loud Ringer (UNA) No. 2	
DSS Key 126	Night Loud Ringer (UNA) No. 3	
DSS Key 127	Night Loud Ringer (UNA) No. 4	
KSS Key 128	Remote Contact No. 1	27. Relay N Remote
DSS Key 129	Remote Contact No. 2	
DSS Key 130	Remote Contact No. 3	
DSS Key 131	Remote Contact No. 4	
KSS Key 132	Background Music Contact 1	27. Relay N B.G.M.
DESCRIPTION OF RELAY OPERATION		
FUNCTION		RELAY OPERATION
External Loud Ringer Contacts	1, 2, 3, 4	1 sec on 3 sec. off
Night Loud Ringer Contacts (UNA)	1, 2, 3, 4	1 sec. on 3 sec. off
Remote Contacts	1, 2, 3, 4	3 sec. Make
Background Music contact	1	Make

7.00 SYSTEM TIMER

7.01 Key system CO line(s) may require programming of various timing parameters to those required by local telephone companies to function properly with old step-by-step or the latest electronic central office line. Also many of the system operational features such as hold recall contain timing functions which are desired to be flexible to meet the customer's business and operational requirements. This paragraph describes these adjustments.

7.02 TABLE 5-L lists the features that require timing parameters. Find the requirement through the local telephone company or the customer and select the appropriate values in the ranges provided.

7.03 After determining the user requirements, the following features are programmed:

- a. **OPERATOR CAMP-ON RECALL TIMING**
 Item No.: 16
 Default: 20 seconds
 Range: 5 to 75 seconds

**TABLE 5-L
 SYSTEM TIMING PARAMETERS**

ITEM	PARAMETERS	SPECIFICATION	DEFAULT	RANGE
<16>	Operator Camp-on Recall	Customer Spec.	20 sec.	5 to 75 sec.
<17>	Station Camp-on Recall	Customer Spec.	20 sec.	10 to 150 sec.
<18>	CO Flash	Telco. Spec.	0.7 sec.	0.1 to 1.5 sec.
<19>	Remote CO Disconnect Signal	Telco. Spec.	0.7 sec.	0.1 to 1.5 sec.
<20>	Timed Trunk Queueing	Customer Spec.	5 min.	0 to 15 min..
<21>	Hold/Call Park Recall	Customer Spec.	2 min. 40 sec.	16 sec. to 4 min.
<22>	Page Time-out	Customer Spec.	20 sec.	10 to 140 sec., or 5 min.
<23>	DTMF Dial Duration	Customer Spec.	100 m-sec.	100 to 400 m-sec.
<24>	Master Group Hunt	Customer Spec.	20 sec.	10 to 150 sec.
<25>	PBX Pause	PBX Spec.	5 sec.	1 to 12 sec.
<26>	Trunk-to-trunk Conference Release	Customer Spec.	5 min.	5 to 75 min. or infinity

Description: This parameter defines the time after an operator station camps-on a CO call until it recalls when unanswered. This parameter also defines call forward/no answer time.

Procedure:

- (1) Display indicates

16. Opr Rcl 20s .

- (2) Enter 2-digit timer data 05 through 75 seconds.

NOTE

1. Data range is 05 through 75 seconds, entered in 5 second increments.

- (3) Press [FLSH] to terminate the process.

b. STATION CAMP-ON RECALL TIMING

Item No.: 17

Default: 20 seconds

Range: 10 to 150 seconds

Description: This parameter defines the time after a station (other than an operator) camp-on CO call recalls when unanswered.

Procedure:

- (1) Display indicates

17. Sta Rcl 02 0s .

- (2) Enter 2-digit timer data (01 through 15).

NOTES

1. The input of two digit number sets the timer to the value ten times larger than input, in seconds. For example, an input of [0][9] sets the timer to 90 seconds.

2. Data range is 01 through 15 (10 through 150 seconds). OVERRANGED data is treated as the default value, 20 sec.

- (3) Press [FLSH] to terminate the process.

c. CO FLASH TIMING

Item No.: 18

Default: 0.7 seconds

Range: 0.1 to 1.5 seconds, 100 ms. to 1500 ms.

Description: This parameter defines flash timing to obtain dial recorder tone while engaged on a CO line. The timing specification for each CO line appearance must be acquired prior to the programming.

Procedure:

- (1) Display indicates

18. Flash 0.7s .

- (2) Enter 2-digit timer data (01 through 15).

NOTES

1. The first digit of the input (0 or 1) represents seconds, the second digit represents tenths of seconds. For example, an entry of [0][9] sets the timer to 0.9 second.

2. Data range is 01 through 15 (.1 through 1.5 seconds). The overranged data is treated as the default value (0.7 sec.).

- (3) Press [FLSH] to terminate the process.

d. REMOTE CO DISCONNECT SIGNAL TIMING

Item No.: 19

Default: 0.7 seconds

Range: 0.1 to 1.5 seconds, 100 ms. to 1500 ms.

Description: This parameter is used for the ZT-D system to detect a distant CO party's on-hook so that the lines on "hold" or on "conference call" can be disconnected automatically. The timing specification must be acquired for each CO line appearance prior to the programming.

Procedure:

- (1) Display indicates

19. Dscnct 0.7s .

- (2) Enter 2-digit timer data (01 through 15).

NOTES

1. The first digit of the input (0 or 1) represents seconds, the second digit represents tenths of a second. For example, an entry of [1][4] sets the timer to 1.4 seconds.

2. Data range is 00 through 15 (.1 through 1.5 seconds). The overranged data is treated as the default value (0.7 sec.).

- (3) Press [FLSH] to terminate the process.

e. TIMED TRUNK QUEUEING TIMING

Item No.: 20

Default: 5 minutes

Range: 02 to 15 minutes

Description: This parameter defines the waiting time for automatic redial after queuing an unanswered outgoing CO call.

Procedure:

- (1) Display indicates

20. Timed Q 0.5min .

- (2) Enter 2-digit timer data (02 through 15).

NOTE

1. The input data sets the timer in minutes. 00, 01 and overranged data is treated as the default value (5 min).

- (3) Press [FLSH] to terminate the process.

f. SYSTEM/EXCLUSIVE/CONSULTATION HOLD, CALL PARK RECALL TIMING

Item No.: 21

Default: 160 seconds

Range: 16 to 240 sec., 16 sec. to 4 minutes

Description: This parameter defines how long a CO call is placed on hold at a station before it recalls.

Procedure:

- (1) Display indicates

21. Hold 160s .

- (2) Enter 3-digit timer data (16 through 240).

NOTES

1. Data entry is done in sixteen (16) second increments.
2. The Hold Time data selection are as follows, in seconds, 16, 32, 48, 64, 80, 96, 112, 128, 144, 160, 175, 192, 208, 224, 240.
- (3) Press [FLSH] to terminate the process.

g. PAGE TIME-OUT TIMING

Item No.: 22

Default: 20 seconds

Range: 10 seconds to 140 seconds or 5 minutes

Description: This parameter defines how long one page call can be continued.

Procedure:

- (1) Display indicates

22. Page 02 0s .

- (2) Enter 2-digit timer data (01 through 15).

NOTES

1. A two digit entry of 01 to 14 sets the timer to a value ten times larger than the value selected. For example, an input entry of [0][9] sets the timer to 90 seconds.
2. A two digit entry of 15 sets the timer to an extended page timeout of 5 minutes.
3. Data range is 01 through 14 (10 to 140 seconds) or 15 (5 min.). The over-ranged data is treated as the default value (20 sec.).
- (3) Press [FLSH] to terminate the process.

h. DTMF DIAL DURATION TIMING

Item No.: 23

Default: 100 milli-seconds

Range: 100 to 400 milli-seconds

Description: Some services on DTMF lines such as remote control of a voice mail unit often requires longer DTMF output time. However unnecessarily long assignment of the DTMF duration timing causes longer waiting time during CO dialing during busy traffic of the system.

Procedure:

- (1) Display indicates

23. DurTime 10 0ms .

- (2) Enter 2-digit timer data (10 through 40).

NOTES

1. The two digit data input selections are as follows: 10, 15, 20, 25, 30, 35, 40.
2. The two digit input sets the timer to a value ten times larger than the input data, in milli-seconds.
3. Any two digit data entry not conforming to the selections above will be rounded up or down depending on it's numerical value.
4. Overranged data is treated as the default value.
- (3) Press [FLSH] to terminate the process.

i. MASTER GROUP HUNT TIMING

Item No.: 24

Default: 20 seconds

Range: 10 to 150 seconds

Description: This parameter sets the ringing time at one station in a hunt group.

Procedure:

- (1) Display indicates

24. GrpHunt 02 0s .

- (2) Enter 2-digit timer data (01 through 15).

NOTES

1. The input data times ten sets the timer in seconds. For example: input number [1][2] sets the timer to 120 seconds.
2. Data range is 01 through 150 (10 to 150 seconds). Data 00 and overranged data is treated as the default value (20 sec.).
- (3) Press [FLSH] to terminate the process.

j. PBX PAUSE TIMING

Item No.: 25

Default: 5 seconds

Range: 1 to 15 seconds

Description: The assigned pause time is automatically inserted after predial code when redialing on the line identified as "PABX" connection. The timing must be obtained through the PBX specification or by measuring the time required to receive CO dial tone after dialing a PBX trunk group.

Procedure:

- (1) Display indicates

25. Pause 05s .

- (2) Enter 2-digit timer data (01 through 15).

NOTES

1. The input data sets the timer in seconds.

2. Data range is 01 through 15 (1 through 15 seconds). Data [00] and over-ranged data is treated as the default value (5 sec.)
- (3) Press [FLSH] to terminate the process.

k. **TRUNK-TO-TRUNK CONFERENCE**

RELEASE TIMING

Item No.: 26

Default: 5 minutes

Range: 5 to 75 minutes or infinity

Description: the parameter determines how long the trunk-to-trunk conference call can be connected to avoid unnecessary charges when a "remote disconnect signal" is not available from the associated telephone central office.

Procedure:

- (1) Display indicates

26. AutoRI	05min
------------	-------

.
- (2) Enter 2-digit timer data (00 through 75).

NOTES

1. The two digit input sets the timer in minutes.
 2. Data range is 05 through 75 (05 through 75 minutes). The overranged data is treated as the default value of 5 minutes.
 3. A two digit data input of 00 sets the timer to infinity. (No release.)
- (3) Press [FLSH] to terminate the process.

8.00 LINE SPECIFICATION PROGRAMMING

8.01 CO lines terminated to the ZT-D system are flexible such that every station can handle calls in a convenient way. This section describes how to characterize individual line for Ringing, Group Access, Call Forwarding various business setting requirements.

8.02 The following individual CO operational parameters can be programmed.

a. **LINE TERMINATION**

- **CO Lines:** Assign each line by <48> DP/MF Dialing Selection to meet the CO dialing characteristics, Dial pulse or DTMF. For Rotary pulse CO line, <32> Dial Pulse Break Ratio Assignment and <49> 10/20pps Pulse Dial Assignment must meet the CO specification. Also assign <50> Automatic CO release (Remote Hold Disconnect) if the disconnect signal is available from the CO for automatic system disconnect.

- **Floating CO Group:** Assign CO lines to one of nine floating groups by item <29> so that the station FLT key can pick up the line. Not applicable to KF systems.
- **PBX Line:** Assign the line connected behind PBX with the pre-dial number (0 through 9) by Item <30> so that the system redial and toll restriction can recognize the required predial automatically.

b. **RINGING ASSIGNMENT**

- **Day Ringing:** Determine which stations to ring, for CO by <40> Day Ringing Assignment, doorphone by <42> Doorphone Day Ringing Assignment, and for P.A. system by <45> Loud Ringing Bell Assignment - Day.
- **Night Ringing:** First determine the <44> CO Ringing Group for a group of CO lines which are night-transferred by the station assigned by item <82>. Then determine which station to ring during the system is in night operation mode for CO by <41> Night Ringing Assignment, for doorphone by <43> Doorphone Night Ringing Assignment, for night bell by <47> External P.A. Ringing Assignment - Night.
- **Optional Ringing Tone:** Assign it by Item <31> when incoming calls of the line have to be distinguished to the other lines.

c. **LINE FEATURES**

- **Automatic CO to CO Forwarding (Transfer):** Assign group No. to incoming and outgoing lines for CO call forwarding by Item <51> which is also activated by the station assigned by item <82>.
- **External MOH Source:** Set Item <53> as required to use External MOH Source such as FM tuner connected to the KSU MOH terminal.
- **Incoming CO and Intercom Hunt Group:** For ICM group hunt call and Incoming assign by item <52>.

8.03 Individual items are programmed as follows:

a. **FLOATING CO GROUP ASSIGNMENT**

Item No.: 29

Default: All CO lines belong to Group No. 1
Description: Nine floating CO trunk groups are available. In subsequent programming, station FLT key(s) or direct FLT key(s) must be assigned to pick up the CO groups. The same CO line may appear as a station direct CO termination as well as assigned to a group.

Procedure. (MF Systems only):

- (1) Display indicates

25. FLT CO Grp	1
----------------	---

.

- (2) Press [CO] keys to assign the lines which belong to the floating group.
- (3) Enter Floating Group No. (1 through 9) through dial pad or press [FWD] key to forward to the next group and press [CO] keys to assign the lines.
- (4) Press [FLSH] to terminate the process.

b. PBX LINE ASSIGNMENT AND PRE-DIAL ENTRY

Item No.: 30

Default: None

Description: Program up to the ten pre-dial numbers. Then assign each CO line connected behind a PBX to these pre-dial numbers so that the system station redial and toll restriction features can recognize the pre-dial automatically.

Procedure:

- (1) Display indicates

30. Pre-dial	#0
--------------	----

.
- (2) Enter the pre-dial table number (0 through 9) to select the desirable table.
- (3) Press [CO] keys to assign the lines which refers the PBX pre-dial number to the toll restriction table.
- (4) Press the [FWD] key to verify or update the pre-dial data. The display changes to

*Pre-dial

. "N" is the predial table selected; the associated CO line(s) lamp lights.
- (5) Enter up to a 3-digit pre-dial number on the dial pad to assign the pre-dial or press [FEAT] key to clear the number. Pressing the line key toggles the CO line status.
- (6) Press [FWD] key to assign next pre-dial table or [FLSH] key to terminate the process.

c. OPTIONAL DISTINCTIVE CO RINGING

Item No.: 31

Default: None

Description: The optional Ringing Tone appears on incoming calls and recalls of the lines assigned. The tone is used to distinguish the incoming calls. The audible ringing tone on an incoming CO line is changed from 440/480 Hz to 480/620 Hz.

Procedure:

- (1) Display indicates

31. Option Ring

.
- (2) Press the CO line keys to indicate which line(s) the option ringing tone should be supplied to.
- (3) Press [FLSH] to terminate the process.

d. DIAL PULSE BREAK RATIO ASSIGNMENT

Item No.: 32

Default: 61%

Description: Determine each CO specification before assignment.

Procedure:

- (1) Display indicates

32. DP Ratio	61%
--------------	-----

.
- (2) Press "*" key to toggle status between

32. DP Ratio	61%
--------------	-----

 and

32. DP Ratio	67%
--------------	-----

.
- (3) Press [FLSH] to terminate the process.

CAUTION

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IN CANADA PROHIBITS USE OF DP
SPEED OF 20PPS AND RATIO OF 33%
FOR ANY SYSTEM INSTALLED IN
CANADA. DO NOT ASSIGN THESE
FEATURES WHEN INSTALLED IN
CANADA.**

e. DAY RINGING ASSIGNMENT

Item No.: 40

Default: Station 120 only

Procedure:

- (1) Display indicates

40. Day Rng Assgn

. CO No. 1 lights.
- (2) Press a line key to select a particular CO line, then press [DSS] key(s) to assign ringing to the station(s).
- (3) Press [FWD] key(s) to proceed to next Co line or [FLSH] to terminate the process.

f. NIGHT RINGING ASSIGNMENT

Item No.: 41

Default: Station 120 only

Procedure:

- (1) Display indicated

41. Nt Ring Assgn

. CO No. 1 lights.
- (2) Press a line key to select a particular CO line, then press [DSS] keys to assign ringing to the station(s).
- (3) Press [FWD] key to proceed to next CO line or [FLSH] to terminate the process.

g. DOORPHONE DAY RINGING ASSIGNMENT

Item No.: 42

Default: Station 120 only

Description: The DSPC82 board and the DPPAG card are required in addition to door-phone unit(s).

Procedure:

- (1) Display indicates

42. Door 1-Day

.

2. Data range is 01 through 15 (1 through 15 seconds). Data [00] and over-ranged data is treated as the default value (5 sec.)
- (3) Press [FLSH] to terminate the process.

k. **TRUNK-TO-TRUNK CONFERENCE**

RELEASE TIMING

Item No.: 26

Default: 5 minutes

Range: 5 to 75 minutes or infinity

Description: the parameter determines how long the trunk-to-trunk conference call can be connected to avoid unnecessary charges when a "remote disconnect signal" is not available from the associated telephone central office.

Procedure:

- (1) Display indicates

26. AutoRI 05min .

- (2) Enter 2-digit timer data (00 through 75).

NOTES

1. The two digit input sets the timer in minutes.
 2. Data range is 05 through 75 (05 through 75 minutes). The overranged data is treated as the default value of 5 minutes.
 3. A two digit data input of 00 sets the timer to infinity. (No release.)
- (3) Press [FLSH] to terminate the process.

8.00 LINE SPECIFICATION PROGRAMMING

8.01 CO lines terminated to the ZT-D system are flexible such that every station can handle calls in a convenient way. This section describes how to characterize individual line for Ringing, Group Access, Call Forwarding various business setting requirements.

8.02 The following individual CO operational parameters can be programmed.

a. **LINE TERMINATION**

- **CO Lines:** Assign each line by <48> DP/MF Dialing Selection to meet the CO dialing characteristics, Dial pulse or DTMF. For Rotary pulse CO line, <32> Dial Pulse Break Ratio Assignment and <49> 10/20pps Pulse Dial Assignment must meet the CO specification. Also assign <50> Automatic CO release (Remote Hold Disconnect) if the disconnect signal is available from the CO for automatic system disconnect.

- **Floating CO Group:** Assign CO lines to one of nine floating groups by item <29> so that the station FLT key can pick up the line. Not applicable to KF systems.
- **PBX Line:** Assign the line connected behind PBX with the pre-dial number (0 through 9) by Item <30> so that the system redial and toll restriction can recognize the required predial automatically.

b. **RINGING ASSIGNMENT**

- **Day Ringing:** Determine which stations to ring, for CO by <40> Day Ringing Assignment, doorphone by <42> Doorphone Day Ringing Assignment, and for P.A. system by <45> Loud Ringing Bell Assignment - Day.
- **Night Ringing:** First determine the <44> CO Ringing Group for a group of CO lines which are night-transferred by the station assigned by item <82>. Then determine which station to ring during the system is in night operation mode for CO by <41> Night Ringing Assignment, for doorphone by <43> Doorphone Night Ringing Assignment, for night bell by <47> External P.A. Ringing Assignment - Night.
- **Optional Ringing Tone:** Assign it by Item < 31> when incoming calls of the line have to be distinguished to the other lines.

c. **LINE FEATURES**

- **Automatic CO to CO Forwarding (Transfer):** Assign group No. to incoming and outgoing lines for CO call forwarding by Item <51> which is also activated by the station assigned by item <82>.
- **External MOH Source:** Set Item <53> as required to use External MOH Source such as FM tuner connected to the KSU MOH terminal.
- **Incoming CO and Intercom Hunt Group:** For ICM group hunt call and Incoming assign by item <52>.

8.03 Individual items are programmed as follows:

a. **FLOATING CO GROUP ASSIGNMENT**

Item No.: 29

Default: All CO lines belong to Group No. 1
Description: Nine floating CO trunk groups are available. In subsequent programming, station FLT key(s) or direct FLT key(s) must be assigned to pick up the CO groups. The same CO line may appear as a station direct CO termination as well as assigned to a group.

Procedure. (MF Systems only):

- (1) Display indicates

25. FLT CO Grp 1 .

- (2) Press [CO] keys to assign the lines which belong to the floating group.
- (3) Enter Floating Group No. (1 through 9) through dial pad or press [FWD] key to forward to the next group and press [CO] keys to assign the lines.
- (4) Press [FLSH] to terminate the process.

b. PBX LINE ASSIGNMENT AND PRE-DIAL ENTRY

Item No.: 30

Default: None

Description: Program up to the ten pre-dial numbers. Then assign each CO line connected behind a PBX to these pre-dial numbers so that the system station redial and toll restriction features can recognize the pre-dial automatically.

Procedure:

- (1) Display indicates

30. Pre-dial	#0
--------------	----

.
- (2) Enter the pre-dial table number (0 through 9) to select the desirable table.
- (3) Press [CO] keys to assign the lines which refers the PBX pre-dial number to the toll restriction table.
- (4) Press the [FWD] key to verify or update the pre-dial data. The display changes to

*Pre-dial

. "N" is the predial table selected; the associated CO line(s) lamp lights.
- (5) Enter up to a 3-digit pre-dial number on the dial pad to assign the pre-dial or press [FEAT] key to clear the number. Pressing the line key toggles the CO line status.
- (6) Press [FWD] key to assign next pre-dial table or [FLSH] key to terminate the process.

c. OPTIONAL DISTINCTIVE CO RINGING

Item No.: 31

Default: None

Description: The optional Ringing Tone appears on incoming calls and recalls of the lines assigned. The tone is used to distinguish the incoming calls. The audible ringing tone on an incoming CO line is changed from 440/480 Hz to 480/620 Hz.

Procedure:

- (1) Display indicates

31. Option Ring

.
- (2) Press the CO line keys to indicate which line(s) the option ringing tone should be supplied to.
- (3) Press [FLSH] to terminate the process.

d. DIAL PULSE BREAK RATIO ASSIGNMENT

Item No.: 32

Default: 61%

Description: Determine each CO specification before assignment.

Procedure:

- (1) Display indicates

32. DP Ratio	61%
--------------	-----

.
- (2) Press "*" key to toggle status between

32. DP Ratio	61%
--------------	-----

 and

32. DP Ratio	67%
--------------	-----

.
- (3) Press [FLSH] to terminate the process.

CAUTION

DEPARTMENT OF COMMUNICATION IN CANADA PROHIBITS USE OF DP SPEED OF 20PPS AND RATIO OF 33% FOR ANY SYSTEM INSTALLED IN CANADA. DO NOT ASSIGN THESE FEATURES WHEN INSTALLED IN CANADA.

e. DAY RINGING ASSIGNMENT

Item No.: 40

Default: Station 120 only

Procedure:

- (1) Display indicates

40. Day Rng Assgn

. CO No. 1 lights.
- (2) Press a line key to select a particular CO line, then press [DSS] key(s) to assign ringing to the station(s).
- (3) Press [FWD] key(s) to proceed to next Co line or [FLSH] to terminate the process.

f. NIGHT RINGING ASSIGNMENT

Item No.: 41

Default: Station 120 only

Procedure:

- (1) Display indicated

41. Nt Ring Assgn

. CO No. 1 lights.
- (2) Press a line key to select a particular CO line, then press [DSS] keys to assign ringing to the station(s).
- (3) Press [FWD] key to proceed to next CO line or [FLSH] to terminate the process.

g. DOORPHONE DAY RINGING ASSIGNMENT

Item No.: 42

Default: Station 120 only

Description: The DSPC82 board and the DPPAG card are required in addition to door-phone unit(s).

Procedure:

- (1) Display indicates

42. Door 1-Day

.

- (2) Press [DSS] keys to assign the ringing station for Door Phone.
- (3) Enter Doorphone No. (1 through 3) through dial pad or press [FWD] key to advance to the next Doorphone and press [DSS] keys to assign the ringing stations for the Door Phone selected.
- (4) Press [FLSH] to terminate the process.

**h. DOORPHONE NIGHT RINGING
ASSIGNMENT**

Item No.: 43

Default: Station 120 only.

Description: The DSPC82 board and the DPPAG card are required in addition to door-phone units.

Procedure:

- (1) Display indicates

43. Door 1 -Night

.
- (2) Press [DSS] keys to assign the night ringing station for Door Phone 1.
- (3) Enter Doorphone No. (1 through 3) on the dial pad or press [FWD] key to advance to the next Doorphone. Press [DSS] keys to assign the night ringing stations for the Doorphone selected.
- (4) Press [FLSH] to terminate the process.

i. CO RINGING GROUP ASSIGNMENT

Item No.: 44

Default: Group 1

Description: The CO lines assigned here to one of the four tenant groups are turned into night ringing mode by the station assigned in item <82>. The feature addresses the individual system tenant's need to change their CO lines into night mode.

Procedure:

- (1) Display indicates

44.CO Rng Grp	1
---------------	---

.
- (2) Enter Group No. (1 through 4) on the dial pad to select a specific group, or press [FWD] key to assign the doorphone ringing group.
- (3) Press [CO] keys to assign the lines to the CO ringing Group on the display.
- (4) Display indicates

*Door1 Line Grp	1
-----------------	---

. On dial pad change the group No. for doorphone 1.
- (6) Press [FLSH] to return to CO line group assignment or press [FLSH] again to terminate the process.

j. LOUD RINGING BELL ASSIGNMENT - DAY

Item No.: 45

Default: No assignment

Description: The FRIFC card must be in-

stalled and <27> Flexible Relay Assignment must must be set for External Loud Ringer (Extrng).

Procedure:

- (1) Display indicates

45. Loud Ringer	1
-----------------	---

.
- (2) Press [CO] keys to assign the lines to activate the relay for External Loud Ringer.
- (3) Enter Ringer No. (1 through 4) through dial pad or press [FWD] key to select the next Ringer. Press [CO] keys to assign the lines to Ringer selected.
- (4) Press [FLSH] to terminate the process.

k. LOUD RINGING BELL ASSIGNMENT - NIGHT

Item No.: 46

Default: No assignment

Description: The FRIFC card must be installed and <27> Flexible Relay Assignment must must be set for Night Loud Ringer (NtRng).

Procedure:

- (1) Display indicates

46. Nt Ringer	1
---------------	---

.
- (2) Press [CO] keys to assign the lines to activate the relay 1 for External Loud Ringer in the Night Transfer Mode.
- (3) Enter Relay No. (1 through 4) through dial pad or press [FWD] key to select the next Relay. Press [CO] keys to assign the lines to relay selected.
- (4) Press [FLSH] to terminate the process.

l. EXTERNAL P.A. RINGING — NIGHT

Item No.: 47

Default: Off

Description: An internal ringing tone is sent through the P.A. system speakers during incoming calls on programmed lines while the system is in the night operation mode. The DSPC82 board and the DPPAG card are required for this feature.

Procedure:

- (1) Display indicates

47. Nt PA Rngr	1
----------------	---

.
- (2) Press [CO] keys to assign the lines to the PA Zone No. that is to receive the ringing tone in the Night Transfer Mode.
- (3) Enter Zone No. (1 through 4) through dial pad or press [FWD] key to select another Zone and press [CO] keys to assign the lines.
- (4) Press [FLSH] to terminate the process.

m. **DP/MF DIALING SELECTION**

Item No.: 48

Default: MF for all lines

Description: Whether the single line telephone on the system have both DTMF or rotary dial, the system sends the proper signal to CO through this assignment.

Procedure:

- (1) Display indicates
48. DP-on, MF-off
- (2) Press line keys to toggle status.
- (3) Press [FLSH] to terminate the process

n. **10/20PPS PULSE DIAL ASSIGNMENT**

Item No.: 49

Default: 10pps

Description: Determine the CO specification before assigning 20pps.

Procedure:

- (1) Display indicates
49. 20pps Dial
- (2) Press line keys to assign the lines which require 20-pps dial pulse speed. The CO lines which the light remain OFF is assigned to 10 pps dial speed.
- (3) Press [FLSH] to terminate the process.

CAUTION

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IN CANADA PROHIBITS USE OF DP
SPEED OF 20PPS AND RATIO OF 67%
FOR ANY SYSTEM INSTALLED IN
CANADA. DO NOT ASSIGN THESE
FEATURES WHEN INSTALLED IN
CANADA.**

o. **AUTOMATIC CO RELEASE**

(Remote Hold Disconnect)

Item No.: 50

Default: None

Description: Determine whether a disconnect signal (loop interrupt) is available for the individual CO. If available, also program correct <19> Remote CO Disconnect Signal Timing. If not, program <26> Trunk-to-Trunk Conference Release Timing accordingly.

Procedure:

- (1) Display indicates
50. CO Release
- (2) Press line keys to assign the CO lines to release automatically when remote disconnect signal is received from the CO.
- (3) Press [FLSH] to terminate the process.

p. **AUTOMATIC CO to CO FORWARDING**

(Transfer)

Item No.: 51

Default: Extension No. 120

Description: Assign incoming and outgoing lines for CO call forwarding and the ex-

tension No. which activates this feature. Up to four (4) individual groups can be programmed.

Procedure:

- (1) Display indicates
51. COfwd Gp1 St?
- (2) Enter group number 1 through 4 dial pad or press [DSS] key to assign which station activates the CO to CO transfer of the CO group selected.
- (3) Press [FWD] key to assign the incoming CO line(s). The display changes to
*COfwd InGp1 CO?
Press [CO] key(s) to assign the incoming CO line(s) to a group which will be forwarded to another outside line(s) when the feature is activated.
- (5) Press [FWD] key to assign the outgoing CO line(s). The display changes to
*COfwdOutGp1 CO?
- (6) Press [CO] key(s) to assign the outgoing CO line(s) to a group which will originate the call when the feature is activated.
- (7) Press [FWD] key to assign the destination CO telephone number. The display changes to
*1 =
- (8) Enter the telephone number to be dialed on the dial pad. Pause is entered using [DND/HLD] key.
- (9) Press [FWD] keys to continue to next group resume or [FLSH] to terminate the process.

NOTES:

1. Same CO line cannot be assigned to both incoming, "CO Forward" and "outgoing CO".
2. Up to 16 digits may be entered as outgoing number.

q. **HUNT CO GROUP ASSIGNMENT**

Item No.: 52

Default: None

Description: This assignment defines stations which belong to the ICM hunt groups, and the CO lines which ring in the hunt group. Program either CO and/or stations for the four (4) hunt groups in the system.

Procedure:

- (1) Display indicates
52. Hunt Gp1 CO?
- (2) Enter Hunt Group number 1 through 4 on the dial pad to select a specific group number or press [CO] keys to assign the incoming CO lines that ring into the hunt group selected.

- (3) Press [FWD] key to assign the stations. The display changes to .
- (4) Press [DSS] keys to assign the stations which ring on incoming calls withing the group.
- (5) Press [FWD] keys to continue to the next hunt group or [FLSH] to terminate the process.

r. **EXTERNAL MOH SOURCE ENABLE**

Item No.: 53

Default: Internal Source

Procedure:

- (1) Display indicates .
- (2) Press [#] to toggle the status between and .
- (3) Press [FLSH] to terminate procedure.

9.00 STATION CLASS OF SERVICE PROGRAMMING

9.01 Stations have various features that can be assigned individually and on a group basis.

a. **INDIVIDUAL STATION ASSIGNMENT**

Stations planning assigns program codes indicated below for station features to meet the individual station requirements.

- <60> Internal/external Background Music Assignment
- <70> Automatic Answering
- <71> Hold Recall Enable
- <72> Speakerphone
- <78> Flexible Key Assignment
- <81> Station Restriction Password Assignment

b. **PAGE/GROUP CALL ASSIGNMENT**

Station planning assigns station's group/tenant characteristics and also disables some stations from access to features to avoid heavy traffic on the page:

- <65> Page Access: Determine extensions which can access voice paging.
- <66> Page Receive: Determines extensions which receives all call page.
- <67> Group Call Access: Determines extensions which can access station group call.
- <68> Group Call Receive: Determines extensions which belong to each call group.

- <69> Zone Page Access: Determines extensions which access Zone (PA) Page.
- <80> Intercom Group Assignment: Determines extensions tenant group when required.

c. **SYSTEM GROUP OPERATOR ASSIGNMENT**

- <82> Night Transfer Activating Station ... One group operator can be assigned for each group.

9.02 Individual station class of service items are programmed as follows:

a. **INTERNAL/EXTERNAL BACKGROUND MUSIC ASSIGNMENT**

Item No.: 60

Default: No BGM

Description: Program the key telephones which are allowed to receive BGM through their speakers. BGM can be turned on and off through [FLSH] key operation. BGM is also assigned each PA zone.

Procedure:

- (1) Display indicates .
- (2) Press [DSS] keys to designate stations which will receive the bakground music.
- (3) Press [FWD] keys to assign P.A. system zone(s). The display changes to .
- (4) Enter P.A. zone numbers (1 through 4) through dial pad to designate the zones which are subject to receive the background music.
- (5) Press [FWD] keys to resume or [FLSH] to terminate the process.

b. **PAGE ACCESS ENABLE**

Item No.: 65

Default: Enable for all stations

Description: The feature assigns the stations who can access to external P.A. system. The DSPC82 board and the DPPAG card are required in addition to the customer provided P.A. system.

Procedure:

- (1) Display indicates .
- (2) Press [DSS] keys to assign the stations which are restricted from accessing All Call Page. The lighted DSS lamps indicate those stations that can originate All Call Page.
- (3) Press [FLSH] to terminate the process.

c. ALL CALL PAGE RECEIVE ENABLE

Item No.: 66

Default: Enable for all stations

Description: The feature assigns the stations who can receive the all call page, by dial [8] [0] or [PAGE] key.

Procedure:

- (1) Display indicates

66. Page RCV	En
--------------	----

 .
- (2) Press [DSS] keys to assign the stations which do not receive the All Call Page at their stations. The lighted DSS lamps indicate that those stations will receive All Call Page.
- (3) Press [FLSH] to terminate the process.

d. GROUP CALL ACCESS ENABLE

Item No.: 67

Default: Disable for all stations

Description: The feature assigns the stations who can dial the intercom group call number(s). Up to four (4) groups can be assigned.

Procedure:

- (1) Display indicates

67. GPage	Access0
-----------	---------

 .
- (2) Press [DSS] keys to assign the stations which can access the Group Call Page. The lighted DSS lamps indicate those stations that can originate the Group Calls.
NOTE:
[0] - All Group [3] - Group No. 3
[1] - Group No. 1 [4] - Group No. 4
[2] - Group No. 2
- (3) Press [FWD] keys to assign another group or press [FLSH] key to terminate the process.

e. GROUP CALL RECEIVE ENABLE

Item No.: 68

Default: Disable for all stations

Description: The feature assigns the stations who can receive the intercom group call. Up to four (4) groups can be assigned.

Procedure:

- (1) Display indicates

68. GPage	RCV	0
-----------	-----	---

 .
- (2) Press [DSS] keys to assign the stations which can receive the Group Call Page at their stations. The lighted DSS lamps indicate those stations that will receive the Group Calls.
NOTE:
[0] - All Group [3] - Group No. 3
[1] - Group No. 1 [4] - Group No. 4
[2] - Group No. 2

- (3) Press [FWD] keys to assign another group or press [FLSH] key to terminate the process.

f. ZONE PAGE ACCESS ENABLE

Item No.: 69

Default: Disable for all stations

Description: The feature assigns the stations who can access zone(s) of the external P.A. system. The DSPC82 board and the DRPAG card are required in addition to the customer provided P.A. system.

Procedure:

- (1) Display indicates

69. ZPage	Access0
-----------	---------

 .
- (2) Press [DSS] keys to assign the stations which can enable to access the External Zone Page. The lighted DSS lamps indicate those stations that can originate the Zone Paging.
NOTE:
[0] - All Group [3] - Group No. 3
[1] - Group No. 1 [4] - Group No. 4
[2] - Group No. 2
- (3) Press [FWD] keys to assign another group or press [FLSH] key to terminate the process.

g. AUTOMATIC ANSWERING

Item No.: 70

Default: Enable for all stations

Description: The feature assigns the stations who can answer an incoming calls automatically by going off-hook. It is recommended to assign [AUTOANS] key to enable station to simplify operation.

Procedure:

- (1) Display indicates

70. Auto Answer

 .
- (2) Press [DSS] keys to disable the stations which will not answer an incoming CO calls automatically. The lighted DSS lamps indicate those stations which are enabled.
- (3) Press [FLSH] key to terminate the process.

h. HOLD RECALL ENABLE

Item No.: 71

Default: Enable all stations

Procedure:

- (1) Display indicates

71. Hold Rcl	En
--------------	----

 .
- (2) Press [DSS] keys to disable the stations that the held CO calls will not ring back. The lighted DSS lamps indicate those stations that will ring back on held CO calls.

- (3) Press [FLSH] key to terminate the process.

i. **SPEAKERPHONE**

Item No.: 72

Default: None

Description: When a station is equipped either with internal or external speakerphone the stations must be identified.

Procedure:

- (1) Display indicates .
- (2) Press [DSS] keys to assign the stations which are installed with built-in or external speakerphones. The lighted DSS lamps indicate the stations installed with speakerphones.
- (3) Press [FLSH] key to terminate the process.

j. **DO NOT DISTURB**

Item No.: 73

Default: Enable for all stations

Procedure:

- (1) Display indicates .
- (2) Press [DSS] keys to disable DND ON the stations. The lighted DSS lamps indicate that those stations can use DND feature.
- (3) Press [FLSH] key to terminate the process.

NOTE:

1. DND disable CO and ICM ringing
2. Operator can override DND with the [OVER] key.

k. **EXECUTIVE STATION**

(Override to Busy/DND Station)

Item No.: 74

Default: Disable for all stations

Description: The executive station can override to another station when it is busy or in DND, unless the station is "protected".

Procedure:

- (1) Display indicates .
- (2) Press [DSS] keys to enable executive override on the stations selected. The lighted DSS lamps indicate the stations having executive override.
- (3) Press [FLSH] key to terminate the process.

NOTE:

1. Executive station can override DND
2. Executive override to a CO line does provide an intrusion tone.

NOTE: When providing this optional feature, the equipment users must be informed of individual's rights as regards to unauthorized eavesdropping on telephone conversations.

l. **PROTECTED EXTENSION**

Item No.: 75

Default: Disable for all stations

Description: The "protected" station can never be overridden by other stations while engaged on a call. If assigned to the single line telephone, it protects data transmission when a MODEM is connected.

Procedure:

- (1) Display indicates .
- (2) Press [DSS] keys to enable the stations that these stations will be protected from the override calls when they are busy. The lighted DSS lamps indicate those station that can use the feature.
- (3) Press [FLSH] key to terminate the process.

m. **SECRETARIAL HOT LINE**

Item No.: 76

Default: None

Description: This program defines the manager-secretary relationships in which the manager station can override the DND on the secretary station. One secretary can be assigned up to two managers.

Procedure:

- (1) Display indicates .
- (2) Press [DSS] keys to assign the stations which are connected to this extension with a Hot Line.
NOTE: Up to two hot line stations may be assigned.
- (3) Press [FWD] key. The display changes to .
- (4) Press [DSS] keys to program the next station. The display goes back to where the new extension number nn (max two) are entered through the [DSS] keys.
- (5) Repeat step (2) or press [FLSH] key to terminate the programming.

n. **FLEXIBLE KEY ASSIGNMENT**

Item No.: 78

Default: Direct CO Keys

Procedure:

- (1) Display indicates .

- (2) Press [FWD] key to individual key assignment. The display changes to Flex Key LK01, or press DSS 120-183 to change to respective extension number.
- (3) Press [FWD] key for next selection of the features or [FEAT] for previous one, until desired assignment appears on the display, or press [*] + [DSS] key to assign the key functions in accordance with the assignment code listed in TABLE 5-M.
- (4) Change the number on the display to the required line number using the dial pad. For example, if [1] [6] is pressed when displaying Flex Key LK01, the display changes to Flex Key LK16.
- (5) When programming Co Direct/Float group access, utilize dial codes listed in Table 5-N.
NOTE: MF system only utilize these type keys.

**TABLE 5-N
 GROUP/FLOAT KEY ASSIGNMENT**

FLT NO.	DESCRIPTION
[0][1] through [0][4]	Float Group Access
[1][1] through [1][2]	Direct Key-CO Group No. 1
[2][1] through [2][2]	Direct Key-CO Group No. 2
[3][1] through [3][2]	Direct Key-CO Group No. 3
[4][1] through [4][2]	Direct Key-CO Group No. 4
[5][1] through [5][2]	Direct Key-CO Group No. 5
[6][1] through [6][2]	Direct Key-CO Group No. 6
[7][1] through [7][2]	Direct Key-CO Group No. 7
[8][1] through [8][2]	Direct Key-CO Group No. 8
[9][1] through [9][2]	Direct Key-CO Group No. 9

- (6) Press [FLSH] key once to assign another flexible key or twice to terminate the process.

o. INTERCOM GROUP ASSIGNMENT

Item No.: 80

Default: All Groups

Description: Four intercom groups are provided for system tenant service. The stations which belong to the same intercom group may call each other. A station can belong to as many as four groups to serve a function as a receptionist.

Procedure:

- (1) Display indicates 80. ICM Group 1. All DSS lights; lights indicating all stations are assigned to group 1.

- (2) Press [DSS] keys to change the stations which belong to the intercom group.
- (3) Enter new group No. (1 through 4) through dial pad or press the [FWD] key to access to the next group.
- (4) Repeat step (2) or press [FLSH] key to terminate the programming.

p. STATION RESTRICTION PASSWORD ASSIGNMENT

Item No.: 81

Default: Any number

Description: The initial password is any four digit number unless it is changed. The password can be cleared by using [*] entry. This programming is also used to find the forgotten passwords.

Procedure:

- (1) Display indicates 81. Password NNNN.
- (2) Press [DSS] key of the station to display or change the password.
- (3) Enter new password of four digits or [*] to clear the password through dial pad.
- (4) Press [FWD] key to proceed to next station or repeat step (2) for other station assignment.
- (5) Press [FLSH] key to terminate the programming.

q. NIGHT TRANSFER ACTIVATING STATION ASSIGNMENT

Item No.: 82

Default: Ext. 120

Description: Program the station that transfers the group of the CO lines defined by Item <44> into Night Service.

Procedure:

- (1) Display indicates 82. NXfr Gp1 St?.
- (2) Press [DSS] key of the station which controls the night transfer of the tenant group displayed.
- (3) Enter another group No. (1 through 4) through dial pad or press the [FWD] key to proceed to next group, and repeat step (2).
- (4) Press [FLSH] key to terminate the programming.

**TABLE 5-M
 FLEXIBLE KEY ASSIGNMENT**

FEATURE	DISPLAY	SELECTION
Direct CO Termination	Flex Key LK01	[*] [DSS120]
Direct Station Signaling (DSS #)	Flex Key DSS120	[*] [DSS121]
One-Touch Speed Dialing (Station)	Flex Key SPD01	[*] [DSS122]
Speed Dialing for DSS Unit # 1	Flex Key SPD1-01	[*] [DSS123]
for DSS Unit # 2	Flex Key SPD2-01	[*] [DSS124]
Speed Dialing	Flex Key SPD	[*] [DSS125]
Float/Group CO Termination (MF sys. only)	Flex Key FLT01	[*] [DSS126]
Zone Page Access	Flex Key Zone1	[*] [DSS127]
	Flex Key Zone2	[*] [DSS128]
	Flex Key Zone3	[*] [DSS129]
	Flex Key Zone4	[*] [DSS130]
	Flex Key Zone0	[*] [DSS131]
All Zone Page Access	Flex Key Group1	[*] [DSS132]
Group Call Access	Flex Key Group2	[*] [DSS133]
	Flex Key Group3	[*] [DSS134]
	Flex Key Group4	[*] [DSS135]
	Flex Key Group0	[*] [DSS136]
All Call Access	Flex Key Remote1	[*] [DSS137]
Remote Control	Flex Key Remote2	[*] [DSS138]
	Flex Key Remote3	[*] [DSS139]
	Flex Key Remote4	[*] [DSS140]
	Flex Key Door 1	[*] [DSS141]
	Flex Key Door 2	[*] [DSS142]
	Flex Key Door 3	[*] [DSS143]
	Flex Key MSG	[*] [DSS144]
Message Waiting	Flex Key Over	[*] [DSS145]
Busy Override	Flex Key CO Back	[*] [DSS146]
CO Line Call-back	Flex Key ICM Bck	[*] [DSS147]
ICM Line Call-back	Flex Key Connect	[*] [DSS148]
Line Connect	Flex Key Park	[*] [DSS149]
Call Park	Flex Key Release	[*] [DSS150]
Line Release	Flex Key Serial	[*] [DSS151]
Serial Call	Flex Key AutoAns	[*] [DSS152]
Automatic Answering	Flex Key Night	[*] [DSS153]
Night Transfer	Flex Key Account	[*] [DSS154]
Account Code Entry	Flex Key Recall	[*] [DSS155]
Recall Pick-up		

10.00 OTHER SYSTEM OPERATIONS

10.01 The following features address the programming mode. Provisions are included for clearing the entire database as well as changing the system password are provided as follows:

a. MEMORY ALL CLEAR

Item No.: 90

Default: None

Procedure:

(1) Display indicates

90. Memory Clear

(2) Enter [C] [L] [R] ([2] [5] [7]) through dial pad to clear memory.

(3) Press [FLSH] to terminate the procedure.

b. SYSTEM PASSWORD CHANGE

Item No.: 99

Default: F492

Procedure:

(1) Display indicates

99. Sys Passw. NNN

(2) Enter through the dial pad the new password of three digits or [*] to clear the password.

(3) Press [FLSH] key to terminate the programming.

11.00 OUTGOING/TOLL RESTRICTION INTRODUCTION

11.01 The ZT-D system has seven programming features to assign different restriction levels to each extension. TABLE 5-P illustrates the restriction levels associated with those programmable items. Use the table to provide features which meets the customer's requirements.

**TABLE 5-P
 OUTGOING/TOLL CALL
 RESTRICTION LEVELS**

FEATURE OF THE RESTRICTION	LEVEL OF RESTRICTION					
	MOST RESTRICTED			LEAST RESTRICTED		
	1	2	3	4	5	6
<62> CO LINE PICK-UP RESTRICTION	X					
<61> OUTGOING CALL RESTRICTION		X				
<64> ACCESS RESTRICTION SYSTEM SPD			X			
<15> O.C.C. DATA ENTRY				X	X	X
<77> TOLL RESTRICTION CLASS ASSIGNMENT					X	
<63> TOLL RESTRICTION - SYSTEM SPD				X		
<05> TOLL RESTRICTION/EQUAL-ACCESS				X	X	X

11.02 The following describe how individual programming items restricts outgoing/toll calls during each step of the outgoing dialing process.

- Pick up a CO line and receive outside dial tone:
 <62> **CO LINE PICK-UP RESTRICTION** does not allow extensions to pick up calls on individual CO line basis.
- Dial any number:
- For any number dialed,
 <61> **OUTGOING CALL RESTRICTION** does not allow extensions to make outgoing calls on an individual CO line basis.
- For any number dialed through the system speed dial,
 <64> **ACCESS RESTRICTION SYSTEM SPD** does not allow extensions to make outgoing calls using the system speed dial.
- Dial a long distance number,
- For a long distance number dialed through the dial pad,

<05> **TOLL RESTRICTION/EQUAL-ACCESS** creates user-defined allow or deny restriction tables for multi-level dial restriction.

<77> **TOLL RESTRICTION CLASS ASSIGNMENT** applies the one of the fifteen restriction classes, consisting of a combination of the restriction tables, to extensions on an individual CO line basis.

- For a long distance number dialed through system speed dial,

<63> **TOLL RESTRICTION — SYSTEM SPD** determines if the extension is subject to the toll restriction when using the system speed dial.

<05> **TOLL RESTRICTION/EQUAL-ACCESS** creates user-defined allow or deny restriction tables for multi-level dial restriction.

<77> **TOLL RESTRICTION CLASS ASSIGNMENT** applies one of the fifteen restriction classes, consisting of a combination of the restriction tables, on extensions on an individual CO line basis.

- For a long distance number dialed through the OCC/Equal Access Carriers.

<15> **O.C.C. DATA ENTRY** allows up to four OCC pre-dial codes to be programmed and assigns the restriction table number to be referred when the OCC number is dialed. The assigned OCC restriction table may not be used for the toll Restriction Class.

11.03 The following program menu provide for the various levels of restriction on the system.

<15> **O.C.C. DATA ENTRY** allows up to four OCC pre-dial codes to be programmed and assigns the restriction table number to be referred when the OCC number is dialed. The assigned OCC restriction table may not be used for the toll Restriction Class.

<05> **TOLL RESTRICTION/EQUAL-ACCESS** creates user-defined allow or deny restriction tables at the restriction tables at the restriction table number assigned by OCC Data Entry.

<77> **TOLL RESTRICTION CLASS ASSIGNMENT** applies the one of the fifteen restriction classes, consisting of a combination of the restriction tables, to extensions on an individual CO line basis.

<64> **ACCESS RESTRICTION — SYSTEM SPD** disables extensions from making outgoing calls using the system speed dial.

<63> **TOLL RESTRICTION — SYSTEM SPD** determines if the extension is subject to toll restriction when using system speed dial.

i. Others

- If the North American Numbering Plan is not applied to the system installed area:

<08> **OUTSIDE USA/CANADA** chooses either the fixed or flexible "basic toll control table" to be used in the system.

- If the line is connected behind the PABX,

<30> **PBX LINE AND PRE-DIAL ENTRY** enters automatic pre-dial code for the lines used behind PBX before the system returns to the restriction table applied.

11.04 The Flow chart in FIGURE 5-3 illustrates how the station outgoing call is determined to be allowed or denied depending upon system programming.

11.05 Toll Restriction Specification

This section describes structure of the toll restriction control tables, basic data table and user data tables. Those tables control not only North American Numbering Plan but also the user-defined dial code, such as an application in Puerto Rico. The toll restriction procedure of the ZT-D key telephone system is versatile and flexible so that the user can control almost any dial codes.

a. **CLASS OF TOLL RESTRICTION**

The classes of toll restriction provide different level of restriction for individual station and CO lines. Up to fifteen (15) service class are available as combination of the restriction tables as designated in TABLE Q below.

**TABLE 5-Q
 TOLL RESTRICTION CLASS STRUCTURE**

CLASS NO.	REFERENCE TABLE NO.							
	USER 1	USER 2	USER 3	USER 4	USER 5	USER 6	USER 7	BASIC
00	No Table (No Restriction)							
01								X
02	X							X
03		X						X
04	X	X						X
05			X					X
06		X	X					X
07	X	X	X					X
08				X				X
09	X	X	X	X				X
10					X			X
11				X	X			X
12						X		X
13					X	X		X
14							X	X
15						X	X	X

NOTES:

1. The "basic table" is either a fixed table (to control North American Dial Plan) or a flexible table (User table No. 8) for alternate dialing plan.
2. User 1 through 7 are user programmable tables.
3. Tables marked with "X" are assigned specifically to the service class indicated.

b. **BASIC DATA TABLE**

This table contains area codes and special service numbers which are used in the North American Numbering Plan. When the system is installed in the United States and Canada, system programming to assign these countries should be in place. If it assigns countries other than U.S.A., the "basic table" data is ignored.

- The structure of table and explanation of each line is described in TABLE 5-R.

c. **USER DATA TABLE**

This table is programmed for system user requirements to contain toll restriction data as to whether the dial code programmed are to be allowed or denied. The toll control plan utilizes the specified user table(s) with the "basic data table" (either fixed or flexible basic table) which is selected by the programming item <28>. The flexible "basic control table" is the User Data Table No. 8. The "user data table" defeats the "basic table" when the same dial codes are included in both tables.

- The system contains seven programmable "user data" tables operating with the fixed or flexible "basic table" as illustrated in FIGURE 5-4. (Page 5-26).

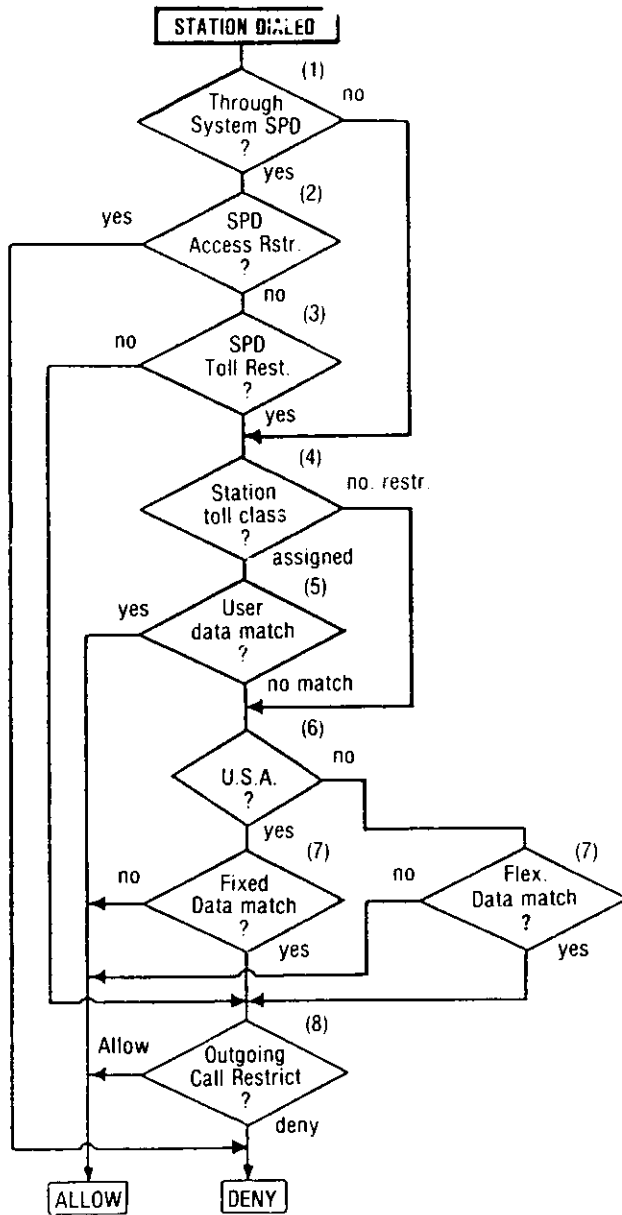
d. **DEFINITION OF CONTROL CODES**

- **Control Process:** In the table, the number referred to as "d1 d2 d3 d4 d5" and control code "c" are to be programmed in each line of the user table. When an extension, which is assigned to refer to this table by toll class assignment, makes an outgoing call which begins with dial number "d1 d2 d3 d4 d5", the system controls the call as defined by the control code "c".

CONTROL CODE	1ST DIGIT	2ND DIGIT	3RD DIGIT	4TH DIGIT	5TH DIGIT
c	d1	d2	d3	d4	d5

**FIGURE 5-5
 USER TABLE DATA ENTRY**

- The control codes used in the User or Basic Control Table that define the system responses to the five digits of the dial numbers entered on the data line are listed in TABLE 5-S. (Page 5-27).



- (1) Check if the dial is made through system SPD.
- (2) Check if system SPD access is restricted.
- (3) Check if the toll restriction is applied to system SPD.
- (4) Check if the calling station has class of restriction.
- (5) Check if the dialed data matches the defined data in the designated user data table.
- (6) Check if the country where the system is used is the U.S.A. or others.
- (7) Check if dialed number matches the data in the corresponding table.
- (8) Check if the matched data is denied or allowed.

**FIGURE 5-3
 TOLL RESTRICTION FLOW**

**TABLE 5-R
 BASIC DATA TABLE**

FIXED BASIC DATA TABLE						
Line No.	DATA CODE					
	Digits					Control code
	1st	2nd	3rd	4th	5th	
1	0	-				1
2	1	-	6	1	1	3
3	1	-	(8	0	0)	2
4	1	-	9	1	1	3
5	1	-	(N	1	1)	1
6	1	-	(N	0	N) 5	4
7	5	5				2
8	1	-	(N	1	N)- 5	4
9	5	5				2
10	1	-	(N	0	N)	1
11	1	-	(N	1	N)	1
12	6	1	1			3
13	(8	0	0)			2
14	9	1	1			3
15	(N	1	1)			1
16	(N	0	N)- 5	5		4
17	5					2
18	(N	1	N)- 5	5		4
19	5					2
20	(N	0	N)			1
21	(N	1	N)			1
22						

Dialing "0", operator call, is denied.

Dialing "611" is allowed but over 10 digit is denied.

Dialing "1-800" and the subsequent number is allowed.

Dialing "1-911" is allowed but over 10 digit is denied.

Dialing "1-N11" and the subsequent number, except "1-911", is denied.

Dialing "1-NON-555" and the subsequent number is allowed.

Dialing "1-N1N-555" and the subsequent number is allowed.

Dialing "1-NON" and the subsequent number, except those followed by office code "555", is denied.

Dialing "1-N1N" and the subsequent number, except those followed by office code "555", is denied.

Dialing "611" is allowed but over 10 digit is denied.

Dialing "800" and the subsequent number is allowed.

Dialing "911" is allowed but over 10 digit is denied.

Dialing "N11" and the subsequent number, except "611" and "911", is denied.

Dialing "NON-555" and the subsequent number is allowed.

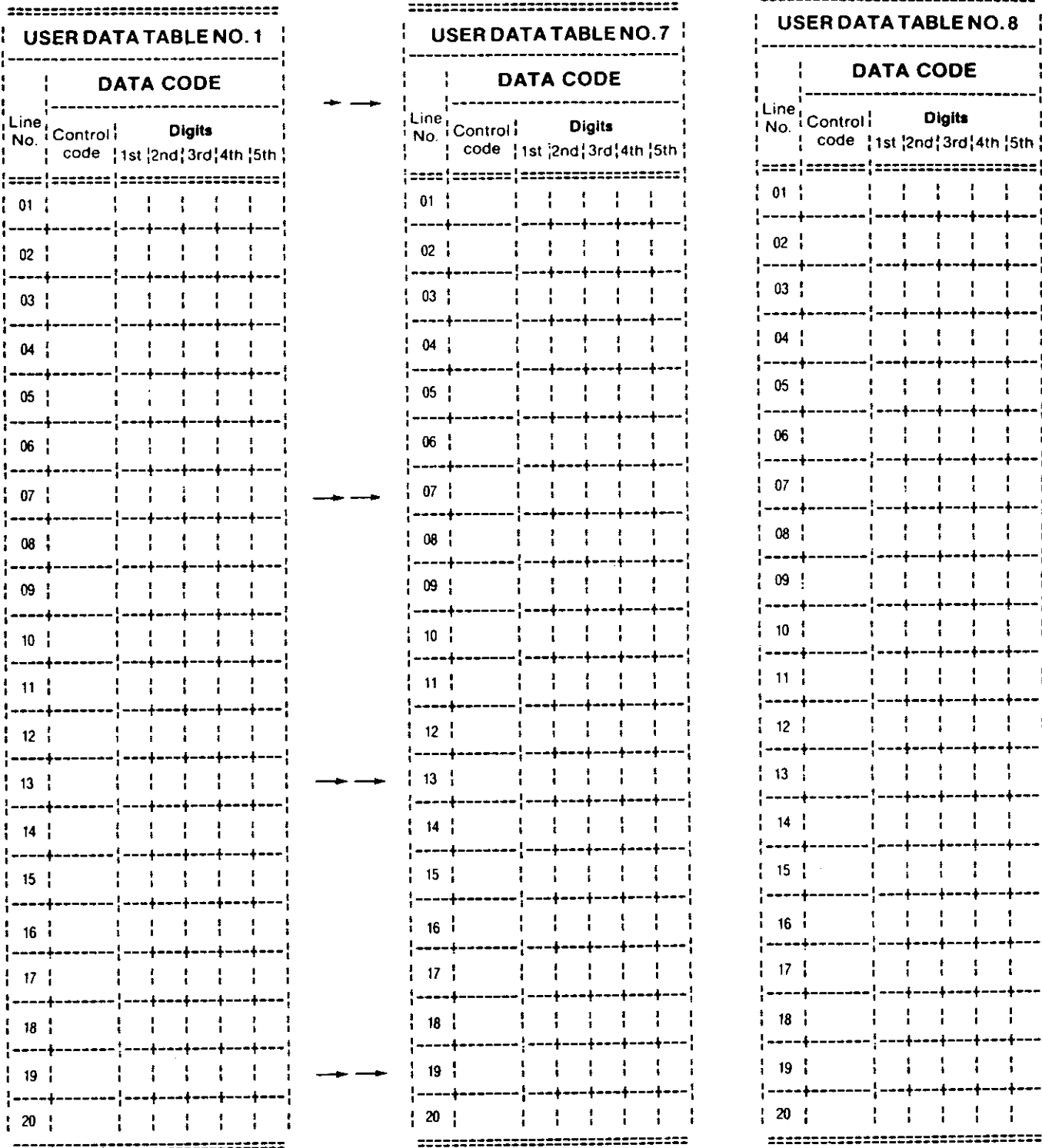
Dialing "N1N-555" and the subsequent number is allowed.

Dialing "NON" and the subsequent number, except those followed by office code "555", is denied.

Dialing "N1N" and the subsequent number, except those followed by office code "555", is denied.

NOTES:

1. The contents of this table cannot be changed by user, since it is generic to the system program. For any change of the basic data table, select flexible basic table instead by programming item <28>.
2. Letter "N" stands for any digit (0-9) unless any one of those are entered in previous lines of the table with the same control code. (e.g. N1N excludes 212 if 212 is entered in the line before N1N.)



Control Codes:

- 0 = Not used.
- 1 = Deny the listed number.
- 2 = Allow the listed number.
- 3 = Allow the listed number but not over 16 dig. all together.
- 4 = Expand the number to the next line.
- 5 = Allow the listed number is dialed. Also print the number on the SCDR.
- 6 = Allow the listed number but not over 16 dig. all together. Also print the number on the SCDR.

FIGURE 5-4 USER DATA TABLE STRUCTURE

**TABLE 5-S
 TOLL RESTRICTION CONTROL CODES**

CODES	MARK	DESCRIPTION
0		Not used.
1	Deny	Deny when the number is dialed.
2	Allow	Allow when the number is dialed.
3	Allow(S)	Allow when the number is dialed but disable dialing after the long-distance number (10 or 11 digits).
4	Expand	Expansion the number to the following line.
5	Allow(T)	Allow when the number is dialed. Also print out the number even when the SCDR is assigned for Toll Call only.
6	Allow(S/T)	Allow when the number is dialed but disable dialing after the long-distance number (10 or 11 digits). Also print out the number even when the SCDR is assigned for Toll Call only.
7	Deny(T)	Used to flag toll numbers of other countries of program No. 8 is set to "other."

NOTES:

1. [#], [*], [0] through [9] can be used as dial data.
2. Allow(T) and Allow (S/T) are used to control SCDR print-out. The SCDR, when assigned to print out toll call only, also prints out these marked numbers considered as toll calls.
3. Control code "3" and "6" should be used to prohibit the station from any further dialing after the toll call is completed after dialing 10 or 11 digits.

e. **SPEED DIAL CONTROL**

When calls are originated by using System Speed Dial, the dialed number is also subject to the toll restriction. If it is required to restrict the system speed dial data, the corresponding programming should be made for each station.

11.06 PROGRAMMING PROCEDURE

a. **TOLL RESTRICTION/EQUAL-ACCESS USER DATA ENTRY**

Item No.: 05

Default: None

Procedure:

- (1) Enter Item Number <05>. .
- (2) Enter the user data table number (1 through 8) and its entry number (01 through 20). For example, when programming at the entry #4 in the table #1, [1][0][4] should be entered. .
- (3) Enter toll control code (1 through 7, then toll call number N1-N5 (0 through 9) and [DND/HLD]).

NOTES:

1. Entering toll control code only erases the toll data.
2. The toll call number N (any number except previously entered) is entered by pressing [DND/HLD] key.
- (4) Press [FWD] for next entry or [FLSH] to terminate the procedure.
- (5) Press [FWD] to proceed to the next entry or [FLSH] to start programming of the next table.

b. **OUTSIDE USA/CANADA**

Item No.: 08

Default: U.S.A./Canada

Procedure:

- (1) Enter Item Number <08>. .
- (2) Press [#] to toggle status between North America and Other Country. .
- (3) Press [FLSH] to terminate the procedure.

NOTES:

1. This programming affects the utilization of toll data tables.
2. It is necessary for user to assign this status when the system is installed in the country where the North American Dialing Plan is not applied. Program the Flexible "basic table" (User Table No. 8) for the common reference as required.

c. **O.C.C. DATA ENTRY**

Item No.: 15

Default: None

Procedure:

- (1) Enter Item Number <15>. .
- (2) Select the OCC entry table by entering table number (1 through 4). The display changes with the number pressed at the dial pad. .
- (3) Enter table data in order as follows:
 - Number of digit of Authorization code. .
 - Position of authorization code. .
[FEAT] if the authorization code is sent "Before" the telephone number.
[DND/HLD] if the authorization code is sent "After" the telephone number.
 - User Data Table Number (1 through 8) to be referred for toll restriction. .
 - Telephone number of the O.C.C. office. .
- (4) Press [FWD] to proceed to the next OCC entry table number or press [FLSH] to terminate the programming.

d. **PBX LINE ASSIGNMENT AND PRE-DIAL ENTRY**

Item No.: 30

Default: None

Procedure:

- (1) Enter Item Number <30>. .
- (2) Enter the pre-dial table number (0 through 9) to select the desired table.
- (3) Press [CO] keys to assign the lines which the PBX pre-dial numbers are associated with for the toll restriction table.
- (4) Press [FWD] key to verify or update the pre-dial data. The CO line lamps assigned to the pre-dial number lights. .
- (5) Enter up to a 3-digit pre-dial number through dial pad to assign the pre-dial or press [FEAT] key to clear the number. Pressing the line key changes the assigned CO lines.
- (6) Press [FWD] key to assign next pre-dial table or [FLSH] key to terminate the programming.

e. OUTGOING CALL RESTRICTION

Item No.: 61

Default: No restriction

Procedure:

- (1) Enter Item Number <61>.

61. OutRstr	CO/St
-------------	-------
- (2) Press a [CO] key to select a particular CO line, then press [DSS] keys to designate stations which are subject to the outgoing restriction.
- (3) Press [FWD] keys to resume or [FLSH] to terminate the process.

f. CO LINE PICK-UP RESTRICTION

Item No.: 62

Default: No restriction

Procedure:

- (1) Enter Item Number <62>.

62. P-upRstr	CO/St
--------------	-------
- (2) Press a line key to select a particular CO line. Then press [DSS] keys to designate stations which are subject to the pick-up restriction.
- (3) Press [FWD] keys to resume or [FLSH] to terminate the process.

g. TOLL RESTRICTION - SYSTEM SPEED DIAL

Item No.: 63

Default: No restriction

Procedure:

- (1) Enter Item Number <63>.

63. SPD Toll Deny

- (2) Press [DSS] keys to assign the stations on which speed dialing is subject to toll restriction.
- (3) Press [FLSH] to terminate the process.

h. ACCESS RESTRICTION - SYSTEM SPEED DIAL

Item No.: 64

Default: No restriction

Procedure:

- (1) Enter Item Number <64>.

64. SPD Restrict

- (2) Press [DSS] keys to assign the stations which are prohibited from accessing system speed dialing.
- (3) press [FLSH] to terminate the process.

i. TOLL RESTRICTION CLASS

Item No.: 77

Default: None

Procedure:

- (1) Enter Item Number <77>.

77. Toll Class	00
----------------	----
- (2) Enter the Toll Class number (01-15) through dial pad.
- (3) For each Toll Class:
 - (a) Assign CO line to Toll Class by pressing respective CO line key on programming station. CO LED indicator lights.
 - (b) Assign extensions to Toll Class by pressing respective extension key on DDS unit. DSS LED indicator lights.
 - (c) Go to next CO line and repeat process (a) and (b) until all CO lines and extensions are programmed.
- (4) Press [FWD] key to proceed to the next Toll Class and repeat (3) above or press [FLSH] key to terminate the process.

NOTE:

Toll Class is the combination of individual trunk and stations.

**TABLE 5-V
 TOLL CLASSES**

NO.	REFERENCE TABLE	NO.	REFERENCE TABLE
00:	No Table	08:	(Basic) = (User No. 4)
01:	(Basic) only	09:	(Basic) + (User No. 1, 2, 3 and 4)
02:	(Basic) + (User No. 1)	10:	(Basic) + (User No. 5)
03:	(Basic) + (User No. 2)	11:	(Basic) + (User No. 4 and 5)
04:	(Basic) + (User No. 1 and 2)	12:	(Basic) + (User No. 6)
05:	(Basic) + (User No. 3)	13:	(Basic) + (User No. 5 and 6)
06:	(Basic) + (User No. 2 and 3)	14:	(Basic) + (User No. 7)
07:	(Basic) + (User No. 1, 2 and 3)	15:	(Basic) + (User No. 6 and 7)

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ZT-D SERIES ELECTRONIC KEY TELEPHONE SYSTEM ADDENDUM A - VERSION 2 ENHANCEMENT

CONTENTS	PAGE	CONTENTS	PAGE
1.00 GENERAL	A-2	4.00 DATABASE PROGRAMMING	A-15
2.00 FEATURE AND OPERATION	A-2	Enhanced Features	A-15
System Station Expansion	A-2	Off-hook Signal Deny	A-15
Off-hook Hands-free Talkback	A-2	SCDR Output Format Assignment	A-15
Direct Inward System Access (DISA)	A-2	DTMF Receiver Assignment	A-15
Optimized Routing	A-4	Hunting ICM Group Assignment	A-16
Two Channel Serial Data Interface	A-6	Dial Confirmation Tone Denial	A-16
Conference Circuit Gain Control	A-6	Voice Mail Line Assignment	A-16
Dial Confirmation Tone	A-6	PAGE Key Function Assignment	A-16
Page Key Assignment	A-6	Direct Inward System Access	A-17
Voice Mail Line Assignment	A-6	CO Line Assignment	A-17
Versatile Floating Group Access Key	A-7	Activation Station Assignment	A-17
Versatile Speed Dial Operation	A-7	Access Code Registration	A-17
Direct System Speed Dial Key	A-7	Optimized Routing	A-17
Other Changes	A-7	Optimized Routing	
Message Waiting Lamp	A-7	Programming Menu	A-17
Do Not Disturb	A-7	System Prefix	A-17
BLF on Incoming CO Calls	A-7	Forced Optimized Call Station	A-18
3.00 INSTALLATION	A-7	Route Advance Step	A-18
Key Service Unit	A-7	Holiday Assignment	A-18
ZT-616 KSU	A-7	Tie Line Area Code Table	A-18
ZT-824/1632 KSU	A-8	Tie Line Office Code Table	A-19
ZT-2464 KSU	A-8	General Area Code Table	A-20
System Station Expansion	A-11	General Office Code Table	A-20
Central Processor/		Time Schedule	A-21
Highway Control Card	A-11	Route Advance Step Table	A-22
Serial Data Interface Card	A-13	Delete Index Table	A-22
2/8-ckt Expandable		Delete Data Table	A-22
DTMF Receiver Card	A-13	Add Index Table	A-23
8-ckt DTMF Receiver		Add Data Area Code Table	A-23
Expansion Card	A-13	Add Data Office Code Table	A-24
Off-hook Hands-free Talkback	A-13	Additional Table	A-25
		Specific Code Table	A-25

1.00 GENERAL

1.01 This specification describes features and functions of Software Version 2.0 of the ZT-D Electronic Key Telephone System. Version 2.0 is available when the system is equipped with either the KCPUHW-1 or the MCPUHW-1 Processor Card. Please note that some features may not be available with KF (KCPUHW-1) type software.

2.00 FEATURE AND OPERATION

System Station Expansion

2.01 The unused circuit card slot which is located directly below the CPUHW card slot in the ZT-2464 KSU can now support a subscriber card, adding eight (8) additional extension circuits to the system. These circuits will support electronic key telephones, direct station selection units or single line stations. The extension numbers associated with these circuits are 184 through 190 and 194.

Off-hook Hands-free Talkback

2.02 Two new models of Executive Key Telephone are available with the ZT-D Series Systems. Each model will utilize a 6-pin modular jack, and takes up two extension circuits. A new class of service setting has been added; "OFF-HOOK Signaling Deny", so that signalling to a busy extension can be allowed or denied as required.

a. Executive Key Telephones

ZT-12X: is an Electronic Key Telephone with 12 flexible keys, an LCD display and an off-hook hands-free reply circuit.

ZT-24X: is an Electronic Key Telephone with 24 flexible keys, an LCD display and an off-hook hands-free reply circuit.

b. Operation

To call a station with the off-hook hands-free feature, dial [*] or press the [OVER] key after receiving busy tone.

Direct Inward System Access (DISA)

2.03 Most of the ZT-D features and functions except for "External Paging" and "Remote Control Access" may be accessed by an external party through an assigned incoming CO/PBX line(s). A maximum of eight (8) DISA connections can be programmed to allow four access groups, with two basic access levels permitted in each group. The two basic access levels are described hereunder.

2.04 The system will automatically answer DISA assigned lines and give an internal dial tone to an external caller when a circuit of the system DTMF receiver is available. Otherwise the call will ring at the station assigned for Direct Inward Line on that line. Three attempts can be made to enter the system via DISA before automatic disconnect takes place. Enhanced DTMF receiver circuit cards have been developed to meet the increased traffic requirements when the system is equipped with both DISA and single line stations. The RECV2-1 and RECV8-1 are provided with two and eight receiver circuits respectively, and can be expanded by eight additional circuits when equipped with the ERVC8 expansion module.

a. Example

Figure A-1 illustrates an example of how DISA calls are handled by the ZT-D system. CO/PBX line 1, 2, and 3 are programmed in Ringing Group 1, which is controlled by extension 120. Extension 120 in this example operates DISA/ GROUP 1 by going off-hook, depressing [FEAT] - [SPKR] - [FLSH] then going on-hook. When activated any incoming CO/PBX calls arriving at a DISA line are automatically answered. Then DISA provides a second dial tone, and awaits for the appropriate security code at the system DTMF receiver card. Upon security code acceptance the call would be treated as if it were from an internal single line telephone and is allowed to access to system features and functions permitted by the station class of service program. Even an intercom dial tone reorder can be activated through DISA by pressing [#][#] instead of hook switch flash. DISA calls are disconnected upon detection of Remote Disconnect or Time-out.

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To call a station with the off-hook hands-free feature, dial [*] or press the [OVER] key after receiving busy tone.

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3. If you are an outside party;
 Enter [0][0] then four-digit security code.
4. If you have an extension in the system;
 Enter last two digits of your extension number, then four digits of your station lock password.

Note: After three attempts at the security code failing, the line is disconnected.

5. The system returns ICM dial tone. Dial as if a single line telephone in the system.
6. Dial [#][#] instead of hook switch flash when an ICM dial tone recorder is needed.

Note: Dialing [#][#] does not provide intercom reorder tone if the user has accessed a CO line.

Optimized Routing

2.05 As with other Omega-Phone systems, Optimized Routing provides eight route tables (programmable time zones) with each table containing three advance steps for trunk group access. System extensions may be limited in their advance steps by station class of service to minimize telephone expense. Optimized Routing also has the ability to add and delete digits automatically when the system is equipped with different types of CO/PBX lines such as DDD and FX lines.

TABLE A-1 CO LINE GROUP

CO Line Group	Line Type	
No.1	TIE	Tie Line (CA)
No.2	FX	Foreign Exchange (NY)
No.3	WATS	WATS Service (Band 2)
No.4	OCC	Other Common Carrier (MCI, SPRINT)
No.5	DDD	Direct Distance Dial (NJ)

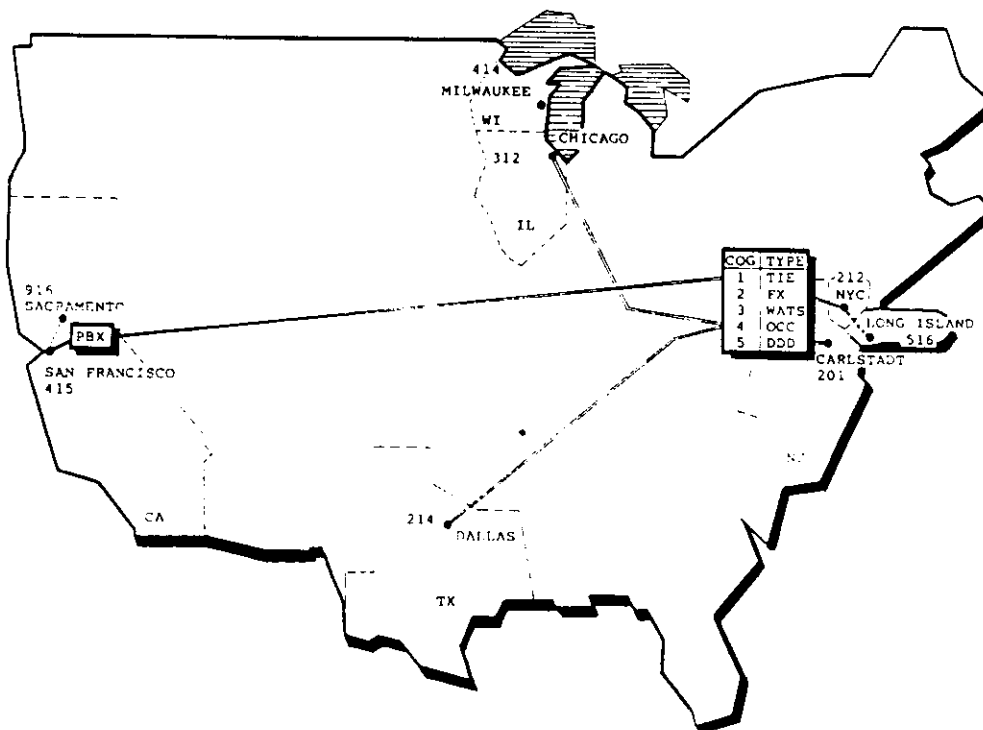


FIGURE A-2 TYPICAL LINE GROUP

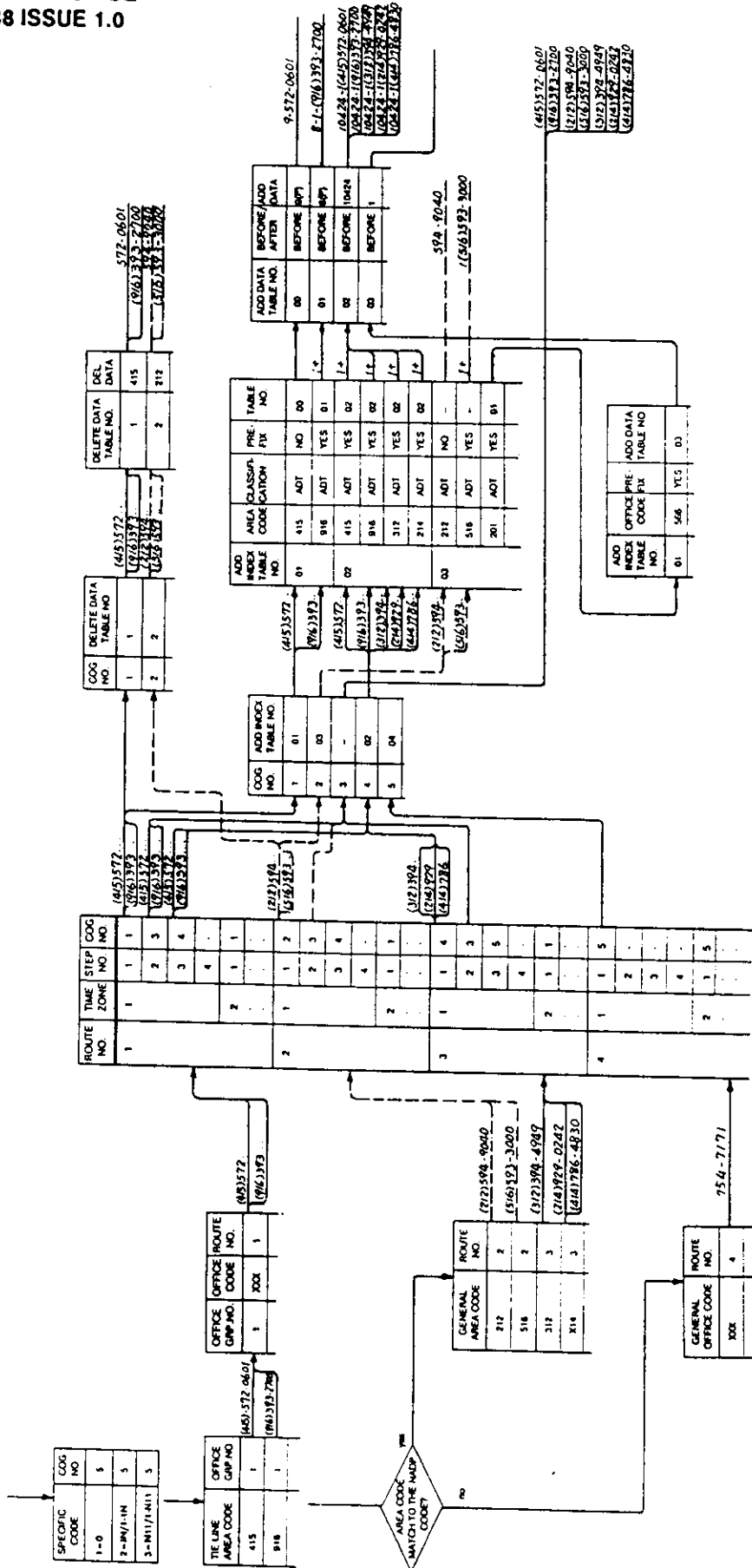


FIGURE A-3 DATABASE AND DIAL IN OPTIMIZED ROUTING

a. Example

Figure A-2 illustrates an example of an interstate connection to the ZT-D system. The ZT-D system is located in Carlstadt, NJ and is terminated with the following CO/PBX lines at its CO line group (COG).

Figure A-3 illustrates an example of the ZT-D system database and how dialed numbers are handled by the optimized routing. In this example, the dialed number

(415) 572-0601

will use route one (1) and is given the ability to advance step three times.

1. If advance step 1 is used, the call will take COG No. 1 which is a PBX line from California. Since the PBX is in the 415 area code the 415 is not required. However, a PBX access code will be required. So, the ZT-D will automatically delete 415 and add 9 before the number. The dialed number will be 9-572-0601.
2. If advance step 2 is used, the call will take COG No. 3 which is an outbound wats line. Since the prefix 1 is not required, the ZT-D will delete the digit 1 and dial 415-572-0601.
3. If advance step 3 is used, the call will take COG No. 4 which has been programmed to use a long distance carrier. The ZT-D system will automatically dial the equal access number, so the dialed number will be 10424-1-415-572-0601.

b. Operation

1. For a key telephone with flexible keys assigned:
Press [OPT] key, or
press [FLT] + [0], or
For a Single Line Telephone(s):
Dial [9] [0]
2. Optimized access tone returns.
3. Dial the local or long distance number.

Note: This operation is not valid in a system with the KCPUHW-1.

Two Channel Serial Data Interface

2.06 The Serial Data Interface Card (SDIFC-1) has an enhanced Peripheral Processor Unit (PPU) and expanded Random Access Memory (RAM) which allows simultaneous operation of SCDR and PC Programming on the customer database for the ZT-D system. The SDIFC-1 circuit provides for the operation of both system RS-232-C ports.

Conference Circuit Gain Control

2.07 A gain control can now be adjusted as a system database program option. The gain control can be programmed on an individual basis for CO/PBX lines, key telephones, single line telephones and trunk-to-trunk conference. Please note that this gain control is not self adjusting, so that it may cause acoustical feed back if improperly set. (Program item 28)

Dial Confirmation Tone

2.08 A dial confirmation tone is now a programmable database station option. Through programming you can disable on a station by station basis, which extension will hear dial confirmation tone. (Program item 55)

Page Key Assignment

2.09 The standard PAGE key on an electronic key telephone can be changed to a Direct Page key or a Group Page key by station flexible key assignment. (Program item 57)

Voice Mail Line Assignment

2.10 This feature allows voice mail line assignment, disabling speed dial operation and allowing only single digit [*] and [#] dialing. The line still can be used as a normal CO line without speed dial features.

a. Operation

1. When accessing a voice mail system through a CO/PBX line, follow the instruction given by the voice mail unit.
2. Pressing [*][*] for [*] or [*][#] for [#] is not required.

Versatile Floating Group Access Key

2.11 When a call is placed in Call Park, the call is removed from the [FLT] key and held on [PARK] key so that the second call can be handled on the original [FLT] key.

Versatile Speed Dial Operation

2.12 System speed dials are usually programmed with Floating Group Access so that a single line telephone can access them. With Version 1 software, the square key telephones with direct CO termination have to press CO line key to use speed dial numbers. Version 2 software made automatic outgoing calls through an idle CO line within the Floating Group, in quick operation available to the squared key telephones.

Direct System Speed Dial Key

2.13 Flexible key assignment includes not only the station speed dials but system speed dial.

Other Changes

2.14 Some minor changes on the Version 2 software are listed.

a. Message Waiting Lamp

The operation of the Message Waiting Feature is modified for integration to Iwatsu Voice Mail/Automated Attendant system:

Leaving a message

After dialing an extension number on ICM, press [6].

Cancelling a message

After dialing an extension number on ICM, press [5].

b. Do Not Disturb

All Call Page and Group Calls are denied when a station is in the DND mode. The DND Override feature remains as same as the Version 1.

c. BLF on Incoming CO Calls

Incoming CO call indications on the BLF (DSS-32C) for the DIL station are removed for speeding up of the CPU processing.

3.00 INSTALLATION

Key Service Unit

3.01 The cabinets of the ZT-D three models remain the same. The changes were made on their distribution panels to increase extension capacities or to provide convenient installation and maintenance. The summary of these components are listed in Table A-2.

a. ZT-616 KSU

The distribution panel, AMPA6-1 provides modular connectors for extensions No.120, 121 and 122, for ease of programming at the KSU site. The panel DSPAB provides the same function, connection of external MOH and BGM circuits, but now it is commonly used with the other ZT-D KSUs. The KSU is illustrated in Figure A-4.

TABLE A-2 COMPONENTS LIST

Order No.	Model	Description
7027	MCPUHW-1	MF Central Processor/Highway Control Card - 1
7029	KCPUHW-1	KF Central Processor/Highway Control Card - 1
7029	SDIFC-1	Serial Data Interface Card (Two Channels)
7030	RECV8-1	8-ckt Expandable DTMF Receiver Card
7031	RECV2-1	2-ckt Expandable DTMF Receiver Card
7032	ERCV8	8-ckt DTMF Receiver Expansion Card
7319	ZT-24X	Twenty-four-button Executive Key Telephone
7320	ZT-12X	Twelve-button Executive Key Telephone
7062	AMPA24-1	Amphenol Distribution Panel A for the ZT-2464-1 KSU
7057	AMPA81-1	Amphenol Distribution Panel A for ZT-824/1232 KSU
7056	AMPA6-1	Amphenol Distribution Panel A for ZT-616 KSU
7063	DSPAB	Distribution Panel for MOH/-BGM

b. ZT-824/1632 KSU

The distribution panel, AMPA81-1 provides modular connectors for extensions No.120, 121 and 122, for ease of programming at the KSU site. The panel DSPAB connects external MOH and BGM circuits, and it is commonly used with the other ZT-D KSUs. The KSU is illustrated in Figure A-5.

The distribution panel, AMPA81-1 provides modular connectors for extensions No.120, 121 and 122, for ease of programming at the KSU site. The panel AMPA24-1 is equipped with five Amphenol connectors to expand the extension capacity to forty. The panel DSPAB connects external MOH and BGM circuits, and it is commonly used with the other ZT-D KSUs. The KSU is illustrated in Figure A-6.

c. ZT-2464 KSU

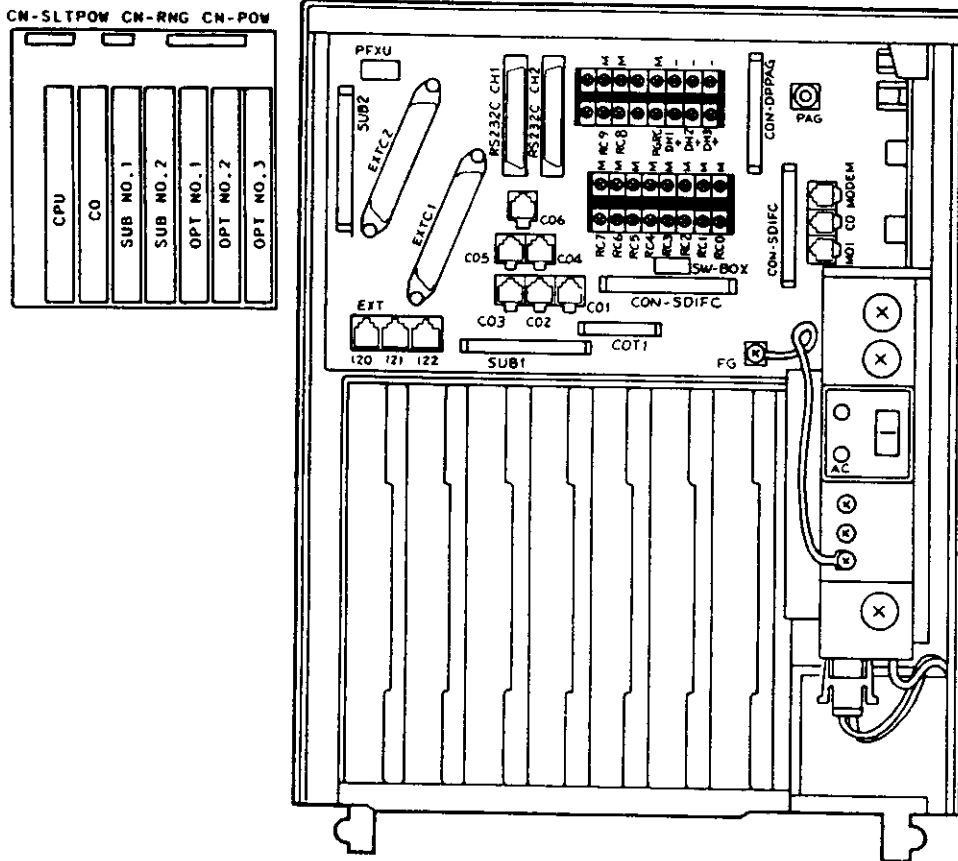


FIGURE A-4 ZT-616 KSU

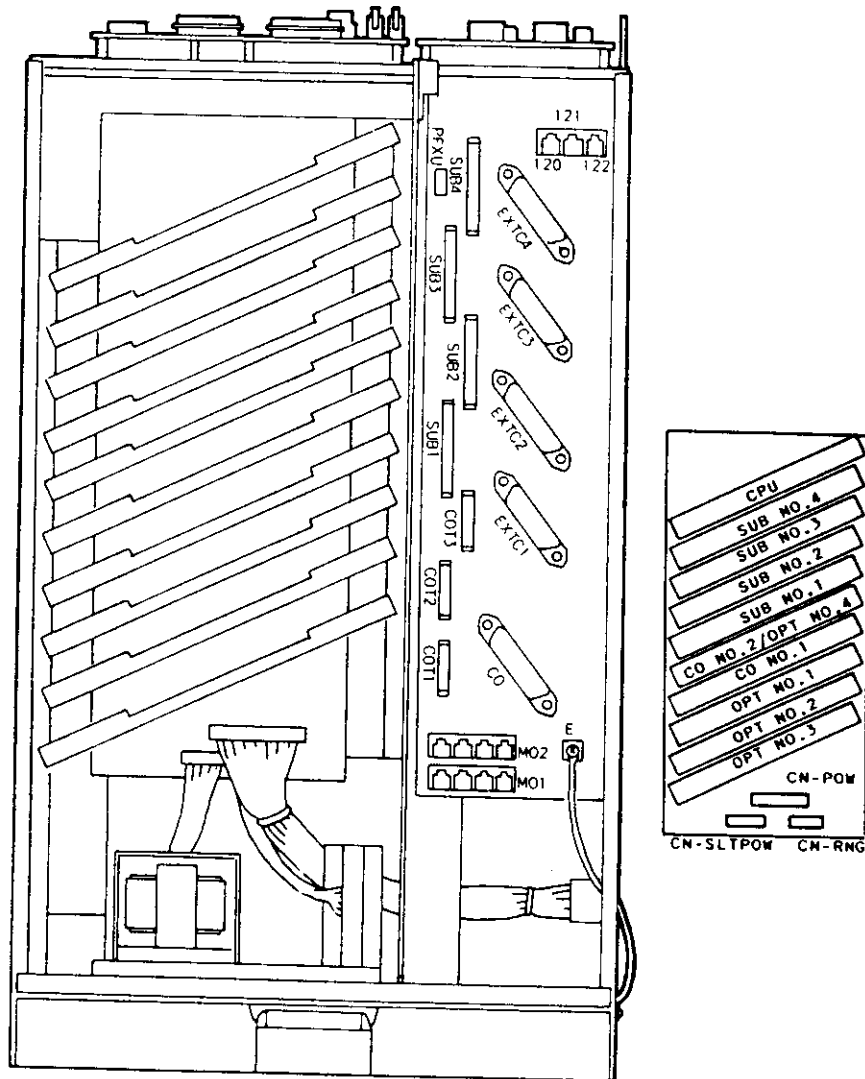


FIGURE A-5 ZT-824/1632 KSU

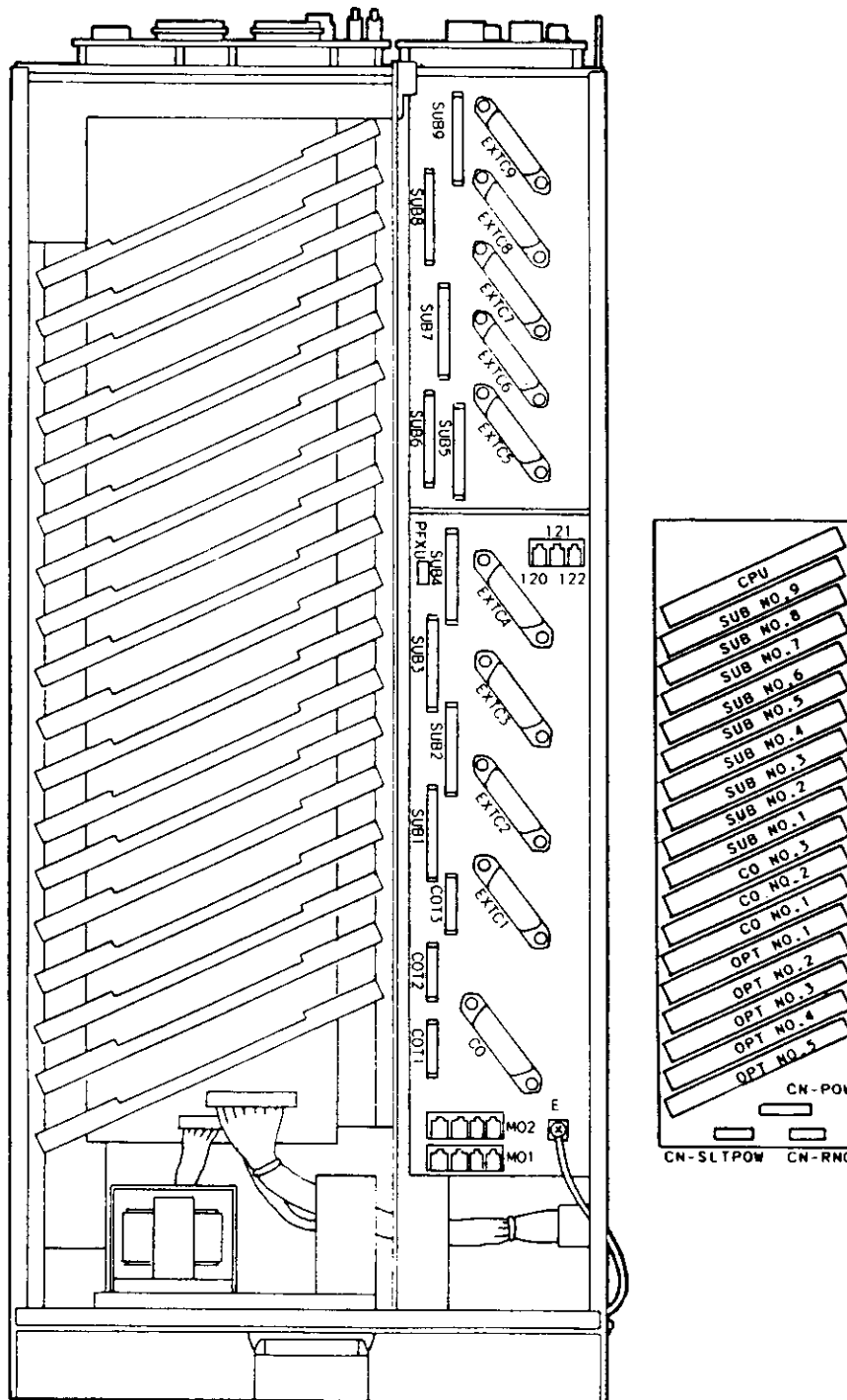


FIGURE A-6 ZT-2464 KSU

System Station Expansion

3.02 The ZT-2464 (ZT-2472) KSU card configuration with the M/KCPUHW-1 card is illustrated in Figure A-3. Additional extension circuits for extension numbers 184 through 190 and 194 appear at the AMPA24-1 Distribution Panel.

