PROSTAR

408/612/816

ELECTRONIC KEY - HYBRID TELEPHONE SYSTEM

INSTALLATION MANUAL

INCLUDES GENERAL DESCRIPTION AND PROGRAMMING

RELEASE 2 SOFTWARE

STC

Password 1,2,3,4

Manuals Plus
404-439-5506

INSTALLATION

AND

PROGRAMMING MANUAL

for

408 - 612- 816

ELECTRONIC KEY/HYBRID TELEPHONE SYSTEM
WITH RELEASE 2 SOFTWARE

Every effort has been made to eliminate errors and ambiguities in the information contained in this manual. Any questions concerning information presented here should be directed to STC Telecom, 1350 E. Newport Center Drive, Suite 110, Deerfield Beach, FL 33442, phone: (305) 426-4100. STC Telecom disclaims all liabilities for damages arising from the erroneous interpretation or use of information presented in this manual.

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STC TELECOM

Publication Information

STC Telecom reserves the right, without prior notice, to revise information in this publication for any reason.

STC Telecom also reserves the right without prior notice to make changes in design or components of equipment as engineering and manufacturing may warrant.

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INSTALLATION SECTION

INTRODUCTION

This document is provided for the purpose of explaining instructions and procedures required to install or connect the features of the PROSTAR telephone system.

STC recognizes there are as many installation practices as there are telephone systems. The instructions in the installation section refer to the preferred method of terminating all modular cables from the KSU to a typical punch-on connecting block (66M type). Connecting stations, lines and optional equipment directly to the same block or cross connecting to a main distribution frame (MDF) is the installers option.

What ever the method of connection is, the modular plugs on all PROSTAR key service units provide for quick and easy isolation of field wiring from KSU during troubleshooting.

Combining the enclosed instructions with proven installation practices will keep the PROSTAR system working for many years to come.

F.C.C. REQUIREMENTS

The PROSTAR electronic telephone system is registered in accordance with the provisions of PART 68 of the Federal Communications Commission Rules and Regulations.

NOTIFICATION TO TELEPHONE COMPANY

Upon request, the customer shall notify the telephone company of the particular line to which the connection will be made and provide them with the FCC registration number and the ringer equivalence number of the protective circuit.

FCC Registration Numbers: **HHTKOR-61082-MF-E** or **HHTKOR-61210-KF-E**
Ringer Equivalence Number: **1.3B** Service Order Code: **9.0F**
Facility Interface Codes: **E & M Tie Line - TL11E**
Off Premise Station - OL13A

TELEPHONE CONNECTION REQUIREMENTS

Except for the telephone company provided ringers, all connections to the telephone network shall be made through standard plugs and telephone company provided jacks, or equivalent, in such a manner as to allow for easy, immediate disconnection of the terminal equipment. Standard jacks shall be so arranged, that if the plug connected thereto is withdrawn, no interference to the operation of the equipment at the customer's premises which remains connected to the telephone network shall occur by reason of such withdrawal.

USOC Jack Types: C.O. Lines - **RJ14C** E & M Tie Line - **RJ2EX**

INCIDENCE OF HARM

Should terminal equipment or protective circuitry cause harm to the telephone network, the telephone company shall, where practicable, notify the customer that temporary disconnection of service may be required; however, where prior service if such action is deemed reasonable in the circumstances. In the case of such temporary discontinuance, the telephone company shall promptly notify the customer and will be given the opportunity to correct the situation.

CHANGES IN TELEPHONE COMPANY EQUIPMENT OR FACILITIES

The telephone company may make changes in its communications facilities, equipment, operations or procedures, where such action is reasonably required and proper in its business. Should any such changes render the PROSTAR electronic telephone system incompatible with the telephone company facilities, the customer shall be given adequate notice to effect the modifications to maintain uninterrupted service.

GENERAL

This equipment should not be used on coin telephone lines. Connection to party line service is subject to state tariffs.

RINGER EQUIVALENCE NUMBER (REN)

The REN is useful to determine the quantity of devices that you may connect to your telephone line and still have all of those devices ring when your telephone number is called. In most, but not all areas, the sum of the REN's of all devices connected to one line should not exceed five (5.0). To be certain of the number of devices that you may connect to your line, you may want to contact your local telephone company.

HEARING AID COMPATIBILITY

All models of the PROSTAR 816 key telephone set are fully hearing aid compatible as specified in FCC Rules and Regulations, Part 68.

RADIO FREQUENCY INTERFERENCE

This equipment generates and uses radio frequency energy and if not installed and operated in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. This equipment has been type-tested and found to comply with the limits for Class B computing devices in accordance with the specifications in Standard 15 (Subpart J) of FCC rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment on and off, the user is encouraged to try the following measures:

1. Reorient the receiving antenna.
2. Relocate the telephone with respect to the receiver.
3. Move the telephone equipment away from the receiver.
4. Plug the Key Service Unit into a different AC outlet so that the KSU and receiver are on different circuits.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful:

"How to Identify and Resolve Radio - TV Interference Problems".

This booklet is available from the U.S. Government Printing Office. Washington, D.C. 20402, Stock Number 004-000-00345-4."

This system is listed with Underwriters Laboratories.

Listed

19X9

Telephone Equipment

DOC REQUIREMENTS

To ensure that certified equipment is attached correctly and only to the networks of participating carriers, the following notice must be complied with:

"NOTICE: The Canadian Department of Communications label identifies certificated equipment. This certification means that the equipment meets certain telecommunications network protective, operational and safety requirements. The Department does not guarantee the equipment will operate to the user's satisfaction.

Before installing this equipment, users should ensure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection. In some cases, the company's inside wiring associated with a single line individual service may be extended by means of a certified connector assembly (telephone extension cord). The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations.

Repairs to certified equipment should be made by an authorized Canadian maintenance facility designated by the supplier. Any repairs or alteration made by the user to this equipment; or equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment.

Users should ensure for their own protection that the electrical ground connections of the power utility, telephone lines and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas.

Caution: Users should not attempt to make such connections themselves, but should contact the appropriate electric inspection authority, or electrician, as appropriate."

This system is listed by the Canadian Standards Association as certified.

LR 89239

GENERAL DESCRIPTION

1. SYSTEM OPERATION

The PROSTAR is a stored program controlled electronic key/ hybrid telephone system ready to use as soon as it is turned on. A powerful Z80A microprocessor operating at 4 MHz digitally controls all speech paths and system functions. The operating program with default memory is stored in non-volatile ROM. Customer data is stored in RAM and protected by a NI-Cd battery for up to thirty days' continuous loss of system power. When AC power is restored, the nicad battery is recharged.

PROSTAR employs a real time-clock and space division switching of twelve (12) audio channels. Ten of these are speech paths. The other two are used for tones and music.

All system hardware has Federal Communications Commission (FCC) and Department of Communications of Canada (DOC) registrations. But not stopping there, PROSTAR proudly carries consumer safety approvals from Underwriters Laboratories (UL) and Canadian Standards Association (CSA).

The PROSTAR has a maximum capacity of eight telephone lines and sixteen stations. Comprised of only a key service unit, expansion cards, electronic keysets and conventional single line telephones, PROSTAR offers small business users flexibility and control of telephone communications.

2. SYSTEM CONFIGURATION

The basic KSU comes equipped to operate four (4) telephone lines and eight (8) electronic keysets. Stations #7 and #8 have strapping options that will allow them to be used with single line telephones or keysets. System capacity is increased in two line by four station increments.

By adding any one of three (3) different expansion cards, the system capacity is increased to six (6) telephone lines and twelve (12) stations. Installing the second expansion card of any type, the PROSTAR system is increased to its maximum capacity of eight lines and sixteen stations.

Combining the strapping options of Stations #7 & #8, and E & M tie line or C.O. line switch selections with all the combinations of expansion cards, the PROSTAR is extremely flexible. All the possible configurations are too many to list; however, the maximum numbers of each circuit type available in a fully configured PROSTAR 816 are listed below

Circuit Type	Maximum Number Available
Electronic Keyset	16
Single Line Phone	10
C.O. Line (loop start)	8
E & M Tie Line	4

3. SYSTEM HARDWARE

3.1 KEY SERVICE UNIT (KSU) is a single cabinet, wall mounted, metal cased unit measuring 21" H x 13 3/4" W x 3" D It contains the following assemblies:

* Power Supply - This unit provides all DC and AC voltages necessary for system operation. Also contains a charger/inverter circuit for 24v. external battery backup connections and ring generator for conventional single line telephones.

* Motherboard - It is the main printed circuit board that contains all memory, common control and switching circuitry. Provides interfaces for telephone lines 1 through 4, stations 1 through 8 and connections for:
  - Music on Hold & Background music source
  - External Paging with contacts for mute option
  - Power Failure Transfer for lines 1 and 2
  - Door Phone with lock release contacts

3.2 EXPANSION CARDS - There are three different expansion cards of which any two can be installed within the KSU. Each card type provides connections for two additional lines and four more stations.

Type I. 2 CO/4 KTS - Two C.O. lines and four keysets

Type II. 2 CO/4 SLT - Two C.O. lines and four single line telephones (DTMF or dial pulse) with power failure transfer

Type III. 2 E&M/4 KTS - Two E & M tie lines or two C.O. lines and four keysets. Each C.O. circuit may be selected for use as a tie line or C.O. line.

3.3 SMDR Card - Optional PCB mounted within the KSU provides an RS232 connector for a serial device such as a printer, data buffer or a call accounting system to be used with Station Message Detail Recording feature. Baud rate is adjustable, 1200, 2400 or 4800.

3.4 DOOR PHONE/ROOM MONITOR - An optional wall mounted unit containing a call button and speaker. Connects to KSU via two pairs twisted wiring. Does not take up a C.O. line or station position. Only one per system.

4. TELEPHONES

There are two types of telephone sets that can be connected to the PROSTAR system. Proprietary electronic keysets and conventional single line telephone sets.

4.1 **PROSTAR 816** electronic key telephone sets provide every user with all of the most desirable features built in. There is a display and non-display model. Each is available in either ALMOND with a glossy finish, or BLACK with a matte finish.

* Full speakerphone capability

* Each keyset comes as a desk model with reversible base wedge and handset clip for wall mounting at no extra cost

* Handset and base cord connectors are designed with strain relief channels for longer cord life and more static-free connections.

* Thirty-six (36) buttons configured as follows:

  A. Eight (8) C.O. line buttons with red and green LED indications.

  B. Sixteen (16) DSS/BLF buttons that also function as sixteen personal speed dial buttons.

  C. Eight (8) feature buttons:
     1. Alarm/Speed Dial - ALM/SD
     2. Message - MSG
     3. Conference - CONF
     4. Page - PAGE
     5. Speaker - SPK
     6. Last number redial - RD
     7. Mute/Do Not Disturb - MUTE/DND
     8. Hold - HOLD (red button)

  D. Four (4) round programmable buttons that may be assigned any of the following functions on a per keyset basis.

     1. Timer (stop watch function)
     2. Auto-Answer
     3. Auto-Redial
     4. Boss/Secretary
     5. Call-Back
     6. Internal Page
     7. Door Phone
     8. Attendant Call Button
     9. Group Listening
     10. Account Code
     11. Group 1
     12. Group 2
     13. Group 3

* Three slide-type volume selectors:
  A. Speaker volume on the front of the keyset.
  B. Ringer volume on the right hand side (top).
  C. Handset volume on the right hand side (bottom).

* Convenient pull-out tray under keyset for directory information.

* Special Features:

  A. Any keyset has the ability to send DTMF signals to a single line station at all times during the established connection.

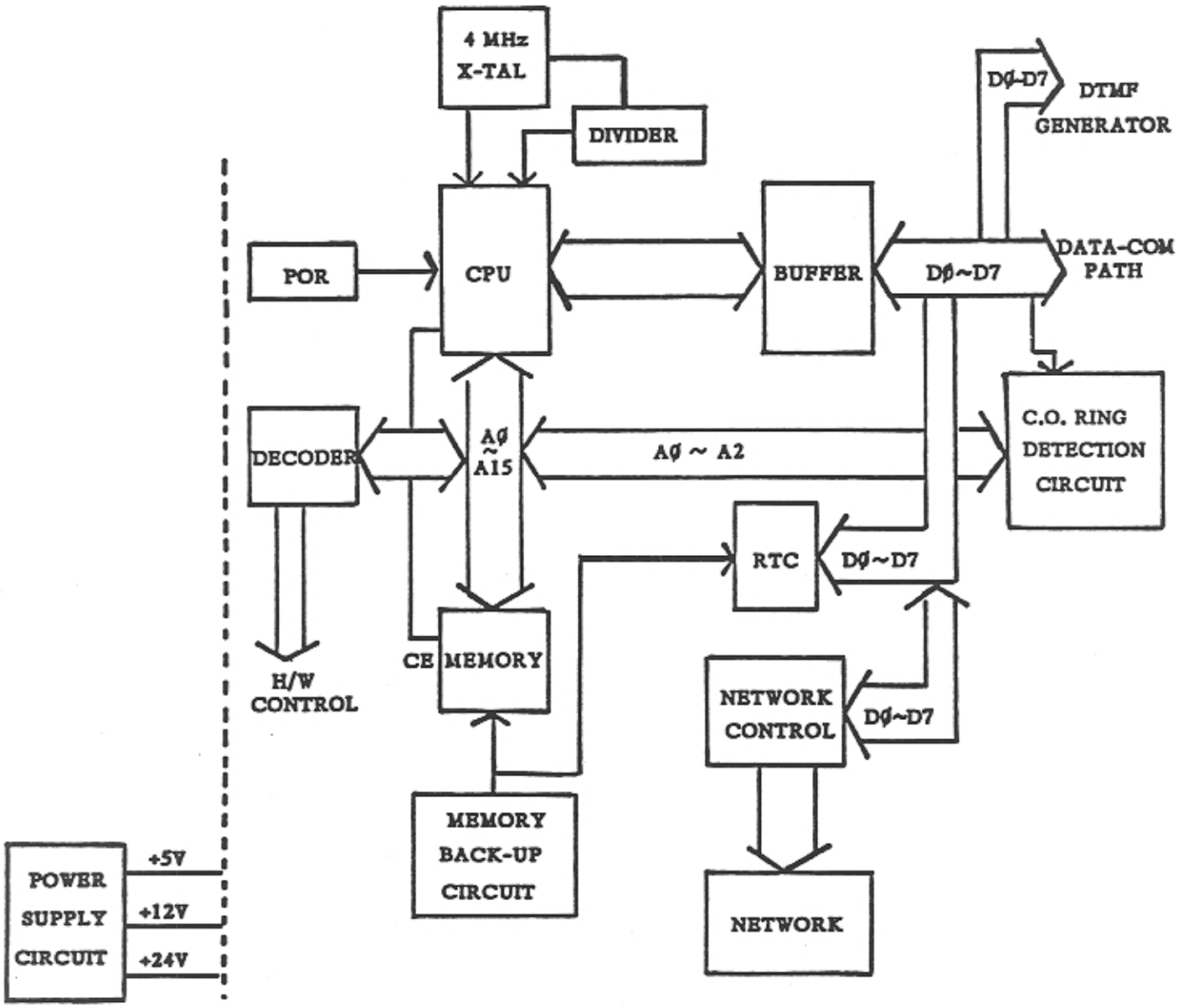
  B. Through optional station programming, the SPK button can enable headset operation without operating the hookswitch.

4.2 **DISPLAY MODEL KEYSET** has all the standard features described above plus a large four-inch, sixteen character liquid crystal display unit with easy to read 1/2 inch letters.

4.3 All PROSTAR handsets are fully "Hearing Aid Compatible" as required by FCC Part 68 Rules.

4.4 **CONVENTIONAL TELEPHONES** - Any industry-approved single line telephone using one pair (two wire) tip and ring circuitry may be connected to a single line station port in the system. The ringer equivalency of any such phone must not exceed 5.0B or damage to the system may result.

SYSTEM BLOCK DIAGRAM



SYSTEM SPECIFICATIONS

System Capacity

8 CO/PBX Lines (Loop Start/600 ohms)
16 Stations
10 Speech Paths
1 Audio Channel for System Tones
1 Audio Channel for Music
1 Door Phone
Automatic Power Failure Transfer Circuits, Max. 6
A maximum of 4 lines may be used as E & M Tie Lines.
Up to 10 of the 16 stations may be configured for single line use.

Power Specifications

AC Input:	Switchable 110 VAC or 220 VAC at 60 Hz.
Power Consumption:	60.5 Watts maximum
Max Current Draw:	1.0 AMPS
Ring Generator:	80 VRMS at 20 Hz
Battery Back-Up Supply:	24 VDC Batteries rating not less than 6 AH but not more than 40 AH

Environmental Limits

Operating Temperatures:	32° - 113°F / 0° - 45°C
Operating Humidity:	10% - 90% (without condensation)

Cable Requirements

Electronic Set -	2 pair twisted, 1300 Ft. (400m) 26AWG or 1485 Ft. (450m) 24AWG
Single Line Station -	1 pair twisted, Approx. 5000 Ft. (2.0 Km) 24AWG. Station loop not to exceed 480 ohms including telephone.
Door Phone -	2 pair twisted, 330 Ft. (100m) 24AWG

Physical Dimensions & Weights

KSU:	21"H x 14"W x 3"D 22.5 lbs.
Keyset:	9"H x 7 3/4"W x 3 1/2"D 2.3 lbs.
Door Phone:	6 1/4"H x 3 1/2"W x 1 5/8"D 8 oz.

RS 232 Connector: Serial Interface: 8 Bits, Even Parity

External Music Source Input: Impedance 600 ohms, 350 mV

External Amplifier Output: Impedance 600 ohms, 1.24 V RMS

Duration of DTMF TONES: 100ms

Hookflash to KSU: 350 - 850ms

SMDR REPORT FOR [ABC COMPANY] '90 12/05

STN	CO	MM:DD	STT.TIME	DURATION	DIAL NUMBER	ACC.CODE
24	2	12/05	22:34:36	00:00:24	4260022	
21	1	12/05	22:34:38	00:00:37	INCOMING	
24	2	12/05	22:36:09	00:00:59	18004521544	4521149
21	5	12/05	22:38:20	00:00:10	0	
25	2	12/05	22:37:34	00:01:05	INCOMING	
24	1	12/05	22:37:39	00:01:31	4265599	
21	2	12/05	22:38:41	00:00:54	TRANSFER	
25	1	12/05	22:39:32	00:00:29	12029957##**	
24	2	12/05	22:40:51	00:00:51	18008764782	4425145
29	2	12/05	22:41:43	00:00:44	TRANSFER	
24	2	12/05	22:42:28	00:00:07	TRANSFER	
25	5	12/05	22:46:57	00:00:11	411	
26	1	12/05	22:47:29	00:00:13	4265599420020	
26	1	12/05	22:48:18	00:00:07	426559942000	
26	1	12/05	22:49:18	00:00:00	426559941	
26	1	12/05	22:49:53	00:00:13	4264156	
24	1	12/05	22:50:07	00:00:18	TRANSFER	4522541
21	2	12/05	22:50:54	00:01:00	INCOMING	DISA
26	1	12/05	22:50:49	00:01:09	4265599420021	
26	2	12/05	22:55:37	00:00:48	4260022	
24	1	12/05	22:55:27	00:00:59	INCOMING	554122*
26	1	12/05	22:56:53	00:01:25	426559942008594264	1233542
82	5	12/05	22:57:08	00:01:21	94264100	DISA
24	1	12/05	23:00:45	00:00:29	07035514265	1234567

SYSTEM INDICATORS

LIGHTS	STATUS	CONDITION
DSS	OFF	Idle
	Flash every 0.25 sec.	Station calling
	Flash every 0.5 sec.	Station is on hold
	ON	Busy
C.O. LINE	OFF	Idle
	Flashing green every 0.25 sec.	Incoming call
	Flashing green every 0.5 sec.	On hold your station
	Flashing red every 0.5 sec.	On hold other station
	Steady red	In use other station
	Steady green	In use your station

PROGRESS TONES

DIAL TONE	Steady tone
BUSY TONE	0.5 sec. ON, 0.5 sec. OFF
RINGBACK TONE	1 sec. ON, 2 sec. OFF
TRANSFER TONE	0.2 sec. ON, 0.2 sec. OFF
CONFERENCE	" "
CONFIRMATION	" "
ERROR TONE	0.5 sec. ON, 2.5 sec. OFF

RINGING SIGNALS

C.O. LINE RING	1 sec. ON, 3 sec. OFF
STATION RING	0.4 sec. ON, 0.2 sec OFF, 0.4 sec. ON, 3 sec. OFF
DOORPHONE RING	0.5 sec. ON, 0.5 sec. OFF
ALARM RING	" "

GENERAL DESCRIPTION

3. INSTALLATION REQUIREMENTS

A. SITE PLANNING

* Select a KSU location that has enough space for easy installation, is well ventilated and has adequate lighting.

* Select a KSU location to minimize station cable lengths. Maximum cable length is (1300ft) using AWG 26 cable for keysets.

* The equipment should not be exposed to direct sunlight, corrosive fumes, dust, constant vibration or strong magnetic fields such as motors, copy machines, etc.

* A direct commercial A.C. POWER outlet is required. Do not use an extension cord.

* Ensure that all wires and cables going to and coming from the KSU are properly routed. Do not cross fluorescent lights or run parallel with AC wires.

* The equipment must be located within a temperature range of 32° - 113°F (0° - 40°C) and a humidity range of 10% - 90%..

B. ELECTRICAL SPECIFICATIONS

INPUT: Commercial AC power source: 115V or 230V AC
90 - 130VAC or 180 - 260VAC
55 - 65 Hz Single Phase

OUTPUT: Power outputs of Main Power Supply

5V ± 5% : 1.0A DC	30V Max : 1.0A DC
12V ± 10% : 1.0A DC	24V Min : 1.0A DC
-12V ± 10% : 0.2A DC	80V ± 10% : 1.0A AC

CURRENT DRAW: Maximum of 1 AMP

POWER DISSIPATION: Maximum of 60.5 watts.

FUSE: Inspect main fuse for proper rating. The PROSTAR power supply requires a 1 amp fuse, 250V rating, fast acting.

**********WARNING**********

FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE AND RATING OF FUSE.

****

4. INSTALLATION PROCEDURES

A. MOUNTING THE KSU

1. Select a wall that is strong enough to support the weight of KSU. (Maximum: 10Kg or 22.5 lbs.)

2. Select hardware that will support the system when it is mounted. It is recommended that KSU be mounted to a plywood backboard, no less than ½ inch thick.

3. Secure with screws using mounting holes in KSU flanges on right and left sides. Do not over tighten or slots on left side of KSU could be squeezed closed. REFER TO FIGURE 2.

4. Verify voltage at wall outlet. Inspect AC selection switch for proper setting. Plug in KSU.

   NOTE: For units wired for 240 VAC operation use an HAR flexible cord assembly approved by the safety agency in the end use country.

B. GROUNDING THE KSU

1. The PROSTAR system requires a solid earth ground to the KSU frame.

2. Failure to provide an adequate ground may cause confusing trouble symptoms or even circuit board failure.

3. In most cases in the U.S. the third wire ground at the AC power outlet will be satisfactory. If you are not sure of a good, solid ground on 3rd prong of outlet, connect the grounding lug on KSU to a ground rod or metal cold water pipe using 10AWG solid copper wire.

   REFER TO FIGURE 2

4. Do not use both methods of ground. The National Electrical Code calls for only one path to ground. The third wire of the electrical cord must be disconnected from KSU frame, taped and stored if an earth ground is applied to grounding lug.

****

WARNING

HAZARDOUS VOLTAGES MAY CAUSE DEATH OR INJURY. OBSERVE EXTREME CAUTION WHEN WORKING WITH AC POWER LINE VOLTAGE.

****

C. CONNECT TELEPHONE LINES TO KSU

Use 4 wire (2 pair) modular cables, 26 AWG included with the KSU.

1) One 2 pair cable is required to connect both C.O. line 1 and C.O. line 2. Another cable is used for C.O. line 3 and C.O. line 4.

   To connect KSU to C.O. line 1,2 or C.O. line 3, 4

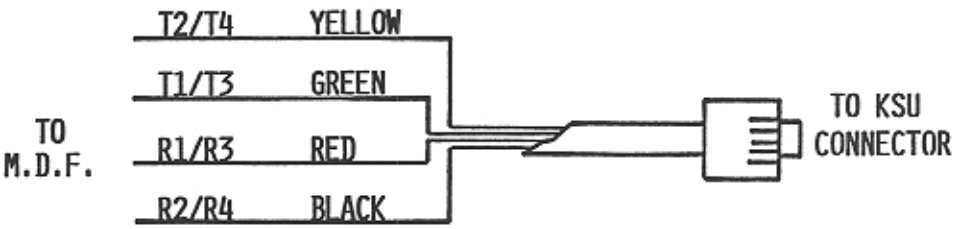
   1. The telephone company lines should be terminated on a connecting block or jack located near KSU.

   2. Identify each outside line number to ensure proper order of lines 1 through 8 when connected to KSU.

   3. Plug the modular jack at one end of the 2 pair cable into the modular connector on KSU marked CO 1.2.

   4. Connect the other end of 2 pair cable to outside lines through a connecting block or appropriate jack at the MDF.

   5. Use the same procedure for connection of C.O. lines 3 and 4.



C.O. LINE CONNECTIONS

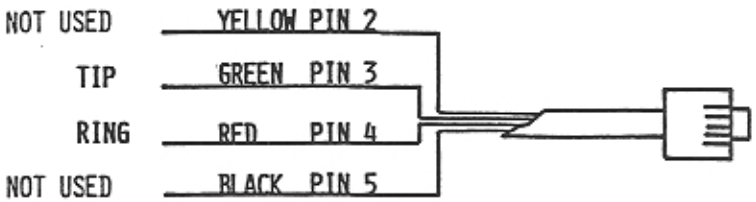
2) For connection of C.O. lines 5 through 8, a one pair cable is required for each C.O. line.

   To connect KSU to C.O. lines 5, 6, 7, 8 each

   1. Plug the modular jack at one end of the 2 pair cable into modular connector marked CO5.

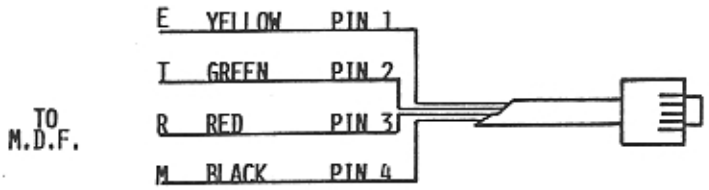
   2. Connect the other end to outside line through a connecting block or an appropriate jack at the MDF.

3. Use the same procedure for connection of C.O. lines 6, 7 and 8 respectively.



CONNECTIONS FOR C.O. 5-6-7 AND 8

4. Connect an E & M Tie Line as shown below.



E & M TIE LINE CONNECTIONS

D. CONNECTING KEYSETS

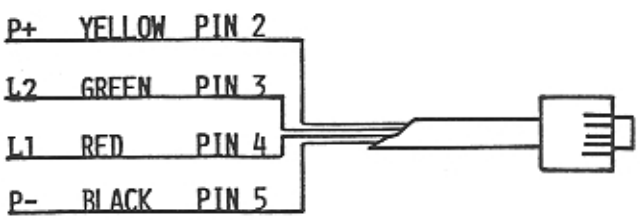
A 2 pair twisted cable with a modular jack at one end is recommended for connecting keysets to KSU. Ensure that the voice line (L-, L+) and data line (P-, P+) are correctly connected to the keyset.

Make sure that the cable run length does not exceed 1300 ft. using 26AWG wire.

*****ALL STATION CABLING MUST BE TWISTED PAIR*****

TO CONNECT EACH KEYSET TO THE KSU:

1. Plug the modular cable into the KSU starting with station number 1.
2. Connect the free end of the modular cable to a connecting block or appropriate jack at the MDF.
3. Take the same procedure as shown above for connection of station number 2 through 8.



KEYSET CONNECTIONS

4. As station numbers 7 and 8 are available for keyset or single line telephone operation, make sure that jumper pins and DIP switches located on the 408 base board are positioned properly.

SWITCH SETTINGS

DIP 3 AND DIP 8 -> ON FOR STATION 7 TO BE A KEYSET

DIP 4 AND DIP 9 -> ON FOR STATION 8 TO BE A KEYSET

E. CONNECTING SINGLE LINE TELEPHONES

A 2 pair twisted cable with a modular jack is required for connecting the single line telephones to the KSU.

Make sure that the length of any cable run does not exceed a 480 ohm loop including the telephone. A typical 2500 set with 24 AWG wire will go approximately 5000 ft.

TO CONNECT SINGLE LINE TELEPHONES TO THE KSU:

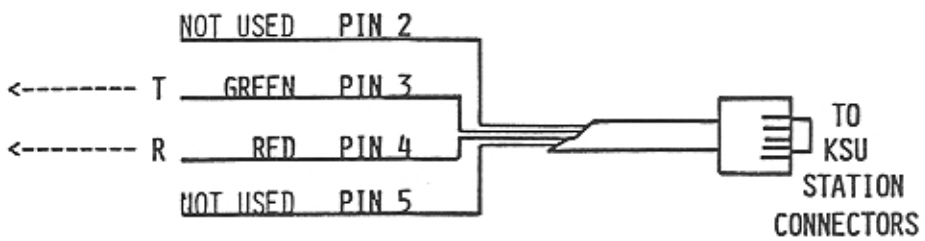
1. As station numbers 7 and 8 can be used for keyset or single line telephone, jumper pins and DIP switches on the 408 base board must be positioned properly.

SWITCH SETTINGS

DIP 3 AND DIP 8 -> OFF FOR STATION 7 TO BE A SINGLE LINE PHONE

DIP 4 AND DIP 9 -> OFF FOR STATION 8 TO BE A SINGLE LINE PHONE

2. Plug a modular cable into KSU and connect the free end to a connecting block or appropriate jack at the MDF.
Do not connect yellow or black leads of single line phone to KSU.