TABLE A-3 CONNECTOR EXTC9 WIRING

CONN. 9 Ext.No.	Designation			Pin No.	MDF Pin No.	MDF Wire Color	Extension Modular	
	KTSB	SLSB	SLKT				Pin No.	Color
184	T	T	T	26	1	W-BL	3	GN
	R	R	R	1	2	BL-W	2	R
	DT	-	DT	27	3	W-O	4	Y
185	DR	-	DR	2	4	O-W	1	BK
	T	T	T	28	5	W-GN	3	GN
	R	R	R	3	6	GN-W	2	R
186	DT	-	DT	29	7	W-BR	4	Y
	DR	-	DR	4	8	BR-W	1	BK
	T	T	T	30	9	W-SL	3	GN
187	R	R	R	5	10	SL-W	2	R
	DT	-	DT	31	11	R-BL	4	Y
	DR	-	DR	6	12	BL-R	1	BK
188	T	T	T	32	13	R-O	3	GN
	R	R	R	7	14	O-R	2	R
	DT	-	DT	33	15	R-GN	4	Y
189	DR	-	DR	8	16	GN-R	1	BK
	T	T	T	34	17	R-BR	3	GN
	R	R	R	9	18	BR-R	2	R
190	DT	-	DT	35	19	R-SL	4	Y
	DR	-	DR	10	20	SL-R	1	BK
	T	T	T	36	21	BK-BL	3	GN
194	R	R	R	11	22	BL-BK	2	R
	DT	-	DT	37	23	BK-O	4	Y
	DR	-	DR	12	24	O-BK	1	BK
194	T	T	T	38	25	BK-GN	3	GN
	R	R	R	13	26	GN-BK	2	R
	DT	-	DT	39	27	BK-BR	4	Y
194	DR	-	DR	14	28	BR-BK	1	BK
	T	T	T	40	29	BK-SL	3	GN
	R	R	R	15	30	SL-BK	2	R
194	DT	-	DT	41	31	Y-BL	4	Y
	DR	-	DR	16	32	BL-Y	1	BK

Central Processor/Highway Control Card

3.03 The Version 2 CPU cards, MCPUHW-1 and KCPUHW-1, are controlled by an 8-bit advanced Z-80 type CPU, HD64180R1 clocked at 8-Mhz. It contains operating software of 256 kilobytes and 32 kilobytes of data storage memory. See Figure A-7.

a. On-board Setting

The functions of major components are listed in Table A-4. Turn on positions 1, 3, 5 and 7 of SW1 to protect customer database if the CPUHW has to be defaulted for KSU upgrading.1

TABLE A-4 CPU COMPONENTS AND FUNCTION

ROM1,2,3	Store system control software; 3 x 128KB
STONE	Stores call progress tone source
CNF1,2	Store digital conference circuit control software
LED0	Indicates system busy on CO/ICM Calls; on = busy/off = idle
LED1	Indicates system running; on = error/off = normal
LED2,3	Not provided
LED4	Indicates CPU running; on = run/off = stop
LED5	Indicates reset circuit engaged; on = reset/off = normal
SW1	Pos.1 = on RAM3 absolute write protection Pos.2 = on RAM3 software write protection Pos.3 = on RAM4 absolute write protection Pos.4 = on RAM4 software write protection Pos.5 = on RAM5 absolute write protection Pos.6 = on RAM5 software write protection Pos.7 = on RAM6 absolute write protection Pos.8 = on RAM6 software write protection
SW2,7	For future use
SW3	RAM CLR Database default RUN Resume operation
SW4	Not provided
SW5	MOH MOH internal tune selection M1 = Internal music 1 M2 = Internal music 2
SW6	INT Internal source EXT External MOH jack BGM COM External BGM jack
SW8	System reset
BAT	Customer Database RAM and Clock backup
MOH VOL	Volume Control for Music-on-hold Source
BGM VOL	Volume Control for Background Music Source

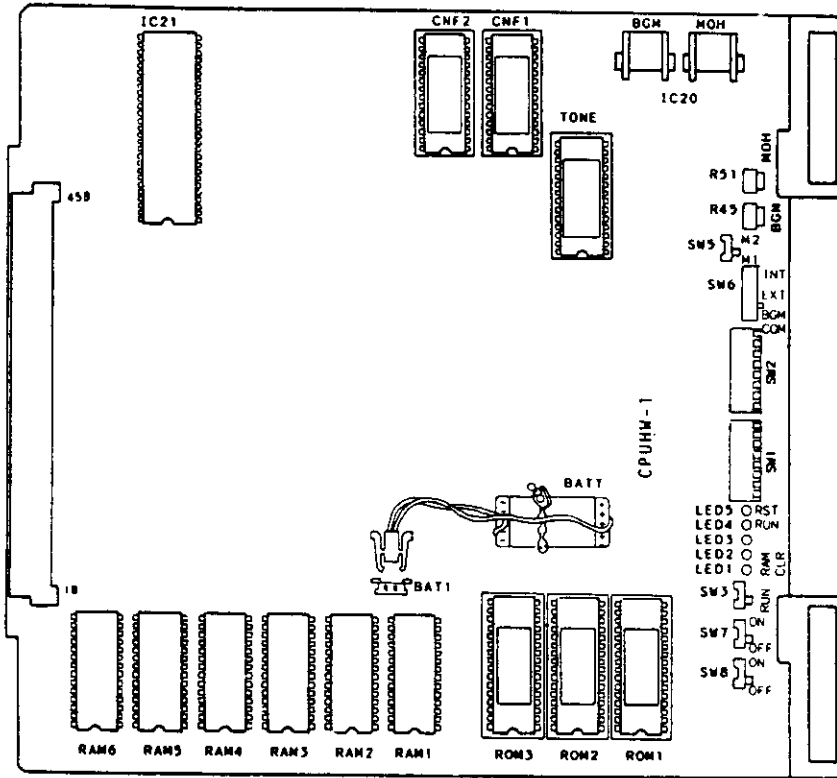


FIGURE A-7 K/MCPUHW-1 CARD

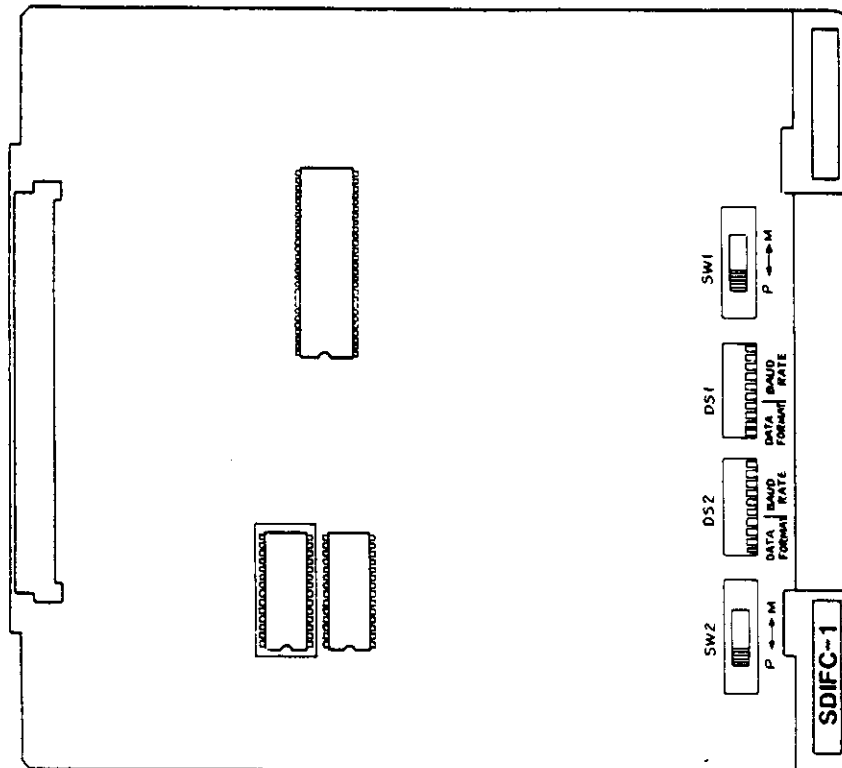


FIGURE A-8 SDIFC-1 CARD

Serial Data Interface Card

3.04 The SDIFC-1 card, when used with the CPU-HW-1 card, can control its two channels for different communication purposes simultaneously and independently. The card can be used with the CPUHW card, however only channel one can be activated. Refer to Figure A-8.

a. On-board Setting

The function of the on-board setting is listed in Table A-5. Select proper device and communication settings according to the requirement of the devices connected.

TABLE A-5 SDIFC-1 ON-BOARD SETTING

Switch	Position	Function
SW1	P	Channel one for Printer Connection
	M	Channel one for Modem Connection
SW2	P	Channel two for Printer Connection
	M	Channel two for Modem Connection
DS1/ DS2	1 ON	8-bit Data
	1 OFF	7-bit Data
	2 ON	Enable Parity Check
	2 OFF	Disable Parity Check
	3 ON	Odd Parity Check
	3 OFF	Even Parity Check
	4 ON	2-Stop bit
	4 OFF	1-Stop bit
	5 ON	Data Speed 300 bps
	6 ON	Data Speed 600 bps
7 ON	Data Speed 1200 bps	
8 ON	Data Speed 2400 bps	
9 ON	Data Speed 4800 bps	
10 ON	Data Speed 9600 bps	

NOTE: Only one of position 5 position 10 should be selected.

2/8-ckt Expandable DTMF Receiver Card

3.05 The RECV2-1 and RECV8-1 DTMF receiver circuit cards are provided with two and eight receiver circuits respectively, and can be expanded by eight additional circuits when equipped with the ERCV8 expansion module. The RECV2/8-1 cards are illustrated in Figure A-10 with the ERCV8 card.

8-ckt DTMF Receiver Expansion Card

3.06 The ERCV8 is an expansion module mounted on the RECV2-1 or RECV8-1 card to add eight additional receiver circuits to the system.

Off-hook Hands-free Talkback

3.07 The following installation is valid only when connecting to the ZT-12X and ZT-24X key telephones.

a. Installation

The first four wires of the 6-pin modular jack of the ZT-12X and ZT-24X telephones are connected to the primary extension number which is assigned to the station type, and the remaining two wires are connected to Tip and Ring of the secondary extension number assigned as its busy bypass circuit. An example of Ext. No. 120 using bypass circuit No.144 is illustrated in Figure A-9.

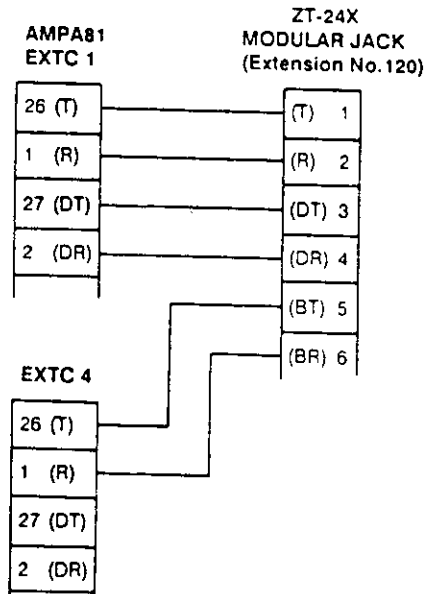


FIGURE A-9 OFF-HOOK HANDS-FREE CONNECTION

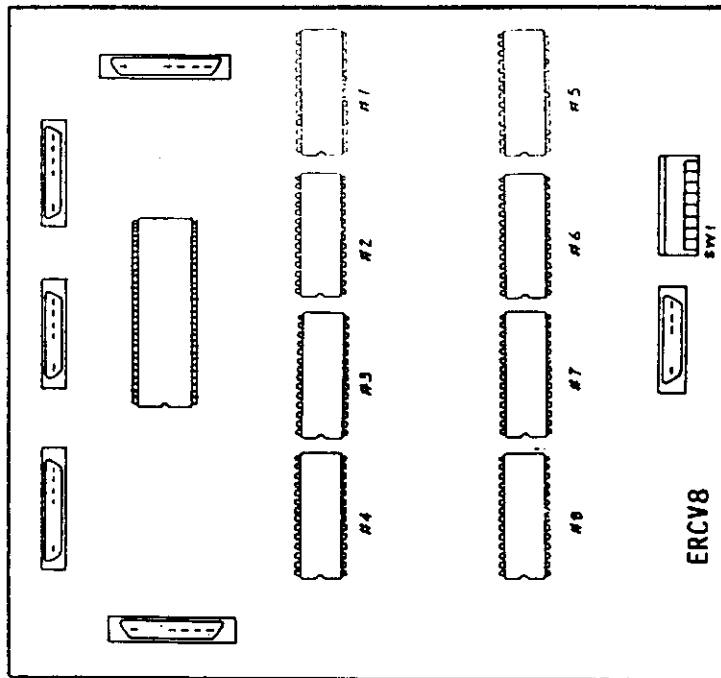
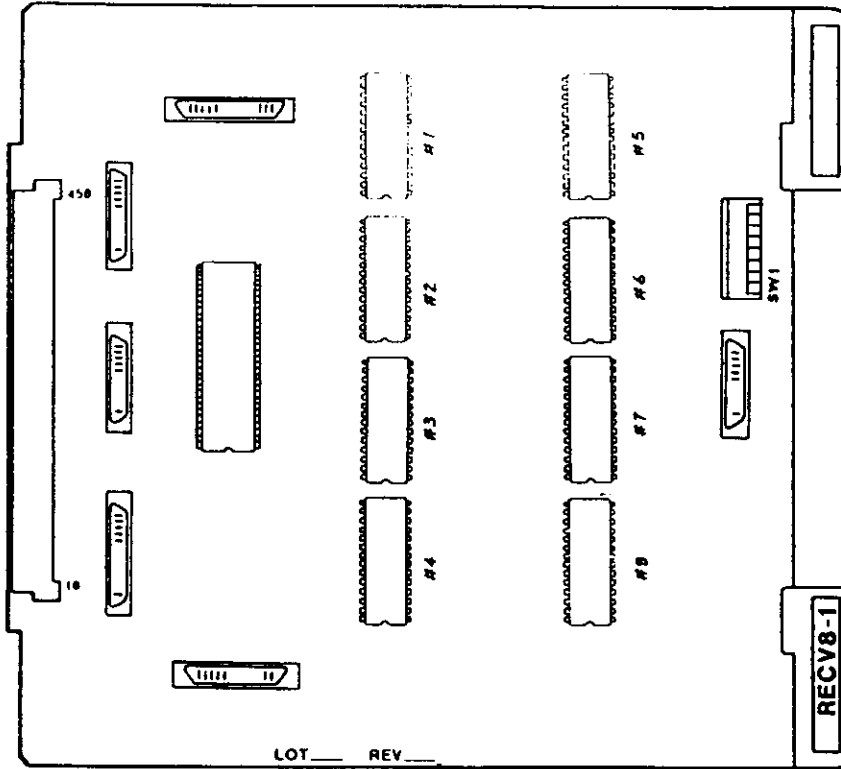


FIGURE A-10 REC2/8-1 CARD AND ERCV8 CARD

4.00 DATABASE PROGRAMMING

Enhanced Features

4.01 This section provides programming procedures for the enhanced features of version 2 software.

a. Off-hook Hands-free Talkback Station Assignment

Item No.: 03

Default: No station assigned

Description: The following installation is valid only connecting to the ZT-12X and ZT-24X key telephones.

Related Programming: <79> Off-hook Signal Deny

Procedure:

1. Select Station type Assignment (Item 03).

Note: Type 24D or 12D must be selected for assigning busy bypass.

2. Press [9]. Display replies ***EXT Connection**.
3. Press [1] to assign ****DSS Console 1**,
or
press [2] to assign ****DSS Console 2**,
or
press [3] to assign ****Busy Bypass**.
4. Press [DSS] keys first to assign Primary Extension number then Secondary Extension No. The primary No. flashes while that of the secondary No. lights steady.

b. Off-Hook Signal Deny

Item No.: 79

Default: No station assigned

Description: This assignment denies station being called on second call while talking with a handset.

Related Programming: <03> Station Assignment

Procedure:

1. Enter item No. 79. Display replies **79.OffHK SigDeny**.
2. Press [DSS] keys to assign stations which off-hook Signalling is denied. The BLFs of the denied station are lit.
3. Press [FLSH] key to terminate the

process.

c. SCDR Output Format Assignment

Item No.: 06

Default: No station assigned

Description: The Serial Data channels of the ZT-D SDIFC-1 card allows individual function setting on each channel, allowing simultaneous operation of SCDR and PC Programming.

Procedure:

1. Enter item No. 06. Display replies **06.SCDR Form PRT**.
2. Press [#] key to change the SCDR output format to AUX if necessary.
3. Press [FWD] key to proceed to channel assignment. Display changes to *** SCDR Channel 1**.
4. Press [#] key to select channel number used for the SCDR printer.
5. Press [FWD] key to proceed to next line or [FLSH] key to terminate the process.

d. DTMF Receiver Assignment

Item No.: 12

Default: No receiver assigned

Description: The assignment of the Version 2 software enables more than eight receiver circuit.

Procedure:

1. Enter item No. 12. Display replies **12.MF Circuit 0,0**.
2. Enter number of the receiver circuits on basic card and piggy back module through the dial pad. i.e. Circuit 2.8 indicates a RECV2 card with a piggy-back module.
3. Press [FWD] key to proceed to next line or [FLSH] key to terminate the process.

e. Conference Voice Level Adjustment

Item No.: 28

Default: CO line = 0 dB

Key telephone = 0 dB

Single line telephone = 0 dB

Trunk-to-trunk = -10 dB*

* NOTE: This value does not mean actual gain in the network.

Description: Conference circuit gain can be

adjusted on an individual basis for each CO/PBX line, key telephone, single line telephone and trunk to trunk conference. Improperly increased gain causes acoustical feed-back.

Procedure:

1. Enter item No. 28. Display replies **28.CONF Level CO**.
2. Press dial pad to select the circuit;
[0] : Default value
[1] : CO line
[2] : Key telephone
[3] : Single line telephone
[4] : Trunk-to-trunk
3. For example, press [4] to adjust trunk-to-trunk line gain. Display changes to ***28 CONF Level T_T**.
4. Press [FWD] key to proceed to gain assignment. Display changes to ***T_T Level -10 dB**.
5. Press dial pad to adjust the gain;
[1] : +1.5 dB [6] : -8 dB
[2] : 0 dB [7] : -10 dB
[3] : -1 dB [8] : -13 dB
[4] : -3 dB [0] : Default Value
[5] : -6 dB
6. Press [FWD] key to proceed to next circuit or [FLSH] key to terminate the process.

f. Hunting ICM Group Assignment

Item No.: 53

Default: No station or group assigned

Description: The ICM hunt group is separated to CO Ringing group in the version 2 CPU. This group uses numbers 71 through 74 to call.

Procedure:

1. Enter item No. 53. Display replies **53.Hunt Gp1 ICM**.
2. Enter Hunt Group number 1 through 4 on the dial pad to select a specific group number.
3. Press [DSS] keys to assign the stations which will be called by the pilot No. of the group.
4. Press [FWD] key to proceed to next Hunt Group or [FLSH] key to terminate the process.

g. Dial Confirmation Tone Denial

Item No.: 55

Default: All stations with no tone

Description: Follow the steps to stop the dial confirmation tone on individual key telephone.

Procedure:

1. Enter item No. 55. Display replies **55.Confirm.T Dis**.
2. Press [DSS] keys of the station that the tone should be disabled.
3. Press [FLSH] key to terminate the process.

h. Voice Mail Line Assignment

Item No.: 56

Default: No line assigned

Description: Once this feature is assigned to the CO line, the system extensions cannot operate speed dial on the line.

Procedure:

1. Enter item No. 56. Display replies **56.Voice Mail CO**.
2. Press a [CO] key to assign the line. The LED lights to indicate the assignment.
3. Press [FLSH] key to terminate the process.

i. PAGE Key Function Assignment

Item No.: 57

Default: All Call/All Page Key

Description: The PAGE key on the key telephones can be assigned to a Direct Page key or a Group Page key by station flexible key assignment.

Procedure:

1. Enter item No. 57. Display replies **57.Page AllCall**.
2. Select the key function through dial pad.
[00]: All Call Page [06]: Zone 1
[01]: Group 1 [07]: Zone 2
[02]: Group 2 [08]: Zone 3
[03]: Group 3 [09]: Zone 4
[04]: Group 4 [10]: All Zone
[05]: All Group
3. Press [DSS] keys to assign the stations which use the PAGE key function.
4. Press [FWD] key to proceed to next function or [FLSH] key to terminate the process.

TABLE A-6 OPTIMIZED ROUTING PROGRAMMING ITEM

[01] System Pre-fix	[10] Route Table
[02] Forced Optimized Call Station	[11] Delete Index Table
[03] Route Advance Step Table	[12] Delete Data Table
[04] Holiday Assignment	[13] Add Index Table
[05] Tie Line Area Code Table	[14] Add Data Area Code Table
[06] Tie Line Office Code Table	[15] Add Data Office Code Table
[07] General Area Code Table	[16] Additional Table
[08] General Office Code Table	[17] Specific Code Table
[09] Time Schedule	

3. Press [FWD] key to proceed to next item or [FLSH] key to terminate the process.

c. Forced Optimized Call Station

Item No. 85-02

Default: Not restricted

Description: This assignment forces individual station(s) to place outgoing calls through optimized routing only.

Procedure:

1. Enter item No. 02. Display replies
`02.Forced OPT St.`
2. Press [DSS] key to force the stations on access. The BLFs of the forced stations light.

d. Route Advance Step

Item No. 85-03

Default: 0 step for all stations

Description: This assignment defines the number of route advance steps allowed for each station.

Procedure:

1. Enter item No. 03. Display replies
`03.Route AdvStep 0`
2. Enter No. of steps to assign.
3. Press [DSS] key to assign the stations to the step.
4. Press [FWD] key to assign to different Step No. or [FLSH] key to terminate the process.

e. Holiday Assignment

Item No. 85-04

Default: None

Description: Up to 20 Holidays can be

registered in the system to alter routing on those days. A different time schedule for the CO line groups (COG) is programmed for weekdays, Saturdays, Sundays and holidays.

Related Programming: [85-09] Time Schedule

Procedure:

1. Enter item No. 04. Display replies
`04.H.day 01 MMDD`

Note: H.day 01 = First Holiday Entry

MM = Month

DD = Day

2. Press [*] to clear current holiday registration on the display.
3. Press [FWD] key to proceed to next Holiday entry or [FLSH] key to terminate the process.

f. Tie Line Area Code Table

Item No. 85-05

Default: None

Description: Area codes which are in Tie Line Group and dialed through the Optimized Routing must be registered in this table.

Related Programming: [85-06] Tie Line Office Code

Procedure:

1. Enter item No. 05. Display replies
`05.TL Area Gp1`
2. Press [1] through [4] to select ICM group (tenant) to assign.
3. Press [FWD] key to assign the area/office code combination. Display changes

Direct Inward System Access

4.02 As detailed in section 2.03 and 2.04, the DISA assignment consists of three parts, for each of four DISA groups, that are related closely each other: CO Line Assignment to determine incoming line of the group, Activation Station Assignment to determine who enables the group of line, and Access Code Registration to provide the security code of the group.

a. CO Line Assignment

Item No.: 35

Default: No line assigned

Description: This item assigns an incoming line group to be activated by station defined in item 36.

Procedure:

1. Enter item No. 35. Display replies `35.DISA CO No.1`.
2. Press [LK] key to assign the incoming CO line No.1.
3. Press [FWD] key to proceed to next line or [FLSH] key to terminate the process.

b. Activation Station Assignment

Item No.: 36

Default: Station 120

Description: This item assigns a station which activates the lines determined in item 35.

Procedure:

1. Enter item No. 36. Display replies `36.DISA Act.GP1`.
2. Press [DSS] key to assign the activation station.
3. Press [FWD] key to proceed to next group or [FLSH] key to terminate the process.

c. Access Code Registration

Item No.: 37

Default: No Code Registered

Description: This item defines security codes used by outside parties to access the DISA groups.

Procedure:

1. Enter item No. 37. Display replies `37.DISA AA1 NNNN`.
where
AA1 = DISA access group number 1,

NNNN = security code.

2. Press [DSS] key of which station class-of-service is referred to.
3. Press [FWD] key. Display changes to `* Security 1 NNNN`.
4. Enter four digit security code through dial pad.
5. Enter DISA group number 1 through 8 from the dial pad to select a specific group number or [FLSH] key to terminate the process.

Optimized Routing

4.03 The Optimized Routing is controlled by eight route tables in conjunction with three time zones, each table containing three advance steps for trunk group access. Refer to section 2.05 for the dial control sequence.

a. Optimized Routing Programming Menu

Item No. 85

Description: This is the opening menu for the Optimized Routing Program.

Procedure:

1. Enter item No. 85. Display replies `OPTMZ No.nxt,end`.
2. Enter two digits of Optimized Programming Item No. as listed in Table A-6.
3. Press [FEAT] key to assign previous item.
4. Press [FWD] key to assign next item.
5. Process the Routing programming.

b. System Prefix

Item No. 85-01

Default: Yes

Description: This assignment defines if the user dials [1] before a long distance number (Yes). When (No), the ZT-D system automatically dials [1] only when the dialed number matches a typical long distance number in The North American Numbering Plan (NADP:x-0-y, x-1-y area codes); e.g. This assignment should be "Yes" if the system is connected to CO lines that provide [1 + 7 digit] toll numbers.

Procedure:

1. Enter item No.01. Display replies `01. Sys Prefix Yes`.
2. Press [#] key to deny system prefix.

- to
*Gp1: ...
4. Enter area code manually through dial pad then press [FWD] key. Display may indicate as
*Gp1:201=OG0
which means that Area Code (201) is referred to Office Code Table No.0.

Note: [HOLD/DND] entry for area codes prompts "X" at the display. It means: 2, 3, 4, 5, 6, 7, 8 and 9 at first digit, 0 and 1 at second digit, and 0, 1, 2, 3, 4, 5, 6, 7, 8 and 9 at third digit.

For example, (X01) includes area codes (201), (301), (401), ... , (801) and (901).

5. Press [1] through [4] to select Office Code Table No.
6. Press [FWD] key to proceed to next area code or [FLSH] key to return to procedure step 3.
7. Press [SPKR] key at step 1 to copy the assignment by ICM group. Display changes to
*Copy Gp. - Gp.
Enter source and destination ICM group Numbers through dial pad, i.e. the display should read
*Copy Gp1 - Gp4
to copy the assignment of the ICM group No.1 to No.4.
8. Press [FWD] key to implement the copy operation.
9. Press [FLSH] key to terminate the process.

Example: Assuming to program Area Codes 201, 202, 203, 204, 206, 209 to Office Code Table No.1, 205, 207 to Office Code Table No.2 and 208 to Office Code Table No.3.

1. First press [2] [0] [HLD/DND] [FWD] then [1] and [FLSH] --- the database is programmed for 200, 201, 202, 203, 204, 205, 206, 207, 208,209 to Office Code Table No.1.
2. Next press [2] [0] [0] [FWD] then [0] and [FLSH] --- Area Code 200 is cleared.

3. Then press [2] [0] [5] [FWD] [2] [FLSH] and [2] [0] [7] [FWD] [2] [FLSH] --- Area Codes 205, 207 are changed to Office Code Table No.2.
4. Finally press [2] [0] [8] [FWD] then [3] and [FLSH] --- Area Code 208 are changed to Office Code Table No.3 and the programming is completed.

g. Tie Line Office Code Table

Item No. 85-06

Default: None

Description: Office codes which are in Tie Line Group and dialed through the Optimized Routing are registered in this table.

Related Programming: [85-05] Tie Line Area Code

Procedure:

1. Enter item No. 06. Display replies
06.TL Office Gp1
2. Press [1] through [4] to select ICM group (tenant) to assign.
3. Press [FWD] key to assign Office Code Group number to route table. Display changes to
*Gp1-OG1
4. Press [1] through [4] to select Office Code Group then press [FWD] key to enter office code. Display changes to
*Gp1-OG1: ...
5. Enter office code manually through dial pad, then press [FWD]. Display may indicate as
*Gp1-OG1:935= Rt0
which means that the Routing of Office Code (935) is determined by Route Table No. 0.

Note: [HOLD/DND] entry for office codes prompts "X" on the display. It means:

2, 3, 4, 5, 6, 7, 8 and 9 at first digit and 0, 1, 2, 3, 4, 5, 6, 7, 8 and 9 at second or third digit.

For example, (93X) includes office codes (930), (931), (932), ... , (938) and (939).

6. Press [0] through [8] to select Route Table Number.
7. Press [FWD] key to proceed to next

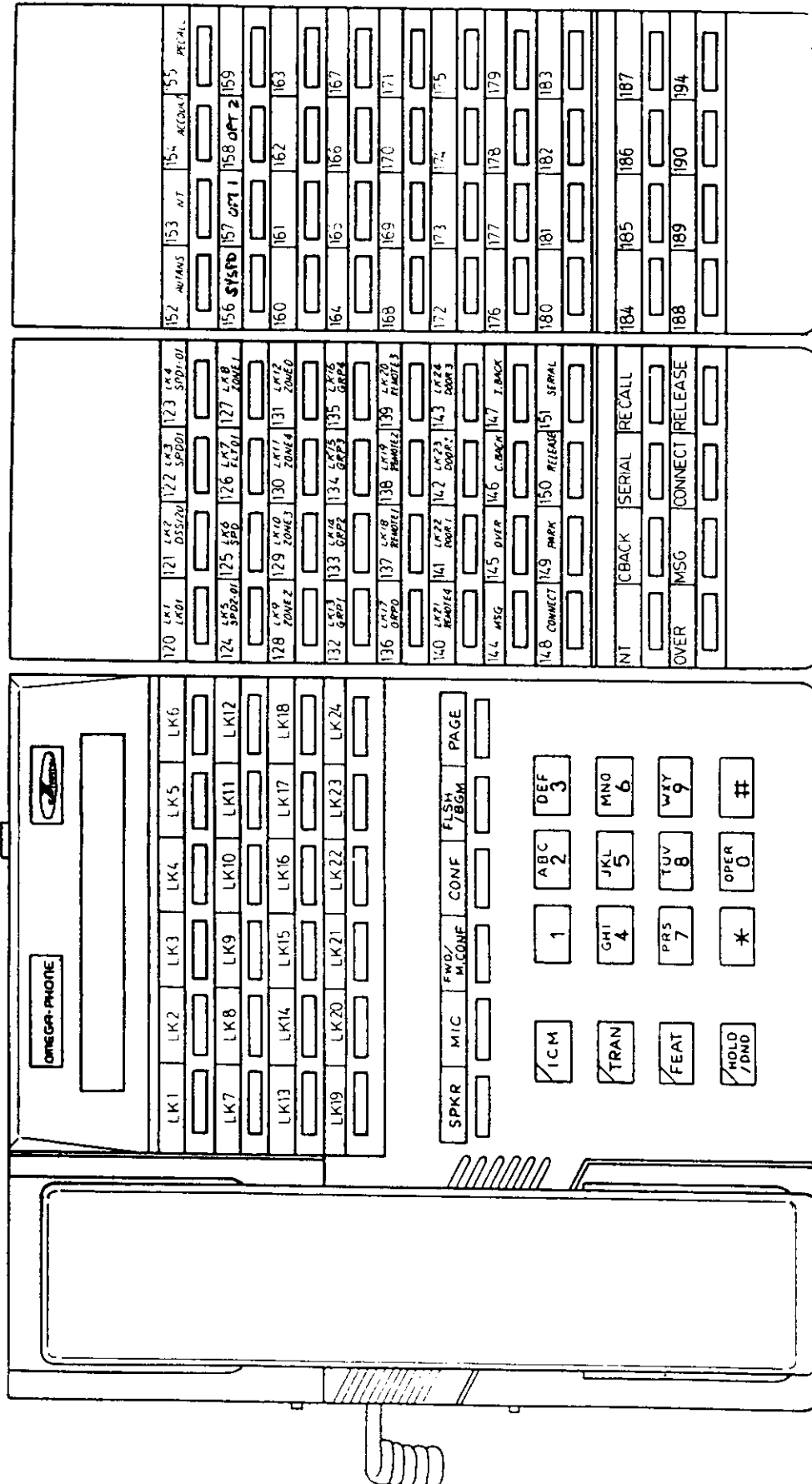


FIGURE A-11 PROGRAMMING TERMINAL

office code or [FLSH] key to return to procedure step 5.

8. Press [SPKR] key at step 2 to copy the table assignment by ICM group. Display changes to

*Copy Gp. - Gp.

Enter source and destination ICM group numbers through dial pad, i.e. the display should read

*Copy Gp1 - Gp4

to copy the assignment of the ICM group No.1 to No.4.

9. Press [SPKR] key at step 4 to copy the table assignment by office code group. Display changes to

Copy Gp1 OG. - OG.

Enter source and destination office code group numbers through dial pad, i.e. the display should read

Copy Gp1 OG1 - Gp4

to copy the assignment of the office code group No.1 to No.4.

10. Press [FWD] key to implement the copy operation.
11. Press [FLSH] key to terminate the process.

h. General Area Code Table

Item No. 85-07

Default: None

Description: Area codes which are not listed in the Tie Line Group and dialed through the Optimized Routing must be registered in this table.

Related Programming: [85-09] Time Schedule

Procedure:

1. Enter item No. 07. Display replies
07.Gen Area Gp1
2. Press [1] through [4] to select ICM group (tenant) to assign.
3. Press [FWD] key to assign area code to route table. Display changes to
*Gp1: ...
4. Enter area code group number manually through dial pad then press [FWD] key. Display may indicate as
*Gp1:212=Rt0
which means that Routing of Area Code (212) is determined by Route Table No. 0.

Note: [HOLD/DND] entry for area code prompts "X" on the display. It means:

2, 3, 4, 5, 6, 7, 8 and 9 at first digit, 0 and 1 at second digit, and 0, 1, 2, 3, 4, 5, 6, 7, 8 and 9 at third digit.

For example, (X01) includes area codes (201), (301), (401), ... , (801) and (901).

5. Press [0] through [8] to select Route Table Number.
6. Press [FWD] key to proceed to next office code or [FLSH] key to return to procedure step 4.
7. Press [SPKR] key at step 2 to copy the assignment by ICM group. Display changes to
*Copy Gp. - Gp.
Enter source and destination ICM group Numbers through dial pad, i.e. the display should read
*Copy Gp1 - Gp4
to copy the assignment of the ICM group No.1 to No.4.
8. Press [FWD] key to implement the copy operation.
9. Press [FLSH] key to terminate the process.

i. General Office Code Table

Item No. 85-08

Default: None

Description: Office codes which are not included in Tie Line Group and to be routed optimizely must be registered in this table.

Related Programming: [85-09] Time Schedule

Procedure:

1. Enter item No. 08. Display replies
08.GenOffice Gp1
2. Press [1] through [4] to select ICM group (tenant) to assign.
3. Press [FWD] key to assign office code to route table. Display changes to
*Gp1: ...
4. Enter office code manually through dial pad then press [FWD] key. Display may indicate as
*Gp1:821=Rt0
which means that Routing of Office Code (821) is determined by Route Table No. 0.

Note: [HOLD/DND] entry prompts "X" on the display. It means:

2, 3, 4, 5, 6, 7, 8 and 9 at first digit and

0, 1, 2, 3, 4, 5, 6, 7, 8 and 9 at second or third digit.

For example, (93X) includes office codes

(930), (931), (932), ... , (938) and (939).

5. Press [0] through [8] to select Route Table No.
6. Press [FWD] key to proceed to next office code or [FLSH] key to return to procedure step 4.
7. Press [SPKR] key at step 2 to copy the assignment by ICM group. Display changes to
***Copy Gp. - Gp.**
Enter source and destination ICM group numbers through dial pad, i.e. the display should read
***Copy Gp1 - Gp4**,
to copy the assignment of the ICM group No.1 to No.4.
8. Press [FWD] key to implement the copy operation.
9. Press [FLSH] key to terminate the process.

j. Time Schedule

Item No. 85-09

Default: None

Description: Time Zones of a day which alters the rout advance step must be registered here according to the local telephone company's billing plan.

Related Programming: [85-10] Route Advance Step

Procedure:

1. Enter item No. 09. Display replies
09.T.Sched. Cd1.
2. Press [1] through [4] to select Condition No;
Condition [1] = Weekday
Condition [2] = Saturday
Condition [3] = Sunday
Condition [4] = Holiday

Note: Condition 4 follows dates in the Holiday Assignment. (Program item 04)

3. Press [FWD] key to proceed to assignment of Time Zone on current condition displayed. Display changes to
***Cd1 Hour00 TZ1**,
which means that 24-hour time of 00:00 to 00:59 (one hour) belongs to Time Zone 1 of Condition 1. Enter two digits, hour of 24 hour clock, to assign individual hour to the Time Zone, which can not be assigned by range programming described at Steps 4 and 5.
4. Press [FWD] key to assign time range by starting and ending time of the Time Zones. Display changes to
***Cd1 TZ1**.
Press [1] through [3] to select a Time Zone then press [FWD]. Display changes to
***Cd1 TZ1fmXXtoYY**,
which means that Time Zone 1 ranges from XX:00 to YY:59 in Condition 1.
5. Enter four digit to define the starting and ending times.
The ending time has to be a larger number than the starting time; 24 > YY > XX. For splitting a Time Zone, use Step 4.
6. Press [FLSH] key to proceed to next Time Zone No.
7. Press [FLSH] key to change Time Range, to step 3.
8. Press [SPKR] key at step 1 to copy the assignment by Condition number. Display changes to
***Copy Cd. - Cd.**
Enter source and destination Condition Numbers through dial pad, i.e. the display should read
***Copy Cd1 - Cd3**,
to copy the assignment of the Condition No.1 to Condition No.3.
9. Press [FWD] key to implement the copy operation.
10. Press [FLSH] key to terminate the process.

Example: Assuming TZ1 from 00:00 to 7:59 and 22:00 to 23:59, TZ2 from 8:00 to 16:59, and TZ3 from 17:00 to 21:59, following programming is required.

1. *Cd1 TZ1fm00to07 .
2. *Cd1 TZ2fm08to16 .
3. *Cd1 TZ3fm17to21 .
4. *Cd1 Hour22 TZ1 .
5. *Cd1 Hour23 TZ1 .

k. Route Advance Step Table

Item No. 85-10

Default: None

Description: Order of advancing step of CO Line Group according to the time schedule must be registered in each table.

Related Programming: [85-09] Time Schedule

Procedure:

1. Enter item No. 10. Display replies
10.Route TBL Gp1 .
2. Press [1] through [4] to select ICM group (tenant) to assign.
3. Press [FWD] key to select Route Number. Display changes to
Gp1-Rt1 .
4. Press [1] through [8] to select Route No. to program advance step.
5. Press [FWD] key to select Time Zone. Display changes to
Gp1-Rt1-TZ1 .
6. Press [1] through [3] to select Time Zone.
7. Press [FWD] key. Display changes to
Gp1-Rt1-TZ1:0000 .
8. Enter CO Line Group No. (1 through 9) four times in order of the advance step.
9. Press [FWD] key to proceed to next Time Zone or [FLSH] key to return to procedure step 4.
10. Press [SPKR] key at step 2 to copy the assignment by ICM group. Display changes to
*Copy Gp. - Gp. .
Enter source and destination ICM group Numbers through dial pad, i.e. the display should read
*Copy Gp1 - Gp4 .
to copy the assignment of the ICM group No.1 to No.4.
11. Press [FWD] key to implement the copy operation.
12. Press [SPKR] key at step 3 to copy the assignment by route. Display changes to

Copy Gp1 Rt. - Rt. .

Enter source and destination route number through dial pad, i.e. the display should read

Copy Gp1 Rt1 - Rt4 .

to copy the assignment of the route No.1 to No.4.

13. Press [FWD] key to implement the copy operation.
14. Press [FLSH] key to terminate the process.

l. Delete Index Table

Item No. 85-11

Default: None

Description: This table defines which Delete Data Table should be referred in each CO Line Group.

Related Programming: [85-09] Time Schedule

Procedure:

1. Enter item No. 11. Display replies
11.Del.index Gp1 .
2. Press [1] through [4] to select ICM group (tenant) to assign.
3. Press [FWD] key. Display changes to
*1-COG1:DDT0 .
4. Press [1] through [9] to select CO Line Group then [1] through [4] to assign Delete Data Table No.
5. Press [FWD] key to proceed to next item or [FLSH] key to return to procedure step 2.
6. Press [SPKR] key at step 2 to copy the assignment by ICM group. Display changes to
*Copy Gp. - Gp. .
Enter source and destination ICM group Numbers through dial pad, i.e. the display should read
*Copy Gp.1 - Gp.4 .
to copy the assignment of the ICM group No.1 to No.4.
7. Press [FWD] key to implement the copy operation.
8. Press [FLSH] key to terminate the process.

m. Delete Data Table

Item No. 85-12

Default: None

Description: This table contains dial num-

bers to be deleted in each CO Line Group.

Related Programming: [85-11] Delete Index Table

Procedure:

1. Enter item No. 12. Display replies
`12.Del.Data Gp1`.
2. Press [1] through [4] to select ICM group (tenant) to assign.
3. Press [FWD] key. Display changes to
`*1-DDT1:`.
4. Press [1] through [4] to select Table No. then three digits of area code to be deleted.
5. Press [FWD] key to proceed to next item or [FLSH] to return to procedure step 2.
6. Press [SPKR] key at step 2 to copy the assignment by ICM group. Display changes to

`*Copy Gp. - Gp.`

Enter source and destination ICM group Numbers through dial pad, i.e. the display should read

`*Copy Gp1 - Gp4`.

to copy the assignment of the ICM group No.1 to No.4.

7. Press [FWD] key to implement the copy operation.
8. Press [FLSH] key to terminate the process.

n. Add Index Table

Item No. 85-13

Default: None

Description: This table defines which Add Index Table should be referred in each CO Line Group.

Related Programming: [85-10], [85-14]

Procedure:

1. Enter item No. 13. Display replies
`13.Add.Index Gp1`.
2. Press [1] through [4] to select ICM group (tenant) to assign.
3. Press [FWD] key. Display changes to
`*1-COG1:ADT00`.
4. Press [1] through [9] to select CO Line Group then [0] [0] through [1] [0] to assign Add Index Table number.
5. Press [FWD] key to proceed to next item or [FLSH] to return to procedure step 2.
6. Press [SPKR] key at step 2 to copy the

assignment by ICM group. Display changes to

`*Copy Gp. - Gp.`

Enter source and destination ICM group Numbers through dial pad, i.e. the display should read

`*Copy Gp1 - Gp4`.

to copy the assignment of the ICM group No.1 to No.4.

7. Press [FWD] key to implement the copy operation.
8. Press [FLSH] key to terminate the process.

o. Add Data Area Code Table

Item No. 85-14

Default: None

Description: This table defines to which Additional Data Table should be proceeded upon matching the area codes and prefixes listed in each Add Index No.

Related Programming: [85-13], [85-15] and [85-16]

Procedure:

1. Enter item No. 14. Display replies
`14.AddDT/Area 01`.
2. Press [0][1] through [1][0] to select Table No. where matching area codes are stored.
3. Press [FWD] key. Display changes to
`*01-...`.
4. Enter area code manually through dial pad.

Note: [HOLD/DND] entry prompts "X" at area code display. It means:

2, 3, 4, 5, 6, 7, 8 and 9 at first digit,

0 and 1 at second digit, and

0, 1, 2, 3, 4, 5, 6, 7, 8 and 9 at third digit.

For example, (X01) includes area codes (201), (301), (401), ... , (801) and (901).

Display may change to

`*01-201`,

when area code (201) is entered.

5. Press [FWD] key. Display may indicate as

`*01-201:a-Pn-Txy`,

where a=Classification of next reference table: A=Additional Table, O=Add Data

Office Code Table,

Pn is a prefix selection: P0=Not required, P1=required,

Txy is a reference table number (Additional Table 00-15 or Add Data Office Code Table 00-10).

For instance, [***01-201:A-P0-T01**] means that any dial with Area Code (201) do not require Prefix "1" (P0), but some additional dialing is required and the information is contained in Additional Table (A) No.01 (T01).

Note: When Add Data Office Code Table is previously selected, the prefix on this entry is ignored – unless Table No. [00] is selected – and it must be assigned in the Add Data Office Code Table itself.

6. Enter [2] for Additional Table or [6] for Add Data Office Code Table.
7. Press [0] or [1] to change Prefix status at entry Additional Table number.
8. Enter two digit to change reference table number. [0] [0] through [1] [5] for Additional Table and [0] [0] through [1] [0] for Add Data Office Code Table.
9. Press [FWD] key to proceed to next area code.
10. Press [SPKR] key at step 2 to copy the assignment of one Data Area Table to another. Display changes to ***Copy ADT.. - ADT..**.
Enter source and destination Data Area Table Numbers through dial pad, i.e. the display should read ***Copy ADT01 - ADT04**,
to copy the assignment of the Table No.1 to No.4.
11. Press [FWD] key to implement the copy operation.
12. Press [FLSH] key to terminate the process.

p. Add Data Office Code Table

Item No. 85-15

Default: None

Description: This table defines to which Additional Data Table should be proceeded upon matching the office codes and prefixes listed in each Add Index No.

Related Programming: [85-13] and [85-16]
Procedure:

1. Enter item No. 15. Display replies **15.ADT/Office 01**.
2. Press [0][1] through [1][0] to select Table No. where matching office codes are stored.
3. Press [FWD] key. Display changes to ***01- ...**.
4. Enter office code manually through dial pad.

Note: [HOLD/DND] entry prompts "X" on the display. It means:

2, 3, 4, 5, 6, 7, 8 and 9 at first digit and
0, 1, 2, 3, 4, 5, 6, 7, 8 and 9 at second or third digit.

For example, (93X) includes office codes (930), (931), (932), ... , (938) and (939).

Display may change to

***01-935**.

when office code (935) is entered.

5. Press [FWD] key. Display may indicate as ***01-935:PF0-AT01**,
which means that any local dials with Office Code (935) do not require Prefix "1" (PF0), but some additional dialing is required and the information is contained in Additional Table 01 (AT01).
6. Press [0] or [1] to change Prefix status at entry Additional Table number. Enter two digit to change Additional Table number, [0] [0] through [1] [5].
7. Press [FWD] key to proceed to next office code.
8. Press [SPKR] key at step 2 to copy the assignment of one Data Office Table to another. Display changes to ***Copy ADT.. - ADT..**.
Enter source and destination Data Office Table Numbers through dial pad, i.e. the display should read ***Copy ADT01 - ADT04**,
to copy the assignment of the Table No.1 to No.4.
9. Press [FWD] key to implement the copy operation.
10. Press [FLSH] key to terminate the

process.

q. Additional Table

Item No. 85-16

Default: None

Description: This table contains dial numbers to be added before or after the numbers entered in system extensions.

Related Programming: [85-14], [85-15]

Procedure:

1. Enter item No. 16. Display replies
[16.Add. Table 01].
2. Enter two digits of Table No. or press [FWD] to program dial data into the table.
3. Display may change to
[*01:0-9358580].
which means that 935-8580 is dialed "before" the manually entered dial (including speed dials).
4. Enter one digit to define "before" or "after";
[0] = Before, [1] = After
5. Enter up to 18 digits of dial data.
6. Press [FWD] key to proceed to next item or [FLSH] to terminate the process.

r. Specific Code Table

Item No. 85-17

Default: None

Description: Dial entries from the system extensions which matches with the code listed in this table are directly forwarded to the CO Line Group assigned.

Procedure:

1. Enter item No. 17. Display replies
[17.Spec.Code Gp1].
2. Press [1] through [4] to select ICM group (tenant) to assign.
3. Press [FWD] key to enter specific dial code. Display changes to
[*1: 0 dial=COG0].
Press [1] through [3] to select the specific code;
[1] = 0, Operator call
[2] = 1N, 1-1N;
[3] = N11, 1-N11:411, 611, 1-411 etc.
then enter CO line group no. (1 - 9) where these specific codes are dialed from.
4. Press [FWD] key to proceed to next

specific code.

5. Press [SPKR] key at step 2 to copy the assignment by ICM group. Display changes to

[*Copy Gp. - Gp.].

Enter source and destination ICM group Numbers through dial pad, i.e. the display should read

[*Copy Gp1 - Gp4].

to copy the assignment of the ICM group No.1 to No.4.

6. Press [FWD] key to implement the copy operation.
7. Press [FLSH] key to terminate the process.

NEW OPERATIONS

System/Station Speed Dial Registration for use with optimized routing. Enter [#] instead of the CO line number at the process. Display will respond as: *00-GO-OPT= for system SPD or *80-OPT= for station SPD.

OTHERS

1. The DISA access codes (1 through 8 have two characteristics, which are determined by other programming items; Item <44> determines which extension will activate the DISA and item <80> determines restriction of internal feature (station call) providing tenant application.
2. Feature and operation should have included a feature separation; ICM hunt group to DIL hunt group.

ZT-D SERIES
ELECTRONIC KEY TELEPHONE SYSTEM
ADDENDUM B - VERSION 3 ENHANCEMENT

CONTENTS	PAGE
1.00 GENERAL	1
2.00 FEATURES AND OPERATION	1
Advanced AA/VM Integration	1
Voice Mail	1
Automated Attendant	2
Station Call Forward & Camp-On	2
Call Forward to Hunt Group	3
Transfer Camp-On to Hunt Group	3
Intercom Call Priority	3
Overriding A Conversation	3
Group Call Pick-Up	4
Utility Relay	4
Other Changes	4
3.00 INSTALLATION	5
I-VM System	5
Utility Relay	6
4.00 DATABASE PROGRAMMING	7
Enhanced Features	7
System Feature Programming	7
Line Specification	9
System Timer	10
Station Class of Service	11

1.00 GENERAL

1.01 This addendum describes features and functions of Software Version 3.0 of the ZT-D Electronic Key Telephone System. The Version 3.0 software is provided with the KCPUHW-1 (V3.0) or MCPUHW-1 (V3.0) Processor Card. Please note that some outgoing calls related features are not available with KF (KCPUHW-1 (V3.0)) type software because of the restriction by the F.C.C.

2.00 FEATURES AND OPERATIONS

Advanced VM/AA Integration

2.01 With the Version 3 software integrated with Iwatsu I-VM Voice Mail/Automated Attendant system, the internal extensions and outside caller can be programmed to access directly into the individual mailbox. The outside party will be lead to the mailbox by station call forwarding and transferring. When configuring the ZT-D system, it must be considered that each I-VM port connected to the ZT-D system requires one dedicated DTMF receiver circuit.

Voice Mail

2.02 The Voice Mail feature of the I-VM operates when its VM or AAVM ports are assigned to work with the ZT-D system. All voice mail features are accessed through the single line circuit of the ZT-D system.

a. Operation - Accessing Mailbox.

1. To log on the voice mail, pick up ICM line and dial [5]- [4]. You will hear the voice mail greeting recorded in the log-on message, when one of VM or AAVM ports is in idle. If a flexible key is assigned, press [VM]

- key to log-on the voice mail.
- To access a mailbox directly, pick up ICM line and dial [5]-[6]-[Ext.no.], where [Ext. no.] = 120,121,...190,194. You will hear a personal greeting recorded in the individual mailbox E20, E21, ... , E90, E94 when one of the VM or AAVM ports is in idle.

The above example displays messages from:

```
# ... Voice Mail
150 ... Ext. No. 150
127 ... Ext. No. 127
136 ... Ext. No. 127
* ... Operator
```

b. Call Forward to Mailbox.

- Key telephone

With [ON-HOOK]
 [FEAT]-[FWD]-[5]-[4]-[0] - All Calls
 [FEAT]-[FWD]-[5]-[4]-[*] - Busy
 [FEAT]-[FWD]-[5]-[4]-[#] - No-answer.

- SLT

With [OFF-HOOK]
 [7][0]-[5]-[4]-[0] - All Calls
 [7][0]-[5]-[4]-[*] - Busy
 [7][0]-[5]-[4]-[#] - No-answer.

Note that a transferred call also logs directly into a mailbox.

c. Transfer to Mailbox.

To transfer an outside call to mailbox, dial [5]-[6]-[Ext.No.] instead of regular extension number.

d. Message Indication and Retrieval.

- LED: The key telephone MSG lamp lights when a message is recorded in its corresponding mailbox:

Normal Message.....	System Hold Flashing
Urgent Message.....	I-use Flash- ing

[Note: When MSG Lamp is not assigned by flexible key assignment, FEAT Key Lamp will light instead of MSG Lamp.]

- LCD: When provided, the LCD on the key telephone displays the voice message by [#] as follows:

MSG#150-127-136 *

3. Message Retrieval.

By pressing [MSG] or [6], the station logs into Voice Mail.

Automated Attendant

2.03 The Automated attendant feature operates when AA ports of I-VM system are assigned, and connected to the ZT-D single line (SLT) ports. The corresponding SLT port must be assigned to AA or AAVM type and a DIL must also be assigned to these extension numbers.

a. Operation.

After an incoming call is answered at I-VM AA or AAVM ports, the call follows sequence programmed in the NODE mailbox in the I-VM, except for the following:

- When all AA and AAVM ports are busy, the incoming call rings at the attendant station.
- When all AA ports are busy and only AA ports are assigned to ringing station, it rings at the primary extension.
- Camp-On recall will be answered by the original AA/AAVM port, when it is in idle. When the original AA port is busy, the recall is forwarded to other AA/AAV port, , and when all AA/AAVM ports are busy, recall will be forwarded to an operator station.
- AAVM ports have priority as AA port, but they can be used in VM port when no AA function is required at the same time.

Station Call Forward and Camp-on

2.04 By separation of recall timers, a camp-on

call (un-screened transfer) can be forwarded until it times out by recall. To enable call forwarding of camp-on calls, Operator camp-on recall timer <16> or Station camp-on recall time <17>, must be set longer than call-forward-no-answer timer <87>.

Call Forward to Hunt Group

2.05 A station can forward calls to stations within a hunt group. There are four (4) hunt groups, No. 71 to No. 74 to be registered to forward. Though there are three (3) forwarding status; All calls, No answer, and Busy, only the **Call Forward-All Calls** can be activated to forward the hunt group.

a. Operation

To register forwarding destination at Key Telephone:

[ON HOOK]-[FEAT]-[FWD]-[71-74]

at SLT:

[OFF-HOOK]-[7][0]-[71-74]-[ON HOOK].

To enable forward at Key Telephone:

[FWD].

at SLT:

[OFF-HOOK]-[7][9] - [ON-HOOK].

Transfer Camp-On to Hunt Group

2.06 When a call is camped-on to a hunt group, the call will ring the first available station in numerical ascending order of the extension numbers. If all the stations are busy or do not answer, the call tries to ring the first station once more. After time-out of the camp-on (Operator or Station), the call rings the original station as recall. The no-answer time-out within the hunt group is set by "Master Group Hunt" Timer <24>.

Intercom Call Priority

2.07 Two classes of calling stations are assigned in the ZT-D systems: Prioritized and others.

a. Prioritized Stations

This class includes Executive Station, Operator, and Secretarial Hotline.

These stations can override in-process intercom calls originated by a station that does not belong to these class-of-service by dialing [*] when they encounter busy tone. If two stations, that belong to these class-of-service, call the same station at same time, the calls are served as first-come, first-serve basis, and there is no overriding function available (override means overriding tone/voice calling, busy-bypass callings but not overriding any conversation). Note that as an exception, the Executive Station can override Station DND features unless the called station is protected by item <75>.

Overriding A Conversation

2.08 There are two (2) Classes of Service to allow override with another station's conversation. When overriding, a short warning tone is sent and a three-party (3) conference is established.

a. Executive Station.

The executive station can override the other station's CO speech by pressing the line key indicating busy.

Exception: When the CO line is assigned to [protected CO line: Item <33>].

b. Barge-in Station.

The barge-in station can override the other station's CO or ICM speech by dialing the station number; then pressing [CONF] key, in addition to the feature provided to the executive station. This class-of-service is assigned by programming item <54>.

Exception: Protected station <75>, Protected CO line <33>, Pick-up Restriction <62> and/or stations talking with door-phones, or when all eight [8] system conference circuits are busy.

Operation:

[OFF-HOOK]-[LKN]-[CONF]

[OFF-HOOK]-[EXT.NO.]-[Busy or busy

by-pass)-[CONF].

No.1, 2 and 3).

Group Call Pick-Up

2.09 Four (4) Call Pick-up Groups are separated from ICM groups to provide effective tenant application. A system extension belonging to a Pick-up Group can pick up calls that ring at other extensions as long as they belong to the same group number; e.g. an extension of Pick-up Group No.1, only can answer to the calls ringing at extensions of Pick-up group No.1, but not those of Group No's 2, 3, or 4. The extensions can belong to as many groups as needed, but cannot pick up calls if they are not assigned to the pick-up call.

a. Example

Table B-1 lists an example of a Station Group assignment related to the Group Call Pick-up.

1. In this example, all stations belong to ICM Group No.1 so that they can call each other without restriction.
2. Ext. No. 125 - 128 (Pick-up Group No.2) can pick up calls ringing at Ext. No. 125 - 128 (Group No.2).
3. Ext. No. 130 - 133 (Pick-up Group No.3) can pick up calls ringing at Ext. No. 130 - 133 (Group No.3).
4. Ext. No. 120 (Pick-up Group No.1, 2 and 3) can pick up calls ringing at any Extensions of the system (Group

TABLE B - 1
GROUP CALL PICK-UP DATABASE

Extention No.	ICM Gruop	Pick-up Gruop
120	No.1	No.1,2,3
125	NO.1	No.2
126	NO.1	No.2
127	NO.1	No.2
128	NO.1	No.2
125	NO.1	No.2
126	NO.1	No.2
127	NO.1	No.2
128	NO.1	No.2

Utility Relay

2.10 Three (3) relays out of ten (10) flexible relays on the RLIFC card can be used to control utilities, such as an air conditioner. The relay can be turned on and off by pushing a key programmed on the station. Note that the LED indication of the relay status appears only at the operating station.

a. Related Programming

<27>, <34>, <78>.

Other Changes

2.11 This section lists miscellaneous improvement provided with Version 3 Software.

a. DND Indicator.

BLF indication of station DND is changed to System-Hold rate so that the DND status can be distinguished from station busy.

b. Message Waiting.

A station can cancel its own MSG indicator by pressing: [5]-[*] except for the messages from the I-VM systems.

c. Direct CO line Pick-Up.

This feature is available with KCPUHW-1 (KF systems) only. For SLT to pick-up a CO line for an outgoing call, as well as Key Telephones: [9]+[CO Line No.]

d. Toll Restriction.

[*] and [#] dials are not subject to toll restriction.

e. Call Park.

Call Park Recall timer [86] is separated from Hold Recall time [21].

f. Remote Control.

Relay operating timer is expanded; default three (3) second range: one (1) second to thirty (30) seconds.

g. Distinctive SLT Ringing.

ICM Calls: 1 sec-on, 2 sec-off
CO Calls: 0.5 sec-on, 0.5 sec-off, 0.5 sec-on, 1.5 sec-off.

h. New Flex Keys.

Master Group Hunt: Direct Signaling to

Hunt Group No. 1,
Hunt Group No. 2,
Hunt Group No. 3, and
Hunt Group No. 4.

Voice Mail: Direct Access to VM (Voice Mail) and MB (Mailbox)

Remote Control: Turning on/off Utility 1, Utility 2, and Utility 3.

3.00 INSTALLATION

I-VM System

3.01 The I-VM Voice Mail/Automated Attendant system is highly integrated with the Version 3 software. The ZT-1632 and ZT-2464 KSU connects these voice mail ports through its single line telephone ports. The high integration with the ZT-616 KSU is not available because of the limited capacity.

a. ZT-1632 KSU.

The ZT-1632 KSU is shipped as 824 configuration, but upgrading to the 16x32 configuration is required, to install the I-VM system since the integration port of the ZT-D system is available at extension numbers 144 to 151.

Motherboard Modification.

1. Turn off the power and remove the CPU card.
2. Cut the solid strapping wire marked S-8 above the CPUHW card connectors as shown in Figure B-1.

Power Supply Requirement.

Whenever the system capacity exceeds eight (8) CO lines and twenty-four (24) extensions, replace the power supply to

the ZT-PNSC.

Circuit Card Location.

The ZT-1632 KSU is configured as Figure B-2a. The card slot for SUB No.4 is for Voice Mail connectors as assigned by programming item <03>.

b. ZT-2464 KSU.

There is no modification required with the ZT-2464 KSU. The slot SUB 4 can only be used to connect the voice mail, as shown in Figure B-2b.

c. Connection.

The number of ports connected to this I-VM system differs by its model. Table B-2 lists the capacity of the port. Connect the I-VM ports to the EXTC4 connector at AMPA81 of the ZT-D KSU following Table B-3.

**TABLE B - 2
I-VM PORT CAPACITY**

Model	Standard	maximum
100A	2	3*
200	2	6

Table B-3 lists connection of the ports.

**TABLE B-3
EXTC4 TO I-VM WIRING**

EXTC 4 Ext.No	Designation		Pin No	MDF Pin No	MDF Wire Color	I-VM Line Card Modular Jack		Note
	SLKT	SLSB				Pin No	Color	
144	T	T	26	1	W-BL	3	R	SLSB only
	R	R	1	2	BL-W	2	G	
	DT		27	3	W-O	4		
	DR		2	4	O-W	1		
145	T	T	28	5	W-GN	1	R	SLSB only
	R	R	3	6	GN-W	2	G	
	DT		29	7	W-BR	4		
	DR		4	8	BR-W	1		
146	T	T	30	9	W-GY	3	R	SLSB only
	R	R	5	10	GY-W	2	G	
	DT		31	11	R-BL	4		
	DR		6	12	BL-R	1		
147	T	T	32	13	R-O	3	R	SLSB only
	R	R	7	14	O-R	2	G	
	DT		33	15	R-GN	4		
	DR		8	16	GN-R	1		
148	T	T	34	17	R-BR	3	R	
	R	R	9	18	BR-R	2	G	
			35	19	R-GY	4		
			10	20	GY-R	1		
149	T	T	36	21	BK-BL	3	R	
	R	R	11	22	BL-BK	2	G	
			37	23	BK-O	4		
			12	24	O-BK	1		
150	T	T	38	25	BK-GN	3	R	
	R	R	13	26	GN-BK	2	G	
			39	27	BK-BR	4		
			14	28	BR-BK	1		
151	T	T	40	29	BK-GY	3	R	
	R	R	15	30	GY-BK	2	G	
			41	31	Y-BL	4		
			16	32	BL-Y	1		

NOTE Extension numbers at the ZT-D EXTC and Port numbers at the I-VM connected together must be assigned to the same function. VM, AA or AAVM

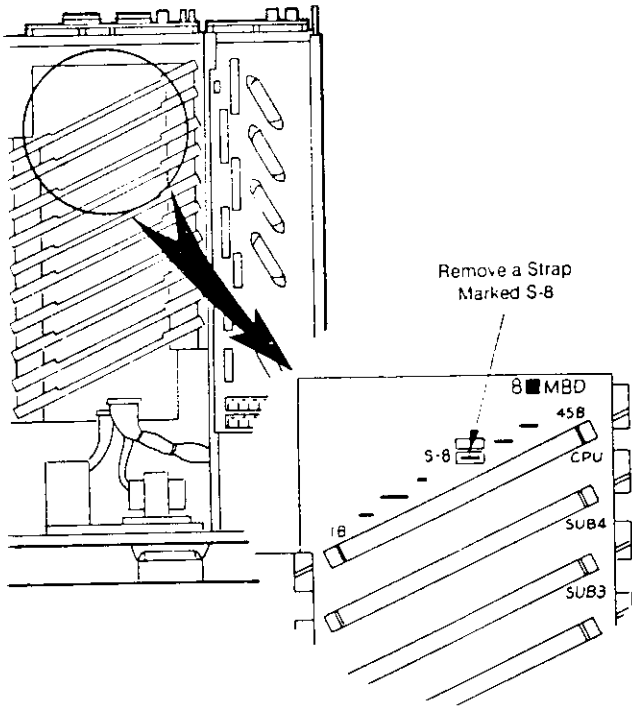
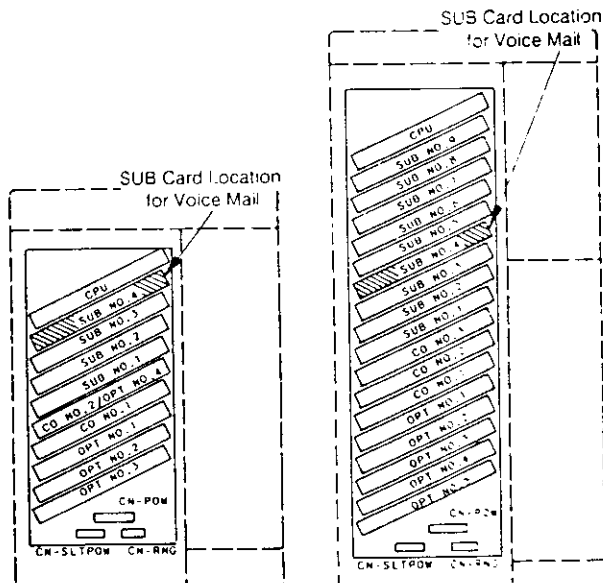


FIGURE B-1 ZT-824 KSU UPGRADING



**a.ZT-1632KSU b.ZT-2464KSU
FIGURE B-2 VOICE MAILE PORT LOCATION**

Utility Relay

3.02 The Utility Relay is a new function of Flexible Relay which turns on and off by the push of a button assigned on a key telephone.

a. Connection.

Figure B-3 shows an application of a flexible relay No. 10 assigned to turn on/off a P.A. amplifier manually. The flexible relay contact has rating of 24 Vac, 1 Amp. Do not exceed the rating in the application and always use a slave relay of which contact rating suits your device requirement.

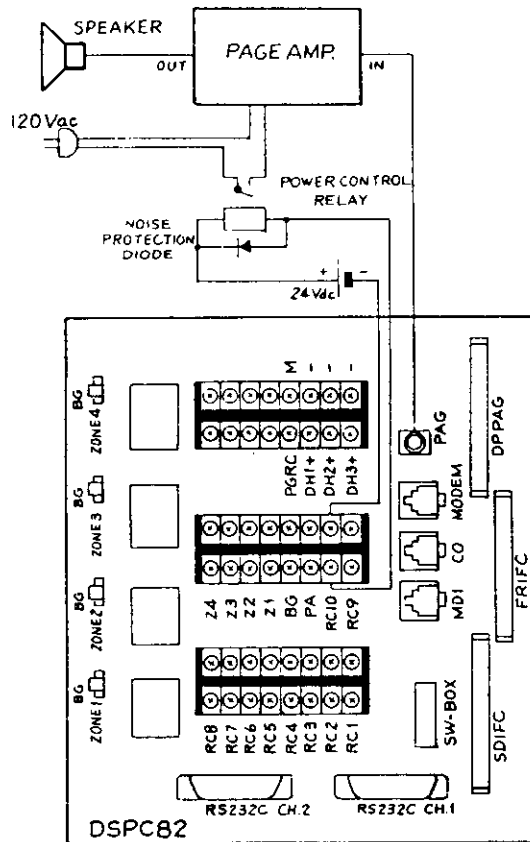


FIGURE B-3 UTILITY RELAY APPLICATION

Default: All stations are ZT-24D
Description: Station ports of the ZT-D system can be assigned to eight types of key telephones -- ZT-24D, ZT-24K, ZT-12D, ZT-12K, ZT-8D, ZT-8K, ZT-6D and ZT-6K, two types of single line telephones (SLTs) -- with DTMF or pulse dial, or Voice Mail. The key telephones have attribution of being operator, with DSS and with busy bypass. The voice mail has attribution of VM, AA and AAVM. Note that voice mail ports assigned dedicated same number of DTMF receiver circuits and these circuits can not be used for other functions.

Related Programming: none
Limitation: Maximum two operators, maximum two DSSs per key telephones, maximum six voice mail ports within extension numbers 144 to 151 (SLKT8 or SLSB8 must be installed there).

- Procedure:**
1. Display indicates
|03. Type T24D |.
 2. Enter the number indicated in Table B-5 to designate the station type or press [FWD] to select the next type.
 3. Press DSS keys to assign stations to the type displayed.

4.00 DATABASE PROGRAMMING

Enhanced Features

4.01 This section provides programming procedures for the enhanced features of Version 3 software. Table B-4 through B-7 lists programmable features of ZT-D system. Additions or changes in Version 2 software are marked with * and those in Version 3 software are marked with ** in the tables.

System Feature Programming

4.02 This section describes additions and changes of the programming on the ZT-D system features.

- a. Station Type Assignment
Item No.: 03

TABLE B-5
STATION TYPE ASSIGNMENT

DIGIT	STATION TYPE	DISPLAY
1	ZT-24D Key Telephone	03 Type T24D
2	ZT-24K Key Telephone	03 Type T24K
3	ZT-12D Key Telephone	03 Type T12D
4	ZT-12K Key Telephone	03 Type T12K
5	ZT-8D Key Telephone	03 Type T8D
6	ZT-8K Key Telephone	03 Type T8K
7	ZT-6D Key Telephone	03 Type T6D
8	ZT-6K Key Telephone	03 Type T6K
9	KT Attribution	*EXT Connection
0	Operator Station	*CP Station
*	SLT with DTMF Dial	03 Type SLTMF
#	SLT with Pulse Dial	03 Type SLTOP
ICM	Voice Mail	*EXT VML Type

**TABLE B-4
SYSTEM FEATURE PROGRAMING**

SYSTEM TIMER

Item	Feature	Default	Range	Step
16	Operator Camp-on Recall	20 sec.	5 - 75 sec.	5 sec.
17	Station Camp-on Recall	20 sec.	10 - 150 sec.	
18	CO Flash	0.7 sec.	0.1 - 1.5 sec.	
19	CO Disconnect Signal	0.7 sec.	0.1 - 1.5 sec.	
20	Timed Trunk Queuing	5 min.	2 - 15 min.	
21	Hold Recall**	2 min. 40 sec.	16 sec. - 4 min.	16 sec.
22	Page Time-out	20 sec.	10 - 140 sec. or 5 min.	
23	DTMF Dial Duration	100 m-sec.	100 - 350 m-sec., 5 sec.	50 m-sec.
24	Master Group Hunt	20 sec.	10 - 150 sec.	
25	PBX Pause Time	5 sec.	1 - 12 sec.	
26	Trunk-to-Trunk Conference	5 min.	5 - 75 min. or inf.	5 min.
86	Call Park Recall**	160 sec.	16 - 240 sec.	16 sec.
87	Call Forward No Answer**	20 sec.	5 - 75 sec.	5 sec.
88	Remote Relay**	3 sec.	Relay 1-4: 1 - 30 sec.	

STATION CLASS-OF-SERVICE PROGRAMMING

Item	Feature	Default	Range
40	Station Day Ringing	Ext 120	CO No. Ext No
41	Station Night Ringing	Ext 120	CO No. Ext No
42	Doorphone Day Ringing	None	CO No. Doorphone No
43	Doorphone Night Ringing	None	CO No. Doorphone No
53	Hunt ICM Group	None	Group 1-4: Ext
54	Barge-in Station**	None	Ext 120-193
55	Dial Confirmation Tone	Enable	Ext 120-193
57	Page Key Function Set*	All Call Page	All Call/Z Page/G Call
60	Background Music	Enable	Ext 120-193, Zone 1-4
65	Page Access Enable	Enable	Ext.120-193
66	Page Receive Enable	Enable	Ext.120-193
67	Group Call Access Enable	Disable	Gp.0-4: Ext.120-193
68	Group Call Receive Enable	Disable	Gp.0-4: Ext.120-193
69	Zone Page Access Enable	Disable	Gp.0-4: Ext.120-193
70	Automatic Answering	Enable	Ext.120-193
71	Hold Recall Enable	Enable	Ext.120-193
72	Speakerphone	None	Ext.120-193
73	Do Not Disturb	Enable	Ext.120-193
74	Executive Station	None	Ext.120-193
75	Protected Station	None	Ext.120-193
76	Secretarial Hot Line	None	Unlimited group of 3 Ext's
78	Flexible Key Assignment**	See Table B-4	Direct CO, DSS, Station SPD, DSS1-SPD, OSS2-SPD, SPD Access, Floating CO, Zone 1-4, Group 1-4, Remote 1-4, Doorphone 1-4, Message Waiting, Busy Override, CO Callback, ICM Callback, Connect, Call Park, Release, Serial, Auto-Answering, Night Transfer, Account Code, Recall, System SPD, Optimized CO 1-2, Hunt Group 1-4, Voice Mail Access, Mailbox Access, Utility 1-3
79	Off-hook Signaling*	Disable	Ext.120-193
80	Intercom Group	All Groups	Group 1-4: Ext.No.
81	Station Restr. Password	None	4-digit/Ext.
82	Night Transfer Station	Ext 120	1-Ext./Ringing Group
83	Station Pick-up Group	All Groups	Group 1-4: Ext.No.

SYSTEM FEATURE PROGRAMING

Item	Feature	Default	Range
03	Station Type Assignment	ZT-24D	KTs, SLTs, Operator, Voice Mail
04	CO Line Assignment		
06	SCDR Output Format	Printer/Ch.1	Printer/Auxiliary, Ch.1/Ch.2
07	SCDR Output Mode	None	T, O, A, Duration 0 - 30 min.
09	Background Music Source	BGM: Off, BGM Amp: No	BGM: On/Off, BGM Amp: Yes/No
10	Tone/Voice Calling	Voice	Tone/Voice
11	P.A. System Assignment	All Zones	Zone 1, 2, 3, 4
12	DTMF Receiver Assignment	None	RECV2, RECV8, ERCV8
13	Doorphone Assignment	None	Doorphone No.1, 2, 3
14	Modem Transmission Line	None	CO No. 1 - 24
27	Flexible Relay Assignment**	None	4-Loud Ringer, 4-Night Ringer, 4-Remote, BGM, 3-Utility
28	Conference Voice Level	0 dB	-13dB - +1.5dB
34	Utility Relay Assignment**	ICM Group 1	ICM Group 1, 2, 3, 4
90	Memory Clear	Disable	One-time operation
99	System Password	None	Any 4-digit number

LINE SPECIFICATION PROGRAMMING

Item	Feature	Default	Range
29	Floating CO Group Assignment	All COs to Group 1	Group 1-9
30	PBX Line And Pre-Dial Entry	None	Pre-dial Table 0-9: CO No.
31	Optional CO Ringing	None	CO No. 1-24
32	Dial Pulse Break Ratio	61%	61/67%
33	Protected CO Line**	None	CO No. 1-24
44	CO Ringing Group	All COs to Group 1	Group 1-4
45	Loud Ringing Bell - Day	None	Loud Ringer 1-4
46	Loud Ringing Bell - Night	None	Night Ringer 1-4
47	P.A. Ringing - Night	None	P.A. Ringer 1-4
48	DP/MF Dialing Selection	DTMF	DTMF/Pulse
49	10/20pps Pulse Dial	10pps	10/20pps
50	Automatic CO Release	None	CO No. 1-24
51	Auto. CO-to-CO Forwarding	Ext.120	Ext.No.: Forward Group 1-4
52	Hunt Group - CO/Station	None	Hunt Group 1-4: CO No. 1-24: Ext.No
56	Voice Mail Line*	None	CO No.1-24

OUTGOING/TOLL RESTRICTION PROGRAMMING

Item	Feature	Default	Range
05	Toll Restr./Equal Access	None	10 20-entry User tables
08	Outside USA/Canada	USA/Canada	USA/Canada or Others
15	OCC Data Entry	None	4 OCC Access Code Tables
61	Outgoing Call Restriction	None	CO No.: Ext No
62	CO Line Pick-up Restriction	None	CO No.: Ext.No.
63	Toll Restr. - System SPD	None	Ext.No
64	Access Restr. - System SPD	None	Ext.No
77	Toll Restriction Class	No Restriction	16 Classes

DISA FEATURE PROGRAMING

Item	Feature	Default	Range
35	DISA CO Line	None	8 COs max
36	DISA Activating Station	Ext.120	1 Ext./DISA Group 1-4
37	DISA Access Activation		

OPTIMIZED ROUTING PROGRAMMING*

Item	Feature	Description
85	Optimized Routing Menu	
85-01	System Pre-fix	
85-02	Forced Optimized Call Station	
85-03	Route Advance Step Table	
85-04	Holiday Assignment	
85-05	Tie Line Area Code Table	
85-06	Tie Line Office Group Table	
85-07	General Area Code Table	
85-08	General Office Code Table	
85-09	Time Schedule	
85-10	Route Table	
85-11	Delete Index Table	
85-12	Delete Data Table	
85-13	Add Index Table	
85-14	Add Data Area Table	
85-15	Add Data Office Table	
85-16	Additional Table	
85-17	Specific Code Table	

Operator Station

4. Display indicates
|* OP Station |.
5. Press [DSS] keys of the stations which are assigned to be operators. Up to two operators can be assigned. The BLF lights steady.

KT Attribution

6. Display indicates
|*EXT Connection |.
7. Press [1], [2] or [3] to select the attribution;
[1]...DSS Console No.1
[2]...DSS Console No.2
[3]...Busy Bypass.
8. Press [DSS] key of the station where the attribution belongs to. The BLF starts flashing.
9. Press [DSS] key to assign the port where the attribution is activated (unit connected). The BLF lights steady.

Voice Mail Attribution

10. Display indicates
|*EXT VML Type |.
11. Press [1], [2] or [3] to select the attribution referring to the feature description of each port;
[1]...VM port
[2]...AA port
[3]...AAVM port
12. Press [DSS] key of the station where the voice mail port is connected. The BLF lights steady.
13. Press [FLSH] to terminate the process.

b. Flexible Relay Assignment

- Item No.:** 27
Default: none
Description: Ten Relays are available on the optional FRIFC card for various features. Utility control functions is added in Version 3 software.
Related Programming: Remote Relay Timer <88>, Utility Relay <34>.
Procedure:
1. Display indicates

2. Press a [DSS] key to assign a feature to the relay. The function of the DSS keys is listed in Table B-6.
3. Press [FLSH] to terminate the process.

**TABLE B-6
FLEXIBLE RELAY ASSIGNMENT**

DSS Key	Function	LCD Display
DSS Key 120	External Loud Ringer No 1	27 RelayN Ext Rng1
DSS Key 121	External Loud Ringer No 2	27 RelayN Ext Rng2
DSS Key 122	External Loud Ringer No 3	27 RelayN Ext Rng3
DSS Key 123	External Loud Ringer No 4	27 RelayN Ext Rng4
DSS Key 124	Night Loud Ringer (UNA) No 1	27 RelayN Nt Rng1
DSS Key 125	Night Loud Ringer (UNA) No 2	27 RelayN Nt Rng2
DSS Key 126	Night Loud Ringer (UNA) No 3	27 RelayN Nt Rng3
DSS Key 127	Night Loud Ringer (UNA) No 4	27 RelayN Nt Rng4
DSS Key 128	Remote Control No 1	27 RelayN Remote1
DSS Key 129	Remote Control No 2	27 RelayN Remote2
DSS Key 130	Remote Control No 3	27 RelayN Remote3
DSS Key 131	Remote Control No 4	27 RelayN Remote4
DSS Key 132	Background Music Control	27 RelayN B G M
DSS Key 133	Utility Control No 1	27 RelayN U Relay1
DSS Key 134	Utility Control No 2	27 RelayN U Relay2
DSS Key 135	Utility Control No 3	27 RelayN U Relay3

a. Utility Relay Assignment

- Item No.:** 34
Default: All relays to Group 1
Description: This assignment defines operating Intercom Group number of utility relays programmed in the assignment <27>.
Related Programming: Flexible Relay Assignment <27>
Procedure:
1. Display changes
|34.U.Relay1 Gp1|.
 2. Press [1] to [4] to select the intercom group number to activate the relay, or press [FWD] to proceed to next relay.
 3. Press [FLSH] to terminate the process.

Line Specification

- 4.03 This section describes additions and chan-

ges of the programming on the ZT-D CO line specifications.

a. Protected CO Line

Item No.: 33

Default: none

Description: The protected CO lines do not allow any override or barge-in operation regardless the station class of service.

Related Programming: none

Procedure:

1. Display indicates
|33.Protected CO |.
2. Press [LK1] to [LK24] where this feature is activated. LED turns on to indicate that the feature is assigned to the line.
3. Press [FLSH] to terminate the process.

System Timer

4.04 This section describes additions and changes of the programming on the ZT-D system timers.

a. DTMF Dial Duration Timing

Item No.: 23

Default: 100 milli-seconds

Range: 100 to 350 milli-sec. or 5 sec.

Description: This programming defines duration of DTMF dialing signal output. Note that unnecessarily long time setting causes longer waiting time during CO outgoing call during heavy traffic hour.

Related Programming: none

Procedure:

1. Display indicates
|23.DurTime 10 0ms |.
2. Enter two-digit timer data (10 through 35) of which multiplication by 10 is the duration time, or 50 for 5 sec.
3. Press [FLSH] to terminate the process.

b. Call Park Recall Timer

Item No.: 86

Default: 160 seconds

Range: 16 to 240 sec., step 16 sec.

Description: This programming defines time after a call is placed on call park till it recalls at the originated station.

Related Programming: none

Procedure:

1. Display indicates
|86.Park Rcl 160s |.
2. Enter three-digit timer data (016 through 240) to set the duration time in seconds.
3. Press [FLSH] to terminate the process.

c. Call Forward No Answer Timer

Item No.: 87

Default: 20 seconds

Range: 5 to 75 sec., 5 sec. step.

Description: This programming defines time after a station is called until it is forwarded when the station did not answer to the call.

Related Programming: Operator camp-on recall <16> timer of Station camp-on recall <17> timer must be set longer than this timer to forward camped-on calls.

Procedure:

1. Display indicates
|87.FWD NoAns 20s |.
2. Enter two-digit timer data (05 through 75) to set the duration time in seconds.
3. Press [FLSH] to terminate the process.

d. Remote Relay Timer

Item No.: 88

Default: 3 seconds

Range: 01 to 30 sec., 1 sec. step.

Description: This programming defines operating time of the remote control relays which can be selected from flexible relay on the FRIFC card.

Related Programming: Flexible Relay Assignment <27>. Select Utility Relay in Flexible Relay Assignment <27> to toggle the relays.

Procedure:

1. Display indicates
|88.Rly Time RMT1 |.
2. Press [1] to [4] to select a relay.

3. Press [FWD] key to proceed to timing assignment. The display changes
|*Remote1 03s |.
4. Enter two-digit timer data (01 through 30) to set the operating time in seconds.
5. Press [FLSH] to terminate the process.

Station Class Of Service

4.05 This section describes additions and changes of the programming on the ZT-D station class-of-services.

a. Station Pick-up Group

Item No.: 83

Default: All stations belongs to Group 1 through group 4.

Description: This assignment defines four pick-up groups of stations. Within the same group, the incoming calls can be picked up alternately.

Related Programming: none

Procedure:

1. Display indicates
|83.GP1 P-Up St. |.
2. Press [1] to [4] or [FWD] to select the group number.
3. Press [DSS] keys to assign extensions to the group.
4. Press [FLSH] to terminate the process.

b. Barge-in Station

Item No.: 54

Default: none

Description: The barge-in station can override CO/ICM conversation.

Related Programming: Protected Extension <75> and Protected CO Line <33> defeat this assignment.

Procedure:

1. Display indicates
|54.Barge-in St. |.
2. Press [DSS] keys to assign the stations. BLF turns on to indicate the station assigned.
3. Press [FLSH] to terminate the process.

c. Flexible Key Assignment

Item No.: 78

Default: Table B-7

Description: This programming assigns one-touch function keys on the key telephones and DSS consoles.

Related Programming: none

Procedure:

1. Display indicates
|78.ST T24D #120 |.
2. Select next step by pressing
[DSS] to change station number
[FWD] to assign flexible key by key location
[*] to assign flexible key by function.
[FLSH] to terminate the process.

Flexible Key by Location

3. Display indicates
|Flex key LK01 |.
4. Press desired [LK] ([LK01] to [LK24]) to assign the function.
5. Press [FWD] (forward) or [FEAT] (backward) to select desired function, or [0] - [9] to change the numbers on the display. See Table B-8 for the function with flexible numbers.
6. Return to step 4 or press [FLSH] to return to step 1.

Flexible Key by Feature

7. Display indicates
| Flex Key? |.
8. Press desired [DSS] key to select a desirable function to assign, referring to Table B-8.
9. Press desired [LK] key to assign the function.
10. Press [FWD] (forward) or [FEAT] (backward) to select desired function, or [0] - [9] to change the numbers on the display. See Table B-8 for the function with flexible numbers.
11. Return to step 4 or press [FLSH] to return to step 1.

**TABLE B-7
DEFAULT KEY ASSIGNMENT**

	ZT-616				ZT-824				ZT-1632/2464			
	6K/D	8K/D	12K/D	24K/D	6K/D	8K/D	12K/D	24K/D	6K/D	8K/D	12K/D	24K/D
K1	CO1	CO1	CO1	CO1	CO1	CO1	CO1	CO1	CO1	CO1	CO1	CO1
K2	CO2	CO2	CO2	CO2	CO2	CO2	CO2	CO2	CO2	CO2	CO2	CO2
K3	CO3	CO3	CO3	CO3	CO3	CO3	CO3	CO3	CO3	CO3	CO3	CO3
K4	CO4	CO4	CO4	CO4	FLT	CO4	CO4	CO4	FLT	CO4	CO4	CO4
K5	CO5	CO5	CO5	CO5	FLT	CO5	CO5	CO5	FLT	CO5	CO5	CO5
K6	CO6	CO6	CO6	CO6	PARK	CO6	CO6	CO6	PARK	CO6	CO6	CO6
K7		MSG	D120	D120		CO7	CO7	CO7		FLT	CO7	CO7
K8		OVER	D121	D121		CO8	CO8	CO8		PARK	CO8	CO8
K9			MSG	D122			MSG	D120			CO9	CO9
K10			OVER	D123			OVER	D121			FLT	CO10
K11			C BAK	D124			C BAK	D122			FLT	CO11
K12			SPD	D125			SPD	D123			PARK	CO12
K13				D126				D124				CO13
K14				D127				D125				CO14
K15				D128				D126				CO15
K16				D129				D127				CO16
K17				D130				D128				CO17
K18				D131				D129				CO18
K19				D132				D130				CO19
K20				D133				D131				CO20
K21				MSG				MSG				CO21
K22				OVER				OVER				CO22
K23				C BAK				C BAK				CO23
K24				SPD				SPD				CO24

NOTES:

1. PARK: Call Park key, C BAK: CO Call Back key, D120: DSS120 key
2. Square key telephone if 24K/D is assigned for 6K/D, 8K/D and 12K/D

**TABLE B-8
FLEXIBLE KEY FUNCTIONS**

FEATURE	DISPLAY	SELECTION
Direct CO Termination*	Flex Key LK01	[*] [DSS120]
Direct Station Signalling (DSS #)*	Flex Key DSS120	[*] [DSS121]
One-touch Speed Dialing (Station)*	Flex Key SPD01	[*] [DSS122]
Speed Dialing For DSS Unit No.1*	Flex Key SPD01 01	[*] [DSS123]
Speed Dialing For DSS Unit No.2*	Flex Key SPD01 01	[*] [DSS124]
Speed Dialing	Flex Key SPD	[*] [DSS125]
Float Group CO Termination*	Flex Key FLT01	[*] [DSS126]
Page Access - Zone 1	Flex Key Zone 1	[*] [DSS127]
Zone 2	Flex Key Zone 2	[*] [DSS128]
Zone 3	Flex Key Zone 3	[*] [DSS129]
Zone 4	Flex Key Zone 4	[*] [DSS130]
All Zone	Flex Key Zone 0	[*] [DSS131]
Group Call Access - Group 1	Flex Key Group 1	[*] [DSS132]
Group 2	Flex Key Group 2	[*] [DSS133]
Group 3	Flex Key Group 3	[*] [DSS134]
Group 4	Flex Key Group 4	[*] [DSS135]
All Group	Flex Key Group 0	[*] [DSS136]
Remote Control - Remote 1	Flex Key Remote 1	[*] [DSS137]
Remote 2	Flex Key Remote 2	[*] [DSS138]
Remote 3	Flex Key Remote 3	[*] [DSS139]
Remote 4	Flex Key Remote 4	[*] [DSS140]
Doorphone Access - Doorphone 1	Flex Key Door 1	[*] [DSS141]
Doorphone 2	Flex Key Door 2	[*] [DSS142]
Doorphone 3	Flex Key Door 3	[*] [DSS143]
Message Waiting	Flex Key MSG	[*] [DSS144]
Busy Override	Flex Key Over	[*] [DSS145]
CO Line Callback	Flex Key CO Back	[*] [DSS146]
ICM Line Callback	Flex Key ICM Back	[*] [DSS147]
Line Connect	Flex Key Connect	[*] [DSS148]
Call Park	Flex Key Park	[*] [DSS149]
Line Release	Flex Key Release	[*] [DSS150]
Serial Call	Flex Key Serial	[*] [DSS151]
Automatic Answering	Flex Key AutoAns	[*] [DSS152]
Night Transfer	Flex Key Night	[*] [DSS153]
Account Code Entry	Flex Key Account	[*] [DSS154]
Recall Pick-up	Flex Key Recall	[*] [DSS155]
One-touch Speed Dialing (System)*	Flex Key SysSPD00	[*] [DSS156]
Optimized CO Access Key No 1	Flex Key OPT1	[*] [DSS157]
No 2	Flex Key OPT2	[*] [DSS158]
Direct Signaling - Hunt Group 1	Flex Key Hunt 1	[*] [DSS159]
Hunt Group 2	Flex Key Hunt 2	[*] [DSS160]
Hunt Group 3	Flex Key Hunt 3	[*] [DSS161]
Hunt Group 4	Flex Key Hunt 4	[*] [DSS162]
Direct Voice Mail Access	Flex Key VM	[*] [DSS163]
Direct Mailbox Access	Flex Key MB120	[*] [DSS164]
Remote Control - Utility 1	Flex Key U RLY 1	[*] [DSS165]
Utility 2	Flex Key U RLY 2	[*] [DSS166]
Utility 3	Flex Key U RLY 3	[*] [DSS167]

NOTE * Use dial pad [0] - [9] to select desired number

**TABLE B-9
COMPARISON BY SOFTWARE VERSION**

SYSTEM	VERSION 1.0	VERSION 2.0	VERSION 3.0
Maximum Capacity	24 COs 64 Exts Note 1	24 COs 72 Exts Note 2	
Extension Numbering	120-183	120-190, 194	
Doorphone	191-193		
KSU CARDS			
CPU Card	CPUHW	CPUHW-1	CPUHW-1 (V3.0)
CPU	Z80	HD64180R1 Note 3	
CPU Clock Speed	4 Mega-hz	8 Mega-hz	
ROM	96 K-Byte	256 K-Byte	
RAM	96 K-Byte	192 K-Byte	
SDIFC	Compatible	N/A	N/A
SDIFC-1	Compatible	Compatible	Compatible
RECV2/8	Compatible	Compatible	Compatible
RECV2-1/8-1	Compatible	Compatible	Compatible
ERCv8	N/A	Compatible	Compatible

FEATURES	VERSION 1.0	VERSION 2.0	VERSION 3.0
Camp-on to Call Forward No Answer	N/A	Note 8	Note 9
Call Pick Up Group	1	1	4
Barge-in	N/A	N/A	X
Protected CO	N/A	N/A	X
Utility relay	N/A	N/A	X
[*]/[#] Dialing with Toll Restricted Station	Denied	Denied	Allowed
Call Park Timer	Shared with	System Hold	Separate Timer
Remote Relay Timer	3 sec.		Up to 30 sec
Call Forward/Camp-on to Hunt Group	N/A	N/A	X
MSG Waiting Cancelling by Received Side	N/A	N/A	X
CO Access from KF SLT	N/A	N/A	5 + (01-24)
CO/ICM Distinctive Ringing to SLT	N/A	N/A	X
Flexible Key for Hunt Group	N/A	N/A	X
DND Status on BLF on DSS Key	Steady	Steady	Flash

FEATURES	VERSION 1.0	VERSION 2.0	VERSION 3.0
Off hook Voice Announce	N/A	Note 4	
DISA	N/A	X	X
Optimized Routing	N/A	X	X
Conference Circuit Gain Control	N/A	X	X
Dial Confirmation Tone On/Off	Optional Software	Programmable (Station basis)	
Voice Mail Line Assignment	N/A	X	X
Page Key Assignment	All Call Page only	Programmable All/Zone/Group	
Floating CO Key During Call Park	Occupied	Idle	
ICM Hunt Group	N/A	X	X
CO Hunt Group	X	X	X
Direct System Speed Dial Key	N/A	X	X
Message Waiting Cancel	Dial [6]	Dial [5]	
DND Station DND Station	Accepts Paging	Denys Paging	
BLF Indication on CO Incoming	Yes Note 5	No Note 6	
Voice Mail Advanced Integration	N/A	N/A	Note 7

Notes:

- 1 With AMPA24/AMPA24-1
- 2 With AMPA24-1.
3. Enhanced Z80 chip
4. ZT-24X and/or ZT-12X required.
5. Except Version 1, Rev. 10 or later
6. No ringing Indication on DIL station to improve system processing speed
7. With 1632 or 2464KSU only.
8. Effective for other than Operator. Timer No. <17> must be set longer than timer No. <16> to activate.
9. Operator and Station Camp-on Recall Timer must be set longer than Call Forward No Answer Timer.



ZT-D SERIES ELECTRONIC KEY TELEPHONE SYSTEM ADDENDUM C - VERSION 4 ENHANCEMENT

CONTENTS	PAGE
1.00 GENERAL	1
Introduction	1
Upgrading	1
2.00 FEATURES AND OPERATIONS	2
New Features	2
Alphanumeric Station ID	2
Busy Bypass Messaging	3
Distributed Hunting	3
Fixed Call Forwarding	4
Facsimile Message Indication	5
Forced Account Code	5
Manual Signaling	6
Personalized Ringing Tone	6
Prime Line Access	6
System Call Park - Attendant Call Park Orbits ..	7
Toll Restriction Override	7
Improved Features	8
Call Forwarding	8
CO Hunt Group Hunting Order	9
DISA - No Password Mode	9
Incoming Call - Float Key	9
SMDR Output Format	10
3.00 PROGRAMMING	11
Introduction	11
CPU Upgrading	11
Programming Terminal	12
Version 4 Feature Programming	12

CONTENTS	PAGE
System Database	12
Modified Database	13
New Database	15

APPENDIX - DATABASE PLANNING SHEET

1.00 GENERAL

Introduction

1.01 The ZT-D system features are enhanced with the Version 4 software release. The Version 4 includes new features and improved features. This ZT-D Technical Manual Addendum describes additional features, operations and the database programming with the new release. Detail of features and operations are described in section 2.00, and programming is discussed in section 3.00.

Upgrading

1.02 The Version 4 software operates on the M/KCPUHW-1 CPU card only. A software upgrade kit is available for those M/KCPUHW-1 which are already installed with software Versions 3.0. The software upgrade kit consists of two EPROM chips for the M/KCPUHW-1 card, and it is not available for the M/KCPUHW card with version 1 software.

2.00 FEATURES AND OPERATIONS

New Features

2.01 The following is a list of new features introduced with the Version 4 software release.

ALPHANUMERIC STATION ID

Description:

Each ZT-D station can be assigned with an alphanumeric name, and it will be displayed, instead of the extension numbers on the key telephone's LCD. For instance, the display style of Version 3 software is treated as a default display in Version 4, and it is shown in the LCD when no ID is programmed in the database. The following lists the differences for Extension No. 125 when replaced with ID "John Doe":

ICM Call

Default
With ID

ICM Incoming Call

Default
With ID

ICM Incoming Call - Forwarded

Default
With ID

ICM Call - Forwarding

Default
With ID

ICM Callback

Default
With ID

ICM Call Busy

Default
With ID

Do not Disturb

Default
With ID

ICM Call Park Recall

Default
With ID

CO Camp-on Call

Default
With ID

CO Camp-on Recall

Default
With ID

CO Incoming Call - Forwarded

Default
With ID

Busy CO Override

Default
With ID

Operation:

As applicable

Conditions:

1. Database must be programmed.
2. Up to 8 digits per station.

Database:

91-03 Alphanumeric Station ID

Hardware:

None

BUSY BYPASS MESSAGING

Description:

This feature provides an alternate way to deliver a message to a busy station without the second voice path. The function is programmed on a key with the contents of messages that are to be displayed on the called key telephone's LCD. (Refer to Manual Signaling.)

Operation:

To send a message to a station under CO/ICM call by Busy Bypass Messaging:

{ICM dial tone}-{Extension No.}-{Busy tone}-
[Message-n]

To return a message:

{ICM message call}-{Message-n}

Conditions:

1. Up to 16 message keys can be programmed in a system. These message keys may be shared with the Manual Signaling feature.
2. When the key is pressed after dialing on an ICM (busy or busy by-pass), the registered station number is ignored and the message is displayed on the called station's LCD.
3. A busy bypass tone sounds the called station's speaker when the key is pressed, unless the speaker is in use.
4. The message key does not work during account code entry.
5. The message on the LCD stays until the station returns a message or goes on-hook.

Database:

78 Flexible Key Assignment, 91-11 Busy Bypass Messaging

Hardware:

ZT-12KTX, ZT-24KTX, ZS-6KTD

DISTRIBUTED HUNTING

Description:

The Version 4 software provides the choice of two hunting schemes for CO Hunt Group: Terminal and Distributed Hunting.

Operation:

{ICM dial tone} + [Hunt Group pilot number]

Conditions:

1. The choice is system wide and covers all of the hunt groups.
2. Four hunt groups, up to 16 stations per a hunt group.
3. The station hunting order is programmable. One station may appear several times in the hunt group.

Database:

52 Hunt Group Station, 91-01 Hunt CO Group Type

Hardware:

None

FIXED CALL FORWARDING

Description:

If a station is programmed with this feature in the database, it will automatically forward incoming calls when the station is busy or does not answer. This forwarding becomes inoperative when the Call Forwarding feature is manually operated.

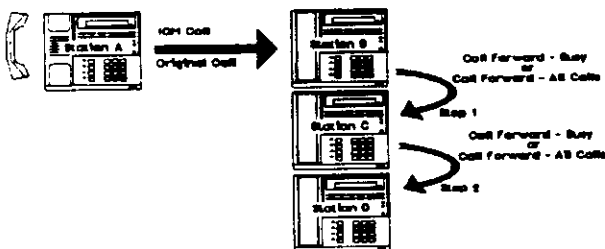
Operation:

None

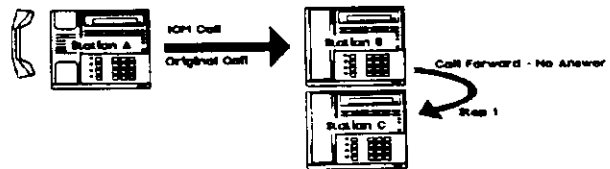
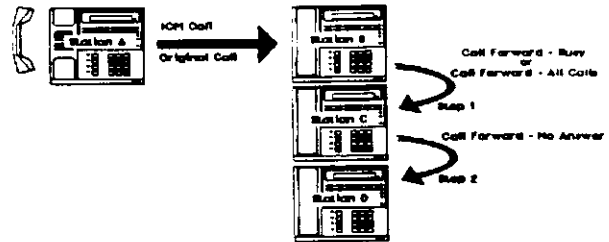
Conditions:

1. This feature operates only when Manual Call Forward is not activated.
2. The Fixed Call Forwarding can only be enabled or disabled through database programming.
3. The following calls will be forwarded through these features:
 - Calls through ICM lines
 - ICM/CO Camp-on calls
 - DISA calls
4. Two programmable modes of Fixed Call Forwarding are available:
 - Busy/No Answer Call Forward to an extension
 - Busy/No Answer Call Forward to Voice Mail
5. The destination station number of the Fixed Call Forwarding must be programmed in the database and cannot be changed by the station operation.
6. All applicable calls will be fixed-call-forwarded when the station is in DND.
7. When a destination of Fixed Call Forwarding is in DND, a camped-on call recalls the transferring station.
8. Steps for Call Forwarding are the same as for Manual Call Forwarding.

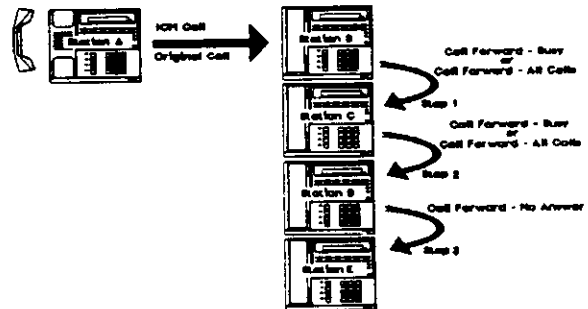
Two steps for extensions with "No Answer Forwarding"



"No Answer Forwarding" is always the last step:



"No Answer Forwarding" provides one extra step if the station is at the second step:



Database:

91-04 Fixed Call Forwarding

Hardware:

None

FACSIMILE MESSAGE NOTIFICATION

Description:

A facsimile machine is usually connected to a single line port in the ZT-D system, and the user has no way of knowing if facsimile calls are received, unless the machine is placed right next to a station. With this feature the facsimile machine will automatically send a message to a preset station to turn on the message lamp and/or indicate it on the LCD display of the station, after it receives facsimile calls.

Operation:

To clear the FAX message: [MSG] or [6]

Conditions:

1. The facsimile machine can only be connected to a single line port, and the port must be identified by the database programming.
2. A key telephone that receives the message from the facsimile machine must be identified by the database programming.
3. When the facsimile receives a call that is longer than the time set in "Minimum facsimile call time", the preset station receives a message as soon as the facsimile reception is completed.
4. The facsimile call appears as "MSG FAX" on the LCD of the preset station.
5. The [FEAT] LED will light to indicate a facsimile call when no [MSG] key is provided on the assigned station.
6. The order of priority on the message LAMP indication is as follows:
 - Voice Mail (highest: fast flash lamp)
 - Fax (slow flash lamp)
 - Station Message (lowest: steady on)
7. A single line port programmed as the facsimile port still provides all of the single line functions.

Database:

03 Station Type Assignment, 91-14 Fax Message Notification (Facsimile port, Notification Station, Minimum Valid Facsimile Call Time)

Hardware:

None

FORCED ACCOUNT CODE

Description:

This feature restricts a station from making outgoing calls without entering account codes.

Operation:

Fixed code length:

Outgoing Calls

{Off-hook} + [Con](or[FLTn]/[OPT]) + {1st dial tone} + [Account Code] + {2nd dial tone} + [dial]

Redial

{Off-hook} + [#] + [Account Code]

Variable code length:

Outgoing Calls

{Off-hook} + [Con](or[FLTn]/[OPT]) + {1st dial tone} + [Account Code] + [*] + {2nd dial tone} + [dial]

Redial

{Off-hook} + [#] + [Account Code] + [*]

Conditions:

1. The system data can set Forced Account Codes for either fixed or variable length.
2. The Account Code length can be 1 to 12 digits.
3. When a variable length is selected, the user can enter from 1 to 12 digits for the account code, but it must be followed by [*], except for 12 digits.
4. The dialed number for the outgoing calls is still subject to toll restriction.
5. Stations set for Forced Account Code entry cannot enter an optional account code.
6. SCDR printout can be masked by programming.
7. The DISA calls do not require account code entry before making outgoing calls even though a Forced Account Code station is referred to determine the COS.
8. The Forced Account Code station can dial five emergency numbers without entering an account code, but these numbers must also be allowed in the Toll Restriction Table.