SINGLE LINE TELEPHONE CONNECTIONS

3. In order to connect station numbers 9 through 16 as single line telephones, additional 204 expansion boards (Type II), must be installed.

F. INSTALL EXPANSION BOARDS

Only two expansion boards can be installed in the PROSTAR KSU.

TYPE I: 2 loop start C.O. lines and 4 electronic keysets. (2CO/4KTS)

TYPE II: 2 loop start C.O. lines and 4 single line telephones (2CO/4SLT).

TYPE III: 2 loop start C.O. lines or 2 E & M Tie lines and 4 electronic keysets. Both line circuits are selectable for C.O. line or Tie line using jumper pins and DIP switch setting's on expansion board. (2E&M/4KTS)

SWITCH SETTINGS

	LINE 5 OR 7					LINE 6 OR 8				
DIP SW	DS11	DS12	DS13	DS14	DS15	DS21	DS22	DS23	DS24	DS25
C.O.	0	1	0	0	ON	0	1	0	0	ON
E/M	1	0	1	1	OFF	1	0	1	1	OFF

Installing any expansion board in the top half of KSU will provide for lines 5 & 6 and stations 9, 10, 11 and 12.

Installing the second expansion board in the lower half of the KSU will provide for lines 7 & 8 and stations 13, 14, 15 and 16.

The system must be expanded logically. Install first expansion board in top half of KSU. When necessary, add the second expansion board to the lower half of the KSU.

INSTALLING EXPANSION BOARDS

****

UNPLUG KSU FROM AC OUTLET AND DISCONNECT BATTERY BACK-UP SYSTEM BEFORE INSTALLING EXPANSION BOARDS.

****

1. Remove 4 screws from either top half or lower half of base board and replace them with metal standoffs provided in expansion board packaging.

REFER TO FIGURE 1

2. Set any DIP switches required, then connect one end of the flat ribbon cable to the expansion board. The ends of the ribbon cable are keyed to prevent incorrect insertion to sockets.

3. Position expansion board with modular connectors on the left and plug other end of ribbon cable into correct connector on the 408 base board.

4. Fold excess ribbon cable under,and secure expansion board with four screws.

5. Inspect work. If everything is correct connect KSU to wall outlet and reconnect battery back-up system if installed.

6. Connect additional lines and stations following the instructions outlined in items C, D and E of this section.

G. EXTERNAL PAGING CONNECTIONS

A modular cable with a jack at one end is recommended for connection of external paging system.

TO CONNECT EXTERNAL PAGING SYSTEM TO THE KSU

1. Plug a 3 pair modular cable into the KSU connector labeled PAGE.

2. Connect the voice pair (Blue & Yellow wires) to the selected input of the amplifier. Output impedance is 600 ohms. If the amplifier does not have a 600 ohm input, a matching impedance transformer should be used.

3. The output level of the external page circuit is fixed. Volume adjustments must be made at the customer's amplifier.

4. When muting of the background music is desired during page announcements use the contact pair (Black & White wires) for this purpose. Connect them to the mute terminals on the amplifier.

REFER TO FIGURE 3

H. EXTERNAL MUSIC SOURCE CONNECTIONS

PROSTAR is equipped with an internal melody IC chip to provide music on hold and background music through the keysets. However, an external music source such as a radio or tape recorder can be connected to the system.

TO CONNECT EXTERNAL MUSIC SOURCE TO THE KSU

1. Connect an external music source to the EXT. MUSIC jack on right side of the KSU using a 1/8 inch, (3.5 mm) mini phono plug.

REFER TO FIGURE 4

2. Adjust the volume of (MOH) Music on Hold at the external source for an acceptable level on C.O. lines.

3. Adjust the volume of (BGM) background music through the speakers in the keysets with the speaker volume at each keyset.

NOTE: Inserting the PHONO plug will disconnect the internal music source automatically.

I. CONNECTING THE DOOR PHONE AND LOCK CONTROL

PROSTAR users have the capability of communicating with an optional door phone when it is installed.

TO CONNECT THE DOOR PHONE

1. Plug a 3 pair modular cable into the connector on the left side of the KSU marked "DOOR".

2. Connect the other free end to a connecting block at the MDF.

3. Cross connect the voice pair, Blue & Yellow wires and the power pair, Green & Red wires to the back of the door phone unit.

4. Cross connect the contact pair, Black and White wires to the customer provided electric door lock unit for control of the door lock release mechanism.

   See programming section # 77 for door contact timer.

NOTE: THIS PAIR OF WIRES IS TO BE USED FOR LOW VOLTAGE RELAY CONTROL ONLY.
DO NOT CONNECT TO COMMERCIAL AC POWER.

REFER TO FIGURE 5

J. INSTALLING THE SMDR CARD

An optional Station Message Detail Recording (SMDR) card can be installed in the PROSTAR KSU. Details of outside calls made through the system can be sent to a customer provided printer, data buffer or call accounting system.

TO INSTALL THE SMDR CARD:

1. If the second expansion card is installed it must be removed to permit installation of the SMDR card.

****

UNPLUG KSU FROM AC OUTLET AND DISCONNECT BATTERY BACK-UP SYSTEM. BEFORE INSTALLING SMDR CARD.

****

2. Remove the cover plate from the right side of the KSU and insert the two plastic standoffs into KSU base.

REFER TO FIGURE 1

3. Insert the RS232 connector through the hole in the KSU. Align the SMDR card with the connector on the 408 base board and standoffs. Secure into place.

4. Set the DIP switches on the SMDR card for the selected baud rate.

		4800 bps	2400 bps	1200 bps
DIP 1	1	OFF	ON	OFF
	2	ON	OFF	OFF
DIP 2	1	OFF	OFF	OFF
	2	OFF	OFF	ON

5. Plug the customer provided equipment into the connector using a pin for pin cable.

REFER TO FIGURE 4

6. Reinstall the expansion card if previously removed.

7. Restore AC power to the KSU.

8. Set Programming Options #19 and #78.

NOTE: The SMDR collecting device must have a serial interface configured for:

* Even parity
* 8 Bits
* No start or stop bit
* Printer must have (CR) carriage return and (LF) line feed enabled.

K. POWER FAILURE TRANSFER

The PROSTAR system has two methods to provide transfer of C.O. lines to conventional single line telephones during a power failure.

A. Transfer to SLT extensions on PROSTAR system.
B. Transfer to externally provided Tip and Ring connections.

METHOD A

1. When stations 7 and 8 are used as SLT sets, C.O. lines 1 and 2 can be automatically connected to these SLT stations during a power failure.

SWITCH SETTINGS

DIP 6 -> **ON** for CO 1 to SLT 7

DIP 7 -> **ON** for CO 2 to SLT 8

NOTE: When station 7 or 8 is set for a keyset, DIP 6 or 7 must be set to OFF.

2. Type II expansion board (2 CO/4 SLT) has two power failure transfer circuits provided. On each board the first C.O. circuit is connected to the first SLT circuit and the second C.O. circuit to the second SLT circuit.

EXAMPLE:

BOARD IN TOP	BOARD IN BOTTOM
CO 5 to SLT 9	CO 7 to SLT 13
CO 6 to SLT 10	CO 8 to SLT 14

There are no jumper pins or DIP switches to set for power failure transfer on the 2 CO/4SLT board.

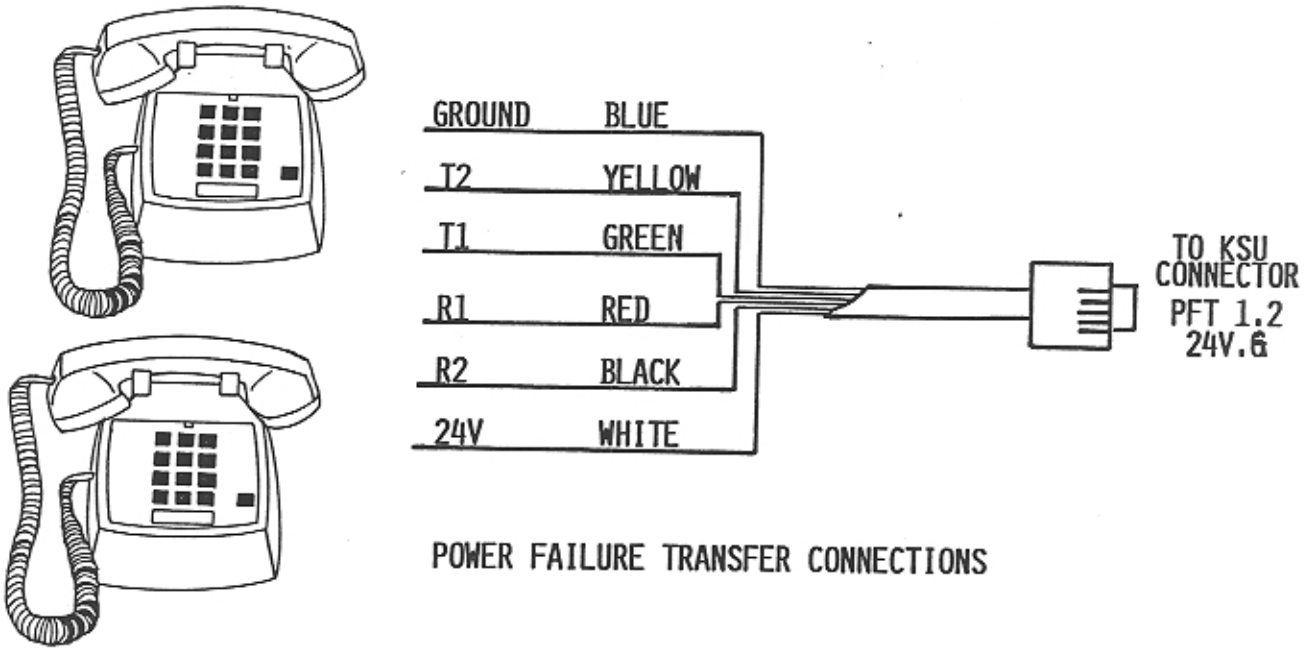
METHOD B

Provides Tip and Ring of C.O. 1 and C.O. 2 to a modular jack for connecting to optionally provided single line phones.

1. Plug a three pair modular cable into the connector on KSU marked PFT 1.2/24V.G

2. Connect the free end to a connecting block. Cross connect C.O. Line 1 and 2 to customer provided equipment.

See diagram next page.



POWER FAILURE TRANSFER CONNECTIONS

L. CONNECTING BATTERY BACK-UP

The PROSTAR KSU can continue full system operation during AC power failure. This requires that a 24V battery supply be connected to the KSU. When AC power drops below 78 VAC. the system switches over to batteries immediately. Calls in progress will not be interrupted.

To supply 24 Volts, use two 12V batteries or four 6V batteries connected in series. Any NICAD or car battery can be used if its rating is not more than 40AH and not less than 6AH. The system will not operate in power failure mode if battery voltage drops below 21.5 VDC.

REFER TO FIGURE 4

Required connector with approximately 36" red and black leads are supplied with KSU.

Power supply circuitry will monitor and recharge batteries as required. A 10AH battery will keep the KSU and six keysets fully operational for approximately six hours.

********** **CAUTION** **********

PRACTICE EXTREME CAUTION WHEN CONNECTING LIVE BATTERIES TO AVOID PERSONAL INJURY OR DAMAGE TO PROSTAR SYSTEM

****

M. INTERNAL MUSIC SOURCE

The PROSTAR key service unit is equipped with an IC Melody chip containing two tunes, "GREENSLEEVES" and "HOME ON THE RANGE".

Selection is made with DIP 5. Position jumper across center pin and A or center pin and B to select tune.

Volume level is adjusted by VR 2 on 408 Base board.

REFER TO FIGURE 6

NOTE: When the customer does not want internal or external music provided, unplug the CONNECTOR for EXT MUSIC from the 408 base board.

N. MEMORY PROTECTION

PROSTAR is equipped with a memory back-up battery that prevents loss of customer data base stored in RAM during a power outage. The 3.7 VDC NICAD battery is connected through DIP 2 switch on the 408 base board.

REFER TO FIGURE 6

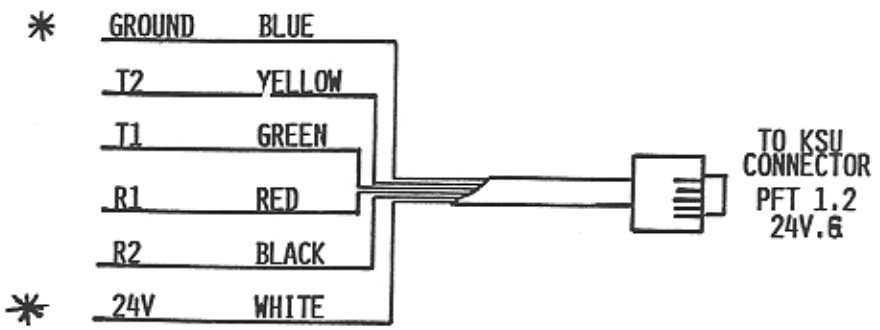
This memory back-up is turned off at the factory before shipping to preserve battery life.

Immediately after installation of the KSU, switch DIP 2 to ON. Allow 48 hours of continuous operation to fully charge NICAD battery.

O. EXTERNAL 24 VDC CONNECTIONS

For added convenience PROSTAR provides a 24 VDC output for external accessories. Any device connected to this power source must not draw more than 12.5 mA.

Output is provided on pins 1 & 6 of the PFT 1.2 connector and is labeled 24V.G



P. C.O. LINE PROTECTION

The National Electrical Code has adopted new requirements for electrical equipment. PROSTAR key service units have been made to comply with the NEC by meeting U.L. 1459 second edition requirements.

One of these new requirements is to provide current protection on all C.O. line circuits. Each C.O. circuit in the PROSTAR system is protected by a pico fuse in series with the TIP lead and a pico fuse in series with the RING lead.

See figures 6, 7, 8 and 9.

To provide proper safety, U.L. requires these pico fuses to blow (open) if current exceeds 250 milliamps. Normal current is approximately 30 milliamps and maximum allowable current is 125 milliamps. Should one or more of these pico fuses blow, the line or lines have been subjected to excessive current. Generally during an electrical storm.

When a C.O. line is dead and the system appears to be functioning normally, check the PICO fuses before replacing KSU or expansion cards.

These pico fuses are installed in white locking connectors located next to the modular jacks for each C.O. line.

Unplug the modular plug for the suspected line and check with an ohm meter for continuity. If fuse is open, replace both fuses for that line. If only one fuse is blown it is certain that the other fuse has been affected. We recommend replacing pico fuses in pairs.

To remove, push down and hold the locking connector on both sides to release the fuse. Remove and replace defective fuse.

Pico fuses can be obtained from electronic component suppliers or in packages of 20 from STC. Current price is $40.00 per pack. The recommended component is made by Littlefuse TRA COR, type number 252.250.

Pico fuses lock like resistors and are normally a green color.