Database:

91-08 Forced Account Code Station, 91-10 Forced Account Code Digit Length, 91-15 Emergency Dial Table, 91-07 Account Code Masking Position and Digits

Hardware:None

MANUAL SIGNALING

Description:

This feature is an updated button buzzer operation that allows a station user to press a button on their phone to signal a pre assigned station by sending a special tone to the speaker and a text message to the LCD. (Refer to Busy Bypass Messaging.)

Operation:

To send a message to a preset station:
{Off-hook} or {Idle} + [Message-n]

Conditions:

1. Up to 16 message keys can be programmed in a system. These message keys may be shared with the Busy Bypass Messaging feature.
2. The extension number must be registered on the key for the Manual Signaling operation.
3. When the key is pressed, the called station LCD displays the message regardless of the station's status: busy or idle.
4. A busy bypass tone sounds the called station's speaker when the key is pressed, unless the speaker is in use.
5. The message key will not work during the account code entry.
6. The message stays on the LCD until the station returns a message or goes on-hook.

Database:

78 Flexible Key Assignment, 91-11 Busy Bypass Messaging

Hardware:

None

PERSONALIZED RINGING TONE

Description:

Every key telephone can select one of four ringing tones to differentiate its CO ringing tone from the adjacent stations.

Operation:

To select a ringing tone:
[Off-hook] + [FEAT] + [SPEAKER] + [0] + [Tone ID]

Tone ID	
[0]=440/480 hz.	[2]=440/620 hz.
[1]=480/620 hz.	[3]=350/440 hz.

Conditions:

1. The default value of the ringing tone is 440/480 hz.
2. This tone is applied to
 - . DIL calls (DIL to single station only)
 - . Unscreened transfer calls
 - . UCD calls
 - . Group Hunt calls

Database:

None

Hardware:

None

PRIME LINE ACCESS

Description:

A station will automatically access a prime line upon going off-hook, when programmed in the station database. The prime line access can be selected from an Intercom line, Individual CO line, Floating CO group, or Optimized Outgoing access.

Operation:

[Off-hook]

Conditions:

1. This feature is available individually for each station.
2. One of the following selections must be registered in the station's database to enable this feature:
 - . Intercom line (system default)
 - . CO line Number
 - . Floating CO group Number
 - . Optimized Outgoing access.
3. When the station is programmed for Forced Account Code entry station <91-08>, CO dial tone is returned after the appropriate account code entry.

Database:

29 Floating CO Group Assignment, 91-05 Prime Line CO, 91-06 Prime Line Access

Hardware:

None

SYSTEM CALL PARK - Attendant Call Park Orbits

Description:

A ZT-D system attendant station can use eight attendant call park orbits to hold calls temporarily. The call parked in the orbits can be picked up by any one of the system extensions by dialing [101] through [108] ICM.

Operation:

To park: {while on a CO call} - [PAGE] or [GPAGEn]
- {orbit no. on LCD}
To pickup: {at ICM dial tone} - [1][0][1] through
[1][0][8]

Conditions:

1. Park numbers are 101 through 108.
2. When all park orbits are in use, the next call will be placed on a system hold.
3. The direct CO line pickup key on the key telephones remains busy while the call is parked by the attendant.

Database:

None

Hardware:

None

TOLL RESTRICTION OVERRIDE

Description:

This feature allows a KT to make outgoing calls allowed by the COS provided with the Toll Restriction Override codes, not by the COS of the KT.

Operation:

{At ICM dial tone} + [FEAT] + [0] + [Override code] + {2nd dial tone} + [CO] (or [FL]n/[OPT]) + [dial]

Conditions

1. Up to eight override codes can be registered in the system database.
2. The Override codes may be up to 12 digits in length, and may be any digit (0-9), which may be

used with the ability to have wild card number "N" entry.

3. When a wildcard number is registered it means any number of "0" to "9" may be used, e.g. the registered override code "2472N" allows ten uses: "24720", "24721", "24722",....., "24729".
4. The Override codes must be programmed with the related station numbers. The following database items determine the COS for outgoing calls using the Override codes;

61	Outgoing Call Restriction
62	CO Line Pick-up Restriction
63	System Toll Speed Dial
64	System Speed Dial Access
77	Toll Restriction Class
80	ICM Group (restricts system speed dial access)
85-02	Forced Optimized Station

5. The physical KT's COS is replaced with a new COS when an Override code is entered, and returns to the original COS when the call is terminated.
6. Last Number Redial and Saved Redial functions do not work for calls made using Override codes.
7. When an Override code is entered, a Forced Account Code is not required even the station is assigned to use it.
8. The dialed number of outgoing calls is still subject to toll restriction by the Toll Restriction Override code's COS.

Database:

91-09 Toll Restriction Override Code Table, 91-07 Account Code Masking Position and Digits

Hardware:

None

Improved Features

2.02 The following is a list of features that are improved in operational functionality.

CALL FORWARDING

Description:

The Call Forwarding modes in the ZT-D system are changed to more usable modes: All Call Forward, No Answer Call Forward, and Busy/No Answer Call Forward. This forwarding feature is operated by the telephone users and the destination can be selected Fixed Call Forwarding overridden when the Call Forwarding feature is manually operated.

Operation:

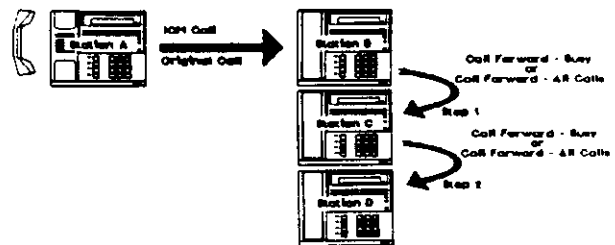
None

Conditions:

1. The Fixed Call Forwarding is overridden when the Call Forwarding feature is manually operated.
2. Following calls will be forwarded through this features;
 - Calls through an ICM lines
 - ICM/CO camp-on calls
 - DISA calls
3. Three forwarding modes of Call Forwarding can be selected:
 - (1) All Call Forward
 - (2) Busy/No Answer Call Forward
 - (3) No Answer Call Forward

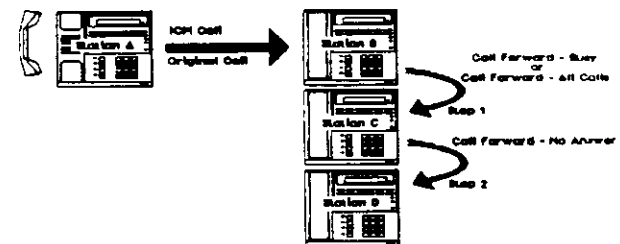
Note: Call Forward to Hunt group works All Call Forward mode only.
4. Steps of call forwarding depends upon the forwarding modes:

Two steps for extensions not "No Answer Forwarding":

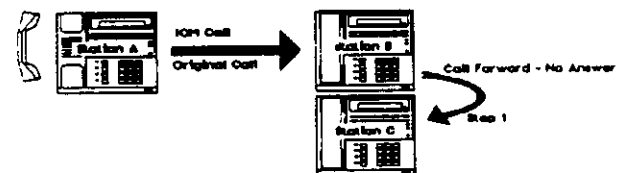


Ext. No.1 (All/Busy) --Ext. No.2 (All/Busy)--Ext. No.3

"No Answer Forwarding" is always the last step:

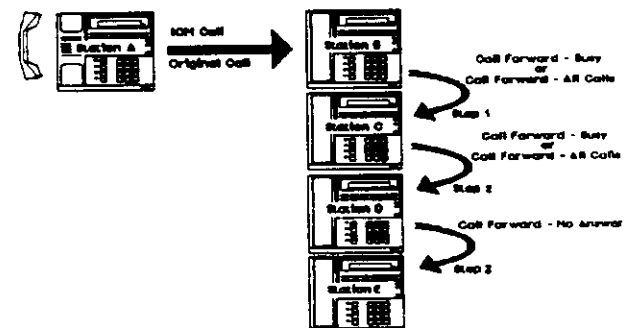


Ext. No.1 (No Answer) --Ext. No.2



Ext. No.1 (All/Busy) --Ext. No.1 (No Answer) --Ext. No.3

"No Answer Forwarding" provides one extra step if the station is at the second step:



Ext. No.1 (All/Busy)--Ext. No.2 (All/Busy)--Ext. No.3 (No Answer)--Ext. No.4

5. When the station is set with "Busy/No Answer Call Forward to a hunt group", incoming CO calls are not forwarded.
6. When a destination of call forwarding is in DND, a camped-on call recalls the transferring station.

Database:

87 Call Forward No Answer Timer

Hardware:

None

CO HUNT GROUP HUNTING ORDER

Description:

The Version 4 software allows for flexible station hunting order assignment in the hunt group. The flexible station hunting order is available only for CO Hunt Groups.

Operation:

{ICM dial tone} + {Hunt group number}

Conditions:

1. Four hunt groups. Up to 16 stations per a hunt group.
2. The station hunting order is programmable. One station may appear several times in the hunt group. (For example;
EXT.A --> EXT.B --> EXT.A --> EXT.C --> EXT.A)

Database:

52 CO Hunt Group

Hardware:

None

DISA - No Password Mode

Description:

An outside caller can use the ZT-D's DISA feature without entering a passwords. No password operation allows only ICM calls and ICM group calls following the assigned station's class of service.

Operation:

{After DISA answers and returns a dial tone}-{dial}

Conditions:

1. No password is required if the CO line for DISA calls is programmed to refer to a station number (class of service).
2. A password is required if the CO line for DISA calls is not programmed to refer to a station number (class of service).
3. The ZT-D system returns a DISA dial tone immediately after answering an incoming call for no password mode operation.

Database:

35 DISA CO Line, 36 DISA Activating Station, 37 DISA Access Activation
91-02 DISA Direct Dial COS

Hardware:

RECV8-1 or RECV2-1

INCOMING CALL - Float Key

Description:

An incoming call rings on the Floating CO Group Key in which the line belongs to.

Operation:

None

Conditions:

1. Incoming calls on lines in a specific CO Group will ring on the Floating CO Group Key for that line.
2. When the Floating CO Group Key is busy, the call rings on the next available Floating Group Key.
3. When all of the Floating CO Group Keys are busy, the call rings on the next available Optimized Access Key.

Database:

29 Floating CO Group Assignment, 78 Flexible Key Assignment

Hardware:

None

SCDR Output Format

Description:

The SCDR Output format is revised as the maximum digits of an account code print-out are increased from six digits to twelve digits in version 4. Also a note code "*" is added next to the duration time to indicate a call duration that exceeds one hour.

Operation:

An account code entry

Conditions:

1. Printer Format

Position 1	2	3	4	5	6	7						
1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890
SEQ	TRK	EXT1	EXT2	TIME	DUR	CALLED NUMBER	ACCT NO.	NOTE				
001	13	126	120	1:31PM	0:23*	20193585801234567890123456	123456789012	*				
002	8	172		1:45PM	10:13			1				

2. Auxiliary Format

Position 1	2	3	4	5	6	7						
1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890
(STX)	900815	13	126	120	1331	0023*	20193585801234567890123456	123456789012	*	(ETX)	(CR)	
(STX)	900815	08	172		1345	1013			1	(ETX)	(CR)	

Database:

06 SCDR Output Format, 07 SCDR Output Mode

Hardware:

SDIFC-1, Customer provided serial printer

3.00 PROGRAMMING

Introduction

3.01 This section describes procedures to program new customer database items added in the Version 4 software of the ZT-D Key Telephone System. Planning sheets to design the customer database for the new features are provided at the end.

CPU Upgrading

3.02 This section describes the procedure to upgrade the preinstalled ZT-D system to Version 4. The upgrading will be done in two steps: replacing the EPROMs on the M/KCPUHW-1 card then programming additional database items.

a. Replacing EPROMs

The following procedure is required to replace the EPROM on the M/KCPUHW-1 card in the system.

1. Make sure that switch SW1 on the M/KCPUHW-1 card is set to the "RUN" (protect) position, and a Lithium battery is properly connected on the board.
2. Turn off the system main power.
3. With a wrist band to discharge static, pull out the M/KCPUHW-1 card from the motherboard connector.
4. Remove two EPROM chips from their sockets ROM1 and ROM2 carefully using a small screw driver or EPROM puller.
5. Insert the new set of EPROMs that contain the Version 4 software into the socket with the matching number mark.
6. Plug the M/KCPUHW-1 card into the motherboard connector.

7. Turn on the system main power.
8. At the programming extension, with the handset on-hook (Speaker off) Enter [0], and a specific password to set the system into programming mode at the extension No. 120.
9. Enter the desired Program Item Number to initiate the programming. The Program Index Numbers are listed in Table 2.

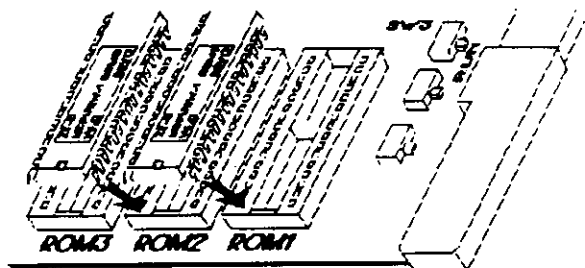


FIGURE 1 CPU UPGRADING

Programming Terminal

3.03 A ZT-24KTX key telephone and ZT-DSS console(s) are required to program the system database on-site. They must be placed in the station positions No. 120(KT), No. 121(DSS). Also No. 122(DSS) is needed if more than 32 stations are installed with the system.

The programming functions of their keys and lamps are listed in Table 1.

**TABLE 1
PROGRAMMING KEYS AND LAMPS**

Keys/Lamps	Location	Function
Dial Pad [0] to [9],[*],[#]	KT	Enter the program index number, alphanumeric data.
Dial Pad [#]	KT	Toggles function during programming
[FLSH] key	KT	Terminates programming after storing data.
[FWD] key	KT	Selects the next program index or data entry after storing data.
[FEAT] key	KT	Selects the previous program index or data entry after storing data.
HOLD/DND key	KT	Enters N code for User Table.
Line [LK] keys	KT	Programs line status.
Line lamps	KT	Indication of line status.
[DSS] keys	DSS	Programs station status.
BLF lamps	DSS	Indication of station status.

Version 4 Feature Programming

3.04 After system upgrading is completed, new operational functions must be identified in order to operate the ZT-D system properly. This paragraph describes the programming requirements to activate Version 4 features.

System Database

3.05 The system database for Version 4 features has two modified database items and fourteen new database items as listed below:

**TABLE 2
VERSION 4 FEATURE PROGRAMMING ITEMS**

<52>	Hunt Group Station
<78>	Flexible Key Assignment
<91-01>	Hunt CO Group Type
<91-02>	DISA Direct Dial COS
<91-03>	Alphabetical Station ID
<91-04>	Fixed Call Forwarding
<91-05>	Prime Line CO
<91-06>	Prime Line Access
<91-07>	Account Code Output Masking
<91-08>	Forced Account Code Station
<91-09>	Toll Restriction Override Code
<91-10>	Forced Account Code Digit Length
<91-11>	Busy Bypass Message
<91-12>	Automatic CO Answer (Future)
<91-13>	UCD (Future)
<91-14>	FAX Notification Station

Modified Database

3.06 Two database items, Item 52 and item 78 are modified from the previous Version (3.00) to provide additional data that are related to Version 4 features.

HUNT CO GROUP ASSIGNMENT

Item No.: 52

Description:

This assignment defines stations which belong to the ICM hunt groups, and the CO lines which ring in the hunt group. Program either CO and/or stations for the four (4) hunt groups in the system.

Procedure:

1. Display indicates **52.Hunt Gp1 CO ?**.
2. Enter Hunt Group number [1] through [4] on the dial pad to select a specific group number then press [CO] keys to assign the incoming CO lines that ring into the hunt group selected.
3. Press the [FWD] key to assign the stations. The display changes to **Hunt Gp1 Sta.#01**.
4. Press the [DSS] key to assign the stations which ring on incoming calls first (#1) within the group, or press [*] to clear all the registered stations.
5. Press the [FWD] key to continue to the next hunting order station in the group, press [1] through [4] on the dial pad to select another Hunt Group number, or [FLSH] to terminate the process.

Default: None

FLEXIBLE KEY ASSIGNMENT

Item No.: 78

Description:

Due to the Busy Bypass Messaging feature, new Busy Bypass Message keys are added to the programming.

Procedure:

1. Display indicates **78.ST T24D #120**.
2. Press the [DSS] key to change the station No. for key assignment.
3. Press the [FWD] key to proceed to individual key assignment. The display changes to **Flex Key LK01**, for example, and the lamp of the flexible key under the assignment lights.
4. Press the [FWD] key for next selection of the features or [FEAT] for the previous one, until the desired assignment appears on the display, or press [*]+[DSS] key to assign the key functions in accordance with the assignment code listed in Table 3.
5. Change the number on the display to the required feature code using the dial pad. For example, if [1][6] is pressed when displaying **Flex Key LK01**, the display changes to **Flex Key LK16**. Enter [1][1],[2][1],...[9][1] and 12,22,....92 for Direct FLT keys.

NOTE: For Direct/Floating CO Group accessing, enter the codes indicated in Table 4.

6. Press the [FLSH] key once to assign another flexible key or twice to terminate the process.

Default:

Direct CO Keys

**TABLE 3
FLEXIBLE KEY ASSIGNMENT**

Feature.....	Display.....	Selection
Direct CO Termination....	Flex Key LK01	..[*] [DSS120]
Direct Station Signaling..	Flex Key DSS120	..[*] [DSS121]
One-touch Speed Dialing..	Flex Key SPD01	..[*] [DSS122]
Speed Dialing.....	Flex Key SPD1-01	..[*] [DSS123]
Speed Dialing.....	Flex Key SPD2-01	..[*] [DSS124]
Speed Dialing.....	Flex Key SPD	..[*] [DSS125]
Floating CO Termination..	Flex Key FLT01	..[*] [DSS126]
Zone Page Access.....	Flex Key Zone1	..[*] [DSS127]
Zone Page Access.....	Flex Key Zone2	..[*] [DSS128]
Zone Page Access.....	Flex Key Zone3	..[*] [DSS129]
Zone Page Access.....	Flex Key Zone4	..[*] [DSS130]
All Zone Page Access.....	Flex Key Zone0	..[*] [DSS131]
Group Call Access.....	Flex Key Group1	..[*] [DSS132]
Group Call Access.....	Flex Key Group2	..[*] [DSS133]
Group Call Access.....	Flex Key Group3	..[*] [DSS134]
Group Call Access.....	Flex Key Group4	..[*] [DSS135]
All Call Access.....	Flex Key Group0	..[*] [DSS136]
Remote Control.....	Flex Key Remote1	..[*] [DSS137]
Remote Control.....	Flex Key Remote2	..[*] [DSS138]
Remote Control.....	Flex Key Remote3	..[*] [DSS139]
Remote Control.....	Flex Key Remote4	..[*] [DSS140]
Doorphone Access.....	Flex Key Door1	..[*] [DSS141]
Doorphone Access.....	Flex Key Door2	..[*] [DSS142]
Doorphone Access.....	Flex Key Door3	..[*] [DSS143]
Message Waiting.....	Flex Key MSG	..[*] [DSS144]
Busy Override.....	Flex Key Over	..[*] [DSS145]
CO Line Call-back.....	Flex Key COBack	..[*] [DSS146]
ICM Line Call-back.....	Flex Key ICMbck	..[*] [DSS147]
Line Connect.....	Flex Key Connect	..[*] [DSS148]
Call Park.....	Flex Key Park	..[*] [DSS149]
Line Release.....	Flex Key Release	..[*] [DSS150]
Serial Call.....	Flex Key Serial	..[*] [DSS151]
Automatic Answering.....	Flex Key AutoAns	..[*] [DSS152]
Night Transfer.....	Flex Key Night	..[*] [DSS153]
Account Code Entry.....	Flex Key Account	..[*] [DSS154]
Recall Pick-up.....	Flex Key Recall	..[*] [DSS155]
System SPD 00.....	Flex Key SPD00	..[*] [DSS156]
Optimized Access No.1....	Flex Key OPT01	..[*] [DSS157]
Optimized Access No.2....	Flex Key OPT02	..[*] [DSS158]
Hunt Group Access No.1....	Flex Key Hunt1	..[*] [DSS159]
Hunt Group Access No.2....	Flex Key Hunt2	..[*] [DSS160]
Hunt Group Access No.3....	Flex Key Hunt3	..[*] [DSS161]
Hunt Group Access No.4....	Flex Key Hunt4	..[*] [DSS162]
Voice Mail Access.....	Flex Key VM	..[*] [DSS163]
Mailbox Access 120.....	Flex Key MB120	..[*] [DSS164]
Universal Relay No.1.....	Flex Key U.RLY1	..[*] [DSS165]
Universal Relay No.2.....	Flex Key U.RLY2	..[*] [DSS166]
Universal Relay No.3.....	Flex Key U.RLY3	..[*] [DSS167]
Busy Bypass Messaging....	Flex Key B-MSG01	..[*] [DSS168]
Not used.....	Flex Key	..[*] [DSS169]

**TABLE 4
FLOATING KEY ASSIGNMENT**

FLT NO.....	DESCRIPTION
[0] [1] through [0] [4]	...Float Group Access key
[1] [1] and [1] [2]	...Direct Float for CO Group No.1
[2] [1] and [2] [2]	...Direct Float for CO Group No.2
[3] [1] and [3] [2]	...Direct Float for CO Group No.3
[4] [1] and [4] [2]	...Direct Float for CO Group No.4
[5] [1] and [5] [2]	...Direct Float for CO Group No.5
[6] [1] and [6] [2]	...Direct Float for CO Group No.6
[7] [1] and [7] [2]	...Direct Float for CO Group No.7
[8] [1] and [8] [2]	...Direct Float for CO Group No.8
[9] [1] and [9] [2]	...Direct Float for CO Group No.9

New Database

3.07 There are fourteen database items are added to program Version 4 features. Note that item <91-12, 13> are reserved for hardware that will be available in future.

Starting New Database Entry

3.08 To start new database item entries that are sub-items of <91>, the following operation is required from the programming terminal position (Station #120):

Procedure:

1. Press [0] + [FEAT] + [Password]
2. Display indicates **Input No.nxt,end**
3. Enter [9] [1], the display changes to **Ver.4 No.nxt,end**
4. Enter subitem numbers [0][1] to [1][5] to proceed to database programming.
5. Press [FWD] to move to the next item or [FEAT] to the previous item.
6. Press [FLSH] to terminate the programming process.

HUNT CO GROUP TYPE

Item No.: 91-01

Description:

This item determines the hunting scheme, either Terminal hunt or distributed hunt.

Procedure:

1. Display indicates **01.HuntType Term**
2. Press [#] to toggle between Term (Terminal Hunt)

and Dist (Distributed Hunt).

3. Press [FLSH] to terminate the process.

Default:

Terminal Hunt

Associated Database:

52 Hunt CO Group

DISA DIRECT DIAL COS

Item No.: 91-02

Description:

This item sets up a Class-of-Service mark on each DISA group, that are referred when for no-password access is used.

Procedure:

1. Display indicates **02.DIS1 COS St.**
2. Press the [DSS] key to assign the extension number, of which COS is used for the DISA group.
3. Press [1] through [8] or [FWD] to select next DISA group to be assigned.
4. Press [FLSH] to terminate the process.

Default:

No COS for any DISA group

Associated Database:

35, 36, 37 DISA Programming

ALPHANUMERIC STATION ID

Item No.: 91-03

Description:

This item programs alphanumeric station ID for each extension.

Procedure:

1. Display indicates **03.Station ID**

2. Press the [DSS] key to select the extension number to be programmed. Then the BLF of the extension lights to indicate the station being programmed.
3. Press the [FWD] key and the display changes to **St. ID =**
4. Enter up to 8 characters for the ID using the dial pad [0] through [9] referring to Table 5.
5. Press the [HOLD] key to enter the each letter.
6. Press [FLSH] to terminate the process.

Default:

No ID for any station

**TABLE 5
ID ENTRY KEYS**

KEY	ALPHABET/FUNCTION			
1	-	.	SP	1
2	A	B	C	2
3	D	E	F	3
4	G	H	I	4
5	J	K	L	5
6	M	N	O	6
7	P	R	S	7
8	T	U	V	8
9	W	X	Y	9
0	Q	Z	&	0
#	Upper/lower case shift lock			
HOLD	Write/Delete one character			
SPKR	Delete all characters			

FIXED CALL FORWARDING

Item No.: 91-04

Description:

The stations programmed with this database option forwards calls to a predesignated destination. The database must be registered with the Call Forwarding Mode and the destination.

Procedure:

1. Display indicates **04.Fixed FWD 0**
2. Press the [DSS] key to select the extension number to be programmed. Then the BLF of the extension lights to indicate the station being programmed.
3. Set the forwarding mode using dial pad [0] through [3]:
 - [0] = No forwarding
 - [1] = Busy/No answer Forwarding to Extension
 - [2] = Reserved
 - [3] = Busy/No answer Forwarding to Voice Mail
 or press [FLSH] to terminate the process.
4. When [1] is pressed, the display changes ***1 FWD to St.nnn**
 Press DSS key to assign the destination extension number.
 Press [FLSH] key to program other extensions.
5. [2] is reserved. Please do not program this number.
6. When [3] is pressed, the display changes **04.Fixed FWD 3** and the station's Fixed Call Forwarding destination is set to the voice mail ports. (ZT-D's voice mail ports are designed work as a voice mail hunt group. Therefore, even if the first voice mail port is busy, the forwarded call will be transferred to the next available voice mail port.)
 Press [FLSH] key to program other extensions.

Default:

No forwarding, No destination

PRIME LINE CO

Item No.: 91-05

Description:

This item programs CO line numbers that are allowed for the Prime Line Access feature.

Procedure:

1. Display indicates **05.Prime Line CO**
2. Press [LK] keys to select the allowed line. The selected line lights up.
3. Pressing the lighted [LK] key will disengage the line and turn the light off.
4. Press [FLSH] to terminate the process.

Default:

No lines are assigned.

Associated Database

91-06 Prime Line CO

PRIME LINE ACCESS

Item No.: 91-06

Description:

This item determines which line is to be seized upon going off-hook (or pressing [SPKR] key) by each extension.

Procedure:

1. Display indicates **06.Prime Type 00** where
Type 00 = ICM Access
Type 01 - Type 24 = Direct CO Line Access
Type 30 = Optimized CO Line Access
Type 31 - Type 39 = CO Line Group Access
(Floating Group)
2. Press [0][0] through [3][9] to select the Access Type.
3. Press the [DSS] key to assign extensions to the Access Type displayed on the LCD. The BLFs of the extensions light to indicate that they are assigned.
4. Press [FLSH] to terminate the process.

Default:

Type 00 = ICM Access for all extensions.

ACCOUNT CODE OUTPUT MASKING POSITION

Item No.: 91-07

Description:

Account code print out to the SCDR will be masked as programmed in this item.

Procedure:

1. Display indicates **07.Mask Start 00**
2. Enter two digits ([0][0] to [1][2]) to indicate the starting position to mask the account code.
3. For example, if [0][6] is pressed, the display will change to **07.Mask Start 06**
4. Press the [FWD] key to proceed to number of masking entry. Display will change to ***Mask Length 00**
5. Enter two digits ([0][0] to [1][2]) that is a number of digits of the account code to be masked.
6. For example, if [0][4] is pressed, the display will change to ***Mask Length 04**
7. Press [FLSH] to terminate the process.

Default:

Starting position = 00, Mask length = 00 digits

FORCED ACCOUNT CODE STATION

Item No.: 91-08

Description:

The extensions assigned with this database item cannot make outgoing calls without account code entry.

Procedure:

1. Display indicates **08.ForcedACCT St**

2. Press the [DSS] key to select the extension number to force an account code entry for outgoing calls. Then the BLFs of the forced extensions light up.
3. Press [FLSH] to terminate the process.
4. When a forced account code station uses the Last Number Redial feature or Speed Dial feature, the system will put a pause time before sending out the digits. This pause time refers to item 25: PBX pause time in the system database. Therefore, **please make the PBX pause time shorter, time < 2 seconds** to send out the digits more quickly. (Default value; 5 seconds)

Default:

No stations are forced

<< IMPORTANT >>
**PLEASE PROGRAM "911" EMERGENCY
NUMBER INTO A EMERGENCY DIAL TABLE
91-15 TO ALLOW STATION USERS TO CALL
THIS EMERGENCY NUMBER WITHOUT
ENTERING AN ACCOUNT CODE.**

TOLL RESTRICTION OVERRIDE

Item No.: 91-09

Description:

This item defines eight special codes that are used to override a station's COS to make outgoing calls.

Procedure:

1. Display indicates **09.OVERRIDE CD.#1**
2. Press [1] through [8] to select Override code No.1 to No.8 respectively.
3. Press the [DSS] key to select the extension number that determines the COS of the Override code.

4. Press the [FWD] key to proceed to enter an Override code or Press [FLSH] to terminate the process.
5. When the [FWD] key is pressed, the display changes to **OVERRIDE CD#1=**
6. The Override code can be up to 12 digits in length.
0 - 9 = number
[HOLD/DND] = wild card N (any number of 0 - 9)
For example, **OVERRIDE CD#1=123NN** means 12300 through 12399 can be used as Override code No.1.

7. Press [FLSH] to proceed to next code.

Default:

No Override code and no COS station are registered for the code No. 1 through No.8.

FORCED ACCOUNT CODE DIGIT LENGTH

Item No.: 91-10

Description:

This item determines number of digits that are used for the Forced Account Code.

Procedure:

1. Display indicates **10.ACCT Digit 00**
2. Enter [0][0] though [1][2] through dial pad.
00 = variable length
01 - 12 = fixed length.
3. Press [FLSH] to terminate the process.

Default:

00 = variable length

BUSY BYPASS MESSAGE/ MANUAL SIGNALING

Item No.: 91-11

Description:

This programming item registers alphanumeric messages that are displayed on the KT's LCD when an associated Busy Bypass Message key or Manual Signaling key is pressed. Up to 16 message can be registered.

TABLE 6
ID ENTRY KEYS

KEY	ALPHABET/FUNCTION			
1	-	.	SP	1
2	A	B	C	2
3	D	E	F	3
4	G	H	I	4
5	J	K	L	5
6	M	N	O	6
7	P	R	S	7
8	T	U	V	8
9	W	X	Y	9
0	Q	Z	&	0
#	Upper/lower case shift lock			
HOLD	Write/Delete one character			
SPKR	Delete all characters			

Procedure:

1. Display indicates **11.Busy MSG #01**
2. Press [0][1] through [1][6] to select the message key number.
3. Press [FWD] to proceed to message registration or [FLSH] to terminate the process.
4. When [FWD] is pressed, the display changes to **MSG#01 =**

5. a) If the message key is for Busy Bypass Messaging purposes, do not program this step. Go to next step.

b) If the message key is for Manual Signaling purposes, please program following:

Press the [DSS] key to assign the default destination station where the message and notification tone are to be automatically sent.

6. Press a dial pad to enter an alphanumeric message that belongs to the message number. Refer to Table 6.

7. Press [FLSH] to program next message.

Default:

No messages are registered.

FAX MESSAGE NOTIFICATION

Item No.: 91-14

Description:

This item tells the system which extension number the FAX machine is connected (SLT) to, which extension the FAX should notify the when a document is received, and the minimum duration time to determine if the call is a FAX call.

Procedure:

1. Display indicates **14.FAX Port #1**
2. Press the [DSS] key where the Group No.1 FAX machines are connected.
3. Press the [FLSH] key to terminate the process, or the [FWD] key to proceed to Notification Station assignment, or [1] to [4] to change the group number.
4. When the [FWD] key is pressed, the display changes to ***Notify St. #1**
5. Press the [DSS] key of the extension where Group No.1 FAX machine's notification is to go.

6. Press the [FLSH] key to reprogram the connected ports (step 2), or [FWD] key to proceed to Minimum call duration, or [1] to [4] to change the group number.
7. When the [FWD] key is pressed, the display changes to ***ValidTime 02 0s**.
8. Enter two digits minimum time for a valid FAX call, [0][1] to [1][5] (10 sec. to 150 sec.) through a dial pad.
9. Press the [FLSH] key to return to Notification Station assignment (step 5).

**TABLE 8
FAX TIMER DATA**

Timer Entry	Time	Timer Entry	Time
00	20 sec.	08	80 sec.
01	10 sec.	09	90 sec.
02	20 sec.	10	100 sec.
03	30 sec.	11	110 sec.
04	40 sec.	12	120 sec.
05	50 sec.	13	130 sec.
06	60 sec.	14	140 sec.
07	70 sec.	15	150 sec.

Default:

No FAX machines are assigned to any extension number.
No Notification stations are assigned.
Minimum Valid FAX call time = 20 seconds.

EMERGENCY DIAL TABLE

Item No.: 91-15

Description:

The numbers represented in this table do not require Account Code entry if the station is programmed for Forced Account Code entry. Up to five 12-digit numbers can be registered.

Note that the numbers should not be toll-restricted since they are still subject of the toll restriction if listed in the restriction table.

Procedure:

1. Display indicates **15.EMERG. Dial#1**
2. Press [1] through [5] to select the entry table No.1 to No.5 respectively.
3. Press the [FWD] key to proceed an Dialing CO line Number entry or Press [FLSH] to terminate the process.
4. When the [FWD] key is pressed, the display changes to ***EMERG. CO Gp#1**
5. Press [0] through [9] to enter CO line group number where the emergency dial is automatically dialed out.
6. Press the [FWD] key to proceed an Dial Number entry or Press [FLSH] to change the entry table number (step 1).
7. When [FWD] key is pressed, the display changes to ***EMERG. CO Gp#1=**
8. Up to 12 digits can be registered:
7. Press [FLSH] to reprogram the CO line group number.

Default:

No dial numbers no CO line group numbers are registered.

<< IMPORTANT >>
PLEASE PROGRAM "911" EMERGENCY NUMBER INTO THIS TABLE TO ALLOW A STATION USER TO CALL THIS EMERGENCY NUMBER WITHOUT ENTERING AN ACCOUNT CODE.

PROGRAMMING GUIDANCE-Z3

03	Station Type Assignment	32	Dial Pulse Break Ratio
04	CO Line Assignment	33	Protected CO Line
05	Toll Restriction/Equal-Access	34	Utility Relay Assignment
06	SCDR Output Format	35	DISA CO Line
07	SCDR Output Mode	36	DISA Activating Station
08	Outside USA/Canada	37	DISA Access Activation
09	Background Music Source		
10	Tone/Voice Calling	40	Station Day Ringing Assignment
11	P.A. System Assignment	41	Station Night Ringing Assignment
12	DTMF Receiver Assignment	42	Doorphone Day Ringing Assignment
13	Doorphone Assignment	43	Doorphone Night Ringing Assignment
14	MODEM Transmission Line	44	Ringing Group Assignment
15	O.C.C. Data Entry	45	Loud Ringing Bell-Day
16	Operator Camp-on Recall	46	P.A. Ringing Bell-Night
17	Station Camp-on Recall	47	P.A. Ringing-Night
18	CO Flash	48	DP/MF Dialing Selection
19	CO Disconnect Signal	49	10/20pps Dial Pulse Assignment
20	Timed Trunk Queuing	50	CO Disconnect Signal Detect
21	Hold Recall	51	Automatic CO to CO Forwarding
22	Page Time-Out	52	Hunt CO Group
23	DTMF Dial Duration	53	Hunt ICM Group
24	Master Group Hunt	54	Barge-in Station
25	PBX Pause	55	Dial Confirmation Tone
26	Trunk-to-Trunk Conference Release	56	Voice Mail Line
27	Flexible Relay Assignment	57	Page Key Function Set
28	Conference Voice Level	60	Internal BGM Assignment
29	Floating CO Group Assignment	61	Outgoing Call Restriction
30	PBX Line & Pre-dial Entry	62	CO Line Pick-up Restriction
31	Optional CO Ringing	63	System Toll Speed Dial
64	System Speed Dial Access	85-09	Time Schedule
65	All Call Access	85-10	Route Table
66	All Call Receive	85-11	Delete Index Table
67	Group Call Access	85-12	Delete Data Table
68	Group Call Receive	85-13	Additional Index Table
69	Zone Page Access	85-14	Additional Data Area Table
70	Automatic Answering	85-15	Additional Data Office Table
71	Hold Recall	85-16	Additional Table
72	Speakerphone	85-17	Specific Code Table
73	Do Not Disturb		
74	Executive Station	86	Call Park Recall Timer
75	Protected Extension	87	Call Forward No Answer Timer
76	Secretarial Hot Line	88	Remote Relay Timer
77	Toll Restriction Class		
78	Flexible Key Assignment	91	Version 4.0 programming
79	Off-hook Signal	91-01	Hunt CO Group Type
80	Intercom Group	91-02	DISA Direct Dial COS
81	Station Restriction Password	91-03	Alphanumeric Station ID
82	Night Transfer Station	91-04	Fixed Call Forwarding
83	Station Pick-up Group	91-05	Prime Line CO
		91-06	Prime Line Access
85	Optimized Routing Menu	91-07	Account Code Output Masking
85-01	System Prefix	91-08	Forced Account Code Station
85-02	Forced Optimized Call Station	91-09	Toll Restriction Override Code
85-03	Route Advance Step	91-10	Forced Account Code Digit Length
85-04	Holiday Assignment	91-11	Busy Bypass Message
85-05	Tie Line Area Code Table	91-12	Automatic CO Answer (Future)
85-06	Tie Line Office Group Table	91-13	UCD (Future)
85-07	General Area Code Table	91-14	FAX Notification Station
85-08	General Office Code Table		



ZT-D V4 SYSTEM DATABASE PLANNING SHEET

52. Hunt Group Station				
Hunting Order	Extensions			
	Hunt Group No.1	Hunt Group No.2	Hunt Group No.3	Hunt Group No.4
No.1	Ext.No. ___	Ext.No. ___	Ext.No. ___	Ext.No. ___
No.2	Ext.No. ___	Ext.No. ___	Ext.No. ___	Ext.No. ___
No.3	Ext.No. ___	Ext.No. ___	Ext.No. ___	Ext.No. ___
No.4	Ext.No. ___	Ext.No. ___	Ext.No. ___	Ext.No. ___
No.5	Ext.No. ___	Ext.No. ___	Ext.No. ___	Ext.No. ___
No.6	Ext.No. ___	Ext.No. ___	Ext.No. ___	Ext.No. ___
No.7	Ext.No. ___	Ext.No. ___	Ext.No. ___	Ext.No. ___
No.8	Ext.No. ___	Ext.No. ___	Ext.No. ___	Ext.No. ___
No.9	Ext.No. ___	Ext.No. ___	Ext.No. ___	Ext.No. ___
No.10	Ext.No. ___	Ext.No. ___	Ext.No. ___	Ext.No. ___
No.11	Ext.No. ___	Ext.No. ___	Ext.No. ___	Ext.No. ___
No.12	Ext.No. ___	Ext.No. ___	Ext.No. ___	Ext.No. ___
No.13	Ext.No. ___	Ext.No. ___	Ext.No. ___	Ext.No. ___
No.14	Ext.No. ___	Ext.No. ___	Ext.No. ___	Ext.No. ___
No.15	Ext.No. ___	Ext.No. ___	Ext.No. ___	Ext.No. ___
No.16	Ext.No. ___	Ext.No. ___	Ext.No. ___	Ext.No. ___

91-01 Hunt CO Group Type	
91-01 CO Group Hunt Mode	[] Terminal [] Distributed

91-02 DISA Direct Dial COS			
DISA Group No.1	Ext. No. ___	DISA Group No.5	Ext. No. ___
DISA Group No.2	Ext. No. ___	DISA Group No.6	Ext. No. ___
DISA Group No.3	Ext. No. ___	DISA Group No.7	Ext. No. ___
DISA Group No.4	Ext. No. ___	DISA Group No.8	Ext. No. ___

91-07 Account Code Output Masking Position/Length	
Account Code Masking Position = ___	Masking Digit Length = ___ Digits

91-09 Toll Restriction Override Code			
Code No.1		Code No.5	
Code No.2		Code No.6	
Code No.3		Code No.7	
Code No.4		Code No.8	

91-10 Forced Account Code Length
Forced Account Code = <u> </u> <u> </u> Digits (00 - 12 digits)

91-11 Busy Bypass Message			
Message No.	Message	Message No.	Message
1		9	
2		10	
3		11	
4		12	
5		13	
6		14	
7		15	
8		16	

91-14 FAX Message Notification				
	FAX No.1	FAX No.2	FAX No.3	FAX No.4
Port No.	Ext. <u> </u> <u> </u> <u> </u>	Ext. <u> </u> <u> </u> <u> </u>	Ext. <u> </u> <u> </u> <u> </u>	Ext. <u> </u> <u> </u> <u> </u>
Notify to	Ext. <u> </u> <u> </u> <u> </u>	Ext. <u> </u> <u> </u> <u> </u>	Ext. <u> </u> <u> </u> <u> </u>	Ext. <u> </u> <u> </u> <u> </u>
Minimum Call	<u> </u> <u> </u> 0 sec.	<u> </u> <u> </u> 0 sec.	<u> </u> <u> </u> 0 sec.	<u> </u> <u> </u> 0 sec.

91-15 Emergency Dial Table				
Dial No.1	CO Group No.	Dial	<< IMPORTANT >> PLEASE PROGRAM "911" EMERGENCY NUMBER INTO THIS TABLE.	

91-15 PRIME LINE CO					
[] CO No.1	[] CO No.2	[] CO No.3	[] CO No.4	[] CO No.5	[] CO No.6
[] CO No.7	[] CO No.8	[] CO No.9	[] CO No.10	[] CO No.11	[] CO No.12
[] CO No.13	[] CO No.14	[] CO No.15	[] CO No.16	[] CO No.17	[] CO No.18
[] CO No.19	[] CO No.20	[] CO No.21	[] CO No.22	[] CO No.23	[] CO No.24

Check CO lines used as Prime Lines

EXTENSION DATABASE PROGRAMMING						
	Ext. No.120	Ext. No.121	Ext. No.122	Ext. No.123	Ext. No.124	
91-03 Alphabet. Station ID						0=None 1=Station 2=Reserved 3=VM 00=ICM 01-24=COL 30=OPT 31-39=FLT
91-04 Fixed Call Forwarding	Mode [10 [11 [12 [13 To _____	Mode [10 [11 [12 [13 To _____	Mode [10 [11 [12 [13 To _____	Mode [10 [11 [12 [13 To _____	Mode [10 [11 [12 [13 To _____	
91-06 Prime Line Access	___	___	___	___	___	
91-08 Forced Account Code	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED	

EXTENSION DATABASE PROGRAMMING						
	Ext. No.125	Ext. No.126	Ext. No.127	Ext. No.128	Ext. No.129	
91-03 Alphabet. Station ID						0=None 1=Station 2=Reserved 3=VM 00=ICM 01-24=COL 30=OPT 31-39=FLT
91-04 Fixed Call Forwarding	Mode [10 [11 [12 [13 To _____	Mode [10 [11 [12 [13 To _____	Mode [10 [11 [12 [13 To _____	Mode [10 [11 [12 [13 To _____	Mode [10 [11 [12 [13 To _____	
91-06 Prime Line Access	___	___	___	___	___	
91-08 Forced Account Code	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED	

EXTENSION DATABASE PROGRAMMING						
	Ext. No.130	Ext. No.131	Ext. No.132	Ext. No.133	Ext. No.134	
91-03 Alphabet. Station ID						0=None 1=Station 2=Reserved 3=VM 00=ICM 01-24=COL 30=OPT 31-39=FLT
91-04 Fixed Call Forwarding	Mode [10 [11 [12 [13 To _____	Mode [10 [11 [12 [13 To _____	Mode [10 [11 [12 [13 To _____	Mode [10 [11 [12 [13 To _____	Mode [10 [11 [12 [13 To _____	
91-06 Prime Line Access	___	___	___	___	___	
91-08 Forced Account Code	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED	

EXTENSION DATABASE PROGRAMMING					
	Ext. No.135	Ext. No.136	Ext. No.137	Ext. No.138	Ext. No.139
91-03 Alphabet. Station ID					
91-04 Fixed Call Forwarding	Mode []0 []1 []2 []3 To _ _ _	Mode []0 []1 []2 []3 To _ _ _	Mode []0 []1 []2 []3 To _ _ _	Mode []0 []1 []2 []3 To _ _ _	Mode []0 []1 []2 []3 To _ _ _
91-06 Prime Line Access	_ _	_ _	_ _	_ _	_ _
91-08 Forced Account Code	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED

0=None
1=Station
2=Reserved
3=VM

00=ICM
01-24=COL
30=OPT
31-39=FLT

EXTENSION DATABASE PROGRAMMING					
	Ext. No.140	Ext. No.141	Ext. No.142	Ext. No.143	Ext. No.144
91-03 Alphabet. Station ID					
91-04 Fixed Call Forwarding	Mode []0 []1 []2 []3 To _ _ _	Mode []0 []1 []2 []3 To _ _ _	Mode []0 []1 []2 []3 To _ _ _	Mode []0 []1 []2 []3 To _ _ _	Mode []0 []1 []2 []3 To _ _ _
91-06 Prime Line Access	_ _	_ _	_ _	_ _	_ _
91-08 Forced Account Code	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED

0=None
1=Station
2=Reserved
3=VM

00=ICM
01-24=COL
30=OPT
31-39=FLT

EXTENSION DATABASE PROGRAMMING					
	Ext. No.145	Ext. No.146	Ext. No.147	Ext. No.148	Ext. No.149
91-03 Alphabet. Station ID					
91-04 Fixed Call Forwarding	Mode []0 []1 []2 []3 To _ _ _	Mode []0 []1 []2 []3 To _ _ _	Mode []0 []1 []2 []3 To _ _ _	Mode []0 []1 []2 []3 To _ _ _	Mode []0 []1 []2 []3 To _ _ _
91-06 Prime Line Access	_ _	_ _	_ _	_ _	_ _
91-08 Forced Account Code	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED

0=None
1=Station
2=Reserved
3=VM

00=ICM
01-24=COL
30=OPT
31-39=FLT

EXTENSION DATABASE PROGRAMMING					
	Ext. No.150	Ext. No.151	Ext. No.152	Ext. No.153	Ext. No.154
91-03 Alphabet. Station ID					
91-04 Fixed Call Forwarding	Mode []0 []1 []2 []3 To _____	Mode []0 []1 []2 []3 To _____	Mode []0 []1 []2 []3 To _____	Mode []0 []1 []2 []3 To _____	Mode []0 []1 []2 []3 To _____
91-06 Prime Line Access	___	___	___	___	___
91-08 Forced Account Code	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED

0=None
1=Station
2=Reserved
3=VM

00=ICM
01-24=COL
30=OPT
31-39=FLT

EXTENSION DATABASE PROGRAMMING					
	Ext. No.155	Ext. No.156	Ext. No.157	Ext. No.158	Ext. No.159
91-03 Alphabet. Station ID					
91-04 Fixed Call Forwarding	Mode []0 []1 []2 []3 To _____	Mode []0 []1 []2 []3 To _____	Mode []0 []1 []2 []3 To _____	Mode []0 []1 []2 []3 To _____	Mode []0 []1 []2 []3 To _____
91-06 Prime Line Access	___	___	___	___	___
91-08 Forced Account Code	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED

0=None
1=Station
2=Reserved
3=VM

00=ICM
01-24=COL
30=OPT
31-39=FLT

EXTENSION DATABASE PROGRAMMING					
	Ext. No.160	Ext. No.161	Ext. No.162	Ext. No.163	Ext. No.164
91-03 Alphabet. Station ID					
91-04 Fixed Call Forwarding	Mode []0 []1 []2 []3 To _____	Mode []0 []1 []2 []3 To _____	Mode []0 []1 []2 []3 To _____	Mode []0 []1 []2 []3 To _____	Mode []0 []1 []2 []3 To _____
91-06 Prime Line Access	___	___	___	___	___
91-08 Forced Account Code	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED

0=None
1=Station
2=Reserved
3=VM

00=ICM
01-24=COL
30=OPT
31-39=FLT

EXTENSION DATABASE PROGRAMMING					
	Ext. No.165	Ext. No.166	Ext. No.167	Ext. No.168	Ext. No.169
91-03 Alphabet. Station ID					
91-04 Fixed Call Forwarding	Mode []0 []1 []2 []3 To _ _ _ _	Mode []0 []1 []2 []3 To _ _ _ _	Mode []0 []1 []2 []3 To _ _ _ _	Mode []0 []1 []2 []3 To _ _ _ _	Mode []0 []1 []2 []3 To _ _ _ _
91-06 Prime Line Access	_ _	_ _	_ _	_ _	_ _
91-08 Forced Account Code	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED

0=None
1=Station
2=Reserved
3=VM

00=ICM
01-24=COL
30=OPT
31-39=FLT

EXTENSION DATABASE PROGRAMMING					
	Ext. No.170	Ext. No.171	Ext. No.172	Ext. No.173	Ext. No.174
91-03 Alphabet. Station ID					
91-04 Fixed Call Forwarding	Mode []0 []1 []2 []3 To _ _ _ _	Mode []0 []1 []2 []3 To _ _ _ _	Mode []0 []1 []2 []3 To _ _ _ _	Mode []0 []1 []2 []3 To _ _ _ _	Mode []0 []1 []2 []3 To _ _ _ _
91-06 Prime Line Access	_ _	_ _	_ _	_ _	_ _
91-08 Forced Account Code	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED

0=None
1=Station
2=Reserved
3=VM

00=ICM
01-24=COL
30=OPT
31-39=FLI

EXTENSION DATABASE PROGRAMMING					
	Ext. No.175	Ext. No.176	Ext. No.177	Ext. No.178	Ext. No.179
91-03 Alphabet. Station ID					
91-04 Fixed Call Forwarding	Mode []0 []1 []2 []3 To _ _ _ _	Mode []0 []1 []2 []3 To _ _ _ _	Mode []0 []1 []2 []3 To _ _ _ _	Mode []0 []1 []2 []3 To _ _ _ _	Mode []0 []1 []2 []3 To _ _ _ _
91-06 Prime Line Access	_ _	_ _	_ _	_ _	_ _
91-08 Forced Account Code	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED

0=None
1=Station
2=Reserved
3=VM

00=ICM
01-24=COL
30=OPT
31-39=FLT

EXTENSION DATABASE PROGRAMMING					
	Ext. No.180	Ext. No.181	Ext. No.182	Ext. No.183	Ext. No.184
91-03 Alphabet. Station ID					
91-04 Fixed Call Forwarding	Mode []0 []1 []2 []3 To _____	Mode []0 []1 []2 []3 To _____	Mode []0 []1 []2 []3 To _____	Mode []0 []1 []2 []3 To _____	Mode []0 []1 []2 []3 To _____
91-06 Prime Line Access	__	__	__	__	__
91-08 Forced Account Code	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED

0=None
1=Station
2=Reserved
3=VM

00=ICM
01-24=COL
30=OPT
31-39=FLT

EXTENSION DATABASE PROGRAMMING					
	Ext. No.185	Ext. No.186	Ext. No.187	Ext. No.188	Ext. No.189
91-03 Alphabet. Station ID					
91-04 Fixed Call Forwarding	Mode []0 []1 []2 []3 To _____	Mode []0 []1 []2 []3 To _____	Mode []0 []1 []2 []3 To _____	Mode []0 []1 []2 []3 To _____	Mode []0 []1 []2 []3 To _____
91-06 Prime Line Access	__	__	__	__	__
91-08 Forced Account Code	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED

0=None
1=Station
2=Reserved
3=VM

00=ICM
01-24=COL
30=OPT
31-39=FLT

EXTENSION DATABASE PROGRAMMING					
	Ext. No.190	Ext. No.191	Ext. No.192	Ext. No.193	Ext. No.194
91-03 Alphabet. Station ID					
91-04 Fixed Call Forwarding	Mode []0 []1 []2 []3 To _____	Mode []0 []1 []2 []3 To _____	Mode []0 []1 []2 []3 To _____	Mode []0 []1 []2 []3 To _____	Mode []0 []1 []2 []3 To _____
91-06 Prime Line Access	__	__	__	__	__
91-08 Forced Account Code	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED

0=None
1=Station
2=Reserved
3=VM

00=ICM
01-24=COL
30=OPT
31-39=FLT

EXTENSION DATABASE PROGRAMMING					
	Ext. No.1 _ _	Ext. No.1 _ _	Ext. No.1 _ _	Ext. No.1 _ _	Ext. No.1 _ _
91-03 Alphabet. Station ID					
91-04 Fixed Call Forwarding	Mode [10 [11 [12 [13 To _ _ _	Mode [10 [11 [12 [13 To _ _ _	Mode [10 [11 [12 [13 To _ _ _	Mode [10 [11 [12 [13 To _ _ _	Mode [10 [11 [12 [13 To _ _ _
91-06 Prime Line Access	_ _	_ _	_ _	_ _	_ _
91-08 Forced Account Code	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED

0=None
1=Station
2=Reserved
3=VM
00=ICM
01-24=COL
30=OPT
31-39=FLT

ZT-D SERIES ELECTRONIC KEY TELEPHONE SYSTEM SECTION 6 – CIRCUIT DESCRIPTION

CONTENTS	PAGE	CONTENTS	PAGE
1.00 INTRODUCTION	2	5.00 POWER SUPPLY UNITS	31
2.00 SYSTEM OVERVIEW	2	OUTPUT POWER CAPACITY	31
SYSTEM ARCHITECTURE	2	CONNECTION	31
SYSTEM CONTROL	3	BATTERY BACKUP	32
DIGITAL SPEECH PATH	4	OPTIONAL POWER RESOURCES ...	32
DATA TRANSMISSION	6	6.00 KSU CARDS	33
SYSTEM COMPONENTS	6	COMMON/LINE CARDS	33
CONNECTION	6	OPTIONAL FEATURE CARDS	40
3.00 OPERATIONAL DESCRIPTION	8	7.00 SYSTEM EXTENSIONS	43
CO/PBX LINE TERMINATION	8	SYSTEM EXTENSIONS	43
CO/PBX INCOMING CALLS	8	KEY TELEPHONE OPTIONS	47
CO/PBX OUTGOING CALLS	10	KEY TELEPHONE HANDSETS	49
CONFERENCE CALLS	13	8.00 OPTIONAL SYSTEM EQUIPMENT ...	50
ICM CALLS	14		
EXTERNAL PAGING	18		
STATION OPERATION	21		
OTHER SYSTEM OPERATION	24		
4.00 KEY SERVICE UNIT			
AND POWER SUPPLY	29		
KEY SERVICE UNIT	29		
ZT-616KSU	29		
ZT-824/1632KSU	29		
ZT-2464KSU	29		
KSU MOTHERBOARD	29		
KSU DISTRIBUTION PANELS	29		

1.00 INTRODUCTION

1.01 This section describes the internal hardware and software operation of the ZT-D Key Telephone System serving to enable its features, referring to the related system database.

1.02 The subsections describe the operation referring to the system features, related programming items and hardware. Some of the descriptions are briefly outlined, avoiding possible confusion from the redundant detail. Detail for these may be found in professional references such as EIA standards.

1.03 Once familiarized with system internal operations, it will simplify system configuration, to build an effective customer database. Also it will assist system maintenance and troubleshooting.

2.00 SYSTEM OVERVIEW

SYSTEM ARCHITECTURE

2.01 The ZT-D KTS design has applied the latest electronics and computer technology for telecommunication. The technology includes distributed multi-processing, time division speech path and digital control. The ZT-D key telephone system consists of three major components:

a. A Key Service Unit

The unit contains various line/feature interface modules — three models are available as ZT-616KSU, ZT- 824/1632KSU and ZT-2464KSU.

b. System Extensions

Key Telephones, Direct Station Selection (DSS32C) Unit and Doorphones. Ten models of key telephones are available and are differentiated only by the database programming (except for two Off-hook hands-free models). The DSS32C unit serves as the attendant position as well as the programming terminal for the system database. The Doorphones serve as ICM hands-free extensions.

c. Ancillary devices

Those provided by Iwatsu as well as by customer are connected externally to add extended feature capability to the system.

2.02 The KSU contains functional modules and are interconnected on the motherboard, where the bus line carries computer data, address and control. The system architecture is computer oriented and provides greater flexibility in system construction. Figure 6-2 illustrates the system architecture.

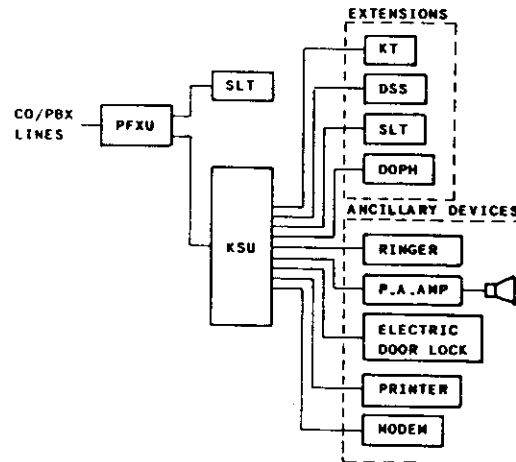


FIGURE 6-1 ZT-D KTS COMPONENTS

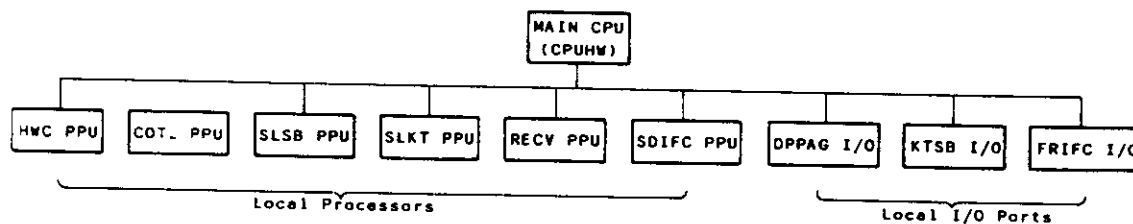


FIGURE 6-3 MICROPROCESSOR SUBSYSTEM

SYSTEM CONTROL

2.03 System operation is controlled by stored program, using distributed multi-processing technology, that achieves efficient and independent system operation. The main (master) computer is a high-speed (4-M Hz. for V1 and 8-M Hz for V2) Z-80 type 8-bit processor. The V1 CPU (CPUHW-Z) uses 94-k bytes of program memory (ROM).

It also uses 94-k bytes of temporary register and customer database memory (RAM). The V2 CPU (CPUHW-Z1) uses 512-k bytes of ROM and 128-k bytes RAM. Port (slave) processing units (PPU) or I/O ports are located at functional modules and at key telephones for local independent function processing. The PPU's consist of one-chip 8-bit custom microcomputers. The microprocessor subsystem is illustrated in Figure 6-3.

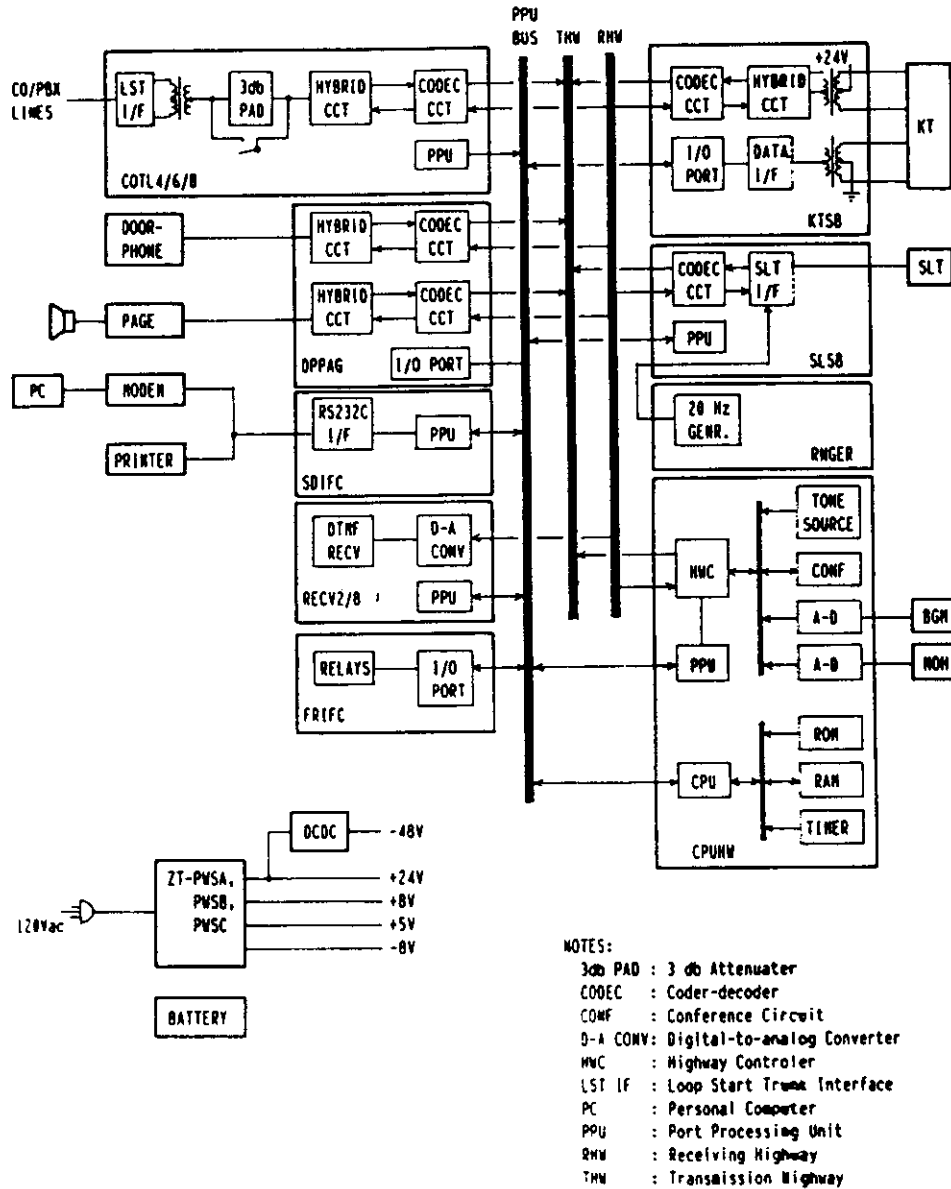


FIGURE 6-2 SYSTEM ARCHITECTURE

DIGITAL SPEECH PATH

2.04 The time division highway consists of the system speech path and digital control techniques including custom LSI which simplifies the switching and the system operation. Figure 6-4 illustrates the digital speech path architecture.

2.05 The digital speech path complies with the international CCITT standard, PCM32 with a total of 160 channels on the highway.

The channel carries all possible traffics to achieve non-blocking communication. CODECs on CO/station interface modules — COTL4/6/8 for CO lines or KTSB8/SLSB8/SLKT8 for station — converts voice signals from analog to digital or digital to analog, to transmit the voice signal over the digital highway. The conversion follows the u-law compression used in the U.S.A. The CODECs are also used for one-way conversion in the modules such as MOH/BGM input circuit. Figure 6-5 shows an example when a CO line is connected to a KT.

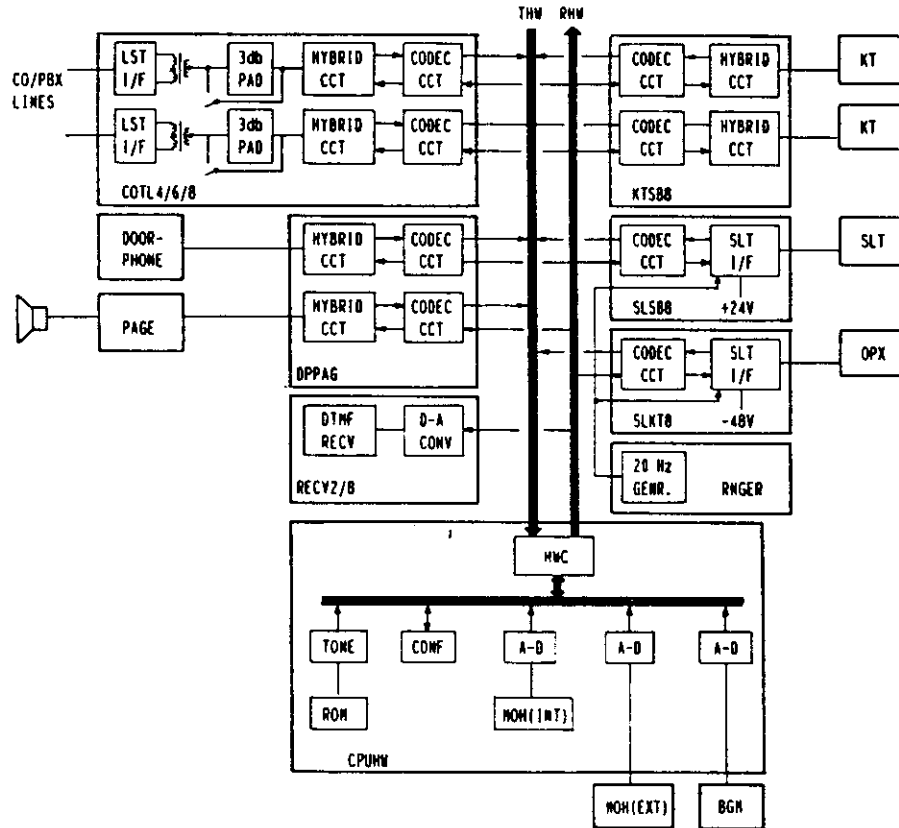


FIGURE 6-4 SPEECH PATH ARCHITECTURE

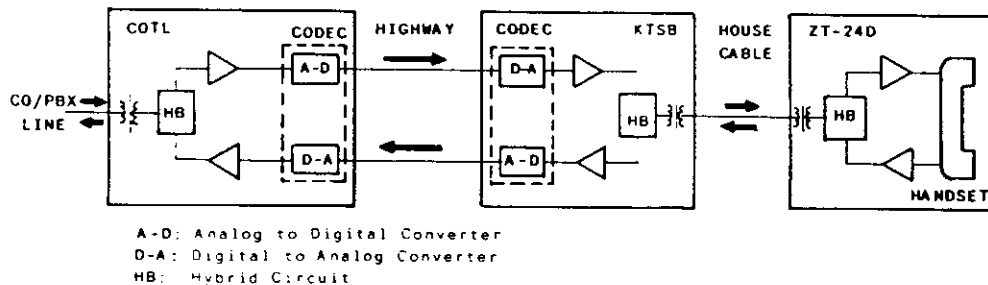


FIGURE 6-5 VOICE TRANSMISSION THROUGH CODEC

2.06 Figure 6-6 illustrates the voice signal transmission process in the system. Input voice signal is sampled every 125u-sec. and the sampled analog value is converted to an eight-bit digital value through the CODEC following the μ -law analog-to-digital transformation curve. The 1/0 digital value is changed into serial pulses and sent into a pre-assigned time-slot (channel) of the transmission highway THW with a synchronizing pulse that is positioned at the station channel. The pulse in the frame is copied into the channel belonging to the receiving station. It is then converted to the voice signal by a CODEC in the reverse process, to sound the receiving station's handset or speaker. Figure 6-7 details the exchange in time slots operated by the HWY PPU.

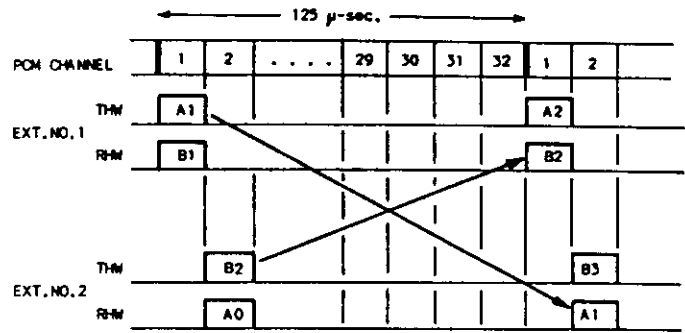


FIGURE 6-6 DIGITAL EXCHANGE

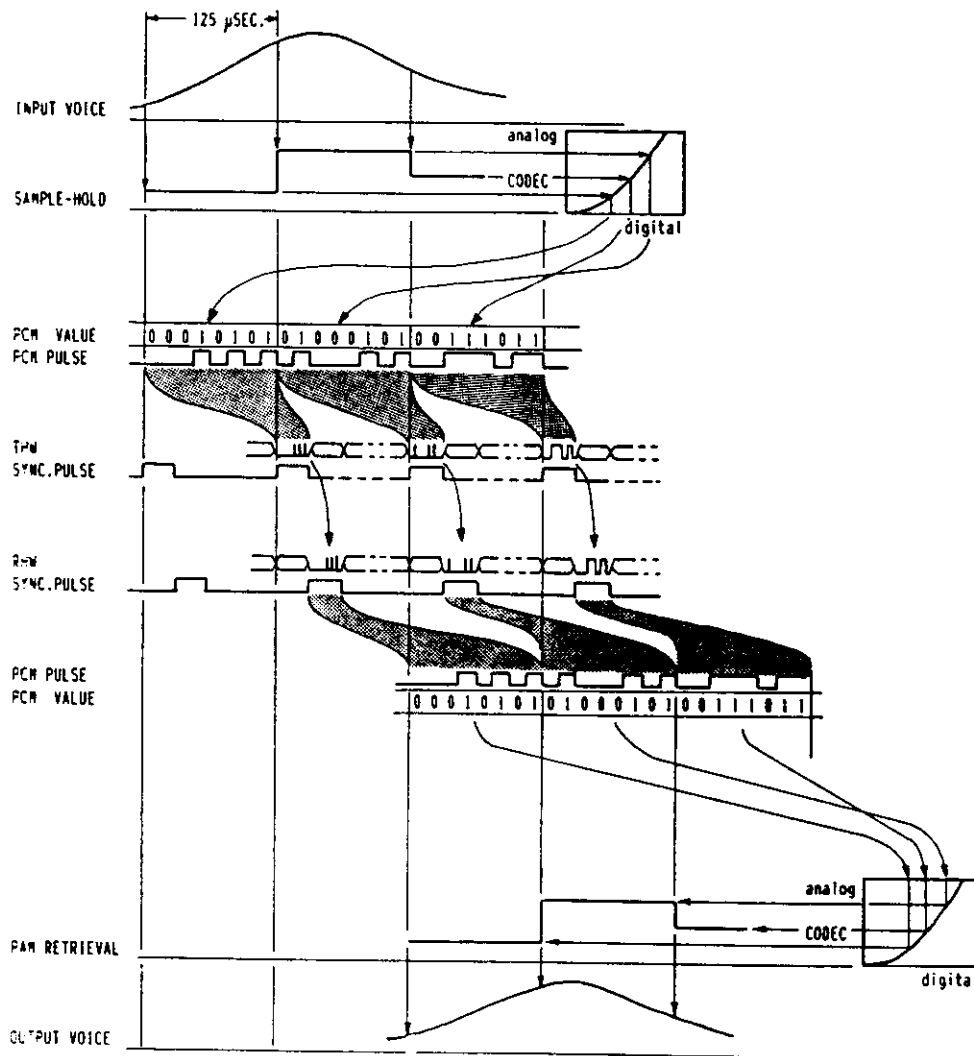


FIGURE 6-6 VOICE EXCHANGE PROCESS OF PCM SYSTEM

DATA TRANSMISSION

2.07 The KSU and key telephones communicate through D1/D2 data transmission path. A bipolar format signal, used in the U.S. T1 carrier system, is adopted in the ZT-D KTS because of its cable transmission efficiency and ease of synchronization. The KTSB card receives data from the CPU through data bus and converts it first to serial unipolar (binary) pulses. Then the signal is modified to bipolar pulses and transmitted to the key telephone, through cable. The key telephone receives the signal and its data receiver circuit extracts the clock pulse from the rising and falling edges of the bipolar signal. The clock pulse is applied to a mono-stable multivibrator, which provides a slight delay to position the timing pulse for the best extraction of the data. The signal is thus retrieved correctly and read by the key telephone PPU for further processing.

2.08 Bipolar signal and corresponding unipolar signal are shown in Figure 6-8.

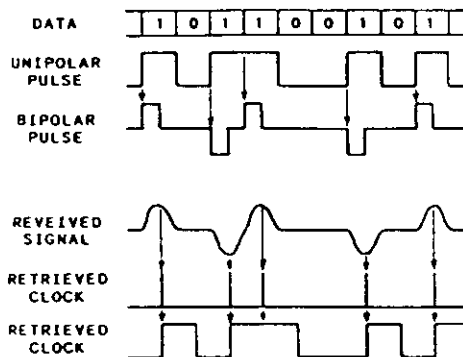


FIGURE 6-8 DATA TRANSMISSION

SYSTEM COMPONENTS CONNECTION

2.09 The ZT-D KSU terminates the external components wiring on the distribution panels. Various types of connectors — 50-pin Amphenol type connector, 6-pin modular jack, 25-pin data connector, RCA-type phono jack, AMP-type connectors, and screw terminals — are provided to suite the device connection requirements. Figure 6-9 illustrates the ZT-616 termination and Figure 6-10 illustrates the ZT-824, 2464.

a. CO Line Connection

Each tip and ring pair of the CO line are terminated on distribution panel AMPAs: AMPA6 for ZT-616KSU and AMPA81 for ZT-824/1632 and ZT-2464 KSU.

b. Extension Connection

A female Amphenol connector terminates eight extensions. Two connectors are provided on the AMPA6 panel (ZT-616) and four (4) connectors are provided on each of AMPA81 and AMPA24 panels. Five (5) connectors are provided on AMPA24-1 panel but the fifth connector, Ext. 184 and above, is alive only with CPUHW-Z1 which contains Version 2 software. The extension lines appear at connectors EXTC1 through EXTC8 on the AMPA panels and connected to CN2 on the SUB cards — KTSB8, SLSB8 and SLKT8 card — through ribbon cables. The longer the cable runs to an extension, the more inductance and capacitance are produced. It is very important to keep those limitations to avoid possible interference, data noise and data transmission failure.

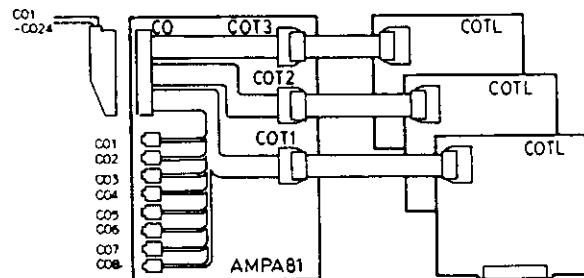


FIGURE 6-9 ZT-616

COMPONENTS TERMINATION

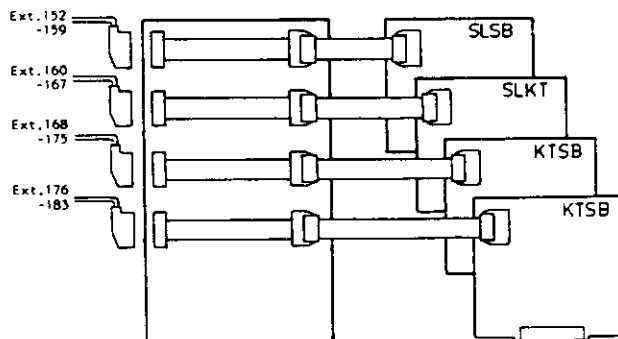


FIGURE 6-10 ZT-824/2464

COMPONENTS TERMINATION

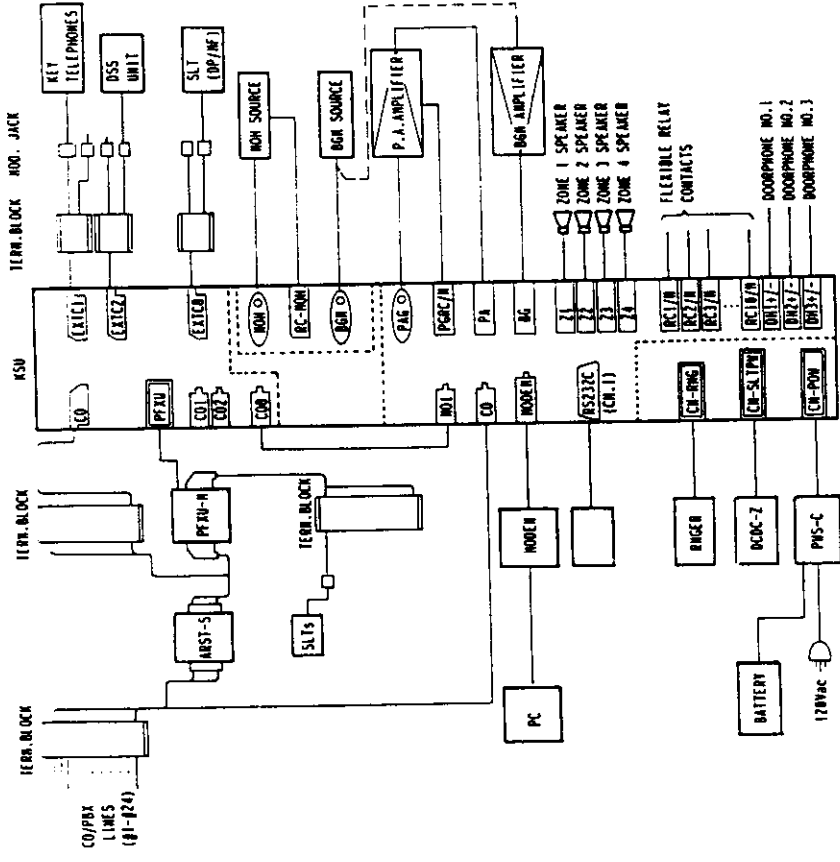


FIGURE 6-12 ZT-824/2464
 CO/EXTENSION CONNECTION

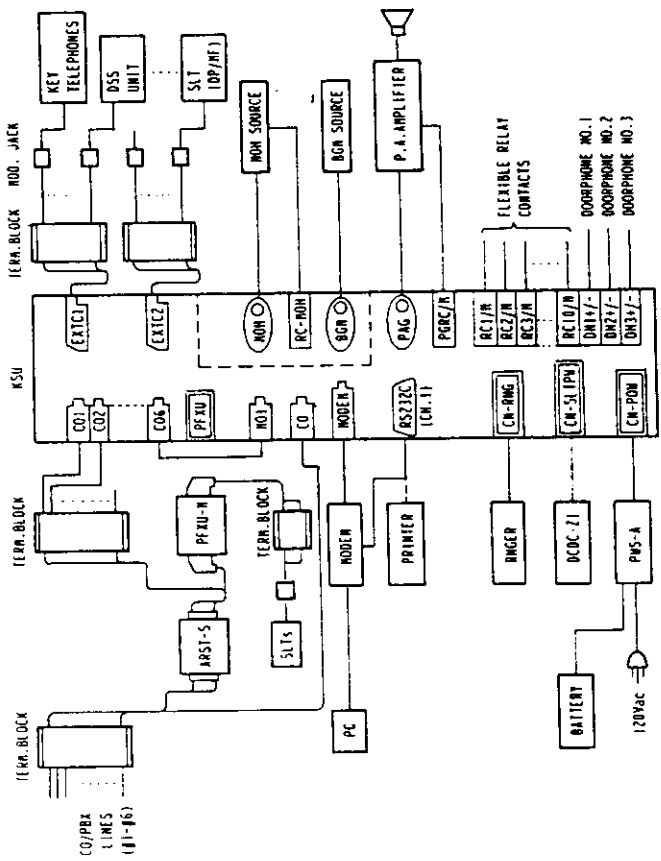


FIGURE 6-11 ZT-616
 CO/EXTENSION CONNECTION

3.00 OPERATIONAL DESCRIPTION

3.01 This section describes relative operation of the system components achieving the major features. Refer to the section describing operation of individual components for details.

CO/PBX LINE TERMINATION

3.02 The system database must be programmed for CO/PBX lines termination on the key telephones or single line telephones to handle incoming and outgoing calls by:

- Direct CO Line Termination
- Floating Group CO Termination

CO/PBX INCOMING CALLS

3.03 This section describes CO/PBX incoming call circuit operation.

a. Incoming Ringing

Related Hardware: CPUHW, COTL, KTSB, SLSB, SLKT, KT, SLT.

Related Programming:

1. Ringing Station Assignment:

The station to ring upon incoming CO/PBX calls are assigned by following features:

- For day ringing,
 Station Day Ringing <40>
 Loud Ringing Bell - Day <45>

Hunt Group - CO/Station <52>
 Flexible Relay Assignment <27>

- For night ringing,
 Station Night Ringing <41>
 CO Ringing Group <44>
 Loud Ringing Bell - Night <46>
 P.A. Ringing - Night <47>

2. Ringing Tone Assignment:

The optional CO ringing tone to sound individual station are programmed by
 Optional CO Ringing <31>

Circuit Operation: When a CO/PBX call rings into the system, the COTL detects it and tells the CPU to process the call to ring on an assigned location in the system. Refer to Figure 6-13.

1. When an incoming call occurs 20 Hz. ringing signal appears across Tip and Ring of the CO/PBX line.

2. If voltage and frequency of the ringing signal satisfies the FCC registered RE number of the system, the signal is detected by the PPU through the TLIC IC on the COTL card after a delay of 300 msec. to confirm the signal from the line noise. The signal is converted to digital data and is sent to CPU on the CPUHW card through the data bus of the mother-board.

3. The CPU refers to the RAM database to find which station to ring, then sends a command to the defined station through the KTSB card.

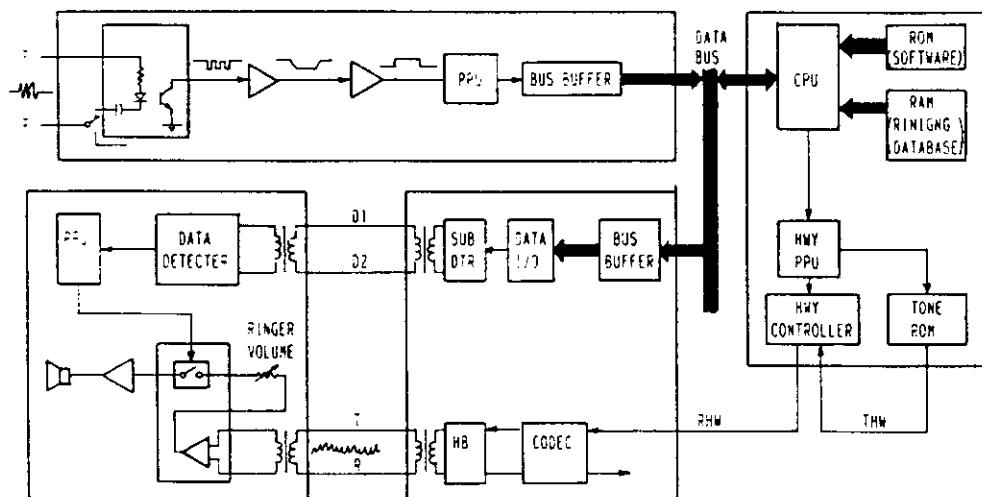


FIGURE 6-13 CO/PBX INCOMING RINGING

Then the CPU switches the station amplifier input to the station Tip/Ring. The ringing signal is stored in the TONE ROM in a digital form and sent to the station Tip/Ring through PCM highway.

4. The visible indication starts at the station also by the CPU command through D1/D2 digital path.

b. Answering the call

Related Features: Answering feature to the incoming CO/PBX calls are provided by:

- Directed Call Pick-up
- Directed CO Pick-up
- Incoming Pick-up Group
- Direct CO Line Termination
- Floating Group CO Termination
- Automatic Answering

Related Hardware: CPUHW, COTL, KTSB, SLSB, SLKT, KT, SLT.

Circuit Operation: When an extension goes off-hook to answer an incoming call using the direct/floating termination, the selected COTL card circuit closes the CO line T/R loop. The line is connected and the ringing stops. Figure 6-14 describes the related circuitry.

1. When a station answers the call, the COTL card operates relay S to close the Tip/Ring Loop through the RESISTIVE TERMINATION in TLIC IC by receiving a command from the CPU through the data bus.

c. Conversation establishment:

Related Hardware: CPUHW, COTL, KTSB, SLSB, SLKT, KT, SLT.

Circuit Operation: Refer to Figure 6-5 for the related circuits. The system extension exchanges conversation with the trunk circuit (outside party) through the PCM highway. The switching is controlled by the Highway PPU on the CPUHW card.

1. The two-way voice signal at CO Tip/Ring is coupled by the transformer T1 and applied to the hybrid circuit. The circuit then separates it into transmitting and receiving voice.
2. The CODEC, IC101, converts transmitting voice to a PCM signal, and sends it on the Transmit Highway (THW) of

the motherboard.

3. The highway PPU reads the system operational register memory to find the extension which is connected to the line, and commands the Highway Control LSI to send the PCM signal to the RHW time slot of the extension.
4. The CODEC on the KTSB card receives the PCM signal, converting it to analog voice, then sends it on the station Tip/Ring through the hybrid circuit on the SLIC IC.
5. The voice from the station handset appears across Tip/Ring is applied to the hybrid circuit in the SLIC on the KTSB. The hybrid circuit separates the received voice and applies to the CODEC, IC101. The CODEC converts it to a PCM signal and sends it onto the THW of the motherboard.
6. The highway PPU reads the system operational register memory to find the CO line (trunk No.) which is connected to the extension, and commands the Highway Control LSI to send the PCM signal to the time slot of the trunk on the Receive Highway (RHW).
7. The CODEC on the COTL card receives the signal, converts it to voice, and sends it on the CO/PBX line Tip/Ring through the hybrid circuit on the TLIC IC.

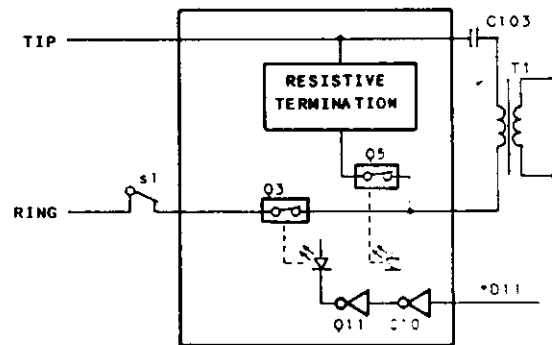


FIGURE 6-14 ANSWERING AN CO/PBX CALL

d. Line on Hold

Related Features:

- Exclusive Hold/Recall
- System Hold/Recall
- Call Park/Recall
- Camp On/Recall
- Consultation Hold/Recall
- Automatic CO release (Remote Hold Disconnect)

Related Hardware: CPUHW, COTL

Related Programming:

- External MOH Source Enabled <53>
- CO Disconnect Signal <19>
- Automatic CO Release <50>
- Hold Recall Enable <71>
- Hold/Call Park Recall Timer <21>

Circuit Operation: While the line is placed on hold the TLIC IC on the COTL card maintains the loop in same way described in "Answering the call". However the PCM speech path is disconnected from the station and connected to the MOH circuit. Refer the following description to Figure 6-15.

1. When the internal MOH is programmed in use, the music output from IC20 is applied to CODEC (IC2) in the CPUHW card, then the PCM signal is sent on the THW to be picked up by CODEC on the COTL card.
2. When the external MOH is programmed in use, the music input at MOH terminal on the MDF panel appears at connector CN2 on the CPUHW card. The signal is applied to CODEC (IC3) and the PCM signal is sent on THW to be picked up by CODEC on the COTL card.
3. The CODEC ICs, IC2 and IC3, are used only as analog-to-digital converters.

4. While the MOH is in use, "MOH" screw terminal on the DSPA6 (616 KSU), or the DSPB82 (824/2464 KSU) provides contact closure of relay H driven by transistor Q1 on the CPUHW card.

CO/PBX OUTGOING CALLS

3.04 This section describes CO/PBX outgoing call circuit operation.

a. Seizing a line

Related Features:

- Flash
- On-hook Dialing/Call Monitoring
- CO Call Back Queuing
- CO Pick-up Restriction

Related Hardware: CPUHW, COTL, KTSB, SLSB, SLKT

Related Programming:

- CO Line Assignment <04>
- Floating CO Group Assignment <29>
- CO Flash <18>
- Timed Trunk Queuing <20>
- CO Line Pick-up Restriction <62>

Circuit Operation: When an extension goes off-hook to pick up an idle CO/PBX line through the direct/floating termination, the selected COTL card circuit closes the T/R loop. Upon the recognition of the loop closure, the central office sends dial tone back to the ZT-D system.

1. When a station picks up an unused line through direct or floating CO termination, the CPU commands the HWY PPU to connect THW and RHW time slots of the COTL and KTSB (or SLSB/SLKT).
2. At the same time the CPU commands the COTL card to operate relay S1, closing the Tip/Ring loop through system data bus.

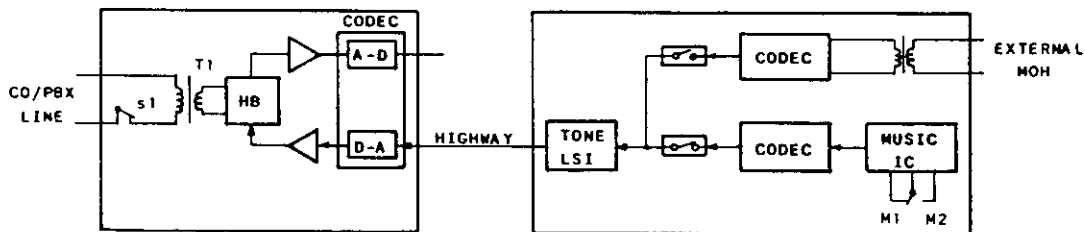


FIGURE 6-15 CO/PBX LINE ON HOLD

- The CPU sends transmitting data to the KTSB cards to turn their respective station's line LEDs on.

b. Dialing - DTMF

Related Features:

- Account Code
- Save/Repeat Dialing
- System Speed Dial - 80
- Station Speed Dial - 20
- Outgoing Call Restriction
- Toll Restriction/Equal Access

Related Hardware: CPUHW, COTL, KTSB, SLSB, SLKT, RECV

Related Programming:

- DP/MF Dialing Selection <48>
- DTMF Dial Duration <23>

Circuit Operation: When a key telephone starts dialing with the digital dial pad, the TONE circuit in the CPUHW starts sending corresponding DTMF signal to the trunk circuit if it is assigned for DTMF. Refer the following description to Figure 6-16.

- Upon receiving a station key data input for dial, the CPU commands the TONE LSI to select corresponding DTMF tone in the TONE ROM and to send it to the RHW of the dialing trunk.
- The CODEC of the trunk receives the signal, converting it to analog, then send it over the CO line Tip/Ring through a hybrid circuit.

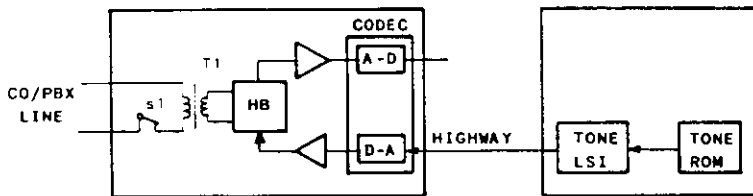


FIGURE 6-16 DTMF DIALING

c. Dialing - Rotary Pulse

Related Features: None

Related Hardware: CPUHW, COTL, KTSB, SLSB, SLKT

Feature Programming:

- DP/MF Dialing Selection <48>

- Dial Pulse Make Ratio <32>
- 10/20 pps Pulse Dial <49>

Circuit Operation: When a key telephone starts dialing with the digital dial pad, the COTL card pulses a solid-state switch at the trunk circuit assigned for the DP (Dial Pulse), to send corresponding dial to CO line.

- Upon receiving a station key data input for dial, the CPU sends corresponding dial data to the COTL PPU circuit through the system data bus.
- The PPU converts it to serial signal *D11 to pulse dialing using switches Q3 and Q5 in the TLIC IC.

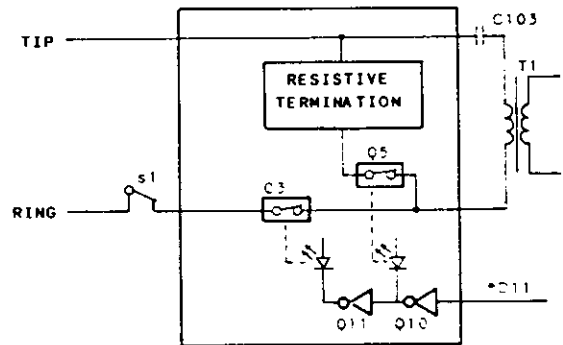


FIGURE 6-17 ROTARY PULSE DIALING

d. Dialing - Restrictions

Related Features:

- Outgoing Call Restriction

Related Hardware: CPUHW, COTL, KTSB, SLSB, SLKT

Feature Programming:

- Outgoing Call Restriction <61>
- Access Restriction - System SPD <64>
- Toll Restriction/Equal-Access <05>
- Toll Restriction- System SPD <63>
- Toll Restriction Class <77>
- Outside USA/Canada <08>
- O.C.C. Data Entry <15>
- PBX Pause <25>
- PBX Line and Pre-dial Entry <30>

Circuit Operation: An extension may be restricted from accessing to or dialing on each CO/PBX line by assigning this feature. Figure 6-18 shows flow chart for various dialing restrictions applied.

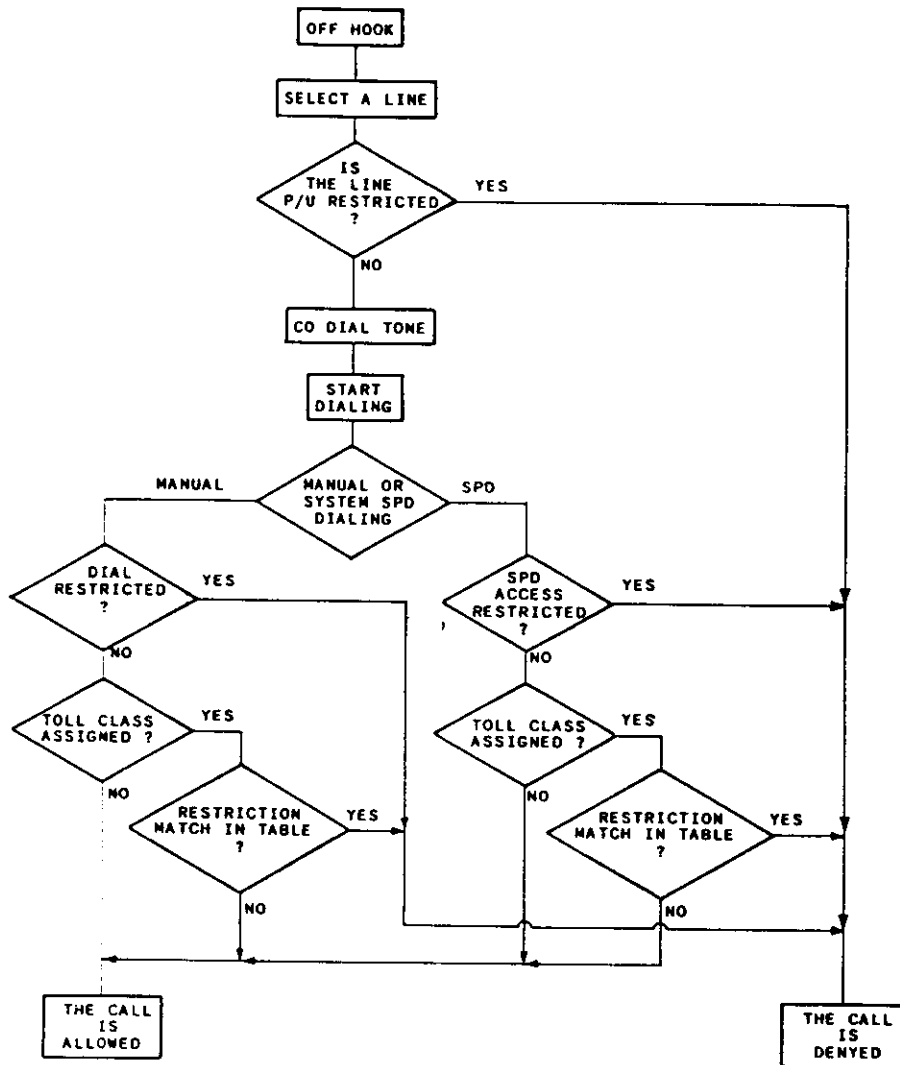


FIGURE 6-18 OUTGOING CALL RESTRICTIONS

1. Upon receiving key data input for dial, the CPU refers it to restriction data-base in RAM on the CPUHW card.
2. The CPU drops the line if the restriction data matches and sends the calling station a fast warning tone.

CONFERENCE CALLS

3.05 This section describes CO/ICM conference call circuit operation.

a. Multi-line Conference

Related Features:

Multi-line Conference

Related Hardware: CPUHW, COTL, KTSB, SLSB, SLKT

Feature Programming:

CO Disconnect Signal <19>

Automatic CO Release <50>

Circuit Operation: An extension can engage up to two CO/PBX lines simultaneously. Figure 6-19 illustrates the voice path in the digital conference circuit.

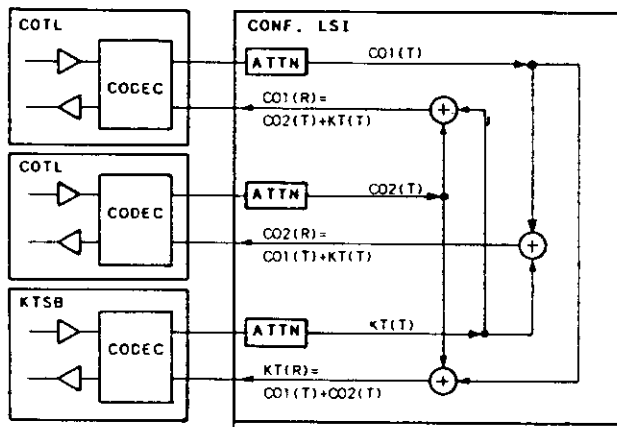


FIGURE 6-19 MULTI-LINE CONFERENCE

1. Individual input/output circuit engaged on conference takes one PCM time slot on the THW and RHW. The conference LSI in the CPUHW card receives two THW data, adding them and send to RHW. In the example of Figure 6-19. CO No.1 RHW receives voice which is sum of CO No.2 THW and KT THW.
2. Each input circuit for the conference

LSI has an attenuater which prevents possible acoustic feedback. The gain or attenuation on this circuit is preset as:

- -10 dB for COs while two circuits are engaged in conference. e.g. trunk-to- trunk or multi-line conference.
- 0 dB for any other conferences, One CO, Key telephone (KT) or Single line telephone (SLT).

3. Both trunks are disconnected when CO disconnect signal is detected, or after time-out if so programmed.

b. Trunk-to-trunk Conference

Related Features:

Trunk-to-trunk Conference

Related Hardware: CPUHW, COTL, KTSB, SLSB, SLKT

Feature Programming:

CO Disconnect Signal <19>

Automatic CO Release <50>

Trunk-To-Trunk Conference Timer <26>

Circuit Operation: A CO/PBX line can be connected to another CO/PBX line through the system by assistance of a key telephone. Refer to description for Multi-line Conference and to Figure 6-20.

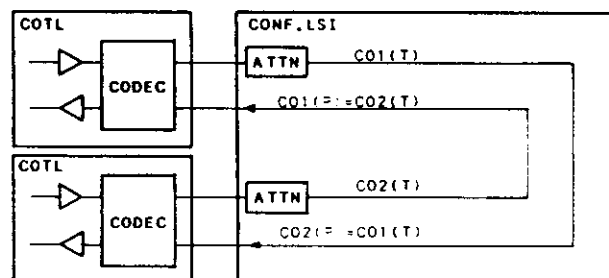


FIGURE 6-20 TRUNK-TO-TRUNK CONFERENCE

c. Automatic CO to CO Forwarding (Transfer)

Related Features:

Automatic CO to CO Forwarding (Transfer)

Feature Programming:

CO Disconnect Signal <19>

Automatic CO Release <50>

Auto. CO to CO Forwarding <51>

Trunk-To-Trunk Conference Timer <26>

Circuit Operation: A CO/PBX incoming call

is answered by the system and forwarded to outside party on another CO/PBX line by conference and automatic dialing. The lines are connected by the conference circuit as shown in Figure 6-20.

1. As soon as an incoming call is detected, the system refers to database RAM for forwarding line and to register RAM for forwarding mode status (ON/OFF).
2. Matching those conditions, it makes one of assigned outgoing line busy reserving it for an expected outgoing call.
3. Closing the loop of incoming and outgoing lines, those lines are connected through CONF LSI as described in Multi-line Conference.
4. Outgoing trunk circuit starts dialing the registered number.
5. Both trunks are disconnected when a CO disconnect signal is detected, or after timeout if programmed.

Example: Figure 6-21 shows the database example programmed as Table 6-A.

TABLE 6-A CO-TO-CO FORWARDING DATABASE

Forward Group	Incoming Trunk No.	Outgoing Trunk No.	Outgoing Dial	Operating Extension
1	1, 2, 3	3, 4	Dial 1	120
2	5, 6	5, 6	Dial 2	135
3	7, 8	12	Dial 3	147
4	9,10	11, 12	Dial 4	147

When Extension No. 147 operates the forwarding, An incoming call recognized by the CPU on CO7 dials number DIAL3 through either CO11 or CO12, whichever available at that moment. On the contrary, an incoming call on CO9 can only dial out through CO12 in this example.

d. Add-on Conference

Related Features:

Privacy/privacy Release

Related Hardware: CPUHW, COTL, KTSB, SLSB, SLKT

Feature Programming: None

Circuit Operation: Up to three extensions can engage to a CO/PBX line simultaneously. Refer to Multi-line Conference and Figure 6-22.

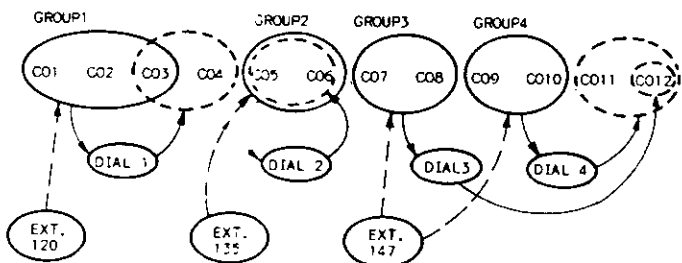
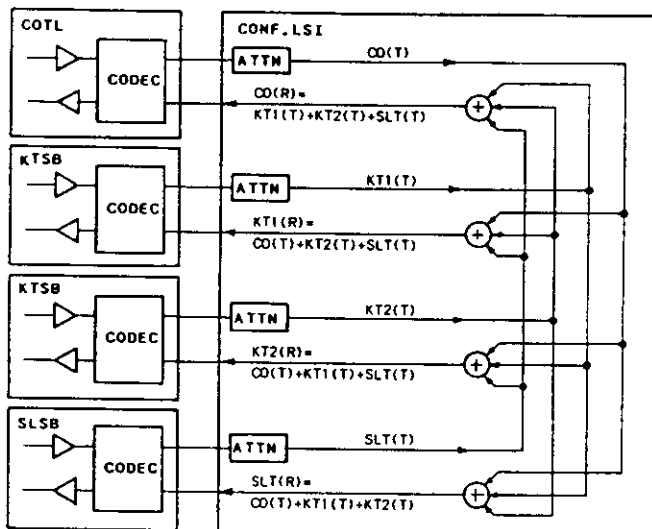


FIGURE 6-21 CO-TO-CO TRANSFER



NOTES: ATTN=Conference circuit input attenuator
 CO(T)=CO line transmitting voice
 CO(R)=CO line receiving voice
 KT1(T)=Key telephone No.1 transmitting voice
 KT1(R)=Key telephone No.1 receiving voice
 KT2(T)=Key telephone No.2 transmitting voice
 KT2(R)=Key telephone No.2 receiving voice
 SLT(T)=Single line telephone transmitting voice
 SLT(R)=Single line telephone receiving voice

A
 ⊕ C ADDER: A+B=C
 B

FIGURE 6-22 ADD-ON CONFERENCE

ICM CALLS

3.06 This section describes the entire ICM call processing circuit operation.

a. ICM line calls

Related Features:

- Dial Intercom
- Direct Station Signalling
- Operator Call
- Tone/Voice Calling
- Dial Tone Reorder

Related Hardware: CPUHW, KTSB, SLSB, SLKT, RECV

Feature Programming:

• **Basic:**

- Station Type Assignment <03>
- Tone/Voice Calling <10>
- Hunt Group - CO/Station <52>
- Master Group Hunt <24>
- Executive Station <74>
- Secretarial Hot Line (MF only) <76>
- Flexible Key Assignment <78>

• **Restriction:**

- Intercom Group <80>
- Group Call Access Enable <67>

• **For SLTs:**

- DTMF Receiver Assignment <12>

Circuit Operation: As a characteristic of fixed time slot PCM non-blocking system, there is no dedicated ICM speech paths provided. Every extension in the system is accompanied with its dedicated speech channel which can never be blocked, or if preferred to call, the ZT-D system is equipped with 72 ICM lines. Refer to Figure 6-23a for KT's and to Figure 6-23b for SLTs.

A key telephone can make intercom calls in two ways: through dial pad (standard) or through DSS keys (optional). The call can be made either by voice or by tone which can be altered by dialing [#] operation.

A single line telephone is automatically on ICM line when it goes off hook. It can make intercom calls through the dial pad. The call can be made by voice. The DTMF SLTs can alter the call to tone by dialing [#].

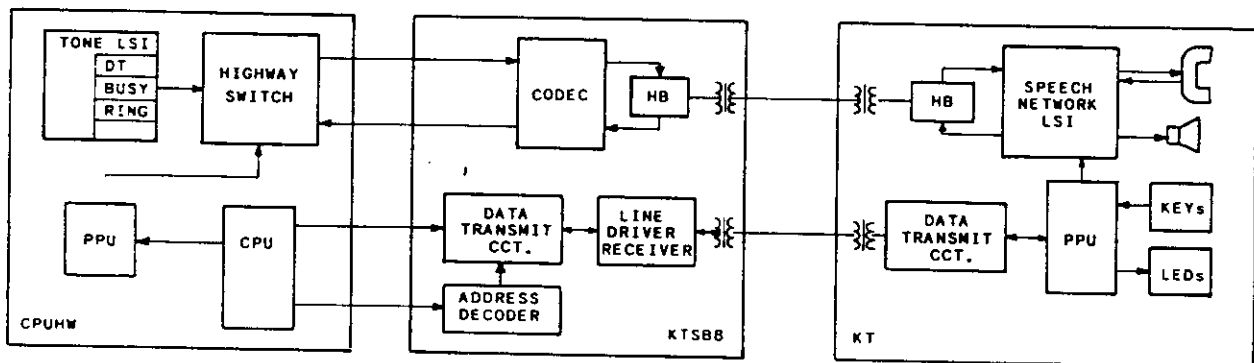


FIGURE 6-23 ICM CALLS - KT

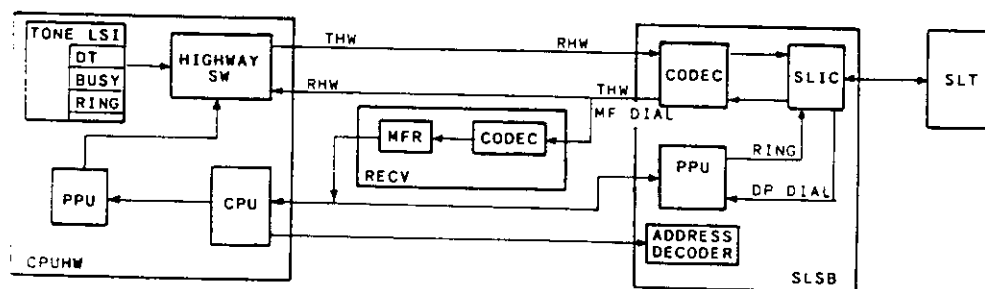


FIGURE 6-24 ICM CALLS - SLT

Line pick up

1. When a key telephone (KT) goes off-hook, the data appears on the KT D1/D2 pair and received by associated SUB card, the KTSB or SLKT, and then it is transferred to CPU through data bus.
2. When a single line telephone (SLT) goes off-hook, the Tip/Ring loop closure is detected by associated SUB card, the SLSB or SLKT. The information is then converted to the corresponding data and transferred to the CPU through data bus. If the SLT is assigned as DTMF dial type, the CPU commands the HWPPU to connect the SLT THW and RECV circuit RHW, ready to receive the DTMF dial.
3. The CPU commands the TONE LSI to output ICM dial tone and HWY PPU to connect the tone to the SUB card's RHW.
4. The dial tone is received by the SUB card and transmitted to the KT or SLT through the Tip/Ring pair, sounding the station's handset or speaker.

Dialing on the ICM line - KTs

5. When a KT dials, the digit data appears on the KT D1/D2 pair and received by its SUB card through house cable. It is then transferred to CPU through system data bus.

Dialing on the ICM line - SLTs

6. When a rotary dial SLT dials, the pulse appearing across Tip/Ring loop is detected by its SUB card. The information is then converted to the corresponding data transferred to the CPU through system data bus.
7. When a DTMF dial SLT dials, the tone signal appearing across Tip/Ring is digitized by CODEC IC and sent on the THW. The signal is received at the RHW of the RECV card, retrieved as analog tone through the CODEC. The RECV card then decode it to binary code at the receiver IC, then transfers the data to the CPU through system data bus.
8. The CPU evaluates the digit input

referring to database and determines if effective or not.

9. For illegal or restricted input, or if called number is busy, a warning or busy tone source is connected to the station's RHW.
10. If the called station is a KT in voice calling mode, calling station's T/RHW is connected to called KT's R/THWY. Then the KT's speaker input is connected to the T/R pair.
11. If the called station is a KT in tone calling mode, ringing signal is generated at TONE ROM and connected to called KT's RHWY. Then called KT's speaker input is connected to the T/R pair.

b. ICM call priorities

Related Features:

Operator Call
Station Class of Service

Related Hardware: CPUHW

Feature Programming:

Station Type Assignment <03>
Executive Station <74>
Secretarial Hot Line (MF only) <76>
Protected Extension <75>

Circuit Operation: Class of service feature defines to the stations priority on inter-com calls as shown in Figure 6-24.

1. An operator can call Regular (No COS assigned) and Executive stations while they are busy on line or are called by other stations.
2. An executive station can bypass call regular (No COS assigned), operator station and executive stations while they are busy on a line or are called by other stations.
3. A regular station can call Regular (No COS assigned) but receives busy tone back from operator and executive stations, while they are busy on a line or are called by other stations.
4. Any call is denied by a "protected" station while it is busy on a line but may be accepted while it being called by other station (unterminated call such as hands-free talk-back).
5. An hotline station can call Regular (No COS assigned) and Executive stations

while they are busy on line or are called by other stations.

c. ICM groups

Related Features:

- Dial Intercom
- Direct Station Signalling
- Operator Call

Related Hardware: CPUHW

Feature Programming:

- Hunt Group - CO/Station <52>
- Intercom Group <80>
- Group Call Access Enable <67>

Circuit Operation: Four intercom groups and four station hunt groups are provided in the ZT-D system. A station can belong to as many groups as required. However a station can only call the stations that belong to the same group. The hunt group defeats the limitation of the intercom group. Following describes the assignment shown in Figure 6-25.

1. Ext.120, the receptionist, belongs to all (four) intercom groups and can call any extensions in the system.
2. Ext. 130 belongs to Group1 and Group2, and can call extensions 120 to 143.
3. Extensions other than 120, 130 and 150 belong only to one group. Therefore they can not call across the group.
4. Extensions 131 and 161 belong to Hunt group 1. If Ext. 163, which is restricted to access ICM group1 but not to HUNT group1 can call Ext. 131 by dialing 71.

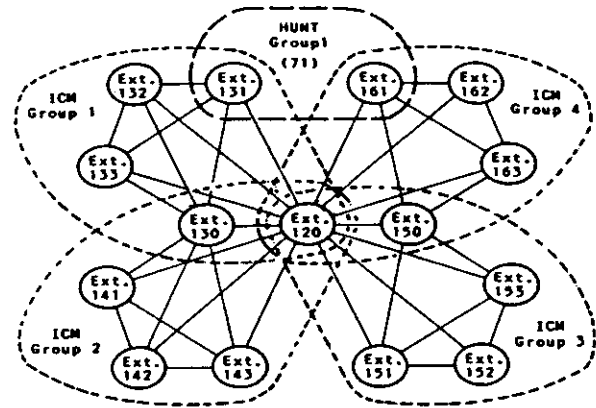


FIGURE 6-25 ICM GROUPS

d. Receiving an ICM call - KTs

Related Features:

- Executive Override
- Call Back Queuing
- Busy Bypass Tone Calling
- Operator Priority
- Master Group Hunt
- Executive Override to Busy/DND Station
- Secretarial Hot Line
- All Call Page - Internal
- Group Call - Four Internal Groups
- Call Forwarding - All calls/Busy/No Answer Protected Extension

Related Hardware: CPUHW, KTSB, SLKT

Feature Programming:

- Tone/Voice Calling <10>
- Hunt Group - CO/Station <52>
- Master Group Hunt <24>
- Intercom Group <80>
- Group Call Receive Enable <68>
- Do Not Disturb <73>
- Protected Extension <75>
- Secretarial Hot Line <76>

Circuit Operation: Whichever type of the ICM call is made, an extension receives the call either at on hook - voice/tone, or at off hook - bypass tone (D/K type KTs) or bypass voice (X type KTs) that decides the system circuit operation. Refer to Figure 6-26.

1. When a KT is called on ICM, the calling party's voice or ringing tone ap-

TABLE 6-B ICM GROUP DATABASE

Ext. No.	ICM Group No.	Hunt Group No.
120	1,2,3,4	none
130	1,2,	none
131	1	1
132,133	1	none
141-143	2	none
150	3,4	none
151-153	3	none
161	4	1
162,163	4	none

pears across station T/R pair. At the same time data, informing that the station is called, appears across D1/D2 pair.

- The Data is acknowledged at the KT PPU then the PPU commands the Speech Network LSI to connect the speaker amplifier input to the station T/R circuit.

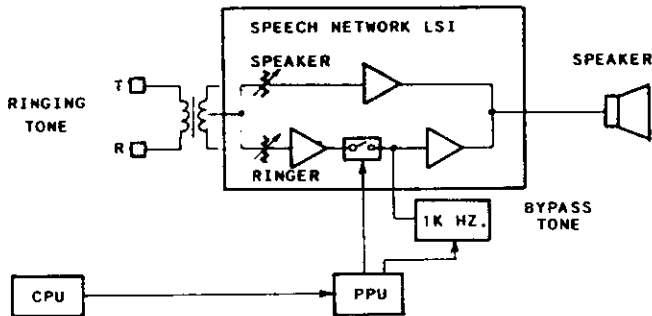


FIGURE 6-26 KEY TELEPHONE RINGING

e. Receiving an ICM call - SLTs

Related Features:

- Executive Override
- Call Back Queuing
- Busy Bypass Tone Calling
- Operator Priority
- Master Group Hunt
- Executive Override to Busy/DND Station
- Secretarial Hot Line
- All Call Page - Internal
- Group Call - Four Internal Groups
- Call Forwarding - All calls/Busy/No Answer Protected Extension

Related Hardware: CPUHW, SLSB, SLKT

Feature Programming:

- Hunt Group - CO/Station <52>
- Master Group Hunt <24>
- Intercom Group <80>
- Group Call Receive Enable <68>
- Do Not Disturb <73>
- Protected Extension <75>
- Secretarial Hot Line <76>

Circuit Operation: A single line telephone receives the ICM calls either as ringing at on-hook or as override tone on speech path at off-hook. The associated circuit is shown in Figure 6-27.

- When a SLT is called on ICM, relay RY starts turning on/off at associated SUB card, the SLSB or SLKT, connecting ringing signal from the RINGER unit to the SLT tip/ring.
- The SLT rings upon receiving the ringing signal until it answers to the call.

f. Conversation on the ICM line

Related Features:

- Hands-free Talkback on ICM
- Microphone Cut-off

Related Hardware: CPUHW, KTSB, SLSB, SLKT

Feature Programming:

- Station Type Assignment <03>
- Intercom Group <80>
- Secretarial HotLine <76>
- Flexible Key Assignment <78>

Circuit Operation: An ICM conversation in the ZT-D system is made directly at the PCM highway by exchanging caller's THW channel to receiver's RHW, receiver's THW channel to caller's RHW. Hence no specific ICM channel is provided on the PCM highway. Refer to Figure 6-28.

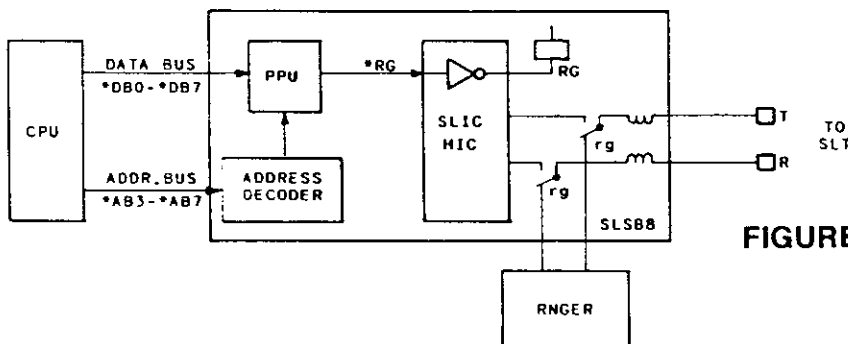


FIGURE 6-27 SINGLE LINE
 TELEPHONE RINGING

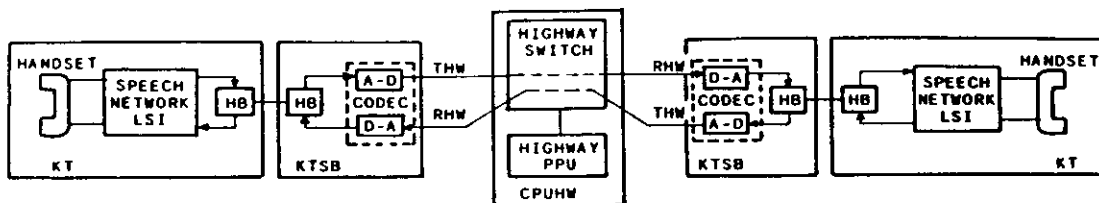


FIGURE 6-28 CONNECTION ON ICM

1. When a called station answers the call, the off-hook is detected at the associated SUB card, then the information is transferred to CPU through the data bus.
2. The CPU then commands the HWY PPU to connect the calling KT's T/RHW and called KT's R/THWY. The speech path is established.

EXTERNAL PAGING

3.07 This section describes external paging amplifier and background music circuit operation.

a. Basic Paging Application

Related Features:

All Call Page - External

Related Hardware: CPUHW, DPPAG, DSPC82 (824/2464 KSU) or AMPA6 (616 KSU).

Feature Programming:

- P.A. System Assignment <11>
- Page Access Enable <65>
- Page Receive Enable <66>
- P.A. Ringing - Night <47>
- Page Time-out <22>
- Flexible Relay Assignment <27>

Circuit Operation: An extension can access a customer provided P.A. system through the DPPAG card installed in the KSU "opt" slot. The card is connected to the DSPC82 panel (824/2464 KSU) or to the AMPA6 panel (616 KSU) through a flat cable, where the P.A. system is terminated. Refer to Figure 6-29 and follow the description.

1. When an extension accesses the P.A.,

the extension's THW signal is duplicated to appear at the P.A.'s RHW time slot and applied to input of CODEC IC13 on the DPPAG card.

2. Output of the codec, voice signal, passes through a hybrid circuit and transformer T1 that provides for two-way page. Finally, the signal appears at PAG RCA jack on the AMPA6 or DSPC82 through connector CN2 and ribbon cable.

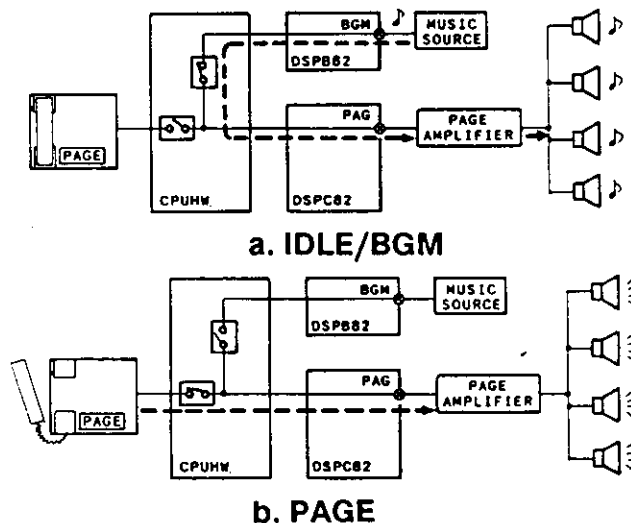


FIGURE 6-29 BASIC P.A. SYSTEM

3. At the same time relay RL operates on the DPPAG card and the contact closure appears across PAG and M on the screw terminal bus "CON1" on the

AMPA6 (616KSU) or the DSPC82 (824/2464KSU). This contact can be used to control the P.A. amplifier power.

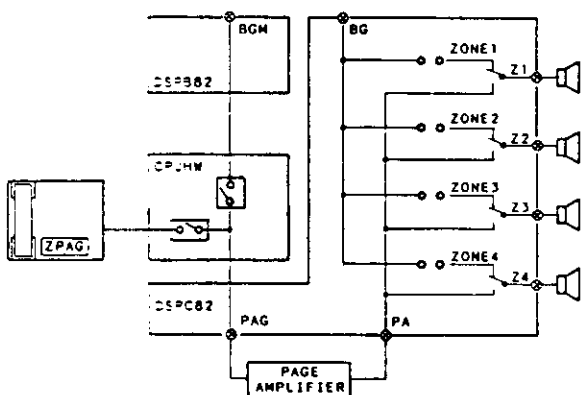
- If a two-way P.A. amplifier is used the talkback voice reaches the calling extension's handset receiver through the opposite path.

b. Zone Paging - No BGM

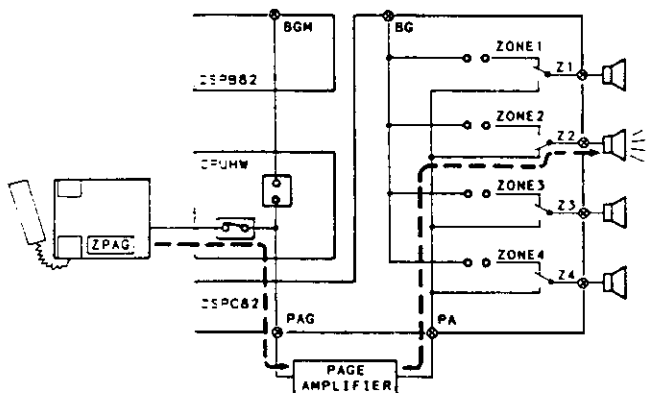
Related Features:

Zone Page - Four External Zones

Related Hardware: CPUHW, DPPAG, DSPC82



a. IDLE



b. PAGING ZONE 2

FIGURE 6-30 BASIC ZONE P.A. SYSTEM

Feature Programming:

- P.A. System Assignment <11>
- Page Access Enable <65>
- Page Receive Enable <66>
- Zone Page Access Enable <69>
- Page Time-out <22>
- Flexible Relay Assignment <27>

Circuit Operation: The ZT-824/2464 system provides optional Zone Paging feature for four zones. Refer to Figure 6-30.

- When idle all the output control relays disconnect the zone speakers from the P.A. amplifier.
- When all zone is accessed by dialing "80" P.A. input picks up the calling station's voice through CODEC on the DPPAG card, while all relays Z1 through Z4 operate to connect the outputs.
- When individual zone is accessed by dialing "81" through "84" P.A. input picks up the calling station's voice through CODEC on the DPPAG card, while only one of relays Z1 through Z4 operates to connect the P.A. output to corresponding zone speaker.

c. Single P.A. Amplifier with BGM

Related Features:

- Zone Paging
- BGM

Related Hardware: CPUHW, DPPAG, DSPC82 (824/2464 KSU) or AMPA6 (616 KSU).

Feature Programming:

- P.A. System Assignment <11>
- Page Access Enable <65>
- Page Receive Enable <66>
- Zone Page Access Enable <69>
- Page Time-out <22>
- Background Music Source <09>
- Flexible Relay Assignment <27>

Circuit Operation: Through this application the BGM is disconnected from all of the P.A. speaker while other zones are paged. Refer to Figure 6-31.

- When idle the P.A. input picks up the music through the CODEC on the DPPAG card, and all the output control relays Z1 through Z4 are operating to connect the zone speakers to send the music.

2. When all zone is accessed by dialing "80" P.A. input switches from the music source to the calling station's voice through CODEC on the DPPAG card, and all relays Z1 through Z4 remain operating to connect the outputs.

3. When individual zone is accessed by dialing "81" through "84" P.A. input switches from the music source to the calling station's voice through the CODEC on the DPPAG card, then all relays but one corresponding to the called zone disconnect the output zones.

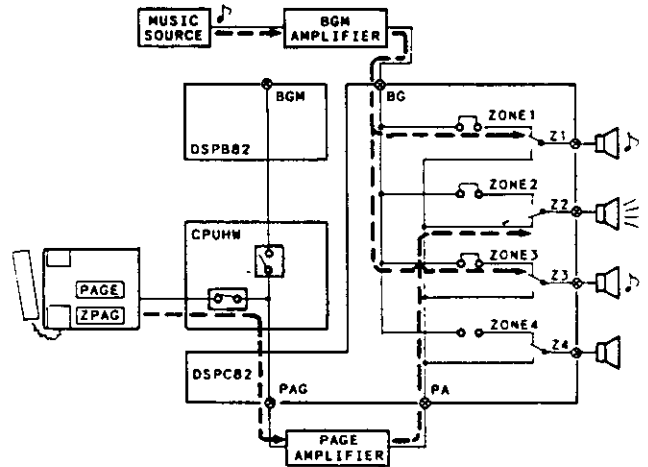
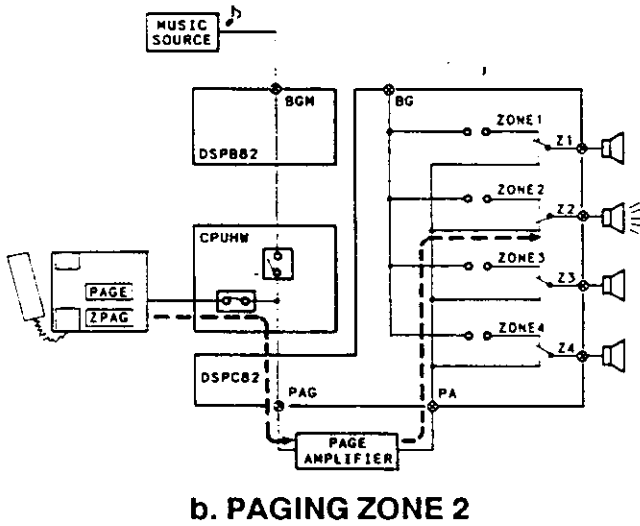
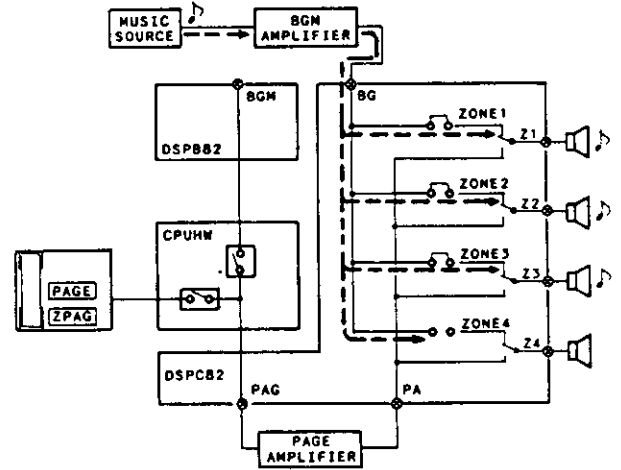
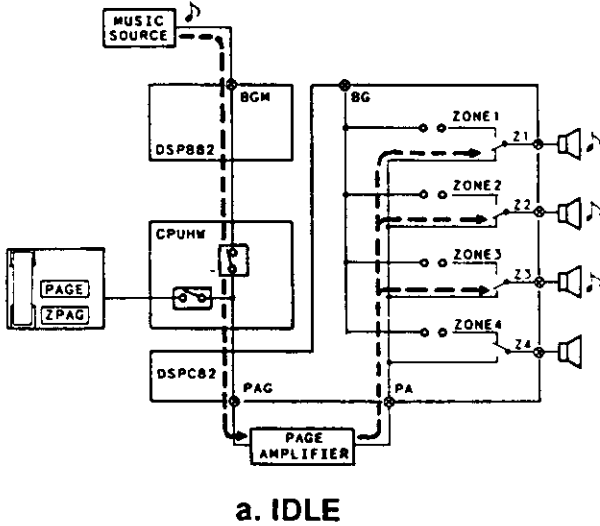


FIGURE 6-31 SINGLE AMP.
 P.A. SYSTEM WITH BGM

FIGURE 6-32 DUAL AMP.
 P.A. SYSTEM WITH BGM

d. Dual P.A. Amplifier with BGM

Related Features:

- Zone Paging
- BGM

Related Hardware: CPUHW, DPPAG, DSPC82 (824/2464 KSU) or AMPA6 (616 KSU).

Feature Programming:

- P.A. System Assignment <11>
- Page Access Enable <65>
- Page Receive Enable <66>
- Zone Page Access Enable <69>
- Page Time-out <22>
- Background Music Source <09>
- Flexible Relay Assignment <27>

Circuit Operation: Through this application the BGM continues unless its own zone is paged. Refer to Figure 6-32.

1. When idle only the BGM amplifier delivers output to the Z relay matrix input. All the output control relays Z1 through Z4 are not operating so their break contacts connect the BGM amplifier to the zone speakers to send the music.
2. When all zone is accessed by dialing "80" P.A. amplifier delivers voice output to the relay matrix. All relays Z1 through Z4 operates to switch the input of the relay matrix to the P.A. voice.
3. When individual zone is accessed by dialing "81" through "84" P.A. only one of Z relays operates to switch the input to the P.A. voice and remaining zone speakers are still connected to BGM amplifier output.

Flexible Key Assignment - DSS <78>

Receiving Features;

- Automatic Answering <70>
- Speakerphone <72>
- Do Not Disturb <73>
- Protected Extension <75>

Circuit Operation: Station Speech path is shown in Figure 6-33.

1. Key telephones have various voice input/output devices and their connection to the Tip/Ring pair is controlled through Speech Network LSI under command of the Station PPU as shown in Figure 6-33.

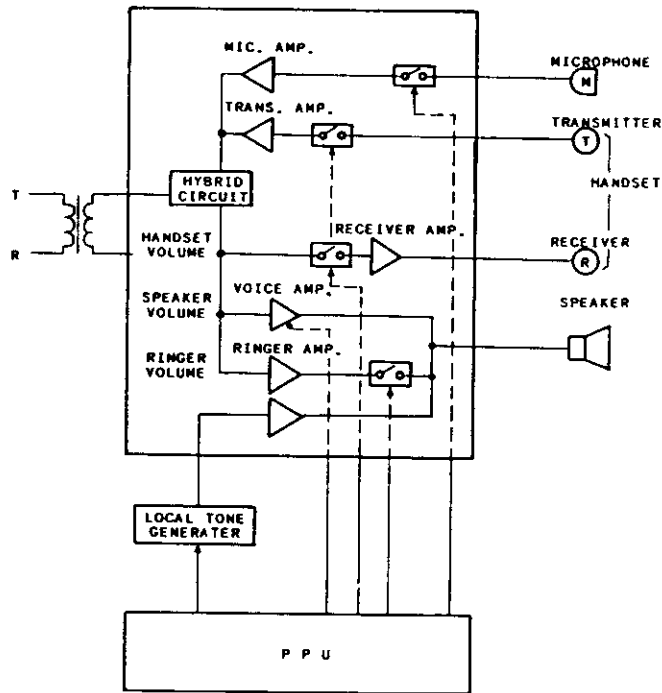


FIGURE 6-33 STATION SPEECH PATH

STATION OPERATION

3.08 This section describes ZT-D extension related circuit operation.

a. Line connection

Related Features: CO, PBX and ICM Calls

Related Hardware: CPUHW, COTL, KTSB, SLSB, SLKT, KT, SLT

Feature Programming:

Calling features;

- Group Call Access Enable <67>
- Executive Station <74>
- Secretarial Hot Line <76>

2. "SPC" signal from the PPU controls handset. In addition the receiver volume can be changed by three step HANDSET volume control.
3. "MIC" signal turns on/off the microphone for hands-free talkback.
4. "AMP" signal automatically lowers the gain of the voice amplifier when it is operating for the hands-free talkback to avoid acoustic feedback.

- "SPEAKER" volume adjusts loudness of speaker during on-hook dialing or monitoring.

b. Ringing

Related Features:

- Do Not Disturb
- Time Reminder
- Station External Ringer Connection

Related Hardware: CPUHW, KTSB, SLKT, KT

Feature Programming:

- Operator Station <03>
- Group Call Receive Enable <68>
- Hold Recall Enable <71>
- Do Not Disturb <73>
- Protected Extension <75>
- Secretarial Hot Line <76>

Circuit Operation: The key telephone block diagram related to ringing is illustrated in Figure 6-34.

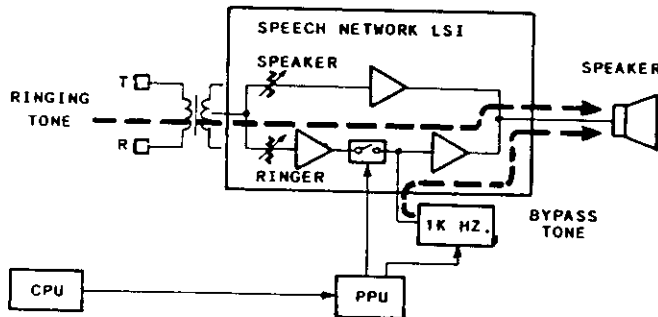


FIGURE 6-34 STATION AT RINGING

- Two tone inputs may be applied to the key telephone speaker circuit;
 - Tip/ring signals originated at TONE ROM in the KSU is controlled by the system CPU and the volume can be adjusted by station RINGER VOLUME;
 - CO/ICM/Doorphone ringing tone
 - CO/ICM camp-on/recall tone
 - Hold recall
 - Local tone is originated at key telephone itself and the volume levels are not controllable;
 - Dial confirmation tone
 - CO/ICM/Doorphone busy bypass

- ringing tone
- CO/ICM camp-on/recall tone - station busy
- Hold recall - station busy

- The above input signals are connected to speaker amplifier through analog switches in Speech Network LSI under command of the Station PPU as shown in Figure 6-34.

c. Handset Conversation

Related Features:

- Amplified Handset
- Noise Cancelling Handset
- Hearing-aid Handset

Related Hardware: KT

Feature Programming:

Strapping on KTEL-Z card.

Circuit Operation: As shown in Figure 6-35, the handset receiving level can be adjusted in two ways:

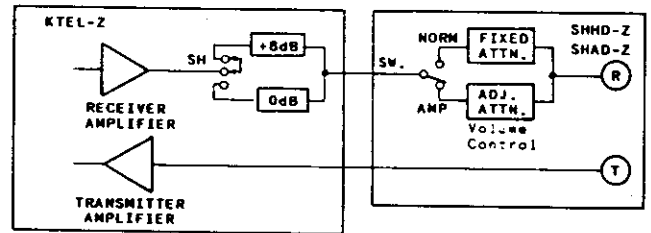


FIGURE 6-35 STATION HANDSET CIRCUIT

- USER ADJUST** is three level handset volume control that changes it to +6 dB, 0 dB or -6 dB.
- INSTALLER ADJUST** is a strapping jack SH that increases the output of receiver amplifier by 8 dB so that optional amplified/hearing aid handset can control the excess level individually.

d. Hands-free Conversation

Related Features:

- Built-in Speakerphone
- Hands-free talkback

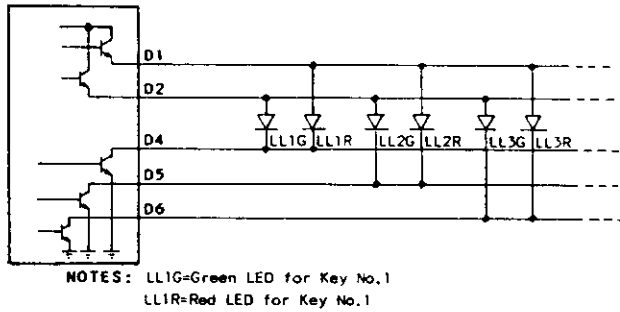
Related Hardware: CPUHW, KTSB, SLKT, KT

Feature Programming:

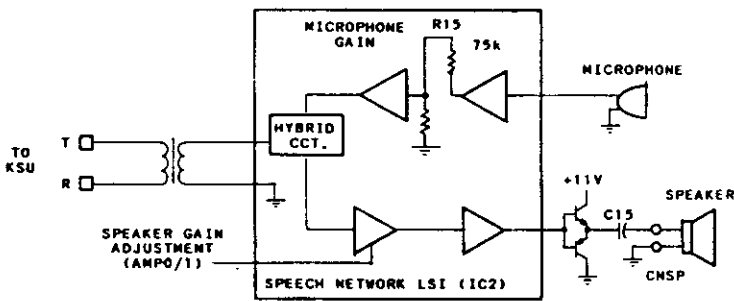
Speakerphone <72>

Circuit Operation: The circuit is illustrated in Figure 6-36.

1. Hands-free talkback on ICM is a full duplex operation which allows speaking and listening at same time.
2. The two-way tip/ring voice is split to transmit and receive voice using a hybrid circuit in SPEED NETWORK LSI and then connected to microphone and speaker.
3. The microphone circuit is disconnected while the station is in DND mode.



**FIGURE 6-37 STATION
 DISPLAY CIRCUIT**



**FIGURE 6-36 STATION
 HANDS-FREE CIRCUIT**

3. The PPU I/O port is connected to the matrix of LEDs which alternate high and low status in order to turn on the LEDs in dynamically. An LED is turned on momentarily when the Anode is high (+5 V) and the Cathode is low (ground)
4. The PPU sends parallel data of ASCII character code to the LCD display module only when the display has to be renewed.

OTHER SYSTEM OPERATION

3.09 This section describes miscellaneous ZT-D system features operation.

e. Station display

Related Features:

- Absence Message Display
- Alpha-numeric Display
- Busy Lamp Field
- I-use/I-hold Indication
- Message Wait

Related Hardware: CPUHW, KTSB, SLKT, KT

Feature Programming:

- Station Type <03>
- Flexible Key Assignment <78>

Circuit Operation: Figure 6-37 shows control circuit of LEDs in the station set.

1. All station displays, LEDs and LCD, are controlled by the CPU in the KSU through data transmission over D1/D2 pair.
2. Data is detected by Data Transmission Circuit and sent to KT PPU.

a. Background music

Related Features:

Internal/external Background Music

Related Hardware: CPUHW, DPPAG, KTSB, SLKT, KT

Feature Programming:

- Background Music Source <09>
- Background Music <60>
- Flexible Relay Assignment <27>

Circuit Operation: The ZT-D system provides background music not only to the P.A. amplifier but also to any key telephones, as programmed as shown in Figure 6-38.

1. BGM signal applied to the "BGM" RCA terminal, located on the KSU MDF panel DSPA6 (616KSU) or DSPB82 (824/2464KSU), appears at BGM input of the CPUHW card.

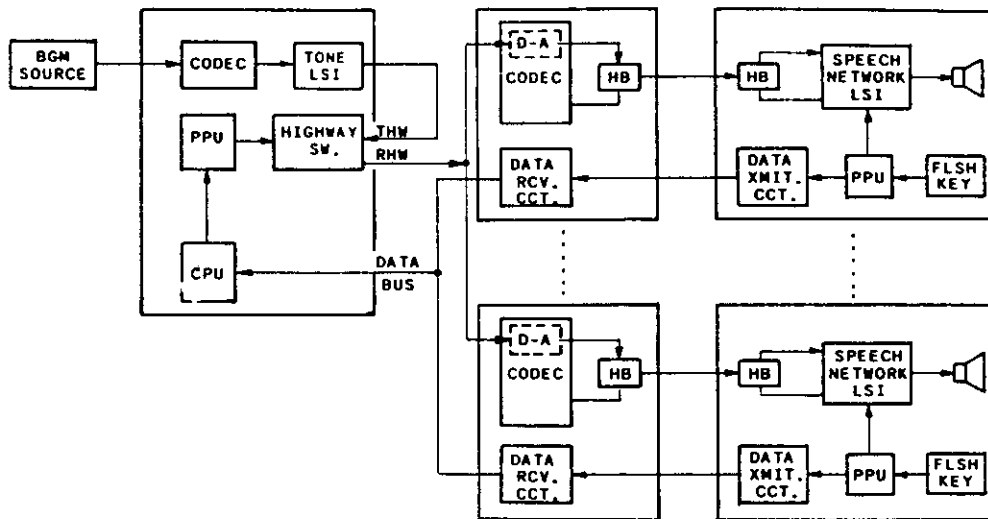


FIGURE 6-38 SYSTEM BACKGROUND MUSIC

2. The signal is digitized on the CPUHW card and constantly exists on THW reserved for the BGM.
3. The CPU, referring to the database for BGM assignment of the station and to the register for the FLSH key operation, commands HWY PPU to duplicate the BGM THW to station RHW slots which are supposed to receive BGM at idle.
4. The BGM THW is also duplicated at the paging input of DPPAG card so that BGM through P.A. amplifier may be activated by programming.

b. Doorphone

Related Features:

Doorphone - maximum three units

Related Hardware: CPUHW, DPPAG, DOPH

Feature Programming:

Doorphone Assignment <13>

Doorphone Ringing - Day <42>

Doorphone Ringing - Night <43>

Ringling Group <44>

Circuit Operation: Up to three doorphones can add intercom monitor/hands-free station to the system. Refer to Figure 6-39.

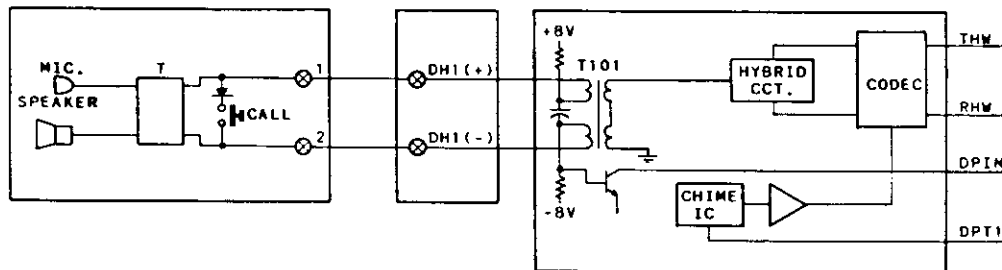


FIGURE 6-39 DOORPHONE OPERATION

1. When the CALL button of a Doorphone is pressed, the 1/2 pair provides a short-circuit so that the DPPAG card can detect the voltage drop as incoming calls.
2. The DPPAG card sends the information to CPU on the CPUHW card through data bus of the motherboard.
3. The CPU finds which station to ring, referring to the database programmed for ringing, and sends a command to the defined station through the KTSB card, to switch the amplifier input to the station Tip/Ring. The ringing signal (chime) is originated at MUSIC IC on the DPPAG card. It is converted to PCM signal through the CODEC IC and sent to the THW. Then it is exchanged to the RHW of the ringing KT by the HWY PPU and controller LSI.
4. At the same time the chime is sent to the Doorphone through 1/2 pair to sound its speaker.

c. Remote Control

Related Features:

Remote Control

Related Hardware: CPUHW, FRIFC, KTSB, SLKT, KT

Feature Programming:

Flexible Relay Assignment <27>

Flexible Key Assignment <78>

Circuit Operation: Figure 6-40 illustrates an example of remote control applications.

1. When a REMOTE key is pressed on a key telephone, the CPU refers it to database to find the flexible relay assignment that defines the relay to operate on the FRIFC card.
2. The CPU sends a command through system databus to turn on the relay. Three seconds later, the CPU sends another command again to turn off the relay.

d. SCDR

Related Features:

SCDR Interface

Related Hardware: CPUHW, SDIFC

Feature Programming:

SCDR Output Format <06>

SCDR Output Mode <07>

Circuit Operation: The ZT-D KSU provides an RS-232C port to connect a printer for SCDR. Table 6-C lists necessary connection to operate printer and Figure 6-41 shows the operational sequence.

1. Every time a CO/PBX line call is completed, the system CPU sends the detailed information to the PPU on the SDIFC card.
2. The PPU translates the information into the print-out format using ASCII code.

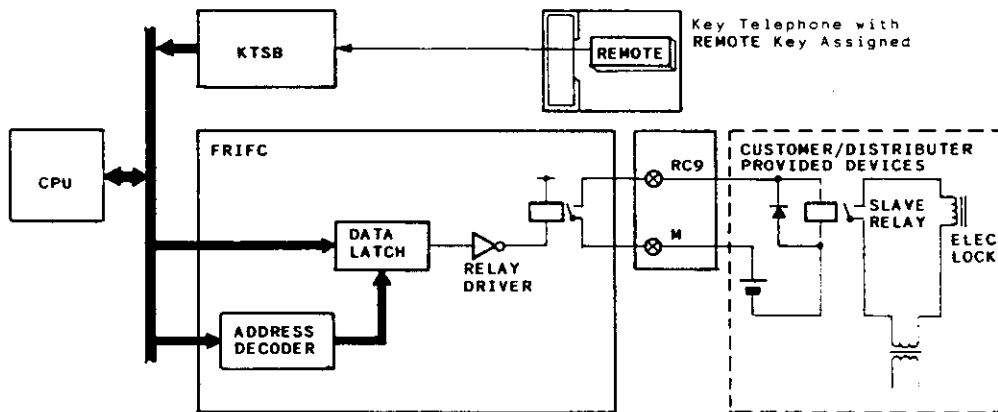


FIGURE 6-40 REMOTE CONTROL EXAMPLE

Then the code sent to the serial interface IC. The signal is converted from +5 V logic level to ± 8 V RS232C level and is sent to the printer through the 25-pin DB connector on the KSU distribution panel DSPA6 (616KSU) or DSPC82 (824/2464KSU).

3. When the KSU requires to transmit data to the printer, it brings DTR signal "High".
4. After receiving the recognition "High" at DSR it brings RTS "high" again.
5. The KSU begins sending the call data at TxD after receiving "High" at CTS. Thus, all signals at DTR, DSR, RTS and CTS must be "High" to enable data transmission at TxD.

**TABLE 6-C KSU-PRINTER
 PIN ASSIGNMENT**

PIN NO.	ZT-D KSU			PRINTER		
	EIA	DESCRIPTION	DIRECTION	EIA	DESCRIPTION	DIRECTION
1	AA	FG Frame ground	None	AA	FG Frame ground	None
2	BB	RxD Receive Data	From Printer	BA	TxD Transmit Data	To Printer
3	BA	TxD Transmit Data	To Printer	BB	RxD Receive Data	From Printer
4	CB	CTS Clear to Send	From Printer	CA	RTS Request to Send	To Printer
5	CA	RTS Request to Send	To Printer	CB	CTS Clear to Send	From Printer
6	CA	RTS Request to Send	To Printer	CC	DSR Data Set Ready	From Printer
7	AB	SG Signal Ground	None	AB	SG Signal Ground	None
8	CD	DTR Data Terminal Ready	To Printer	CF	DCD Data Career Detect	From Printer
20	CF	DCC Data Career Detect	From Printer	CD	DTR Data Terminal Ready	To Printer

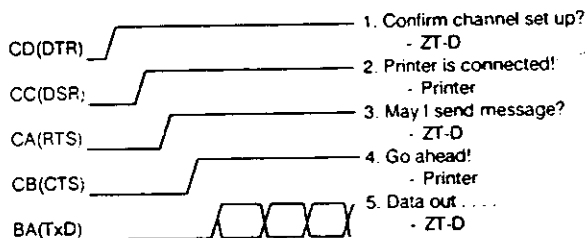


FIGURE 6-41 SCDR OPERATION

e. Remote programming

Related Features:

Remote/Local PC Programming

Related Hardware: CPUHW, SDIFC, FRIFC, REMOTE BOX, DSPC82

Feature Programming:

MODEM Transmission Line <14>

Circuit Operation: An IBM XT compatible

Personal Computer can program or change the customer database at a remote location through a telephone modem. A Hayes Smart-Modem (R) must be used to meet the ZT-D communication protocol. Table 6-D lists necessary connection to operate Modem. Refer to the PC Programmer manual for details of the operation. (R Trademark of Hayes Corp.)

**TABLE 6-D KSU-MODEM
 PIN ASSIGNMENT**

PIN NO.	ZT-D KSU		DIRECTION	MODEM	
	EIA	DESCRIPTION		EIA	DESCRIPTION
1	AA	FG Frame ground	None	AA	FG Frame ground
2	BA	TxD Transmit Data	From ZT-D	BB	RxD Receive Data
3	BB	RxD Receive Data	To ZT-D	BA	TxD Transmit Data
4	CA	RTS Request to Send	From ZT-D	CB	CTS Clear to Send
5	CB	CTS Clear to Send	To ZT-D	CA	RTS Request to Send
6		No Connection	None		None
7	AB	SG Signal Ground	None	AB	SG Signal Ground
8	CF	DCD Data Career Detect	To ZT-D	CD	DTR Data Terminal Ready
20	CD	DTR Data Terminal Ready	From ZT-D	CF	DCD Data Career Detect

f. Power failure transfer

Related Features:

Power Failure Back up - Memory

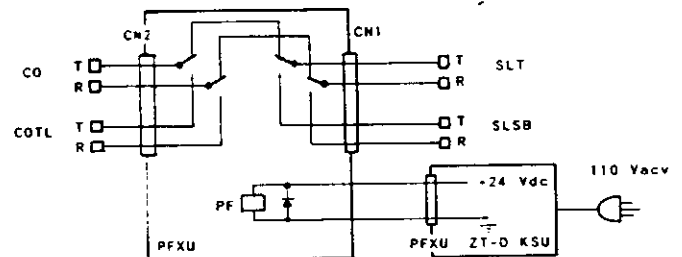
Power Failure Back up - System

Power Failure Transfer - SLT

Related Hardware: PFXU, MBD, AMPA6, AMPA82

Feature Programming: None

Circuit Operation: The CO/PBX lines can be connected to SLTs using an optional PFXU-M unit during commercial power failure. Refer to Figure 6-42.



**FIGURE 6-42 POWER FAILURE
 OPERATION**

1. The PFXU connector in the KSU distribution panel AMPA6 (ZT-616) or AMPA82 (ZT-824/2464) provides +24 Vdc battery while the system power is ON. All relays in the PFXU-M are operating in normal use, connecting the CO/PBX lines to the KSU.
2. When the power is lost, the +24 Vdc battery is removed and the relays are released, switching the CO/PBX lines to the SLTs.

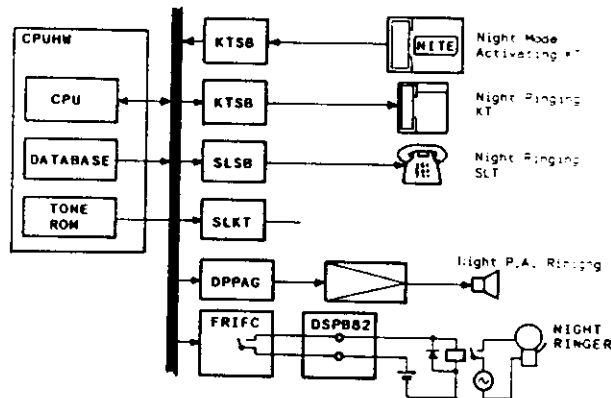


FIGURE 6-44 NIGHT RINGING SERVICE

g. Night Service Switch

Related Features:

- Night Ringing at extension,
- External ringer
- P.A. system

Related Hardware: CPUHW, FDIFC, AMPA6, AMPA82

Feature Programming:

- Flexible Relay Assignment <27>
- Station Night Ringing <41>
- Doorphone Ringing - Night <43>
- CO Ringing Group <44>
- Loud Ringing Bell - Night <46>
- P.A. Ringing - Night <47>
- Night Transfer Station <82>

Circuit Operation: Figure 6-43 shows hardware and related control flow for night service feature. Figure 6-44 illustrates an example of database programming listed in Table 6-E.

TABLE 6-E NIGHT TRANSFER DATABASE

CO No.	Ringng Extension	Transfer Group	Transferring Extension
1	120		
2	123	1	120
3	126		
4	126, 127	2	125
5	130		
6	126, 132		
7	132, 133	3	132
8	132		
9	none		
10	none		
11	140,142,156	4	132

1. When the night service is activated at the Extension No.132, Ringing Group 3 (CO6, CO7, CO8) and Ringing Group 5 (CO11) turn into night ringing mode.
2. The ringing station belongs to individual CO line, not the Ringing Group; CO6 rings at Ext. 126 while CO7 rings at Ext.133.

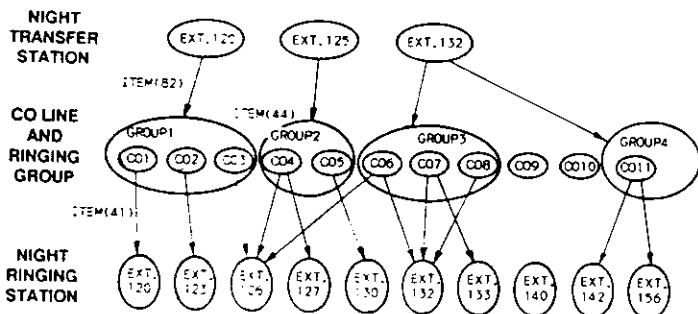


FIGURE 6-43 NIGHT SERVICE DIAGRAM

4.00 KEY SERVICE UNIT AND POWER SUPPLY

KEY SERVICE UNIT

4.01 The Key Service Unit (KSU) is a single cabinet construction and it contains a motherboard for all plug-in circuit card modules and power supplies. It also contains the distribution panels for connecting external circuits and devices such as CO lines and key telephones. The motherboard module slots are classified into four (4) functions; CPU, CO lines, SUBscribers and OPTions. Three models of the KSU, the ZT-616KSU, ZT-824/1632KSU and ZT-2464 KSU differs by the capacity of the card modules and distribution points. To distinguish the capacity difference the system identification is provided on the motherboard so that a commonly used CPUHW software can recognize the capacity. Figure 6-45 illustrates the motherboard connection on the KSUs and the associated circuit card module location.

ZT-616KSU

4.02 The ZT-616KSU provides one CPU, one CO, two SUB and three OPT slots for configuration of up to six (6) CO/PBX trunks and sixteen (16) extensions. An internally mounted power supply, ZT-PWSA, provides operational power to the system.

ZT-824/1632KSU

4.03 The ZT-824/1632KSU provides one CPU, one CO, one CO/OPT, four SUB and three OPT slots for configurations of up to sixteen (16) CO/PBX trunks and thirty-two (32) extensions. The CO/OPT slot may be used for either a second CO or a fourth OPT card. An externally mounted power supply ZT-PWSB provides operational power for up to 824 configuration. Power supply ZT-PWSC must be used for configurations over eight trunks and twenty-four extensions on the KSU.

ZT-2464KSU

4.04 The ZT-2464KSU provides one CPU, three CO, nine SUB and five OPT slots for configuration of up to twenty-four (24) CO/PBX trunks and seventy-two (72) extensions. Note that the ninth SUB slot is activated only with the CPUHW-Z1 processor card. An externally mounted power supply ZT-PWSC provides operational power to the system.

KSU MOTHERBOARD

4.05 The KSU Motherboard provides all the intra-card module wiring such as CPU bus for data, address and control and PCM voice communication highway THW and RHW. Also, the motherboard provides individual edge connector with digital (binary address) identification so that the CPU can determine if they are for CO line, subscriber, or option cards.

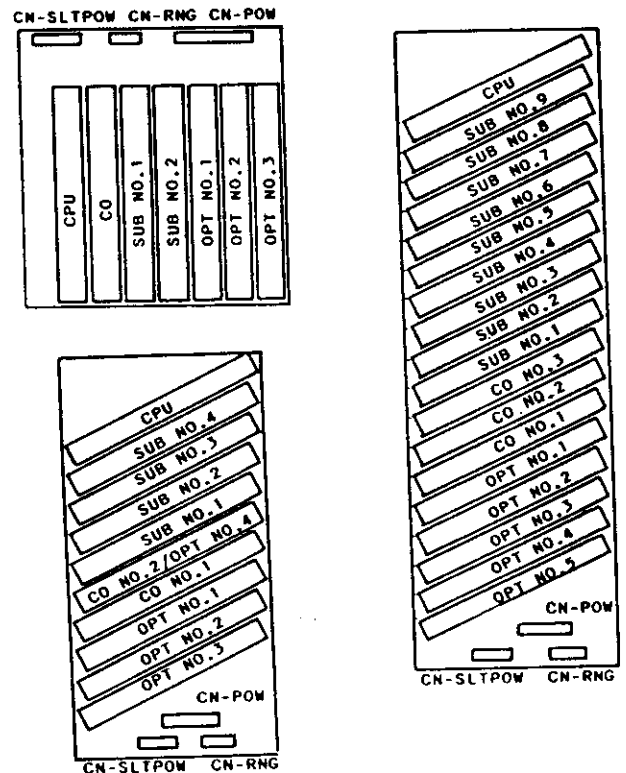


FIGURE 6-45 KSU MOTHERBOARD

KSU DISTRIBUTION PANELS

4.06 This section describes the distribution panel circuits on the ZT-D KSUs.

a. AMPA6 Distribution Panel

Circuit Description: AMPA6 panel connects CO lines, Power Failure Transfer Unit, intra-house station wiring, doorphones, P.A. system, external device control wiring,

SCDR and Modem for remote programming for ZT-616KSU.

b. AMPA81 Distribution Panel

Circuit Description: AMPA81 panel connects CO lines, Power Failure Transfer Unit, intra-house station wiring for up to 32 extensions for ZT-824/1632 and ZT-2464KSU.

c. AMPA24 Distribution Panel

Circuit Description: AMPA24 panel connects intra-house station wiring of additional 32 extensions on the ZT-2464KSU with the CPUHW.

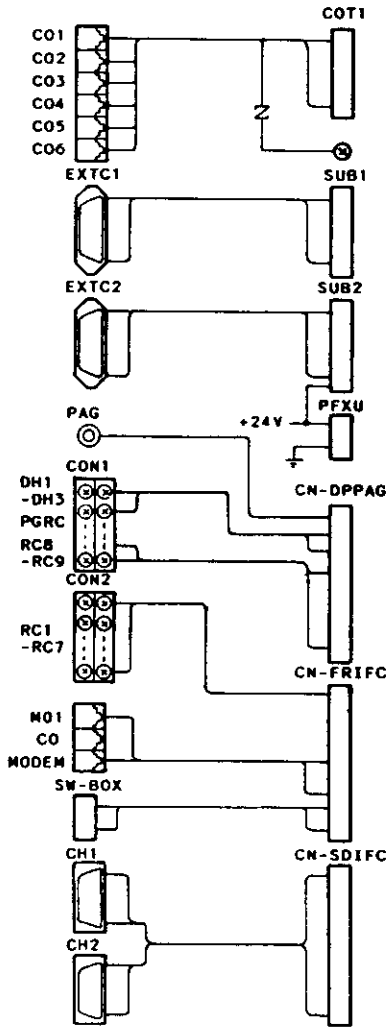
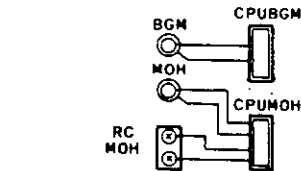


FIGURE 6-46 AMPA6 PANEL



**FIGURE 6-49 DSPA6/
 DSPB82 PANEL**

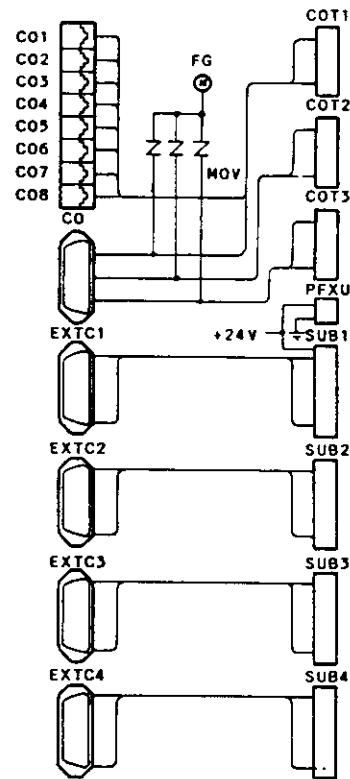


FIGURE 6-47 AMPA81 PANEL

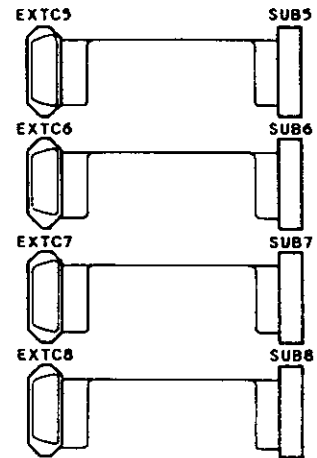


FIGURE 6-48 AMPA24 PANEL

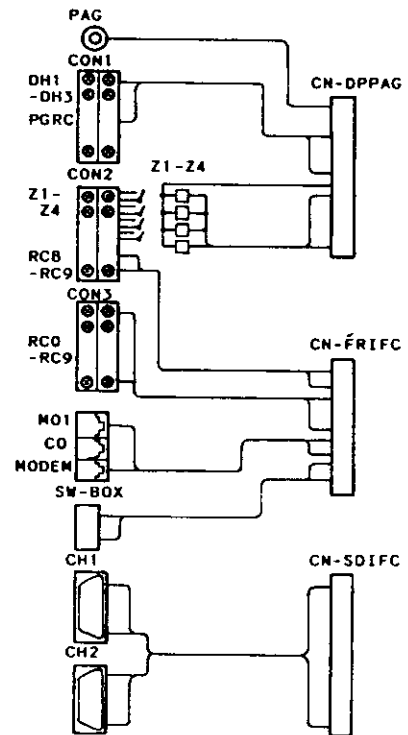


FIGURE 6-50 DSPC82 PANEL

- d. **AMPA24-1 Distribution Panel**
Circuit Description: AMPA24-1 panel connects intra-house station wiring of additional 40 extensions on the ZT-2464KSU with the CPUHW-Z1.
- e. **DSPA6 Distribution Panel**
Circuit Description: DSPA6 panel connects MOH and BGM input circuit and BGM control wiring for ZT-616KSU.
- f. **DSPB82 Distribution Panel**
Circuit Description: DSPB82 panel connects MOH and BGM input circuits and BGM control wiring for ZT-824/1632/2464KSU.
- g. **DSPC82 Distribution Panel**
Circuit Description: DSPC82 panel connects doorphones, P.A. system, external device control wiring, SCDR and Modem for remote programming for ZT-824/1632 and ZT-2464KSU.

TABLE 6-F SYSTEM POWER SUPPLY SPECIFICATIONS

FUNCTION	ZT-PWSA	ZT-PWSB	ZT-PWSC
System Configuration	up to 616	up to 824	above 824
AC Input Voltage	120 Vac \pm 10%, 50-60 hz		
AC Input Current	1.8 amps.	1.8 amps.	4.5 amps.
DC Output (+24 Vdc)	2.5 amps.	2.6 amps.	8.8 amps.
DC Output (+8 Vdc)	0.4 amps.	0.6 amps.	0.6 amps.
DC Output(+5 Vdc)	2.5 amps.	2.5 amps.	3.0 amps.
DC Output (-8 Vdc)	0.4 amps.	0.6 amps.	0.6 amps.
Charger Out (27.3 Vdc)	0.2 amps.	0.2 amps.	0.5 amps.

5.00 POWER SUPPLY UNITS

5.01 The three models of the ZT-D power supply have identical output voltage but they differ by the power capacities. The main power supply unit generates the necessary DC voltages from commercial AC power, to operate the system circuitry. In all three ZT-D KSUs, the DC supply voltages are +5 Vdc, \pm 8 Vdc and +24 Vdc. These voltages are converted from the 120 Vac commercial power, or +24 Vdc emergency back-up battery, at the main power supply unit.

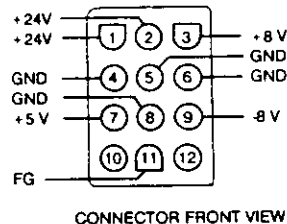
5.02 The PWSA is an internal power supply for the ZT-616KSU. The PWSB can be used for up to 824 system configuration for the ZT-824/1632KSU. Any system above 824 size must use the power supply PWSC.

OUTPUT POWER CAPACITY

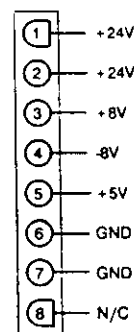
5.03 Table 6-F lists the system power supply specifications.

CONNECTION

5.04 Output of the Power Supplies are fed into the KSU motherboard through a 12-pin (nine-wire) plastic connector—from connector J1 of the power supply to connector CN-POW on the KSU motherboard. The voltage appears at connector pins are shown in Figure 6-51.



a. ZT-PWSB/PWSC



b. ZT-PWSA

CONNECTOR FRONT VIEW

FIGURE 6-51 POWER SUPPLY CONNECTOR

BATTERY BACKUP

5.05 If the ZT-D system is required to remain operational during a power failure, a set of rechargeable batteries must be installed. Rechargeable batteries connected to the power supply unit are charged while the system power is on. The battery support time depends upon the system configuration, call traffic, and the number of batteries. Based upon average use of the 1648 size system, the minimum supporting time with GEL-CELL(U128) is approximately four to five hours.

TABLE 6-G COMPONENTS POWER CONSUMPTION

Cards	Back-up Current	Cards	Back-up Current
CPUHW	315 mA	SDIFC	64 mA
COTL4	25 mA	RNGER	290 mA
COTL6	35 mA	DCDC-Z	250 mA
COTL8	55 mA	DCDC-Z1	100 mA
KTSB8	45 mA	ZT-24D/K	35/135 mA
SLSB8	170 mA	ZT-12D/K	35/120 mA
SLKT8	40 mA	ZT-8D/K	35/115 mA
RECV2	35 mA	ZT-6D/K	35/115 mA
RECV8	140 mA	ZT-32C	28/180 mA
DPPAG	125 mA	SLT	0/25 mA
FRIFC	5/90 mA		

NOTE: Idle/Busy

5.06 Power consumption for individual system components is listed in Table 6-G in current at 24 Vdc input from the batteries. For 8 CO lines and 15 ZT-24D key telephones of which one-third are operating as average throughout the office hour, total current can be calculated as:

1-CPUHW	315	315 mA
1-COTL8	55	55 mA
2-KTSB8	2 X 45	90 mA
1-DPPAG	125	125 mA
5-operating 24D ..	5 X 135	675 mA
10-idle 24D	10 X 35	350 mA
Total current		1.305 A

Supporting this system with two Glove Union Gel-Cell GC 1245-1 that have 4.5 AH capacity, the back-up time is:

$$4.5 \text{ AH} / 1.3 \text{ A} = 3.5 \text{ Hours.}$$

Apply this approach to determine the number of batteries required for the expected support time.

OPTIONAL POWER RESOURCES

5.07 Optional power resources for the ZT-D system are Ringer RNGER and DC-DC Converters DCDC-Z/Z1. The capacities of these resources are listed in Table 6-H.

TABLE 6-H OPTIONAL POWER RESOURCES

	RNGER	DCDC-Z	DCDC-Z1
INPUT	+24 Vdc	+24 Vdc	+24 Vdc
OUTPUT	65 Vac, *A 20 Hz	-48 Vdc, *A	-48 Vdc, *A

a. RNGER

Features: The RNGER generates a 20 \pm 4 Hz., 63 \pm 4 Vrms ringing signal for single line telephones (SLTs). It has output power capacity to drive 20 SLT/OPX ringers at once. In normal operation it drives 60 SLTs/OPXs simultaneously over one ringing cycle which consists of "one second of ring" and "two seconds of silence". The interrupter is software timer and physicaly controlled at the SLSB8/SLKT8 cards.

Circuit Description: An output signal level of 20 Hz. oscillator, IC1, is adjusted by VR1 and delivered to a phase shift circuit IC2. The signal is shifted by 90 degree and applied to a output power amplifier Q1 and Q2. The output voltage is brought up high enough to activate telephone ringer through transformer ZT-R. The signal is send to the motherboard on the KSU through a connector CN-RNG as illustrated.

NOTE: Volume control knob VR1 is preset at the factory and should NEVER be adjusted.

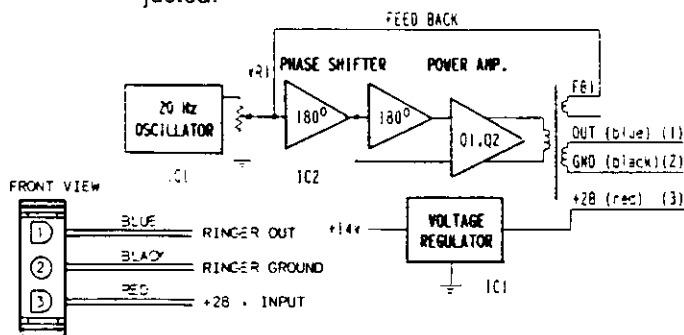


FIGURE 6-52 RINGER

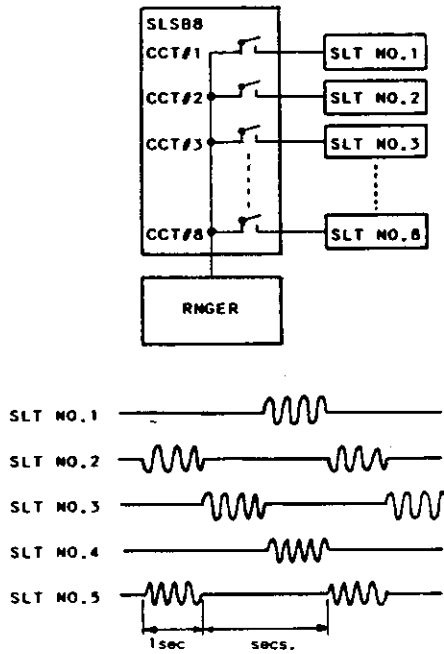


FIGURE 6-53 RINGING OPERATION

b. DCDC-Z/DCDC-Z1

Features: The DC to DC converter generates negative 48 Vdc power from +24 Vdc system battery, to provide talk battery to up to thirty-two (32) long-distance off-premise single line telephones (OPX) for the ZT-824/1632 and ZT-2464 KSUs.

Circuit Description: +24 Vdc input provides power to internal oscillator and the AC driver circuit. The generated AC signal is stepped up through high efficiency transformer, and rectified and be regulated to -48 Vdc output.

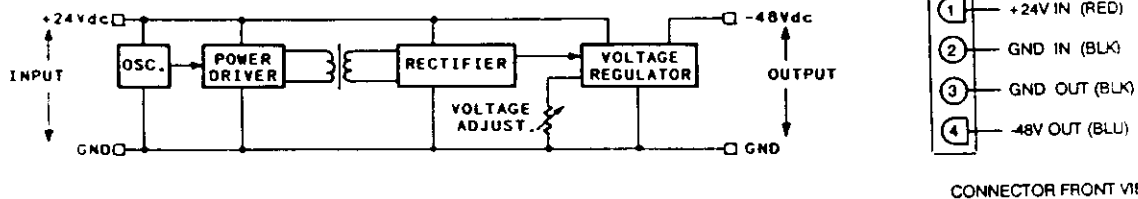


FIGURE 6-54 DCDC-Z/Z1

6.00 KSU CARDS

6.01 The KSU cards are printed circuit boards which consists of individual functional modules on the ZT-D KSUs. The modules consist of system common control, CO/PBX line interface, extension interface and others. The card slots of the KSUs are assigned for the functions respectively.

COMMON/LINE CARDS

6.02 This section describes the common control card and CO line/station interface cards used in the ZT-D KSUs.

a. CPUHW

Function: The CPUHW card contains two functions; main system control (CPU) and the speech path (Highway) control. The CPU consists of a Z-80 microprocessor, memories and the peripherals. The Highway control includes pulse-code modulated (PCM) time-division multiplexed high-way switch. Two variations of the CPUHW card, MCPUHW and KCPUHW differs only by the software: contents of the EPROMs. The Version 2 CPU (CPUHW-Z1) contains a larger memory size to control enhanced system features and can be installed with all the original hardware modules.

Circuit Description: When the system is powered up, the CPU first reads all data in the PROMs and refers it to the SUM-CHECK value; LED3 indicates error if the check is failed. Then it reads position of switch SW1.

If it is at RAM CLR, the CPU clears all the customer database memory and writes default database into it. When the switch is changed to RUN position the CPU starts reading circuit card type in the KSU motherboard slots and turns on the local power one by one. The system can be reset by shorting the Reset Mark.

1. CPU: Main system control uses Z-80 8-bit microprocessor driven by 4-M Hz. clock. Capacitor C38 determines clock accuracy and it is factory adjusted. Interrupt timer changes level of operational software every 8-msec. and holds the CPU to execute its main software for 32-u sec. while accessing to PPU's.

Three LEDs indicate the status of running system software;

LED1 indicates system clock:

Blinking = normal,
 Steady on/off = failure.

LED2 indicates system status:

Off = system idle,
 Blinking = system busy.
 On = MOH in use.

LED3 indicates the memory failure on HWPPU during system start-up:

On = RAM/ROM failure,
 Off = normal.

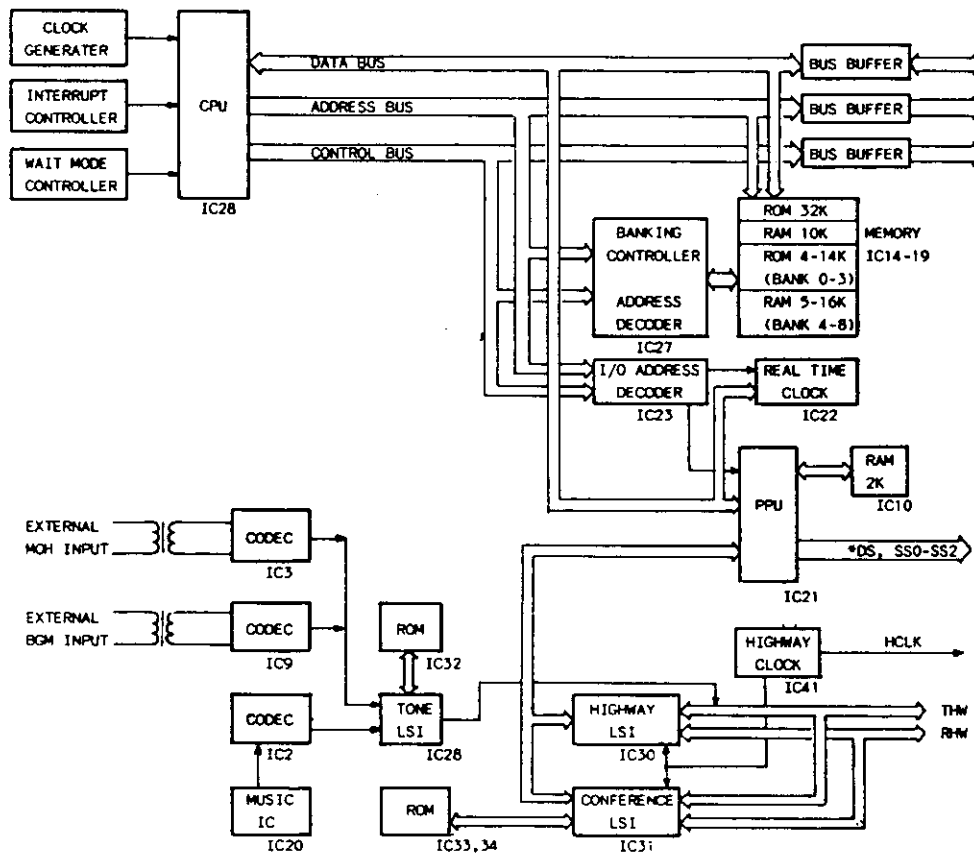


FIGURE 6-55 CPUHW CARD

2. **Memories:** 96-k bytes of ROM and 96-k bytes of RAM are mounted on the CPUHW card. The CPU uses 32-k ROM and 16-k RAM, totaling 48-k memory area for basic operation, and remaining memory address C000H to FFFFH are used for banking to access further 144-k bytes of memory as illustrated in Figure 6-56. A custom made IC27 was developed for this purpose. The operating program is stored in PROMs at P1, P2 and P3 and customer database and system operating condition are stored in RAMs at M1, M2 and M3. The RAMs are backed up by a Lithium battery (BTT) to maintain the installed customer database through connector CN-BT while the CPUHW card is not powered.

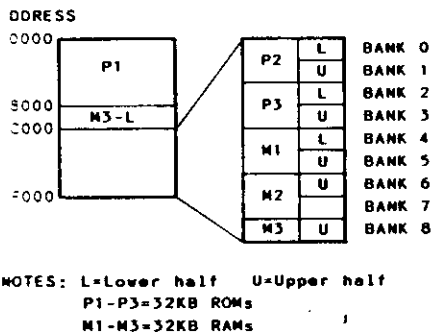


FIGURE 6-56 CPU MEMORY MAPPING

3. **Timer:** To maintain the system clock for various services IC22 is generating a real time clock/calendar pulse.
4. **PPU:** IC28, an one-chip microcomputer (HWPPU), performs slave processing to the main CPU. It controls highway channel switching for PCM digital voice communication. The PPU has external 2K bytes RAM in addition to the internal ROM.
5. **Highway Switch:** The Highway PPU controls custom LSI, IC31, to exchange digital highway channels. The channels are fixed to voice communication units such as CO lines and extensions as illustrated in Figure 6-7. The highway

consists of seven (7) frames, each of them containing 32 channels. the LSI also provides synchronizing clock for highway bus:

$$\begin{aligned} \text{HCLK (Highway clock)} &= 2.048\text{M Hz.} \\ \text{DS0-DS3, SS0-SS4 (Sampling strove)} &= 3.9 \text{ us.} \end{aligned}$$

6. **Conference Circuit:** EPROMs CONF1 and CONF2 (IC33 and IC34) contain all necessary data for digital conference manipulation including gain control.

TABLE 6-I TONE ROM SOURCE

FUNCTION	AUDIBLE INDICATION
ICM Busy Tone	480/620 hz.
CO Incoming/Ringback	440/480 hz.
CO Incoming/Ringback2	480/620 hz.
ICM Incoming/Camp-on	400 hz.
CO Recall	440/480 hz.
ICM Incoming/Ringback	440/480 hz.
ICM Recall	400 Hz.
ICM Dial Tone	400 hz.
CO Override/ICM Burst	400 hz.
Warning Tone	480/620 hz.

7. **Call Progress Tone Source:** Tone ROM (IC32) contains call progress tones such as dial tone, busy tone, ring back tone, howler tone and DTMF signal. These signals are transmitted to the highway through Tone control LSI (IC29).
8. **MOH Source:** An Internal or external MOH source is selected by programming, choosing from:
 - * For internal MOH switch SW2 selects one of two melodies which is stored in IC20. (M1: Home on The Range, M2: Green Sleeves).
 - * For external MOH CN2/EX-MOH inputs the customer provided source through jack BGM/MOH on the DSPB82 (824/1632/2464) or the DSPA6(616).
9. **BGM Source:** Connector CN3/BGM inputs customer provided BGM source through BGM phono jack on the DSPB82 (824/1632/2464) or the DSPA6 (616).
10. **Test terminal TP:** is used to confirm: all analog signals in the HWPPU, highway switch, tone LSI, and the internal MOH.

b. CO/PBX LINE (COTL) INTERFACE CARDS

Features: CO/PBX incoming ringing detection, momentary battery open (CO disconnect) detection, DTMF and DP signals transmission and all voice frequency signal interface.

Circuit Description:

1. One-chip microprocessor IC6 controls local functions on the card and interfaces to the main CPU on the CPUHW card. IC9 monitors PPU operation for abnormal software status such as deadlock and overrun, and initializes it when necessary.
2. Codec circuits IC101-IC108, consisting of a set of digital-to-analog and analog-to-digital converters, convert the digital PCM signal to analog voice for metallic Tip/Ring communication using American Standard u-law technology. Voice transmission to the extension is ceased to avoid noise while the line is dialing to the CO.
3. Hybrid ICs TLIC1-TLIC8 are CO/PBX line interface circuitry including ringing detector and line battery monitor circuits.

The line busy/idle indicators LED1 LED8 and line relays S1-S8 are also driven by those ICs.

4. **Make-busy straps MB1 - MB8** sets the PPU so that the associated line circuitry does not exist temporarily through IC14.
5. **PAD switches PAD1 - through PAD8** insert additional 3-dB attenuation to the line when they are at 2-3/5-6 (LC) positions.
6. **Strapping jacks CN11 - CN18** adjust line impedance to match 600 ohms or 900 ohms by changing tap of transformer T1 - T8. The impedance is marked on the board. The proper adjustment is very important for hybrid balance (two-to-four wire conversion) to avoid line echo or high side tone.
7. **Ribbon cable connector CN2** connects CO line Tip/Ring, appearing at Ampenol/modular jacks on the AMPA panel to the card. Pin 1 connects CO1 tip, Pin 2 - CO1 ring, pin 3 - CO2 tip, Pin 4 - CO3 ring, and so forth.

Related Programming: System programming item (04) activates the individual line circuit on the cards.

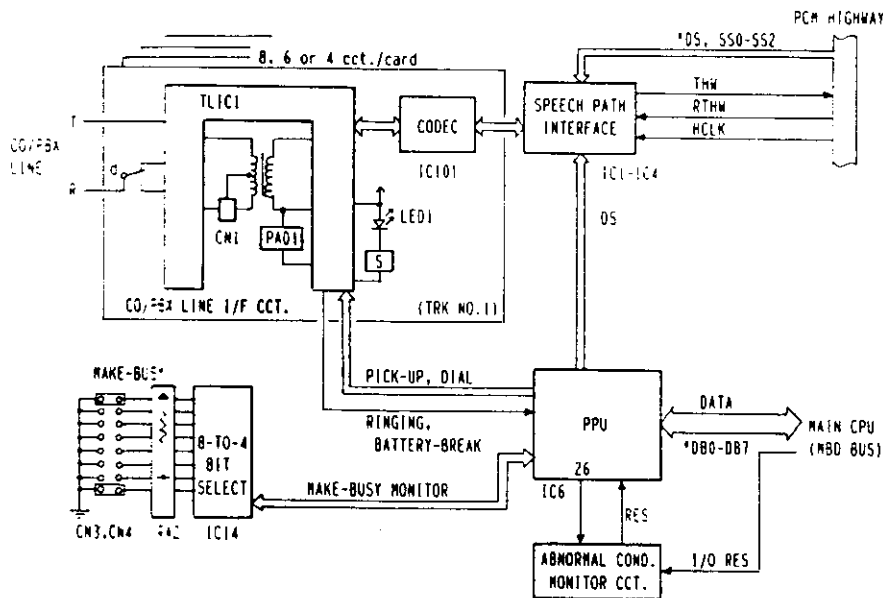


FIGURE 6-57 COTL CARD

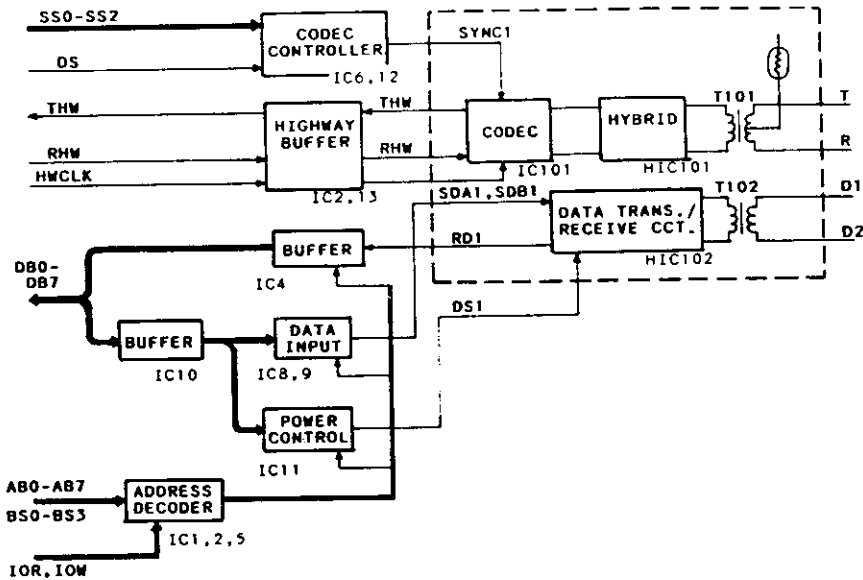


FIGURE 6-58 KTSB8 CARD

c. KTSB8 Card

Features: The KTSB8 card contains eight interface circuits for all types of key telephone(s) and DSS Console(s). Each circuit uses two-pair for an extension connection:

- One-pair for speech path.
- One-pair for data transmission.

Circuit Description:

1. **Power** to the extension is provided through center taps of a pair of transformers, e.g. T101 and T102 for circuit No.1. The posisters PTH101 - PTH 108 protects the circuit from overcurrent flow into the cable individually. Also the CPU controls the turn-on sequence of power control switches located in the HIC1 - HIC8 to protect system power supply from extreme rush current at initial power-up of the system.
2. **Data transmission:** Bipolar pulse transmission technology is used for data communication between the KTSB card and key telephones. The CPU data bus with addressing and control signal sets transmission data pulse (high) to SDA and SDB alternately through IC8 and IC9. The output is applied to data driver HIC102 - HIC802 which convert it to a bipolar pulse, sending through

transformer T102 - T802. Received bipolar pulse from extensions at these transformers is applied to HIC102 - HIC802 to convert back to unipolar pulse (RD) and held there waiting for the CPU to read it. The CPU reads the RD through data bus with addressing and control signalling and resets the latch for the next input. The Bipolar signal and corresponding unipolar signal is shown in Figure 6-60.

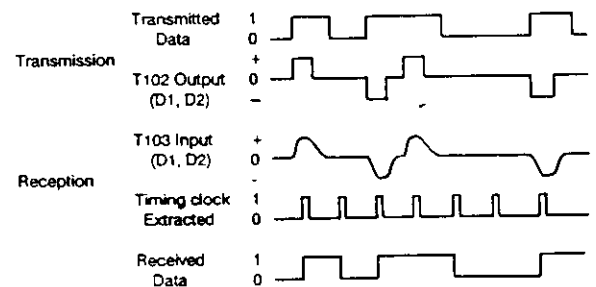


FIGURE 6-60 DATA TRANSMISSION SIGNAL

3. the digital PCM highway and analog hybrid line circuit. The analog part of the signal is connected to intra-house cabling through HIC101 - HIC 801 and transformers T101- T801. The codec

sends and receives the PCM signals to/from the HWPPU over Transmission Highway (THW) and Reception Highway (RHW) respectively through interface circuits IC6 and IC12. The Highway clock (HWCLK), necessary to synchronize to its own channel, is also interfaced through the same circuit.

d. SLSB8 Card

Features: The SLSB8 card contains eight interface circuits for on-premise DP and DTMF SLTs providing +28 Vdc talk battery.

Circuit Description:

1. Talk battery to the extension is +28 Vdc and provided through SLIC ICs (HIC101 - HIC801). The maximum loop resistance of the intrahouse cabling to maintain high-impedance balanced circuit for SLT interface is 500 ohms.
2. The SLIC is a custom hybrid IC containing a talk battery feeding circuit, loop detector, and a relay (RG) driver to turn on/off the 20 Hz. ringing signal, generated at the RINGER unit.
3. If either Tip or Ring conductor to the SLT is earth grounded, the SLIC detects it and turns on the indicators LED101 - LED801.

Then it turns off talk battery to the SLT to protect the SLIC circuit from overcurrent damage. The circuit is recovered by itself when the problem is corrected.

4. Communication of the PPU, one-chip microcomputer IC3, to the CPU is carried through the data bus with aid of address and control bus over the KSU motherboard.

IC4 monitors PPU operation for abnormal software status such as deadlock and overrun, and initializes it when necessary.

5. Codec circuits IC101-IC108 interface the digital PCM highway and analog hybrid line circuit. The analog part of the signal is connected to intra-house cabling through HIC101 - HIC 801 and transformers T101- T801. The codec sends and receives the PCM signals to/from the HWPPU over Transmission Highway (THW) and Reception Highway (RHW) respectively through interface circuit IC6 and IC12. The Highway clock (HWCLK), necessary to synchronize to its own channel, is also interfaced through the same circuit.

Related Programming: System programming items (03), and (12) activates subscriber cards.

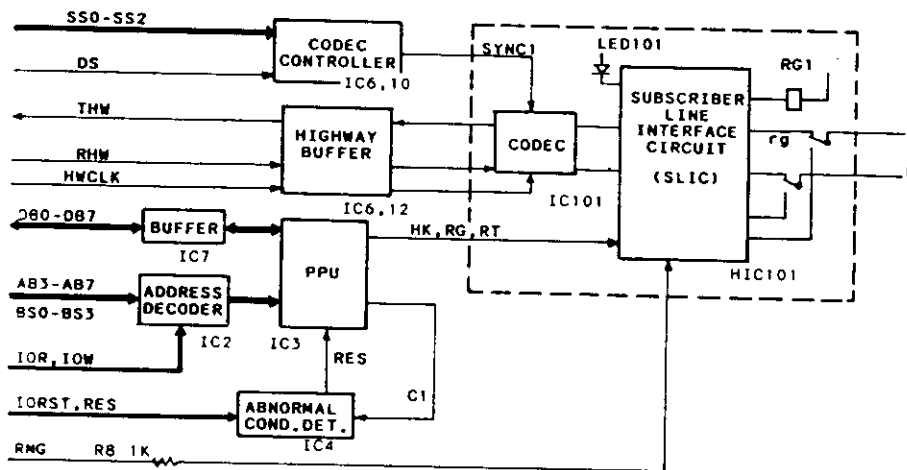


FIGURE 6-60 SLSB8 CARD

e. SLKT8 Card

Features: The SLKT8 card contains four (4) key telephone interfaces and four (4) off-premise SLT extension (OPX) interfaces with -48 Vdc talk battery.

Circuit Description:

1. Talk battery to the OPXs is -48 Vdc and provided through SLIC ICs (HIC502 - HIC802). The maximum loop resistance of the intrahouse cabling to maintain high-impedance balance circuit for OPX interface is 1200 ohms. The SLIC also contains a CODEC for digital voice interface.
2. The basic operation of the SLIC is the same as those in the SLSB card. The SLIC detects if either tip or ring conductor to the SLT is earth grounded.

When detected, it and turns on the indicators LED501 - LED801 and then stops feeding the talk battery to the OPX. The circuit is recovered by itself when the problem is corrected.

3. Codec circuits IC101-IC104 convert digital PCM signal to analog voice for two-way voice communication through HIC101 - HIC 401 and transformers T101-T401 for key telephones.
4. JP1-JP4 connects MOVs to earth ground to protect the circuit from lightning surge. It is recommend to cut them off for better interference withstanding where lightning is seldom observed.

Related Programming: System programming items (03) and (12) activates subscriber cards.

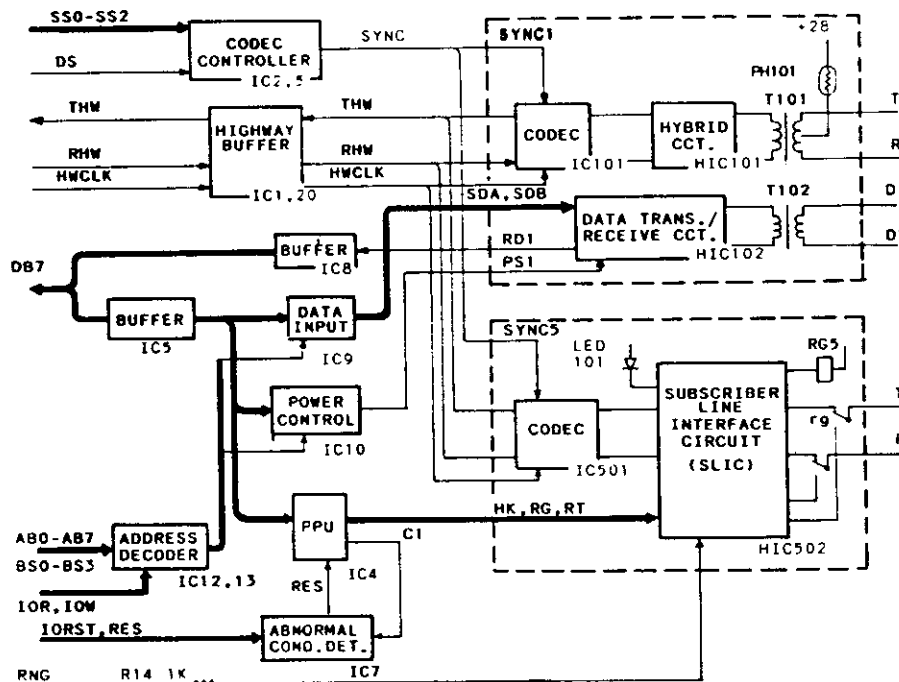


FIGURE 6-61 SLKT8 CARD

OPTIONAL FEATURE CARDS

6.03 This section describes circuit operation of optional cards which adds optional features to the ZT-D system.

a. RECV2/RECV8 Card

Features: The RECV cards receive DTMF (tone) dialing signals from the 2500 type SLTs and convert them to digital signals for the system CPU. Additionally, RECV cards have a "Make Busy" switch to disable individual defective circuits from access.

Circuit Description:

1. CODECs IC103-IC803 convert DTMF signal on the PCM receive highway (RHW) to the analog signal and pass them to the corresponding DTMF receiver ICs IC101-IC801.
2. The 8-bit PPU on this card retrieves the binary data output from the individual DTMF receiver IC and sends them to the CPU through the system data bus.
3. The PPU operation is continuously monitored by abnormal condition detect circuit IC7 and is reset together with individual receiver when such a condition is detected.

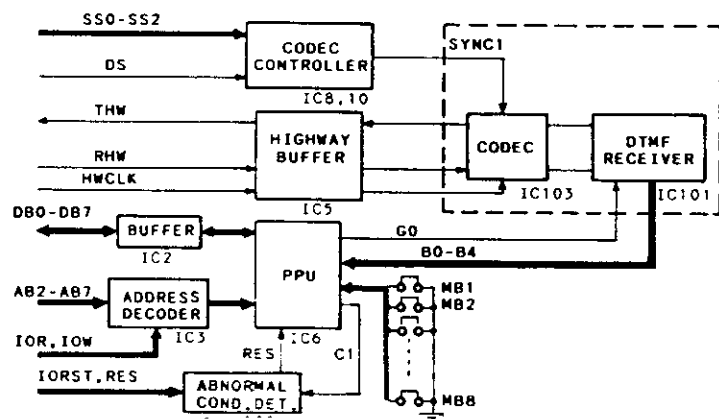


FIGURE 6-61 RECV CARD

b. DPPAG Card

Features: The DPPAG card contains three (3) doorphone interface circuits, one two-way external P.A. system interface circuit, and four paging speaker zone control relays. A DSPC82 provides physical interface to these external devices for the ZT-824/1632/ZT-2464 KSU.

Circuit Description:

1. **Doorphone Interface:** The doorphone interface circuit consists of CODECs IC101-IC301, a ringing tone source, a hybrid circuit and analog switches. When the doorphone rings, by closing its push-button switch contact, DPIN signal triggers Ringing Recognition circuit IC4. It informs the call to the CPU through I/O interface circuit IC6 and IC7. Then the CPU acknowledges the call and turns on the ringing tone source through the same interface circuit, providing audible ringing signal to both doorphone and internal speech path. The individual doorphone interface circuit contains an different ringing signal source. Communication to the doorphones is established via speech path interface, IC9 and IC10, and CODECs.
2. **P.A. Amplifier Interface:** The circuit consists of CODEC IC13 and a hybrid circuit. The CODEC provides two way voice communication to the P.A. through a matching transformer which requires 600 ohms impedance. The input impedance must be maintained at 600 ohms for hybrid circuit balance in order to avoid acoustic feedback.
3. **Zone page control:** IC14 turns on and off the relays located on the Distribution Panel during PAGE operation. The relay operation sequence depends upon the system database configuration (the external BGM, BGM amplifier installed, etc).
4. **Speech-path Interface** extracts proper clock pulse for on-going speech and provides it to the CODEC to synchronize transmission and receiving voice of the circuit.

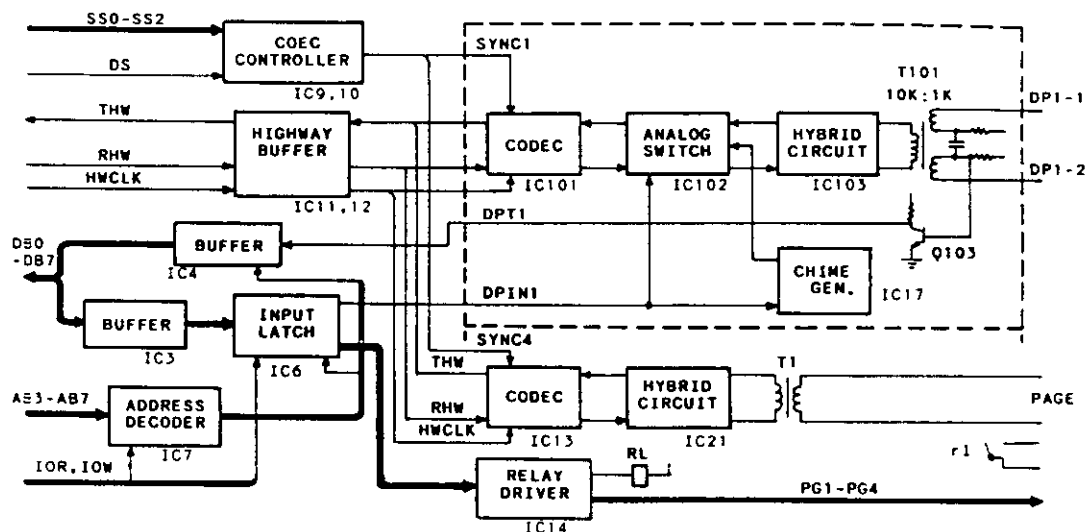


FIGURE 6-62 DPPAG CARD

c. FRIFC Card

Features: FRIFC Card provides 11 relays to control external devices such as loud ringing bells. One relay is dedicated to Remote Programming Control. A DSPC82 Panel (ZT-824/1632 or ZT-2464) or AMPA6 (ZT-616) terminates these contacts on screw terminals for external connection.

Circuit Description: The CPU access address AB2-AB7 to the FRIFC card is decoded by IC3 to latch relay control information on data bus *DB0-*DB5. Relays RLM, RL0-RL9 are driven by IC10, and RL5-RL9 are driven by IC11. The contacts appears at the MDFs connected through the ribbon cable from connector CN2 on the card to connector CON-FRIFC on the AMPA6 or DSPC82 panel.

Related Programming: Function assignment to each relay is required by system programming.

d. SDIFC Card

Features: The serial data interface card provides two channels of RS232C ports. However, CH.2 is currently reserved for future application. The CH.2 port interfaces to IBM-XT personal computers and/-

or to SCDR printer. These devices can operate once at a time for the SDIFC with the CPUHW, though alternate operation is possible. When new SDIFC-1 is equipped with the CPUHW-1 (Version 2 CPU), they can operate simultaneously. Two D-sub-miniature connectors are located on the DSPC82 (824/1632 and 2464 KSU) or AMPA6 (616 KSU) for connection.

Circuit Description:

1. The card consists of an address decoder, PPU, reset circuit, abnormal condition monitor, data buffer, multi-protocol serial controller (MPSC), clock circuit and RS232-C driver/receiver. The PPU has extended 8-K byte ROM and 8-K byte RAM externally.
2. The abnormal condition monitor IC6 continuously watches the status of the PPU operation, which provides timing pulse while normal operation, using a hardware monitor. It resets the PPU to restart if any abnormal software status is detected through the timing pulse.
3. The PPU IC1 is an 8-bit one-chip microprocessor, HD63B05Y2, driven by 2-M Hz. clock and controls all the operation on the card.