KEY SERVICE UNIT LAYOUT

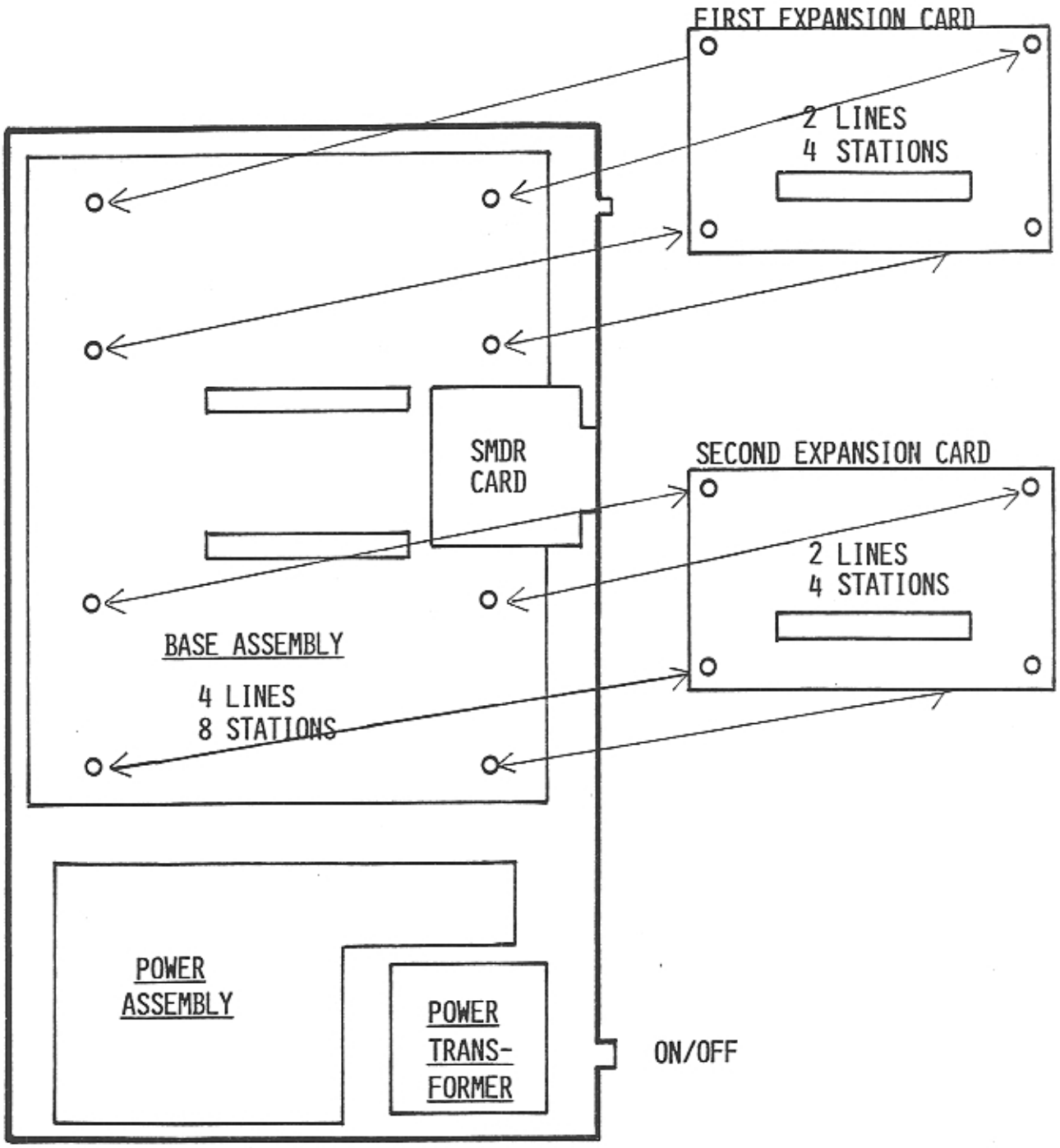


FIGURE I

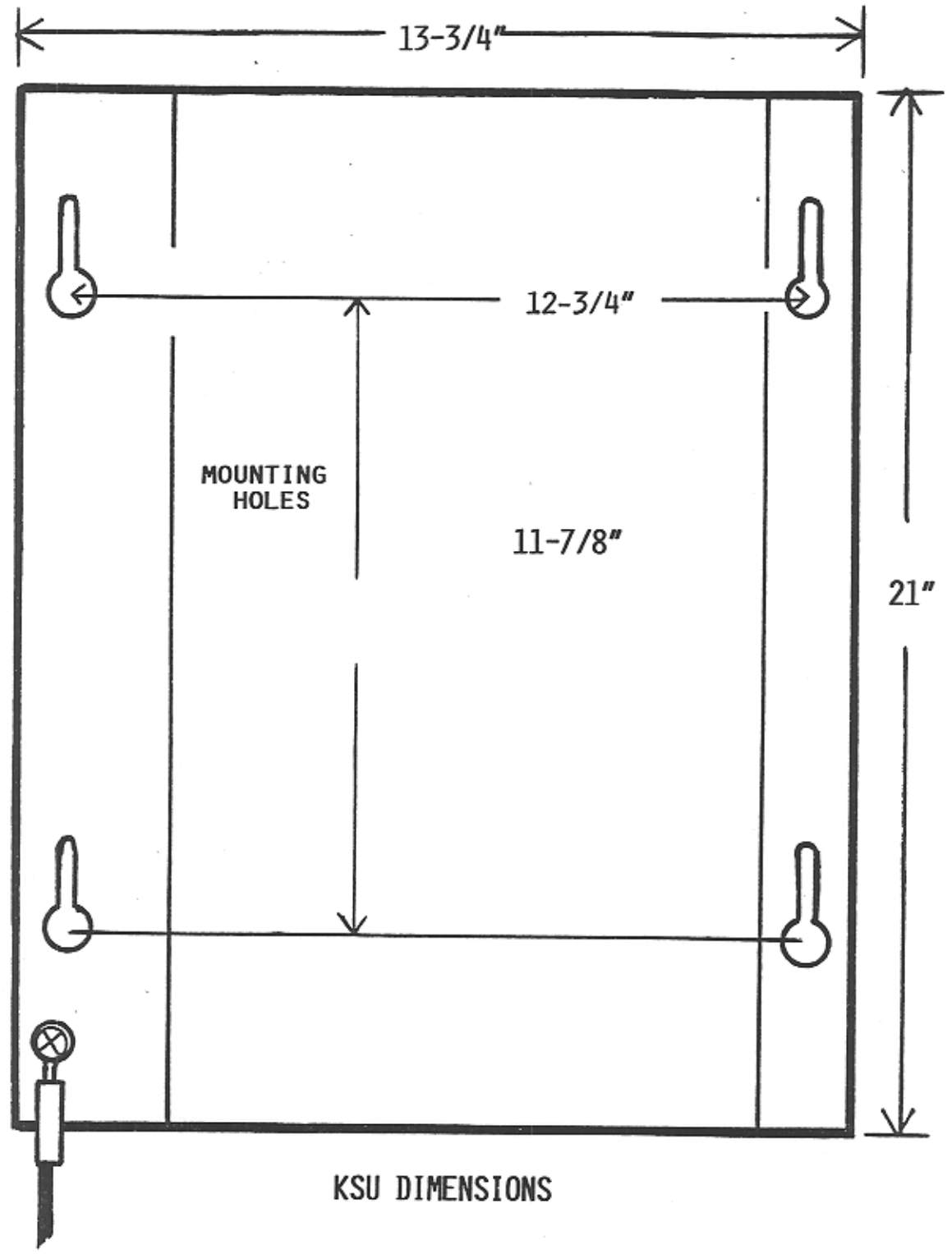

13-3/4"
12-3/4"
MOUNTING
HOLES
11-7/8"
21"
KSU DIMENSIONS
#10 AWG SOLID COPPER
COLD WATER PIPE OR
GROUND ROD

FIGURE 2

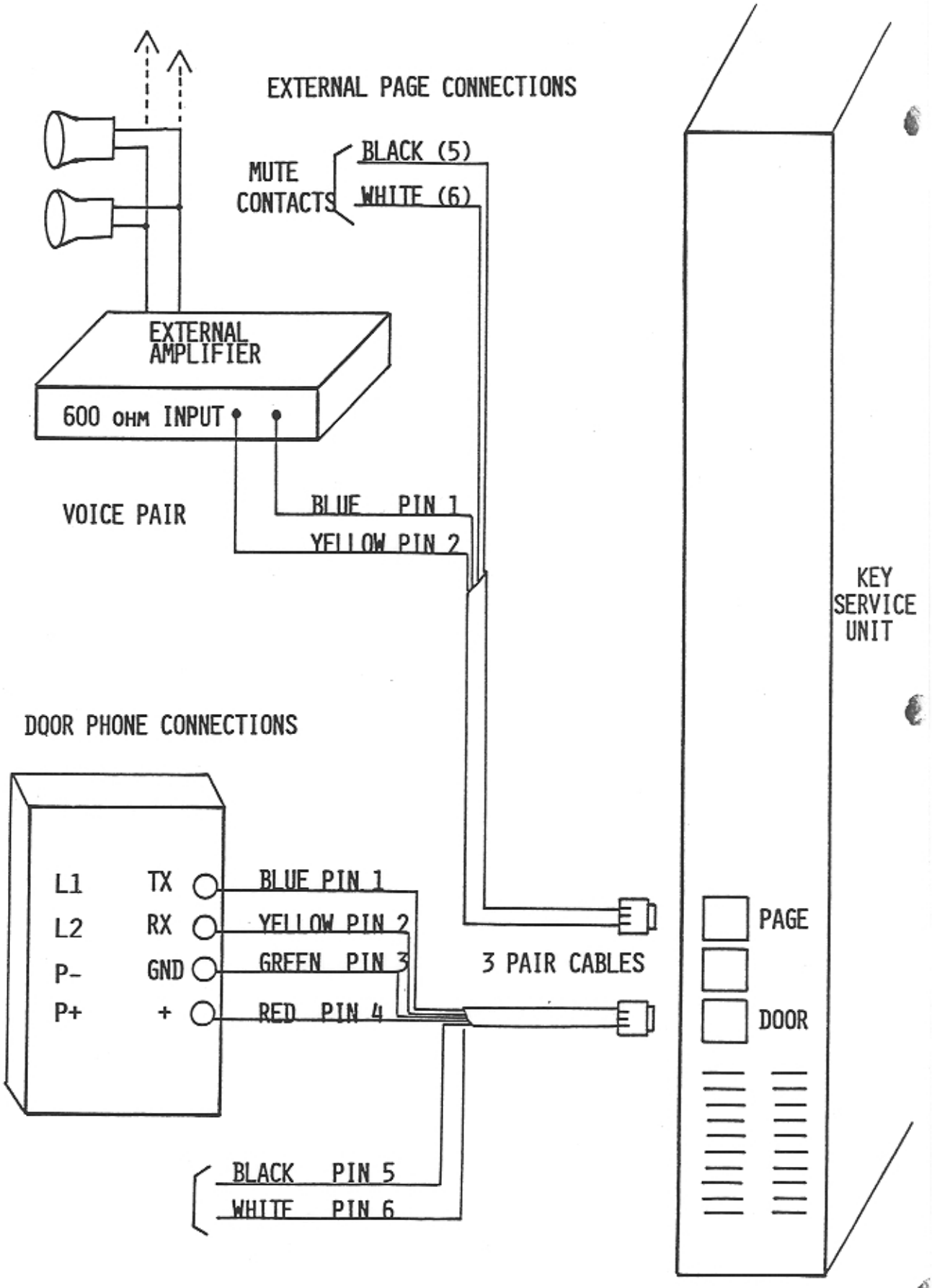

EXTERNAL PAGE CONNECTIONS
MUTE CONTACTS
BLACK (5)
WHITE (6)
EXTERNAL AMPLIFIER
600 OHM INPUT
VOICE PAIR
BLUE PIN 1
YELLOW PIN 2
KEY SERVICE UNIT
DOOR PHONE CONNECTIONS
L1
L2
P-
P+
TX
RX
GND
+
BLUE PIN 1
YELLOW PIN 2
GREEN PIN 3
RED PIN 4
3 PAIR CABLES
PAGE
DOOR
BLACK PIN 5
WHITE PIN 6