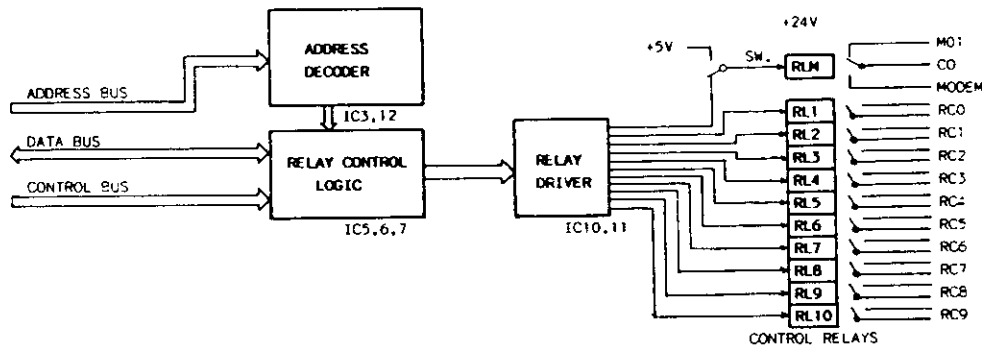


FIGURE 6-63 FRIFC CARD

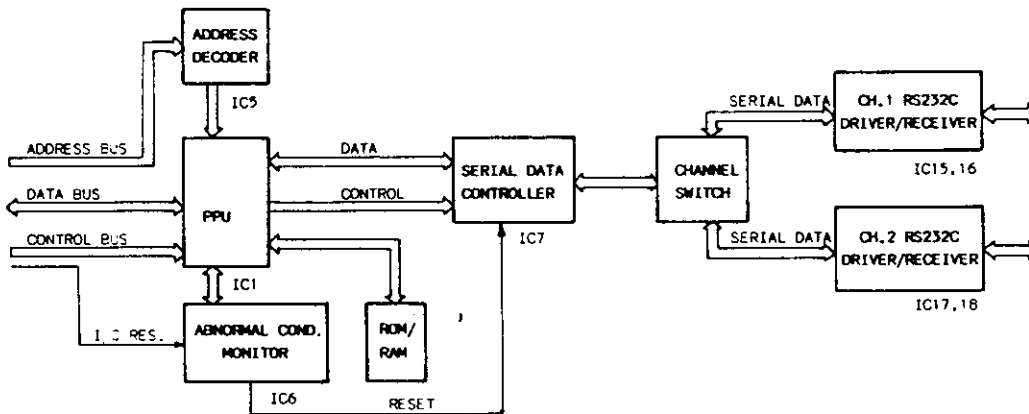


FIGURE 6-65 SDIFC CARD

4. The signal from system data bus is received by the PPU and is sent to Serial Data Controller IC7. The data is formatted following the RS232C standard, synchronized to assigned data speed and sent to RS232C Driver/Receiver circuit through the Channel Switch.
5. RS232C port is specified as follows;
 - Signal voltage = ± 8 Vdc.
 - Data speed = 300/1200 bps. set by programming.
 - Transmission type = Full-duplex, asynchronous.
 - Data format = 8-bit ASCII, one-start, one-stop bit.
6. RS232C connector pin assignment is

listed in Tables 6-C and 6-D.

7. Four switches control function of the SDIFC card:
 - SW1: Changes RS232c CH(annel) 1 connector output pin arrangement between "P(rinter)" and "M(odem)".
 - SW2: Changes RS232c CH(annel) 2 connector output pin arrangement between "P(rinter)" and "M(odem)".
 - SW3: Turn "ON" and "OFF" the CH(annel) 1 port.
 - SW4: Turn "ON" and "OFF" the CH(annel) 4 port.

Related Programming: The parameters for transmission are assigned by programming items <06> and <07>.

7.00 SYSTEM EXTENSIONS

SYSTEM EXTENSIONS

7.01 This section describes circuit of key telephones, DSS console, single line telephones and a doorphone which operate as extensions of the ZT-D system.

a. Key telephones

Features: Key telephones differ only by the number of flex keys and LEDs, and whether they have a sixteen (16) digit alpha-numeric LCD displays. These differences only exist in the upper board.

The electronic key telephones consists of custom LSIs and uses the latest surface mount technology.

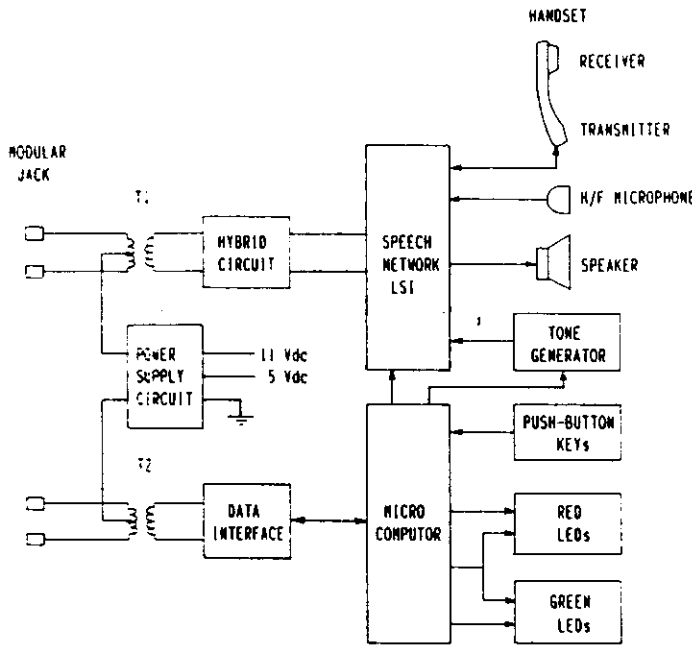


FIGURE 6-66 KT BLOCK DIAGRAM

Circuit Description:

1. **The key telephones** are connected to the KTSB card through two-pair wiring individually:
 - A T/R pair carries the analog voice transmission.
 - A D1/D2 pair carries two-way data-stream for digital communication between the central microprocessor

(CPU) in the KSU and local micro-processor (PPU) in the key telephone, through the interface circuit in the KTSB/SLKT card.

- The station power is carried at neutral points of those pairs.
2. **Data transmission** utilizes serial bipolar digital pulses:
 - 60 usec./bit, 98.3 msec./frame
 - 121 bits/frame

Refer to section 6.02c for detail.

3. **Speech Path:** Key telephone speech path circuit consists of a Speech Network LSI IC2 and the peripherals as shown in the Figure 6-70. The voice at T/R on the station modular jack (L1/L2 on the station KTEL-Z card) appears at IC2, through transformer ZT-4, and is separated into transmitter/receiver for the handset or microphone/speaker for the hands-free operation.

4. **The ZT-DTEL unit** contains three strapping jacks with following functions:

- EXSP: disconnects the station tip wire from IC2 and connects the tip control to external speakerphone connector CNOPT1.
- SH: provides extra-current power to handset receiver to drive Hearing-aid receiver.
- SPT/SPR: connects the station Tip/Ring control to built-in speakerphone (optional) module.

5. **Keyboard:** The station keyboard consists of an one-chip microcomputer with single contact key matrix as the inputs, and dual-colored LEDs as the outputs. Keyboards of D-type telephones are also provided with an LCD module as additional output device.

6. **Local tone generator:** Three inverters in IC1 consists of local 1-K Hz. tone oscillator. This tone is used as dial confirmation, busy-bypass override, camp-on, recall, etc..

7. **Power:** The station is powered with 24 Vdc through center-taps of transformers, ZT-4 and ZT-6. The power is converted to 11 Vdc by Q6, to 5 Vdc by SI-8201. IC2, operating in differential manner, also generates its ground voltage 5.5 Vdc.

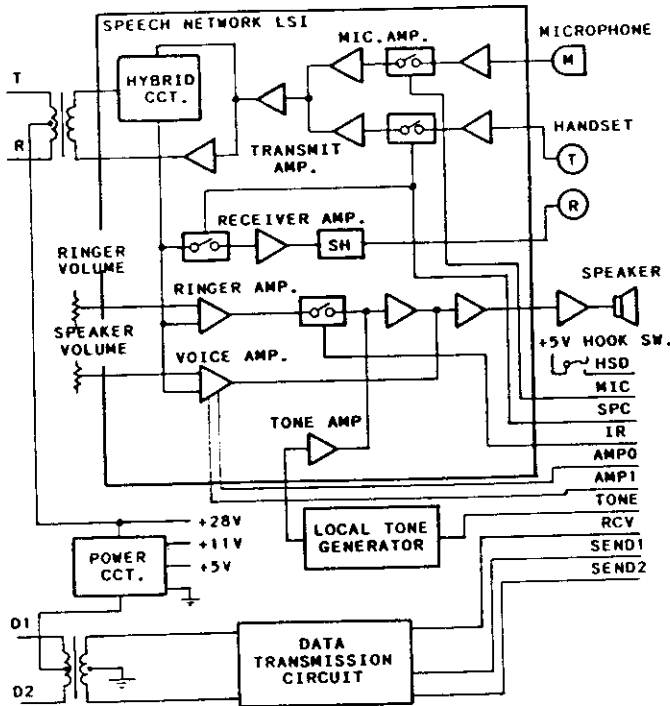


FIGURE 6-67 ZT-D TEL UNIT

TABLE 6-J SYSTEM
 AUDIBLE INDICATIONS

FUNCTION	AUDIBLE INDICATION
ICM Busy Tone	480/620 hz. :TONE ROM
CO Incoming/Ringback	40/480 hz. :TONE ROM
CO Incoming/Ringback2	480/620 hz. :TONE ROM
ICM Incoming/Camp-on	400 hz. :TONE ROM
CO Recall	440/480 hz. :TONE ROM
ICM Incoming/Ringback	440/480 hz. :TONE ROM
ICM Recall	400 Hz. :TONE ROM
ICM Dial Tone	400 hz. :TONE ROM
CO Override/ICM Burst	400 hz. :TONE ROM
Door Ringing #1	Chime :DPPAG
Door Ringing #2	Chime :DPPAG
Door Ringing #3	Chime :DPPAG
Warning Tone	480/620 hz. :TONE ROM
CO Busy by-pass Tone	1k hz. :LOCAL
ICM Busy by-pass Tone	1k hz. :LOCAL
Dial Confirmation Tone	1k hz. :LOCAL

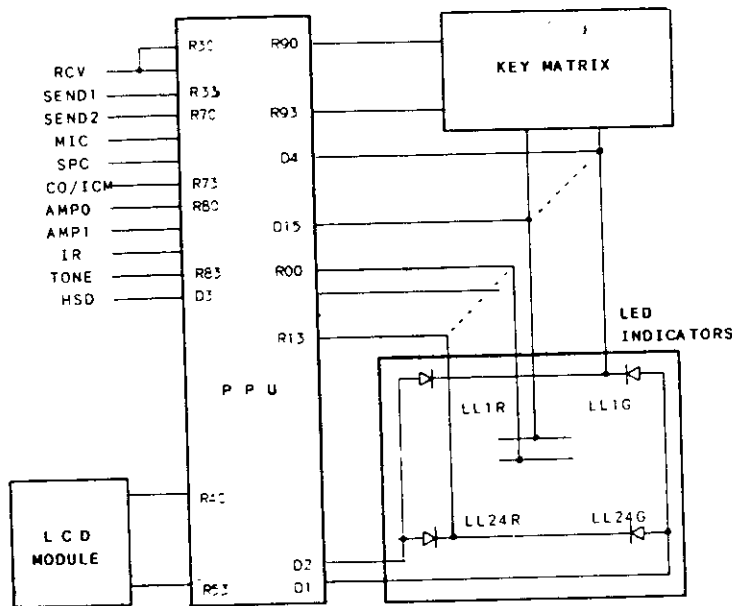


FIGURE 6-68 KEYBOARD UNIT

8. Audible indications on key telephones are generated on the CPUHW (TONE ROM) or locally as listed in Table 6-J.
9. The following switches and potentiometer control the various voice signal levels of the station circuit:
 - Speaker volume control adjusts output VOICE level of the station speaker.
 - Tone ringer volume control adjusts RINGER level of the station except bypass tones in three steps.
 - Handset receiving volume control adjusts sound level from the handset earpiece in three steps: High-Normal-Low.
10. Station features and functions are processed by their own local microprocessors (PPU). The PPU is located on the keyboard and there are two types: PPU for D-type KT's and PPU for K-type KT's.

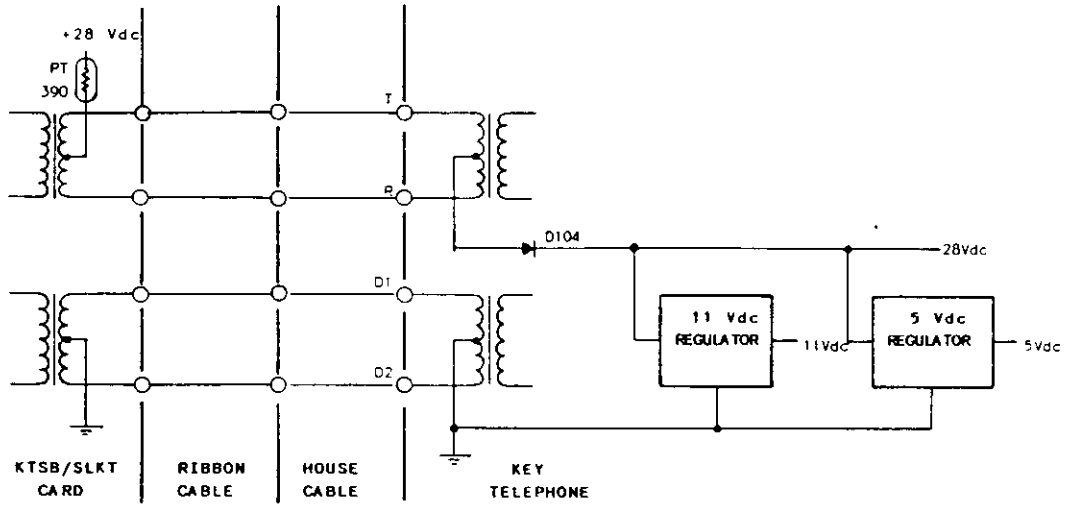


FIGURE 6-69 KT POWER CIRCUIT

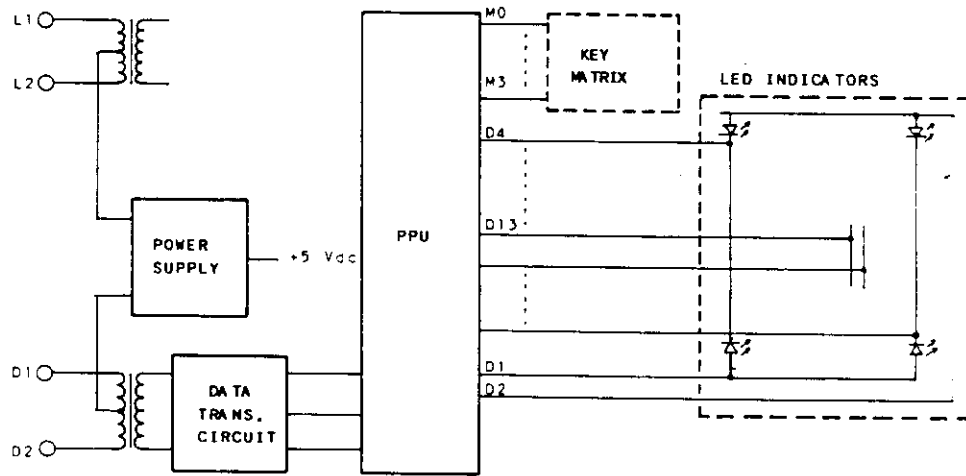


FIGURE 6-70 DSS-32C

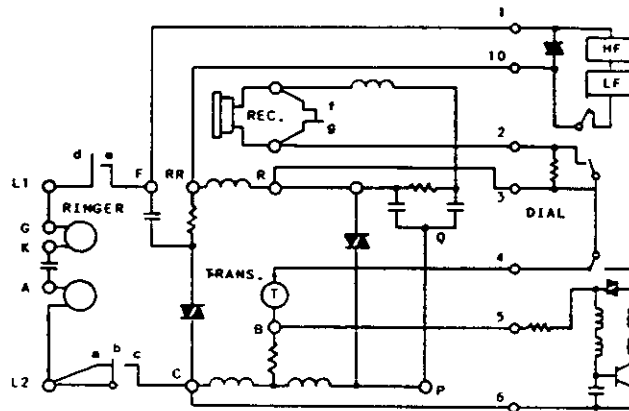
b. ZT-32C DSS Console

Features: The ZT-32C, a thirty-two-button DSS Console, consists of forty (40) keys and forty (40) LED indicator lamps.

Circuit Description: The DSS is interfaced with the Key telephone subscriber circuit KTSB or SLKT in the KSU. Since it is differentiated from the KT's only by programming, the same data transmission and power supply technology are used as the KT's.

1. The PPU used on the DSS unit to control all the key and lamp functions is the same PPU as that of the K-type key telephones.
2. The DSS contains an +5 Vdc voltage regulator.

Related Programming: The DSS Console belongs to one of KT's in the system as assigned by programming item <03>. Once a DSS is assigned at a port the extension number can not be used.



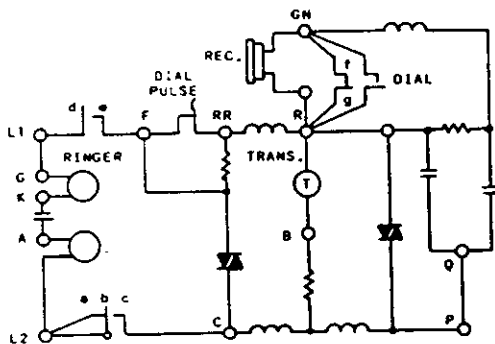
b. 2500 TYPE

FIGURE 6-71 SLT

c. Single Line Telephones

Features: Both DP and DTMF SLTs can operate many ZT-D features. A dial mask for DTMF telephones is available to assist the user with feature operation.

Circuit Description: Typical SLT circuit is shown in Figure 6-71.



a. 500 TYPE

d. Doorphones

Features: The Doorphone consists of a microphone, a speaker, a hybrid transformer, and a CALL button as illustrated in Figure 6-72. It interfaces with the doorphone control circuit in the DPPAG card in the KSU.

Circuit Description:

1. The voice input from the microphone is amplified and appears at terminals 1 and 2 through transformer T. The signal applied through the amplifier is cancelled electromagnetically at the transformer coil and does not appear at speaker.
2. The voice from the KSU (input at terminals 1 and 2) is applied to the transformer and sounds the speaker.
3. The CALL key closes between terminals 1 and 2, if the polarity is correctly applied, and the DC current through the key contact is detected by DPPAG card and rings the assigned station for the call.

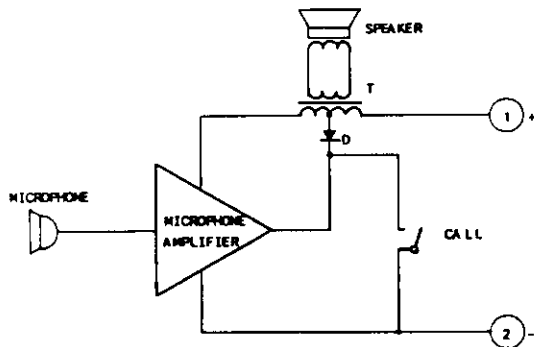


FIGURE 6-72 DOORPHONE

KEY TELEPHONE OPTIONS

7.02 This section describes the operation of the optional components for the key telephones. They may be installed in any of the models;

a. SSPU-Z1

Features: Station Built-in Speakerphone Card (SSPU-Z1) provides the key telephones with hands-free talk-back (built-in speakerphone) feature on CO/PBX lines. The speaker output level of CO/PBX call is reduced to that of ICM call in order to avoid acoustic feedback.

Circuit Description:

1. **KT Strapping:** Two strapping jacks are provided on the Station Circuit Card to switch the voice signal level control to the SSPU.
 SPT: Transmission level at position 1-2
 SPR: Receiving level at position 1-2
2. The SSPU uses a voice activated talk-back circuit. Tx-Rx Comparator compares transmit (Tx) and receiving (Rx) power to allow only the stronger path to be switched on at one time. The switching is performed through Transmit Attenuator and Receive Attenuator.
3. **Receive switch power adjustment:** Strap RDET at adjusting position enables the

control potentiometer R4. Turning R4 clockwise increases receive power for voice switch so that the weak incoming CO/PBX voice can be balanced to the station voice.

4. **Transmit switch power:** Strap TXG at adjusting position increases transmitting power to toggle voice switch so that the station voice can be balanced to the stronger CO/PBX line voice.
5. **Receiving voice level adjustment:** Strap RATT at adjusting position enables the control potentiometer R32. Turning R32 clockwise decreases receiving voice level and switching power at the same time.

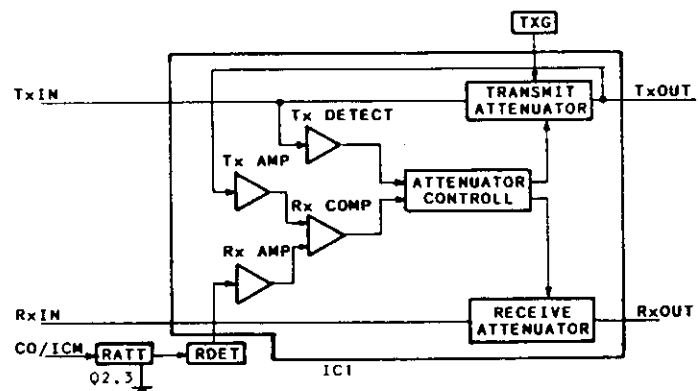
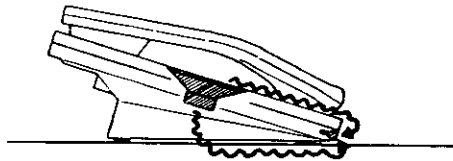


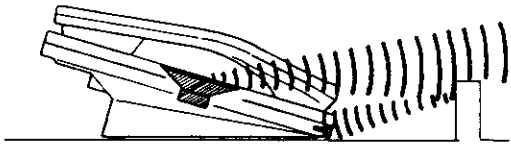
FIGURE 6-73 SSPU-Z

Acoustic Feedback: Figure 6-74 illustrates some situations that could cause acoustic feedback or hollow effect.

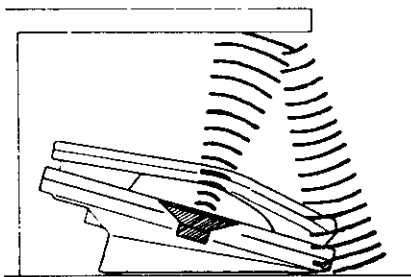
1. When a station set is placed on hard wood or metal surface touching the bottom housing directly, vibration of the speaker may be returned to the microphone as shown in Figure 6-74a.
2. When there is an object in front of the microphone or above the station set, the speaker sound may be reflected returning into the microphone as in Figure 6-7b and c.



a. THROUGH VIBRATION



b. THROUGH FORWARD REFLECTION



c. THROUGH UPWARD REFLECTION

FIGURE 6-74 ACOUSTIC FEEDBACK

b. Station Miscellaneous Adapter (SMSA-Z)

Features: The station miscellaneous adapter provides an interface voice port for an external speakerphone, station loud ringer, cassette tape recorder and modular headset.

Circuit Description: The SMSA-Z consists of three individual circuits:

1. Connector CNOPT1 provides external voice port connection for speakerphone and recording device with battery for the relays. CNOPT2 provides headset and loud ringer connections.
2. While the station remains on-hook, a "Low" signal is applied to HSin enabling the driver circuit for relay H. Relay HK remains inoperative when pins A and

A1 are open, Tin is connected back to Tout and the speech network in the station set is connected to its Tip and Ring.

3. When pins A and A1 are closed, the driver circuit operates to turn on relay H, closing the station hook switch at HS01, and transfers Tin/Rin to Ancillary AT/AR.
4. When the station goes off-hook, a "High" signal appears at HSin disabling the driver circuit for relay H. Relay HK turns off connecting Tin back to Tout and the speech network in the station set is connected to its Tip and Ring.

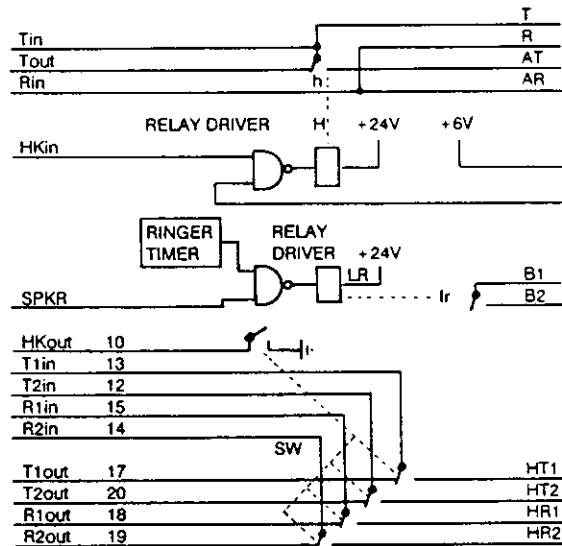


FIGURE 6-75 SMSA-Z

TABLE 6-K ESP-RNG
 PIN ASSIGNMENT NO.1

PIN NO.	FUNCTION
2	Speakerphone A
3	Speakerphone T
4	Speakerphone R
5	Speakerphone A1

- The modular jack ESP-RNG also provides a contact closure for station loud ringer. RINGER TIMER is free running at interval of one sec. ON - three second OFF. When the station is called, a "High" appears at the SPKR to operate Relay LR following the interval of the TIMER.

**TABLE 6-L ESP-RNG
 PIN ASSIGNMENT NO.2**

PIN NO.	FUNCTION
1	Ringer Contact Set
6	

- A four-pin modular jack HEADSET provides identical pin output as the station handset when the switch is turned to the headset position. The electrical characteristic equivalent to the ZT-D handset, which uses an electret microphone and ceramic receiver element, is required for the headset. The switch also closes the station hookswitch circuit through pin HSo2 so that the station can access the CO/PBX lines through the line keys.

TABLE 6-M HEADSET PIN ASSIGNMENT

PIN NO.	FUNCTION
1	Transmitter T1
2	Receiver R1
3	Receiver R2
4	Transmitter T2

- A pair of push-on terminals T and R provides voice signal output for recording devices. Use a matching transformer to adjust the input impedance of the recording device: Impedance across T/R is 600 ohms.
- c. Station Headset Connecting Box (SHCB-Z)**
Features: The SHCB-Z provides an interface port for an industry standard headset.
Circuit Description: The SHCB-Z provides

the same function as the SMSA-Z but for the standard Starset (R) connection through JS-180 or equivalent.

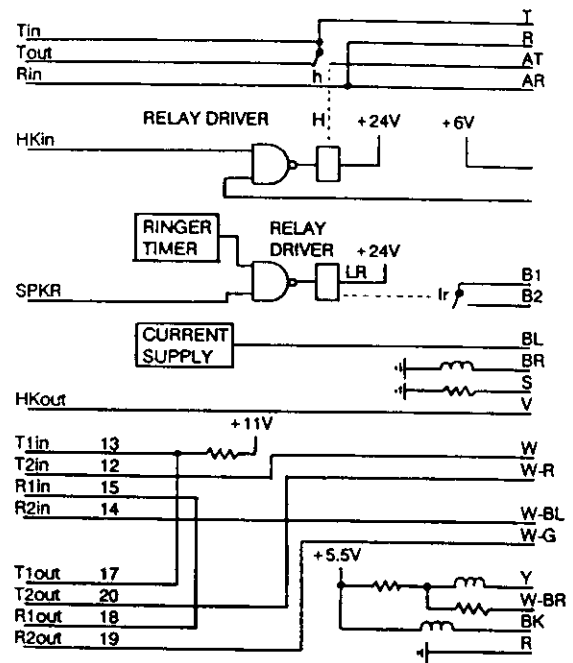


FIGURE 6-76 SHCB-Z

KEY TELEPHONE HANDSETS

7.03 Key Telephones require the use of a proprietary handset that comes with each unit. Optional handsets are available to meet the needs of the individual station user.

a. Station Noise Cancelling Handset (SNHD-Z)

Features: The SNHD-Z is designed to cancel environmental noises so that the user voice can be clearly transmitted.

Circuit Description: The SNHD-Z has side slits around the microphone cover so that acoustic pressure of the surrounding noise presses the microphone plate from front and rear equally so as not to generate any electrical signal. On the other hand, human voice pressure is directly applied mostly to the front of the microphone plate and

generate the electrical signal. A built-in amplifier compensates the loss of the voice signal.

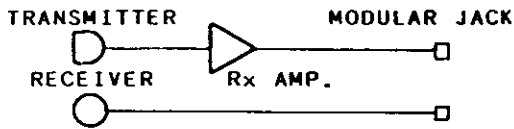


FIGURE 6-77 SNHD-Z

amplifier in the station circuit card by changing strapping SH to position 1-2 on the KTEL-Z. The volume control is enabled only when the handset switch is turned on.

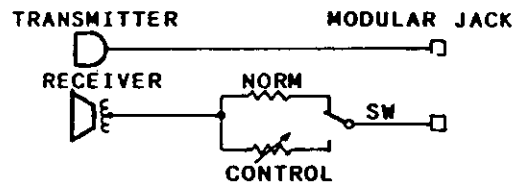


FIGURE 6-79 SHAD-Z

b. Station Hard of Hearing Handset (SHHD-Z)

Features: The SHHD-Z is an acoustically amplified handset with volume control for hearing impaired people.

Circuit Description: The SHHD-Z contains a volume control to adjust the extra receiving level provided by the receiving amplifier in the station circuit card by changing strapping SH to position 1-2 on the KTEL-Z. The volume control is enabled only when the handset switch is turned on.

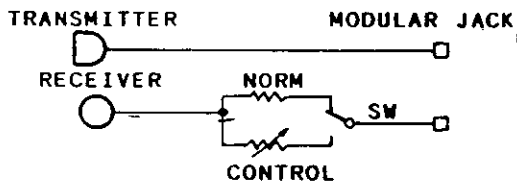


FIGURE 6-78 SHHD-Z

c. Station Hearing Aid Handset (SHAD-Z)

Features: The SHAD-Z is an acoustically and electromagnetically amplified handset with volume control for people using a hearing aid device.

Circuit Description: The SHAD-Z generates a stronger magnetic field from the voice signal at the handset receiver to couple with a magnetic pick-up type hearing aid devices. It also provides acoustic amplification as the SHHD-Z. The SHAD-Z contains a volume control to adjust the extra receiving level provided by the receiving

8.00 OPTIONAL SYSTEM EQUIPMENT

8.01 The following components are standard devices not dedicated to the ZT-D system.

a. PFXU-M

Used commonly through Iwatsu Key System to transfer eight (8) CO lines to industry standard single line telephones. The unit is normally powered by 24 Vdc battery at PFXU connector on the KSU MDF panel. CO/PBX lines are through connected to the COTL cards. When system loses the power, the lines are transferred to the SLT ports.

b. SCDR Printer

Most commercially available printer with EIA Standard RS232C interface may be used for Station Call Detail Recorder. Individual connection to the printer may differ due to the standard variation. Refer to the instruction for the proper connection.

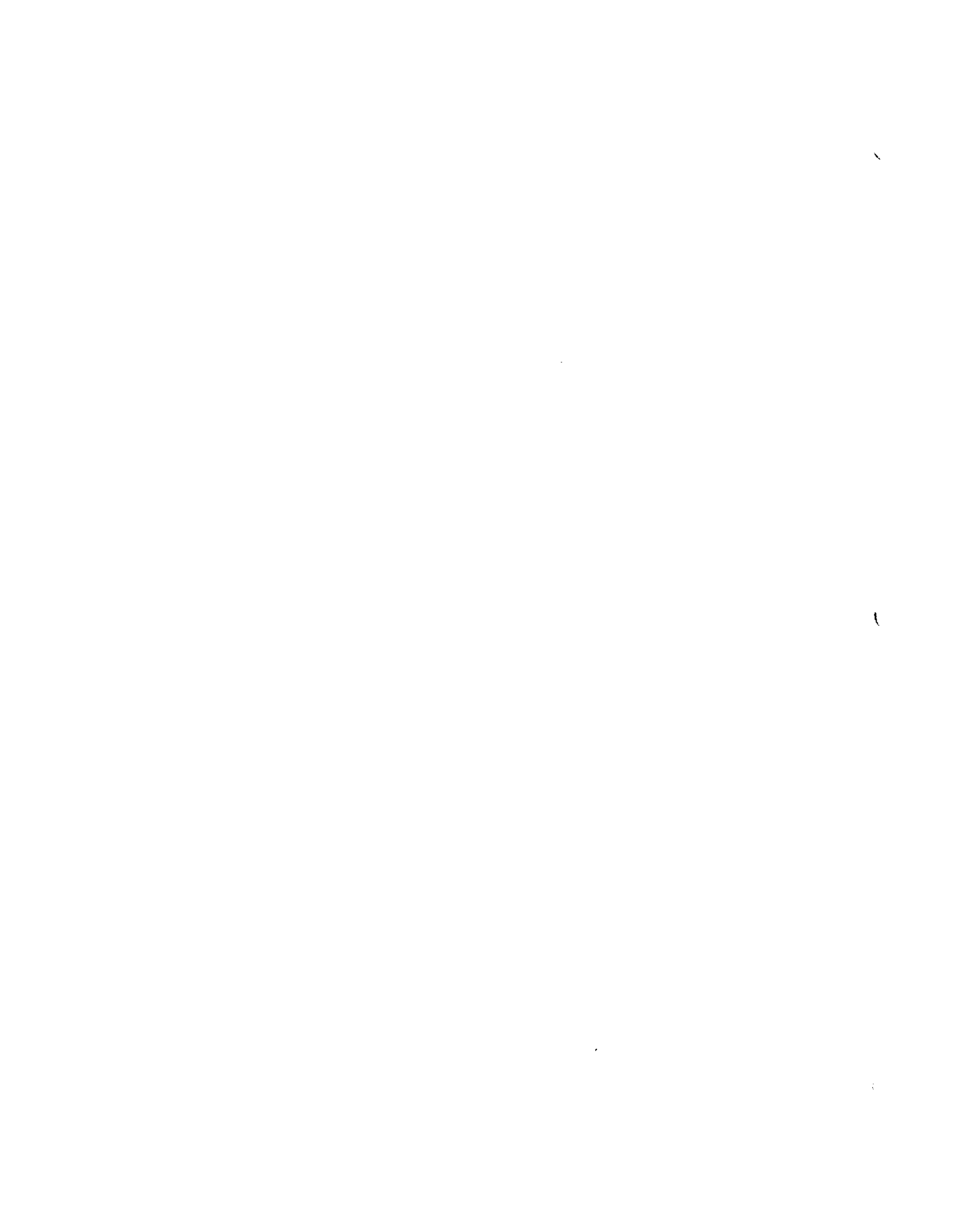
c. HAYES Micromodem

Smart-com 2400 (R) is required to accomplish the interface for communication of the ZT-D system to remote PC.

**ZT-D KTS SYSTEM PRACTICE
FEBRUARY 1987, ISS 1.0**

**IWATSU
PN-7900-APPND A**

**ZT-D SERIES
ELECTRONIC KEY TELEPHONE SYSTEMS
APPENDIX A — PLANNING/PROGRAM WORKSHEETS**



SYSTEM PROGRAMMING

06.	SCDR Output Format Assignment []Printer []Auxiliary []300 []1200	07.	SCDR Output Mode Assignment TO PRINT OUT: []... : All calls except incoming calls without account code. []TO : Outgoing toll calls only. []O : All outgoing calls. []A : Incoming and outgoing calls with account code. []TA : Outgoing toll calls with account codes and incoming calls with account codes. []OA : Outgoing calls and incoming calls with account codes only. []TOA: Outgoing Toll calls with account codes only.
08.	Outside USA/Canada []North America (Basic Toll) []Others(Flex Toll)		
09.	Background Music Source Assignment []BGM-ON []BGM-OFF		
10.	Tone/Voice Calling Assignment []Voice []Tone		
11.	P.A. System Assignment []No Zone []Zone 1 []Zone 2 []Zone 3 []Zone 4	12.	DTMF Receiver Assignment []None []Receiver-2 []Receiver-8
13.	Doorphone Assignment []No Doorphone []1 Doorphone []2 Doorphones []3 Doorphones	14.	MODEM Transmission CO Line Assignment CO Line No. _____

15. O.C.C. Data Entry

Entry No. 1 Number of Digits _ _ * PIN code is dialed []before []after L/D number User Data Table No. _ + OCC Dial number : _____	Entry No. 2 Number of Digits _ _ * PIN code is dialed []before []after L/D number User Data Table No. _ + OCC Dial number : _____	Entry No. 3 Number of Digits _ _ * PIN code is dialed []before []after L/D number User Data Table No. _ + OCC Dial number : _____	Entry No. 4 Number of Digits _ _ * PIN code is dialed []before []after L/D number User Data Table No. _ + OCC Dial number : _____
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NOTES.

- *Enter digits of PIN code if it must be dialed "before" the long distance number or digits of OCC Dial number if "after"
- +User Data Table Number (1 through 8) to be refereed for toll restriction.

No.	Item	Default	Range	Set Value
16.	Operator Camp-on Recall	20 sec.	5-75 sec.	[]_ _ seconds
17.	Station Camp-on Recall	20 sec.	20-150 sec. or inf.	[]_ _0 seconds
18.	CO Flash	700 millisecc.	100-1500 millisecc.	[]_ _00 millisecc.
19.	Remote CO Disconnect Signal	700 millisecc.	100-1500 millisecc.	[]_ _00 millisecc.
20.	Timed Trunk Queueing	5 min.	2-15 min.	[]_ _min.
21.	System/ Exclusive/ Consulta- tion Hold/Call Park Recall	2.7 min.	16-240 sec.	[]_ _sec.
22.	Page Time-out	20 sec.	10-140 sec. or 5 min.	[]_ _ 0 sec. []5 min.
23.	DTMF Dial Duration	100 millisecc.	100-400 millisecc.	[]100 []150 []200 []250 []300 []350 []400 millisecc.
24.	Master Group Hunt	20 sec.	10-150 sec.	[]_ _ 0 sec.
25.	PBX Pause	5 sec.	1-15 sec.	[]_ _ sec.
26.	Trunk-to-trunk Conference Release	5 min.	5-75 min. or inf.	[] Infinity []_ _ min.

27.	Flexible Relay Assignment - Remote Control (Default: None)		
	Relay No. 0 External Ringer <input type="checkbox"/> No.1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 Night Ringer <input type="checkbox"/> No.1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 Remote Ringer <input type="checkbox"/> No.1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> BGM	Relay No. 1 External Ringer <input type="checkbox"/> No.1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 Night Ringer <input type="checkbox"/> No.1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 Remote Ringer <input type="checkbox"/> No.1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> BGM	Relay No. 2 External Ringer <input type="checkbox"/> No.1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 Night Ringer <input type="checkbox"/> No.1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 Remote Ringer <input type="checkbox"/> No.1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> BGM
	Relay No. 3 External Ringer <input type="checkbox"/> No.1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 Night Ringer <input type="checkbox"/> No.1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 Remote Ringer <input type="checkbox"/> No.1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> BGM	Relay No. 4 External Ringer <input type="checkbox"/> No.1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 Night Ringer <input type="checkbox"/> No.1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 Remote Ringer <input type="checkbox"/> No.1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> BGM	Relay No. 5 External Ringer <input type="checkbox"/> No.1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 Night Ringer <input type="checkbox"/> No.1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 Remote Ringer <input type="checkbox"/> No.1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> BGM
	Relay No. 6 External Ringer <input type="checkbox"/> No.1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 Night Ringer <input type="checkbox"/> No.1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 Remote Ringer <input type="checkbox"/> No.1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> BGM	Relay No. 7 External Ringer <input type="checkbox"/> No.1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 Night Ringer <input type="checkbox"/> No.1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 Remote Ringer <input type="checkbox"/> No.1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> BGM	Relay No. 8 External Ringer <input type="checkbox"/> No.1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 Night Ringer <input type="checkbox"/> No.1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 Remote Ringer <input type="checkbox"/> No.1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> BGM
	Relay No. 9 External Ringer <input type="checkbox"/> No.1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 Night Ringer <input type="checkbox"/> No.1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 Remote Ringer <input type="checkbox"/> No.1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> BGM		
32.	Dial Pulse Break Ratio Assignment (Default: 61%) <input type="checkbox"/> 61% <input type="checkbox"/> 67% CAUTION: DEPARTMENT OF COMMUNICATION IN CANADA PROHIBITS USE OF DP RATIO OF 67% FOR ANY SYSTEM INSTALLED IN CANADA.		
42.	Doorphone Day Ringing Assignment (Default: Station 120 only)		
	Doorphone 1: <input type="checkbox"/> 120 <input type="checkbox"/> 121 <input type="checkbox"/> 122 <input type="checkbox"/> 123 <input type="checkbox"/> 124 <input type="checkbox"/> 125 <input type="checkbox"/> 126 <input type="checkbox"/> 127 <input type="checkbox"/> 124 <input type="checkbox"/> 125 <input type="checkbox"/> 126 <input type="checkbox"/> 127 <input type="checkbox"/> 128 <input type="checkbox"/> 129 <input type="checkbox"/> 130 <input type="checkbox"/> 131 <input type="checkbox"/> 132 <input type="checkbox"/> 133 <input type="checkbox"/> 134 <input type="checkbox"/> 135 <input type="checkbox"/> 136 <input type="checkbox"/> 137 <input type="checkbox"/> 138 <input type="checkbox"/> 139 <input type="checkbox"/> 140 <input type="checkbox"/> 141 <input type="checkbox"/> 142 <input type="checkbox"/> 143 <input type="checkbox"/> 144 <input type="checkbox"/> 145 <input type="checkbox"/> 146 <input type="checkbox"/> 147 <input type="checkbox"/> 148 <input type="checkbox"/> 149 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43.	Doorphone Night Ringing Assignment (Default: Station 120 only)		
<p>Doorphone 1: <input type="checkbox"/>120 <input type="checkbox"/>121 <input type="checkbox"/>122 <input type="checkbox"/>123 <input type="checkbox"/>124 <input type="checkbox"/>125 <input type="checkbox"/>126 <input type="checkbox"/>127 <input type="checkbox"/>124 <input type="checkbox"/>125 <input type="checkbox"/>126 <input type="checkbox"/>127 <input type="checkbox"/>128 <input type="checkbox"/>129 <input type="checkbox"/>130 <input type="checkbox"/>131 <input type="checkbox"/>132 <input type="checkbox"/>133 <input type="checkbox"/>134 <input type="checkbox"/>135 <input type="checkbox"/>136 <input type="checkbox"/>137 <input type="checkbox"/>138 <input type="checkbox"/>139 <input type="checkbox"/>140 <input type="checkbox"/>141 <input type="checkbox"/>142 <input type="checkbox"/>143 <input type="checkbox"/>144 <input type="checkbox"/>145 <input type="checkbox"/>146 <input type="checkbox"/>147 <input type="checkbox"/>148 <input type="checkbox"/>149 <input type="checkbox"/>150 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51.	Automatic CO to CO Forwarding (Transfer) (Default: Extension No. 120)		
<p>FORWARD GROUP 1: Ext. No. 1__ __ Incoming TRK No. <input type="checkbox"/>01 <input type="checkbox"/>02 <input type="checkbox"/>03 <input type="checkbox"/>04 <input type="checkbox"/>05 <input type="checkbox"/>06 <input type="checkbox"/>07 <input type="checkbox"/>08 <input type="checkbox"/>09 <input type="checkbox"/>10 <input type="checkbox"/>11 <input type="checkbox"/>12 <input type="checkbox"/>13 <input type="checkbox"/>14 <input type="checkbox"/>15 <input type="checkbox"/>16 <input type="checkbox"/>17 <input type="checkbox"/>18 <input type="checkbox"/>19 <input type="checkbox"/>20 <input type="checkbox"/>21 <input type="checkbox"/>22 <input type="checkbox"/>23 <input type="checkbox"/>24</p> <p>Outgoing TRK No. <input type="checkbox"/>01 <input type="checkbox"/>02 <input type="checkbox"/>03 <input type="checkbox"/>04 <input type="checkbox"/>05 <input type="checkbox"/>06 <input type="checkbox"/>07 <input type="checkbox"/>08 <input type="checkbox"/>09 <input type="checkbox"/>10 <input type="checkbox"/>11 <input type="checkbox"/>12 <input type="checkbox"/>13 <input type="checkbox"/>14 <input type="checkbox"/>15 <input type="checkbox"/>16 <input type="checkbox"/>17 <input type="checkbox"/>18 <input type="checkbox"/>19 <input type="checkbox"/>20 <input type="checkbox"/>21 <input type="checkbox"/>22 <input type="checkbox"/>23 <input type="checkbox"/>24</p> <p>Outgoing Telephone No.: --(---)-----</p>	<p>FORWARD GROUP 2: Ext. No. 1__ __ Incoming TRK No. <input type="checkbox"/>01 <input type="checkbox"/>02 <input type="checkbox"/>03 <input type="checkbox"/>04 <input type="checkbox"/>05 <input type="checkbox"/>06 <input type="checkbox"/>07 <input type="checkbox"/>08 <input type="checkbox"/>09 <input type="checkbox"/>10 <input type="checkbox"/>11 <input type="checkbox"/>12 <input type="checkbox"/>13 <input type="checkbox"/>14 <input type="checkbox"/>15 <input type="checkbox"/>16 <input type="checkbox"/>17 <input type="checkbox"/>18 <input type="checkbox"/>19 <input type="checkbox"/>20 <input type="checkbox"/>21 <input type="checkbox"/>22 <input type="checkbox"/>23 <input type="checkbox"/>24</p> <p>Outgoing TRK No. <input type="checkbox"/>01 <input type="checkbox"/>02 <input type="checkbox"/>03 <input type="checkbox"/>04 <input type="checkbox"/>05 <input type="checkbox"/>06 <input type="checkbox"/>07 <input type="checkbox"/>08 <input type="checkbox"/>09 <input type="checkbox"/>10 <input type="checkbox"/>11 <input type="checkbox"/>12 <input type="checkbox"/>13 <input type="checkbox"/>14 <input type="checkbox"/>15 <input type="checkbox"/>16 <input type="checkbox"/>17 <input type="checkbox"/>18 <input type="checkbox"/>19 <input type="checkbox"/>20 <input type="checkbox"/>21 <input type="checkbox"/>22 <input type="checkbox"/>23 <input type="checkbox"/>24</p> <p>Outgoing Telephone No.: --(---)-----</p>	<p>FORWARD GROUP 3: Ext. No. 1__ __ Incoming TRK No. <input type="checkbox"/>01 <input type="checkbox"/>02 <input type="checkbox"/>03 <input type="checkbox"/>04 <input type="checkbox"/>05 <input type="checkbox"/>06 <input type="checkbox"/>07 <input type="checkbox"/>08 <input type="checkbox"/>09 <input type="checkbox"/>10 <input type="checkbox"/>11 <input type="checkbox"/>12 <input type="checkbox"/>13 <input type="checkbox"/>14 <input type="checkbox"/>15 <input type="checkbox"/>16 <input type="checkbox"/>17 <input type="checkbox"/>18 <input type="checkbox"/>19 <input type="checkbox"/>20 <input type="checkbox"/>21 <input type="checkbox"/>22 <input type="checkbox"/>23 <input type="checkbox"/>24</p> <p>Outgoing TRK No. <input type="checkbox"/>01 <input type="checkbox"/>02 <input type="checkbox"/>03 <input type="checkbox"/>04 <input type="checkbox"/>05 <input type="checkbox"/>06 <input type="checkbox"/>07 <input type="checkbox"/>08 <input type="checkbox"/>09 <input type="checkbox"/>10 <input type="checkbox"/>11 <input type="checkbox"/>12 <input type="checkbox"/>13 <input type="checkbox"/>14 <input type="checkbox"/>15 <input type="checkbox"/>16 <input type="checkbox"/>17 <input type="checkbox"/>18 <input type="checkbox"/>19 <input type="checkbox"/>20 <input type="checkbox"/>21 <input type="checkbox"/>22 <input type="checkbox"/>23 <input type="checkbox"/>24</p> <p>Outgoing Telephone No.: --(---)-----</p>	<p>FORWARD GROUP 4: Ext. No. 1__ __ Incoming TRK No. <input type="checkbox"/>01 <input type="checkbox"/>02 <input type="checkbox"/>03 <input type="checkbox"/>04 <input type="checkbox"/>05 <input type="checkbox"/>06 <input type="checkbox"/>07 <input type="checkbox"/>08 <input type="checkbox"/>09 <input type="checkbox"/>10 <input type="checkbox"/>11 <input type="checkbox"/>12 <input type="checkbox"/>13 <input type="checkbox"/>14 <input type="checkbox"/>15 <input type="checkbox"/>16 <input type="checkbox"/>17 <input type="checkbox"/>18 <input type="checkbox"/>19 <input type="checkbox"/>20 <input type="checkbox"/>21 <input type="checkbox"/>22 <input type="checkbox"/>23 <input type="checkbox"/>24</p> <p>Outgoing TRK No. <input type="checkbox"/>01 <input type="checkbox"/>02 <input type="checkbox"/>03 <input type="checkbox"/>04 <input type="checkbox"/>05 <input type="checkbox"/>06 <input type="checkbox"/>07 <input type="checkbox"/>08 <input type="checkbox"/>09 <input type="checkbox"/>10 <input type="checkbox"/>11 <input type="checkbox"/>12 <input type="checkbox"/>13 <input type="checkbox"/>14 <input type="checkbox"/>15 <input type="checkbox"/>16 <input type="checkbox"/>17 <input type="checkbox"/>18 <input type="checkbox"/>19 <input type="checkbox"/>20 <input type="checkbox"/>21 <input type="checkbox"/>22 <input type="checkbox"/>23 <input type="checkbox"/>24</p> <p>Outgoing Telephone No.: --(---)-----</p>

52.	Hunt CO Group Assignment (Default: None)			
<p>HUNT GRP 1 :TRK No. <input type="checkbox"/>01 <input type="checkbox"/>02 <input type="checkbox"/>03 <input type="checkbox"/>04 <input type="checkbox"/>05 <input type="checkbox"/>06 <input type="checkbox"/>07 <input type="checkbox"/>08 <input type="checkbox"/>09 <input type="checkbox"/>10 <input type="checkbox"/>11 <input type="checkbox"/>12 <input type="checkbox"/>13 <input type="checkbox"/>14 <input type="checkbox"/>15 <input type="checkbox"/>16 <input type="checkbox"/>17 <input type="checkbox"/>18 <input type="checkbox"/>19 <input type="checkbox"/>20 <input type="checkbox"/>21 <input type="checkbox"/>22 <input type="checkbox"/>23 <input type="checkbox"/>24</p> <p>EXTENSIONS TO HUNT: <input type="checkbox"/>120 <input type="checkbox"/>121 <input type="checkbox"/>122 <input type="checkbox"/>123 <input type="checkbox"/>124 <input type="checkbox"/>125 <input type="checkbox"/>126 <input type="checkbox"/>127 <input type="checkbox"/>128 <input type="checkbox"/>129 <input 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type="checkbox"/>165 <input type="checkbox"/>166 <input type="checkbox"/>167 <input type="checkbox"/>168 <input type="checkbox"/>169 <input type="checkbox"/>170 <input type="checkbox"/>171 <input type="checkbox"/>172 <input type="checkbox"/>173 <input type="checkbox"/>174 <input type="checkbox"/>175 <input type="checkbox"/>176 <input type="checkbox"/>177 <input type="checkbox"/>178 <input type="checkbox"/>179 <input type="checkbox"/>180 <input type="checkbox"/>181 <input type="checkbox"/>182 <input type="checkbox"/>183</p>	<p>HUNT GRP 2 :TRK No. <input type="checkbox"/>01 <input type="checkbox"/>02 <input type="checkbox"/>03 <input type="checkbox"/>04 <input type="checkbox"/>05 <input type="checkbox"/>06 <input type="checkbox"/>07 <input type="checkbox"/>08 <input type="checkbox"/>09 <input type="checkbox"/>10 <input type="checkbox"/>11 <input type="checkbox"/>12 <input type="checkbox"/>13 <input type="checkbox"/>14 <input type="checkbox"/>15 <input type="checkbox"/>16 <input type="checkbox"/>17 <input type="checkbox"/>18 <input type="checkbox"/>19 <input type="checkbox"/>20 <input type="checkbox"/>21 <input type="checkbox"/>22 <input type="checkbox"/>23 <input type="checkbox"/>24</p> <p>EXTENSIONS TO HUNT: <input type="checkbox"/>120 <input type="checkbox"/>121 <input type="checkbox"/>122 <input type="checkbox"/>123 <input type="checkbox"/>124 <input type="checkbox"/>125 <input type="checkbox"/>126 <input type="checkbox"/>127 <input type="checkbox"/>128 <input type="checkbox"/>129 <input type="checkbox"/>130 <input type="checkbox"/>131 <input type="checkbox"/>132 <input type="checkbox"/>133 <input type="checkbox"/>134 <input type="checkbox"/>135 <input type="checkbox"/>136 <input type="checkbox"/>137 <input type="checkbox"/>138 <input type="checkbox"/>139 <input type="checkbox"/>140 <input type="checkbox"/>141 <input type="checkbox"/>142 <input type="checkbox"/>143 <input type="checkbox"/>144 <input type="checkbox"/>145 <input type="checkbox"/>146 <input 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type="checkbox"/>182 <input type="checkbox"/>183</p>	<p>HUNT GRP 3 :TRK No. <input type="checkbox"/>01 <input type="checkbox"/>02 <input type="checkbox"/>03 <input type="checkbox"/>04 <input type="checkbox"/>05 <input type="checkbox"/>06 <input type="checkbox"/>07 <input type="checkbox"/>08 <input type="checkbox"/>09 <input type="checkbox"/>10 <input type="checkbox"/>11 <input type="checkbox"/>12 <input type="checkbox"/>13 <input type="checkbox"/>14 <input type="checkbox"/>15 <input type="checkbox"/>16 <input type="checkbox"/>17 <input type="checkbox"/>18 <input type="checkbox"/>19 <input type="checkbox"/>20 <input type="checkbox"/>21 <input type="checkbox"/>22 <input type="checkbox"/>23 <input type="checkbox"/>24</p> <p>EXTENSIONS TO HUNT: <input type="checkbox"/>120 <input type="checkbox"/>121 <input type="checkbox"/>122 <input type="checkbox"/>123 <input type="checkbox"/>124 <input type="checkbox"/>125 <input type="checkbox"/>126 <input type="checkbox"/>127 <input 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type="checkbox"/>180 <input type="checkbox"/>181 <input type="checkbox"/>182 <input type="checkbox"/>183</p>	
53.	External MOH Source Enable (Default: Internal Source) <input type="checkbox"/> Internal <input type="checkbox"/> External		60.	Internal/external Background Music Assignment <input type="checkbox"/> Internal <input type="checkbox"/> External
80.	Intercom Group Assignment			
<p>INTERCOM GRP.1: <input type="checkbox"/>120 <input type="checkbox"/>121 <input type="checkbox"/>122 <input type="checkbox"/>123 <input type="checkbox"/>124 <input type="checkbox"/>125 <input type="checkbox"/>126 <input type="checkbox"/>127 <input type="checkbox"/>128 <input type="checkbox"/>129 <input type="checkbox"/>130 <input type="checkbox"/>131 <input type="checkbox"/>132 <input type="checkbox"/>133 <input type="checkbox"/>134 <input type="checkbox"/>135 <input type="checkbox"/>136 <input type="checkbox"/>137 <input type="checkbox"/>138 <input type="checkbox"/>139 <input type="checkbox"/>140 <input type="checkbox"/>141 <input type="checkbox"/>142 <input type="checkbox"/>143 <input type="checkbox"/>144 <input type="checkbox"/>145 <input type="checkbox"/>146 <input type="checkbox"/>147 <input type="checkbox"/>148 <input type="checkbox"/>149 <input type="checkbox"/>150 <input type="checkbox"/>151</p> <p><input type="checkbox"/>152 <input type="checkbox"/>153 <input type="checkbox"/>154 <input type="checkbox"/>155 <input type="checkbox"/>156 <input type="checkbox"/>157 <input type="checkbox"/>158 <input type="checkbox"/>159 <input type="checkbox"/>160 <input type="checkbox"/>161 <input type="checkbox"/>162 <input type="checkbox"/>163 <input type="checkbox"/>164 <input type="checkbox"/>165 <input type="checkbox"/>166 <input type="checkbox"/>167 <input type="checkbox"/>168 <input type="checkbox"/>169 <input type="checkbox"/>170 <input type="checkbox"/>171 <input type="checkbox"/>172 <input type="checkbox"/>173 <input type="checkbox"/>174 <input type="checkbox"/>175 <input type="checkbox"/>176 <input type="checkbox"/>177 <input type="checkbox"/>178 <input type="checkbox"/>179 <input type="checkbox"/>180 <input type="checkbox"/>181 <input type="checkbox"/>182 <input type="checkbox"/>183</p>	<p>INTERCOM GRP.2: <input type="checkbox"/>120 <input type="checkbox"/>121 <input type="checkbox"/>122 <input type="checkbox"/>123 <input type="checkbox"/>124 <input type="checkbox"/>125 <input type="checkbox"/>126 <input type="checkbox"/>127 <input type="checkbox"/>128 <input type="checkbox"/>129 <input type="checkbox"/>130 <input type="checkbox"/>131 <input type="checkbox"/>132 <input type="checkbox"/>133 <input type="checkbox"/>134 <input type="checkbox"/>135 <input type="checkbox"/>136 <input type="checkbox"/>137 <input type="checkbox"/>138 <input type="checkbox"/>139 <input type="checkbox"/>140 <input type="checkbox"/>141 <input type="checkbox"/>142 <input type="checkbox"/>143 <input type="checkbox"/>144 <input type="checkbox"/>145 <input type="checkbox"/>146 <input type="checkbox"/>147 <input type="checkbox"/>148 <input type="checkbox"/>149 <input type="checkbox"/>150 <input type="checkbox"/>151</p> <p><input type="checkbox"/>152 <input type="checkbox"/>153 <input type="checkbox"/>154 <input type="checkbox"/>155 <input type="checkbox"/>156 <input type="checkbox"/>157 <input type="checkbox"/>158 <input type="checkbox"/>159 <input 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<input type="checkbox"/>131 <input type="checkbox"/>132 <input type="checkbox"/>133 <input type="checkbox"/>134 <input type="checkbox"/>135 <input type="checkbox"/>136 <input type="checkbox"/>137 <input type="checkbox"/>138 <input type="checkbox"/>139 <input type="checkbox"/>140 <input type="checkbox"/>141 <input type="checkbox"/>142 <input type="checkbox"/>143 <input type="checkbox"/>144 <input type="checkbox"/>145 <input type="checkbox"/>146 <input type="checkbox"/>147 <input type="checkbox"/>148 <input type="checkbox"/>149 <input type="checkbox"/>150 <input type="checkbox"/>151</p> <p><input type="checkbox"/>152 <input type="checkbox"/>153 <input type="checkbox"/>154 <input type="checkbox"/>155 <input type="checkbox"/>156 <input type="checkbox"/>157 <input type="checkbox"/>158 <input type="checkbox"/>159 <input type="checkbox"/>160 <input type="checkbox"/>161 <input type="checkbox"/>162 <input type="checkbox"/>163 <input type="checkbox"/>164 <input type="checkbox"/>165 <input type="checkbox"/>166 <input type="checkbox"/>167 <input type="checkbox"/>168 <input type="checkbox"/>169 <input type="checkbox"/>170 <input type="checkbox"/>171 <input type="checkbox"/>172 <input type="checkbox"/>173 <input type="checkbox"/>174 <input type="checkbox"/>175 <input type="checkbox"/>176 <input type="checkbox"/>177 <input type="checkbox"/>178 <input type="checkbox"/>179 <input type="checkbox"/>180 <input type="checkbox"/>181 <input type="checkbox"/>182 <input type="checkbox"/>183</p>	<p>INTERCOM GRP.4: <input type="checkbox"/>120 <input type="checkbox"/>121 <input type="checkbox"/>122 <input type="checkbox"/>123 <input type="checkbox"/>124 <input type="checkbox"/>125 <input type="checkbox"/>126 <input type="checkbox"/>127 <input type="checkbox"/>128 <input type="checkbox"/>129 <input type="checkbox"/>130 <input type="checkbox"/>131 <input type="checkbox"/>132 <input type="checkbox"/>133 <input type="checkbox"/>134 <input type="checkbox"/>135 <input type="checkbox"/>136 <input type="checkbox"/>137 <input type="checkbox"/>138 <input type="checkbox"/>139 <input type="checkbox"/>140 <input type="checkbox"/>141 <input type="checkbox"/>142 <input type="checkbox"/>143 <input type="checkbox"/>144 <input type="checkbox"/>145 <input type="checkbox"/>146 <input type="checkbox"/>147 <input type="checkbox"/>148 <input type="checkbox"/>149 <input type="checkbox"/>150 <input type="checkbox"/>151</p> <p><input type="checkbox"/>152 <input type="checkbox"/>153 <input type="checkbox"/>154 <input type="checkbox"/>155 <input type="checkbox"/>156 <input type="checkbox"/>157 <input type="checkbox"/>158 <input type="checkbox"/>159 <input type="checkbox"/>160 <input type="checkbox"/>161 <input type="checkbox"/>162 <input type="checkbox"/>163 <input type="checkbox"/>164 <input type="checkbox"/>165 <input type="checkbox"/>166 <input type="checkbox"/>167 <input type="checkbox"/>168 <input type="checkbox"/>169 <input type="checkbox"/>170 <input type="checkbox"/>171 <input type="checkbox"/>172 <input type="checkbox"/>173 <input type="checkbox"/>174 <input type="checkbox"/>175 <input type="checkbox"/>176 <input type="checkbox"/>177 <input type="checkbox"/>178 <input type="checkbox"/>179 <input type="checkbox"/>180 <input type="checkbox"/>181 <input type="checkbox"/>182 <input type="checkbox"/>183</p>	
82.	<p>Night Transfer Activating Station Assignment</p> <p>Night Transfer Extension No. for Group 1: 1 __ Night Transfer Extension No. for Group 3: 1 __</p> <p>Night Transfer Extension No. for Group 2: 1 __ Night Transfer Extension No. for Group 4: 1 __</p>			

STATION PROGRAMMING

EXTENSION NO.		120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	Remark
03	STATION TYPE:																	Default: 240 Check 1/ext.
	ZT-6K	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	ZT-6D	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	ZT-8K	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	ZT-8D	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	ZT-12K	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	ZT-12D	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	ZT-24K	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	ZT-24D	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	SLT/Pulse dial	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
SLT/DTMF dial	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
STATION FEATURE:																		Default: none
Operator	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
with 1 DSS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
with 2 DSS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
63	Toll Restriction -																	Default: Allow Toll
	System																	
	SPD																	
	Allow Toll	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Deny Toll	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
64	Access Restriction -																	Default: Allow Access
	System																	
	SPD																	
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65	Page Access																	Default: Allow Access
	System																	
	SPD																	
	Allow Access	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
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66	Page Receive																	Default: Allow Receive
	System																	
	SPD																	
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67	Group Call																	Default: Allow Access
	System																	
	SPD																	
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68	Group Call Receive																	Default: Deny Receive
	System																	
	SPD																	
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Allow Grp 3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
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69	Zone Page																	Default: Allow Access
	System																	
	SPD																	
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70	Auto Answer																	Default: Auto-answer
	System																	
	SPD																	
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71	Hold Recall																	Default: Enable Recall
	System																	
	SPD																	
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STATION PROGRAMMING

EXTENSION NO.		136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	Remark
03.	STATION TYPE:																	
	ZT-6K	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Default: 24D Check 1/ext.
	ZT-6D	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	ZT-8K	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
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	SLT/Pulse dial	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
SLT/DTMF dial	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
STATION FEATURE:																		
	Operator	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Default: none
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63	Toll Restriction - System																	Default: Allow Toll
	SPD																	
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64	Access Restriction - System																	Default: Allow Access
	SPD																	
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66	Page Receive																	Default: Allow Receive
	Allow Receive	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
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67	Group Call																	Default: Allow Access
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68	Group Call Receive																	Default: Deny Receive
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	Allow Grp 1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Allow Grp 2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Allow Grp 3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
70	Auto Answer																	Default Auto-answer
	Allow Auto	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Deny Auto	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
71	Hold Recall																	Default Enable Recall
	Allow Recall	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Deny Recall	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

STATION PROGRAMMING

EXTENSION NO.		152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	Remark
03	STATION TYPE:																	
	ZT-6K	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Default: 240
	ZT-6D	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Check 1/ext
	ZT-8K	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	ZT-8D	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	ZT-12K	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	ZT-12D	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	ZT-24K	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	ZT-24D	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	SLT: Pulse dial	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
SLT: DTMF dial	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
STATION FEATURE:																		
Operator	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Default: none
with 1 DSS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
with 2 DSS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
63	Toll Restriction - System																	
	SPD Allow Toll	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Default: Allow Toll
64	Access Restriction - System																	
	SPD Allow Access	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Default: Allow Access
65	Page Access																	
	Allow Access	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Default: Allow Access
66	Page Receive																	
	Allow Receive	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Default: Allow Receive
67	Group Call																	
	Deny Access	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Default: Allow Access
	Allow Grp 0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Allow Grp 1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Allow Grp 2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Allow Grp 3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Allow Grp 4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
68	Group Call Receive																	
	Den. Receive	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Default: Deny Receive
	Allow Grp 0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Allow Grp 1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Allow Grp 2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Allow Grp 3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Allow Grp 4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
69	Zone Page																	
	Den. Access	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Default: Allow Access
	Allow Grp 0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Allow Grp 1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Allow Grp 2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Allow Grp 3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Allow Grp 4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
70	Auto Answer																	
	Allow Auto	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Default: Auto-answer
71	Hold Recall																	
	Allow Recall	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Default: Enable Recall

STATION PROGRAMMING

EXTENSION NO.		168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	Remark
03	STATION TYPE																	
	ZT-6K	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Default: 24D
	ZT-6D	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Check 1/ext.
	ZT-8K	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	ZT-8D	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	ZT-12K	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	ZT-12D	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	ZT-24K	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	ZT-24D	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	SLT/Pulse dial	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
SLT/DTMF dial	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
STATION FEATURE:																		
Operator with 1 DSS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Default: none
Operator with 2 DSS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
63 Toll Restriction - System SPD	Allow Toll	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Default: Allow Toll
	Deny Toll	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
64 Access Restriction - System SPD	Allow Access	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Default: Allow Access
	Deny Access	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
65 Page Access	Allow Access	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Default: Allow Access
	Deny Access	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
66 Page Receive	Allow Receive	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Default: Allow Receive
	Deny Receive	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
67 Group Call	Deny Access	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Default: Allow Access
	Allow Grp 0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Allow Grp 1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Allow Grp 2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Allow Grp 3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Allow Grp 4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
68 Group Call Receive	Deny Receive	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Default: Deny Receive
	Allow Grp 0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Allow Grp 1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Allow Grp 2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Allow Grp 3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Allow Grp 4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
69 Zone Page	Deny Access	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Default: Allow Access
	Allow Grp 0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Allow Grp 1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Allow Grp 2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Allow Grp 3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Allow Grp 4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
70 Auto Answer	Allow Auto	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Default: Auto-answer
	Deny Auto	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
71 Hold Recall	Allow Recall	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Default: Enable Recall
	Deny Recall	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

EXTENSION NO.		120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	Remark
72	Speakerphone																	
	Not Installed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Default: None
73	Do Not Disturb																	
	Allow DND Deny DND	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Default: Allow DND
74	Executive Station																	
	Yes No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Override Busy/DND Station Default: No
75	Protected Extension																	
	Not protected Protected	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Default: Not protected
76	Secretarial Hot-Line																	
	Not required	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Default: None
	Line Ext # Line Ext #	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	Default: None
78	Flex Key Assign																	
	Key01	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	Enter Feature To be assigned. LK01-LK24. DSS120-DSS183. SPD80-SPD99. SPD. FLT1-FLT9. FLT. Zone1-Zone4. All Zone. Group1-Group4 All Grp. Door1-Door3. MSG Over. C Back. I Back. Connect. Call Park. Release. Serial AutoAns. Night. Account Recall
	Key02	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
	Key03	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
	Key04	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
	Key05	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
	Key06	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
	Key07	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
	Key08	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
	Key09	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
	Key10	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
	Key11	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
	Key12	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
	Key13	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
Key14	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----		
Key15	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----		
Key16	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----		
Key17	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----		
Key18	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----		
Key19	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----		
Key 20	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----		
Key 21	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----		
Key 22	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----		
Key 23	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----		
Key 24	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----		
80	Intercom Group																	
	No 1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Default: All Group
	No 2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	No 3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
No 4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
81	Station Lock Pass word	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	

EXTENSION NO		136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	Remark
72.	Speakerphone																	
	Not Installed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Default:
	Installed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	None
73.	Do Not Disturb																	
	Allow DND	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Default:
	Deny DND	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Allow DND
74.	Executive Station																	
	Yes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Override Busy/DND
	No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Station
75.	Protected Extension																	
	Not protected	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Default:
	Protected	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Not protected
76.	Secretarial Hot-Line																	
	Not required	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Default: None
	Line Ext.#	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	Default: None
	Line Ext.#	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	Default: None
78.	Flex. Key Assign.																	
	Key01	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	Enter Feature To be assigned. LK01-LK24. DSS120-DSS183. SPD80-SPD99. SPD. FLT1-FLT9. FLT. Zone1-Zone4. All Zone. Group1-Group4. All Grp. Door1-Door3. MSG. Over. C.Back. I.Back. Connect. Call Park. Release. Serial. AutoAns. Night. Account. Recall
	Key02	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
	Key03	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
	Key04	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
	Key05	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
	Key06	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
	Key07	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
	Key08	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
	Key09	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
	Key10	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
	Key11	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
	Key12	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
	Key13	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
	Key14	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
	Key15	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
	Key16	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
	Key17	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
Key18	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----		
80.	IntercomGroup																	
	No.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Default: All Group
	No.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	No.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
No.4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
81.	Station Lock Password																	

	EXTENSION NO.	152 153 154 155	156 157 158 159	160 161 162 163	164 165 166 167	Remark																				
72.	Speakerphone																									
	Not Installed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Default: None
73.	Do Not Disturb																									
	Allow DND	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Default: Allow DND
74.	Executive Station																									
	Yes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Override Busy/DND Station Default: No
75.	Protected Extension																									
	Not protected	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Default: Not protected
76.	Secretarial Hot-Line																									
	Not required	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Default: None
	Line Ext. #	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	Default: None
78.	Flex Key Assign																									
	Key01	-----	-----	-----	-----	-----																				
	Key02	-----	-----	-----	-----	-----																				
	Key03	-----	-----	-----	-----	-----																				
	Key04	-----	-----	-----	-----	-----																				
	Key05	-----	-----	-----	-----	-----																				
	Key06	-----	-----	-----	-----	-----																				
	Key07	-----	-----	-----	-----	-----																				
	Key08	-----	-----	-----	-----	-----																				
	Key09	-----	-----	-----	-----	-----																				
	Key10	-----	-----	-----	-----	-----																				
	Key11	-----	-----	-----	-----	-----																				
	Key12	-----	-----	-----	-----	-----																				
	Key13	-----	-----	-----	-----	-----																				
	Key14	-----	-----	-----	-----	-----																				
Key15	-----	-----	-----	-----	-----																					
Key16	-----	-----	-----	-----	-----																					
Key17	-----	-----	-----	-----	-----																					
Key18	-----	-----	-----	-----	-----																					
Key19	-----	-----	-----	-----	-----																					
Key 20	-----	-----	-----	-----	-----																					
Key 21	-----	-----	-----	-----	-----																					
Key 22	-----	-----	-----	-----	-----																					
Key 23	-----	-----	-----	-----	-----																					
Key 24	-----	-----	-----	-----	-----																					
80.	IntercomGroup																									
	No 1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Default: All Group
	No 2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	No 3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	No 4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
81.	Station Lock Password																									

EXTENSION NO.		168 169 170 171	172 173 174 175	176 177 178 179	180 181 182 183	Remark	
72.	Speakerphone						
	Not Installed	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Default: None
73.	Do Not Disturb						
	Allow DND	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Default: Allow DND
74.	Executive Station						
	Yes	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Override Busy/DND Station Default: No
75.	Protected Extension						
	Not protected	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Default: Not protected
76.	Secretarial Hot-Line						
	Not required	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Default: None Default: None
78.	Flex. Key Assign.						
	Key01	-----	-----	-----	-----	-----	
	Key02	-----	-----	-----	-----	-----	
	Key03	-----	-----	-----	-----	-----	
	Key04	-----	-----	-----	-----	-----	
	Key05	-----	-----	-----	-----	-----	
	Key06	-----	-----	-----	-----	-----	
	Key07	-----	-----	-----	-----	-----	
	Key08	-----	-----	-----	-----	-----	
	Key09	-----	-----	-----	-----	-----	
	Key10	-----	-----	-----	-----	-----	
	Key11	-----	-----	-----	-----	-----	
	Key12	-----	-----	-----	-----	-----	
	Key13	-----	-----	-----	-----	-----	
	Key14	-----	-----	-----	-----	-----	
	Key15	-----	-----	-----	-----	-----	
	Key16	-----	-----	-----	-----	-----	
	Key17	-----	-----	-----	-----	-----	
	Key18	-----	-----	-----	-----	-----	
	Key19	-----	-----	-----	-----	-----	
	Key 20	-----	-----	-----	-----	-----	
	Key 21	-----	-----	-----	-----	-----	
	Key 22	-----	-----	-----	-----	-----	
	Key 23	-----	-----	-----	-----	-----	
	Key 24	-----	-----	-----	-----	-----	
80.	IntercomGroup						
	No 1	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Default: All Group
	No 2	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
	No 3	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
	No 4	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
81.	Station Lock Password	-----	-----	-----	-----	-----	

EXTENSION NO.	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	Remark
61. Outgoing Call Restriction	on TRK No.01	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Default: No restriction
	on TRK No.02	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.03	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.04	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.05	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.06	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.07	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.08	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.09	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.10	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.11	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.12	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.13	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.14	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.15	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.16	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.17	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.18	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.19	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.20	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.21	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.22	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.23	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.24	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
62. CO Line Pick-up Restriction	on TRK No.01	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Default: No restriction
	on TRK No.02	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.03	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.04	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.05	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.06	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.07	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.08	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.09	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.10	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.11	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.12	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.13	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.14	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.15	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.16	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.17	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.18	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.19	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.20	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.21	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.22	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.23	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.24	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

EXTENSION NO.		136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	Remark
61.	Outgoing Call Restriction																	Default: No restriction
	on TRK No.01	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.02	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.03	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.04	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.05	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.06	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.07	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.08	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.09	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.10	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.11	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.12	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.13	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.14	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.15	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.16	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.17	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.18	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.19	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.20	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.21	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.22	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.23	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
on TRK No.24	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
62.	CO Line Pick-up Restriction																	Default: No restriction
	on TRK No.01	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.02	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.03	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.04	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.05	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.06	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.07	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.08	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.09	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.10	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.11	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.12	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.13	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.14	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.15	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.16	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.17	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.18	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.19	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.20	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.21	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.22	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.23	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
on TRK No.24	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

EXTENSION NO.		152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	Remark
61.	Outgoing Call Restriction																	Default: No restriction
	on TRK No.01	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.02	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.03	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.04	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.05	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
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	on TRK No.07	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.08	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.09	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.10	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.11	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.12	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.13	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.14	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
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	on TRK No.16	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
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	on TRK No.18	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.19	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
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	on TRK No.21	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.22	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.23	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
on TRK No.24	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
62.	CO Line Pick-up Restriction																	Default: No restriction
	on TRK No.01	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.02	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.03	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.04	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.05	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.06	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.07	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.08	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.09	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.10	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.11	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.12	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.13	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.14	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.15	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.16	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.17	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.18	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.19	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.20	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.21	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.22	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.23	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
on TRK No.24	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

EXTENSION NO.		168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	Remark
61.	Outgoing Call Restriction																	Default: No restriction
	on TRK No.01	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.02	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.03	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.04	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.05	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.06	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.07	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.08	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.09	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
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	on TRK No.11	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.12	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.13	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.14	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.15	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.16	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.17	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.18	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.19	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.20	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.21	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.22	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.23	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
on TRK No.24	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
62.	CO Line Pick-up Restriction																	Default: No restriction
	on TRK No.01	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.02	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.03	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.04	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.05	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.06	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.07	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.08	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.09	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.10	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.11	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.12	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.13	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.14	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.15	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.16	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.17	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.18	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.19	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.20	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.21	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.22	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	on TRK No.23	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
on TRK No.24	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

EXTENSION NO.		120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	Remark
77.	Toll Restriction																	Default: None Enter Class No. 01-15
	Class [No restrictn]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	
	Rstr. TRK #01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Rstr. TRK #02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Rstr. TRK #03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Rstr. TRK #04	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Rstr. TRK #05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Rstr. TRK #06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Rstr. TRK #07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Rstr. TRK #08	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Rstr. TRK #09	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Rstr. TRK #10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Rstr. TRK #11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Rstr. TRK #12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Rstr. TRK #13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Rstr. TRK #14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Rstr. TRK #15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Rstr. TRK #16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Rstr. TRK #17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Rstr. TRK #18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Rstr. TRK #19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Rstr. TRK #20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Rstr. TRK #21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Rstr. TRK #22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Rstr. TRK #23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Rstr. TRK #24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
82.	Night Transfer																	Default: None
	Activation for																	
	Group No 1	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	
	No 2	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	
	No 3	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	
No 4	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]		

EXTENSION NO.		136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	Remark
77	Toll Restriction																	Default: None Enter Class No. 01-15
	Class No restrictn	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	
	Rstr. TRK =01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Rstr. TRK =02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Rstr. TRK =03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Rstr. TRK =04	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Rstr. TRK =05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Rstr. TRK =06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Rstr. TRK =07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Rstr. TRK =08	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Rstr. TRK =09	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Rstr. TRK =10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Rstr. TRK =11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Rstr. TRK =12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Rstr. TRK =13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Rstr. TRK =14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Rstr. TRK =15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Rstr. TRK =16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Rstr. TRK =17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Rstr. TRK =18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Rstr. TRK =19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Rstr. TRK =20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Rstr. TRK =21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Rstr. TRK =22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Rstr. TRK =23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Rstr. TRK =24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
82	Night Transfer																	Default: None
	Activation for																	
	Group No. 1	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	
	No. 2	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	
	No. 3	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	
No. 4	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]		

EXTENSION NO.		152 153 154 155	156 157 158 159	160 161 162 163	164 165 166 167	Remark
77	Toll Restriction					Default: None Enter Class No. 01-15
	Class					
	No restrictn	[] [] [] []	[] [] [] []	[] [] [] []	[] [] [] []	
	Rstr. TRK #01	- - - -	- - - -	- - - -	- - - -	
	Rstr. TRK #02	- - - -	- - - -	- - - -	- - - -	
	Rstr. TRK #03	- - - -	- - - -	- - - -	- - - -	
	Rstr. TRK #04	- - - -	- - - -	- - - -	- - - -	
	Rstr. TRK #05	- - - -	- - - -	- - - -	- - - -	
	Rstr. TRK #06	- - - -	- - - -	- - - -	- - - -	
	Rstr. TRK #07	- - - -	- - - -	- - - -	- - - -	
	Rstr. TRK #08	- - - -	- - - -	- - - -	- - - -	
	Rstr. TRK #09	- - - -	- - - -	- - - -	- - - -	
	Rstr. TRK #10	- - - -	- - - -	- - - -	- - - -	
	Rstr. TRK #11	- - - -	- - - -	- - - -	- - - -	
	Rstr. TRK #12	- - - -	- - - -	- - - -	- - - -	
	Rstr. TRK #13	- - - -	- - - -	- - - -	- - - -	
	Rstr. TRK #14	- - - -	- - - -	- - - -	- - - -	
	Rstr. TRK #15	- - - -	- - - -	- - - -	- - - -	
	Rstr. TRK #16	- - - -	- - - -	- - - -	- - - -	
	Rstr. TRK #17	- - - -	- - - -	- - - -	- - - -	
	Rstr. TRK #18	- - - -	- - - -	- - - -	- - - -	
	Rstr. TRK #19	- - - -	- - - -	- - - -	- - - -	
	Rstr. TRK #20	- - - -	- - - -	- - - -	- - - -	
	Rstr. TRK #21	- - - -	- - - -	- - - -	- - - -	
Rstr. TRK #22	- - - -	- - - -	- - - -	- - - -		
Rstr. TRK #23	- - - -	- - - -	- - - -	- - - -		
Rstr. TRK #24	- - - -	- - - -	- - - -	- - - -		
82	Night Transfer					Default: None
	Activation for					
	Group					
	No 1	[] [] [] []	[] [] [] []	[] [] [] []	[] [] [] []	
	No 2	[] [] [] []	[] [] [] []	[] [] [] []	[] [] [] []	
No 3	[] [] [] []	[] [] [] []	[] [] [] []	[] [] [] []		
No 4	[] [] [] []	[] [] [] []	[] [] [] []	[] [] [] []		

EXTENSION NO.		168 169 170 171	172 173 174 175	176 177 178 179	180 181 182 183	Remark
77	Toll Restriction					Default: None Enter Class No. 01-15
	Class [No restrictn]	[] [] [] []	[] [] [] []	[] [] [] []	[] [] [] []	
	Rstr. TRK =01	- - - - -	- - - - -	- - - - -	- - - - -	
	Rstr. TRK =02	- - - - -	- - - - -	- - - - -	- - - - -	
	Rstr. TRK =03	- - - - -	- - - - -	- - - - -	- - - - -	
	Rstr. TRK =04	- - - - -	- - - - -	- - - - -	- - - - -	
	Rstr. TRK =05	- - - - -	- - - - -	- - - - -	- - - - -	
	Rstr. TRK =06	- - - - -	- - - - -	- - - - -	- - - - -	
	Rstr. TRK =07	- - - - -	- - - - -	- - - - -	- - - - -	
	Rstr. TRK =08	- - - - -	- - - - -	- - - - -	- - - - -	
	Rstr. TRK =09	- - - - -	- - - - -	- - - - -	- - - - -	
	Rstr. TRK =10	- - - - -	- - - - -	- - - - -	- - - - -	
	Rstr. TRK =11	- - - - -	- - - - -	- - - - -	- - - - -	
	Rstr. TRK =12	- - - - -	- - - - -	- - - - -	- - - - -	
	Rstr. TRK =13	- - - - -	- - - - -	- - - - -	- - - - -	
	Rstr. TRK =14	- - - - -	- - - - -	- - - - -	- - - - -	
	Rstr. TRK =15	- - - - -	- - - - -	- - - - -	- - - - -	
	Rstr. TRK =16	- - - - -	- - - - -	- - - - -	- - - - -	
	Rstr. TRK =17	- - - - -	- - - - -	- - - - -	- - - - -	
	Rstr. TRK =18	- - - - -	- - - - -	- - - - -	- - - - -	
	Rstr. TRK =19	- - - - -	- - - - -	- - - - -	- - - - -	
	Rstr. TRK =20	- - - - -	- - - - -	- - - - -	- - - - -	
	Rstr. TRK =21	- - - - -	- - - - -	- - - - -	- - - - -	
	Rstr. TRK =22	- - - - -	- - - - -	- - - - -	- - - - -	
Rstr. TRK =23	- - - - -	- - - - -	- - - - -	- - - - -		
Rstr. TRK =24	- - - - -	- - - - -	- - - - -	- - - - -		
82	Night Transfer					Default: None
	Activation for					
	Group					
	No. 1	[] [] [] []	[] [] [] []	[] [] [] []	[] [] [] []	
	No. 2	[] [] [] []	[] [] [] []	[] [] [] []	[] [] [] []	
No. 3	[] [] [] []	[] [] [] []	[] [] [] []	[] [] [] []		
No. 4	[] [] [] []	[] [] [] []	[] [] [] []	[] [] [] []		

For Use as a Worksheet Only. Duplicate Sheet for Each CO/PBX Line.	
TRUNK No. _ _	04. <input type="checkbox"/> Line connected: (_ _) _ _ _ _ _ _ _ _
29. FLT CO Group No. _ (1 through 9)	30. Predial <input type="checkbox"/> Not behind PBX <input type="checkbox"/> Predial 0: _ _ _ <input type="checkbox"/> Predial 1: _ _ _ <input type="checkbox"/> Predial 2: _ _ _ <input type="checkbox"/> Predial 3: _ _ _
31. CO Ringing Tone <input type="checkbox"/> Standard Tone <input type="checkbox"/> Optional Tone	
40. Day Ringing Ext. Nos. <input type="checkbox"/> 120 <input type="checkbox"/> 121 <input type="checkbox"/> 122 <input type="checkbox"/> 123 <input type="checkbox"/> 152 <input type="checkbox"/> 153 <input type="checkbox"/> 154 <input type="checkbox"/> 155 <input type="checkbox"/> 124 <input type="checkbox"/> 125 <input type="checkbox"/> 126 <input type="checkbox"/> 127 <input type="checkbox"/> 156 <input type="checkbox"/> 157 <input type="checkbox"/> 158 <input type="checkbox"/> 159 <input type="checkbox"/> 128 <input type="checkbox"/> 129 <input type="checkbox"/> 130 <input type="checkbox"/> 131 <input type="checkbox"/> 160 <input type="checkbox"/> 161 <input type="checkbox"/> 162 <input type="checkbox"/> 163 <input type="checkbox"/> 132 <input type="checkbox"/> 133 <input type="checkbox"/> 134 <input type="checkbox"/> 135 <input type="checkbox"/> 164 <input type="checkbox"/> 165 <input type="checkbox"/> 166 <input type="checkbox"/> 167 <input type="checkbox"/> 136 <input type="checkbox"/> 137 <input type="checkbox"/> 138 <input type="checkbox"/> 139 <input type="checkbox"/> 168 <input type="checkbox"/> 169 <input type="checkbox"/> 170 <input type="checkbox"/> 171 <input type="checkbox"/> 140 <input type="checkbox"/> 141 <input type="checkbox"/> 142 <input type="checkbox"/> 143 <input type="checkbox"/> 172 <input type="checkbox"/> 173 <input type="checkbox"/> 174 <input type="checkbox"/> 175 <input type="checkbox"/> 144 <input type="checkbox"/> 145 <input type="checkbox"/> 146 <input type="checkbox"/> 147 <input type="checkbox"/> 176 <input type="checkbox"/> 177 <input type="checkbox"/> 178 <input type="checkbox"/> 179 <input type="checkbox"/> 148 <input type="checkbox"/> 149 <input type="checkbox"/> 150 <input type="checkbox"/> 151 <input type="checkbox"/> 180 <input type="checkbox"/> 181 <input type="checkbox"/> 182 <input type="checkbox"/> 183	41. Night Ringing Ext. Nos. <input type="checkbox"/> 120 <input type="checkbox"/> 121 <input type="checkbox"/> 122 <input type="checkbox"/> 123 <input type="checkbox"/> 152 <input type="checkbox"/> 153 <input type="checkbox"/> 154 <input type="checkbox"/> 155 <input type="checkbox"/> 124 <input type="checkbox"/> 125 <input type="checkbox"/> 126 <input type="checkbox"/> 127 <input type="checkbox"/> 156 <input type="checkbox"/> 157 <input type="checkbox"/> 158 <input type="checkbox"/> 159 <input type="checkbox"/> 128 <input type="checkbox"/> 129 <input type="checkbox"/> 130 <input type="checkbox"/> 131 <input type="checkbox"/> 160 <input type="checkbox"/> 161 <input type="checkbox"/> 162 <input type="checkbox"/> 163 <input type="checkbox"/> 132 <input type="checkbox"/> 133 <input type="checkbox"/> 134 <input type="checkbox"/> 135 <input type="checkbox"/> 164 <input type="checkbox"/> 165 <input type="checkbox"/> 166 <input type="checkbox"/> 167 <input type="checkbox"/> 136 <input type="checkbox"/> 137 <input type="checkbox"/> 138 <input type="checkbox"/> 139 <input type="checkbox"/> 168 <input type="checkbox"/> 169 <input type="checkbox"/> 170 <input type="checkbox"/> 171 <input type="checkbox"/> 140 <input type="checkbox"/> 141 <input type="checkbox"/> 142 <input type="checkbox"/> 143 <input type="checkbox"/> 172 <input type="checkbox"/> 173 <input type="checkbox"/> 174 <input type="checkbox"/> 175 <input type="checkbox"/> 144 <input type="checkbox"/> 145 <input type="checkbox"/> 146 <input type="checkbox"/> 147 <input type="checkbox"/> 176 <input type="checkbox"/> 177 <input type="checkbox"/> 178 <input type="checkbox"/> 179 <input type="checkbox"/> 148 <input type="checkbox"/> 149 <input type="checkbox"/> 150 <input type="checkbox"/> 151 <input type="checkbox"/> 180 <input type="checkbox"/> 181 <input type="checkbox"/> 182 <input type="checkbox"/> 183
44. CO Ringing Group No. _ (Default: Group 0)	45. Day Loud Ringing Bell No. _ (Default: No assignment)
46. Night Loud Ring Bell No. _ (Default: No assignment)	47. Night External P.A. Ringing (Default: Off) <input type="checkbox"/> <input type="checkbox"/> Off
48. DP/MF Dialing Selection <input type="checkbox"/> DP <input type="checkbox"/> MF (Default: MF for all lines)	49. 10/20pps Pulse Dial Assignment <input type="checkbox"/> 10PPS <input type="checkbox"/> 20PPS (Default: 10pps) CAUTION: DEPARTMENT OF COMMUNICATION IN CANADA PROHIBITS USE OF DP SPEED OF 20PPS.
50. Automatic CO release (Remote Hold Disconnect) <input type="checkbox"/> Yes <input type="checkbox"/> No Detect	
TRUNK No. _ _	04. <input type="checkbox"/> Line connected: (_ _) _ _ _ _ _ _ _ _
29. FLT CO Group No. _ (1 through 9)	30. Predial <input type="checkbox"/> Not behind PBX <input type="checkbox"/> Predial 0: _ _ _ <input type="checkbox"/> Predial 1: _ _ _ <input type="checkbox"/> Predial 2: _ _ _ <input type="checkbox"/> Predial 3: _ _ _
31. CO Ringing Tone <input type="checkbox"/> Standard Tone <input type="checkbox"/> Optional Tone	
40. Day Ringing Ext. Nos. <input type="checkbox"/> 120 <input type="checkbox"/> 121 <input type="checkbox"/> 122 <input type="checkbox"/> 123 <input type="checkbox"/> 152 <input type="checkbox"/> 153 <input type="checkbox"/> 154 <input type="checkbox"/> 155 <input type="checkbox"/> 124 <input type="checkbox"/> 125 <input type="checkbox"/> 126 <input type="checkbox"/> 127 <input type="checkbox"/> 156 <input type="checkbox"/> 157 <input type="checkbox"/> 158 <input type="checkbox"/> 159 <input type="checkbox"/> 128 <input type="checkbox"/> 129 <input type="checkbox"/> 130 <input type="checkbox"/> 131 <input type="checkbox"/> 160 <input type="checkbox"/> 161 <input type="checkbox"/> 162 <input type="checkbox"/> 163 <input type="checkbox"/> 132 <input type="checkbox"/> 133 <input type="checkbox"/> 134 <input type="checkbox"/> 135 <input type="checkbox"/> 164 <input type="checkbox"/> 165 <input type="checkbox"/> 166 <input type="checkbox"/> 167 <input type="checkbox"/> 136 <input type="checkbox"/> 137 <input type="checkbox"/> 138 <input type="checkbox"/> 139 <input type="checkbox"/> 168 <input type="checkbox"/> 169 <input type="checkbox"/> 170 <input type="checkbox"/> 171 <input type="checkbox"/> 140 <input type="checkbox"/> 141 <input type="checkbox"/> 142 <input type="checkbox"/> 143 <input type="checkbox"/> 172 <input type="checkbox"/> 173 <input type="checkbox"/> 174 <input type="checkbox"/> 175 <input type="checkbox"/> 144 <input type="checkbox"/> 145 <input type="checkbox"/> 146 <input type="checkbox"/> 147 <input type="checkbox"/> 176 <input type="checkbox"/> 177 <input type="checkbox"/> 178 <input type="checkbox"/> 179 <input type="checkbox"/> 148 <input type="checkbox"/> 149 <input type="checkbox"/> 150 <input type="checkbox"/> 151 <input type="checkbox"/> 180 <input type="checkbox"/> 181 <input type="checkbox"/> 182 <input type="checkbox"/> 183	41. Night Ringing Ext. Nos. <input type="checkbox"/> 120 <input type="checkbox"/> 121 <input type="checkbox"/> 122 <input type="checkbox"/> 123 <input type="checkbox"/> 152 <input type="checkbox"/> 153 <input type="checkbox"/> 154 <input type="checkbox"/> 155 <input type="checkbox"/> 124 <input type="checkbox"/> 125 <input type="checkbox"/> 126 <input type="checkbox"/> 127 <input type="checkbox"/> 156 <input type="checkbox"/> 157 <input type="checkbox"/> 158 <input type="checkbox"/> 159 <input type="checkbox"/> 128 <input type="checkbox"/> 129 <input type="checkbox"/> 130 <input type="checkbox"/> 131 <input type="checkbox"/> 160 <input type="checkbox"/> 161 <input type="checkbox"/> 162 <input type="checkbox"/> 163 <input type="checkbox"/> 132 <input type="checkbox"/> 133 <input type="checkbox"/> 134 <input type="checkbox"/> 135 <input type="checkbox"/> 164 <input type="checkbox"/> 165 <input type="checkbox"/> 166 <input type="checkbox"/> 167 <input type="checkbox"/> 136 <input type="checkbox"/> 137 <input type="checkbox"/> 138 <input type="checkbox"/> 139 <input type="checkbox"/> 168 <input type="checkbox"/> 169 <input type="checkbox"/> 170 <input type="checkbox"/> 171 <input type="checkbox"/> 140 <input type="checkbox"/> 141 <input type="checkbox"/> 142 <input type="checkbox"/> 143 <input type="checkbox"/> 172 <input type="checkbox"/> 173 <input type="checkbox"/> 174 <input type="checkbox"/> 175 <input type="checkbox"/> 144 <input type="checkbox"/> 145 <input type="checkbox"/> 146 <input type="checkbox"/> 147 <input type="checkbox"/> 176 <input type="checkbox"/> 177 <input type="checkbox"/> 178 <input type="checkbox"/> 179 <input type="checkbox"/> 148 <input type="checkbox"/> 149 <input type="checkbox"/> 150 <input type="checkbox"/> 151 <input type="checkbox"/> 180 <input type="checkbox"/> 181 <input type="checkbox"/> 182 <input type="checkbox"/> 183
44. CO Ringing Group No. _ (Default: Group 0)	45. Day Loud Ringing Bell No. _ (Default: No assignment)
46. Night Loud Ring Bell No. _ (Default: No assignment)	47. Night External P.A. Ringing (Default: Off) <input type="checkbox"/> <input type="checkbox"/> Off
48. DP/MF Dialing Selection <input type="checkbox"/> DP <input type="checkbox"/> MF (Default: MF for all lines)	49. 10/20pps Pulse Dial Assignment <input type="checkbox"/> 10PPS <input type="checkbox"/> 20PPS (Default: 10pps) CAUTION: DEPARTMENT OF COMMUNICATION IN CANADA PROHIBITS USE OF DP SPEED OF 20PPS.
50. Automatic CO release (Remote Hold Disconnect) <input type="checkbox"/> Yes <input type="checkbox"/> No Detect	

TOLL RESTRICTION PROGRAMMING

PLANNING STEPS

- Determine if North American Dial Plan (Fixed Basic Table) or Other (Flexible Basic Table: User Table 8) to be used.
- Separate the fifteen toll classes into required groups if the numbers exceeds twenty or different level of restriction is required.
- Fill the user table as required.
- Toll restriction related programming items are as follows:

- | | |
|--------------------------------------|--|
| 07. SCDR Output Mode | 62. CO Line Pick-up Restriction |
| 15. O C C. Data Entry (Four entries) | 63. Toll Restriction — System Speed Dial |
| 30. Predial | 64. Access Restriction — System Speed Dial |
| 61. Outgoing Call Restriction | 77. Toll Restriction Class |

TOLL CLASSES TABLE

CLASS NO	USER1	USER2	USER3	USER4	USER5	USER6	USER7	BASIC
00	No Table (No restriction)							
01								x
02	x							x
03		x						x
04	x	x						x
05			x					x
06		x	x					x
07	x	x	x					x
08				x				x
09	x	x	x	x				x
10					x			x
11				x	x			x
12						x		x
13					x	x		x
14							x	x
15						x	x	x

TABLE ENTRY EXAMPLE

USER DATA TABLE NO.1						
Line No	DATA CODE					
	Control	Digits				
	code	1st	2nd	3rd	4th	5th
01	4	1	2	0	1	5
02	1	5	5	1	2	1
03						

Deny Dialing 1-(201) 5 55-1212

NOTES:

1. The basic table is either a fixed table, to control North American Dial Plan, or flexible table, User table No. 8, for alternate dialing plan.
2. User 1 thru 7 are user programmable tables.
3. Tables marked with "x" are selected according to the service class.
4. The control codes are used in the User or Basic Control Table and define the five digits of the dial numbers entered on the line as follows:
 - 0 = Not used.
 - 1 = Deny the listed number.
 - 2 = Allow the listed number.
 - 3 = Allow the listed number but over 16 dig. all together.
 - 4 = Expand the number to the next line.
 - 5 = Allow the listed number is dialed. Also print the number on the SCDR.
 - 6 = Allow the listed number but not over 16 dig. all together. Also print the number on the SCDR.

USER DATA TABLE NO. 1		USER DATA TABLE NO. 2		USER DATA TABLE NO. 3		USER DATA TABLE NO. 4		USER DATA TABLE NO. 5		USER DATA TABLE NO. 6		USER DATA TABLE NO. 7		USER DATA TABLE NO. 8	
Line No.	Control Code	Line No.	Control Code	Line No.	Control Code	Line No.	Control Code	Line No.	Control Code	Line No.	Control Code	Line No.	Control Code	Line No.	Control Code
01		01		01		01		01		01		01		01	
02		02		02		02		02		02		02		02	
03		03		03		03		03		03		03		03	
04		04		04		04		04		04		04		04	
05		05		05		05		05		05		05		05	
06		06		06		06		06		06		06		06	
07		07		07		07		07		07		07		07	
08		08		08		08		08		08		08		08	
09		09		09		09		09		09		09		09	
10		10		10		10		10		10		10		10	
11		11		11		11		11		11		11		11	
12		12		12		12		12		12		12		12	
13		13		13		13		13		13		13		13	
14		14		14		14		14		14		14		14	
15		15		15		15		15		15		15		15	
16		16		16		16		16		16		16		16	
17		17		17		17		17		17		17		17	
18		18		18		18		18		18		18		18	
19		19		19		19		19		19		19		19	
20		20		20		20		20		20		20		20	

Control Codes:
 0 = Not used.
 1 = Deny the listed number.
 2 = Allow the listed number.
 3 = Allow the listed number but not over 60 dig. all together.
 4 = Expand the number to the next line.
 5 = Allow the listed number is dialed. Also print the number on the SCDR.
 6 = Allow the listed number but not over 16 dig. altogether. Also print the number on the SCDR.

TABLE 5.15
 BASIC DATA TABLE

FIXED BASIC DATA TABLE							
Line No.	DATA CODE					Control code	
	Digits						
	1st	2nd	3rd	4th	5th		
1	0	-				1	
2	1	-	6	1	1	3	
3	1	-	(8	0	0)	2	
4	1	-	9	1	1	3	
5	1	-	(N	1	1)	1	
6	1	-	(N	0	N)	5	4
7	5		5			2	
8	1	-	(N	1	N)-	5	4
9	5		5			2	
10	1	-	(N	0	N)		1
11	1	-	(N	1	N)		1
12	6		1	1			3
13	(8		0	0)			2
14	9		1	1			3
15	(N		1	1)			1
16	(N		0	N)-	5	5	4
17	5						2
18	(N		1	N)-	5	5	4
19	5						2
20	(N		0	N)			1
21	(N		1	N)			1
22							

Dialing "0", operator call, is denied.

Dialing "611" is allowed but over 10 digit is denied.

Dialing "1-800" and the subsequent number is allowed.

Dialing "1-911" is allowed but over 10 digit is denied.

Dialing "1-N11" and the subsequent number, except "1-911", is denied.

Dialing "1-NON-555" and the subsequent number is allowed.

Dialing "1-N1N-555" and the subsequent number is allowed.

Dialing "1-NON" and the subsequent number, except those followed by office code "555", is denied.

Dialing "1-N1N" and the subsequent number, except those followed by office code "555", is denied.

Dialing "611" is allowed but over 10 digit is denied.

Dialing "800" and the subsequent number is allowed.

Dialing "911" is allowed but over 10 digit is denied.

Dialing "N11" and the subsequent number, except "611" and "911", is denied.

Dialing "NON-555" and the subsequent number is allowed.

Dialing "N1N-555" and the subsequent number is allowed.

Dialing "NON" and the subsequent number, except those followed by office code "555", is denied.

Dialing "N1N" and the subsequent number, except those followed by office code "555", is denied.

NOTES:

1. The contents of this table cannot be changed by user, since it is generic to the system program. For any change of the basic data table, select flexible basic table instead by programming item <28>.
2. Letter "N" stands for any digit (0-9) unless any one of those are entered in previous lines of the table with the same control code. (e.g. N1N excludes 212 if 212 is entered in the line before N1N.)

ZT-D SYSTEM PRACTICE INDEX

- 10/20 pps pulse dial, 5-16
 - programming, 5-16
- abbreviated calling, 3-4
- absence message, 3-17
 - programming, 3-17
- AC power
 - requirement, 4-5
 - testing, 4-6
- access restriction programming, 5-21, 5-23
- ACCNT key, 2-19
- account code, 3-4
 - operation, 3-9
 - SLT, 3-8
- add-on conference, 3-1
 - operation
- all call page
 - operation, 3-9
- all call page
 - receive programming, 5-18
- all call
 - voice page, 3-1
- all page operation, 3-10
- alpha-numeric display, 3-4
- AMPA24, 4-11
- AMPA6, 4-11
- AMPA81, 4-11
- amplified handset, 3-7
- answer-hold and split operation, 3-10
- area/office code restriction, 3-1
- audible indication, 2-5
- AUTANS key, 2-19
- automatic answering, 3-4
 - operation, 3-10
 - programming, 5-19
- automatic
 - callback — ICM, 3-5
- CO release programming, 5-16
 - CO to CO forward programming, 5-16
 - hold, attendant, 3-7
 - recall, attendant, 3-7
 - station/line release, 3-1
- background music, 3-3
 - installation, 4-54
 - operation, 3-10
 - programming, 5-18
 - source, 5-8
- basic data table programming, 5-24, 5-26
- battery back-up, 4-16
- BLF lamp, 3-7
- busy bypass operation, 3-10
- busy override — attendant, 3-7
- cable raceway — KSU, 4-52
- cabling, 4-45
 - optional equipment, 4-50
 - station, 4-47
 - requirement, 2-5, 4-45
- CALBAK key, 2-19
- calendar, 3-17
- call back — attendant, 3-7
- call forward
 - all calls, 3-5
 - no answer, 3-5
 - remote CO/PBX, 3-4
 - SLT, 3-8
 - station busy, 3-5
 - operation, 3-10
- call monitor, 3-6
- call park, 3-5
 - operation, 3-10
 - SLT, 3-8
 - park pick up, 3-5
- CALLBAK key, 2-20
- camp-on
 - attendant, 3-7
 - operation, 3-11
- chain calling, attendant, 3-7
- class of service, 3-5
 - programming, 5-6, 5-17
 - SLT, 3-8
- class of toll restriction
 - programming, 5-24
- clock, 3-3
- CO flash timing programming, 5-11
- CO line programming, 5-7
- CO ringing group programming, 5-15
- CO ringing hunt programming, 5-14
- CO-to—CO forwarding
 - operation, 3-18
 - programming, 5-14
- CO/PBX line, 2-13, 4-3, 4-6
 - access operation, 3-11
 - cards, 4-17
 - connection, 4-45
 - hold operation, 3-11
 - pick-up restriction, 3-1
 - queueing operation, 3-12
 - trunk queueing operation, 3-12
- components — KSU, 4-6
- CONF key, 2-18
- Conference
 - add-on conference, 3-1
 - operation, 3-9
 - multi-line conference, 3-2
 - operation, 3-14
 - trunk-to-trunk conference, 3-4
 - release timing programming, 5-13
 - operation, 3-15
- Connect key, 2-19, 2-20
- consultation hold, 3-5
 - operation, 3-12
 - SLT, 3-8
- control codes programming, 5-27, 5-29
- COTL card, 4-19
 - installation, 4-19
- COTL4 card, 2-8
- COTL6 card, 2-8
- COTL8 card, 2-8
- CPUHW card, 2-8, 4-17, 5-2
 - components, 4-19
 - installation, 4-19
- customer database, 2-21
- data security, SLT, 3-8
- database
 - customer, 2-21
 - worksheets, 5-5
- day ringing
 - installation, 4-56
 - programming, 5-14, 5-15
- DCDC-Z, 2-8, 2-13, 2-21, 4-25
- DCDC-Z1, 2-8, 2-21, 4-25
- dial mask, 4-42
- dial pulse break ratio, 5-14
- dial tone reorder
 - operation, 3-12

ZT-D SYSTEM PRACTICE INDEX — (Continued)

- SLT, 3-8
- dial/direct page access, 3-5
- dialing, 2-13
- direct
 - CO/PBX key, 2-19
 - CO/PBX line termination, 3-5
 - float group, 3-5
 - FLT key, 2-19
 - station selection unit, 3-7
 - station termination, 3-5
- directed
 - call pick-up, 3-5
 - call pick-up operation, 3-12
 - call pick-up SLT, 3-8
- directory tray, station, 3-7
- distinctive
 - ringing, 3-2
 - ringing SLT, 3-8
- distribution panels, 4-11, 4-50
- DND, (see do-not-disturb)
- do-not-disturb, 3-5
 - operation, 3-12
 - programming, 5-19
- DOOR key, 2-19
- doorphone, 3-4, 4-44
 - access operation, 3-12
 - day ringing programming, 5-15
 - night ringing programming, 5-15
 - installation, 4-57
 - programming, 5-9
- DP/MF dialing programming, 5-16
- DPPAG card, 2-13, 4-26
- DSPA6, 4-12
- DSPB82, 4-12
- DSPC82, 4-12
- DSS
 - operation, 3-16
 - call-attendant, 3-7
 - console, 4-3, 4-41
 - console programming, 5-7
 - features, 2-7
 - key, 2-19, 2-20, 3-7
 - operation, 3-16
 - unit, 2-1, 2-2, 2-20
- DTMF, 2-21
 - duration timing programming, 5-12
- DTMF/dial pulse trunks, 3-2
- DTMF/DP SLT, 3-8
- earth grounding, 4-5
- electronic station features, 2-7
- emergency back-up, 4-16
 - database, 4-16
 - SLT transfer, 4-16
 - system, 4-16
- environment, 4-4
- equal access, 2-2, 19
 - programming, 5-23
- exclusive hold, 3-5
 - operation, 3-12
- executive override, 3-6
 - operation, 3-12
- executive station programming, 5-19
- Extension cards, 4-3
- external loud ringer, 3-2
- external MOH
 - installation, 4-53
 - programming, 5-14
- external P.A. ringing programming, 5-16
- FCC
 - registration, 2-8
 - Registration No., 4-2
 - Rules, 4-2
- FEAT key, 2-18
- flash key, 3-6
- flexible day ringing, 3-2
- flexible key programming, 5-20
- flexible night service, 3-2
- flexible relay programming, 5-10
- flexible timing functions, 3-2
- float key, 3-6
- floating Co group programming, 5-14
- FLSH key, 2-18
- FLT key, 2-19
- FRIFC card, 4-26
- FWD key, 2-18
- group operation programming, 5-17
- group call, 3-6
 - access programming, 5-18
 - pick-up operation, 3-13
 - pick-up SLT, 3-8
- group hunting, 3-2
- group page operation, 3-13
- group pick-up, 3-5
- GRP key, 2-19
- hands-free, 2-13, 3-6
 - CO, 3-6
 - ICM, 3-6
- handset, 2-13
 - amplified handset, 3-7
 - hard-of-hearing, 4-41
 - hearing aid, 4-2, 4-41
 - noise cancelling, 3-7, 4-41
- Hayes modem, 4-45
- headset, 4-35
 - station adaptor, 3-6
- hearing aid handset, 4-2
- hold, 3-3
 - recall, 3-6
 - recall programming, 5-17
- I-hold/I-use, 6
- IBM XT, 45
- ICM CALBAK key, 2-19
- ICM call priority-attendant, 3-7
- ICM key, 2-18
- installation
 - layout, 4-5
 - recommendation, 4-3
- intercom
 - call operation, 3-13
 - callback operation, 3-13
 - group programming, 5-20
 - hunt group programming, 5-14
 - tone/voice operation, 3-13
- KCPUHW, 4-2
- key service unit, 2-8, 4-6
- key telephone, 2-2, 2-13, 4-29
 - features, 2-7
 - models, 2-1
- key
 - multi-function system, 3-2
- KF, 4-2
- KSU
 - cable raceway, 4-52
 - cards, 4-17
 - distribution panels, 4-50
 - location, 4-4

ZT-D SYSTEM PRACTICE INDEX — (Continued)

- KTSB8 card, 2-8, 4-21
- last number redial SLT, 3-8
- line specification, 5-5, 5-13
- line termination programming, 5-13
- lock-out station, 3-7
- loop limit, 2-5
- loud-ringer-KT, 4-35
- loud ringing bell
 - programming 5-15
 - day programming, 5-15
 - night programming, 5-16
- master group hunt
 - operation, 3-13
 - timing programming, 5-13
- MCPUHW, 4-2
- memo-of-call, 3-6
- memory all clear programming, 5-22
- message operation, 3-16
- message
 - display absence operation, 3-13
 - absence programming, 3-17
 - reminder programming, 3-17
 - message waiting, 3-6
 - SLT activation, 3-8
 - callback operation, 3-14
- MF, 4-2
- MIC OFF, 4-29
- MIC OFF key, 2-18
- microphone cut-off, 3-6
 - operation, 3-14
- microprocessor, 2-1
- modem, 4-45
 - line programming, 5-9
- modular jack, 4-45
- MSG key, 2-19, 2-20
- multi-digit restriction, 3-2
- multi-line conference, 3-14
- multiple answering position, 3-2
- music-on-hold, 3-2
- night
 - loud ringing installation, 4-56
 - mode set/reset operation, 3-18
 - ringing programming, 5-14, 5-15
- night service
 - operation, 3-14
 - control attendant, 3-8
- night transfer
 - operation, 3-16
 - activating station programming, 5-22
- noise cancelling handset, 3-7
- NT key, 2-20
- numbering plan, 2-5
- OCC, 2-2
 - data entry programming, 5-23, 5-30
 - service, 3-2
- off premise SLT, 3-2
- on-hook dialing, 3-6
- on premise SLT, 3-2
- operation symbols, 3-9
- operator
 - call operation, 3-14
 - camp-on recall timer, 5-11
 - station programming, 5-7
- operator/station database, 3-17
- OPT slot, 4-26
- optional
 - cards, 4-17
 - components, 4-4
 - equipment-KT, 4-35
 - equipment installation, 4-52
 - features, 4-3
 - KSU cards, 4-24
 - ringing programming, 5-14
 - ringing tone programming, 5-14
 - system equipment, 4-45
 - other system programming, 5-6
 - outgoing call restriction, 3-2
 - programming, 5-23, 5-30
 - outgoing-toll restriction
 - programming, 5-6, 5-23
 - outside USA-Canada, 5-24, 5-30
 - OVER key, 2-19, 2-20
 - override operation, 3-16
 - P.A. system
 - installation, 4-53
 - programming, 5-9
 - page access
 - attendant, 3-8
 - programming, 5-18
 - restriction, 3-3
 - PAGE key, 2-18
 - page time-out programming, 5-12
 - page-group call programming, 5-17
 - PARK key, 2-19
 - PBX
 - line programming, 5-14, 5-24, 5-30
 - pause timing programming, 5-13
 - personal computer, 2-2, 2-21, 4-45
 - PFUX-M, 2-13, 4-45
 - pick-up restriction
 - programming, 5-23, 5-31
 - pound-star key
 - DTMF generator, 3-6
 - power failure transfer
 - memory, 3-3
 - station/line, 3-3
 - system, 3-3
 - power supply, 4-3, 4-14
 - PWSB/PWSC, 4-15
 - specification, 2-5
 - pre-dial programming, 5-14, 5-24
 - pre-selection, 3-6
 - printed circuit card, 2-8
 - privacy
 - on all calls, 3-3
 - release operation, 3-14
 - program terminal, 3-3
 - programmable station keys, 3-6
 - programming, 2-21
 - basic, 5-2
 - keys, 5-2
 - positions, 4-3
 - procedure, station database, 3-17
 - terminal, 5-2
 - tool, 5-2
 - protected extension, 3-6
 - programming, 5-20
 - RAM CLR, 5-2
 - recall operation, 3-16
 - RECALL key, 2-20
 - RECV2, 2-8, 2-13, 2-21, 4-26
 - relay, 4-50
 - release operation, 3-16
 - RELEASE key, 2-19, 2-20

**ZT-D KTS SYSTEM PRACTICE
FEBRUARY 1987, ISS 1.0**

ZT-D SYSTEM PRACTICE INDEX — (Continued)

- reminder message programming, 3-17
- remote
 - CO disconnect programming, 5-12
 - programming, 3-3
 - programming-installation, 4-59
- REMOTE key, 2-19
- restriction
 - access, 5-31, 5-23
 - area/office code, 3-1
 - class of toll, programming, 5-24
 - class programming, 5-23, 5-31
 - CO/PBX lines, 4-3
 - CO/PBX pick-up, 3-1
 - flow, 5-25
 - multi-digit, 3-2
 - outgoing call, 3-2, 5-6, 5-23, 5-30
 - page access, 3-3
 - pick-up, programming, 5-23, 5-31
 - station password operation, 3-15
 - station password programming, 5-22
 - toll, 2-2, 3-19
 - toll operation, 3-19
 - toll programming, 5-6, 5-23
 - toll — SPD, 5-24, 5-31
 - user data entry, 5-30
- Ringer Equivalence, 4-2
- ringing assignment programming, 5-14
- RNGER, 2-8, 2-13, 2-21, 4-24
- save/repeat dial, 3-6
 - operation, 3-15
- SCDR, 2-2, 3-19
 - installation, 4-58
 - output format programming, 5-8
 - output mode programming, 5-8
 - printer, 4-45
- screened transfer, 3-3
- SDIFC card, 2-13
- secretarial hot line, 3-6
 - operation, 3-15
 - programming, 5-20
- serial call
 - attendant, 3-8
 - operation, 3-15, 3-16
- SERIAL key, 2-19, 2-20
- SHCB-Z, 4-40
- single line telephone, see SLT
- slave relay, 4-50
- SLKT8 card, 2-8, 2-21, 4-22
- SLSB8 card, 2-8, 2-21, 4-22
 - features, 2-7
- SMSA-Z, 4-35
- SPD key, 2-19
- speaker key, 2-18
- speakerphone, 4-35
 - external, 4-35
 - operation, 3-10
 - programming, 5-19
- speed dial
 - control, 3-19
 - operation, 3-15
 - station, 3-6
 - station programming, 3-18
 - system, 3-3
 - system, programming, 3-18
 - control programming, 5-27
- speed key-station, 3-7
- SPKR key, 4-29
- SSPU-Z1, 4-35
- station, 4-29
 - camp-on recall timer, 5-11
 - accessories, 4-29
 - components, 4-29
 - BGM, 3-6
 - cabling, 4-47
 - call detail recorder, 3-3
 - equipment, 4-29
 - feature operation, 3-9
 - headset, 4-40
 - miscellaneous adapter, 4-35
 - restriction password
 - operation, 3-15
 - programming, 5-22
 - type programming, 5-7, 5-17
- subscriber card, 4-3, 4-17, 4-21
- system
 - architecture, 2-1
 - capacity, 2-2
 - clock programming, 3-17
 - component, 2-8
 - configurations, 2-1
 - database, 5-5
 - feature programming, 5-4, 5-5, 5-7
 - features, 2-6, 3-1
 - hold timer programming, 5-12
 - loop limits, 4-45
 - password programming, 5-22
 - planning guide, 5-22
 - planning guide, 4-3
 - preparations, 4-2
 - programming, 2-2
 - timer programming, 5-5, 5-11
- tape recorder, 4-35
- technology, 2-1
- tenant service, 3-4
 - programming, 5-20
- termination
 - ZT-616, 4-51
 - ZT-824/2464, 4-51
- through dialing, 3-4
- time reminder, 3-7
 - operation, 3-15
- toll restriction, 2-2
 - operation, 3-19
 - programming, 3-19, 5-23
 - SPD programming, 5-24, 5-31
 - data entry programming, 5-30
 - class programming, 5-23, 5-31
 - flow programming, 5-25
- tone/voice calling, 3-4
- TRAN key, 2-18
- trunk
 - group selection SLT, 3-8
 - queue timer programming, 5-12
 - queueing, 3-7
- trunk-to-trunk conference, 3-4
 - release timing programming, 5-13
 - operation, 3-15
- universal night answer, 3-4
- unscreened transfer, 3-3
- user data table programming, 5-27, 5-28
- user prompts, 3-7
- visual indication, 2-5
- voice circuit, 2-13
- volume control, 2-18, 4-29

**ZT-D KTS SYSTEM PRACTICE
FEBRUARY 1987, ISS 1.0**

ZT-D SYSTEM PRACTICE INDEX — (Continued)

wall mounting, 3-7
 DSS, 4-42
 KT, 4-40
ZONE key, 2-19
zone page, 3-4
 operation, 3-16
 access programming, 5-18
 installation, 4-54
ZT-12D telephone, 2-18
ZT-12K telephone, 2-18
ZT-2464KSU, 2-1, 2-2, 2-8, 4-8
ZT-24D telephone, 2-18
ZT-24K telephone, 2-18
ZT-32C unit, 2-20, 4-41
ZT-616KSU, 2-1, 2-2, 2-8, 4-6
ZT-6D telephone, 2-13
ZT-6K telephone, 2-13
ZT-824KSU, 2-1, 2-2, 2-8, 4-8
ZT-8D telephone, 2-18
ZT-8K telephone, 2-13

STATION PROGRAMMING (EXTENSION NO.152 - NO.167)

EXTENSION NO.	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	Remark
03. STATION TYPE:																	
ZT-6K	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	Default: 24D
ZT-6D	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	
ZT-8K	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	
ZT-8D	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	
ZT-12K	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	
ZT-12D	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	
ZT-24K	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	
ZT-24D	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	
SLT/Pulse dial	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	Default: none Default: none
SLT/DTMF dial	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	
Operator	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	
Executive KT	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	
STATION FEATURE:																	
with 1 DSS	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	Enter Extension Port No.
with 2 DSS	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
with Busy Bypass	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
79. OFF HOOK SIGNAL DENY																	
Allow Receive	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	Default: Allow Receive
Deny Receive	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	

STATION PROGRAMMING (EXTENSION NO.168 - NO.183)

EXTENSION NO.	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	Remark
03. STATION TYPE:																	
ZT-6K	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	Default: 24D
ZT-6D	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	
ZT-8K	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	
ZT-8D	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	
ZT-12K	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	
ZT-12D	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	
ZT-24K	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	
ZT-24D	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	
SLT/Pulse dial	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	Default: none Default: none
SLT/DTMF dial	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	
Operator	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	
Executive KT	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	
STATION FEATURE:																	
with 1 DSS	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	Enter Extension Port No.
with 2 DSS	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
with Busy Bypass	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
79. OFF HOOK SIGNAL DENY																	
Allow Receive	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	Default: Allow Receive
Deny Receive	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	

STATION PROGRAMMING (EXTENSION NO.184 - NO.194)

EXTENSION NO.	184	185	186	187	188	189	190	194	Remark
03. STATION TYPE:									
ZT-6K	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Default: 24D
ZT-6D	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
ZT-8K	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
ZT-8D	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
ZT-12K	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
ZT-12D	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
ZT-24K	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
ZT-24D	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
SLT/Pulse dial	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
SLT/DTMF dial	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Operator	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Default: none
Executive KT	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Default: none
STATION FEATURE:									
with 1 DSS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enter Extension Port No.
with 2 DSS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
with Busy Bypass	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
79. OFF HOOK SIGNAL DENY									
Allow Receive	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Default:
Deny Receive	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Allow Receive

OPTIMIZED ROUTING PROGRAMMING

[85-01] SYSTEM PREFIX

SYSTEM PREFIX	<input type="checkbox"/> YES	<input type="checkbox"/> NO
---------------	------------------------------	-----------------------------

[85-02] FORCED OPTIMIZED CALL STATION

<input type="checkbox"/> 120 <input type="checkbox"/> 121 <input type="checkbox"/> 122 <input type="checkbox"/> 123 <input type="checkbox"/> 124 <input type="checkbox"/> 125 <input type="checkbox"/> 126 <input type="checkbox"/> 126 <input type="checkbox"/> 128 <input type="checkbox"/> 129 <input type="checkbox"/> 130 <input type="checkbox"/> 131 <input type="checkbox"/> 132 <input type="checkbox"/> 133 <input type="checkbox"/> 134 <input type="checkbox"/> 135	<input type="checkbox"/> 152 <input type="checkbox"/> 153 <input type="checkbox"/> 154 <input type="checkbox"/> 155 <input type="checkbox"/> 156 <input type="checkbox"/> 156 <input type="checkbox"/> 158 <input type="checkbox"/> 159 <input type="checkbox"/> 160 <input type="checkbox"/> 161 <input type="checkbox"/> 162 <input type="checkbox"/> 163 <input type="checkbox"/> 164 <input type="checkbox"/> 165 <input type="checkbox"/> 166 <input type="checkbox"/> 166	<input type="checkbox"/> 184 <input type="checkbox"/> 185 <input type="checkbox"/> 186 <input type="checkbox"/> 186 <input type="checkbox"/> 188 <input type="checkbox"/> 189 <input type="checkbox"/> 190 <input type="checkbox"/> 194
<input type="checkbox"/> 136 <input type="checkbox"/> 136 <input type="checkbox"/> 138 <input type="checkbox"/> 139 <input type="checkbox"/> 140 <input type="checkbox"/> 141 <input type="checkbox"/> 142 <input type="checkbox"/> 143 <input type="checkbox"/> 144 <input type="checkbox"/> 145 <input type="checkbox"/> 146 <input type="checkbox"/> 147 <input type="checkbox"/> 148 <input type="checkbox"/> 149 <input type="checkbox"/> 150 <input type="checkbox"/> 151	<input type="checkbox"/> 168 <input type="checkbox"/> 169 <input type="checkbox"/> 170 <input type="checkbox"/> 171 <input type="checkbox"/> 172 <input type="checkbox"/> 173 <input type="checkbox"/> 174 <input type="checkbox"/> 175 <input type="checkbox"/> 176 <input type="checkbox"/> 176 <input type="checkbox"/> 178 <input type="checkbox"/> 179 <input type="checkbox"/> 180 <input type="checkbox"/> 181 <input type="checkbox"/> 182 <input type="checkbox"/> 183	

[85-04] HOLIDAY ASSIGNMENT

HOLIDAY NO	DATE
01	-----
02	-----
03	-----
04	-----
05	-----
06	-----
07	-----
08	-----
09	-----
10	-----
11	-----
12	-----
13	-----
14	-----
15	-----
16	-----
17	-----
18	-----
19	-----
20	-----

[85-03] ROUTE ADVANCE STEP

STEP 0 (NO STEP)	STEP 1 ALLOWED	STEP 2 ALLOWED	STEP 3 ALLOWED
<input type="checkbox"/> 120 <input type="checkbox"/> 121 <input type="checkbox"/> 122 <input type="checkbox"/> 123 <input type="checkbox"/> 124 <input type="checkbox"/> 125 <input type="checkbox"/> 126 <input type="checkbox"/> 126 <input type="checkbox"/> 128 <input type="checkbox"/> 129 <input type="checkbox"/> 130 <input type="checkbox"/> 131 <input type="checkbox"/> 132 <input type="checkbox"/> 133 <input type="checkbox"/> 134 <input type="checkbox"/> 135	<input type="checkbox"/> 120 <input type="checkbox"/> 121 <input type="checkbox"/> 122 <input type="checkbox"/> 123 <input type="checkbox"/> 124 <input type="checkbox"/> 125 <input type="checkbox"/> 126 <input type="checkbox"/> 126 <input type="checkbox"/> 128 <input type="checkbox"/> 129 <input type="checkbox"/> 130 <input type="checkbox"/> 131 <input type="checkbox"/> 132 <input type="checkbox"/> 133 <input type="checkbox"/> 134 <input type="checkbox"/> 135	<input type="checkbox"/> 120 <input type="checkbox"/> 121 <input type="checkbox"/> 122 <input type="checkbox"/> 123 <input type="checkbox"/> 124 <input type="checkbox"/> 125 <input type="checkbox"/> 126 <input type="checkbox"/> 126 <input type="checkbox"/> 128 <input type="checkbox"/> 129 <input type="checkbox"/> 130 <input type="checkbox"/> 131 <input type="checkbox"/> 132 <input type="checkbox"/> 133 <input type="checkbox"/> 134 <input type="checkbox"/> 135	<input type="checkbox"/> 120 <input type="checkbox"/> 121 <input type="checkbox"/> 122 <input type="checkbox"/> 123 <input type="checkbox"/> 124 <input type="checkbox"/> 125 <input type="checkbox"/> 126 <input type="checkbox"/> 126 <input type="checkbox"/> 128 <input type="checkbox"/> 129 <input type="checkbox"/> 130 <input type="checkbox"/> 131 <input type="checkbox"/> 132 <input type="checkbox"/> 133 <input type="checkbox"/> 134 <input type="checkbox"/> 135
<input type="checkbox"/> 136 <input type="checkbox"/> 136 <input type="checkbox"/> 138 <input type="checkbox"/> 139 <input type="checkbox"/> 140 <input type="checkbox"/> 141 <input type="checkbox"/> 142 <input type="checkbox"/> 143 <input type="checkbox"/> 144 <input type="checkbox"/> 145 <input type="checkbox"/> 146 <input type="checkbox"/> 147 <input type="checkbox"/> 148 <input type="checkbox"/> 149 <input type="checkbox"/> 150 <input type="checkbox"/> 151	<input type="checkbox"/> 136 <input type="checkbox"/> 136 <input type="checkbox"/> 138 <input type="checkbox"/> 139 <input type="checkbox"/> 140 <input type="checkbox"/> 141 <input type="checkbox"/> 142 <input type="checkbox"/> 143 <input type="checkbox"/> 144 <input type="checkbox"/> 145 <input type="checkbox"/> 146 <input type="checkbox"/> 147 <input type="checkbox"/> 148 <input type="checkbox"/> 149 <input type="checkbox"/> 150 <input type="checkbox"/> 151	<input type="checkbox"/> 136 <input type="checkbox"/> 136 <input type="checkbox"/> 138 <input type="checkbox"/> 139 <input type="checkbox"/> 140 <input type="checkbox"/> 141 <input type="checkbox"/> 142 <input type="checkbox"/> 143 <input type="checkbox"/> 144 <input type="checkbox"/> 145 <input type="checkbox"/> 146 <input type="checkbox"/> 147 <input type="checkbox"/> 148 <input type="checkbox"/> 149 <input type="checkbox"/> 150 <input type="checkbox"/> 151	<input type="checkbox"/> 136 <input type="checkbox"/> 136 <input type="checkbox"/> 138 <input type="checkbox"/> 139 <input type="checkbox"/> 140 <input type="checkbox"/> 141 <input type="checkbox"/> 142 <input type="checkbox"/> 143 <input type="checkbox"/> 144 <input type="checkbox"/> 145 <input type="checkbox"/> 146 <input type="checkbox"/> 147 <input type="checkbox"/> 148 <input type="checkbox"/> 149 <input type="checkbox"/> 150 <input type="checkbox"/> 151
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<input type="checkbox"/> 168 <input type="checkbox"/> 169 <input type="checkbox"/> 170 <input type="checkbox"/> 171 <input type="checkbox"/> 172 <input type="checkbox"/> 173 <input type="checkbox"/> 174 <input type="checkbox"/> 175 <input type="checkbox"/> 176 <input type="checkbox"/> 176 <input type="checkbox"/> 178 <input type="checkbox"/> 179 <input type="checkbox"/> 180 <input type="checkbox"/> 181 <input type="checkbox"/> 182 <input type="checkbox"/> 183	<input type="checkbox"/> 168 <input type="checkbox"/> 169 <input type="checkbox"/> 170 <input type="checkbox"/> 171 <input type="checkbox"/> 172 <input type="checkbox"/> 173 <input type="checkbox"/> 174 <input type="checkbox"/> 175 <input type="checkbox"/> 176 <input type="checkbox"/> 176 <input type="checkbox"/> 178 <input type="checkbox"/> 179 <input type="checkbox"/> 180 <input type="checkbox"/> 181 <input type="checkbox"/> 182 <input type="checkbox"/> 183	<input type="checkbox"/> 168 <input type="checkbox"/> 169 <input type="checkbox"/> 170 <input type="checkbox"/> 171 <input type="checkbox"/> 172 <input type="checkbox"/> 173 <input type="checkbox"/> 174 <input type="checkbox"/> 175 <input type="checkbox"/> 176 <input type="checkbox"/> 176 <input type="checkbox"/> 178 <input type="checkbox"/> 179 <input type="checkbox"/> 180 <input type="checkbox"/> 181 <input type="checkbox"/> 182 <input type="checkbox"/> 183	<input type="checkbox"/> 168 <input type="checkbox"/> 169 <input type="checkbox"/> 170 <input type="checkbox"/> 171 <input type="checkbox"/> 172 <input type="checkbox"/> 173 <input type="checkbox"/> 174 <input type="checkbox"/> 175 <input type="checkbox"/> 176 <input type="checkbox"/> 176 <input type="checkbox"/> 178 <input type="checkbox"/> 179 <input type="checkbox"/> 180 <input type="checkbox"/> 181 <input type="checkbox"/> 182 <input type="checkbox"/> 183
<input type="checkbox"/> 184 <input type="checkbox"/> 185 <input type="checkbox"/> 186 <input type="checkbox"/> 186 <input type="checkbox"/> 188 <input type="checkbox"/> 189 <input type="checkbox"/> 190 <input type="checkbox"/> 194	<input type="checkbox"/> 184 <input type="checkbox"/> 185 <input type="checkbox"/> 185 <input type="checkbox"/> 186 <input type="checkbox"/> 188 <input type="checkbox"/> 189 <input type="checkbox"/> 190 <input type="checkbox"/> 194	<input type="checkbox"/> 184 <input type="checkbox"/> 185 <input type="checkbox"/> 186 <input type="checkbox"/> 186 <input type="checkbox"/> 188 <input type="checkbox"/> 189 <input type="checkbox"/> 190 <input type="checkbox"/> 194	<input type="checkbox"/> 184 <input type="checkbox"/> 185 <input type="checkbox"/> 186 <input type="checkbox"/> 186 <input type="checkbox"/> 188 <input type="checkbox"/> 189 <input type="checkbox"/> 190 <input type="checkbox"/> 194

[85-10] ROUTE ADVANCE STEP TABLE

ROUTE NO.	TIME ZONE	COG. NO. FOR ADVANCE STEP			
		1	2	3	4
1	1				
	2				
	3				
2	1				
	2				
	3				
3	1				
	2				
	3				
4	1				
	2				
	3				
5	1				
	2				
	3				
6	1				
	2				
	3				
7	1				
	2				
	3				
8	1				
	2				
	3				

[85-11] DELETE INDEX TABLE

COG NO	DELETE DATA TABLE NO. (1-4)
1	
2	
3	
4	
5	
6	
7	
8	
9	

[85-13] ADDITIONAL INDEX TABLE

COG NO.	ADD INDEX TABLE NO. (1-4)
1	
2	
3	
4	
5	
6	
7	
8	
9	

[85-12] DELETE DATA TABLE

DELETE DATA TABLE NO.	DELETE DATA
1	
2	
3	
4	

[85-17] SPECIFIC CODE TABLE

SPECIFIC CODE	COG. NO.
1 = 0	
2 = 1N/1-1N	
3 = N11/1-N11	

[85-09] TIME SCHEDULE

HOUR	CONDITION 1 WEEKDAYS			CONDITION 2 SATURDAYS			CONDITION 3 SUNDAYS			CONDITION 4 HOLIDAYS		
	TZ1	TZ2	TZ3	TZ1	TZ2	TZ3	TZ1	TZ2	TZ3	TZ1	TZ2	TZ3
00:00	{}	{}	{}	{}	{}	{}	{}	{}	{}	{}	{}	{}
01:00	{}	{}	{}	{}	{}	{}	{}	{}	{}	{}	{}	{}
02:00	{}	{}	{}	{}	{}	{}	{}	{}	{}	{}	{}	{}
03:00	{}	{}	{}	{}	{}	{}	{}	{}	{}	{}	{}	{}
04:00	{}	{}	{}	{}	{}	{}	{}	{}	{}	{}	{}	{}
05:00	{}	{}	{}	{}	{}	{}	{}	{}	{}	{}	{}	{}
06:00	{}	{}	{}	{}	{}	{}	{}	{}	{}	{}	{}	{}
07:00	{}	{}	{}	{}	{}	{}	{}	{}	{}	{}	{}	{}
08:00	{}	{}	{}	{}	{}	{}	{}	{}	{}	{}	{}	{}
09:00	{}	{}	{}	{}	{}	{}	{}	{}	{}	{}	{}	{}
10:00	{}	{}	{}	{}	{}	{}	{}	{}	{}	{}	{}	{}
11:00	{}	{}	{}	{}	{}	{}	{}	{}	{}	{}	{}	{}
12:00	{}	{}	{}	{}	{}	{}	{}	{}	{}	{}	{}	{}
13:00	{}	{}	{}	{}	{}	{}	{}	{}	{}	{}	{}	{}
14:00	{}	{}	{}	{}	{}	{}	{}	{}	{}	{}	{}	{}
15:00	{}	{}	{}	{}	{}	{}	{}	{}	{}	{}	{}	{}
16:00	{}	{}	{}	{}	{}	{}	{}	{}	{}	{}	{}	{}
17:00	{}	{}	{}	{}	{}	{}	{}	{}	{}	{}	{}	{}
18:00	{}	{}	{}	{}	{}	{}	{}	{}	{}	{}	{}	{}
19:00	{}	{}	{}	{}	{}	{}	{}	{}	{}	{}	{}	{}
20:00	{}	{}	{}	{}	{}	{}	{}	{}	{}	{}	{}	{}
21:00	{}	{}	{}	{}	{}	{}	{}	{}	{}	{}	{}	{}
22:00	{}	{}	{}	{}	{}	{}	{}	{}	{}	{}	{}	{}
23:00	{}	{}	{}	{}	{}	{}	{}	{}	{}	{}	{}	{}

[85-16] ADDITIONAL DATA TABLE

0=Before, 1=After

ADD DATA TABLE NO.	BEFORE/ AFTER	ADDITIONAL DIAL DATA
01		
02		
03		
04		
05		
06		
07		
08		
09		
10		
11		
12		
13		
14		
15		

[85-05] TIE LINE AREA CODE TABLE

T.L. AREA CODE	OFFICE CODE TBL NO	T.L. AREA CODE	OFFICE CODE TBL NO	T.L. AREA CODE	OFFICE CODE TBL NO	T.L. AREA CODE	OFFICE CODE TBL NO	T.L. AREA CODE	OFFICE CODE TBL NO	T.L. AREA CODE	OFFICE CODE TBL NO	T.L. AREA CODE	OFFICE CODE TBL NO	T.L. AREA CODE	OFFICE CODE TBL NO
200		300		400		500		600		700		800		900	
201		301		401		501		601		701		801		901	
202		302		402		502		602		702		802		902	
203		303		403		503		603		703		803		903	
204		304		404		504		604		704		804		904	
205		305		405		505		605		705		805		905	
206		306		406		506		606		706		806		906	
207		307		407		507		607		707		807		907	
208		308		408		508		608		708		808		908	
209		309		409		509		609		709		809		909	
210		310		410		510		610		710		810		910	
211		311		411		511		611		711		811		911	
212		312		412		512		612		712		812		912	
213		313		413		513		613		713		813		913	
214		314		414		514		614		714		814		914	
215		315		415		515		615		715		815		915	
216		316		416		516		616		716		816		916	
217		317		417		517		617		717		817		917	
218		318		418		518		618		718		818		918	
219		319		419		519		619		719		819		919	

[85-07] GENERAL AREA CODE TABLE

GEN. AREA CODE	ROUTE NO	GEN. AREA CODE	ROUTE NO	GEN. AREA CODE	ROUTE NO	GEN. AREA CODE	ROUTE NO	GEN. AREA CODE	ROUTE NO	GEN. AREA CODE	ROUTE NO	GEN. AREA CODE	ROUTE NO	GEN. AREA CODE	ROUTE NO
200		300		400		500		600		700		800		900	
201		301		401		501		601		701		801		901	
202		302		402		502		602		702		802		902	
203		303		403		503		603		703		803		903	
204		304		404		504		604		704		804		904	
205		305		405		505		605		705		805		905	
206		306		406		506		606		706		806		906	
207		307		407		507		607		707		807		907	
208		308		408		508		608		708		808		908	
209		309		409		509		609		709		809		909	
210		310		410		510		610		710		810		910	
211		311		411		511		611		711		811		911	
212		312		412		512		612		712		812		912	
213		313		413		513		613		713		813		913	
214		314		414		514		614		714		814		914	
215		315		415		515		615		715		815		915	
216		316		416		516		616		716		816		916	
217		317		417		517		617		717		817		917	
218		318		418		518		618		718		818		918	
219		319		419		519		619		719		819		919	

185-06] TIE LINE OFFICE CODE TABLE

OFFICE CODE TBL NO	OFFICE CODE	ROUTE NO
1		
2		
3		
4		

[85-06] GENERAL OFFICE CODE TABLE

GEN OFFICE CODE	ROUTE -NO-	GEN OFFICE CODE	ROUTE NO	GEN OFFICE CODE	ROUTE NO	GEN OFFICE CODE	ROUTE NO	GEN OFFICE CODE	ROUTE NO	GEN OFFICE CODE	ROUTE NO	GEN OFFICE CODE	ROUTE NO	GEN OFFICE CODE	ROUTE NO	GEN OFFICE CODE	ROUTE NO	GEN OFFICE CODE	ROUTE NO	

[85-14] ADD DATA AREA CODE TABLE

ADD INDEX TABLE NO.	AREA CODE	CLASSIFICATION	PRE-FIX	TABLE NO.			
06		{Act-data {actOffice	{P {1}				
		{Act-data {actOffice	{P {1}				
		{Act-data {actOffice	{P {1}				
		{Act-data {actOffice	{P {1}				
		{Act-data {actOffice	{P {1}				
		{Act-data {actOffice	{P {1}				
		{Act-data {actOffice	{P {1}				
		{Act-data {actOffice	{P {1}				
		{Act-data {actOffice	{P {1}				
		{Act-data {actOffice	{P {1}				
		{Act-data {actOffice	{P {1}				
		{Act-data {actOffice	{P {1}				
		{Act-data {actOffice	{P {1}				
		{Act-data {actOffice	{P {1}				
		{Act-data {actOffice	{P {1}				
		{Act-data {actOffice	{P {1}				
		{Act-data {actOffice	{P {1}				
		{Act-data {actOffice	{P {1}				
		{Act-data {actOffice	{P {1}				
		07			{Act-data {actOffice	{P {1}	
{Act-data {actOffice	{P {1}						
{Act-data {actOffice	{P {1}						
{Act-data {actOffice	{P {1}						
{Act-data {actOffice	{P {1}						
{Act-data {actOffice	{P {1}						
{Act-data {actOffice	{P {1}						
{Act-data {actOffice	{P {1}						
{Act-data {actOffice	{P {1}						
{Act-data {actOffice	{P {1}						
{Act-data {actOffice	{P {1}						
{Act-data {actOffice	{P {1}						
{Act-data {actOffice	{P {1}						
{Act-data {actOffice	{P {1}						
{Act-data {actOffice	{P {1}						
{Act-data {actOffice	{P {1}						
{Act-data {actOffice	{P {1}						
{Act-data {actOffice	{P {1}						
08				{Act-data {actOffice	{P {1}		
				{Act-data {actOffice	{P {1}		
		{Act-data {actOffice	{P {1}				
		{Act-data {actOffice	{P {1}				
		{Act-data {actOffice	{P {1}				
		{Act-data {actOffice	{P {1}				
		{Act-data {actOffice	{P {1}				
		{Act-data {actOffice	{P {1}				
		{Act-data {actOffice	{P {1}				
		{Act-data {actOffice	{P {1}				
		{Act-data {actOffice	{P {1}				
		{Act-data {actOffice	{P {1}				
		{Act-data {actOffice	{P {1}				
		{Act-data {actOffice	{P {1}				
		{Act-data {actOffice	{P {1}				
		{Act-data {actOffice	{P {1}				
		{Act-data {actOffice	{P {1}				
		09		{Act-data {actOffice	{P {1}		
				{Act-data {actOffice	{P {1}		
				{Act-data {actOffice	{P {1}		
{Act-data {actOffice	{P {1}						
{Act-data {actOffice	{P {1}						
{Act-data {actOffice	{P {1}						
{Act-data {actOffice	{P {1}						
{Act-data {actOffice	{P {1}						
{Act-data {actOffice	{P {1}						
{Act-data {actOffice	{P {1}						
{Act-data {actOffice	{P {1}						
{Act-data {actOffice	{P {1}						
{Act-data {actOffice	{P {1}						
{Act-data {actOffice	{P {1}						
{Act-data {actOffice	{P {1}						
{Act-data {actOffice	{P {1}						
{Act-data {actOffice	{P {1}						
10				{Act-data {actOffice	{P {1}		
				{Act-data {actOffice	{P {1}		
				{Act-data {actOffice	{P {1}		
		{Act-data {actOffice	{P {1}				
		{Act-data {actOffice	{P {1}				
		{Act-data {actOffice	{P {1}				
		{Act-data {actOffice	{P {1}				
		{Act-data {actOffice	{P {1}				
		{Act-data {actOffice	{P {1}				
		{Act-data {actOffice	{P {1}				
		{Act-data {actOffice	{P {1}				
		{Act-data {actOffice	{P {1}				
		{Act-data {actOffice	{P {1}				
		{Act-data {actOffice	{P {1}				
		{Act-data {actOffice	{P {1}				
		{Act-data {actOffice	{P {1}				
		{Act-data {actOffice	{P {1}				

SYSTEM PROGRAMMING

28. CONFERENCE GAIN ASSIGNMENT

Circuit	Gain
[1] CO	[]+1.5dB []0dB []-1dB []-3dB []-6dB []-8dB []-10dB []-13dB
[2] Extension	[]+1.5dB []0dB []-1dB []-3dB []-6dB []-8dB []-10dB []-13dB
[3] SLT	[]+1.5dB []0dB []-1dB []-3dB []-6dB []-8dB []-10dB []-13dB
[4] CO-to-CO	[]+1.5dB []0dB []-1dB []-3dB []-6dB []-8dB []-10dB []-13dB

53. HUNT ICM GROUP ASSIGNMENT (Default: None)

HUNT GRP 1 :	HUNT GRP 2 :	HUNT GRP 3 :	HUNT GRP 4 :
[]120 []121 []122 []123	[]120 []121 []122 []123	[]120 []121 []122 []123	[]120 []121 []122 []123
[]124 []125 []126 []127	[]124 []125 []126 []127	[]124 []125 []126 []127	[]124 []125 []126 []127
[]128 []129 []130 []131	[]128 []129 []130 []131	[]128 []129 []130 []131	[]128 []129 []130 []131
[]132 []133 []134 []135	[]132 []133 []134 []135	[]132 []133 []134 []135	[]132 []133 []134 []135
[]136 []137 []138 []139	[]136 []137 []138 []139	[]136 []137 []138 []139	[]136 []137 []138 []139
[]140 []141 []142 []143	[]140 []141 []142 []143	[]140 []141 []142 []143	[]140 []141 []142 []143
[]144 []145 []146 []147	[]144 []145 []146 []147	[]144 []145 []146 []147	[]144 []145 []146 []147
[]148 []149 []150 []151	[]148 []149 []150 []151	[]148 []149 []150 []151	[]148 []149 []150 []151
[]152 []153 []154 []155	[]152 []153 []154 []155	[]152 []153 []154 []155	[]152 []153 []154 []155
[]156 []157 []158 []159	[]156 []157 []158 []159	[]156 []157 []158 []159	[]156 []157 []158 []159
[]160 []161 []162 []163	[]160 []161 []162 []163	[]160 []161 []162 []163	[]160 []161 []162 []163
[]164 []165 []166 []167	[]164 []165 []166 []167	[]164 []165 []166 []167	[]164 []165 []166 []167
[]168 []169 []170 []171	[]168 []169 []170 []171	[]168 []169 []170 []171	[]168 []169 []170 []171
[]172 []173 []174 []175	[]172 []173 []174 []175	[]172 []173 []174 []175	[]172 []173 []174 []175
[]176 []177 []178 []179	[]176 []177 []178 []179	[]176 []177 []178 []179	[]176 []177 []178 []179
[]180 []181 []182 []183	[]180 []181 []182 []183	[]180 []181 []182 []183	[]180 []181 []182 []183
[]184 []185 []186 []187	[]184 []185 []186 []187	[]184 []185 []186 []187	[]184 []185 []186 []187
[]188 []189 []190 []194	[]188 []189 []190 []194	[]188 []189 []190 []194	[]188 []189 []190 []194

DISA PROGRAMMING

35. DISA INCOMING CO LINE (Default: None, Max 8)

[]CO01 []CO02 []CO03 []CO04 []CO05 []CO06 []CO07 []CO08 []CO09 []CO10 []CO11 []CO12 []CO13 []CO14 []CO15 []CO16 []CO17 []CO18 []CO19 []CO20 []CO21 []CO22 []CO23 []CO24
--

36. DISA ACTIVATION STATION (Def:120)

DISA Group No.1: Ext. No. 1	_____
DISA Group No.2: Ext. No. 1	_____
DISA Group No.3: Ext. No. 1	_____
DISA Group No.4: Ext. No. 1	_____

37. DISA ACCESS CODE (Default: None)

DISA Group No.1: Security Code	_____	Class of Service by Ext.No.1	_____
DISA Group No.2: Security Code	_____	Class of Service by Ext.No.1	_____
DISA Group No.3: Security Code	_____	Class of Service by Ext.No.1	_____
DISA Group No.4: Security Code	_____	Class of Service by Ext.No.1	_____

STATION PROGRAMMING (EXTENSION NO.120 - NO.135)

EXTENSION NO.	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	Remark
03. STATION TYPE:																	
ZT-6K	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	Default: 24D
ZT-6D	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	
ZT-8K	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	
ZT-8D	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	
ZT-12K	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	
ZT-12D	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	
ZT-24K	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	
ZT-24D	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	
SLT/Pulse dial	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	Default: none Default: none
SLT/DTMF dial	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	
Operator	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	
Executive KT	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	
STATION FEATURE:																	
with 1 DSS	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	Enter Extension Port No.
with 2 DSS	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
with Busy Bypass	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
79. OFF HOOK SIGNAL DENY																	
Allow Receive	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	Default: Allow Receive
Deny Receive	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	

STATION PROGRAMMING (EXTENSION NO.136 - NO.151)

EXTENSION NO.	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	Remark
03. STATION TYPE:																	
ZT-6K	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	Default: 24D
ZT-6D	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	
ZT-8K	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	
ZT-8D	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	
ZT-12K	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	
ZT-12D	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	
ZT-24K	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	
ZT-24D	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	
SLT/Pulse dial	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	Default: none Default: none
SLT/DTMF dial	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	
Operator	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	
Executive KT	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	
STATION FEATURE:																	
with 1 DSS	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	Enter Extension Port No.
with 2 DSS	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
with Busy Bypass	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
79. OFF HOOK SIGNAL DENY																	
Allow Receive	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	Default: Allow Receive
Deny Receive	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	

ZT-D SERIES

ELECTRONIC KEY TELEPHONE SYSTEM

SECTION 8 - COMPONENTS DESCRIPTION

1.00 GENERAL

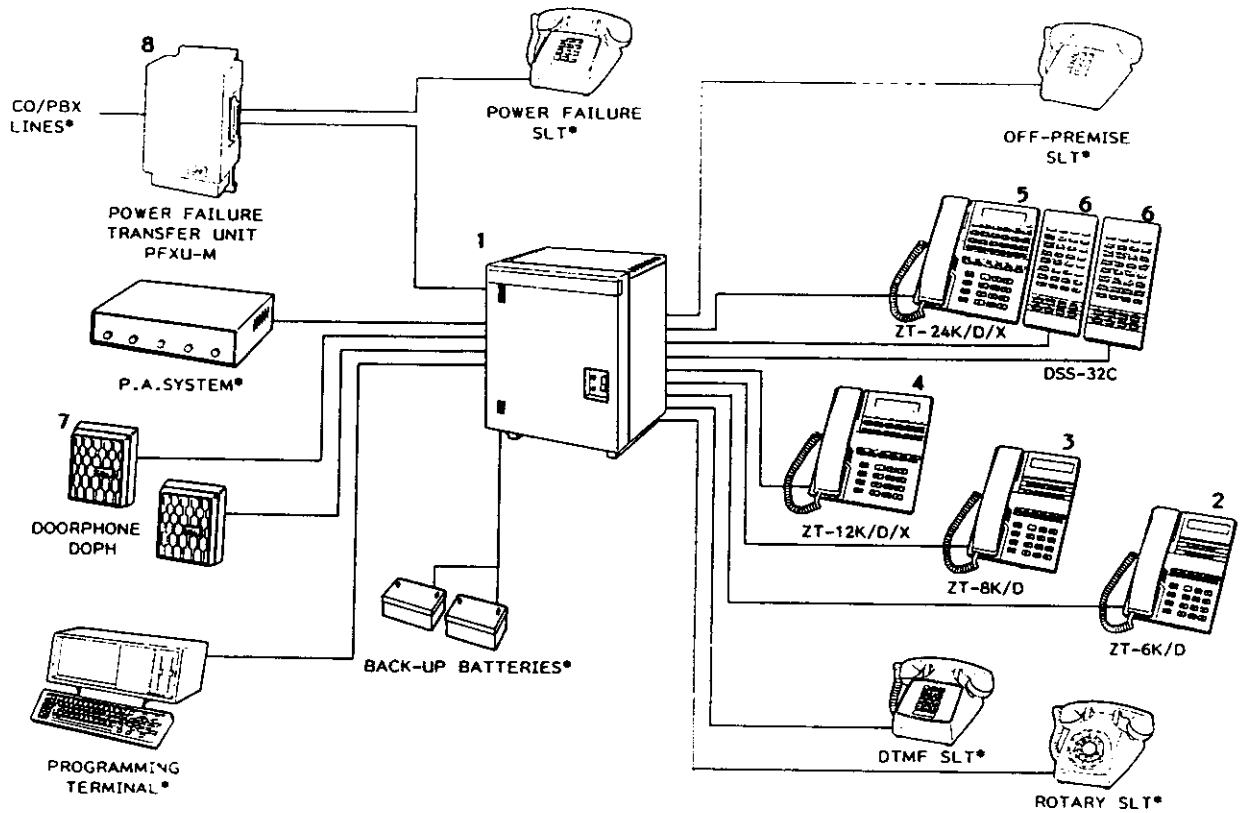
1.01 This section lists and illustrates the system and individual components of the ZT-D Key Telephone System.

SYSTEM COMPONENTS

1.02 Three KSUs can consist five variation of the ZT-D system with view of the maximum capacity as illustrated in Figures 8-1, 8-2 and 8-3. Figures 8-4 through 8-23 shows the key service units and their components, and Figures 8-24 through 8-45 shows system extensions and their components.

FIGURE 8-1 ZT-616 KTS COMPONENTS
FIGURE 8-2 ZT-824/1632 KTS COMPONENTS
FIGURE 8-3 ZT-2464 KTS COMPONENTS
FIGURE 8-4 ZT-616 KSU OPTIONAL COMPONENTS
FIGURE 8-5 ZT-824/1632 KSU OPTIONAL COMPONENTS
FIGURE 8-6 ZT-2464 KSU OPTIONAL COMPONENTS
FIGURE 8-7 ZT-616 KSU
FIGURE 8-8 ZT-824/1632 KSU
FIGURE 8-9 ZT-2464 KSU
FIGURE 8-10 ZT-PWSA POWER SUPPLY
FIGURE 8-11 ZT-PWSB POWER SUPPLY
FIGURE 8-12 ZT-PWSC POWER SUPPLY
FIGURE 8-13 DCDC-Z DC-DC CONVERTER
FIGURE 8-14 DCDC-Z1 DC-DC CONVERTER
FIGURE 8-15 RINGING GENERATOR

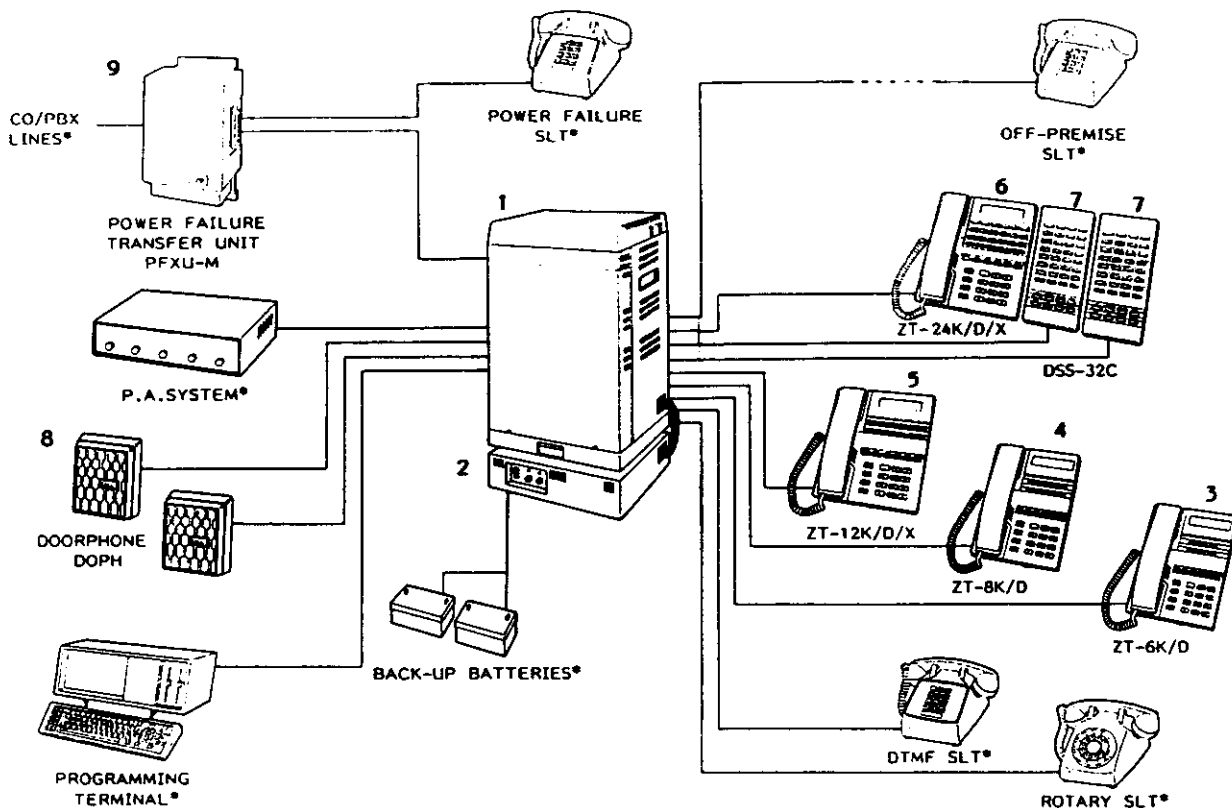
FIGURE 8-16 CPUHW CARDS
FIGURE 8-17 CO LINE CARDS
FIGURE 8-18 SUBSCRIBER CARDS
FIGURE 8-19 RECV2/8 CARDS
FIGURE 8-20 RECV2/8-1 CARDS
FIGURE 8-21 SDIFC CARDS
FIGURE 8-22 FRIFC CARDS
FIGURE 8-23 DPPAG CARDS
FIGURE 8-24 KEY TELEPHONE OPTIOANL COMPONENTS
FIGURE 8-25 ZT-6K KEY TELEPHONE
FIGURE 8-26 ZT-6K KEYBOARD
FIGURE 8-27 ZT-6D KEY TELEPHONE
FIGURE 8-28 ZT-6D KEYBOARD
FIGURE 8-29 ZT-8K KEY TELEPHONE
FIGURE 8-30 ZT-8K KEYBOARD
FIGURE 8-31 ZT-8D KEY TELEPHONE
FIGURE 8-32 ZT-8D KEYBOARD
FIGURE 8-33 ZT-12K KEY TELEPHONE
FIGURE 8-34 ZT-12K KEYBOARD
FIGURE 8-35 ZT-12D KEY TELEPHONE
FIGURE 8-36 ZT-12D KEYBOARD
FIGURE 8-37 ZT-12X KEY TELEPHONE
FIGURE 8-38 ZT-24K KEY TELEPHONE
FIGURE 8-39 ZT-24K KEYBOARD
FIGURE 8-40 ZT-24D KEY TELEPHONE
FIGURE 8-41 ZT-24D KEYBOARD
FIGURE 8-42 ZT-24X KEY TELEPHONE
FIGURE 8-43 ZT-32C DSS CONSOLE
FIGURE 8-44 ZT-32C DSS KEYBOARD
FIGURE 8-45 SINGLE LINE TELEPHONE ACCESSORY
FIGURE 8-25 ZT-6K KEY TELEPHONE



* Customer Provided Devices

No.	Order No.	Model	Description	Remarks
1	7001	ZT-616KSU	ZT-616 Key Service Unit	
	7201	ZT-PWSA	Power Supply for 616KSU	Provided with ZT-616KSU
2	7301	ZT-6K	Key Telephone	6 flexible keys
	7302	ZT-6D	Key Telephone	6 flexible keys/LCD display
3	7303	ZT-8K	Key Telephone	8 flexible keys
	7304	ZT-8D	Key Telephone	8 flexible keys/LCD display
4	7305	ZT-12K	Key Telephone	12 flexible keys
	7306	ZT-12D	Key Telephone	12 flexible keys/LCD display
	7320	ZT-12X	Executive Key Telephone	12 flexible keys/LCD display/off-hook handsfree
5	7307	ZT-24K	Key Telephone	24 flexible keys
	7308	ZT-24D	Key Telephone	24 flexible keys/LCD display
	7319	ZT-24X	Executive Key Telephone	24 flexible keys/LCD display/off-hook handsfree
6	7309	ZT-32C	DSS Console	32 DSS buttons + 8 function keys
7	2030	DOPH	Doorphone	
8	4021	PFXU-M	Power Failure Transfer Unit	8 CO lines/unit
9	7038	MSWBX	Modem Switching Box	

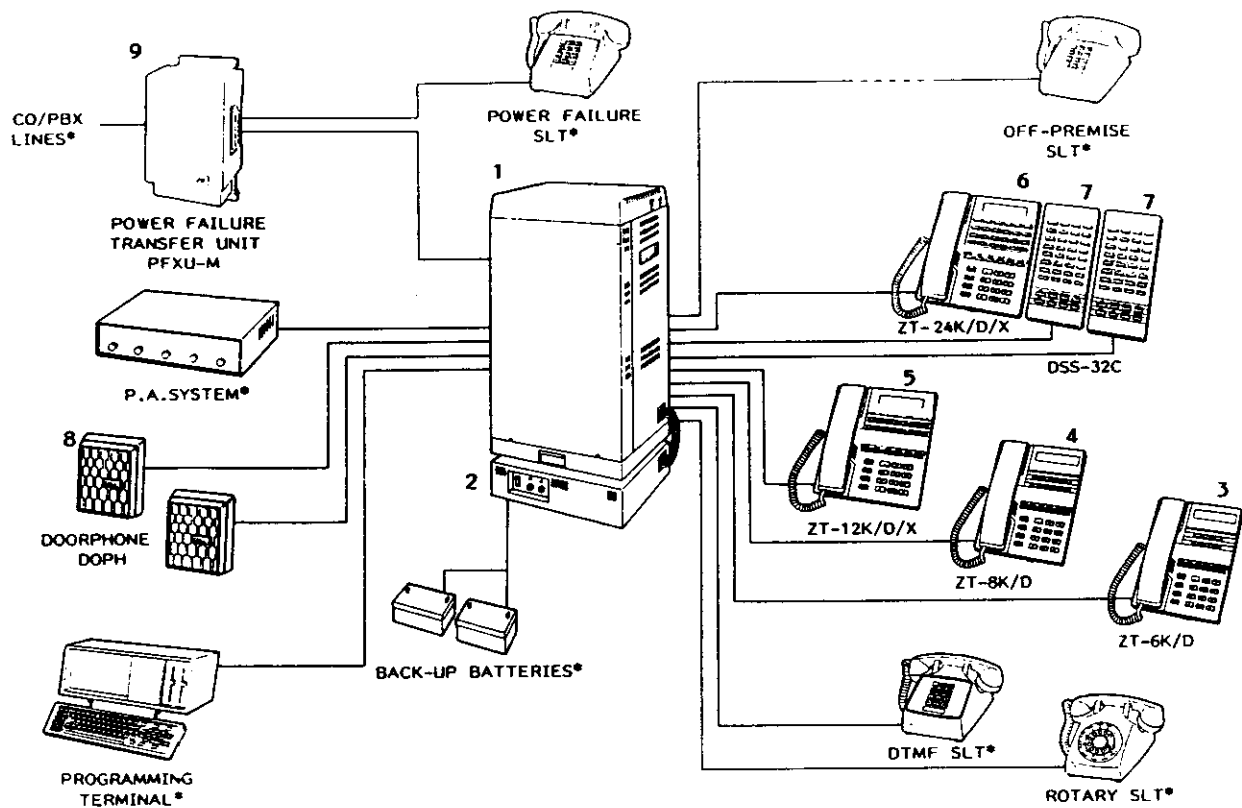
FIGURE 8-1 ZT-616 KTS COMPONENTS



* Customer Provided Devices

No.	Order No.	Model	Description	Remarks
1	7002	ZT-824/1632KSU	ZT-824/1632 Key Service Unit	
2	7202	ZT-PWSB	Power Supply for 824KSU	Optional
	7303	ZT-PWSC	Power Supply for 1632KSU	Optional
3	7301	ZT-6K	Key Telephone	6 flexible keys
	7302	ZT-6D	Key Telephone	6 flexible keys/LCD display
4	7303	ZT-8K	Key Telephone	8 flexible keys
	7304	ZT-8D	Key Telephone	8 flexible keys/LCD display
5	7305	ZT-12K	Key Telephone	12 flexible keys
	7306	ZT-12D	Key Telephone	12 flexible keys/LCD display
	7320	ZT-12X	Executive Key Telephone	12 flexible keys/LCD display/off-hook handsfree
6	7307	ZT-24K	Key Telephone	24 flexible keys
	7308	ZT-24D	Key Telephone	24 flexible keys/LCD display
	7319	ZT-24X	Executive Key Telephone	24 flexible keys/LCD display/off-hook handsfree
7	7309	ZT-32C	DSS Console	32 DSS buttons + 8 function keys
8	2030	DOPH	Doorphone	
9	4021	PF XU-M	Power Failure Transfer Unit	8 CO lines/unit
10	7038	MSWBX	Modern Switching Box	

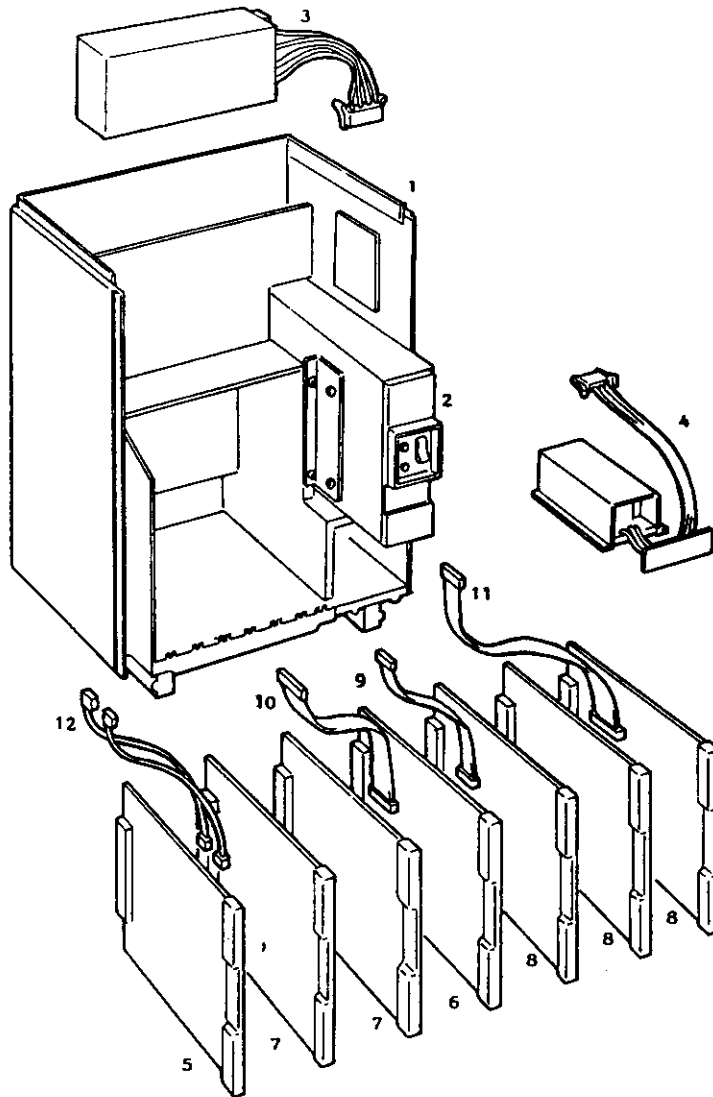
FIGURE 8-2 ZT-824/1632 KTS COMPONENTS



* Customer Provided Devices

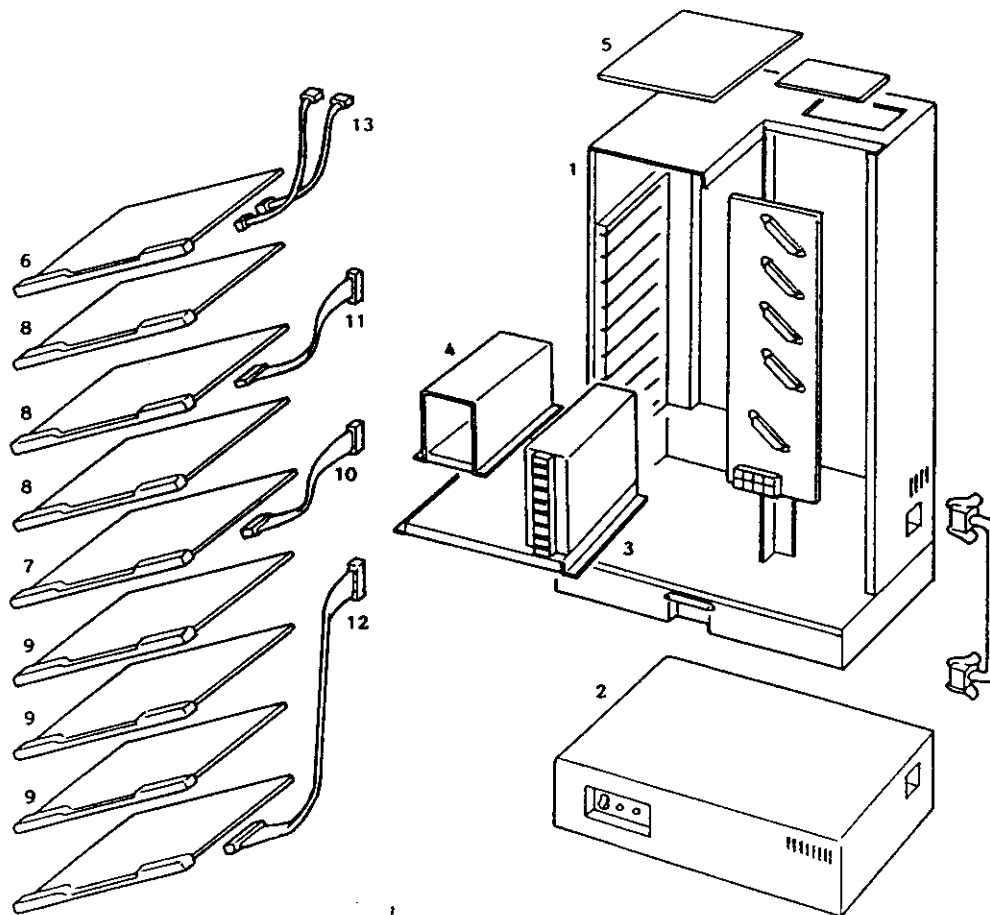
No.	Order No.	Model	Description	Remarks
1	7003	ZT-1232/2464KSU	ZT-1232/2464 Key Service Unit	
2	7303	ZT-PWSC	Power Supply for 1632/2464KSUs	Optional
3	7301	ZT-6K	Key Telephone	6 flexible keys
	7302	ZT-6D	Key Telephone	6 flexible keys/LCD display
4	7303	ZT-8K	Key Telephone	8 flexible keys
	7304	ZT-8D	Key Telephone	8 flexible keys/LCD display
5	7305	ZT-12K	Key Telephone	12 flexible keys
	7306	ZT-12D	Key Telephone	12 flexible keys/LCD display
	7320	ZT-12X	Executive Key Telephone	12 flexible keys/LCD display/off-hook handsfree
6	7307	ZT-24K	Key Telephone	24 flexible keys
	7308	ZT-24D	Key Telephone	24 flexible keys/LCD display
	7319	ZT-24X	Executive Key Telephone	24 flexible keys/LCD display/off-hook handsfree
7	7309	ZT-32C	DSS Console	32 DSS buttons + 8 function keys
8	2030	DOPH	Doorphone	
9	4021	PFXU-M	Power Failure Transfer Unit	8 CO lines/unit
10	7038	MSWBX	Modern Switching Box	

FIGURE 8-3 ZT-2464 KTS COMPONENTS



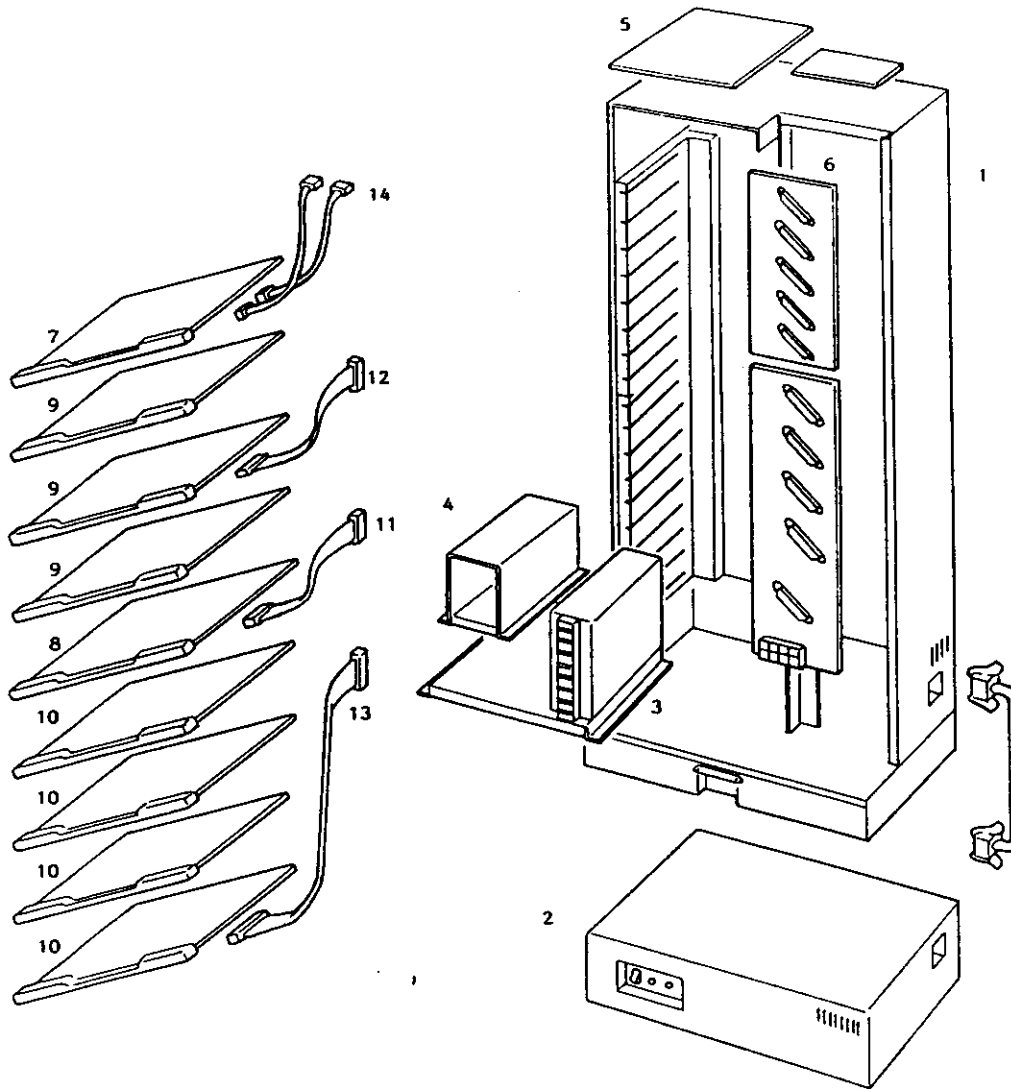
No.	Order No.	Model	Description	Remark
1	7001	ZT-616KSU	ZT-616 Key Service Unit	
2	7201	ZT-PWSA	Power Supply Unit for ZT-616 KSU	Provided with ZT-616KSU
3	7205	DCDC-Z1	DC-DC Converter for ZT-616 KSU	Optional
4	7021	RNGER	Ringing Generator for Single Line Telephone	Optional
5			CPUHW Card	See Table 8-9
6			COTL Card	See Table 8-9
7			SUB Cards	See Table 8-9
8			OPT Cards	See Table 8-9
9	7121	KCBLA	KSU Card Connecting Cable A (16p)	Provided with COTL Cards
10	7122	KCBLB	KSU Card Connecting Cable B (32p)	Provided with SUB Cards
11	7125	KCBLC	KSU Card Connecting Cable C (32p)	Provided with OPT Cards
12			MOH/BGM Connecting Cable	Provided with CPU Card

FIGURE 8-4 ZT-616 KSU OPTIONAL COMPONENTS



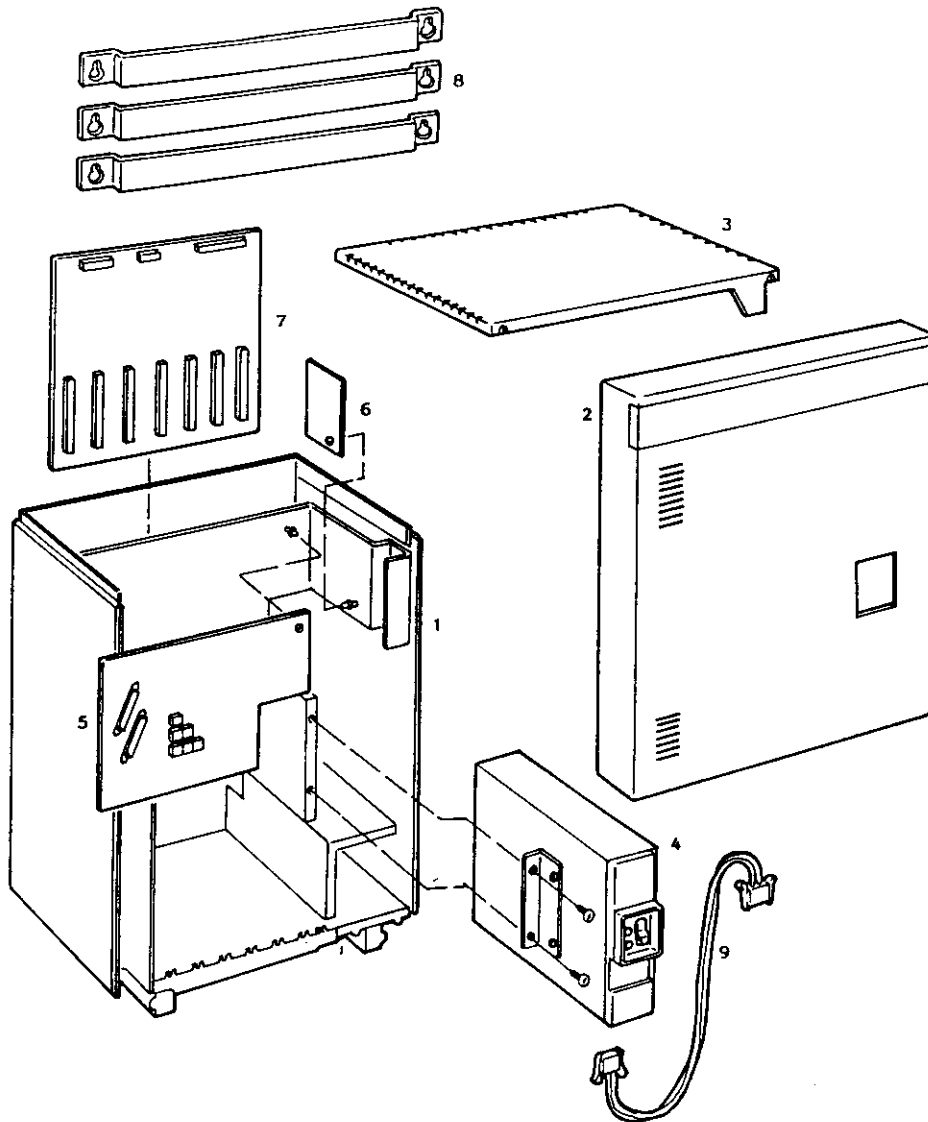
No.	Order No.	Model	Description	Remark
1	7002	ZT-824/1632KSU	ZT-824/1632 Key Service Unit	
2	7202	ZT-PWSB	Power Supply Unit for 8x24 Configuration	Optional
	7203	ZT-PWSC	Power Supply Unit for 16x32 Configuration	Optional
3	7204	DCDC-Z	DC-DC Converter for ZT-824/1632 and 2464 KSUs	Optional
4	7021	RNGER	Ringing Generator for Single Line Telephone	Optional
5	7060	DSPC82	External Device Connecting Panel	Optional
6			CPUHW Card	See Table 8-9
7			COTL Cards	See Table 8-9
8			SUB Cards	See Table 8-9
9			OPT Cards	See Table 8-9
10	7121	KCBLA	KSU Card Connecting Cable A (16p)	Provided with COTL Cards
11	7122	KCBLB	KSU Card Connecting Cable B (32p)	Provided with SUB Cards
12	7125	KCBLC	KSU Card Connecting Cable C (32p)	Provided with OPT Cards
13			MOH/BGM Connecting Cable	Provided with CPU Card

FIGURE 8-5 ZT-824/1632 KSU OPTIONAL COMPONENTS



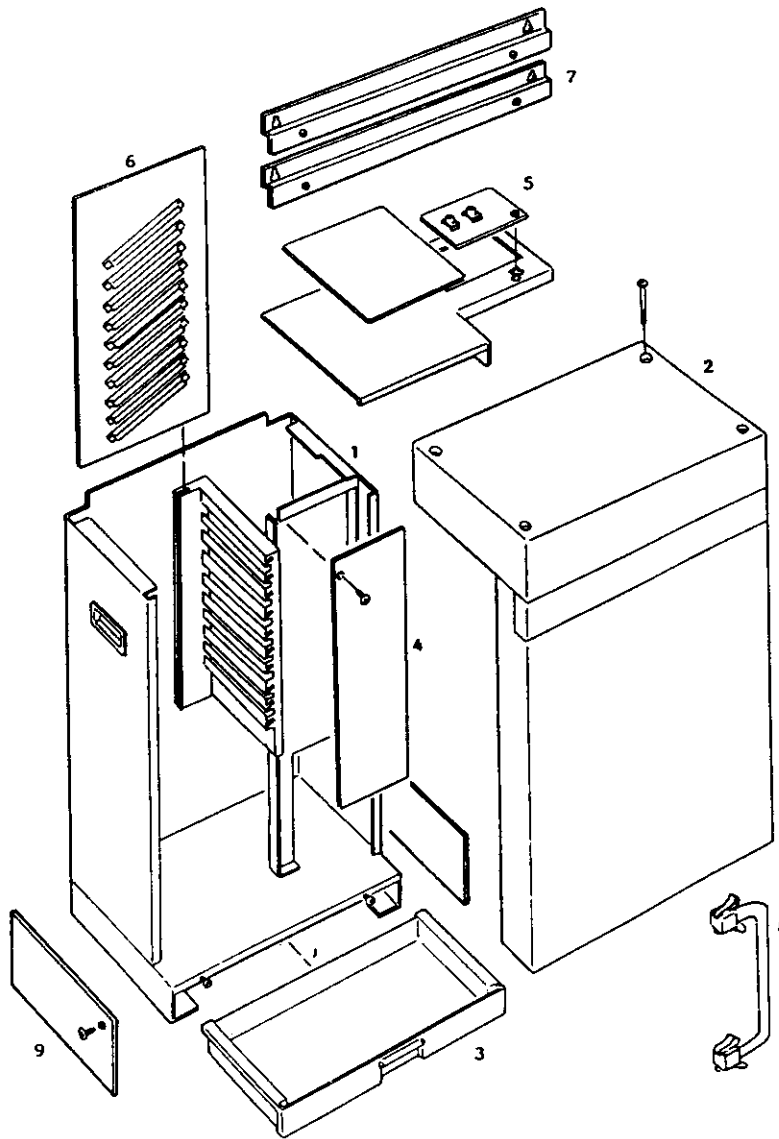
No.	Order No.	Model	Description	Remark
1	7003	ZT-824/1632KSU	ZT-2464 Key Service Unit	
2	7203	ZT-PWSC	Power Supply Unit for 24x64 Configuration	Optional
3	7204	DCDC-Z	DC-DC Converter for ZT-824/1632 and 2464 KSUs	Optional
4	7021	RNGER	Ringing Generator for Single Line Telephone	Optional
5	7060	DSPC82	External Device Connecting Panel	Optional
6	7058	AMPA24	Thirty-two Station Distribution Panel	Optional for Ver.0 CPU
	7062	AMPA24-1	Forty Station Distribution Panel	Optional for Ver.0 CPU
7			CPUHW Card	See Table 8-9
8			COTL Cards	See Table 8-9
9			SUB Cards	See Table 8-9
10			OPT Cards	See Table 8-9
11	7121	KCBLA	KSU Card Connecting Cable A (16p)	Provided with COTL Cards
12	7122	KCBLB	KSU Card Connecting Cable B (32p)	Provided with SUB Cards
13	7125	KCBLC	KSU Card Connecting Cable C (32p)	Provided with OPT Cards
14			MOH/BGM Connecting Cable	Provided with CPU Card

FIGURE 8-6 ZT-2464 KSU OPTIONAL COMPONENTS



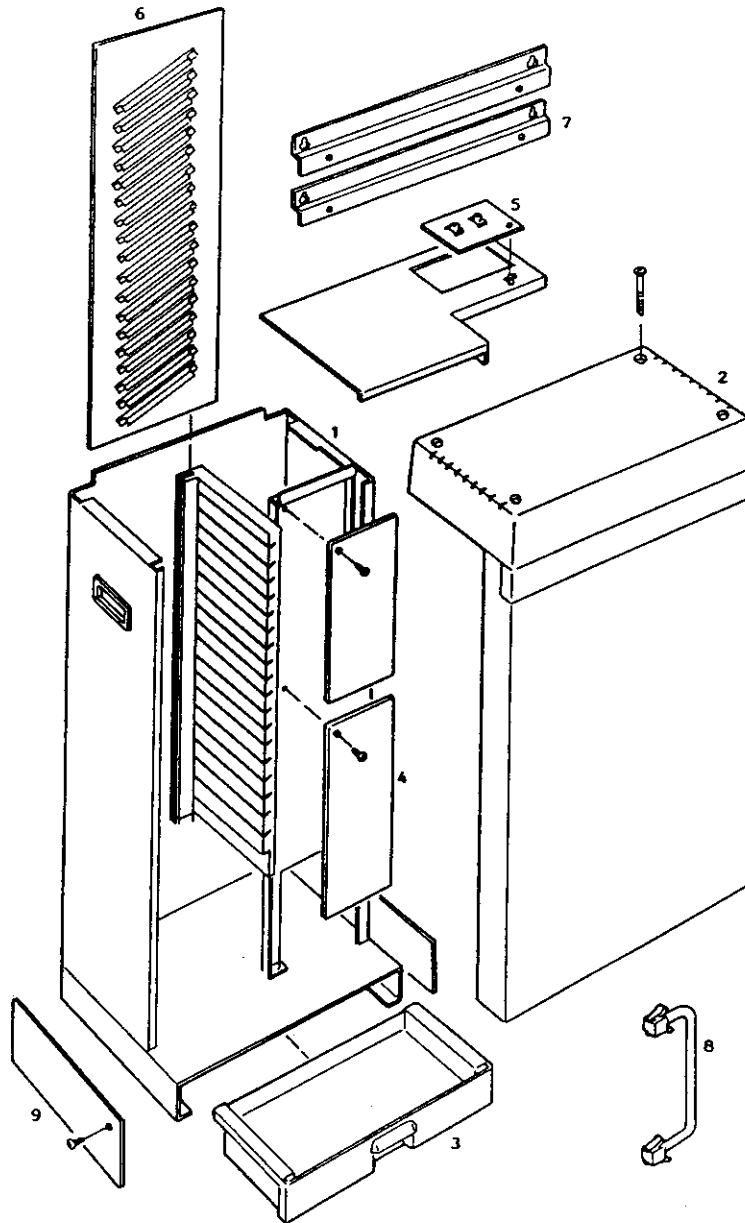
No.	Order No.	Model	Description	Remark
1			ZT-616KSU Base	
2			ZT-616KSU Cover	
3			ZT-616KSU Top	
4	7201	ZT-PWSA	Power Supply Unit for ZT-616 KSU	
5	7056	AMPA6	CO/Station Distribution Panel for ZT-616	
6	7053 7063	DSPA6 DSPBAB	MOH/BGM Connecting Panel for ZT-616 MOH/BGM Connecting Panel for all ZT-D KSUs	Choice of One
7	7101	MTBD6	ZT-616KSU Mother Board	
8	7104	KSUWM	KSU Wall/Rack Mount Unit	
9			Power Supply Connecting Cord	

FIGURE 8-7 ZT-616 KSU



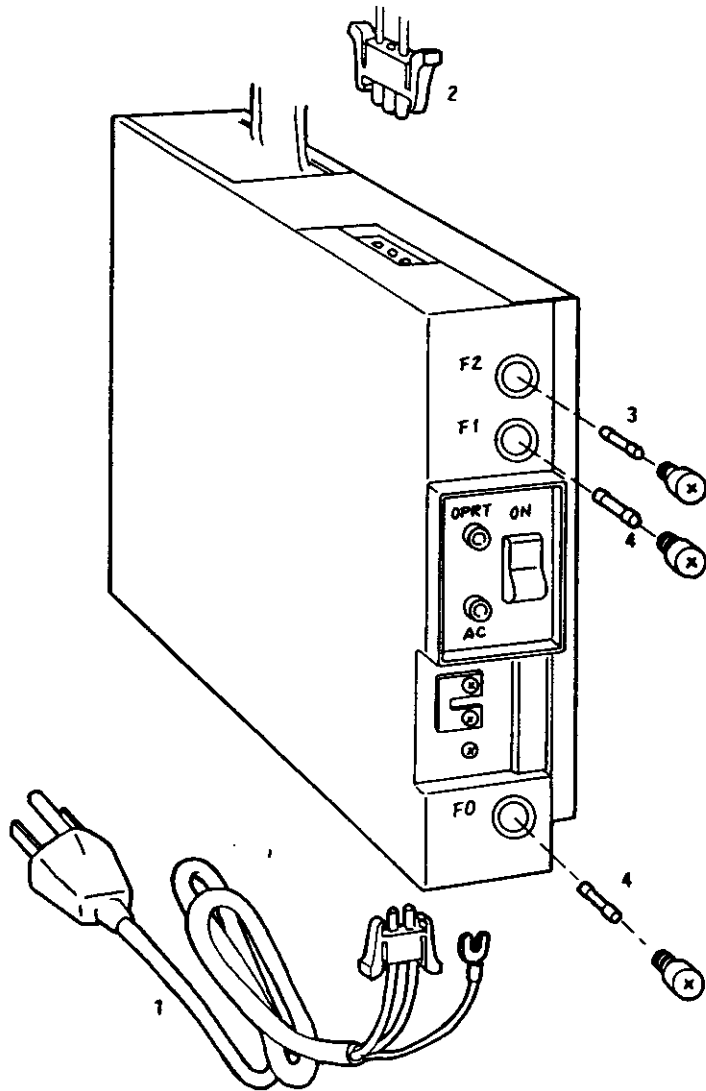
No.	Order No.	Model	Description	Remark
1			ZT-824/1632KSU Base	
2			ZT-824/1632KSU Cover	
3			KSU Tray	
4	7057	AMPA81	CO/Station Distribution Panel	
5	7059	DSPB82	MOH/BGM Connecting Panel	Choice of one
	7063	DSPBAB	MOH/BGM Connecting Panel	
6	7102	MTBD8	ZT-824/1632KSU Mother Board ZT-824/1632	
7		KSUWM	KSU Wall/Rack Mount Unit	
8	7126	PCBLB	Power Supply Connecting Cable	
9			Power Supply Mounting Bracket	

FIGURE 8-8 ZT-824/1632 KSU



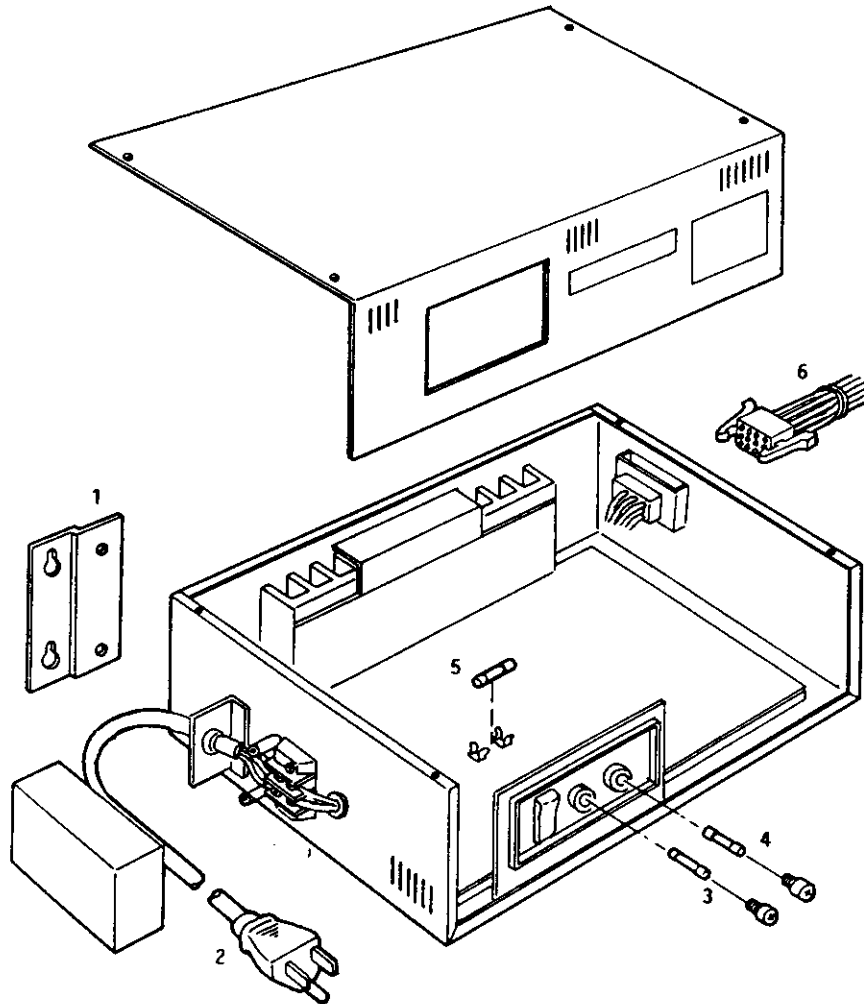
No.	Order No.	Model	Description	Remark
1			ZT-2464KSU Base	
2			ZT-2464KSU Cover	
3			KSU Tray	
4	7057	AMPA81	CO/Station Distribution Panel	
5	7059	DSPB82	MOH/BGM Connecting Panel	Choice of one
	7063	DSPBAB	MOH/BGM Connecting Panel	
6	7103	MTBD24	ZT-2464KSU Mother Board	
7	7104	KSUWM	KSU Wall/Rack Mount Unit	
8	7126	PCBLB	Power Supply Connecting Cable	
9			Power Supply Mounting Bracket	

FIGURE 8-9 ZT-2464 KSU



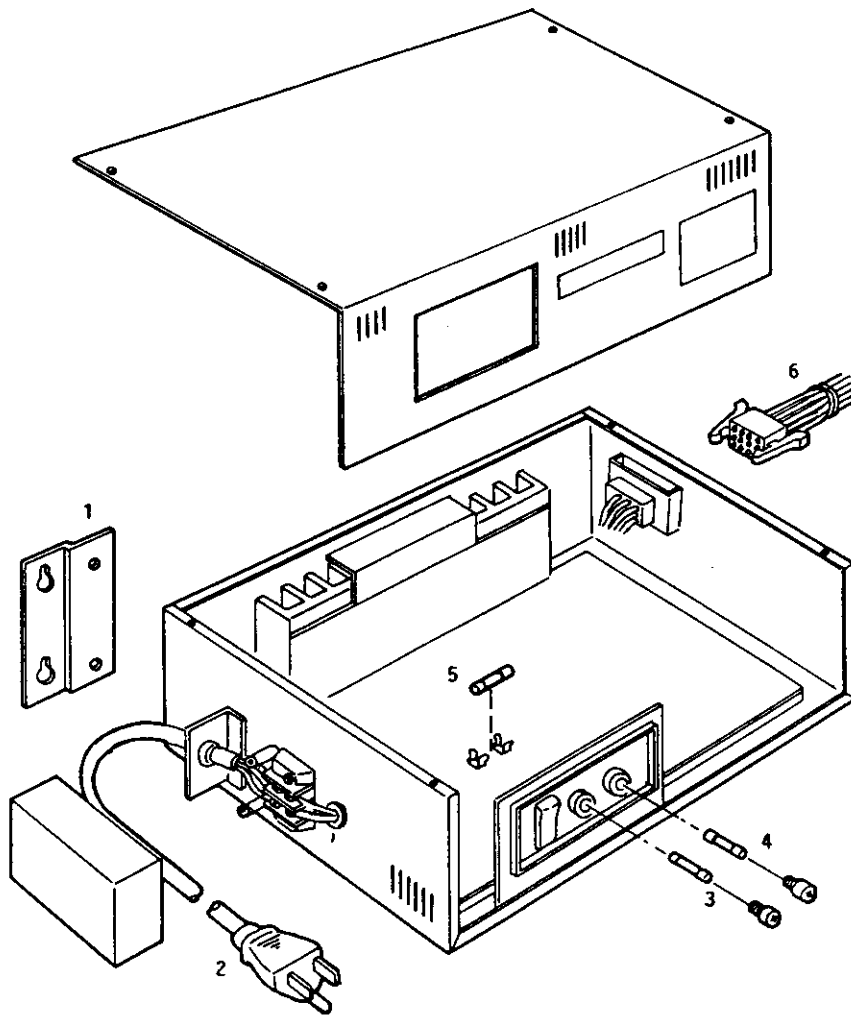
No.	Order No.	Model	Description	Remark
1	7201	ZT-PWSA	Power Supply Unit for ZT-616 KSU Power Line Cord	Provided with ZT-616KSU Provided with Power Supply
2		BACKB-Z	Battery Connecting Cable	Optional
3		F0	Fuse 250V/3.15A	
4		F1, F2	Fuse 250V/5A	

FIGURE 8-10 ZT-PWSA POWER SUPPLY



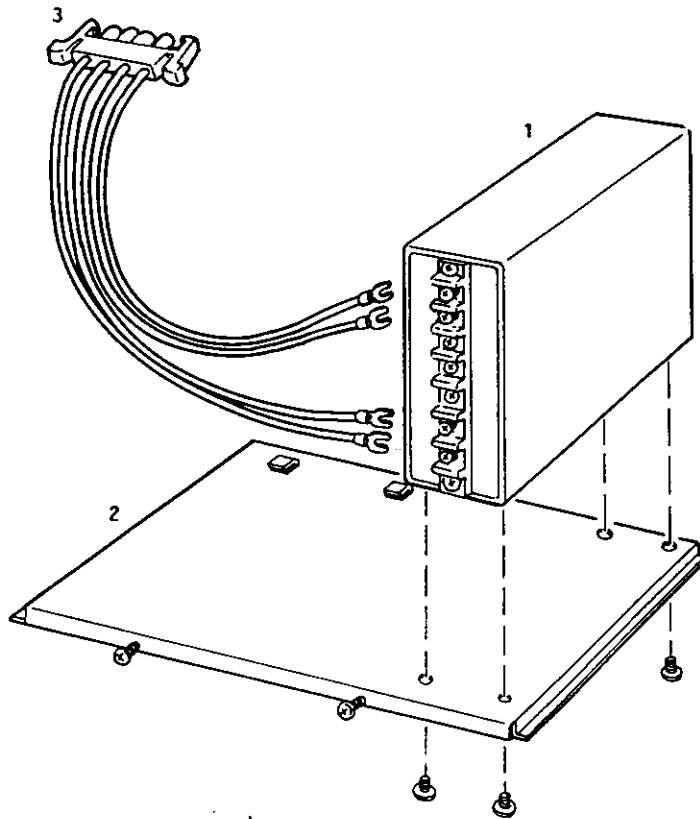
No.	Order No.	Model	Description	Remark
	7202	ZT-PWSB	Power Supply Unit for ZT-824 KSU	
1			Wall Mounting Bracket	Provided with Power Supply
2			Power Line Cord	Provided with Power Supply
3		F1	Fuse 125V/6A	
4		F2	Fuse 125V/8A	
5		(F1)	Fuse 125V/5A Slow Blow	
6			ZT-PWSB/C Connecting Cable	Provided with KSU
7		BACKB-Z	Battery Connecting Cable	Optional

FIGURE 8-11 ZT-PWSB POWER SUPPLY



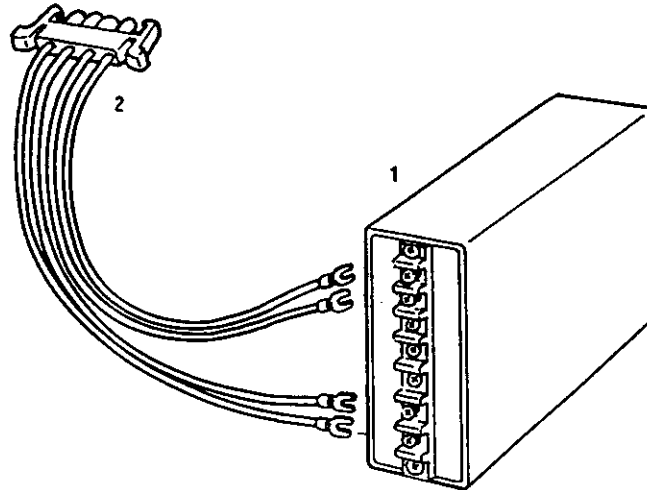
No.	Order No.	Model	Description	Remark
	7303	ZT-PWSC	Power Supply Unit for ZT-1632 and ZT-2464 KSUs	Optional
1			Wall Mounting Bracket	Provided with Power Supply
2			Power Line Cord	Provided with Power Supply
3		F1	Fuse 125V/10A	
4		F2	Fuse 125V/15A	
5		(F1)	Fuse 125V/5A Slow Blow	
6			ZT-PWSB/C Connecting Cable	Provided with KSU
7		BACKB-Z	Battery Connecting Cable	Optional