FIGURE 3

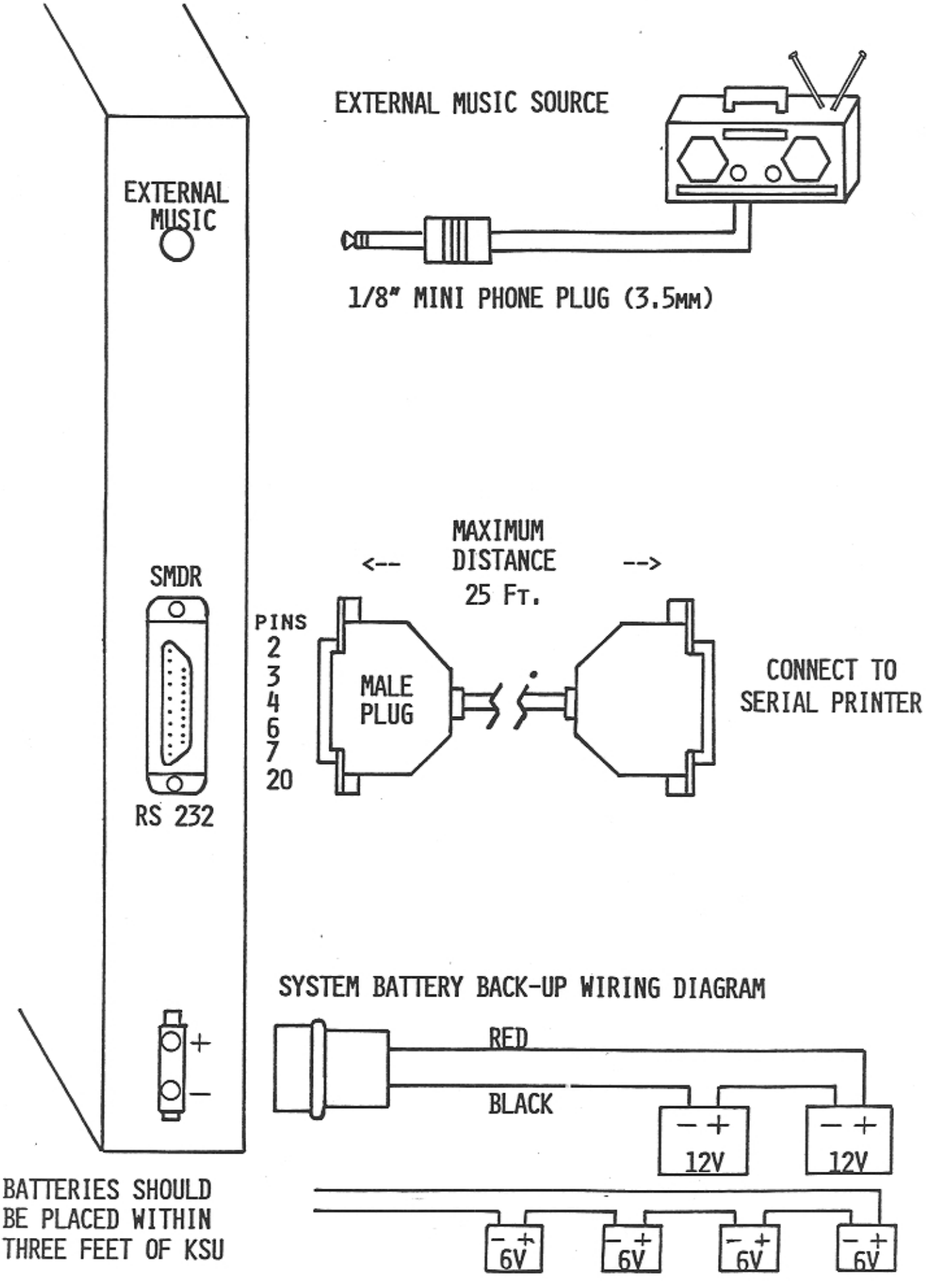
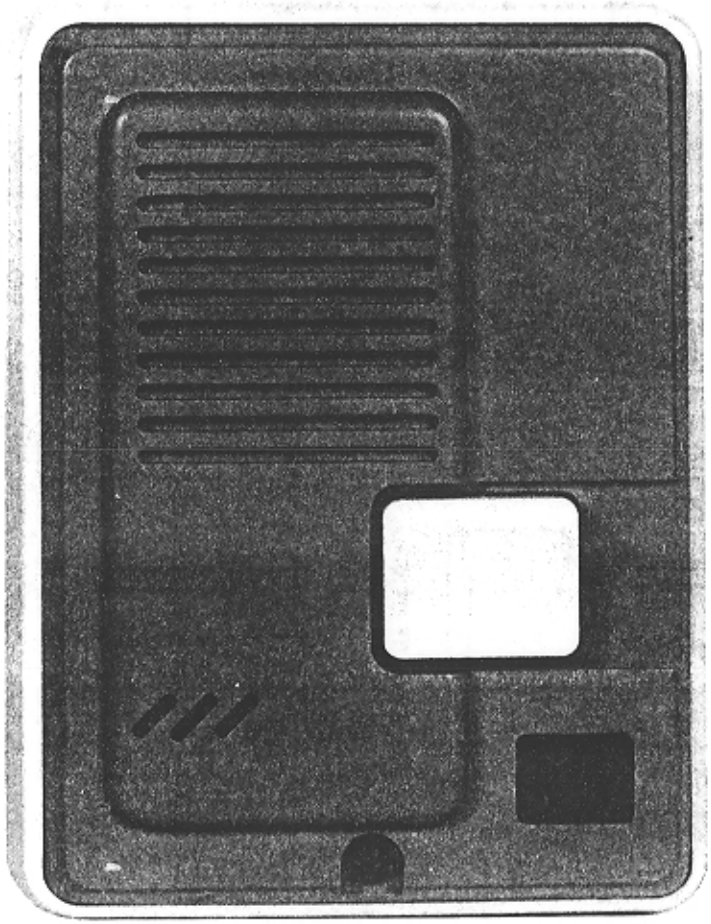
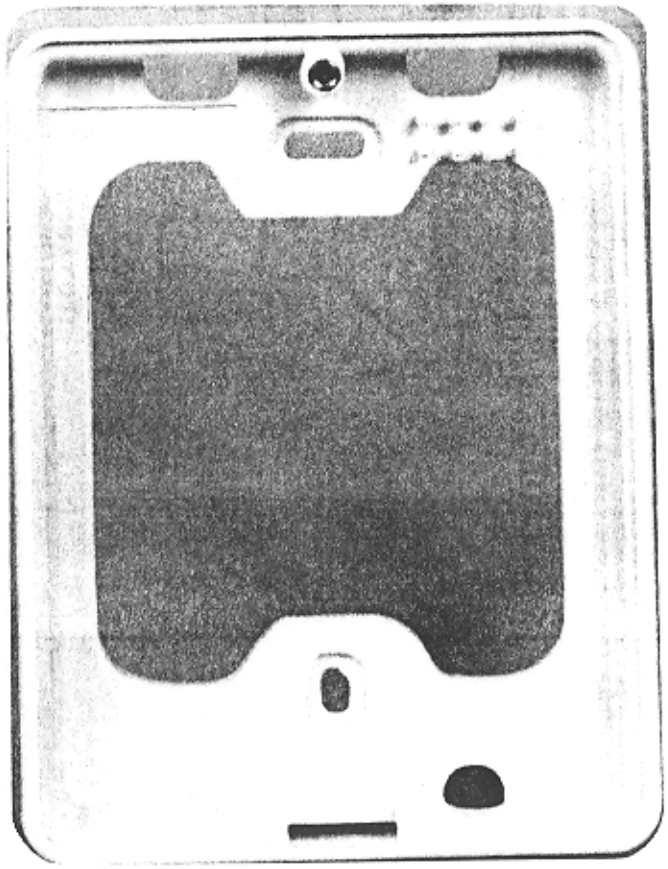

EXTERNAL MUSIC SOURCE
EXTERNAL MUSIC
1/8" MINI PHONE PLUG (3.5MM)
SMDR
RS 232
MAXIMUM DISTANCE 25 FT.
<--
-->
PINS 2 3 4 6 7 20
MALE PLUG
CONNECT TO SERIAL PRINTER
SYSTEM BATTERY BACK-UP WIRING DIAGRAM
RED
BLACK
12V
12V
6V
6V
6V
6V
BATTERIES SHOULD BE PLACED WITHIN THREE FEET OF KSU

FIGURE 4

DOOR PHONE



FRONT VIEW



MOUNTING BRACKET

FIGURE 5

DIP SWITCHES
BASIC KEY SERVICE UNIT (408)

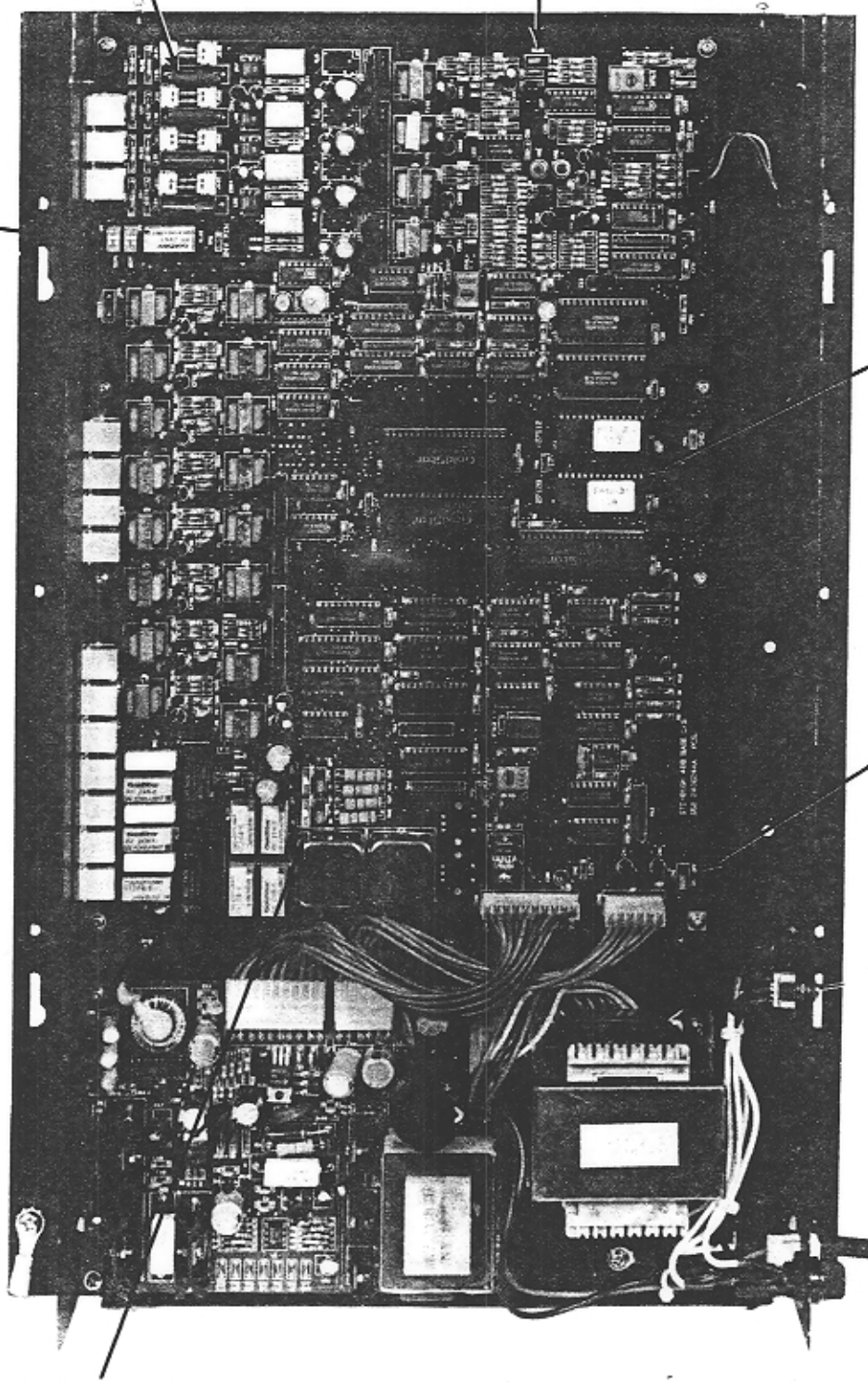
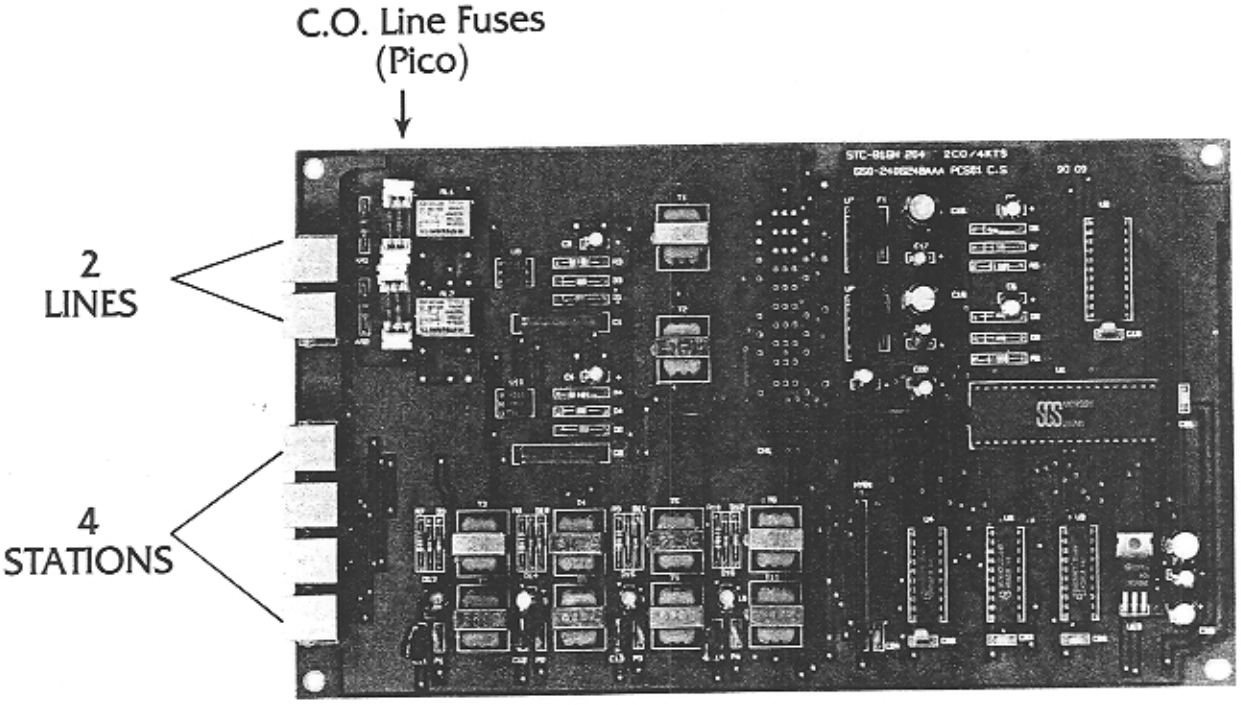
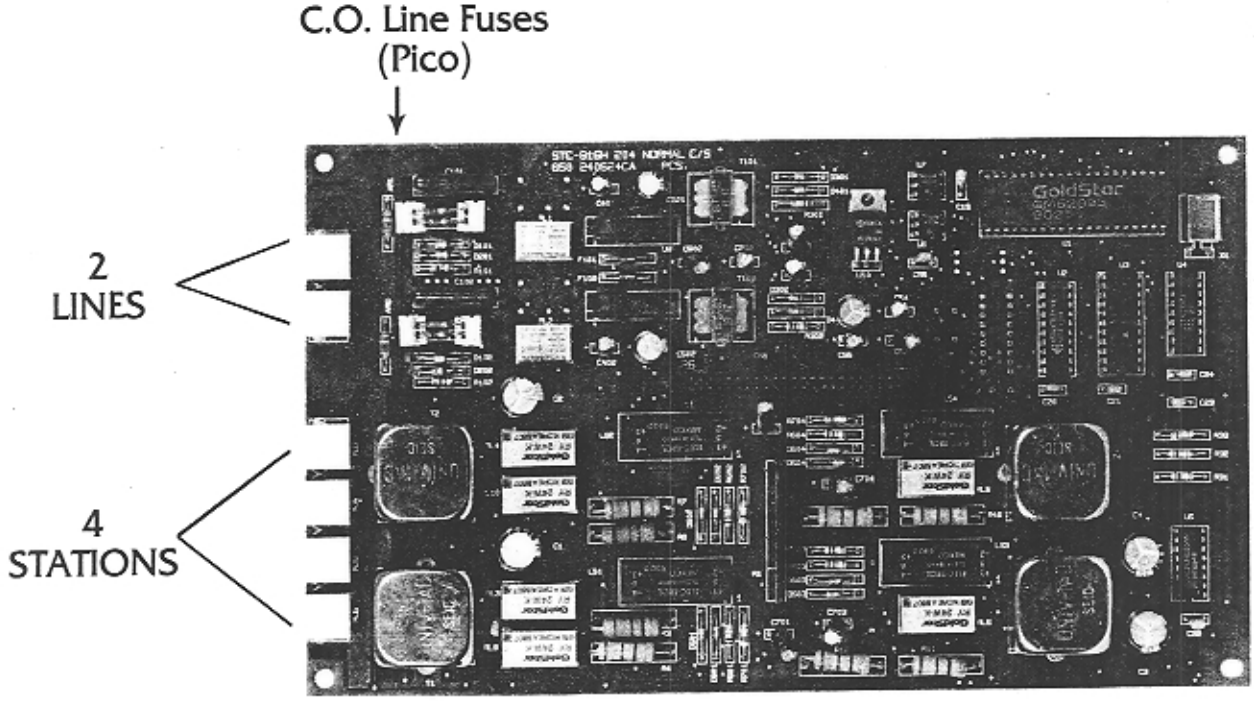