FIGURE 8-12 ZT-PWSC POWER SUPPLY



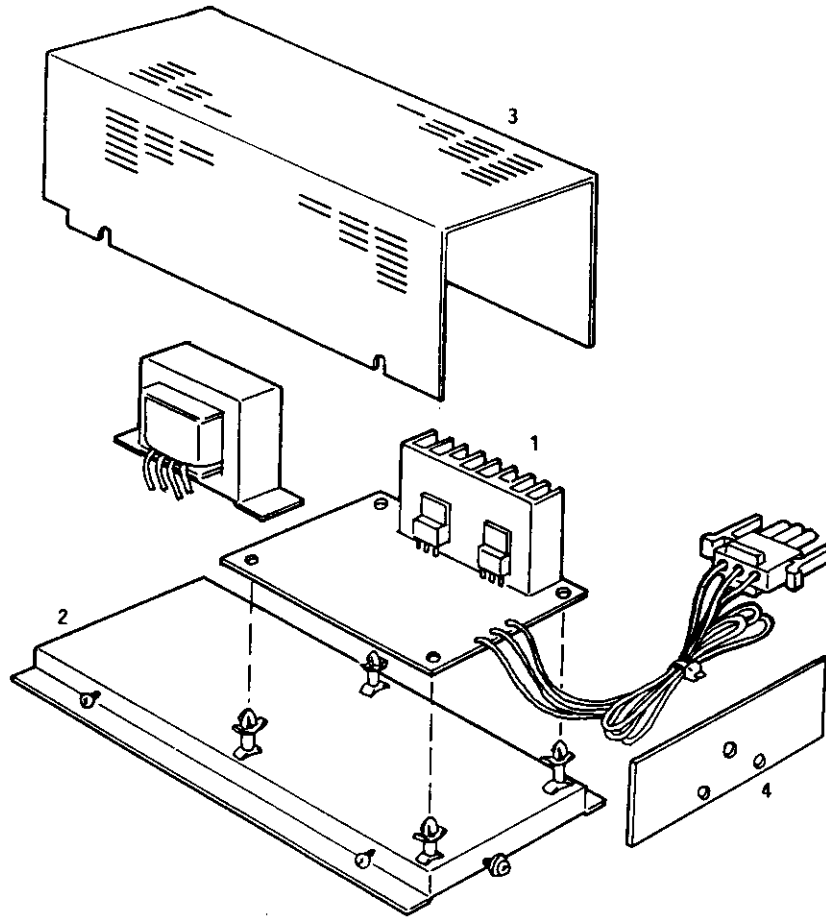
No.	Order No.	Model	Description	Remark
1	7204	DCDC-Z	DC-DC Converter for ZT-824/1632 and ZT-2464 KSUs Converter RDM48-1R9	Optional
2			Converter Base	
3			Connecting Cable	

FIGURE 8-13 DCDC-Z DC-DC CONVERTER



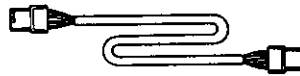
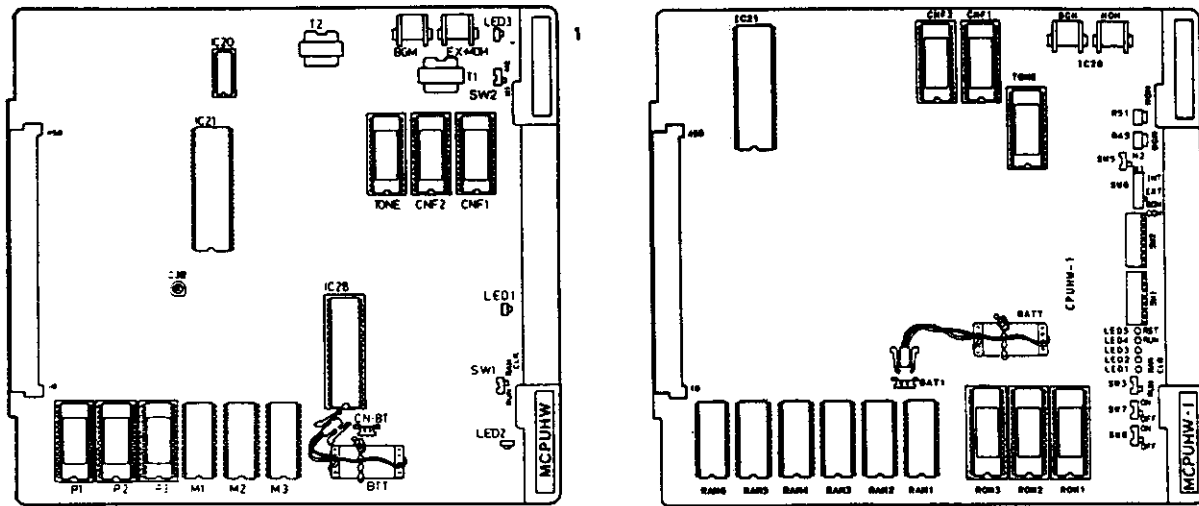
No.	Order No.	Model	Description	Remark
1	7205	DCDC-Z1	DC-DC Converter for ZT-616 KSU Converter RDM48-1R2	Optional
2			Connecting Cable	

FIGURE 8-14 DCDC-Z1 DC-DC CONVERTER



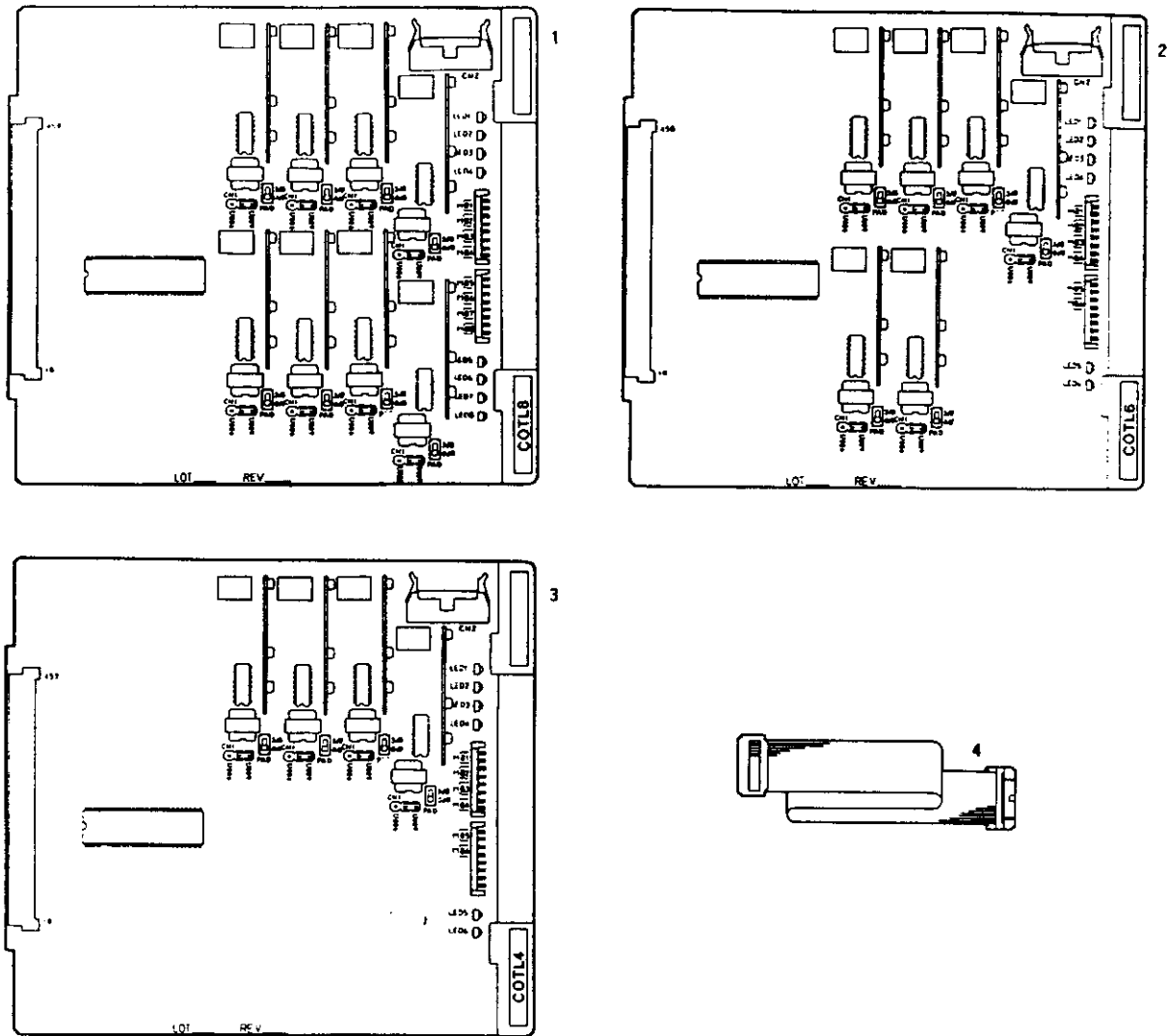
No.	Order No.	Model	Description	Remark
1	7021	RNGER	Ringing Generator for Single Line Telephone	Optional
2			RNGER Board Assembly	
3			RNGER Base	
4			RNGER Cover	
			Mounting Panel	

FIGURE 8-15 RINGING GENERATOR



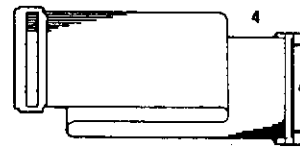
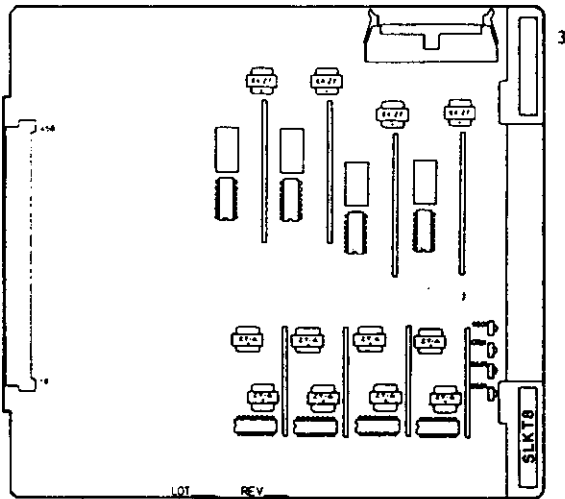
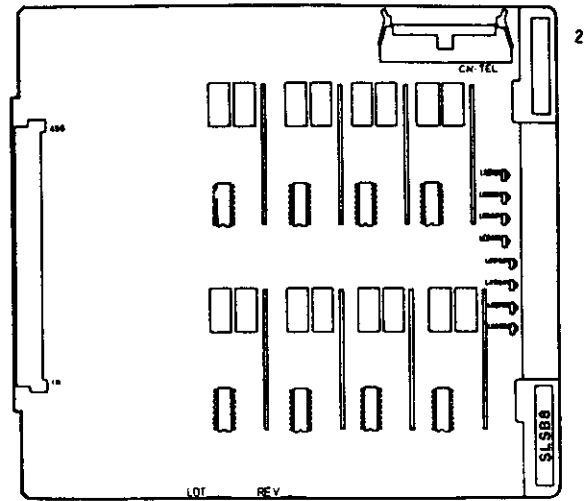
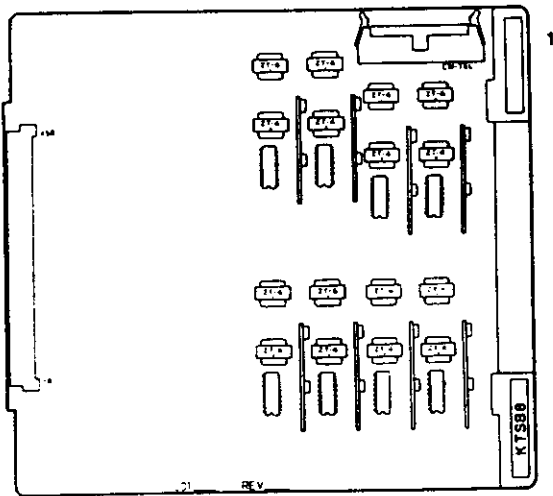
No.	Order No.	Model	Description	Remark
1	7011	MCPUHW	Central Processor/Highway Controller Card	At KSU CPU Slot: MF Registration Version 1
	7025	KCPUHW	Central Processor/Highway Controller Card	At KSU CPU Slot: KF Registration Version 1
	7013	MCPUHW-1	Central Processor/Highway Controller Card	At KSU CPU Slot: MF Registration Version 2
	7013	KCPUHW-1	Central Processor/Highway Controller Card	At KSU CPU Slot: KF Registration Version 2
2			MOH/BGM Connecting Cable	Provided with CPU Card

FIGURE 8-16 CPUHW CARDS



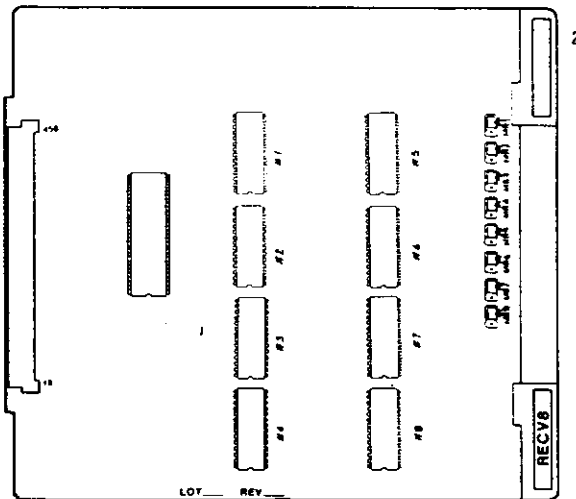
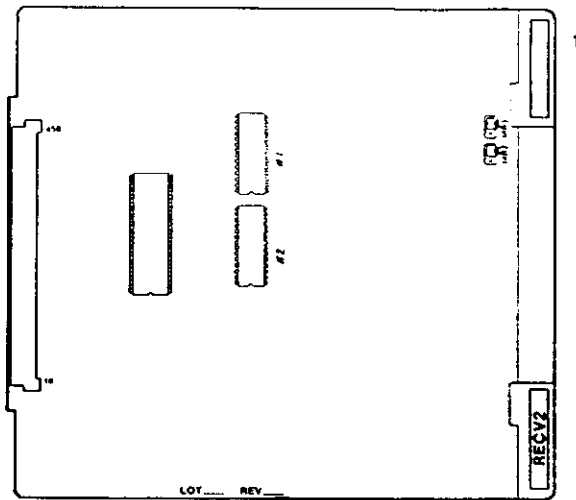
No.	Order No.	Model	Description	Remark
1	7013	COTL8	8-ckt CO Line Card	At KSU CO Slot
2	7014	COTL6	6-ckt CO Line Card	At KSU CO Slot
3	7015	COTL4	4-ckt CO Line Card	At KSU CO Slot
(1)	7035	COTL8-1	8-ckt CO Line Card	At KSU CO Slot: DOC Approved
(2)	7036	COTL6-1	6-ckt CO Line Card	At KSU CO Slot: DOC Approved
(3)	7037	COTL4-1	4-ckt CO Line Card	At KSU CO Slot: DOC Approved
4	7121	<CBLA	KSU Card Connecting Cable A (16p)	For COTL Cards

FIGURE 8-17 CO LINE CARDS



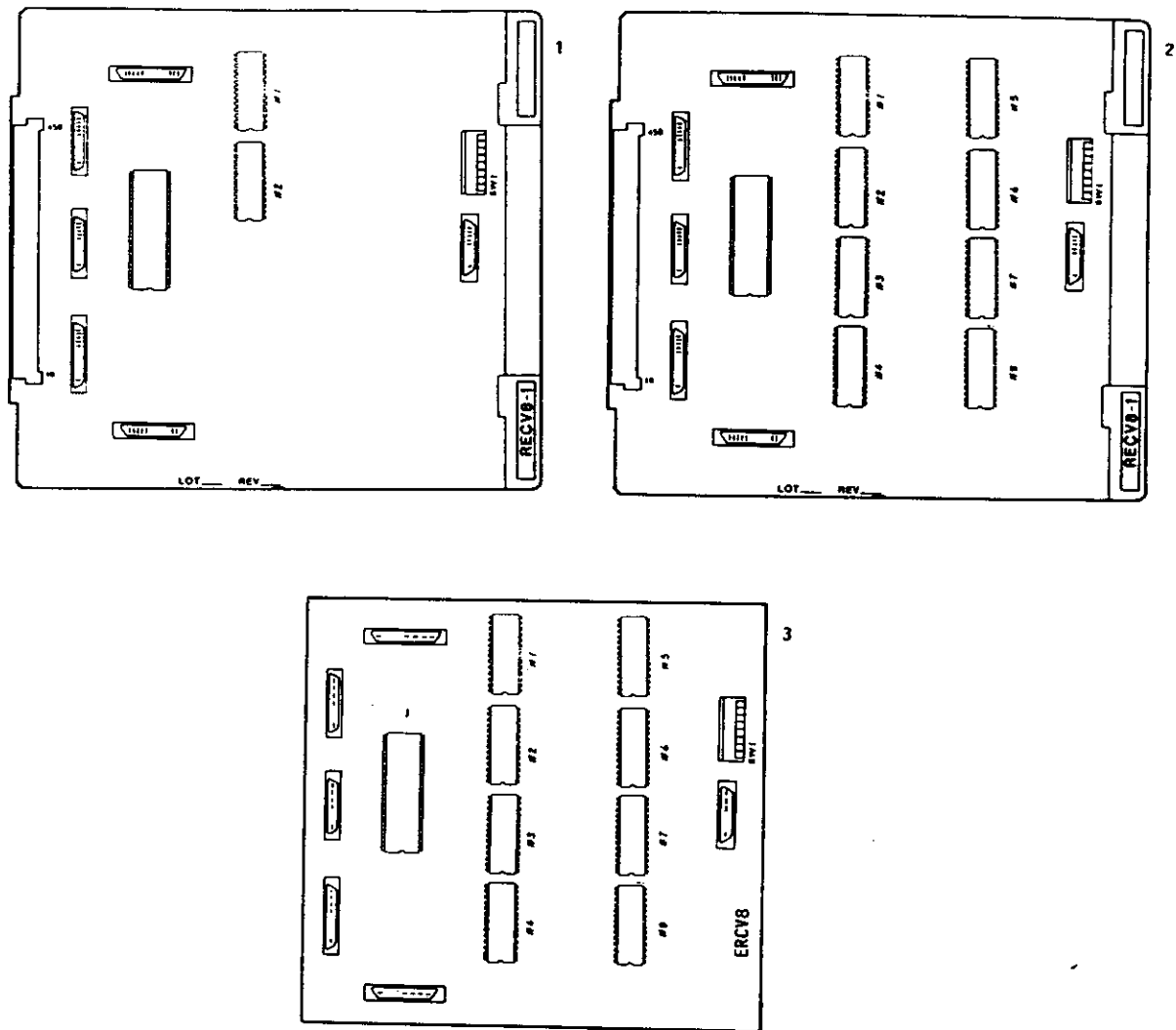
No.	Order No.	Model	Description	Remark
1	7018	KT388	8-ckt Key Telephone Subscriber Card	At KSU SUB Slot
2	7019	SL388	8-ckt Single Line Telephone (-24V)	At KSU SUB Slot
3	7020	SLKT8	4-ckt Single Line (-48V)/4-ckt Key Telephone	At KSU SUB Slot
4	7122	KCELB	KSU Card Connecting Cable B (32p)	For SUB Cards

FIGURE 8-18 SUBSCRIBER CARDS



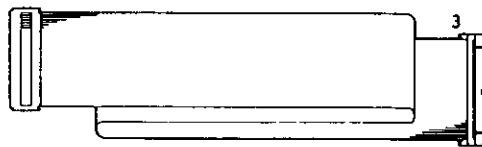
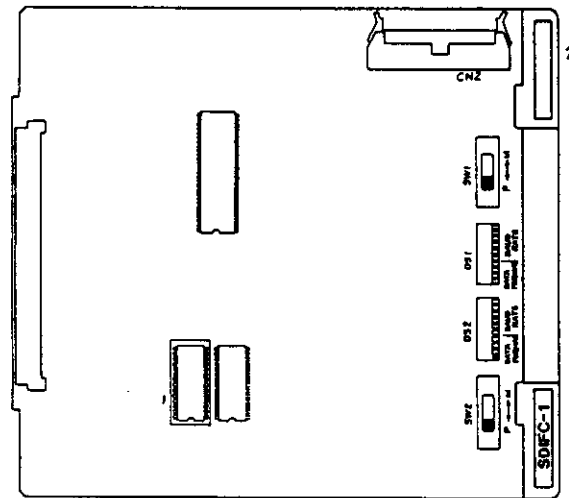
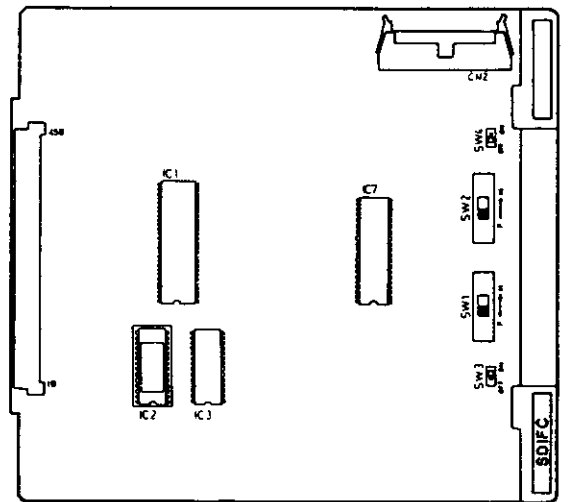
No.	Order No.	Model	Description	Remark
1	7016	REC V2	2-ckt DTMF Receiver Card	At KSU OPT Slot
2	7017	REC V8	8-ckt DTMF Receiver Card	At KSU OPT Slot

FIGURE 8-19 REC V2/8 CARDS



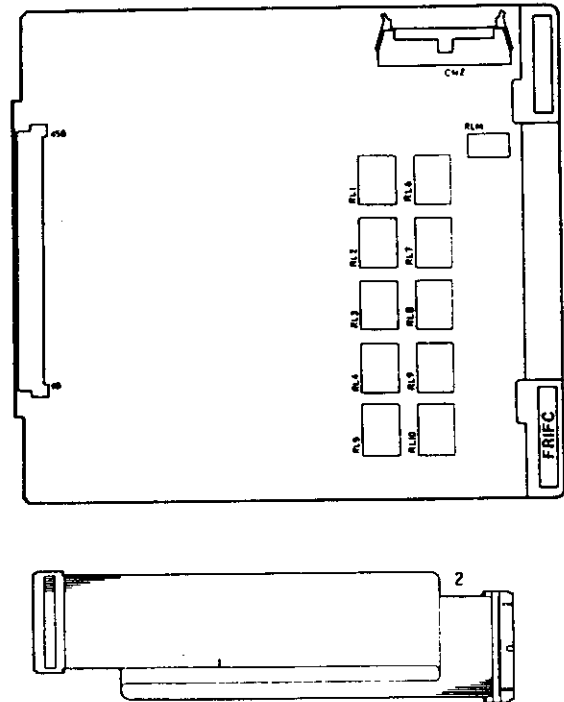
No.	Order No.	Model	Description	Remark
1	7033	RECV2-1	2-ckt DTMF Receiver Card V1	At KSU OPT Slot: Expandable
2	7032	RECV8-1	8-ckt DTMF Receiver Card V1	At KSU OPT Slot: Expandable
3	7017	ERCV8	8-ckt DTMF Receiver Expansion Card	On RECV Card

FIGURE 8-20 RECV2-1/8-1 CARDS AND ERCV8



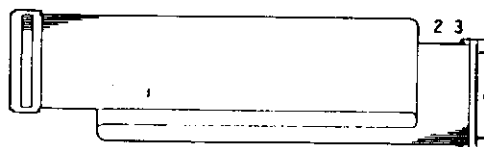
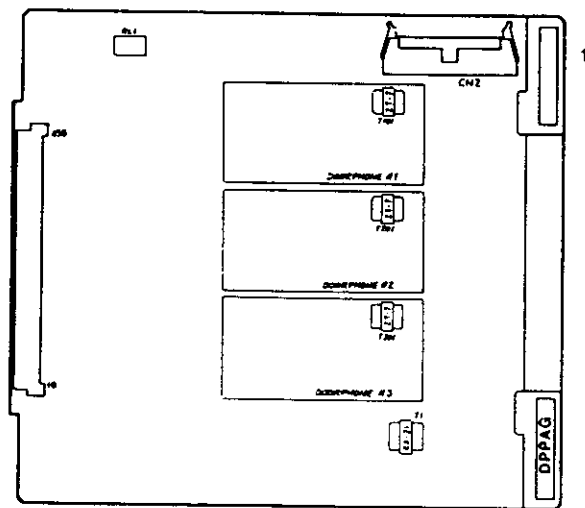
No.	Order No.	Model	Description	Remark
1	7022	SDIFC	Serial Data Interface Card	At KSU OPT Slot: One Channel
2	7031	SDIFC-1	Serial Data Interface Card V1	At KSU OPT Slot: Two Channels
3	7125	KCBLC	KSU Card Connecting Cable C (32p)	For OPT Cards

FIGURE 8-21 SDIFC CARDS



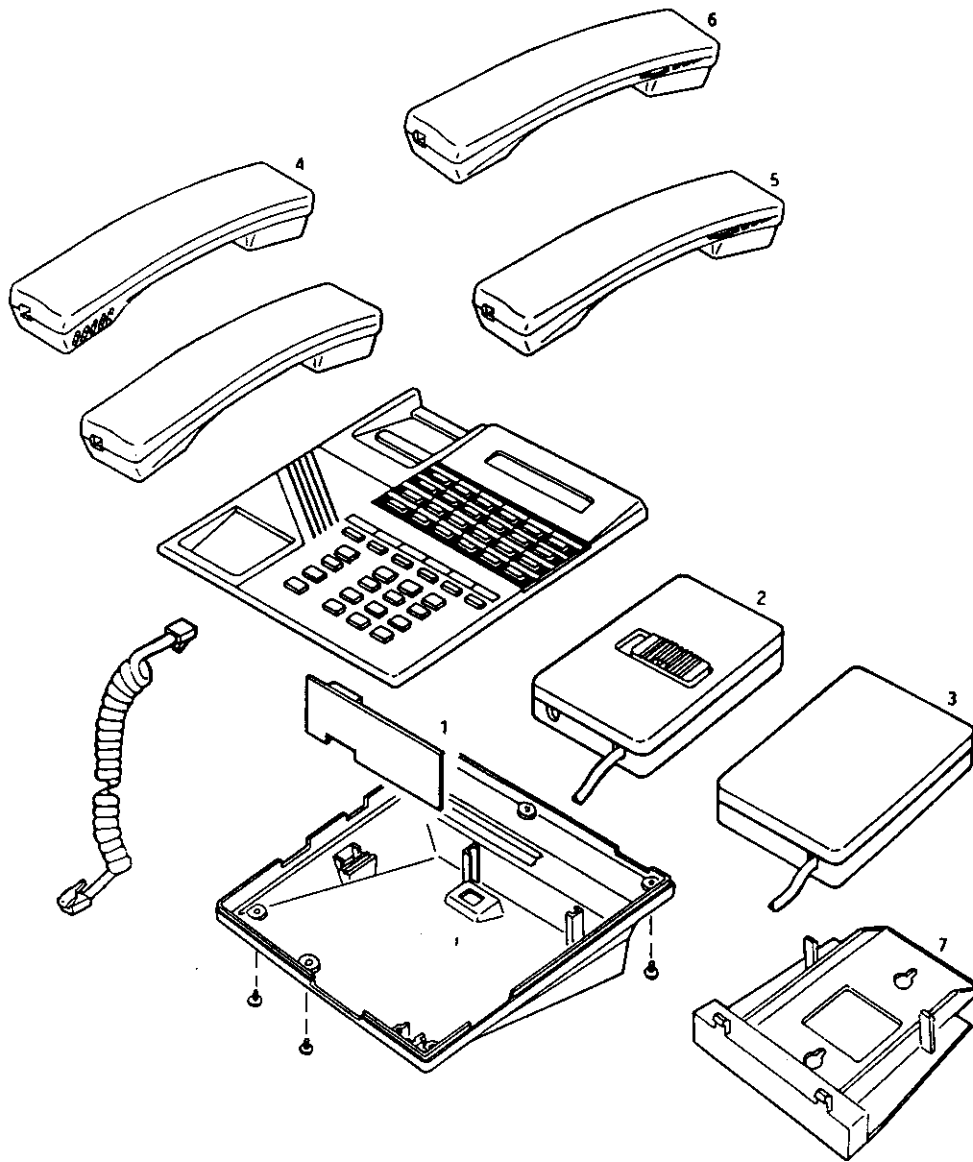
No.	Order No.	Model	Description	Remark
1	7023	FRIFC	Flexible Relay Interface Card	At KSU OPT Slot:
2	7125	KCBLC	KSU Card Connecting Cable C (32p)	For OPT Cards

FIGURE 8-22 FRIFC CARDS



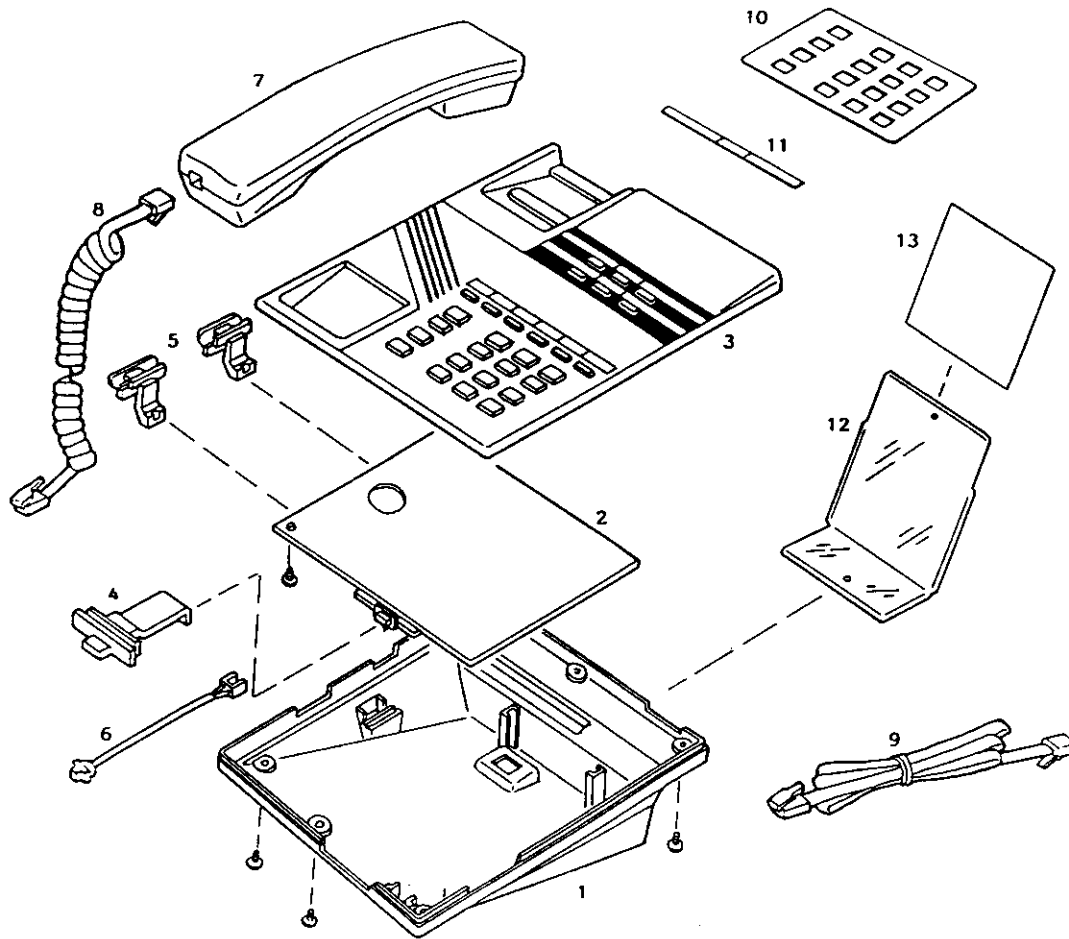
No.	Order No.	Model	Description	Remark
1	7024	DPPAG	Doorphone/P.A. System Interface Card	At KSU OPT Slot:
2	7125	KCBLC	KSU Card Connecting Cable C (32p)	For OPT Cards

FIGURE 8-23 DPPAG CARDS



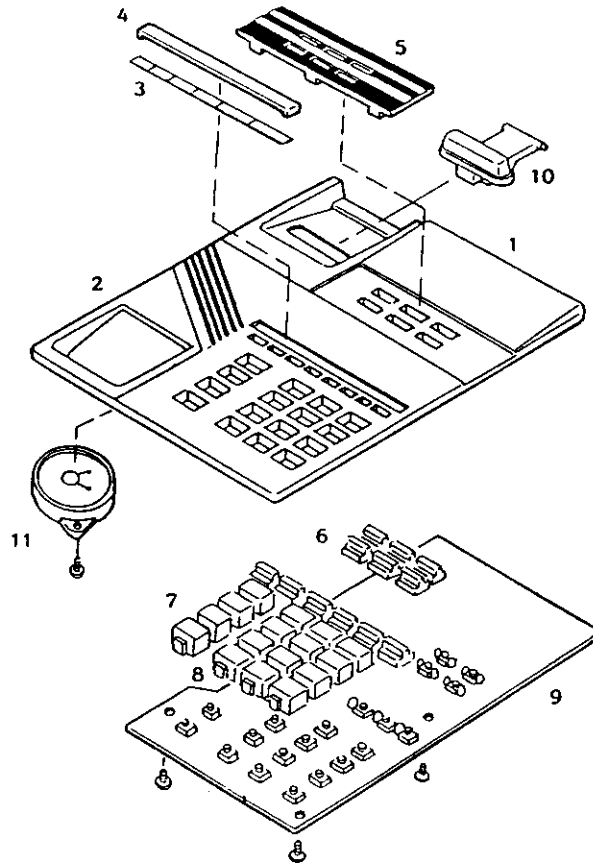
No.	Order No.	Model	Description
1	7501	SSPU-Z1	Station Built-in Speakerphone Card
2	7502	SMSA-Z	Station Miscellaneous Adapter
3	7510	SHCB-Z	Station Headset Connecting Box
4	7503	SNHD-Z	Station Noise Cancelling Handset
5	7505	SHHD-Z	Station Hard-of-hearing Handset
6	7506	SHAD-Z	Station Hearing Aid Handset
7	7414	STWM6/8-Z	Station Wall Mount Unit 6/8-Z
	7423	STWM12/24-X	Station Wall Mount Unit 12/24-Z

FIGURE 8-24 KEY TELEPHONE OPTIOANL COMPONENTS



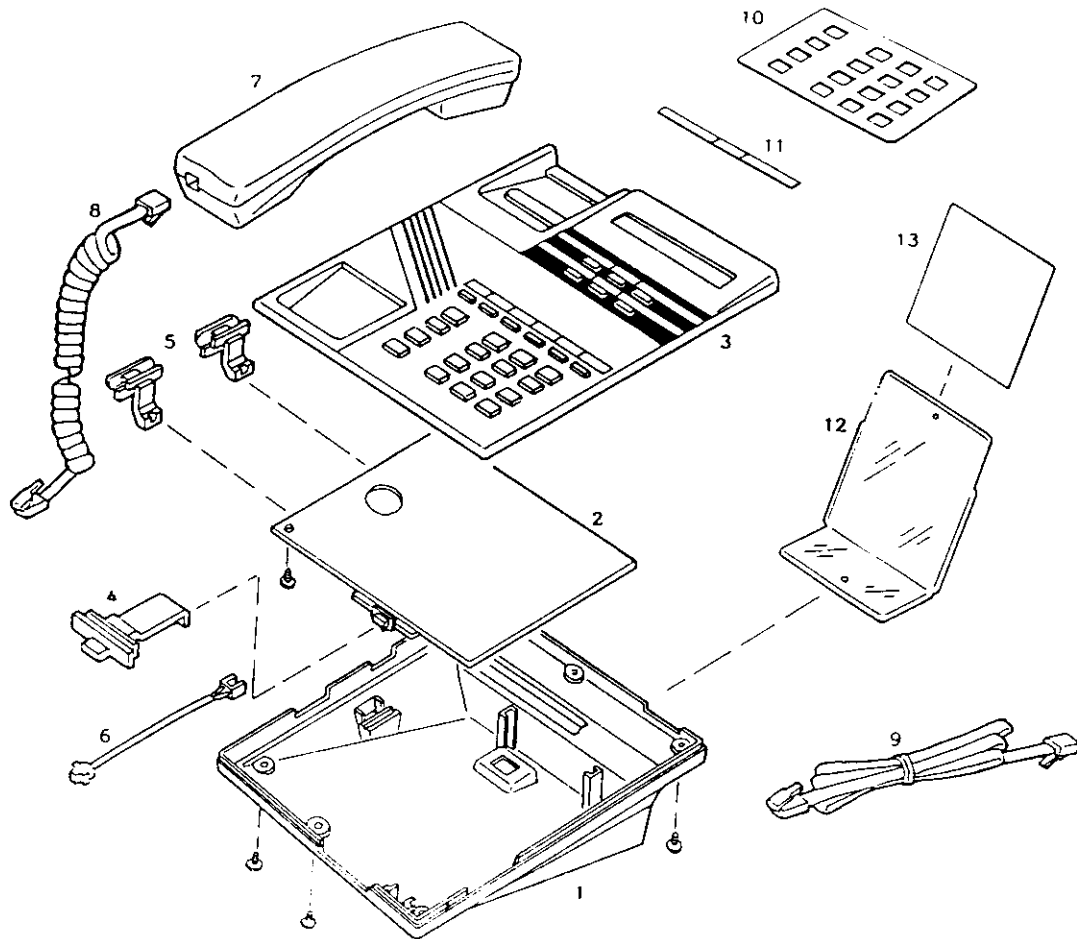
No.	Order No.	Model	Description
1		KTBS6/8	ZT-6/8 Lower Case
2	7351	KTEL-Z	Processor Unit for K/D Key Telephone
3	7352	KTKB-6K	ZT-6K Key Board Assembly
4			Volume Control Knob
5			Switch Knob
6			Microphone Assembly
7	7412	SSHD-Z	Station Standard Handset
8			Handset Cord (6ft.)
9			Station Modular Cord (2p)
10	7401	DMKT-Z	Dial Mask for Key Telephone
11	7404	KTCL6-Z	ZT-6 Line Key Designation Card
12			Directory Holder
13			Directory Card

FIGURE 8-25 ZT-6K KEY TELEPHONE



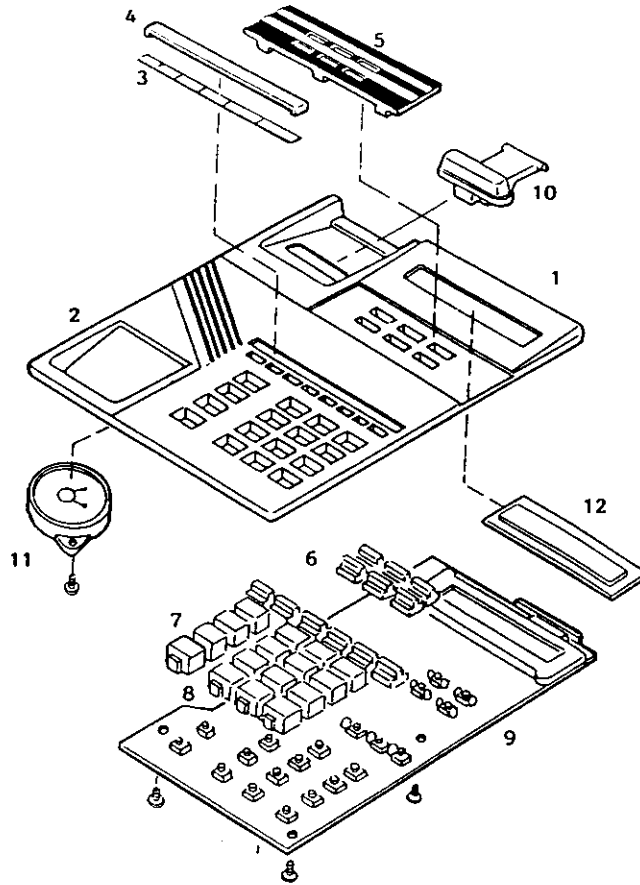
No.	Order No.	Model	Description
1			ZT-6K Upper Case
2			ZT-6/8 Upper Case
3	7408	KTFL6/8-Z	ZT-6/8 Feature Key Designation Card
4			ZT-6/8 Feature Key Card Cover
5			ZT-6/8 Line Key Card Cover
6			Line Keytop
7			Feature Keytop Set
8			Dial Keytop Set
9			ZT-6K Keyboard
10			Hook Button
11			Speaker Assembly

FIGURE 8-26 ZT-6K KEYBOARD



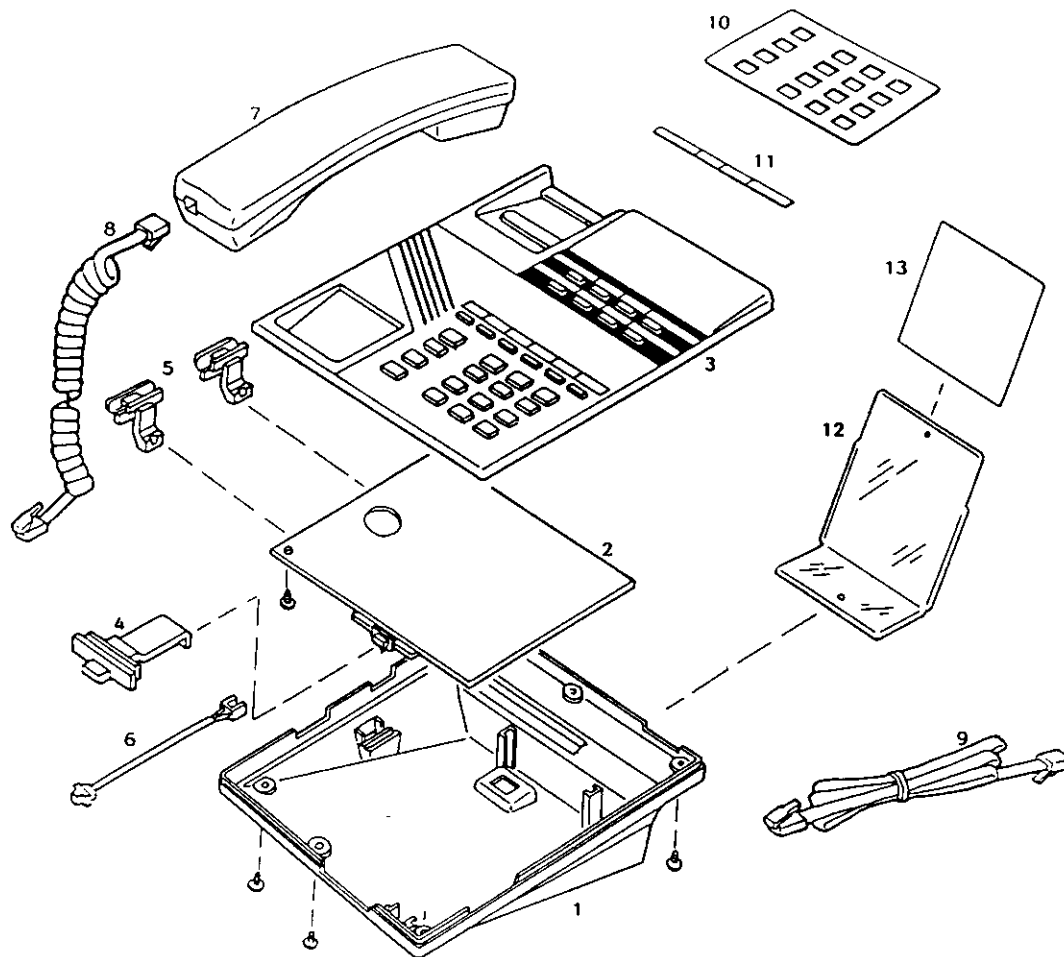
No.	Order No.	Model	Description
1		KTBS6/8	ZT-6/8 Lower Case
2	7351	KTCL-Z	Processor Unit for K/D Key Telephone
3	7353	KTKB-6D	ZT-6D Key Board Assembly
4			Volume Control Knob
5			Switch Knob
6			Microphone Assembly
7	7412	SSHD-Z	Station Standard Handset
8			Handset Cord (6ft.)
9			Station Modular Cord (2p)
10	7401	DMKT-Z	Dial Mask for Key Telephone
11	7404	KTCL6-Z	ZT-6 Line Key Designation Card
12			Directory Holder
13			Directory Card

FIGURE 8-27 ZT-6D KEY TELEPHONE



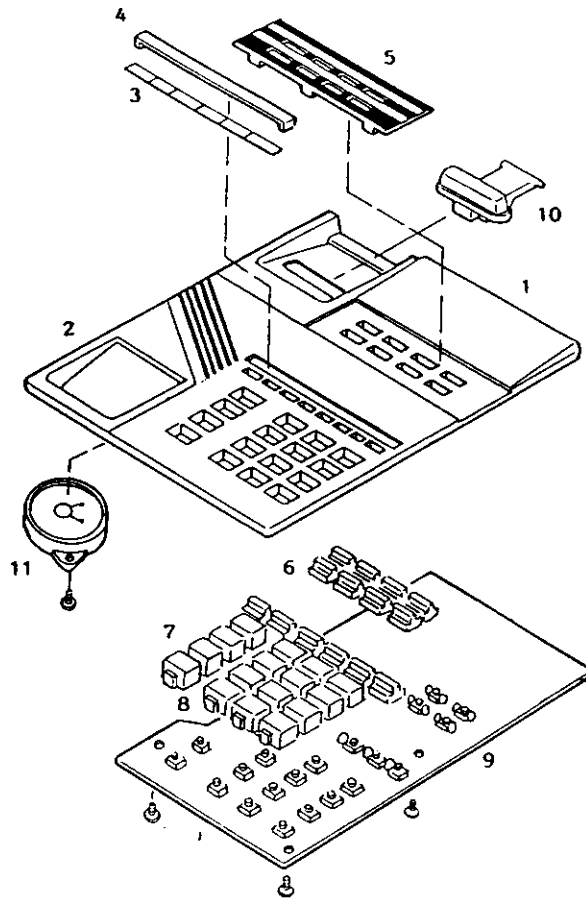
No.	Order No.	Model	Description
1			ZT-6D Upper Case
2			ZT-6/8 Upper Case
3	7408	KT*_6/8-Z	ZT-6/8 Feature Key Designation Card
4			ZT-6/8 Feature Key Card Cover
5			ZT-6/8 Line Key Card Cover
6			Line Keytop
7			Feature Keytop Set
8			Dial Keytop Set
9			ZT-6D Keyboard
10			Hook Button
11			Speaker Assembly
12			LCD Unit

FIGURE 8-28 ZT-6D KEYBOARD



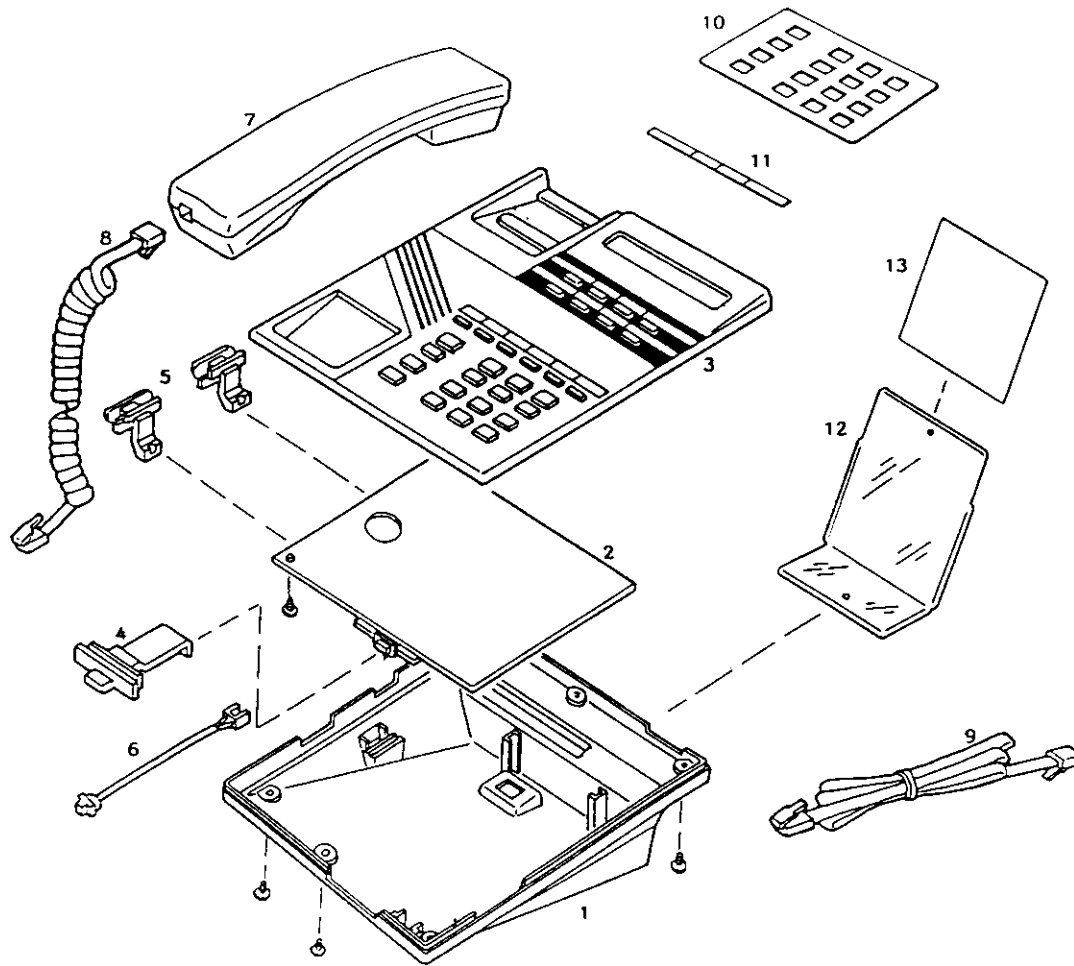
No.	Order No.	Model	Description
1		KTBS6/8	ZT-6/8 Lower Case
2	7351	KTEL-Z	Processor Unit for K/D Key Telephone
3	7354	KTKB-8K	ZT-8K Key Board Assembly
4			Volume Control Knob
5			Switch Knob
6			Microphone Assembly
7	7412	SSHD-Z	Station Standard Handset
8			Handset Cord (6 ft.)
9			Station Modular Cord (2p)
10	7401	DMKT-Z	Dial Mask for Key Telephone
11	7405	KTCL8-Z	ZT-8 Line Key Designation Card
12			Directory Holder
13			Directory Card

FIGURE 8-29 ZT-8K KEY TELEPHONE



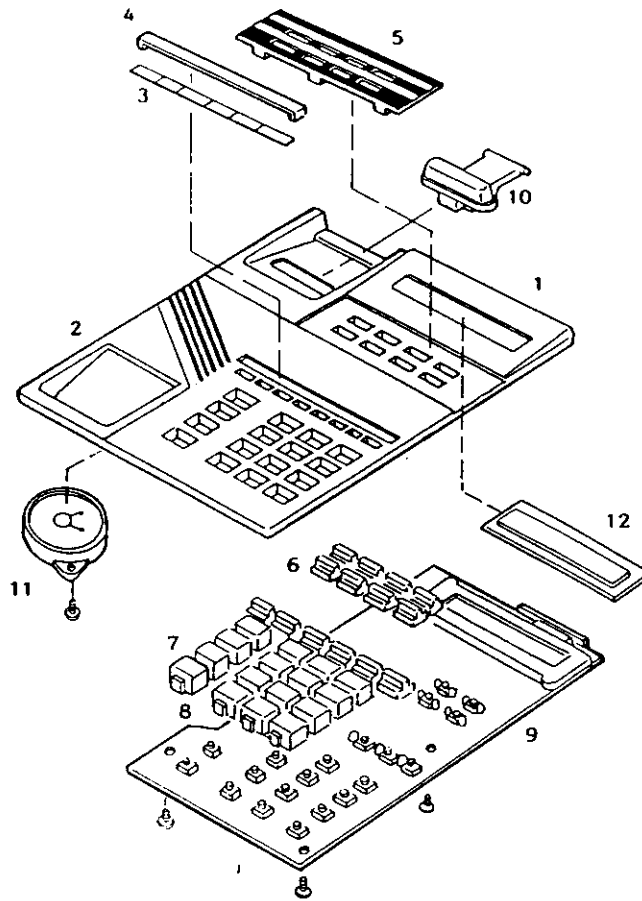
No.	Order No.	Model	Description
1	7408	KTFL6/8-Z	ZT-8K Upper Case
2			ZT-6/8 Upper Case
3			ZT-6/8 Feature Key Designation Card
4			ZT-6/8 Feature Key Card Cover
5			ZT-6/8 Line Key Card Cover
6			Line Keytop
7			Feature Keytop Set
8			Dial Keytop Set
9			ZT-8K Keyboard
10			Hook Button
11			Speaker Assembly

FIGURE 8-30 ZT-8K KEYBOARD



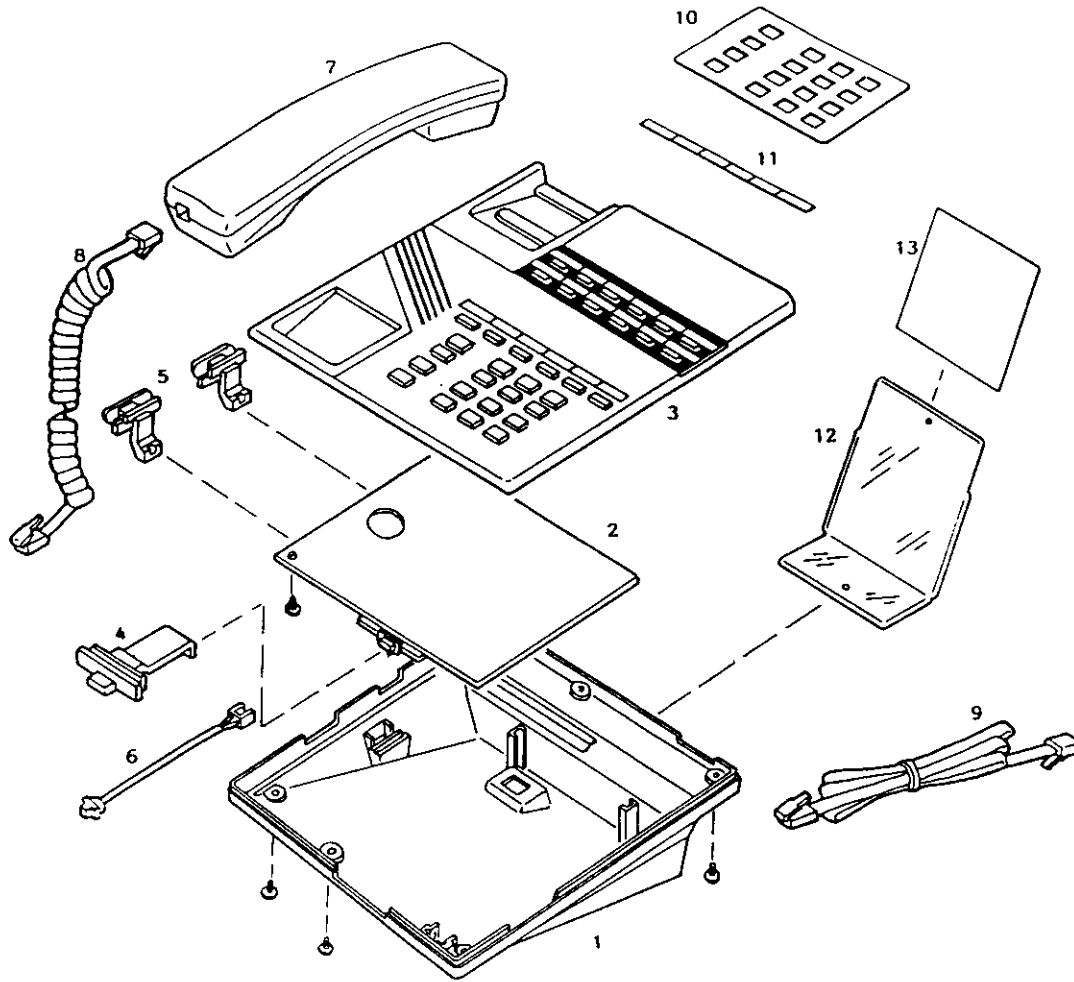
No.	Order No.	Model	Description
1		KTBS6/8	ZT-6/8 Lower Case
2	7351	KTEL-Z	Processor Unit for K/D Key Telephone
3	7355	KTKB-8D	ZT-8D Key Board Assembly
4			Volume Control Knob
5			Switch Knob
6			Microphone Assembly
7	7412	SSHD-Z	Station Standard Handset
8			Handset Cord (6 ft.)
9			Station Modular Cord (2p)
10	7401	DMKT-Z	Dial Mask for Key Telephone
11	7405	KTCL8-Z	ZT-8 Line Key Designation Card
12			Directory Holder
13			Directory Card

FIGURE 8-31 ZT-8D KEY TELEPHONE



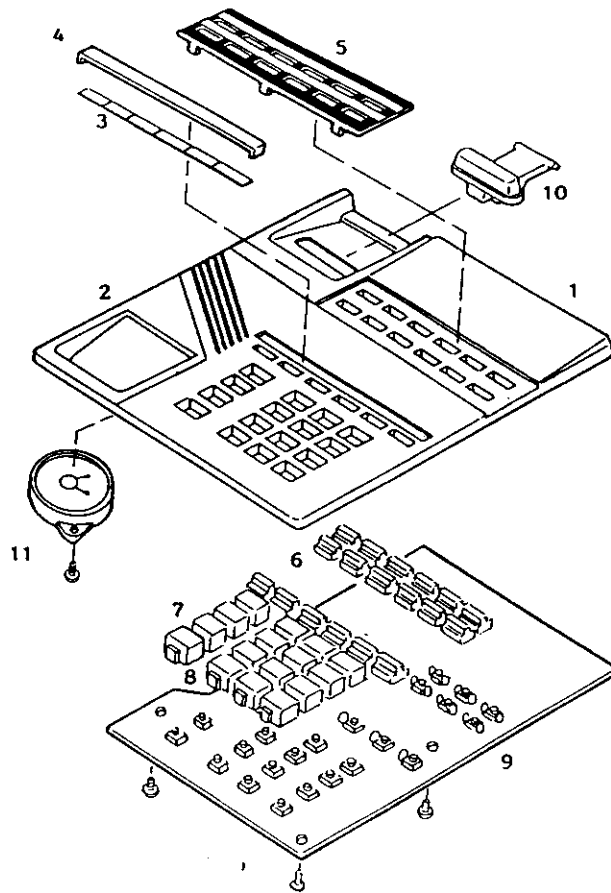
No.	Order No.	Model	Description
1	7408	KTF_6/8-Z	ZT-8D Upper Case
2			ZT-6/8 Upper Case
3			ZT-6/8 Feature Key Designation Card
4			ZT-6/8 Feature Key Card Cover
5			ZT-6/8 Line Key Card Cover
6			Line Keytop
7			Feature Keytop Set
8			Dial Keytop Set
9			ZT-8D Keyboard
10			Hook Button
11			Speaker Assembly
12			LCD Unit

FIGURE 8-32 ZT-8D KEYBOARD



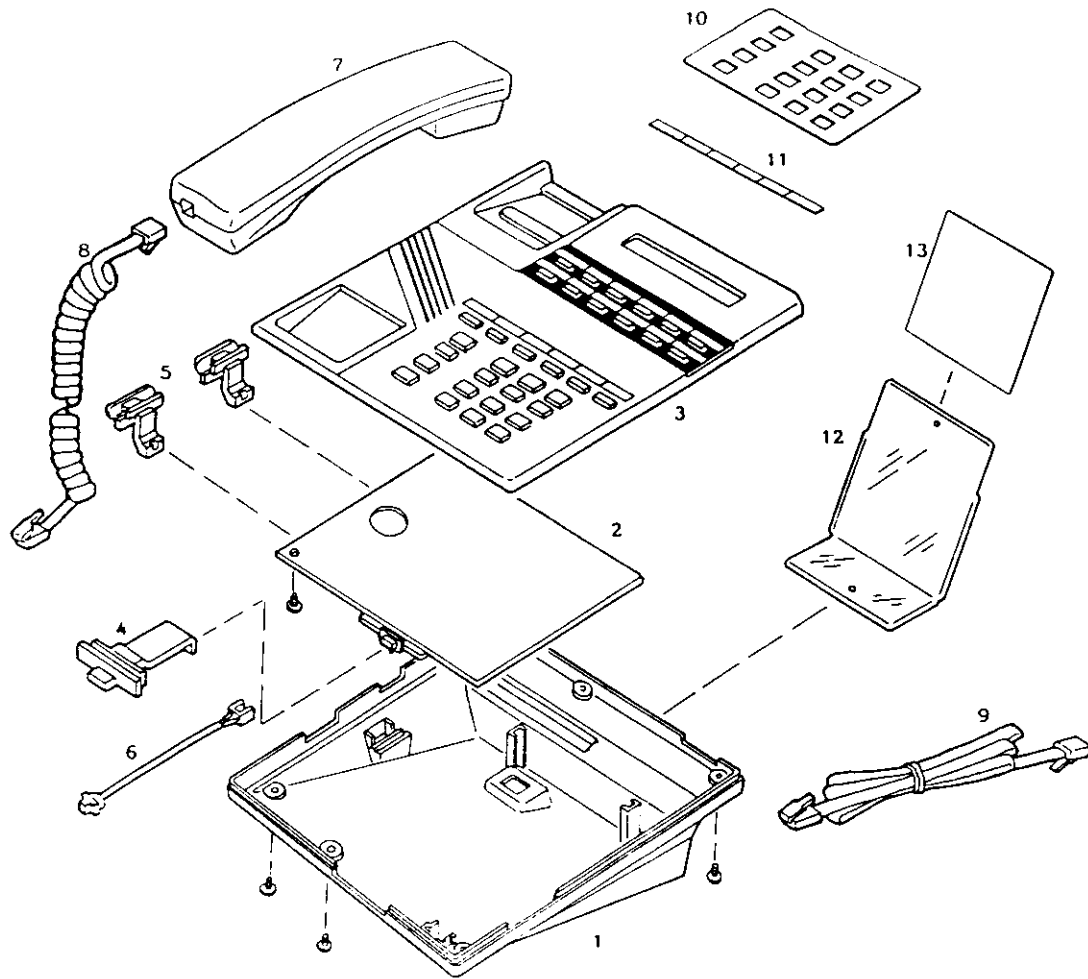
No.	Order No.	Model	Description
1		KTBS12/24-Z	ZT-12/24 Lower Case
2	7351	KTEL-Z	Processor Unit for K/D Key Telephone
3	7356	KTKB-12K	ZT-12K Key Board Assembly
4			Volume Control Knob
5			Switch Knob
6			Microphone Assembly
7	7412	SSHD-Z	Station Standard Handset
8			Handset Cord (6 ft.)
9			Station Modular Cord (2p)
10	7401	DMKT-Z	Dial Mask for Key Telephone
11	7406	KTCL12/24-Z	ZT-12 Line Key Designation Card
12			Directory Holder
13			Directory Card

FIGURE 8-33 ZT-12K KEY TELEPHONE



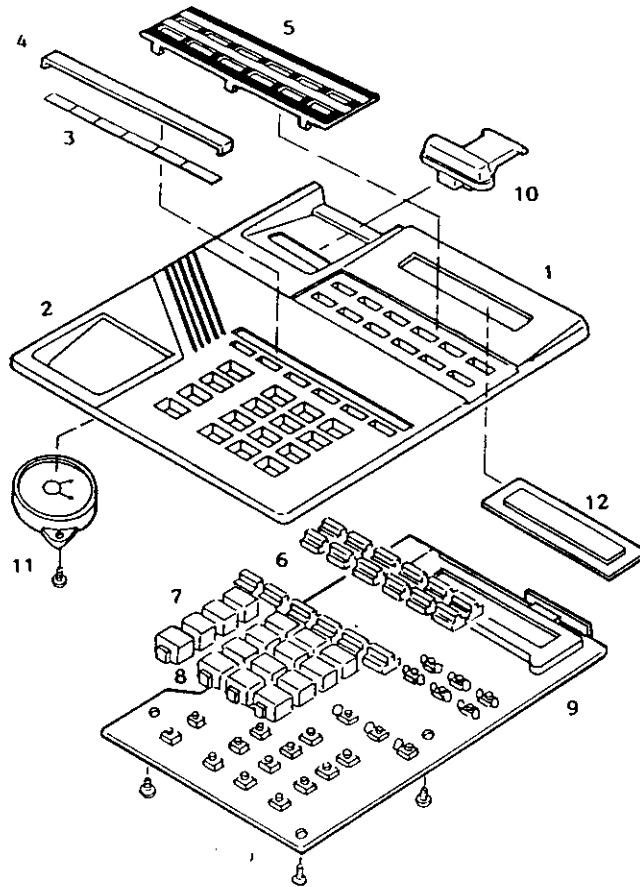
No.	Order No.	Model	Description
1	7410	KTFL12/24-Z	ZT-12K Upper Case
2			ZT-12/24 Upper Case
3			ZT-12/24 Feature Key Designation Card
4			ZT-12/24 Feature Key Card Cover
5			ZT-12 Line Key Card Cover
6			Line Keytop
7			Feature Keytop Set
8			Dial Keytop Set
9			ZT-12K Keyboard
10			Hook Button
11			Speaker Assembly

FIGURE 8-34 ZT-12K KEYBOARD



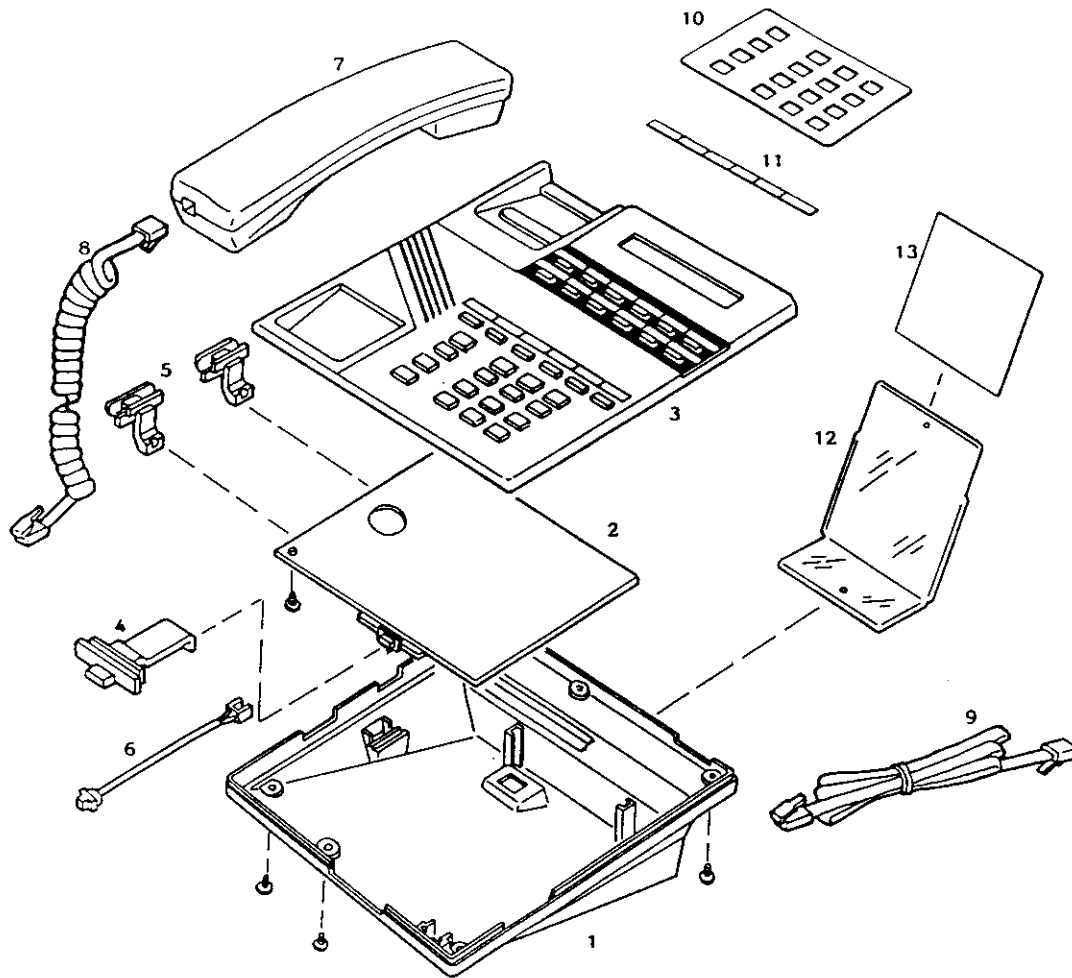
No.	Order No.	Model	Description
1		KTBS12/24-Z	ZT-12/24 Lower Case
2	7351	KTEL-Z	Processor Unit for K/D Key Telephone
3	7357	KTKB-12D	ZT-12D Key Board Assembly
4			Volume Control Knob
5			Switch Knob
6			Microphone Assembly
7	7412	SSHD-Z	Station Standard Handset
8			Handset Cord (6 ft.)
9			Station Modular Cord (2p)
10	7401	DMKT-Z	Dial Mask for Key Telephone
11	7406	KTCL12/24-Z	ZT-12/24 Line Key Designation Card
12			Directory Holder
13			Directory Card

FIGURE 8-35 ZT-12D KEY TELEPHONE



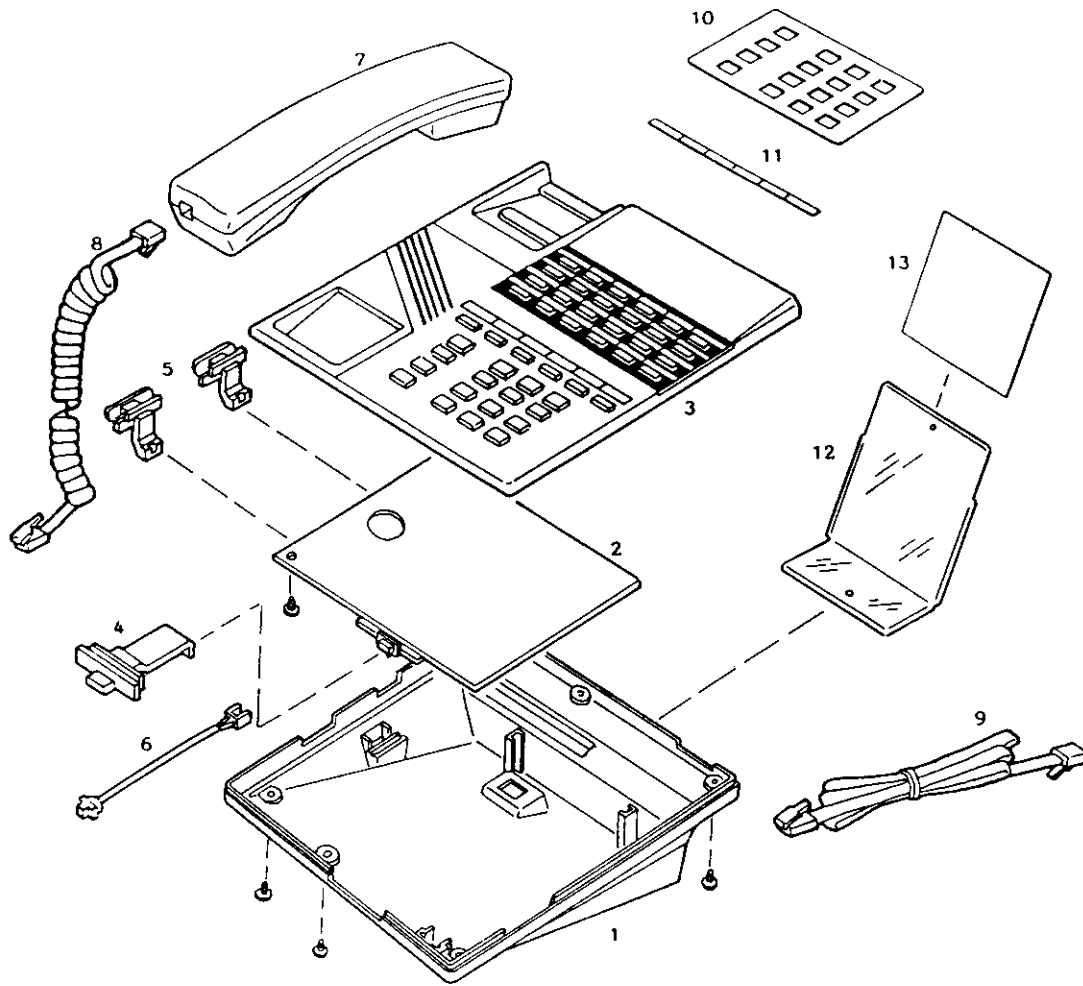
No.	Order No.	Model	Description
1			ZT-12D Upper Case
2			ZT-12/24 Upper Case
3	7410	KTFL12/24-Z	ZT-12/24 Feature Key Designation Card
4			ZT-12/24 Feature Key Card Cover
5			ZT-12 Line Key Card Cover
6			Line Keytop
7			Dial Keytop Set
8			Dial Keytop Set
9			ZT-12D Keyboard
10			Hook Button
11			Speaker Assembly
12			LCD Unit

FIGURE 8-36 ZT-12D KEYBOARD



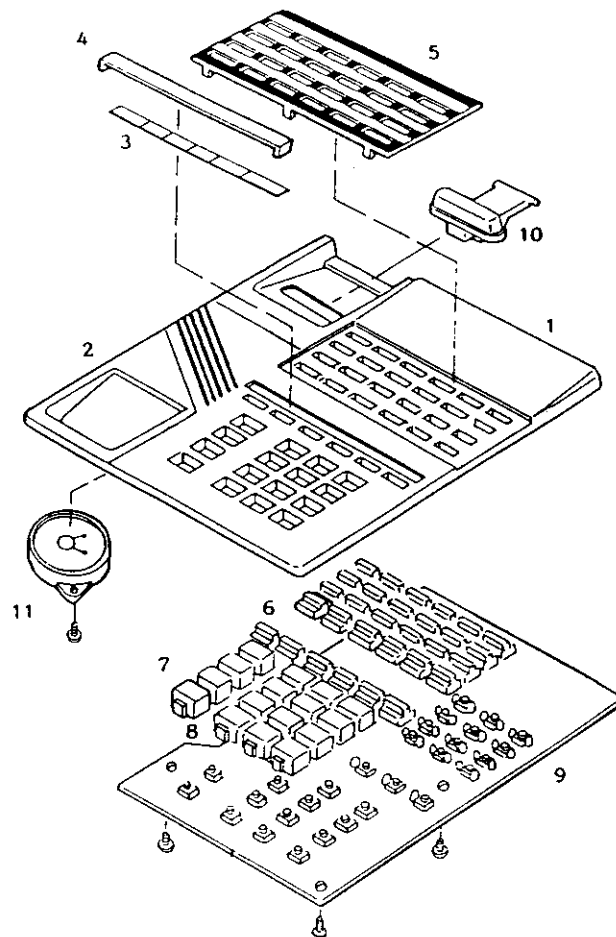
No.	Order No.	Model	Description
1			KTBS12/24-Z ZT-12/24 Lower Case
2	7372	XTEL-Z	Processor Unit for X Key Telephone
3	7357	KTKB-12D	ZT-12D Key Board Assembly
4			Volume Control Knob
5			Switch Knob
6			Microphone Assembly
7	7412	SSHD-Z	Station Standard Handset
8			Handset Cord (6 ft.)
9			Station Modular Cord (3p)
10	7401	DMKT-Z	Dial Mask for Key Telephone
11	7406	KTCL12/24-Z	ZT-12/24 Line Key Designation Card
12			Directory Holder
13			Directory Card

FIGURE 8-37 ZT-12X KEY TELEPHONE



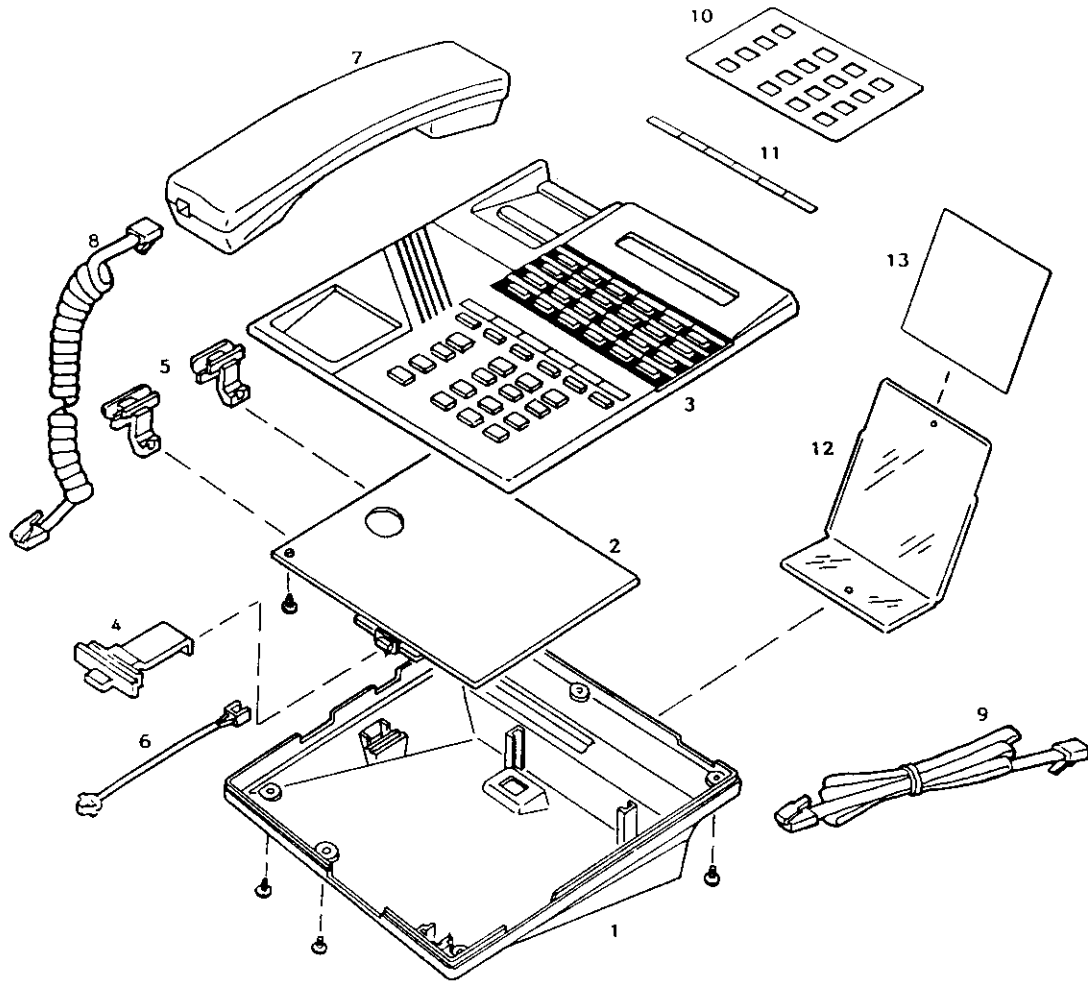
No.	Order No.	Model	Description
1		KTBS12/24-Z	ZT-12/24 Lower Case
2	7351	KTEL-Z	Processor Unit for K/D Key Telephone
3	7358	KTKB-24K	ZT-24K Key Board Assembly
4			Volume Control Knob
5			Switch Knob
6			Microphone Assembly
7	7412	SSHD-Z	Station Standard Handset
8			Handset Cord (6 ft.)
9			Station Modular Cord (2p)
10	7401	DMKT-Z	Dial Mask for Key Telephone
11	7406	KTCL12/24-Z	ZT-12/24 Line Key Designation Card
12			Directory Holder
13			Directory Card

FIGURE 8-38 ZT-24K KEY TELEPHONE



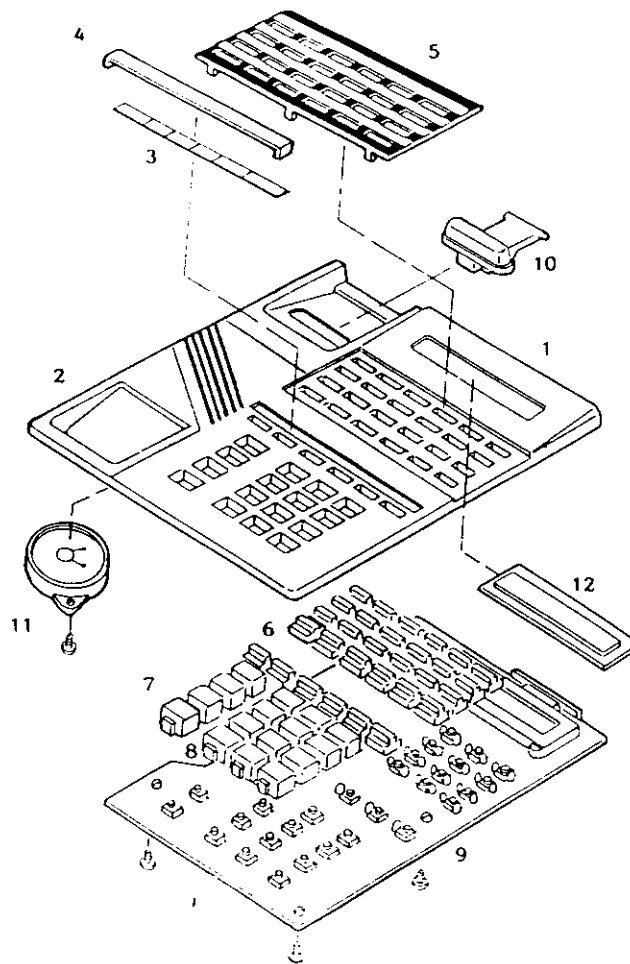
No.	Order No.	Model	Description
1			ZT-24K Upper Case
2			ZT-12/24 Upper Case
3	7410	<TFL12/24-Z	ZT-12/24 Feature Key Designation Card
4			ZT-12/24 Feature Key Card Cover
5			ZT-24 Line Key Card Cover
6			Line Keytop
7			Feature Keytop Set
8			Dial Keytop Set
9			ZT-24K Keyboard
10			Hook Button
11			Speaker Assembly

FIGURE 8-39 ZT-24K KEYBOARD



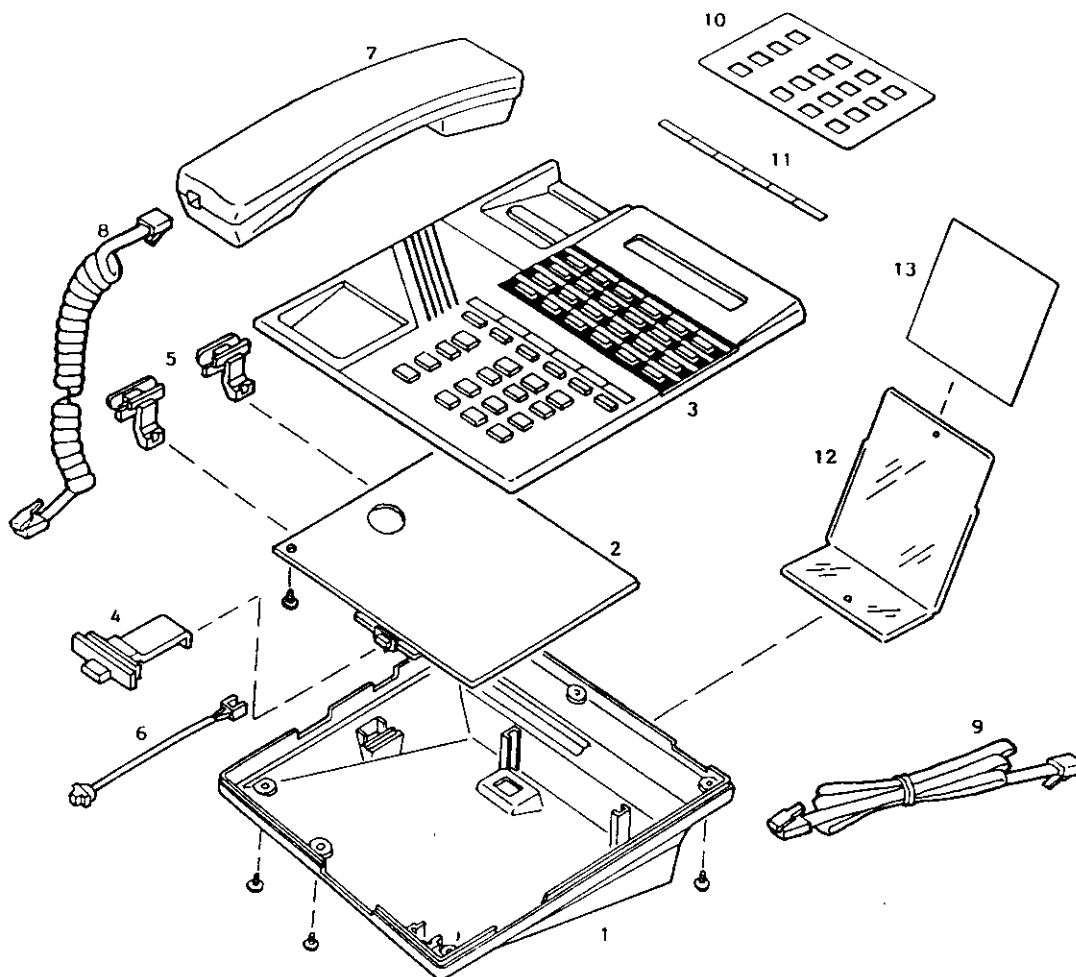
No.	Order No.	Model	Description
1		KTBS12/24-Z	ZT-12/24 Lower Case
2	7351	TEL-Z	Processor Unit for K/D Key Telephone
3	7359	TKB-24D	ZT-24D Key Board Assembly
4			Volume Control Knob
5			Switch Knob
6			Microphone Assembly
7	7412	SSH-D-Z	Station Standard Handset
8			Handset Cord (6 ft.)
9			Station Modular Cord (2p)
10	7401	DMKT-Z	Dial Mask for Key Telephone
11	7406	CL12/24-Z	ZT-12/24 Line Key Designation Card
12			Directory Holder
13			Directory Card

FIGURE 8-40 ZT-24D KEY TELEPHONE



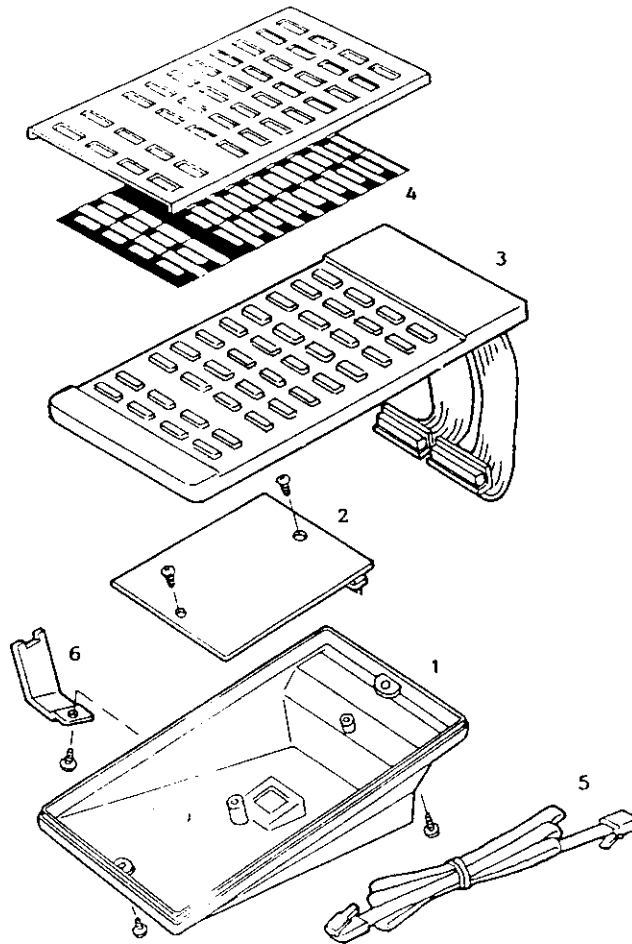
No.	Order No.	Model	Description
1			ZT-24D Upper Case
2			ZT-12/24 Upper Case
3	7410	KTFL12/24-Z	ZT-12/24 Feature Key Designation Card
4			ZT-12/24 Feature Key Card Cover
5			ZT-24 Line Key Card Cover
6			Line Keytop
7			Feature Keytop Set
8			Dial Keytop Set
9			ZT-24D Keyboard
10			Hook Button
11			Speaker Assembly
12			LCD Unit

FIGURE 8-41 ZT-24D KEYBOARD



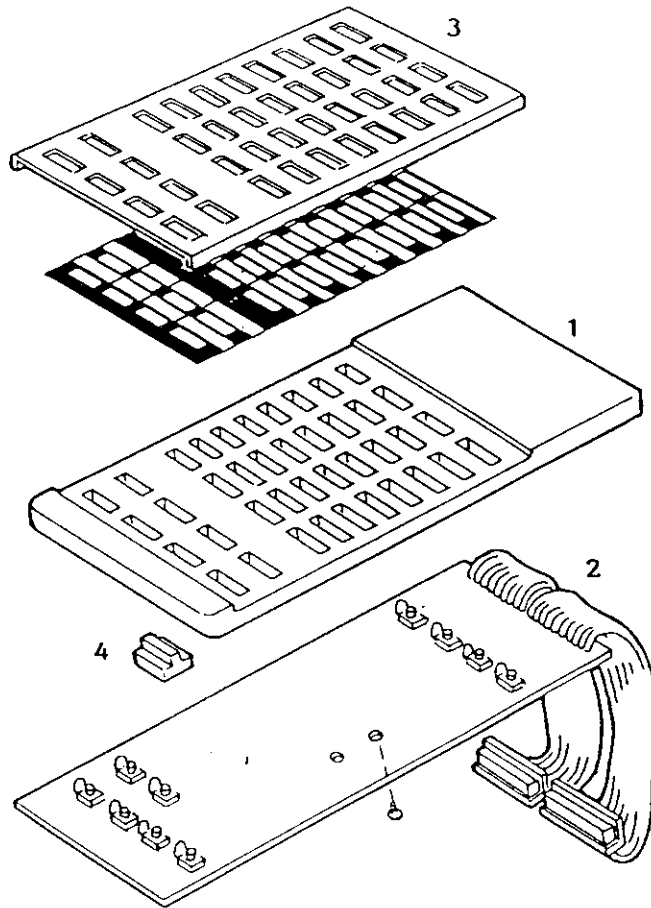
No.	Order No.	Model	Description
1		KTBS12/24-Z	ZT-12/24 Lower Case
2	7372	XTEL-Z	Processor Unit for X Key Telephone
3	7359	KTKB-24D	ZT-24D Key Board Assembly
4			Volume Control Knob
5			Switch Knob
6			Microphone Assembly
7	7412	SSHD-Z	Station Standard Handset
8			Handset Cord (6 ft.)
9			Station Modular Cord (3p)
10	7401	DMKT-Z	Dial Mask for Key Telephone
11	7406	KTCL12/24-Z	ZT-12/24 Line Key Designation Card
12			Directory Holder
13			Directory Card

FIGURE 8-42 ZT-24X KEY TELEPHONE



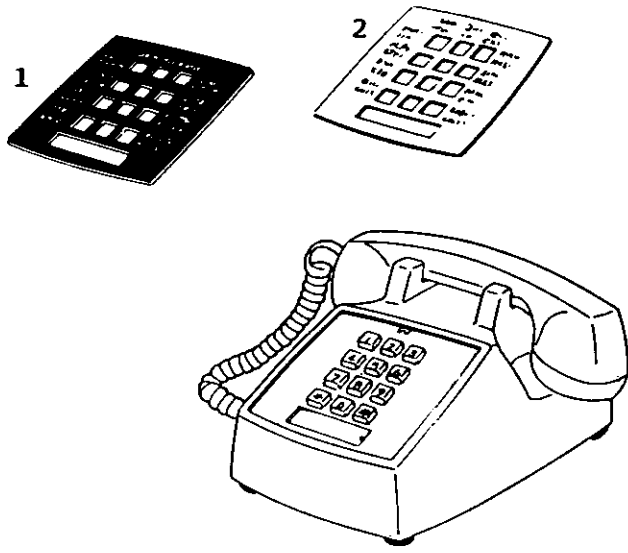
No.	Order No.	Model	Description
1			ZT-32C Lower Case
2	7360	DSSP-Z	Control Unit for ZT-32C DSS
3	7361	OSKB-Z	ZT-32C DSS Key Board Assembly
4			DSS Key Designation Card
5			Station Modular Cord (2p)
6			DSS Connecting Bracket
7	7423	FKAO-Z	Flexible Key Assignment Overlay for ZT-32C DSS
8	7424	DSSWM-Z	DSS Console Wall Mount Unit - Optional

FIGURE 8-43 ZT-32C DSS CONSOLE



No.	Order No.	Model	Description
1			ZT-32C Upper Case
2			ZT-32C Keyboard Assembly
3			ZT-32C DSS Key Card Cover
4			Line Keytop

FIGURE 8-44 ZT-32C DSS KEYBOARD



No.	Order No.	Model	Description
1	7402	DMST-Z-BX	Dial Mask for Single Line Telephone - Black
2	7403	DMST-Z-BE	Dial Mask for Single Line Telephone - Beige

FIGURE 8-45 SINGLE LINE TELEPHONE ACCESSORY

**ZT-D SERIES
ELECTRONIC KEY TELEPHONE SYSTEM
SUPPLEMENT**

CONTENTS	PAGE	1.00 INTRODUCTION
1.00 INTRODUCTION	S-1	1.01 This section provides additional information to original holders of the ZT-D KTS SYSTEM PRACTICE to maintain updated information.
2.00 ZT-824 KSU UPGRADE KSU Upgrading Motherboard Modification Power Supply Requirement Circuit Card Location System Programming	S-2	1.02 This first page is always revised when a new supplement is released. Ensure replacement every time so that the manual holder has up to date product information.
3.00 MULTIPLE FCC REGISTRATION Condition Feature And Operation Programming	S-4	1.03 Revision History
		Date Page
		8-12-87 S-2,3,4
		5-19-88 S-4,5,6
4.00 VERSION 2.0 SYSTEM Hardware And KSU Cards Features And Operation Programming	S-4 S-5	
5.00 SYSTEM COMPONENTS Physical Dimension Weight	S-6	

FIGURE S-1 MOTHERBOARD MODIFICATION
FIGURE S-2 ZT-1632 KSU CONFIGURATION

TABLE S-A DEFAULT KEY ARRANGEMENT
LIST OF ZT-D KEY TELEPHONES
TABLE S-B SYSTEM COMPARISON
TABLE S-C HARDWARE COMPARISON
TABLE S-D V2 FEATURES AND OPERATION

2.00 ZT-824 KSU UPGRADE

2.01 A ZT-824 KSU originally designed for eight (8) CO lines and twenty-four (24) extensions is upgradable to sixteen (16) CO lines and thirty-two (32) extensions. The same KSU hardware is used for the ZT-824/1632 system and this section describes the upgrading procedure and difference in programming.

KSU Upgrading

2.02 Upgrading the ZT-824 KSU to a ZT-1632 KSU requires two changes from the original installation.

Motherboard Modification

One strapping has to be removed from the motherboard to change the system recognition by the system CPU from the 824 configuration to 1632.

1. Turn off the power supply and remove the CPUHW card.
2. Cut off a solid strapping wire marked S-8 above the middle of the CPUHW card connector as illustrated in Figure S-1.

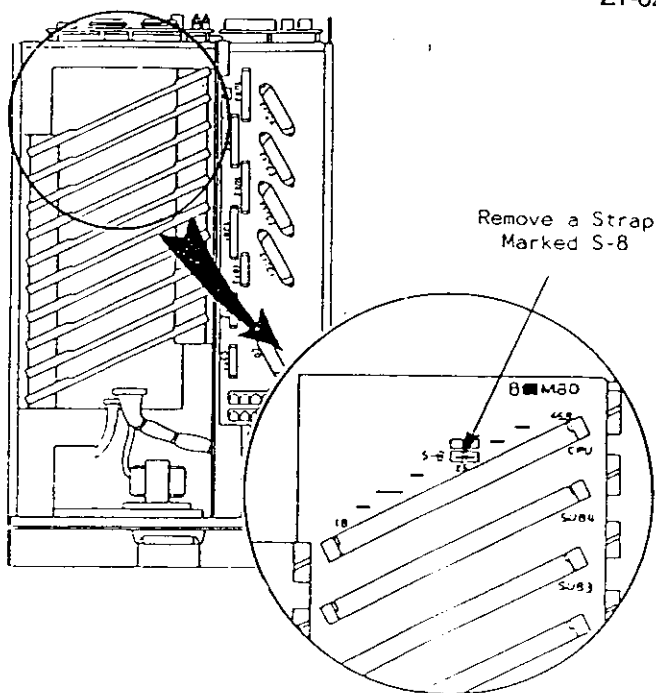


FIGURE S-1 MOTHERBOARD MODIFICATION

Power Supply Requirement

Since the ZT-PWSB has power supply capacity to support up to an 824 system configuration, the larger supply, ZT-PWSC must be used for the upgraded ZT-1632 KSU.

Circuit Card Location

2.03 The upgrading motherboard modification enables two card slots to operate differently from the ZT-824;

Unused slot under CPUHW slot:

For SUB4 card to connect Ext. No. 144 through No. 151

OPT slot between COT1 and SUB1 slots:

For COT2 card to connect CO lines No.9 through No.16, or OPT card.

Refer to Figure S-2 for the new card configuration.

System Programming

2.04 System programming is the same regardless of the model of the KSU. There are three key telephone default key assignments by the KSU as listed in Table S-A. Note that the ZT-1632 system follows the default assignment of the ZT-2464 while ZT-824 system has its own assignment.

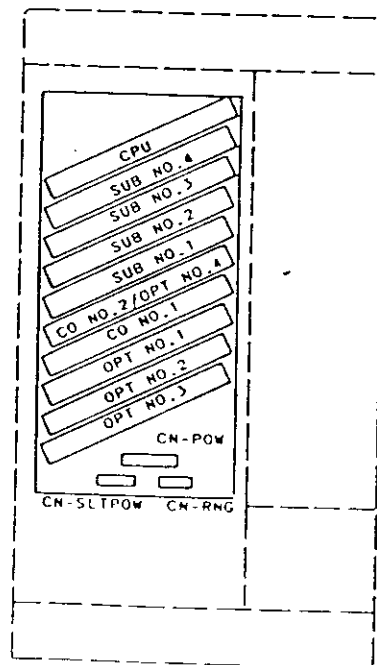


FIGURE S-2 ZT-1632 KSU CONFIGURATION

TABLE S-A DEFAULT KEY ARRANGEMENT LIST
OF ZT-D KEY TELEPHONES

	ZT-616				ZT-824				ZT-1632/2464			
	6K/D	8K/D	12K/D	24K/D	6K/D	8K/D	12K/D	24K/D	6K/D	8K/D	12K/D	24K/D
LK1	CO1	CO1	CO1	CO1	CO1	CO1	CO1	CO1	CO1	CO1	CO1	CO1
LK2	CO2	CO2	CO2	CO2	CO2	CO2	CO2	CO2	CO2	CO2	CO2	CO2
LK3	CO3	CO3	CO3	CO3	CO3	CO3	CO3	CO3	CO3	CO3	CO3	CO3
LK4	CO4	CO4	CO4	CO4	FLT	CO4	CO4	CO4	FLT	CO4	CO4	CO4
LK5	CO5	CO5	CO5	CO5	FLT	CO5	CO5	CO5	FLT	CO5	CO5	CO5
LK6	CO6	CO6	CO6	CO6	PARK	CO6	CO6	CO6	PARK	FLT	CO6	CO6
LK7	-	MSG	D120	D120	-	CO7	CO7	CO7	-	FLT	CO7	CO7
LK8	-	OVER	D121	D121	-	CO8	CO8	CO8	-	PARK	CO8	CO8
LK9	-	-	MSG	D122	-	-	MSG	D120	-	-	CO9	CO9
LK10	-	-	OVER	D123	-	-	OVER	D121	-	-	FLT	CO10
LK11	-	-	C.BAK	D124	-	-	C.BAK	D122	-	-	FLT	CO11
LK12	-	-	SPD	D125	-	-	SPD	D123	-	-	PARK	CO12
LK13	-	-	-	D126	-	-	-	D124	-	-	-	CO13
LK14	-	-	-	D127	-	-	-	D125	-	-	-	CO14
LK15	-	-	-	D128	-	-	-	D126	-	-	-	CO15
LK16	-	-	-	D129	-	-	-	D127	-	-	-	CO16
LK17	-	-	-	D130	-	-	-	D128	-	-	-	CO17
LK18	-	-	-	D131	-	-	-	D129	-	-	-	CO18
LK19	-	-	-	D132	-	-	-	D130	-	-	-	CO19
LK20	-	-	-	D133	-	-	-	D131	-	-	-	CO20
LK21	-	-	-	MSG	-	-	-	MSG	-	-	-	CO21
LK22	-	-	-	OVER	-	-	-	OVER	-	-	-	CO22
LK23	-	-	-	C.BAK	-	-	-	C.BAK	-	-	-	CO23
LK24	-	-	-	SPD	-	-	-	SPD	-	-	-	CO24

NOTES:

1. PARK: Call Park key, C.BAK: CO Call Back key, D120:DSS120 key
2. Square key telephone if 24K/D is assigned for 6K/D, 8K/D and 12K/D.