FIGURE 6

EXPANSION BOARDS

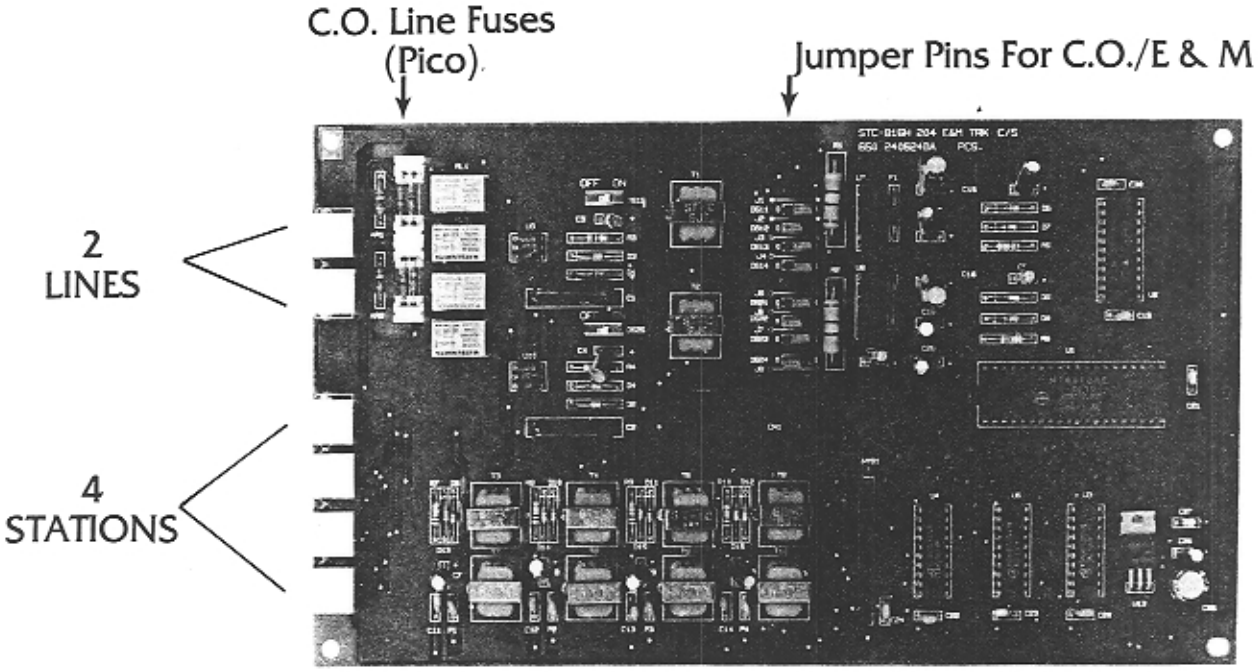


(Figure 7) TYPE I. 2CO/4KTS



(Figure 8) TYPE II. 2CO/4SLT

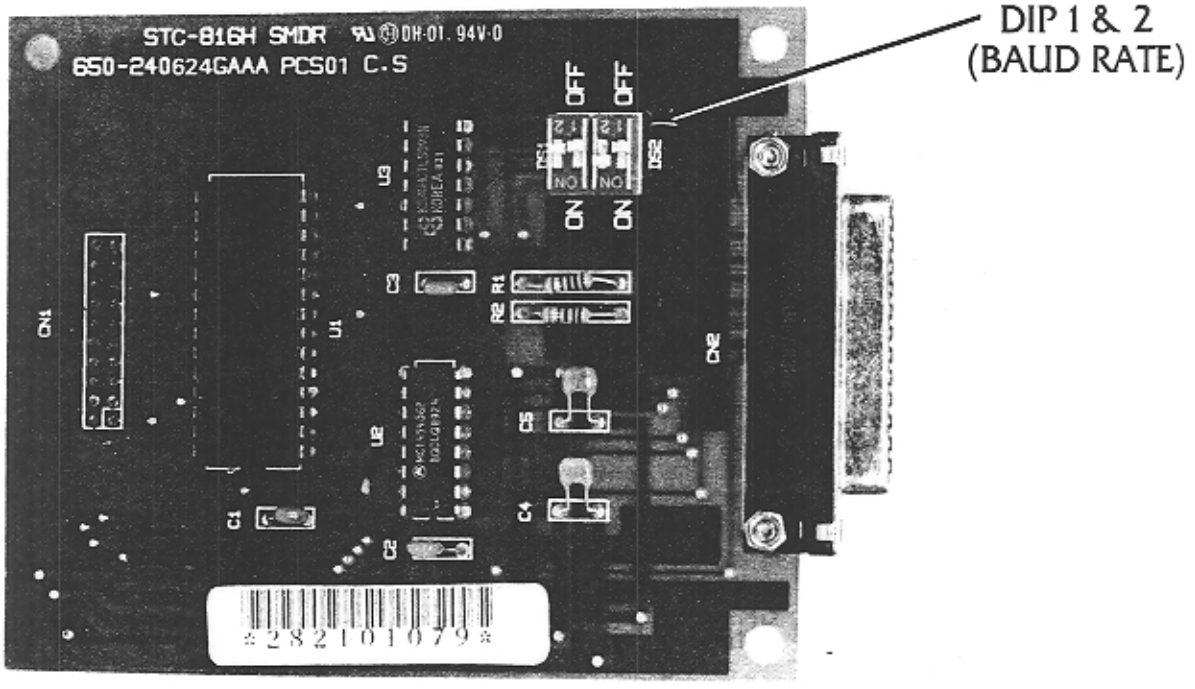
EXPANSION BOARD



(Figure 9)

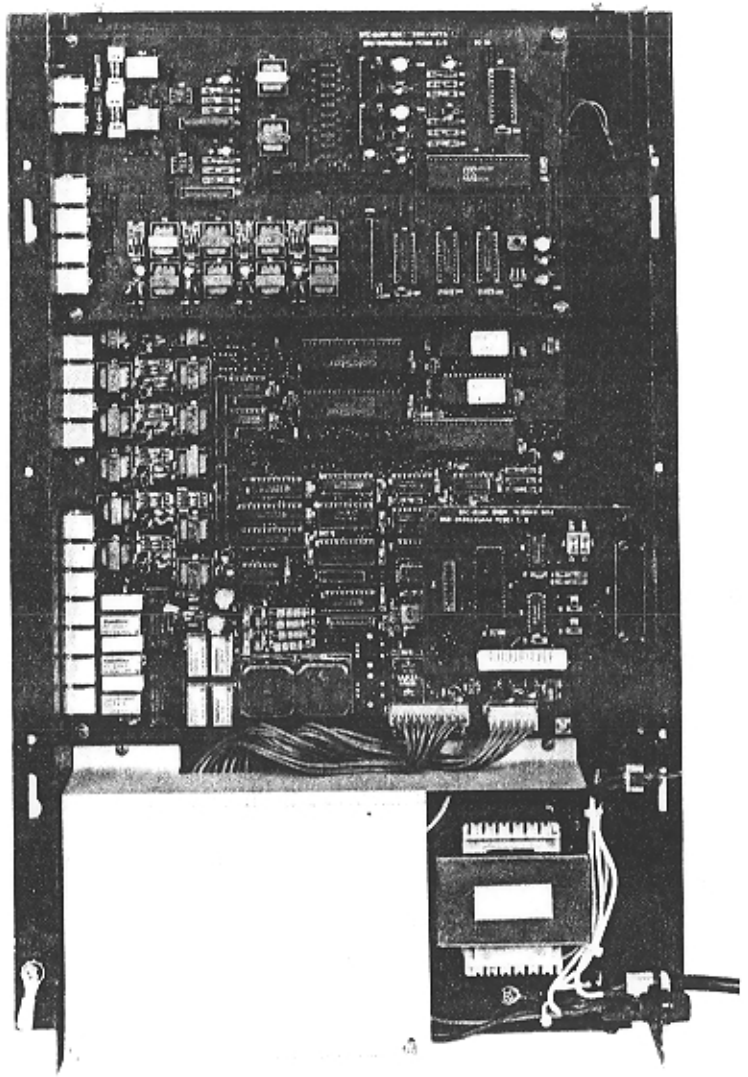
TYPE III 2 E&M/4 KTS

SMDR CARD

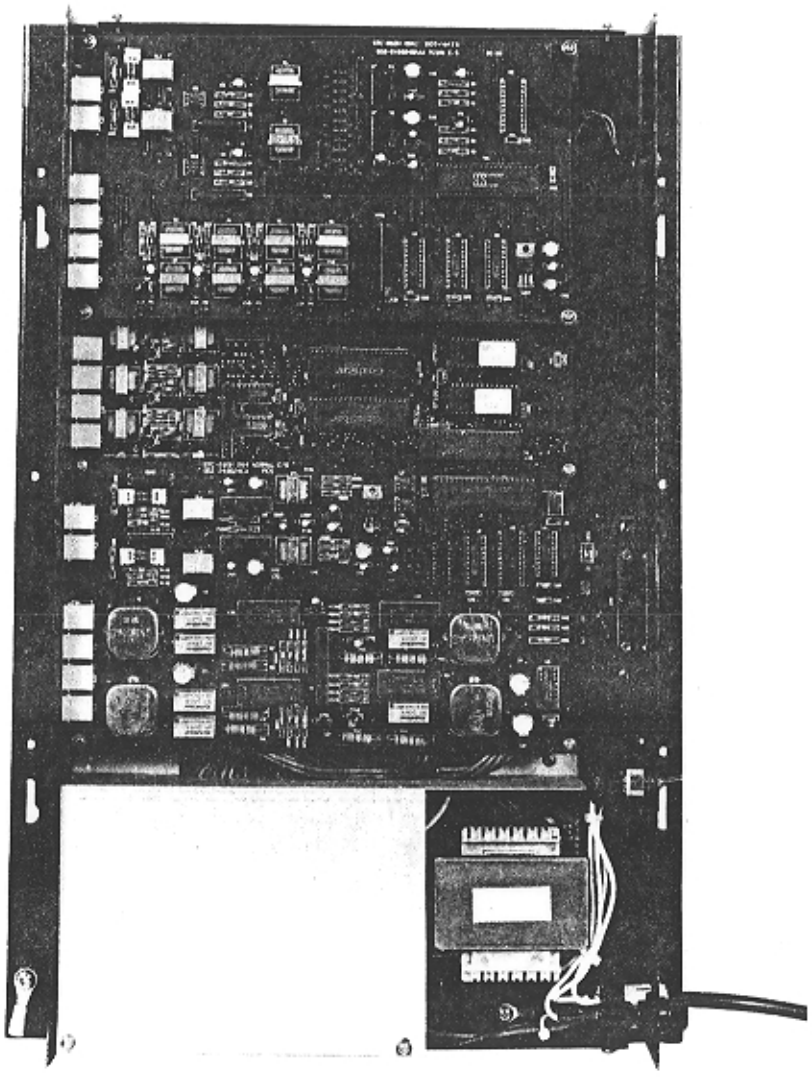


(Figure 10)

HARDWARE CONFIGURATIONS



BASIC KSU
FIRST EXPANSION BOARD
SMDR CARD



BASIC KSU
FIRST AND SECOND EXPANSION BOARDS
SMDR CARD

(Figure 11)

408/816 KSU SIDE VIEWS

LEFT

408

LEFT

612

LEFT

816

RIGHT

SMDR CARD
INSTALLED

FIGURE 12

PROGRAMMING SECTION

STATION PROGRAMMING

The following features and programs can be accessed by keyset users without a password.

NUMBER	FUNCTION
10	AUTO ANSWER SELECTION
11	STATION CALL FORWARDING
13	AUTO TIMER ON/OFF
14	STATION NAME -- STATION DIRECTORY
15	SOFT KEY ASSIGNMENT (Not in User Guide)
17	RINGING LINE PREFERENCE

CUSTOMER PROGRAMMING

The following programs can be accessed only by entering USER PASSWORD. Some of these are not explained in user guide. The installing company may provide these instructions to any customer they care to.

NUMBER	FUNCTION
04	ENABLE USER PROGRAMMING
05	CHANGE USER PASSWORD
16	C.O. LINE DIRECTORY
18	GROUP DIRECTORY (Not in User Guides)
19	SMDR DIRECTORY (Not in User Guides)
39	ASSIGN BARGE-IN (Not in User Guides)
45	EXTERNAL CALL FORWARD
55	DATE AND TIME
65	DISA SECURITY CODE
74	ASSIGN HEADSET OPERATION (Not in User Guides)
82	PROGRAMMABLE MESSAGES (Not in User Guides)
**	SYSTEM SPEED DIALING

TECHNICIAN PROGRAMMING

Using the technician level password will allow access to **ALL** PROSTAR 816 programming procedures including station and customer programs.

NUMBER	FUNCTION
20	ENABLE TECHNICIAN PROGRAMMING
21	CHANGE TECHNICIAN PASSWORD
22	DTMF TONES MUTE
23	DIAL PULSE MAKE/BREAK RATIO
24	SOFTWARE VERSION DISPLAY
25	SYSTEM INITIALIZATION
26	NIGHT MODE DIALING CLASSES
30	CLASS OF SERVICE
31	C.O. LINE ACCESS
32	INTERNAL PAGING
33	DENY CODES CLASS OF SERVICE "B"
34	ALLOW CODES CLASS OF SERVICE "B"
35	DENY CODES CLASS OF SERVICE "C"
36	ALLOW CODES CLASS OF SERVICE "C"
37	ALLOW CODES CLASS OF SERVICE "D"
38	SINGLE LINE DIALING TYPE
39	ASSIGN BARGE-IN STATUS
40	DIAL 80 GROUP
41	C.O. LINE INCOMING/OUTGOING ASSIGNMENT
42	C.O. LINE PULSE/TONE SELECTION
43	ASSIGN TRUNKS
44	C.O. OR PBX LINE SELECTION
45	EXTERNAL CALL FORWARDING
46	PRIVATE OR NON-PRIVATE LINES
47	DIAL 9 GROUP
48	ASSIGN DISA LINES
49	FORWARD C.O. LINES
50	C.O. FLASH TIMING
51	PBX FLASH TIMING
52	HOLD/CAMP-ON RECALL TIME
53	TRANSFER RING TIME
54	ALARM TIME DURATION
55	DATE AND TIME
56	OVERRIDE TONE INTERVAL
57	C.O. TO C.O. DURATION TIMER
58	AUTO TIMER START TIME
59	EXTERNAL CALL FORWARD TIMER
60	C.O. LINE RING MODE
61	NIGHT RINGING ASSIGNMENT
62	DAY RINGING ASSIGNMENT
63	DOOR PHONE RINGING ASSIGNMENT
64	RING OVER PAGING
65	DISA SECURITY CODE
66	ASSIGN DND
67	CAMP-ON TONE INTERVAL
68	INTERNAL PAGE ZONES
69	STATION HUNT GROUPS

TECHNICIAN PROGRAMMING Cont'd..

70	ATTENDANT ASSIGNMENT
71	SYSTEM SPEED DIAL RESTRICTION
72	EXECUTIVE BARGE-IN
73	BOSS/SECRETARY ASSIGNMENT
74	ASSIGN HEADSET OPERATION
75	PBX TOLL CHECK
76	HUNT GROUP RING MODES
77	DOOR CONTACT TIMER
78	SMDR PAGE LENGTH
80	KEYSET BUTTON PROGRAMMING
81	DIAGNOSTIC KEY TEST
82	PROGRAMMABLE MESSAGE DISPLAY

A. INSTRUCTIONS

This section of the manual provides system programming instructions. Programming can be done at any electronic station port equipped with a display keyset.

There are three levels of programming: Technician, User and Station.

All system programming can be accessed by entering a Technician's password at any display station. Only an authorized person can program the features which are applied to all the stations in the system.

User programming is intended for customer's use and allows limited access to system programs through use of a USER level password. The attendant keyset will use this level of access to enable specific features.

Station programming can be done at any station without password because these features will be applied to that station only.

This section describes only Technician and User level programming. Station programming is described in User Guide that is packed with every keyset or The Special Feature Guide.

Features will operate when the system is turned on because it is factory - programmed. This is called DEFAULT DATA. You may use the features as factory - programmed or change them.

The programming should be done using the following procedures while on-hook.

a) To program each feature, the system must be set into the program enable mode.

Enter: # --> 20 --> Password --> 0/1 --> #
0 : Programmable Disable
1 : Programmable Enable

b) To program each feature dial;

--> Program Number --> Enter Data -->

**********REMINDER**********

Set DIP 2 to ON before entering customer data. Failure to do so will result in loss of data during a loss of power to the system.

****

B. PROGRAMMING PROCEDURES

#04 ENABLE USER PROGRAMMING

This program will enable access to a few programs necessary for the end user. See list at beginning of Program section of this manual.

1) Press # key.
   PROGRAMMING is displayed.

2) Dial 04.
   MMC DISABLED is displayed.

3) Dial four digit password, then 1.

4) Press # key.

* Default password is 4321.

* NOTE: Programming mode will automatically time out after a short period of time following last key sequence.

#05 CHANGE USER PASSWORD

Use this program to change user password for enabling user programming.

1) Press # key.
   PROGRAMMING is displayed.

2) Dial 05.
   OLD PASSWORD is displayed.

3) Enter old password.
   Display changes to NEW PASSWORD.

4) Enter new four digit password.
   The password cannot include * or #.

5) Press # Key.

* Default password is 4321.

* NOTE: If user forgets password, a technician may get into programming using his password.

#10 AUTO ANSWER SELECTION

* See Keyset User Guide.

#11 STATION CALL FORWARDING

* See Keyset User Guide.

#13 AUTO TIMER ON/OFF

* See Keyset User Guide.

#14 STATION DIRECTORY

Use this program at the attendant's keyset to enter names for each station in the system. If attendant is not a display keyset, temporarily install one at this station.

1) Press # key.
PROGRAMMING is displayed.

2) Dial 14.
Attendant's extension number is displayed and any previously entered name.

3) Press HOLD to clear current data.

4) Press the DSS button to be named.

5) Enter the name by using dial pad and C.O. line buttons (ten characters maximum).

EXAMPLE:

To display the letter "A", press C01 then dial pad button 2. This is the first letter on this button.

To display the letter "R", press C02 then dial pad button 7. This is the second letter on this button.

To display the letter "S", press C03 then dial pad button 7. This is the third letter on this button.

All numbers are displayed by pressing C04 then the dial pad button with that number.

Other characters are as follows:

Q = C01 then dial pad number 1
Z = C02 then dial pad number 1
* = C03 then dial pad number 1

: = C01 then dial pad number 0
. = C02 then dial pad number 0
! = C03 then dial pad number 0

Press MSG button for a space.
Press HOLD button to clear all letters and begin again.

6) Press another DSS button and enter name.

7) Press # after all names are entered.

* Default: No names are assigned.

#15 SOFT KEY ASSIGNMENT

This program is used to assign the four round buttons on each keyset any of the following functions. These are assigned on an individual keyset basis.

33	TIMER	40	BOSS/SECRETARY
34	AUTO ANSWER	41	GROUP LISTENING
35	AUTO REDIAL	42	ACCOUNT CODE
36	CALLBACK	43	GROUP 1
37	INTERNAL PAGE	44	GROUP 2
38	ATTENDANT	45	GROUP 3
39	DOOR PHONE		

1) Press # key.
PROGRAMMING is displayed.

2) Dial 15.
STN KEY PROGRAM is displayed.

3) Press the round button to be programmed.
The default function of this button is displayed, followed by the current function.

4) Dial two digit code corresponding to desired function. Code is displayed.

5) Press # Key.

* NOTE: Blank button designation strips should be used when anything other than default functions are assigned. New functions can be labeled for customer's use.

#16 CO LINE DIRECTORY

This program is used to enter an identification or name for each C.O. line.

1) Press # key.
PROGRAMMING is displayed.

2) Dial 16.
LINE DIRECTORY is displayed.

3) Press the C.O. line button to be named.
Line number is displayed and any previously entered data.

4) Press HOLD button to clear old data.

5) Enter new name or ID (10 characters maximum) in same manner as station directory except, use DSS buttons 1, 2, 3, and 4 to select first, second, or third character and number on each dial pad button.

* Default: No line directory information assigned.

#17 RINGING LINE PREFERENCE

* See Keyset User Guide.

#18 GROUP DIRECTORY

This program is used to assign a ten character name or identification for each of the three station groups.

1) Press # key.
PROGRAMMING is displayed.

2) Dial 18.
GROUP DIRECTORY is displayed.

3) Press one of the first three round buttons below the display to select group number 71, 72, or 73. The selected group number is displayed.

4) Enter ten character identity using same method as detailed in Program #14, or as instructed in keyset user guide under ENTERING PERSONAL NAME IN DIRECTORY.

5) Press # Key.

* Default: No identity assigned.

#19 SMDR DIRECTORY

This program is used to assign a sixteen character directory name at the top of each page of an SMDR printout.

1) Press # key.
PROGRAMMING is displayed.

2) Dial 19.
SMDR DIRECTORY is displayed.

3) Press the HOLD button to clear old data.

4) Enter a sixteen character name using the same procedure as Program #14, station directory.

5) Press # key.

#20 ENABLE/DISABLE TECHNICIAN PROGRAMMING

Allows you to set the system into program enable mode or disable mode for Technician Level Access. This will enable you to access user programs also.

1) Press # key while on hook.
PROGRAMMING is displayed.

2) Dial 20.
MMC ENABLED or MMC DISABLED is displayed.

3) Enter password
Default is 1 2 3 4. If wrong password is entered, display shows ERROR and the program mode is finished.

4) Dial 1 to enter program mode or make another selection.

0: System program disable.
1: System program enable.
2: Auto C.O. line selection while on hook enable.
3: Auto C.O. line selection while on hook disable.
4: 12 Hour Clock.
5: 24 Hour Clock.

5) Press # key.

* NOTE: The unit will automatically go out of the programming mode if no data is entered in 4 minutes.

#21 CHANGE TECHNICIAN PASSWORD (Does not require MMC ENABLED)

The Technician's password can be changed using the following procedures.

1) Press # key.
PROGRAMMING is displayed.

2) Dial 21.
OLD PASSWORD is displayed.

3) Enter the current password.
NEW PASSWORD is displayed.
If wrong password is entered, display will show ERROR and system will release you from programming.

4) Enter new password.

5) Press # key.

* NOTE: 4 digit password is composed of any of 0 - 9 on the dial keys and 1 - 6 on the DSS keys

1 - 6 on the DSS keys represents A, B, C, D, E and F respectively. Loss of RAM memory will initialize the password to default value - 1 2 3 4.

#22 DTMF TONE MUTE (Does not require MMC ENABLED)

Allows you to mute DTMF tones when dialing on C.O. lines.

1) Press # key.
PROGRAMMING is displayed.

2) Dial 22.
The present DTMF tone mode is displayed.

3) Enter password.

4) Enter 0 or 1 on the dial keys.

0: Hear DTMF tone
1: Mute DTMF tone

5) Press # key.

* Default: 1 --- Mute DTMF tone

#23 DIAL PULSE MAKE/BREAK RATIO
(Does not require MMC ENABLED)

Enables you to adjust the dial pulse make/break ratio.

1) Press # key.
PROGRAMMING is displayed.

2) Dial 23.
Display will show: MAKE RATIO.

3) Enter password.
Current MAKE time is displayed.

4) Enter new MAKE time as 2 digits in range of 01 - 99 milliseconds.
Current BREAK time is displayed.

5) Enter new BREAK time as 2 digits in range of 01 - 99 milliseconds.

6) Press # key.

* Default : MAKE --- 33ms / BREAK --- 66ms.

#24 SOFTWARE VERSION DISPLAY (Does not require MMC ENABLED)

Provides display of current software version of KSU and Keyset.

1) Press # key.
   PROGRAMMING is displayed.

2) Dial 24.
   VERSION is displayed.

3) Enter password.
   Display will show KSU version and KTS version.

4) Press # key.

#25 SYSTEM INITIALIZATION (Does not require MMC ENABLED)

Enables you to initialize the system without turning system power ON and OFF.

1) Press # key.
   PROGRAMMING is displayed.

2) Dial 25.
   INITIAL SYS? will be displayed.

3) Enter password.

4) Enter one of three digits below.

   0: No initialization.
   1: Initialization of scratch pad data in RAM.
   2: Initialization of scratch pad data and battery backed-up data in RAM. (Takes approximately 15 seconds)

5) Press # key.

#26 NIGHT MODE DIALING CLASSES

Use this program to set all stations to a specific call restriction class for after-hours service. NIGHT MODE OPERATION.

1) Press # key.
   PROGRAMMING is displayed.

2) Dial 26.
   NIGHT TOLL is displayed and the current data indicating class of dialing.

3) Enter technician level password and one of the following digits.

0 = Same as day mode operation.
1 = All stations class B.
2 = All stations class C.
3 = All stations class D.
4 = All stations class E.

4) Press # key.

* Default: 0

#30 CLASS OF SERVICE

Enables you to assign individual dialing class of service to each station.

1) Press # key.
PROGRAMMING is displayed.

2) Dial 30.
Display will show: STATION TOLL CALL and then 16 digits, each of which indicated CLASS OF SERVICE of each station.

0: Class A: No Restriction

1: Class B: Follows Allow/Deny Table for class B (Program # 33, 34)
Deny table has a priority to Allow table.

2: Class C: Follows another Allow/Deny Table for class C.
(Program # 35, 36)

3: Class D: Follows Allow Table for class D (Program # 37)

4: Class E: Intercom Call only.

3) Enter all of 16 digits to set class of service for each station.

4) Press # key.

* Default: All Class A ---0000000000000000

#31 C.O. LINE ACCESS

This program enables you to designate which station(s) have access to C.O. lines on a station by station basis.

1) Press # key.
PROGRAMMING is displayed.

2) Dial 31.
TRUNK ACCESS is displayed.

3) Press DSS key of station to be programmed.

4) Display will show extension number followed by eight bits indicating allow or deny status for each line.

5) Enter "0" or "1" for each line.
One digit must be entered for each of the eight (8) C.O. lines.

"0" --- Deny
"1" --- Allow

6) Press # key.

* Default: 11111111: for all stations.

#32 INTERNAL PAGING

This function enables you to allow or deny a station from receiving an internal page.

1) Press # key.
PROGRAMMING is displayed.

2) Dial 32.
Display will show: ENABLE ALL CALLS and then 16 digits to indicate allow or deny status for each station.

3) Enter 0 or 1 for all of 16 stations.

"0" --- Deny
"1" --- Allow

4) Press # key.

* Default: 1 (Allow)

#33 DENY CODES FOR CLASS OF SERVICE B

This program enables you to define what leading digits in a dialing plan are to be restricted. There are 10 line entries (0 - 9) which define up to 12 digits per entry.

1) Press # key.
   PROGRAMMING is displayed.

2) Dial 33.
   Display will show: DENY IN CLASS B.

3) Enter "0" to "9" to select line entry.

   BD X is displayed.
   X means line entry 0 thru 9.

4) Enter up to 12 digits to be restricted.

5) Press # key.

* Press HOLD key to clear entry and enter new data.

#34 ALLOW CODES FOR CLASS OF SERVICE B

This program enables you to define what leading digits in a dialing plan are to be allowed. There are 10 line entries (0 - 9) which define up to 12 digits per entry.

1) Press # key.
   PROGRAMMING is displayed.

2) Dial 34.
   Display will show: ALLOW IN CLASS B.

3) Enter "0" to "9" to select line entry.
   BA X is displayed.
   X means line entry 0 thru 9.

4) Enter up to 12 digits allowed for dialing.

5) Press # key.

* Press HOLD key to clear entry and enter new data.

#35 DENY CODES FOR CLASS OF SERVICE C

This program enables you to define what leading digits in a dialing plan are to be restricted. There are 10 line entries (0 - 9) which define up to 12 digits per entry.

1) Press # key.
   PROGRAMMING is displayed.

2) Dial 35.
   Display will show: DENY IN CLASS C.

3) Enter "0" to "9" to select line entry.
   CD X is displayed.
   X means line entry 0 thru 9.

4) Enter up to 12 digits to be toll restricted.

5) Press # key.

* Press HOLD key to clear entry and enter new data.

#36 ALLOW CODES FOR CLASS OF SERVICE C

This program defines what leading digits in a dialing plan are to be allowed. There are 10 line entries (0 - 9) which define up to 12 digits per entry.

1) Press # key.
   PROGRAMMING is displayed.

2) Dial 36.
   Display will show: ALLOW IN CLASS C.

3) Enter "0" to "9" to select line entry.
   CA X is displayed.
   X means line entry 0 thru 9.

4) Enter up to 12 digits to be allowed.

5) Press # key.

* Press HOLD key to clear entry and enter new data.

#37 ALLOW CODES FOR CLASS OF SERVICE D

This program defines what leading digits in a dialing plan are to be allowed. There are 10 line entries (0 - 9) which define up to 12 digits per entry.

1) Press # key.
   PROGRAMMING is displayed.

2) Dial 37.
   Display will show: ALLOW IN CLASS D.

3) Enter "0" to "9" to select line entry.
   DA X is displayed.
   X means line entry 0 thru 9.

4) Enter up to 12 digits to be allowed.

5) Press # key.

* Press HOLD key to clear entry and enter new data.

TOLL RESTRICTION

PROSTAR 816 programming provides for all 16 stations to be assigned an individual class of dialing. There are five (5) classes, see program 30. Because class "A" has no restrictions and class E cannot make outside calls they require no additional programming. However classes B, C and D must be assigned in other programs the digits they are allowed or restricted from dialing.

Classes B and C have a deny list assigned to each. Class D is intended for stations will limited outside calling requirements and therefore can only dial what is in their allow list. Each of these allow or deny list have ten entries 0 - 9, with a maximum of 12 digits in each entry. Toll restriction is configured as follows.