3.00 MULTIPLE FCC REGISTRATION

3.01 The ZT-D Electronic Key Telephone System is multiple-registered with the F.C.C. Part 68 as a multi-function (hybrid) telephone system and as a key telephone system. This section describes the difference in features and programming of the key telephone (KF) system that were not fully explained in the original issue.

Condition

3.02 The multi-function (MF) telephone system and key (KF) telephone system are differentiated by the CPU/Highway card in all ZT-D series systems.

a. Different Condition

. Fully-protected Multi-function system

Hardware Requirement

....MCPUHW or MCPUHW-1

FCC Registration Number

....BD687Y1-72879-MF-E

. Fully-protected Key Telephone System

Hardware Requirement

....KCPUHW or KCPUHW-1

FCC Registration Number

....BD687Y-16781-KF-E

b. Common Condition

. Ringer Equivalence Number....0.4A/0.8B

. OPS Facility Interface Code

....OL13A/OL13B/OL13C

. Network Addressing Signalling Code...E

Feature And Operation

3.03 As for KF registration - key telephone system - All the automatic route selections for outgoing CO call are prohibited, and the following features differ from the MF registered system;

a. Floating CO Termination

The feature is used to answer incoming and transferred CO calls only.

b. Quick Mode Speed Dialing

The feature can access CO lines automatically when an individual CO line number, not a CO line group number, is program-

med.

3.04 Outgoing CO calls on single line telephones are allowed only by Through Dialing - system operator assistance.

Programming

3.05 The database entry for the floating CO group will be accepted by the KCPUHW card. However the operation is different with the MCPUHW card.

a. Floating CO Group Assignment - Item <29>

The CO Group can be assigned for station LCD display purpose only. The LCD display of the D-type key telephone shows the assigned group number of incoming and outgoing CO lines. Single line telephones, dialing [9][0] through [9][9], are restricted and receive system warning tone.

b. Flexible Key Assignment - Item <78>

When floating functions,

FLT01, FLT02,...., FLT04,

FLT11, FLT21,...., FLT91,

FLT12, FLT22,...., FLT92,

are assigned to key telephones, they can be used to pick up incoming CO calls and camp- on/transfer calls but not to make outgoing CO calls.

c. System And Station Speed Dials

When CO line group codes,

31 through 39

are entered in a speed dial memory, the quick mode operation of the dial returns warning tone to the station. Use Individual CO line codes only,

01 through 24

for the system with the KCPUHW.

4.00 VERSION 2.0 SYSTEM

4.01 A version 2.0 software was introduced in April, 1988 with an enhanced features. The ZT-D system uses the same cabinet but a new CPU card, the KCPUHW-1 or MCPUHW-1. The FCC Registration Number remains same.

TABLE S-B SYSTEM COMPARISON

	VERSION 1.0	VERSION 2.0
System Capacity	24 COs/64 Exts. (with AMPA24 or AMPA24-1)	24 COs/72 Exts. (with AMPA24-1)
Extension Numbering	120-183 (191-193 for Doorphone)	120-190,194
CPU Card	K/MCPUHW	K/MCPUHW-1

Hardware And KSU Cards

4.02 The new KSU cards in comparison with the existing card are listed in Table S-C. Note that the SDIFC card are compatible with the K/MCPUHW-1 but can not operate SCDR and PC Programming at the same time.

TABLE S-C HARDWARE COMPARISON

	VERSION 1.0	VERSION 2.0
CPU Card	CPUHW	CPUHW-1
CPU	Z80	Enhanced HD64180R1
CPU Clock Speed	4 Mega Hertz	8 Mega Hertz
ROM	96 K Byte	256 K Byte
RAM	96 K Byte	192 K Byte
SDIFC	X	-
SDIFC-1	X	X
RECV2/8	X	X
RECV2-1/8-1	X	X
ERCV8	-	X
ZT-24X	Works as ZT-24D	X
ZT-12X	Works as ZT-12D	X

Features and Operation

4.03 Features and the related operations are listed in Table S-D. Note that important two changes described below.

a. Message Operation

To leave a message:

[Dial An Extension No.] - [6]

To cancel a message:

[Dial An Extension No.] - [5]

b. Speed Dial Registration

To register a system speed dial for Optimized Routing:

[00-79] - [CO Group No.]

- [#] - [Dial Number]

To register a station speed dial for Optimized Routing:

[80-99] - [#] - [Dial Number]

Programming

4.04 New programming items are explained in the ZT-D Technical Manual Addendum A.

a. Additional DSS Key Function

[DSS156].....System Speed Dial

[DSS157].....OPT1 Key Assignment

[DSS158].....OPT2 Key Assignment

[DSS184]-[DSS190], [DSS194] (eight DSS

Keys at bottom of the second DSS-32C

....Extension Assignment

TABLE S-D V2 FEATURES AND OPERATION

	VERSION 1.0	VERSION 2.0
DISA	-	X
Optimized Routing	-	X
Conference Ckt. Gain Control	-	X
Dial Confirmation Tone	Special Software (System basis)	Programmable (Station basis)
Voice Mail Line Assign.	-	X
Page Key Assign.	All Call Page	Programmable
Floating Group Access Key	Busy after a Call is parked	Idle after a Call is parked
ICM Hunt Group	-	X
CO Hunt Group	X	X
Speed Dial	X	More Flexibility
Direct System SPD Key	-	X
Message Waiting	Set *6*, Cancel *6*	Set *6*, Cancel *5*
DND Station	Receive Paging	Does not Receive Paging
Incoming BLF Indication	Every Ringing Exts.	No BLF due to System Speed Up.

5.00 SYSTEM COMPONENTS

5.01 Physical Dimension

a. Key Service Unit

ZT-D 616	17.8"hx12.9"wx10.9"d
ZT-D 824/1632	26.0"hx14.5"wx10.9"d
ZT-D 2464	35.5"hx14.5"wx10.9"d

5.02 Weight

a. Key Service Unit

ZT-D 616	15.5 lbs
ZT-D 824/1632	29.5 lbs
ZT-D 2464	38.0 lbs
PWSB	11.5 lbs
PWSC	16.0 lbs

ZT-D SERIES ELECTRONIC KEY TELEPHONE SYSTEM ADDENDUM D - VERSION 4.5 ENHANCEMENT

VOICE MAIL INTEGRATION PART

CONTENTS	PAGE
1.00 GENERAL	1
1.01 Introduction	1
1.02 Upgrading	1
2.00 VOICE MAIL INTEGRATION	1
2.01 General	1
2.02 Requirements	2
2.03 Limitations	2
2.04 In-Band Packet Format	2
2.05 Call Progress Tone to VM/AA Port	3
2.06 In-Band Packet Listing	4
2.07 Status Listing for Each Packet	5
3.00 SYSTEM USER'S OPERATION	6
3.01 General	6
3.02 Station Users	6
3.03 DISA Callers	7
4.00 INSTALLATION	8
4.01 Introduction	8
4.02 CPU Upgrading	8
4.03 Programming Terminal	8
4.04 Programming	9
4.05 System Database	9
4.06 Modified Database	9
4.07 New Database Entry	9
5.00 DATABASE PLANNING SHEET	12

1.00 GENERAL

Introduction

1.01 The ZT-D system Voice Mail Integration features are enhanced with the Version 4.5 software. This Technical Manual Addendum describes the enhanced integration and database programming in the new release.

Upgrading

1.02 The Version 4.5 software operates on the M/KCPUHW-1 CPU only. A software upgrade kit is available for those M/KCPUHW-1 which are already installed with software Versions 3.0 or 4.0. The software upgrade kit consists of two EPROM chips for the M/KCPUHW-1 card, and it is not available for the M/KCPUHW card with Version 1.0 software.

2.00 VOICE MAIL INTEGRATION

General

2.01 The Version 4.5 software provides integration capability with most commercially available Voice Mail and/or Automated Attendant (VM/AA) systems, by sending in-band DTMF packet signals that identify the call status when the VM/AA system answers the call. The degree of the integration depends upon the packet handling capability of the VM/AA system and status information from the ZT-D system. The major enhancement of the Version 4.5 software is the user programmable DTMF packet strings. The VM/AA ports can be either assigned the AAVM mode or AA mode.

Requirements

2.02 A Single Line Subscriber Card (SLSB8 or SLKT8) circuit provides the connection to the VM/AA ports. A DTMF receiver circuit card (RECV8-1 and/or ERCV8-1) is also required.

- . SLSB8 or SLKT8
- . RECV8-1 and ERCV8-1 (option)

Limitations

2.03 The ZT-D system allows to install the VM/AA ports EXT.144 through EXT.151 only and up to 6 ports in total. This limitation is identical with the Version 3.0 or 4.0 software.

In-Band Packet Format

2.04 In-Band packets are classified as shown in Figure 1, and are sent to the AA/VM under the conditions listed in Table 1.

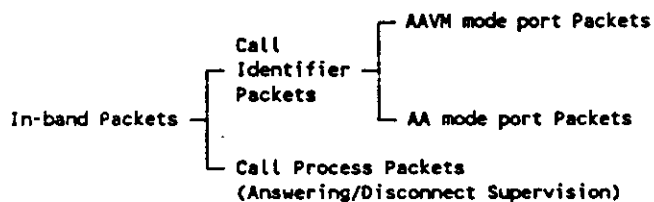


FIGURE 1 IN-BAND PACKET CLASSIFICATION

a. Call Identifier Packets

When a call answered by a VM/AA port call identifier packet is sent to the VM/AA system. The packets contain the following information.

[Pause 1] + [Packet] (+ [Pause 3]) + [Ext or Trunk No.]

Pause 1: Pre-dial Pause. The pause time between the VM/AA port closing the loop and the first digit of the packet being sent. Programmable 0 to 10 seconds.

Packet: Call Type Identifier. There are seventeen types, and each packet string can be programmable from 0 to 4 digits. The digits are 0 through 9, * and #. If there are no digits programmed in the packet string, the extension number or trunk number is sent.

Pause 3: In-Packet Pause Time. Programmable 0 to 10 seconds.

Ext. or Trunk No.:

The value depends upon the proceeding call identifier. The trunk no. can be denied in programming.

b. Answering Supervision Packet

When a call from the VM/AA port is answered by a station upon transferring a call to the station.

[Pause 1] + [Packet 14]

Pause 1: The pause between the station answering a call and the packet being sent.

Packet: Answering Supervision Packet. Programmable between 0 to 4 digits and the digits are 0 through 9, * and #.

c. Disconnect Packet

The disconnect packet will be sent when the ZT-D station or trunk connected to the VM/AA port has been hung-up.

[Pause 2] + [Packet 19]

Pause 2: The pause time between the station or the trunk hanging-up and the first digit of the packet being sent.

Packet: Disconnect Packet. Programmable between 0 to 4 digits and the digits are 0 through 9, * and #.

d. Message Waiting Lamp Control

VM/AA system can leave (turn on a MSG lamp) or cancel (turn off a MSG lamp) KT's. Any port programmed as AAVM or AA mode port can control the MSG lamp.

To leave a message (turn on a MSG lamp):

[Off-hook] + [Confirm Dial Tone]

[Dial; 1 * 1 + Ext. No.] + [On-hook]

To cancel the message (turn off a MSG lamp):

[Off-hook] + [Confirm Dial Tone]

[Dial; 1 * 0 + Ext. No.] + [On-hook]

Note: Upon the completion of dialing from the VM/AA port, the ZT-D system will send a Confirmation Tone.

Call Progress Tone to VM/AA Port

2.05 The ZT-D system provides the following call progress tone to the VM/AA ports at individual cases:

a. ICM Dial Tone (400 Hz, continuously):

1. When a VM/AA port closes the loop (off-hook).
2. After a VM/AA performs hook-flash while talking to a station or a trunk.

b. Ring Back Tone (440/480 Hz, 1 second on/3 seconds off):

1. When a VM/AA port calls an idle station.
2. When a VM/AA port calls a busy station and dials [*], which allows Off-hook Signaling.

c. Busy Tone (480/620 Hz, 0.5 second on/off):

1. When a VM/AA port calls a busy station which is denied the Off-Hook signaling or is protected.
2. When a VM/AA port calls a DND station.

d. Invalid Tone (480/620Hz, 0.2 second on/off):

1. When a VM/AA port dials an invalid number.

e. Confirmation Tone (440 Hz, 0.1 second on/off):

1. Upon a completion of the MSG lamp control dial from a VM/AA port.

In-Band Packet Listing

2.06 The following table lists the typical in-band packet application of the ZT-D database.

TABLE 1 IN-BAND PACKET LISTING

State. No.		AAVM Mode Port Packet	AA Mode Port Packet
1.	When it answers a direct CO incoming call.	[Pkt_01] + Trunk No.	[Pkt_01] + Trunk No.
2.	When it answers a direct ICM incoming call. (Station dials "54" on ICM Dial Tone.)	[Pkt_02] + [0] [0]	[Pkt_02] + [0] [0]
3.	When it answers a direct ICM incoming call. (Station dials "56 + EXT.No" on ICM Dial Tone.)	[Pkt_06] + EXT. No.	[Pkt_06] + EXT. No.
4.	When it answers an unscreened transferred CO call. (Station dials "54" upon transferring a CO call.)	[Pkt_03] + Trunk No.	[Pkt_03] + Trunk No.
5.	When it answers an unscreened transferred ICM call. (Station dials "54" upon transferring an ICM call.)	[Pkt_04] + [0] [0]	[Pkt_04] + [0] [0]
6.	When it answers an unscreened transferred CO call. (Station dials "56 + EXT.No" upon transferring a CO call.)	[Pkt_07] + EXT. No.	[Pkt_07] + EXT. No.
7.	When it answers an unscreened transferred ICM call. (Station dials "56 + EXT.No" upon transferring an ICM call.)	[Pkt_08] + EXT. No.	[Pkt_08] + EXT. No.
8.	When it answers a forwarded CO call.	[Pkt_09] + EXT. No.	[Pkt_15] + Trunk No.
9.	When it answers a forwarded ICM call.	[Pkt_10] + EXT. No.	[Pkt_16] + [0] [0]
10.	When it answers a Camp-on Recall of a CO or an ICM.	[Pkt_11] + EXT. No.	[Pkt_17] + EXT. No.
11.	When it answers a Recall of a CO/ICM call attempted DND station.	[Pkt_12] + EXT. No.	[Pkt_18] + EXT. No.
12.	When it answers a Recall of a CO/ICM call attempted to an invalid station number.	[Pkt_05] + Trunk No.	[Pkt_05] + Trunk No.
13.	When it answers an ICM call from a station dialing "6" or pressing a MSG key to retrieve a message.	[Pkt_13] + EXT. No.	[Pkt_13] + EXT. No.
14.	When a called station from a VM/AA port answers.	[Pkt_14]	[Pkt_14]
15.	When a station or trunk connected to a VM/AA port hangs-up.	[Pkt_19]	[Pkt_19]

Note: 1. In the status number 3, 6 and 7, the station user can dial any 3 digits (000 to 999) after dialing "56". The system re-generates the 3 digits following packets 6, 7 or 8.
 2. The trunk number is 01 through 24 according to the CO line which is connected to the VM port. For the ICM call in the status number 2, 5, 9 and 12, the 00 is sent as the trunk number.

Status Listing for Each Packet

2.07 The following list shows all the conditions in which packets may be sent to a VM/AA port.

a. VM/AA Port Call Identifier Packets

[Packet_01] (+ Trunk No.): for AAVM and AA

1. When it answers a direct incoming CO call. (DIL to VM/AA port.)

[Packet_02] (+ [0][0]): for AAVM and AA

1. When it answers an ICM call from a station which dialed either "54" or the AAVM or AA mode port's extension number.
2. When it answers a call from a DISA line that the DISA caller dials "54".

[Packet_03] (+ Trunk No.): for AAVM and AA

1. When it answers an unscreened transferred CO call from a station which dialed either "54" or the extension number of the AAVM or AA mode port upon transferring.
2. When it answers an ICM call from a station which has consultation hold CO and has dialed either "54" or the extension number of the AAVM or AA mode port. (an ICM call for a screen transfer of CO call)

[Packet_04] (+ [0][0]): for AAVM and AA

1. When it answers an unscreened transferred ICM call from a station which dialed either "54" or the extension number of the AAVM or AA mode port upon transferring.
2. When it answers an ICM call from a station which has consultation hold ICM and has dialed either "54" or the extension number of the AAVM or AA mode port. (An ICM call for a screen transfer of ICM call.)

[Packet_05] (+ Trunk No.): for AAVM and AA

1. When it answers a recall which was attempted to an invalid number by the AAVM or AA mode port.

[Packet_06] + Ext. No.: for AAVM and AA

1. When it answers an ICM call from a station which dialed "56 + Ext. No.".
2. When it answers a call from a DISA line that

the DISA caller dialed "56 + Ext.No.".

[Packet_07] + Ext. No.: for AAVM and AA

1. When it answers an unscreened transferred CO call from a station which dialed "56 + Ext. No.".
2. When it answers an ICM call from a station which has consultation hold CO and dialed "56 + Ext. No.". (An ICM call for a screen transfer of a CO call.)

[Packet_08] + Ext. No.: for AAVM and AA

1. When it answers an unscreened transferred ICM call from a station which dialed "56 + Ext. No.".
2. When it answers an ICM call from a station which has consultation hold ICM and dialed "56 + Ext. No.". (An ICM call for a screen transfer of an ICM call.)

[Packet_09] + Ext. No.: for AAVM only

1. When it answers a forwarded direct incoming CO call.
2. When it answers a forwarded unscreened transferred CO call.
3. When it answers a forwarded screened transferred call on CO.

[Packet_10] + Ext. No.: for AAVM only

1. When it answers a forwarded ICM call.
2. When it answers a forwarded unscreened transferred ICM call.
3. When it answers a forwarded screened transferred call on ICM.

[Packet_11] + Ext. No.: for AAVM only

1. When it answers a camp-on recall the VM/AA port attempted.

[Packet_12] + Ext. No.: for AAVM only

1. When it answers a recall after the port attempted calling a DND station.

[Packet_13] + Ext. No.: for AAVM and AA

1. When it answers a call from a station which dialed "6" or pressing a MSG key to retrieve a message in the VM/AA system.
2. When a station dials "56" and the own extension number as the mailbox number.

[Packet_15] (+ Trunk No.): for AA only

1. When it answers a forwarded direct incoming CO call.
2. When it answers a forwarded unscreened transferred CO call.
3. When it answers a forwarded screened transferred call on CO.

[Packet_16] (+ [0][0]): for AA only

1. When it answers a forwarded ICM call.
2. When it answers a forwarded unscreened transferred ICM call.
3. When it answers a forwarded screened transferred call on ICM.

[Packet_17] + Ext. No.: for AA only

1. When it answers a camp-on recall the VM/AA port attempted.

[Packet_18] + Ext. No.: for AA only

1. When it answers a recall after the port attempted to call a DND station.

b. VM/AA Port Call Process Packets

[Packet_14] : for AAVM and AA

When a station answers a call from a VM/AA port upon screen transfer.

[Packet_19] : for AAVM and AA

When a station or trunk connected to an AAVM or AA mode port hangs-up. (Disconnect Packet)

3.00 SYSTEM USER'S OPERATION

General

3.01 This section describes the typical operations associated with the Voice Mail/Auto. Attendant Integration for the ZT-D system users.

Station Users

3.02 If the system has both AAVM and AA mode ports, a call from a station - including a transferred or forwarded call - will go to the AAVM mode port first. If there are no AAVM mode ports available, the call will go to the AA mode port. Only a forwarded call from an operator station will go to the AA mode port first. If the system has either mode port only, this does not apply.

a. To Transfer an Outside (CO) Party to a MailBox. (To a Personal Greeting.)

{While talking on a CO line}

[TRAN] + "56" + "Mail Box No." + [On-hook]

([TRAN]) + [Mail Box n] + [On-hook]

- Note: 1. The "Mail Box Number" after dialing "56" can be entered using any 3 digits between 000 to 999.
2. When the station user transfers a call by screening, the outside party will hear the greeting in the middle. Therefore, it is good practice to transfer an unscreened call.

b. To Transfer an Internal (ICM) Party to a MailBox. (To a Personal Greeting.)

{While talking on an ICM line}

[TRAN] + "56" + "Mail Box No." + [On-hook]

([TRAN]) + [Mail Box n] + [On-hook]

- Note: 1. The "Mail Box Number" after dialing "56" can be entered using any 3 digits between 000 to 999.
2. When the station user transfers a call by

screening, the internal party will hear the greeting in the middle. Therefore, it is good practice to transfer an unscreened call.

c. To transfer an Outside (CO) Party to a Voice Mail (To a General Greeting)

{While talking on a CO line}

[TRAN] + *54* + [On-hook]

([TRAN]) + [V-Mail] + [On-hook]

Note: 1. When the station user transfers a call by screening, the outside party will hear the greeting in the middle. Therefore, it is good practice to transfer an unscreened call.

d. To transfer an Internal (ICM) Party to a Voice Mail (To a General Greeting)

{While talking on an ICM line}

[TRAN] + *54* + [On-hook]

([TRAN]) + [V-Mail] + [On-hook]

Note: 1. When the station user transfers a call by screening, the outside party will hear the greeting in the middle. Therefore, it is good practice to transfer an unscreened call.

e. To Retrieve Messages in the Mail Box

{While the MSG key is flashing}

Dial *6* or

Hit the MSG key.

Note: 1. If the KT does not have a MSG key, the FEAT key will flash.
2. If there are messages from other stations, the above operation will call the VM/AA system first.

f. To Forward A Call to the Mail Box (To a Personal Greeting)

[Off-hook] + [FEAT] + [FWD] + *54* + *0*, ** or *#*

0: All Call

***: Busy/No Answer

#: No Answer

Note: 1. The Fixed Call Forward to the VM/AA ports is also available by the programming.
2. When a station sets the Call Forward to VM/AA ports, the forwarded call will go to AAVM mode ports first, if the system has both AAVM and AA mode ports.
3. When an operator station sets the Call Forward to VM/AA ports, the forwarded call will go to AA mode ports first, if the system has both AAVM and AA mode ports.

DISA Callers

3.03 The outside party calling the system through DISA can also access the VM/AA system. If the system has both AAVM and AA mode ports, the call from the DISA will go to AAVM mode ports first. The operation is as follows:

a. To Get into a Voice Mail (General Greeting)

{While on system ICM Dial Tone}

Dial *54*

b. To Get into a Mail Box (Personal Greeting)

{While on system ICM Dial Tone}

Dial *56* + *Mail Box Number*

Note: 1. The *Mail Box Number* after dialing *56* can be entered using any 3 digits between 000 to 999.

4.00 INSTALLATION

Introduction

4.01 This section describes the procedures to program new customer database items added in the Version 4.5 software of the ZT-D Key Telephone System. Planning sheets to design the customer database for the new features are provided at the end.

CPU Upgrading

4.02 This section describes the procedure to upgrade the pre-installed ZT-D system to Version 4.5. The upgrading will be done in two steps: replacing the EPROMs on the M/KCPUHW-1 card and then programming additional database items.

a. Replacing EPROMs

The following procedure is required to replace the EPROM on the M/KCPUHW-1 card in the system.

1. Make sure that switch SW1 on the M/KCPUHW-1 card is set to the "RUN" (protect) position, and a Lithium battery is properly connected on the board.
2. Turn off the system main power.
3. With a wrist band to discharge static, pull out the M/KCPUHW-1 card from the motherboard connector.
4. Remove two EPROM chips from their sockets ROM1 and ROM2 carefully, using a small screwdriver or EPROM puller.
5. Insert the new set of EPROMs that contain the Version 4 software into the socket with the matching number mark.
6. Plug the M/KCPUHW-1 card into the motherboard connector.
7. Turn on the system main power.
8. At the programming extension, with the handset on-hook (Speaker off), Enter [0] and

a specific password to set the system into programming mode at Extension No. 120.

9. Enter the desired Program Item Number to initiate the programming. The Program Index Numbers are listed in Table 3.

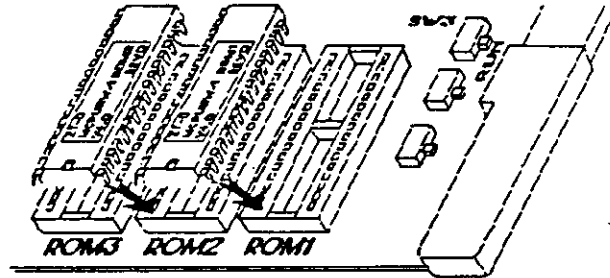


FIGURE 2 CPU UPGRADING

Programming Terminal

4.03 A ZT-24KTX key telephone and ZT-DSS console(s) is required to program the system database on-site. They must be placed in the station positions No. 120(KT), No. 121(DSS). Also, No. 122(DSS) is needed, if more than 32 stations are installed with the system.

The programming functions of their keys and lamps are listed in Table 2.

**TABLE 2
 PROGRAMMING KEYS AND LAMPS**

Keys/Lamps	Location	Function
Dial Pad [0] to [9],[*],[#]	KT	Enter the program index number, alphanumeric data.
Dial Pad [#]	KT	Toggles function during programming.
[FLSH] key	KT	Terminates programming after storing data.
[FWD] key	KT	Selects the next program index or data entry after storing data.
[FEAT] key	KT	Selects the previous program index or data entry after storing data.
HOLD/DND key	KT	Enters N code for User Table.
Line [LK] keys	KT	Programs line status.
Line lamps	KT	Indication of line status.
[DSS] keys	DSS	Programs station status.
BLF lamps	DSS	Indication of station status.

Programming

4.04 After system upgrading is completed, new operational functions must be identified, in order to operate the ZT-D system properly. This paragraph describes the programming requirements to activate Voice Mail integration

System Database

4.05 The associated system databases with the Voice Mail integration are listed below, including new databases in Version 4.5:

**TABLE 3
 VERSION 4.5 ASSOCIATED FEATURE
 PROGRAMMING ITEMS**

- <03> Station Type Assignment
- <12> DTMF Receiver Assignment
- <16> Operator Camp-On Recall Timer
- <17> Station Camp-on Recall Timer
- <29> Floating CO Group Assignment
- <40> Station Day Ringing Assignment
- <41> Station Night Ringing Assignment
- <61> Outgoing Call Restriction
- <62> CO Line Pick-up Restriction
- <64> System Speed Dial Access
- <77> Toll Restriction Class
- <87> Call Forward No Answer Timer
- <91-04> Fixed Call Forwarding
- <91-20> Voice Mail DTMF Duration Time*
- <91-21> Voice Mail Pause Timer*
- <91-22> Voice Mail Packet Table*

* Indicates new databases in Version 4.5 software.

Modified Database

4.06 The Voice Mail port assignment in database item <03> Station Type Assignment, has been changed in Version 4.5 software. Only AAVM or AA mode can be assigned in the VM/AA ports. VM mode is no longer valid.

New Database Entry

4.07 To start new database item entries that are sub-items of <91>, the following operation is required from the programming terminal position (Station #120):

Procedure:

1. Press [0] + [FEAT] + [Password]
2. Display indicates input No.nxt,end
3. Enter [9] [1]. The display changes to Ver.4 No.nxt,end
4. Enter subitem numbers [0][1] to [2][2] to proceed to database programming.

5. Press [FWD] to move to the next item or [FEAT] for the previous item.
6. Press [FLSH] to terminate the programming process.

Voice Mail DTMF Duration Time

Item No.: 91-20

Description:

This item determines a DTMF signal duration sent to VM/AA ports. This item applies to the DTMF signal of packets and a DTMF signal from a KT's manual dialing.

Procedure:

1. Display indicates **20. VM DTMF 10 0ms**
2. Enter three digits for signal duration. Valid data is as follows:

**TABLE 4
 DTMF DURATION DATA**

Data	Duration (On/Off)	Data	Duration (On/Off)
005	50 msec. On/Off	025	250 msec. On/Off
010	100 msec. On/Off	030	300 msec. On/Off
015	150 msec. On/Off	035	350 msec. On/Off
020	200 msec. On/Off	500	5 sec. On/Off

3. Press [FLSH] to terminate the entry.

Default:

DTMF Signal Duration = 100 msec. On/Off

Voice Mail Pause Timer

Item No.: 91-21

Description:

This item determines the individual pause timer in the Voice Mail packets. There are three pause timers as follows:

Pause No.1: The pause between the Voice Mail closes a loop and the packet sent.

Pause No.2: The pause between a station or trunk connected to the Voice Mail hanging up and the disconnect packet ([Pkt_19]) sent.

Pause No.3: The pause between the packet and the extension or trunk number sent.

Procedure:

1. Display indicates **21.VM Pause #1**
2. Enter a digit ([1] to [3]) to indicate the pause no.
3. For example, if [2] is pressed, the display will change to **21.VM Pause #2**
4. Press the [FWD] key to proceed to pause timer entry. Display will change to ***Pause Type#2 03s**
5. Enter two digits ([0][0] to [1][0]) that are the length of the pause time.
6. For example, if [0][0] is pressed, the display will change to ***Pause Type#2 00s**
7. Press [FWD] to terminate the process.

Default:

Pause No.1 = 1 second.
 Pause No.2 = 3 seconds.
 Pause No.3 = 1 second.

Voice Mail Packet Assignment

Item No.: 91-22

Description:

This item is to assign individual packet strings. The packet can be assigned 0 to 4 digits, and strings can be entered 0 through 9, * and #. There are twenty packets for entry. The twentieth packet entry is used to determine either trunk number included in the packet strings. None of the data entered in this packet entry means the trunk number is not included.

Procedure:

1. Display indicates **22.VM Packet#01**
2. Enter two digits ([0][1] to [2][0]) to indicate the packet no.

3. For example, if [0][2] is pressed, the display will change to **22.VM Packet#02**
4. Press the [FWD] key to proceed to packet strings entry. Display will change to ***Packet #02=**
5. Enter up to 4 digits ([0] through [9], [*] and [#]) for the packet strings.
6. For example, if [9][*][2] is pressed, the display will change to ***Packet #02=9*2**

To delete the entered packet strings, press the [SPKR] key.

7. Press [FWD] to terminate the process.

Default:

No packet strings are assigned.

5.00 DATABASE PLANNING SHEET

91-20 VOICE MAIL DTMF DURATION TIME	
DTMF DURATION TIME = __ __ 0 msec. ON/OFF (50 - 350 msec, 5 sec. on/off)	

91-21 VOICE MAIL PAUSE TIMER				
Pause Type No.	Type No. 1	Type No. 2	Type No. 3	0 sec. to 10 sec.
Duration	__ __ sec.	__ __ sec.	__ __ sec.	

91-22 VOICE MAIL PACKET ASSIGNMENT			
Packet No.		Packet Strings	Mode
1.	When it answers an direct CO incoming call.	— — — — (+ Trunk No.)	AAVM / AA
2.	When it answers a direct ICM incoming call. (Station dials "54" on ICM Dial Tone.)	— — — — (+ [0][0])	AAVM / AA
3.	When it answers an unscreened transferred CO call. (Station dials "54" upon transferring a CO call.)	— — — — (+ Trunk No.)	AAVM / AA
4.	When it answers an unscreened transferred ICM call. (Station dials "54" upon transferring an ICM call.)	— — — — (+ [0][0])	AAVM / AA
5.	When it answers a Recall of a CO/ICM call attempted to an invalid station number.	— — — — (+ Trunk No.)	AAVM / AA
6.	When it answers a direct ICM incoming call. (Station dials "56 + EXT.No" on ICM Dial Tone.)	— — — — + EXT. No.	AAVM / AA
7.	When it answers an unscreened transferred CO call. (Station dials "56 + EXT.No" upon transferring a CO call.)	— — — — + EXT. No.	AAVM / AA
8.	When it answers an unscreened transferred ICM call. (Station dials "56 + EXT.No" upon transferring an ICM call.)	— — — — + EXT. No.	AAVM / AA
9.	When it answers a forwarded CO call.	— — — — + EXT. No.	AAVM only
10.	When it answers a forwarded ICM call.	— — — — + EXT. No.	AAVM only
11.	When it answers a Camp-on Recall of a CO or an ICM.	— — — — + EXT. No.	AAVM only
12.	When it answers a Recall of a CO/ICM call attempted to a DND station.	— — — — + EXT. No.	AAVM only
13.	When it answers an ICM call from a station dialing "6" or pressing a MSG key to retrieve a message.	— — — — + EXT. No.	AAVM / AA
14.	When a called station from a VM/AA port answers.	— — — —	AAVM / AA
15.	When it answers a forwarded CO call.	— — — — (+ Trunk No.)	AA only
16.	When it answers a forwarded ICM call.	— — — — (+ [0][0])	AA only
17.	When it answers a Camp-on Recall of a CO or an ICM.	— — — — + EXT. No.	AA only
18.	When it answers a Recall of a CO/ICM call attempted to a DND station.	— — — — + EXT. No.	AA only
19.	When a station or trunk connected to a VM/AA port hangs-up.	— — — —	AAVM / AA
20.	(If any digits are assigned here, the Trunk No. will be added in the packet strings.)	— — — —	AAVM / AA

ZT-D SERIES ELECTRONIC KEY TELEPHONE SYSTEM ADDENDUM C - VERSION 4 ENHANCEMENT

CONTENTS	PAGE
1.00 GENERAL	1
Introduction	1
Upgrading	1
2.00 FEATURES AND OPERATIONS	2
New Features	2
Alphanumeric Station ID	2
Busy Bypass Messaging	3
Distributed Hunting	3
Fixed Call Forwarding	4
Facsimile Message Indication	5
Forced Account Code	5
Manual Signaling	6
Personalized Ringing Tone	6
Prime Line Access	6
System Call Park - Attendant Call Park Orbits ..	7
Toll Restriction Override	7
Improved Features	8
Call Forwarding	8
CO Hunt Group Hunting Order	9
DISA - No Password Mode	9
Incoming Call - Float Key	9
SMDR Output Format	10
3.00 PROGRAMMING	11
Introduction	11
CPU Upgrading	11
Programming Terminal	12
Version 4 Feature Programming	12

CONTENTS	PAGE
System Database	12
Modified Database	13
New Database	15

APPENDIX - DATABASE PLANNING SHEET

1.00 GENERAL

Introduction

1.01 The ZT-D system features are enhanced with the Version 4 software release. The Version 4 includes new features and improved features. This ZT-D Technical Manual Addendum describes additional features, operations and the database programming with the new release. Detail of features and operations are described in section 2.00, and programming is discussed in section 3.00.

Upgrading

1.02 The Version 4 software operates on the M/KCPUHW-1 CPU card only. A software upgrade kit is available for those M/KCPUHW-1 which are already installed with software Versions 3.0. The software upgrade kit consists of two EPROM chips for the M/KCPUHW-1 card, and it is not available for the M/KCPUHW card with version 1 software.

2.00 FEATURES AND OPERATIONS

New Features

2.01 The following is a list of new features introduced with the Version 4 software release.

ALPHANUMERIC STATION ID

Description:

Each ZT-D station can be assigned with an alphanumeric name, and it will be displayed, instead of the extension numbers on the key telephone's LCD. For instance, the display style of Version 3 software is treated as a default display in Version 4, and it is shown in the LCD when no ID is programmed in the database. The following lists the differences for Extension No. 125 when replaced with ID "John Doe":

ICM Call

Default

With ID

ICM Incoming Call

Default

With ID

ICM Incoming Call - Forwarded

Default

With ID

ICM Call - Forwarding

Default

With ID

ICM Callback

Default

With ID

ICM Call Busy

Default

With ID

Do not Disturb

Default

With ID

ICM Call Park Recall

Default

With ID

CO Camp-on Call

Default

With ID

CO Camp-on Recall

Default

With ID

CO Incoming Call - Forwarded

Default

With ID

Busy CO Override

Default

With ID

Operation:

As applicable

Conditions:

1. Database must be programmed.
2. Up to 8 digits per station.

Database:

91-03 Alphanumeric Station ID

Hardware:

None

BUSY BYPASS MESSAGING

Description:

This feature provides an alternate way to deliver a message to a busy station without the second voice path. The function is programmed on a key with the contents of messages that are to be displayed on the called key telephone's LCD. (Refer to Manual Signaling.)

Operation:

To send a message to a station under CO/ICM call by Busy Bypass Messaging:

{ICM dial tone}-{Extension No.}-{Busy tone}-
[Message-n]

To return a message:

{ICM message call}-{Message-n]

Conditions:

1. Up to 16 message keys can be programmed in a system. These message keys may be shared with the Manual Signaling feature.
2. When the key is pressed after dialing on an ICM (busy or busy by-pass), the registered station number is ignored and the message is displayed on the called station's LCD.
3. A busy bypass tone sounds the called station's speaker when the key is pressed, unless the speaker is in use.
4. The message key does not work during account code entry.
5. The message on the LCD stays until the station returns a message or goes on-hook.

Database:

78 Flexible Key Assignment, 91-11 Busy Bypass Messaging

Hardware:

ZT-12KTX, ZT-24KTX, ZS-6KTD

DISTRIBUTED HUNTING

Description:

The Version 4 software provides the choice of two hunting schemes for CO Hunt Group: Terminal and Distributed Hunting.

Operation:

{ICM dial tone} + [Hunt Group pilot number]

Conditions:

1. The choice is system wide and covers all of the hunt groups.
2. Four hunt groups, up to 16 stations per a hunt group.
3. The station hunting order is programmable. One station may appear several times in the hunt group.

Database:

52 Hunt Group Station, 91-01 Hunt CO Group Type

Hardware:

None

FIXED CALL FORWARDING

Description:

If a station is programmed with this feature in the database, it will automatically forward incoming calls when the station is busy or does not answer. This forwarding becomes inoperative when the Call Forwarding feature is manually operated.

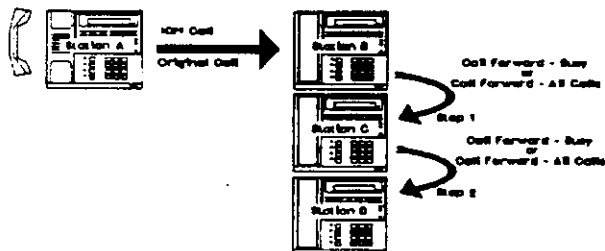
Operation:

None

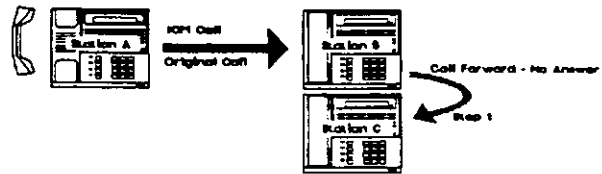
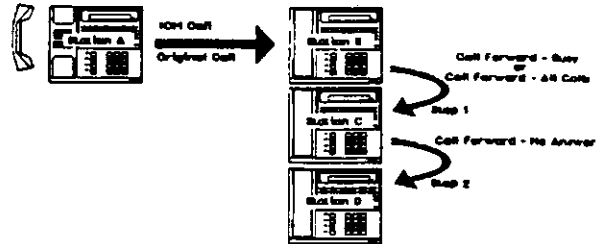
Conditions:

1. This feature operates only when Manual Call Forward is not activated.
2. The Fixed Call Forwarding can only be enabled or disabled through database programming.
3. The following calls will be forwarded through these features:
 - Calls through ICM lines
 - ICM/CO Camp-on calls
 - DISA calls
4. Two programmable modes of Fixed Call Forwarding are available:
 - Busy/No Answer Call Forward to an extension
 - Busy/No Answer Call Forward to Voice Mail
5. The destination station number of the Fixed Call Forwarding must be programmed in the database and cannot be changed by the station operation.
6. All applicable calls will be fixed-call-forwarded when the station is in DND.
7. When a destination of Fixed Call Forwarding is in DND, a camped-on call recalls the transferring station.
8. Steps for Call Forwarding are the same as for Manual Call Forwarding.

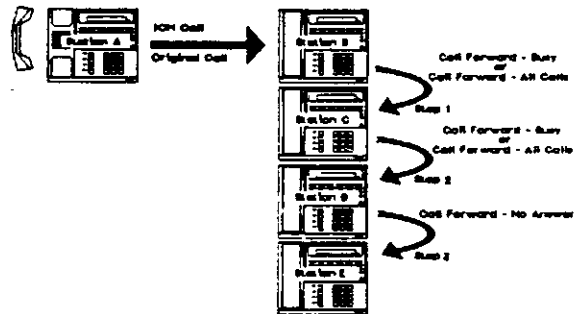
Two steps for extensions with "No Answer Forwarding"



"No Answer Forwarding" is always the last step;



"No Answer Forwarding" provides one extra step if the station is at the second step:



Database:

91-04 Fixed Call Forwarding

Hardware:

None

FACSIMILE MESSAGE NOTIFICATION

Description:

A facsimile machine is usually connected to a single line port in the ZT-D system, and the user has no way of knowing if facsimile calls are received, unless the machine is placed right next to a station. With this feature the facsimile machine will automatically send a message to a preset station to turn on the message lamp and/or indicate it on the LCD display of the station, after it receives facsimile calls.

Operation:

To clear the FAX message: [MSG] or [6]

Conditions:

1. The facsimile machine can only be connected to a single line port, and the port must be identified by the database programming.
2. A key telephone that receives the message from the facsimile machine must be identified by the database programming.
3. When the facsimile receives a call that is longer than the time set in "Minimum facsimile call time", the preset station receives a message as soon as the facsimile reception is completed.
4. The facsimile call appears as "MSG FAX" on the LCD of the preset station.
5. The [FEAT] LED will light to indicate a facsimile call when no [MSG] key is provided on the assigned station.
6. The order of priority on the message LAMP indication is as follows:
 - Voice Mail (highest: fast flash lamp)
 - Fax (slow flash lamp)
 - Station Message (lowest: steady on)
7. A single line port programmed as the facsimile port still provides all of the single line functions.

Database:

03 Station Type Assignment, 91-14 Fax Message Notification (Facsimile port, Notification Station, Minimum Valid Facsimile Call Time)

Hardware:

None

FORCED ACCOUNT CODE

Description:

This feature restricts a station from making outgoing calls without entering account codes.

Operation:

Fixed code length:

Outgoing Calls

{Off-hook} + [Con](or[FLTn]/[OPT]) + {1st dial tone} + [Account Code] + {2nd dial tone} + [dial]

Redial

{Off-hook} + [#] + [Account Code]

Variable code length:

Outgoing Calls

{Off-hook} + [Con](or[FLTn]/[OPT]) + {1st dial tone} + [Account Code] + [*] + {2nd dial tone} + [dial]

Redial

{Off-hook} + [#] + [Account Code] + [*]

Conditions:

1. The system data can set Forced Account Codes for either fixed or variable length.
2. The Account Code length can be 1 to 12 digits.
3. When a variable length is selected, the user can enter from 1 to 12 digits for the account code, but it must be followed by [*], except for 12 digits.
4. The dialed number for the outgoing calls is still subject to toll restriction.
5. Stations set for Forced Account Code entry cannot enter an optional account code.
6. SCDR printout can be masked by programming.
7. The DISA calls do not require account code entry before making outgoing calls even though a Forced Account Code station is referred to determine the COS.
8. The Forced Account Code station can dial five emergency numbers without entering an account code, but these numbers must also be allowed in the Toll Restriction Table.

Database:

91-08 Forced Account Code Station, 91-10 Forced Account Code Digit Length, 91-15 Emergency Dial Table, 91-07 Account Code Masking Position and Digits

Hardware:None

MANUAL SIGNALING

Description:

This feature is an updated button buzzer operation that allows a station user to press a button on their phone to signal a pre assigned station by sending a special tone to the speaker and a text message to the LCD. (Refer to Busy Bypass Messaging.)

Operation:

To send a message to a preset station:
{Off-hook} or {Idle} + [Message-n]

Conditions:

1. Up to 16 message keys can be programmed in a system. These message keys may be shared with the Busy Bypass Messaging feature.
2. The extension number must be registered on the key for the Manual Signaling operation.
3. When the key is pressed, the called station LCD displays the message regardless of the station's status: busy or idle.
4. A busy bypass tone sounds the called station's speaker when the key is pressed, unless the speaker is in use.
5. The message key will not work during the account code entry.
6. The message stays on the LCD until the station returns a message or goes on-hook.

Database:

78 Flexible Key Assignment, 91-11 Busy Bypass Messaging

Hardware:

None

PERSONALIZED RINGING TONE

Description:

Every key telephone can select one of four ringing tones to differentiate its CO ringing tone from the adjacent stations.

Operation:

To select a ringing tone:
[Off-hook] + [FEAT] + [SPEAKER] + [0] + [Tone ID]

Tone ID	
[0]=440/480 hz.	[2]=440/620 hz.
[1]=480/620 hz.	[3]=350/440 hz.

Conditions:

1. The default value of the ringing tone is 440/480 hz.
2. This tone is applied to
 - . DIL calls (DIL to single station only)
 - . Unscreened transfer calls
 - . UCD calls
 - . Group Hunt calls

Database:

None

Hardware:

None

PRIME LINE ACCESS

Description:

A station will automatically access a prime line upon going off-hook, when programmed in the station database. The prime line access can be selected from an Intercom line, Individual CO line, Floating CO group, or Optimized Outgoing access.

Operation:

[Off-hook]

Conditions:

1. This feature is available individually for each station.
2. One of the following selections must be registered in the station's database to enable this feature:
 - . Intercom line (system default)
 - . CO line Number
 - . Floating CO group Number
 - . Optimized Outgoing access.
3. When the station is programmed for Forced Account Code entry station <91-08>, CO dial tone is returned after the appropriate account code entry.

Database:

29 Floating CO Group Assignment, 91-05 Prime Line CO, 91-06 Prime Line Access

Hardware:

None

SYSTEM CALL PARK - Attendant Call Park Orbits

Description:

A ZT-D system attendant station can use eight attendant call park orbits to hold calls temporarily. The call parked in the orbits can be picked up by any one of the system extensions by dialing [101] through [108] ICM.

Operation:

To park: {while on a CO call} - [PAGE] or [GPAGEn]
- {orbit no. on LCD}

To pickup: {at ICM dial tone} - [1][0][1] through
[1][0][8]

Conditions:

1. Park numbers are 101 through 108.
2. When all park orbits are in use, the next call will be placed on a system hold.
3. The direct CO line pickup key on the key telephones remains busy while the call is parked by the attendant.

Database:

None

Hardware:

None

TOLL RESTRICTION OVERRIDE

Description:

This feature allows a KT to make outgoing calls allowed by the COS provided with the Toll Restriction Override codes, not by the COS of the KT.

Operation:

{At ICM dial tone} + [FEAT] + [0] + [Override code] + {2nd dial tone} + [CO] (or [FLTn]/[OPT]) + [dial]

Conditions

1. Up to eight override codes can be registered in the system database.
2. The Override codes may be up to 12 digits in length, and may be any digit (0-9), which may be

used with the ability to have wild card number "N" entry.

3. When a wildcard number is registered it means any number of "0" to "9" may be used, e.g. the registered override code "2472N" allows ten uses: "24720", "24721", "24722",....., "24729".
4. The Override codes must be programmed with the related station numbers. The following database items determine the COS for outgoing calls using the Override codes;

61	Outgoing Call Restriction
62	CO Line Pick-up Restriction
63	System Toll Speed Dial
64	System Speed Dial Access
77	Toll Restriction Class
80	ICM Group (restricts system speed dial access)
85-02	Forced Optimized Station

5. The physical KT's COS is replaced with a new COS when an Override code is entered, and returns to the original COS when the call is terminated.
6. Last Number Redial and Saved Redial functions do not work for calls made using Override codes.
7. When an Override code is entered, a Forced Account Code is not required even the station is assigned to use it.
8. The dialed number of outgoing calls is still subject to toll restriction by the Toll Restriction Override code's COS.

Database:

91-09 Toll Restriction Override Code Table, 91-07 Account Code Masking Position and Digits

Hardware:

None

Improved Features

2.02 The following is a list of features that are improved in operational functionality.

CALL FORWARDING

Description:

The Call Forwarding modes in the ZT-D system are changed to more usable modes: All Call Forward, No Answer Call Forward, and Busy/No Answer Call Forward. This forwarding feature is operated by the telephone users and the destination can be selected Fixed Call Forwarding overridden when the Call Forwarding feature is manually operated.

Operation:

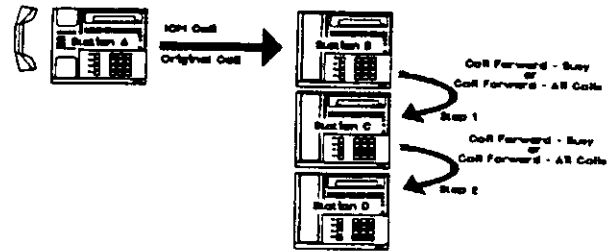
None

Conditions:

1. The Fixed Call Forwarding is overridden when the Call Forwarding feature is manually operated.
2. Following calls will be forwarded through this features;
 - Calls through an ICM lines
 - ICM/CO camp-on calls
 - DISA calls
3. Three forwarding modes of Call Forwarding can be selected:
 - (1) All Call Forward
 - (2) Busy/No Answer Call Forward
 - (3) No Answer Call Forward

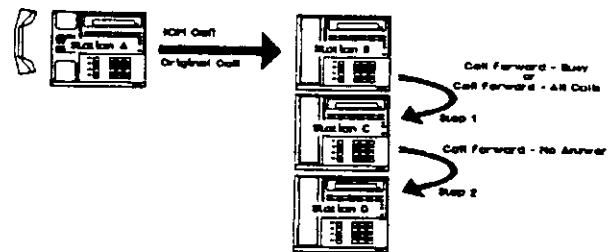
Note: Call Forward to Hunt group works All Call Forward mode only.
4. Steps of call forwarding depends upon the forwarding modes:

Two steps for extensions not "No Answer Forwarding":

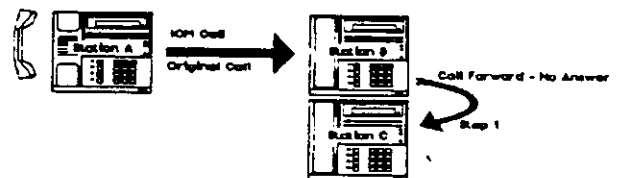


Ext. No.1 (All/Busy) --Ext. No.2 (All/Busy)--Ext. No.3

"No Answer Forwarding" is always the last step:

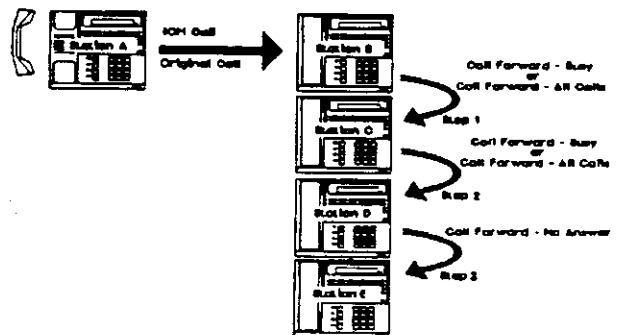


Ext. No.1 (No Answer) --Ext. No.2



Ext. No.1 (All/Busy) --Ext. No.1 (No Answer) --Ext. No.3

"No Answer Forwarding" provides one extra step if the station is at the second step:



Ext. No.1 (All/Busy)--Ext. No.2 (All/Busy)--Ext. No.3 (No Answer)--Ext. No.4

5. When the station is set with "Busy/No Answer Call Forward to a hunt group", incoming CO calls are not forwarded.
6. When a destination of call forwarding is in DND, a camped-on call recalls the transferring station.

Database:

87 Call Forward No Answer Timer

Hardware:

None

CO HUNT GROUP HUNTING ORDER

Description:

The Version 4 software allows for flexible station hunting order assignment in the hunt group. The flexible station hunting order is available only for CO Hunt Groups.

Operation:

{ICM dial tone} + [Hunt group number]

Conditions:

1. Four hunt groups. Up to 16 stations per a hunt group.
2. The station hunting order is programmable. One station may appear several times in the hunt group. (For example:
EXT.A --> EXT.B --> EXT.A --> EXT.C --> EXT.A)

Database:

52 CO Hunt Group

Hardware:

None

DISA - No Password Mode

Description:

An outside caller can use the ZT-D's DISA feature without entering a passwords. No password operation allows only ICM calls and ICM group calls following the assigned station's class of service.

Operation:

{After DISA answers and returns a dial tone}-{dial}

Conditions:

1. No password is required if the CO line for DISA calls is programmed to refer to a station number (class of service).
2. A password is required if the CO line for DISA calls is not programmed to refer to a station number (class of service).
3. The ZT-D system returns a DISA dial tone immediately after answering an incoming call for no password mode operation.

Database:

35 DISA CO Line, 36 DISA Activating Station, 37 DISA Access Activation
91-02 DISA Direct Dial COS

Hardware:

RECV8-1 or RECV2-1

INCOMING CALL - Float Key

Description:

An incoming call rings on the Floating CO Group Key in which the line belongs to.

Operation:

None

Conditions:

1. Incoming calls on lines in a specific CO Group will ring on the Floating CO Group Key for that line.
2. When the Floating CO Group Key is busy, the call rings on the next available Floating Group Key.
3. When all of the Floating CO Group Keys are busy, the call rings on the next available Optimized Access Key.

Database:

29 Floating CO Group Assignment, 78 Flexible Key Assignment

Hardware:

None

SCDR Output Format

Description:

The SCDR Output format is revised as the maximum digits of an account code print-out are increased from six digits to twelve digits in version 4. Also a note code "*" is added next to the duration time to indicate a call duration that exceeds one hour.

Operation:

An account code entry

Conditions:

1. Printer Format

Position 1	2	3	4	5	6	7			
123456789012345678901234567890123456789012345678901234567890123456789									
SEQ	TRK	EXT1	EXT2	TIME	DUR	CALLED NUMBER	ACCT NO.	NOTE	
001	13	126	120	1:31PM	0:23*	20193585801234567890123456	123456789012	*	
002	8	172		1:45PM	10:13				1

2. Auxiliary Format

Position 1	2	3	4	5	6	7			
123456789012345678901234567890123456789012345678901234567890123456789									
(STX)	900815	13	126	120	1331	0023*	20193585801234567890123456	123456789012	*(ETX)(CR)
(STX)	900815	08	172		1345	1013			1(ETX)(CR)

Database:

06 SCDR Output Format, 07 SCDR Output Mode

Hardware:

SDIFC-1, Customer provided serial printer

3.00 PROGRAMMING

Introduction

3.01 This section describes procedures to program new customer database items added in the Version 4 software of the ZT-D Key Telephone System. Planning sheets to design the customer database for the new features are provided at the end.

CPU Upgrading

3.02 This section describes the procedure to upgrade the preinstalled ZT-D system to Version 4. The upgrading will be done in two steps: replacing the EPROMs on the M/KCPUHW-1 card then programming additional database items.

a. Replacing EPROMs

The following procedure is required to replace the EPROM on the M/KCPUHW-1 card in the system.

1. Make sure that switch SW1 on the M/KCPUHW-1 card is set to the "RUN" (protect) position, and a Lithium battery is properly connected on the board.
2. Turn off the system main power.
3. With a wrist band to discharge static, pull out the M/KCPUHW-1 card from the motherboard connector.
4. Remove two EPROM chips from their sockets ROM1 and ROM2 carefully using a small screw driver or EPROM puller.
5. Insert the new set of EPROMs that contain the Version 4 software into the socket with the matching number mark.
6. Plug the M/KCPUHW-1 card into the motherboard connector.

7. Turn on the system main power.
8. At the programming extension, with the handset on-hook (Speaker off) Enter [0], and a specific password to set the system into programming mode at the extension No. 120.
9. Enter the desired Program Item Number to initiate the programming. The Program Index Numbers are listed in Table 2.

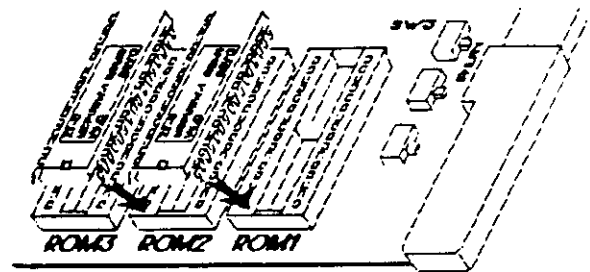


FIGURE 1 CPU UPGRADING

Programming Terminal

3.03 A ZT-24KTX key telephone and ZT-DSS console(s) are required to program the system database on-site. They must be placed in the station positions No. 120(KT), No. 121(DSS). Also No. 122(DSS) is needed if more than 32 stations are installed with the system.

The programming functions of their keys and lamps are listed in Table 1.

**TABLE 1
PROGRAMMING KEYS AND LAMPS**

Keys/Lamps	Location	Function
Dial Pad [0] to [9], [*], [#]	KT	Enter the program index number, alphanumeric data.
Dial Pad [#]	KT	Toggles function during programming
[FLSH] key	KT	Terminates programming after storing data.
[FWD] key	KT	Selects the next program index or data entry after storing data.
[FEAT] key	KT	Selects the previous program index or data entry after storing data.
HOLD/DND key	KT	Enters N code for User Table.
Line [LK] keys	KT	Programs line status.
Line lamps	KT	Indication of line status.
[DSS] keys	DSS	Programs station status.
BLF lamps	DSS	Indication of station status.

Version 4 Feature Programming

3.04 After system upgrading is completed, new operational functions must be identified in order to operate the ZT-D system properly. This paragraph describes the programming requirements to activate Version 4 features.

System Database

3.05 The system database for Version 4 features has two modified database items and fourteen new database items as listed below:

**TABLE 2
VERSION 4 FEATURE PROGRAMMING ITEMS**

<52>	Hunt Group Station
<78>	Flexible Key Assignment
<91-01>	Hunt CO Group Type
<91-02>	DISA Direct Dial COS
<91-03>	Alphabetical Station ID
<91-04>	Fixed Call Forwarding
<91-05>	Prime Line CO
<91-06>	Prime Line Access
<91-07>	Account Code Output Masking
<91-08>	Forced Account Code Station
<91-09>	Toll Restriction Override Code
<91-10>	Forced Account Code Digit Length
<91-11>	Busy Bypass Message
<91-12>	Automatic CO Answer (Future)
<91-13>	UCD (Future)
<91-14>	FAX Notification Station

Modified Database

3.06 Two database items, Item 52 and item 78 are modified from the previous Version (3.00) to provide additional data that are related to Version 4 features.

HUNT CO GROUP ASSIGNMENT

Item No.: 52

Description:

This assignment defines stations which belong to the ICM hunt groups, and the CO lines which ring in the hunt group. Program either CO and/or stations for the four (4) hunt groups in the system.

Procedure:

1. Display indicates **52.Hunt Gp1 CO ?**.
2. Enter Hunt Group number [1] through [4] on the dial pad to select a specific group number then press [CO] keys to assign the incoming CO lines that ring into the hunt group selected.
3. Press the [FWD] key to assign the stations. The display changes to **Hunt Gp1 Sta.#01**.
4. Press the [DSS] key to assign the stations which ring on incoming calls first (#1) within the group, or press [*] to clear all the registered stations.
5. Press the [FWD] key to continue to the next hunting order station in the group, press [1] through [4] on the dial pad to select another Hunt Group number, or [FLSH] to terminate the process.

Default: None

FLEXIBLE KEY ASSIGNMENT

Item No.: 78

Description:

Due to the Busy Bypass Messaging feature, new Busy Bypass Message keys are added to the programming.

Procedure:

1. Display indicates **78.ST T24D #120**.
 2. Press the [DSS] key to change the station No. for key assignment.
 3. Press the [FWD] key to proceed to individual key assignment. The display changes to **Flex Key LK01**, for example, and the lamp of the flexible key under the assignment lights.
 4. Press the [FWD] key for next selection of the features or [FEAT] for the previous one, until the desired assignment appears on the display, or press [*]+[DSS] key to assign the key functions in accordance with the assignment code listed in Table 3.
 5. Change the number on the display to the required feature code using the dial pad. For example, if [1][6] is pressed when displaying **Flex Key LK01**, the display changes to **Flex Key LK16**. Enter [1][1],[2][1],...[9][1] and 12,22,...,92 for Direct FLT keys.
- NOTE:** For Direct/Floating CO Group accessing, enter the codes indicated in Table 4.
6. Press the [FLSH] key once to assign another flexible key or twice to terminate the process.

Default:

Direct CO Keys

**TABLE 3
FLEXIBLE KEY ASSIGNMENT**

Feature.....	Display.....	Selection
Direct CO Termination....	Flex Key LK01	..[*] [DSS120]
Direct Station Signaling..	Flex Key DSS120	..[*] [DSS121]
One-touch Speed Dialing..	Flex Key SPD01	..[*] [DSS122]
Speed Dialing.....	Flex Key SPD1-01	..[*] [DSS123]
Speed Dialing.....	Flex Key SPD2-01	..[*] [DSS124]
Speed Dialing.....	Flex Key SPD	..[*] [DSS125]
Floating CO Termination..	Flex Key FLT01	..[*] [DSS126]
Zone Page Access.....	Flex Key Zone1	..[*] [DSS127]
Zone Page Access.....	Flex Key Zone2	..[*] [DSS128]
Zone Page Access.....	Flex Key Zone3	..[*] [DSS129]
Zone Page Access.....	Flex Key Zone4	..[*] [DSS130]
All Zone Page Access....	Flex Key Zone0	..[*] [DSS131]
Group Call Access.....	Flex Key Group1	..[*] [DSS132]
Group Call Access.....	Flex Key Group2	..[*] [DSS133]
Group Call Access.....	Flex Key Group3	..[*] [DSS134]
Group Call Access.....	Flex Key Group4	..[*] [DSS135]
All Call Access.....	Flex Key Group0	..[*] [DSS136]
Remote Control.....	Flex Key Remote1	..[*] [DSS137]
Remote Control.....	Flex Key Remote2	..[*] [DSS138]
Remote Control.....	Flex Key Remote3	..[*] [DSS139]
Remote Control.....	Flex Key Remote4	..[*] [DSS140]
Doorphone Access.....	Flex Key Door1	..[*] [DSS141]
Doorphone Access.....	Flex Key Door2	..[*] [DSS142]
Doorphone Access.....	Flex Key Door3	..[*] [DSS143]
Message Waiting.....	Flex Key MSG	..[*] [DSS144]
Busy Override.....	Flex Key Over	..[*] [DSS145]
CO Line Call-back.....	Flex Key COBack	..[*] [DSS146]
ICM Line Call-back.....	Flex Key ICMbk	..[*] [DSS147]
Line Connect.....	Flex Key Connect	..[*] [DSS148]
Call Park.....	Flex Key Park	..[*] [DSS149]
Line Release.....	Flex Key Release	..[*] [DSS150]
Serial Call.....	Flex Key Serial	..[*] [DSS151]
Automatic Answering.....	Flex Key AutoAns	..[*] [DSS152]
Night Transfer.....	Flex Key Night	..[*] [DSS153]
Account Code Entry.....	Flex Key Account	..[*] [DSS154]
Recall Pick-up.....	Flex Key Recall	..[*] [DSS155]
System SPD 00.....	Flex Key SPD00	..[*] [DSS156]
Optimized Access No.1....	Flex Key OPT01	..[*] [DSS157]
Optimized Access No.2....	Flex Key OPT02	..[*] [DSS158]
Hunt Group Access No.1....	Flex Key Hunt1	..[*] [DSS159]
Hunt Group Access No.2....	Flex Key Hunt2	..[*] [DSS160]
Hunt Group Access No.3....	Flex Key Hunt3	..[*] [DSS161]
Hunt Group Access No.4....	Flex Key Hunt4	..[*] [DSS162]
Voice Mail Access.....	Flex Key VM	..[*] [DSS163]
Mailbox Access 120.....	Flex Key MB120	..[*] [DSS164]
Universal Relay No.1.....	Flex Key U.RLY1	..[*] [DSS165]
Universal Relay No.2.....	Flex Key U.RLY2	..[*] [DSS166]
Universal Relay No.3.....	Flex Key U.RLY3	..[*] [DSS167]
Busy Bypass Messaging....	Flex Key B-MSG01	..[*] [DSS168]
Not used.....	Flex Key	..[*] [DSS169]

**TABLE 4
FLOATING KEY ASSIGNMENT**

FLT NO.....	DESCRIPTION
{0} {1} through {0} {4}	...Float Group Access key
{1} {1} and {1} {2}	...Direct Float for CO Group No.1
{2} {1} and {2} {2}	...Direct Float for CO Group No.2
{3} {1} and {3} {2}	...Direct Float for CO Group No.3
{4} {1} and {4} {2}	...Direct Float for CO Group No.4
{5} {1} and {5} {2}	...Direct Float for CO Group No.5
{6} {1} and {6} {2}	...Direct Float for CO Group No.6
{7} {1} and {7} {2}	...Direct Float for CO Group No.7
{8} {1} and {8} {2}	...Direct Float for CO Group No.8
{9} {1} and {9} {2}	...Direct Float for CO Group No.9

New Database

3.07 There are fourteen database items are added to program Version 4 features. Note that item <91-12, 13> are reserved for hardware that will be available in future.

Starting New Database Entry

3.08 To start new database item entries that are sub-items of <91>, the following operation is required from the programming terminal position (Station #120):

Procedure:

1. Press [0] + [FEAT] + [Password]
2. Display indicates **Input No.nxt,end**
3. Enter [9] [1]. the display changes to **Ver.4 No.nxt,end**
4. Enter subitem numbers [0][1] to [1][5] to proceed to database programming.
5. Press [FWD] to move to the next item or [FEAT] to the previous item.
6. Press [FLSH] to terminate the programming process.

HUNT CO GROUP TYPE

Item No.: 91-01

Description:

This item determines the hunting scheme, either Terminal hunt or distributed hunt.

Procedure:

1. Display indicates **01.HuntType Term**
2. Press [#] to toggle between Term (Terminal Hunt)

and Dist (Distributed Hunt).

3. Press [FLSH] to terminate the process.

Default:

Terminal Hunt

Associated Database:

52 Hunt CO Group

DISA DIRECT DIAL COS

Item No.: 91-02

Description:

This item sets up a Class-of-Service mark on each DISA group, that are referred when for no-password access is used.

Procedure:

1. Display indicates **02.DISAS1 COS St.**
2. Press the [DSS] key to assign the extension number, of which COS is used for the DISA group.
3. Press [1] through [8] or [FWD] to select next DISA group to be assigned.
4. Press [FLSH] to terminate the process.

Default:

No COS for any DISA group

Associated Database:

35, 36, 37 DISA Programming

ALPHANUMERIC STATION ID

Item No.: 91-03

Description:

This item programs alphanumeric station ID for each extension.

Procedure:

1. Display indicates **03.Station ID**

2. Press the [DSS] key to select the extension number to be programmed. Then the BLF of the extension lights to indicate the station being programmed.
3. Press the [FWD] key and the display changes to **St. ID=**
4. Enter up to 8 characters for the ID using the dial pad [0] through [9] referring to Table 5.
5. Press the [HOLD] key to enter the each letter.
6. Press [FLSH] to terminate the process.

Default:

No ID for any station

**TABLE 5
ID ENTRY KEYS**

KEY	ALPHABET/FUNCTION			
1	-	.	SP	1
2	A	B	C	2
3	D	E	F	3
4	G	H	I	4
5	J	K	L	5
6	M	N	O	6
7	P	R	S	7
8	T	U	V	8
9	W	X	Y	9
0	Q	Z	&	0
#	Upper/lower case shift lock			
HOLD	Write/Delete one character			
SPKR	Delete all characters			

FIXED CALL FORWARDING

Item No.: 91-04

Description:

The stations programmed with this database option forwards calls to a predesignated destination. The database must be registered with the Call Forwarding Mode and the destination.

Procedure:

1. Display indicates **04.Fixed FWD 0**
2. Press the [DSS] key to select the extension number to be programmed. Then the BLF of the extension lights to indicate the station being programmed.
3. Set the forwarding mode using dial pad [0] through [3];
 - [0] = No forwarding
 - [1] = Busy/No answer Forwarding to Extension
 - [2] = Reserved
 - [3] = Busy/No answer Forwarding to Voice Mail
 or press [FLSH] to terminate the process.

4. When [1] is pressed, the display changes ***1 FWD to St.nnn**
 - Press DSS key to assign the destination extension number.
 - Press [FLSH] key to program other extensions.
5. [2] is reserved. Please do not program this number.
6. When [3] is pressed, the display changes **04.Fixed FWD 3** and the station's Fixed Call Forwarding destination is set to the voice mail ports. (ZT-D's voice mail ports are designed work as a voice mail hunt group. Therefore, even if the first voice mail port is busy, the forwarded call will be transferred to the next available voice mail port.)
 - Press [FLSH] key to program other extensions.

Default:

No forwarding, No destination

PRIME LINE CO

Item No.: 91-05

Description:

This item programs CO line numbers that are allowed for the Prime Line Access feature.

Procedure:

1. Display indicates **05.Prime Line CO**
2. Press [LK] keys to select the allowed line. The selected line lights up.
3. Pressing the lighted [LK] key will disengage the line and turn the light off.
4. Press [FLSH] to terminate the process.

Default:

No lines are assigned.

Associated Database

91-06 Prime Line CO

PRIME LINE ACCESS

Item No.: 91-06

Description:

This item determines which line is to be seized upon going off-hook (or pressing [SPKR] key) by each extension.

Procedure:

1. Display indicates **06.Prime Type 00** where
Type 00 = ICM Access
Type 01 - Type 24 = Direct CO Line Access
Type 30 = Optimized CO Line Access
Type 31 - Type 39 = CO Line Group Access
(Floating Group)
2. Press [0][0] through [3][9] to select the Access Type.
3. Press the [DSS] key to assign extensions to the Access Type displayed on the LCD. The BLFs of the extensions light to indicate that they are assigned.
4. Press [FLSH] to terminate the process.

Default:

Type 00 = ICM Access for all extensions.

ACCOUNT CODE OUTPUT MASKING POSITION

Item No.: 91-07

Description:

Account code print out to the SCDR will be masked as programmed in this item.

Procedure:

1. Display indicates **07.Mask Start 00**
2. Enter two digits ([0][0] to [1][2]) to indicate the starting position to mask the account code.
3. For example, if [0][6] is pressed, the display will change to **07.Mask Start 06**
4. Press the [FWD] key to proceed to number of masking entry. Display will change to ***Mask Length 00**
5. Enter two digits ([0][0] to [1][2]) that is a number of digits of the account code to be masked.
6. For example, if [0][4] is pressed, the display will change to ***Mask Length 04**
7. Press [FLSH] to terminate the process.

Default:

Starting position = 00, Mask length = 00 digits

FORCED ACCOUNT CODE STATION

Item No.: 91-08

Description:

The extensions assigned with this database item cannot make outgoing calls without account code entry.

Procedure:

1. Display indicates **08.ForcedACCT St**

2. Press the [DSS] key to select the extension number to force an account code entry for outgoing calls. Then the BLFs of the forced extensions light up.
3. Press [FLSH] to terminate the process.
4. When a forced account code station uses the Last Number Redial feature or Speed Dial feature, the system will put a pause time before sending out the digits. This pause time refers to item 25: PBX pause time in the system database. Therefore, please make the PBX pause time shorter, time < 2 seconds to send out the digits more quickly. (Default value; 5 seconds)

Default:
No stations are forced

<< IMPORTANT >>
PLEASE PROGRAM "911" EMERGENCY NUMBER INTO A EMERGENCY DIAL TABLE 91-15 TO ALLOW STATION USERS TO CALL THIS EMERGENCY NUMBER WITHOUT ENTERING AN ACCOUNT CODE.

TOLL RESTRICTION OVERRIDE

Item No.: 91-09

Description:
This item defines eight special codes that are used to override a station's COS to make outgoing calls.

Procedure:

1. Display indicates **09.OVERRIDE CD.#1**
2. Press [1] through [8] to select Override code No.1 to No.8 respectively.
3. Press the [DSS] key to select the extension number that determines the COS of the Override code.

4. Press the [FWD] key to proceed to enter an Override code or Press [FLSH] to terminate the process.
5. When the [FWD] key is pressed, the display changes to **OVERRIDE CD#1=**
6. The Override code can be up to 12 digits in length.
0 - 9 = number
[HOLD/DND] = wild card N (any number of 0 - 9)
For example, **OVERRIDE CD#1=123NN** means 12300 through 12399 can be used as Override code No.1.

7. Press [FLSH] to proceed to next code.

Default:
No Override code and no COS station are registered for the code No. 1 through No.8.

FORCED ACCOUNT CODE DIGIT LENGTH

Item No.: 91-10

Description:
This item determines number of digits that are used for the Forced Account Code.

Procedure:

1. Display indicates **10.ACCT Digit 00**
2. Enter [0][0] though [1][2] through dial pad.
00 = variable length
01 - 12 = fixed length.
3. Press [FLSH] to terminate the process.

Default:
00 = variable length

BUSY BYPASS MESSAGE/ MANUAL SIGNALING

Item No.: 91-11

Description:

This programming item registers alphanumeric messages that are displayed on the KT's LCD when an associated Busy Bypass Message key or Manual Signaling key is pressed. Up to 16 message can be registered.

TABLE 6
ID ENTRY KEYS

KEY	ALPHABET/FUNCTION			
1	-	.	SP	1
2	A	B	C	2
3	D	E	F	3
4	G	H	I	4
5	J	K	L	5
6	M	N	O	6
7	P	R	S	7
8	T	U	V	8
9	W	X	Y	9
0	Q	Z	&	0
#	Upper/lower case shift lock			
HOLD	Write/Delete one character			
SPKR	Delete all characters			

Procedure:

1. Display indicates **11.Busy MSG #01**
2. Press [0][1] through [1][6] to select the message key number.
3. Press [FWD] to proceed to message registration or [FLSH] to terminate the process.
4. When [FWD] is pressed, the display changes to **MSG#01 =**

5. a) If the message key is for Busy Bypass Messaging purposes, do not program this step. Go to next step.

- b) If the message key is for Manual Signaling purposes, please program following:

Press the [DSS] key to assign the default destination station where the message and notification tone are to be automatically sent.

6. Press a dial pad to enter an alphanumeric message that belongs to the message number. Refer to Table 6.
7. Press [FLSH] to program next message.

Default:

No messages are registered.

FAX MESSAGE NOTIFICATION

Item No.: 91-14

Description:

This item tells the system which extension number the FAX machine is connected (SLT) to, which extension the FAX should notify the when a document is received, and the minimum duration time to determine if the call is a FAX call.

Procedure:

1. Display indicates **14.FAX Port #1**
2. Press the [DSS] key where the Group No.1 FAX machines are connected.
3. Press the [FLSH] key to terminate the process, or the [FWD] key to proceed to Notification Station assignment, or [1] to [4] to change the group number.
4. When the [FWD] key is pressed, the display changes to ***Notify St. #1**
5. Press the [DSS] key of the extension where Group No.1 FAX machine's notification is to go.

6. Press the [FLSH] key to reprogram the connected ports (step 2), or [FWD] key to proceed to Minimum call duration, or [1] to [4] to change the group number.
7. When the [FWD] key is pressed, the display changes to ***ValidTime 02 0s**
8. Enter two digits minimum time for a valid FAX call, [0][1] to [1][5] (10 sec. to 150 sec.) through a dial pad.
9. Press the [FLSH] key to return to Notification Station assignment (step 5).

**TABLE 8
FAX TIMER DATA**

Timer Entry	Time	Timer Entry	Time
00	20 sec.	08	80 sec.
01	10 sec.	09	90 sec.
02	20 sec.	10	100 sec.
03	30 sec.	11	110 sec.
04	40 sec.	12	120 sec.
05	50 sec.	13	130 sec.
06	60 sec.	14	140 sec.
07	70 sec.	15	150 sec.

Default:

No FAX machines are assigned to any extension number.
No Notification stations are assigned.
Minimum Valid FAX call time = 20 seconds.

EMERGENCY DIAL TABLE

Item No.: 91-15

Description:

The numbers represented in this table do not require Account Code entry if the station is programmed for Forced Account Code entry. Up to five 12-digit numbers can be registered.

Note that the numbers should not be toll-restricted since they are still subject of the toll restriction if listed in the restriction table.

Procedure:

1. Display indicates **15.EMERG. Dial#1**
2. Press [1] through [5] to select the entry table No.1 to No.5 respectively.
3. Press the [FWD] key to proceed an Dialing CO line Number entry or Press [FLSH] to terminate the process.
4. When the [FWD] key is pressed, the display changes to ***EMERG. CO Gp#1**
5. Press [0] through [9] to enter CO line group number where the emergency dial is automatically dialed out.
6. Press the [FWD] key to proceed an Dial Number entry or Press [FLSH] to change the entry table number (step 1).
7. When [FWD] key is pressed, the display changes to ***EMERG. CO Gp#1 =**
8. Up to 12 digits can be registered:
7. Press [FLSH] to reprogram the CO line group number.

Default:

No dial numbers no CO line group numbers are registered.

<< IMPORTANT >>
PLEASE PROGRAM "911" EMERGENCY NUMBER INTO THIS TABLE TO ALLOW A STATION USER TO CALL THIS EMERGENCY NUMBER WITHOUT ENTERING AN ACCOUNT CODE.

ZT-D V4 SYSTEM DATABASE PLANNING SHEET

52. Hunt Group Station				
Hunting Order	Extensions			
	Hunt Group No.1	Hunt Group No.2	Hunt Group No.3	Hunt Group No.4
No.1	Ext.No. ___	Ext.No. ___	Ext.No. ___	Ext.No. ___
No.2	Ext.No. ___	Ext.No. ___	Ext.No. ___	Ext.No. ___
No.3	Ext.No. ___	Ext.No. ___	Ext.No. ___	Ext.No. ___
No.4	Ext.No. ___	Ext.No. ___	Ext.No. ___	Ext.No. ___
No.5	Ext.No. ___	Ext.No. ___	Ext.No. ___	Ext.No. ___
No.6	Ext.No. ___	Ext.No. ___	Ext.No. ___	Ext.No. ___
No.7	Ext.No. ___	Ext.No. ___	Ext.No. ___	Ext.No. ___
No.8	Ext.No. ___	Ext.No. ___	Ext.No. ___	Ext.No. ___
No.9	Ext.No. ___	Ext.No. ___	Ext.No. ___	Ext.No. ___
No.10	Ext.No. ___	Ext.No. ___	Ext.No. ___	Ext.No. ___
No.11	Ext.No. ___	Ext.No. ___	Ext.No. ___	Ext.No. ___
No.12	Ext.No. ___	Ext.No. ___	Ext.No. ___	Ext.No. ___
No.13	Ext.No. ___	Ext.No. ___	Ext.No. ___	Ext.No. ___
No.14	Ext.No. ___	Ext.No. ___	Ext.No. ___	Ext.No. ___
No.15	Ext.No. ___	Ext.No. ___	Ext.No. ___	Ext.No. ___
No.16	Ext.No. ___	Ext.No. ___	Ext.No. ___	Ext.No. ___

91-01 Hunt CO Group Type	
91-01 CO Group Hunt Mode	<input type="checkbox"/> Terminal <input type="checkbox"/> Distributed

91-02 DISA Direct Dial COS			
DISA Group No.1	Ext. No. ___	DISA Group No.5	Ext. No. ___
DISA Group No.2	Ext. No. ___	DISA Group No.6	Ext. No. ___
DISA Group No.3	Ext. No. ___	DISA Group No.7	Ext. No. ___
DISA Group No.4	Ext. No. ___	DISA Group No.8	Ext. No. ___

91-07 Account Code Output Masking Position/Length	
Account Code Masking Position = ___	Masking Digit Length = ___ Digits

91-09 Toll Restriction Override Code			
Code No.1		Code No.5	
Code No.2		Code No.6	
Code No.3		Code No.7	
Code No.4		Code No.8	

91-10 Forced Account Code Length
Forced Account Code = <input type="text"/> <input type="text"/> Digits (00 - 12 digits)

91-11 Busy Bypass Message			
Message No.	Message	Message No.	Message
1		9	
2		10	
3		11	
4		12	
5		13	
6		14	
7		15	
8		16	

91-14 FAX Message Notification					
	FAX No.1	FAX No.2	FAX No.3	FAX No.4	
Port No.	Ext. <input type="text"/>	Ext. <input type="text"/>	Ext. <input type="text"/>	Ext. <input type="text"/>	
Notify to	Ext. <input type="text"/>	Ext. <input type="text"/>	Ext. <input type="text"/>	Ext. <input type="text"/>	
Minimum Call	<input type="text"/> 0 sec.	<input type="text"/> 0 sec.	<input type="text"/> 0 sec.	<input type="text"/> 0 sec.	

91-15 Emergency Dial Table					
Dial No.1	CO Group No.		Dial		<< IMPORTANT >> PLEASE PROGRAM "911" EMERGENCY NUMBER INTO THIS TABLE.
Dial No.2	CO Group No.		Dial		
Dial No.3	CO Group No.		Dial		
Dial No.4	CO Group No.		Dial		
Dial No.5	CO Group No.		Dial		

91-15 PRIME LINE CO					
<input type="checkbox"/> CO No.1	<input type="checkbox"/> CO No.2	<input type="checkbox"/> CO No.3	<input type="checkbox"/> CO No.4	<input type="checkbox"/> CO No.5	<input type="checkbox"/> CO No.6
<input type="checkbox"/> CO No.7	<input type="checkbox"/> CO No.8	<input type="checkbox"/> CO No.9	<input type="checkbox"/> CO No.10	<input type="checkbox"/> CO No.11	<input type="checkbox"/> CO No.12
<input type="checkbox"/> CO No.13	<input type="checkbox"/> CO No.14	<input type="checkbox"/> CO No.15	<input type="checkbox"/> CO No.16	<input type="checkbox"/> CO No.17	<input type="checkbox"/> CO No.18
<input type="checkbox"/> CO No.19	<input type="checkbox"/> CO No.20	<input type="checkbox"/> CO No.21	<input type="checkbox"/> CO No.22	<input type="checkbox"/> CO No.23	<input type="checkbox"/> CO No.24

Check CO lines used as Prime Lines

EXTENSION DATABASE PROGRAMMING					
	Ext. No.120	Ext. No.121	Ext. No.122	Ext. No.123	Ext. No.124
91-03 Alphabet. Station ID					
91-04 Fixed Call Forwarding	Mode []0 []1 []2 []3 To _ _ _ _	Mode []0 []1 []2 []3 To _ _ _ _	Mode []0 []1 []2 []3 To _ _ _ _	Mode []0 []1 []2 []3 To _ _ _ _	Mode []0 []1 []2 []3 To _ _ _ _
91-06 Prime Line Access	_ _ _	_ _ _	_ _ _	_ _ _	_ _ _
91-08 Forced Account Code	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED

0=None
1=Station
2=Reserved
3=VM
00=ICM
01-24=COL
30=OPT
31-39=FLT

EXTENSION DATABASE PROGRAMMING					
	Ext. No.125	Ext. No.126	Ext. No.127	Ext. No.128	Ext. No.129
91-03 Alphabet. Station ID					
91-04 Fixed Call Forwarding	Mode []0 []1 []2 []3 To _ _ _ _	Mode []0 []1 []2 []3 To _ _ _ _	Mode []0 []1 []2 []3 To _ _ _ _	Mode []0 []1 []2 []3 To _ _ _ _	Mode []0 []1 []2 []3 To _ _ _ _
91-06 Prime Line Access	_ _ _	_ _ _	_ _ _	_ _ _	_ _ _
91-08 Forced Account Code	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED

0=None
1=Station
2=Reserved
3=VM
00=ICM
01-24=COL
30=OPT
31-39=FLT

EXTENSION DATABASE PROGRAMMING					
	Ext. No.130	Ext. No.131	Ext. No.132	Ext. No.133	Ext. No.134
91-03 Alphabet. Station ID					
91-04 Fixed Call Forwarding	Mode []0 []1 []2 []3 To _ _ _ _	Mode []0 []1 []2 []3 To _ _ _ _	Mode []0 []1 []2 []3 To _ _ _ _	Mode []0 []1 []2 []3 To _ _ _ _	Mode []0 []1 []2 []3 To _ _ _ _
91-06 Prime Line Access	_ _ _	_ _ _	_ _ _	_ _ _	_ _ _
91-08 Forced Account Code	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED

0=None
1=Station
2=Reserved
3=VM
00=ICM
01-24=COL
30=OPT
31-39=FLT

EXTENSION DATABASE PROGRAMMING					
	Ext. No.135	Ext. No.136	Ext. No.137	Ext. No.138	Ext. No.139
91-03 Alphabet. Station ID					
91-04 Fixed Call Forwarding	Mode []0 []1 []2 []3 To _ _ _ _	Mode []0 []1 []2 []3 To _ _ _ _	Mode []0 []1 []2 []3 To _ _ _ _	Mode []0 []1 []2 []3 To _ _ _ _	Mode []0 []1 []2 []3 To _ _ _ _
91-06 Prime Line Access	_ _	_ _	_ _	_ _	_ _
91-08 Forced Account Code	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED

0=None
1=Station
2=Reserved
3=VM

00=ICM
01-24=COL
30=OPT
31-39=FLT

EXTENSION DATABASE PROGRAMMING					
	Ext. No.140	Ext. No.141	Ext. No.142	Ext. No.143	Ext. No.144
91-03 Alphabet. Station ID					
91-04 Fixed Call Forwarding	Mode []0 []1 []2 []3 To _ _ _ _	Mode []0 []1 []2 []3 To _ _ _ _	Mode []0 []1 []2 []3 To _ _ _ _	Mode []0 []1 []2 []3 To _ _ _ _	Mode []0 []1 []2 []3 To _ _ _ _
91-06 Prime Line Access	_ _	_ _	_ _	_ _	_ _
91-08 Forced Account Code	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED

0=None
1=Station
2=Reserved
3=VM

00=ICM
01-24=COL
30=OPT
31-39=FLT

EXTENSION DATABASE PROGRAMMING					
	Ext. No.145	Ext. No.146	Ext. No.147	Ext. No.148	Ext. No.149
91-03 Alphabet. Station ID					
91-04 Fixed Call Forwarding	Mode []0 []1 []2 []3 To _ _ _ _	Mode []0 []1 []2 []3 To _ _ _ _	Mode []0 []1 []2 []3 To _ _ _ _	Mode []0 []1 []2 []3 To _ _ _ _	Mode []0 []1 []2 []3 To _ _ _ _
91-06 Prime Line Access	_ _	_ _	_ _	_ _	_ _
91-08 Forced Account Code	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED

0=None
1=Station
2=Reserved
3=VM

00=ICM
01-24=COL
30=OPT
31-39=FLT

EXTENSION DATABASE PROGRAMMING						
	Ext. No.150	Ext. No.151	Ext. No.152	Ext. No.153	Ext. No.154	
91-03 Alphabet. Station ID						
91-04 Fixed Call Forwarding	Mode []0 []1 []2 []3 To _ _ _ _	Mode []0 []1 []2 []3 To _ _ _ _	Mode []0 []1 []2 []3 To _ _ _ _	Mode []0 []1 []2 []3 To _ _ _ _	Mode []0 []1 []2 []3 To _ _ _ _	0=None 1=Station 2=Reserved 3=VM
91-06 Prime Line Access	_ _	_ _	_ _	_ _	_ _	00=ICM 01-24=COL 30=OPT 31-39=FLT
91-08 Forced Account Code	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED	

EXTENSION DATABASE PROGRAMMING						
	Ext. No.155	Ext. No.156	Ext. No.157	Ext. No.158	Ext. No.159	
91-03 Alphabet. Station ID						
91-04 Fixed Call Forwarding	Mode []0 []1 []2 []3 To _ _ _ _	Mode []0 []1 []2 []3 To _ _ _ _	Mode []0 []1 []2 []3 To _ _ _ _	Mode []0 []1 []2 []3 To _ _ _ _	Mode []0 []1 []2 []3 To _ _ _ _	0=None 1=Station 2=Reserved 3=VM
91-06 Prime Line Access	_ _	_ _	_ _	_ _	_ _	00=ICM 01-24=COL 30=OPT 31-39=FLT
91-08 Forced Account Code	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED	

EXTENSION DATABASE PROGRAMMING						
	Ext. No.160	Ext. No.161	Ext. No.162	Ext. No.163	Ext. No.164	
91-03 Alphabet. Station ID						
91-04 Fixed Call Forwarding	Mode []0 []1 []2 []3 To _ _ _ _	Mode []0 []1 []2 []3 To _ _ _ _	Mode []0 []1 []2 []3 To _ _ _ _	Mode []0 []1 []2 []3 To _ _ _ _	Mode []0 []1 []2 []3 To _ _ _ _	0=None 1=Station 2=Reserved 3=VM
91-06 Prime Line Access	_ _	_ _	_ _	_ _	_ _	00=ICM 01-24=COL 30=OPT 31-39=FLT
91-08 Forced Account Code	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED	

EXTENSION DATABASE PROGRAMMING						
	Ext. No.165	Ext. No.166	Ext. No.167	Ext. No.168	Ext. No.169	
91-03 Alphabet. Station ID						
91-04 Fixed Call Forwarding	Mode []0 []1 []2 []3 To _ _ _	Mode []0 []1 []2 []3 To _ _ _	Mode []0 []1 []2 []3 To _ _ _	Mode []0 []1 []2 []3 To _ _ _	Mode []0 []1 []2 []3 To _ _ _	0=None 1=Station 2=Reserved 3=VM
91-06 Prime Line Access	_ _	_ _	_ _	_ _	_ _	00=ICM 01-24=COL 30=OPT 31-39=FLT
91-08 Forced Account Code	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED	

EXTENSION DATABASE PROGRAMMING						
	Ext. No.170	Ext. No.171	Ext. No.172	Ext. No.173	Ext. No.174	
91-03 Alphabet. Station ID						
91-04 Fixed Call Forwarding	Mode []0 []1 []2 []3 To _ _ _	Mode []0 []1 []2 []3 To _ _ _	Mode []0 []1 []2 []3 To _ _ _	Mode []0 []1 []2 []3 To _ _ _	Mode []0 []1 []2 []3 To _ _ _	0=None 1=Station 2=Reserved 3=VM
91-06 Prime Line Access	_ _	_ _	_ _	_ _	_ _	00=ICM 01-24=COL 30=OPT 31-39=FLT
91-08 Forced Account Code	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED	

EXTENSION DATABASE PROGRAMMING						
	Ext. No.175	Ext. No.176	Ext. No.177	Ext. No.178	Ext. No.179	
91-03 Alphabet. Station ID						
91-04 Fixed Call Forwarding	Mode []0 []1 []2 []3 To _ _ _	Mode []0 []1 []2 []3 To _ _ _	Mode []0 []1 []2 []3 To _ _ _	Mode []0 []1 []2 []3 To _ _ _	Mode []0 []1 []2 []3 To _ _ _	0=None 1=Station 2=Reserved 3=VM
91-06 Prime Line Access	_ _	_ _	_ _	_ _	_ _	00=ICM 01-24=COL 30=OPT 31-39=FLT
91-08 Forced Account Code	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED	

EXTENSION DATABASE PROGRAMMING					
	Ext. No.180	Ext. No.181	Ext. No.182	Ext. No.183	Ext. No.184
91-03 Alphabet. Station ID					
91-04 Fixed Call Forwarding	Mode []0 []1 []2 []3 To _ _ _ _	Mode []0 []1 []2 []3 To _ _ _ _	Mode []0 []1 []2 []3 To _ _ _ _	Mode []0 []1 []2 []3 To _ _ _ _	Mode []0 []1 []2 []3 To _ _ _ _
91-06 Prime Line Access	_ _	_ _	_ _	_ _	_ _
91-08 Forced Account Code	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED

0=None
1=Station
2=Reserved
3=VM

00=ICM
01-24=COL
30=OPT
31-39=FLT

EXTENSION DATABASE PROGRAMMING					
	Ext. No.185	Ext. No.186	Ext. No.187	Ext. No.188	Ext. No.189
91-03 Alphabet. Station ID					
91-04 Fixed Call Forwarding	Mode []0 []1 []2 []3 To _ _ _ _	Mode []0 []1 []2 []3 To _ _ _ _	Mode []0 []1 []2 []3 To _ _ _ _	Mode []0 []1 []2 []3 To _ _ _ _	Mode []0 []1 []2 []3 To _ _ _ _
91-06 Prime Line Access	_ _	_ _	_ _	_ _	_ _
91-08 Forced Account Code	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED

0=None
1=Station
2=Reserved
3=VM

00=ICM
01-24=COL
30=OPT
31-39=FLT

EXTENSION DATABASE PROGRAMMING					
	Ext. No.190	Ext. No.191	Ext. No.192	Ext. No.193	Ext. No.194
91-03 Alphabet. Station ID					
91-04 Fixed Call Forwarding	Mode []0 []1 []2 []3 To _ _ _ _	Mode []0 []1 []2 []3 To _ _ _ _	Mode []0 []1 []2 []3 To _ _ _ _	Mode []0 []1 []2 []3 To _ _ _ _	Mode []0 []1 []2 []3 To _ _ _ _
91-06 Prime Line Access	_ _	_ _	_ _	_ _	_ _
91-08 Forced Account Code	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED

0=None
1=Station
2=Reserved
3=VM

00=ICM
01-24=COL
30=OPT
31-39=FLT

EXTENSION DATABASE PROGRAMMING					
	Ext. No.1 _ _ _	Ext. No.1 _ _ _	Ext. No.1 _ _ _	Ext. No.1 _ _ _	Ext. No.1 _ _ _
91-03 Alphabet. Station ID					
91-04 Fixed Call Forwarding	Mode []0 []1 []2 []3 To _ _ _	Mode []0 []1 []2 []3 To _ _ _	Mode []0 []1 []2 []3 To _ _ _	Mode []0 []1 []2 []3 To _ _ _	Mode []0 []1 []2 []3 To _ _ _
91-06 Prime Line Access	_ _	_ _	_ _	_ _	_ _
91-08 Forced Account Code	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED	[]NO []FORCED

0=None
1=Station
2=Reserved
3=VM

00=ICM
01-24=COL
30=OPT
31-39=FLT



Omegagram

IWATSU AMERICA, INC. 430 Commerce Boulevard, Carlstadt, NJ 07072 • (201) 935-8580

DATE: 5/4/92

IAI REF. #: 592-010

TO: ALL IAI AUTHORIZED DISTRIBUTORS
FROM: IAI MARKETING DEPARTMENT
SUBJECT: ZT-D VERSION 5.0 SOFTWARE

Please be advised that Iwatsu America is now shipping Version 5.0 software with all new ZT-D systems. ZT-D Version 5.0 software brings the following enhancements:

New Feature

CO SHORT FLASH

Enhanced Features

CAMP-ON STATION DISPLAY
TOLL RESTRICTION OVERRIDE
SYSTEM SPEED DIAL
OPTIMIZED ROUTING

Please refer to the following sheet for details.

ERRATA

The following pen/ink changes should be incorporated in all ZT-D Services ISS 1.0 Technical Manuals. Changes are indicated in bold type.

I. Section 2 - General Description

- (1) Figure 2-1..... Make the following changes to component designations in the drawing.
- . Change OPPAG to DPPAG
 - . Change SOIFC to SDIFC
 - . Change FRLIF to FRIFC
 - . Change KTSB to KTSB 8
 - . Change SLSB to SLSB 8
 - . Change +28 v on KTSB 8 to +24 v
 - . Add MOH designation to A-D converter, under EGM on CPUHW card.
- (2) Figure 2-2..... Make the following changes to component designations in the drawing.
- . Change SLIFC to SDIFC
 - . Change MFR/RC2, MFR/RC8 to RECV 2, RECV 8
- (3) Table 2-G..... Change Call Forward-Busy 79 + # to 79 + * and Call Forward-No Answer 79 + * to 79 + #
- (4) Para. 6.05, b, 2..... Add at the end of sentence:
If allowed by COS assignment

II. Section 3 - System Features Functions

- (1) Para. 6.03m..... Add: Off-hook after KT DEF.
- (2) Para. 6.03o..... 1 to 7.5. or 5 minutes in the last sentence to 16 to 240 seconds.
- Eliminate: [FEAT] after KT DEF in condition planning Call Park Pick-up.

- (3) Para. 6.03hh..... Change: Code 02 to 2, 03 to 3, 04 to 4.
Change: KT DEF:[FEAT] [SPKR] [6] to[FEAT] [SPKR] [6].
- (4) Para. 6.03ii..... Change: SL-MF/HF/(6) to SL-MF:(6).
Change: All station: [6] [*] to KT station: [6] [*] KT.
- (6) Para. 6.04e..... Add: SLT: [6].
Change:
. [Release] disc. to
. [Release].
The release key enables the operator to end the current CO/PBX or intercom call. The operation can release the called intercom station and return to CO/PBX call.
- (3) Para. 7.02a..... Add the following:
(6) To erase the entry, press: FEAT key, SPKR key, 61 (dial pad), and HOLD/DND key.
- (4) Para. 7.02b..... Add the following:
(6) To cancel the message, press: FEAT key, SPKR key, 6 (dial pad), and * (dial pad).
- (5) Para. 7.02e..... Change: Station: Operator only to Station: 120 only.

III. Section 4 - Equipment Installation

- (1) Para. 2.02a..... Change: Two operations per system to two operators per system tenant.
- (2) Table 4-D..... Change: RCVER 2/8 to RECV2/8 (2 places).

- (3) Table 4-G..... Eliminate: S designation in ZT-824 KSU column for AMPA24.
 Add: S designation in ZT-824 KSU column for DSPB82.
 Add: O designation in ZT-824 KSU column of DSFC82.
- (4) Table 4-H..... Change the second +8VDC output to -8VDC.
- (5) Para. 4.10j Programming..... Change 2400 bps to 1200 bps.
- (6) Para. 5.03d Installation..... Para. 2 Add the following:
 Beige color connector from SMSA-Z cable plug into CNOPT1 and gray color connector from SMSA-A cable plug into CNOPT2.

IV. Section 5 - System Programming

- (1) Table of Contents..... Change 5-9 to Modem Transmission: Change 5-11 to Timed Trunk Queing.
- (2) Para. 2.01..... Change the sentence: They must be placed in the station position No. 120 (KT), No. 121 (DSS), and No. 122 (DSS) (if more than 32 stations are on the system) to read The KT must be placed at the primary station (position) No. 120; DSS #1 at No. 121, and (if more than 32 stations on the system) DSS #2 at No. 122. (Or if flex keys of Auto Answer, Night, Account and Recall are changed on DSS units).
- (3) Table 5-B..... Add: Item 08 Outside U.S.A./Canada.

ZT-1 SOFTWARE 2.0

EXPANSION:

- 8 ADDITIONAL PORTS EXT, S6.

BUSH BY PASS DEVICE

12 DX

24 DX

DISPLAY

3 PR WIRE

USE TWO SEPARATE PRINTS

VA HFRB

OFF HOOK

W/COS

LIST

• LIA CONNECTIONS IN COINS
AUX CD (1 DIAL)

PERSONAL ID (2 DIAL)

DIAL OPERATION IF REV CD & PUNCH RING "OPR" CONTROL

REV CD HDS, DIAL # EXP. PAGE, RINGS

PUT INTO DISA MODE FROM ASSIGN SET
NOT DEDICATED TR.

COS

OPR ACCESS

SD DIAL ACCESS

SCOR PRINT-OUT

HINT 60

ICM CALL

INTERNAL

DIAL TONE RE ORDER (ICM)

(250 W/H)

FEAT-SAL-FINISH - DISA MODE

CALL PARTIAL NOW UNDER CAN PARTIAL KEY

FLEX KEY NOW SYSTEM STATION

→ ADVANTAGE FREE UP KEY OLD WAY 2 KEY BUSY
W/ C PARTIAL KEY