CLASS B		CLASS C		CLASS D
DENY LIST	ALLOW LIST	DENY LIST	ALLOW LIST	ALLOW LIST
Prog #33 0 - 9	Prog #34 0 - 9	Prog #35 0 - 9	Prog #36 0 - 9	Prog #37 0 - 9

EXAMPLE 1: Class of service B phones need to dial 1-800 numbers, 1 plus 7 digits and local calls. They are to be restricted (denied) 0 + calls, 976, and 1 + any area code + 7 digits.

PROGRAM LIKE THIS:

#33 Deny Class B
Entry 0 = 0
Entry 1 = 1*0
Entry 2 = 1*1
Entry 3 = 976

#34 Allow Class B
Entry 0 = 1800

EXAMPLE 2: Class of service C phones need to dial 1 + A/C + 7 digits, 1-800, and local calls. They are to be denied 1-900, 976, 1-A/C-976, 0 + calls, and 411 calls.

PROGRAM LIKE THIS:

#35 Deny Class C
Entry 0 = 0
Entry 1 = 1900
Entry 2 = 976
Entry 3 = 1***976
Entry 4 = 411

#36 Allow Class C

(No Entries Required)

EXAMPLE 3: Class of service D phones need to dial 911 for emergencies only.
Program #37, Entry 0 = 911.

NOTES:
1. A "*" indicates any digit dialed.
2. Exceptions to a deny entry are listed in the allow table.
3. Pressing the HOLD button will enter the letter "E" . This means end of dialing, no more digits allowed.

#38 SINGLE LINE DIALING TYPE

You must define the type of phone, connected to each SLT port for dialing purposes. Keysets are not affected by this program and will be assigned "0".

1) Press # key.
PROGRAMMING is displayed.

2) Dial 38.
Display will show: SLT DIAL TYPE.
Each of 16 digit indicates the type of station for each station number.

3) Enter 0, 1, or 2 for all of 16 digits according to the type of stations.

0: Key telephone
1: Single line phone (DTMF)
2: Single line phone (dial pulse)

4) Press # key.

* Default: Depends on hardware configuration. All station ports with keyset connected will show "0" and all SLT ports will show "1". Keyset ports with no keyset will show as "N".

#39 ASSIGN BARGE-IN STATUS (OVERRIDE)

This program allows you to assign individual stations the ability to barge-in on (override) an existing conversation. Note that a level 3 or 2 can not barge into a level 2 or 0 if the station they are talking to is a level 3 or 1.

1) Press # key.
PROGRAMMING is displayed.

2) Dial 39.
Display will show [ASSIGN BARGE-IN] and then the current data for all sixteen stations.

3) Enter 0,1,2 or 3 for all 16 stations.

4) 3: You can barge-in / nobody can barge in on you
2: You can barge-in / others can barge in on you
1: You cannot barge-in / nobody can barge in on you
0: You cannot barge-in / others can barge in on you

5) Press # key.

* Default: 0000000000000000

40 DIAL 80 GROUP

This program allows individual C.O. lines to be added to or removed from the line group that is accessed by dialing "80". Some telcos require more expensive trunk charges over business line rates when this form of pooled access is used.

1) Press # key.
   PROGRAMMING is displayed.

2) Dial 40.
   DIAL 80 GROUP is momentarily displayed then eight bits of information representing the status of all eight C.O. lines.

3) Enter new data for all eight lines.

   0 = Not in group.
   1 = In group.

4) Press # key.

* Default: 00000000

* NOTE: A line cannot be in more than one group.

#41 C.O. LINE INCOMING/OUTGOING ASSIGNMENT

This program enables you to assign the C.O. lines as incoming only, or incoming and outgoing.

1) Press # key.
   PROGRAMMING is displayed.

2) Dial 41.
   Display will show: INCOMING TRUNK and then 8 digits, each of which indicates current data of each line.

3) Enter "0" or "1"

   "0" --- Incoming / Outgoing
   "1" --- Incoming only

4) Press # key.

* DEFAULT: 00000000

#42 C.O. LINE PULSE/TONE SELECTION

This program enables you to define which C.O. lines are to be assigned as Tone or Pulse Dialing.

1) Press # key.
   PROGRAMMING is displayed.

2) Dial 42.
   Display will show: TRUNK DIAL TYPE and then 8 digits, each of which indicates current data of each line.

3) Enter "0" or "1" for all 8 C.O. lines.

   0 --- Pulse mode.
   1 --- DTMF mode.

4) Press # key.

* DEFAULT: 11111111

#43 ASSIGN TRUNKS

This program enables you to define which lines are used as normal C.O. line or tie line.

1) Press # key.
PROGRAMMING is displayed

2) Dial 43.
Display will show: ASSIGN TRUNKS and then display 8 digits of current data

3) Enter 0, 1, or 3 for all eight trunks.

0 --- C.O. line is not connected
1 --- C.O. line is connected
2 --- B/W Tie (Not available).
3 --- E/M Tie (E & M tie line)
4 --- R/D Tie (Not available).

5) Press # key.

* Default: 11111111

* NOTE: C.O. lines 1 to 4 are available only for normal C.O. line and C.O. 5 to 8 can be used as both normal C.O. line or tie line.

* NOTE: 2 & 4 require special universal trunk card. Currently not available in the U.S.

#44 C.O. OR PBX LINE SELECTION

This program enables you to define which lines are directly connected to Telephone Company (C.O.) or PBX line.

1) Press # key.
PROGRAMMING is displayed.

2) Dial 44.
Display will show: C.O. or PBX TRUNK and then 8 digits of current data.

3) Enter 0 or 1 for all of 8 outside lines.

0 --- PBX line
1 --- C.O. line

4) Press # key.

* Default: 11111111

* This program defines type of flash to be used on each line. See Program 50 and 51.

#45 EXTERNAL CALL FORWARDING

This program enables you to designate the C.O. line that can be call forwarded to another outside telephone number.

1) Press # key.
   PROGRAMMING is displayed.

2) Dial 45.
   Display will show: FORWARD LINE SET.

3) Enter 0 (deny) or 1 (allow) for each incoming C.O. line to be forwarded.

* Default: 00000000

* NOTE: See Program #59.

#46 PRIVATE OR NON PRIVATE LINES

This program enables you to assign each C.O. line for Private or Non Private use. Lines set for Non Private use work like 1A2 operation. (Maximum 3 additional parties may access a line already in use.)

1) Press # key.
   PROGRAMMING is displayed.

2) Dial 46.
   Display will show: PRIVACY OR NON and then PRIVACY: 0 NON: 1, then one second later current data is displayed.

3) Enter new data up to 8 digits for each C.O. line.

4) Press # key.

* Default: 00000000

#47 DIAL 9 GROUP

This program allows individual C.O. lines to be added to or removed from the line group that is accessed by dialing "9". Some telcos require more expensive trunk charges over business line rates when this form of pooled accessed is used.

1) Press # key.
   PROGRAMMING is displayed.

2) Dial 47.
DIAL 09 GROUP is momentarily displayed then eight bits of information representing the status of all eight C.O. lines.

3) Enter new data for all eight lines.

0 = Not in group.
1 = In group.

4) Press # key.

* Default: 11111111

* NOTE: A line cannot be in more than one group.

#48 ASSIGN DISA LINES

This program is used to assign specific lines to be used for DISA feature.

1) Press # key.
PROGRAMMING is displayed.

2) Dial 48.
ASSIGN DISA is displayed momentarily then eight digits indicating status of C.O. lines.

3) Enter new data for all eight lines.

0 --- Not a DISA line.
1 --- For DISA use.

4) Press # key.

* Default: 00000000

* NOTE: Any C.O. line can be used as a DISA line. When the system is in night mode, incoming calls on a DISA line will be answered automatically and caller will receive internal dial tone.

#49 FORWARD C.O. LINES

This program is used to set C.O. lines to follow station call forwarding or not to follow station call forwarding.

1) Press # key.
PROGRAMMING is displayed.

2) Dial 49.
CO LINE FORWARD is momentarily displayed then eight bits of data representing the current status of each C.O. line.

3) Enter the new data for all eight lines.

0 = Will not follow station call forward.
1 = Will follow station call forward.

4) Press # key.

* Default: 00000000

#50 C.O. FLASH TIMING

This program enables you to define the length of a flash on the C.O. line.

1) Press # key.
PROGRAMMING is displayed.

2) Dial 50.
Display will show: C.O. FLASH TIME is displayed and then xxx MSEC is displayed.

3) Enter 4 digits of flash time in compliance with C.O. requirements.

4) Press # key.

* Default: 600 mSEC

* The flash time ranges from 0 mSEC to 5000 mSEC.

#51 PBX FLASH TIMING

This program enables you to define the length of a flash for a line defined as a PBX line.

1) Press # key.
PROGRAMMING is displayed.

2) Dial 51.
Display will show: PBX FLASH TIME is displayed and then xxx MSEC is displayed.

3) Enter 4 digits of new flash time.

4) Press # key.

* Default: 600 mSEC

* The PBX line flash time ranges from 0 mSEC to 5000 mSEC.

* If the entered data is over 5000 mSEC, 5000 mSEC is entered into the memory.

#52 HOLD/CAMP-ON RECALL TIME

This program enables you to define the length of time a C.O. line is allowed to be on hold or camped-on before it recalls the station.

1) Press # key.
   PROGRAMMING is displayed.

2) Dial 52.
   Display will show: HOLD RECALL TIME and then current data of 3 digits is displayed.

3) Enter 3 digits of new recall time.

4) Press # key.

* Default: 30 seconds.

* The recall time ranges from 0 SEC to 990 SEC.

* If the entered value is over 990 SEC, 990 SEC is entered into memory.

* If the telephone is off hook during the recall mode, the telephone will ring as soon as the telephone goes on-hook.

#53 TRANSFER RING TIME

This program enables you to define the length of time a transferred call will ring at a station, before it recalls the original station.

1) Press # key.
   PROGRAMMING is displayed.

2) Dial 53.
   Display will show: TRSF RECALL TIME and then 3 digits of current data is displayed.

3) Enter 3 digits of new Transfer Recall Time.

4) Press # key.

* Default: 30 seconds.

* The transfer recall time may range from 0 seconds to 200 seconds.

* If the entered data is over 200 seconds, 200 seconds will be entered into memory.

#54 ALARM TIME DURATION

This program enables you to define the duration of ringing signal when using alarm feature.

1) Press # key.
PROGRAMMING is displayed.

2) Enter 54 on the dial keys
Display will show: ALARM RING TIME and then preset alarm time duration is displayed.

3) Enter 3 digits of new Alarm Ring Time.

4) Press # key.

* Default: 10 seconds.

* The Alarm Time Duration ranges from 0 seconds to 200 seconds.

* If the entered data is over 200 seconds, 200 seconds will be entered into memory.

#55 DATE AND TIME

This program enables you to adjust the date and time.

1) Press # key.
PROGRAMMING is displayed.

2) Dial 55.
Display will show: YY MM DD W HH MM and then current data is displayed.

3) Input new data successively.

YY --- Last 2 digits of year
MM --- Month of year (01 - 12)
DD --- Day (01 - 31)
W --- Weekday
HH --- Hour (24 hour mode)
MM --- Minutes (00 - 60)

Weekday:

1 = Monday
2 = Tuesday
3 = Wednesday
4 = Thursday
5 = Friday
6 = Saturday
7 = Sunday

4) Press # key.

* NOTE: If 12 hour clock is desired, program time in 24 hour clock (military time) in this program. Then change to 12 hour clock in Program #20. Failure to do so will result in incorrect change in day of week display.

#56 OVERRIDE TONE INTERVAL

This program enables you to define the interval between intrusion tones. Tone is heard at the beginning of override, then repeated at programmed interval.

1) Press # key.
PROGRAMMING is displayed.

2) Dial 56.
Display will momentarily show OVERRIDE ALARM, then show current data.

3) Enter 2 digit interval time (00 - 99).

4) Press # key.

* Default: 10 seconds.

#57 C.O. TO C.O. DURATION TIMER

This program enables you to define the length of time for an unsupervised conference, a DISA call or an external call forward connection. The connection between to C.O. lines will automatically be dropped when this timer expires.

1) Press # key.
PROGRAMMING is displayed.

2) Dial 57.
Display will show: CO/CO CALL TIME and 3 digits of timer length.

3) Enter 3 digits of time duration. (000 to 999)
Example: XXX SEC

4) Press # key.

* Default 150 seconds.

* NOTE: Recalls to operator will be automatically disconnected if not answered before this timer expires.

#58 AUTO TIMER START TIME

This program enables you to define the delay before the auto timer starts.

1) Press # key.
PROGRAMMING is displayed.

2) Dial 58.
Display will show: TIMER DELAY TIME then XX SEC.

3) Enter 2 digits of time duration 00 - 99.

4) Press # key.

* Default 45 seconds.

#59 EXTERNAL CALL FORWARD TIMER

When program #45 has one or more lines set for external call forward, use this program to delay the forwarding feature. This will allow the customer time to answer the line before it is externally forwarded.

1) Press # key.
PROGRAMMING is displayed.

2) Dial 59.
EXT DLY TIME is displayed momentarily then the current timer value XXXSEC:.

3) Dial a new three digit time in range from 0 to 200 seconds.

4) Press # key.

* Default: 0 seconds.

#60 C.O. LINE RING MODE

This program is used to assign an incoming ring mode for each C.O. line.

1) Press # key.
PROGRAMMING is displayed.

2) Dial 60.
Display will show: TRUNK RING MODE.

3) Press desired C.O. line button and current ring mode is displayed.

4) Enter new data for that line.

0 --- Individual ring mode
1 --- Conditional ring mode
2 --- Unconditional ring mode
3 --- Distributed ring mode

5) Press # key.
Repeat for each line in the system.

* **Individual Ring Mode:** An incoming line will ring the first non-busy station in order defined in Program 61 for night mode and Program 62 for day mode. If all stations are busy, off-hook ringing is sent to the first station programmed for the line ringing group (Refer to Program 61 and 62).

* **Conditional Ring Mode:** An incoming line will ring all stations that are idle for that line ringing group.

* **Unconditional Ring Mode:** An incoming line will ring stations as defined in a line ringing group whether they are active or idle.

* **Distributed Ring Mode:** Allows multiple stations to share incoming call load by ringing first station with a call and then the next call at the next station assigned to ring.

* Default: 2 UNCONDITIONAL RING

#61 NIGHT RINGING ASSIGNMENT

This program enables you to define which phones ring on a per-line basis when the system is in the night mode.

1) Press # key.
PROGRAMMING is displayed.

2) Dial 61.
Display will show: NITE RING ASSIGN.

3) Press the C.O. line key to be programmed for night ring mode. C.O. line number and previously assigned station numbers are displayed.

4) Press the DSS key of each station that is to ring in night mode.

5) Press # key.

* Default: All C.O. lines ring to station 4.

* A C.O. line may have a maximum 8 stations assigned to ring.

* Letters A to G in display indicate station numbers 10 to 16 respectively.

#62 DAY RINGING ASSIGNMENT

This program enables you to define which phones ring on a per-line basis when the system is in the day ring mode.

1) Press # key.
PROGRAMMING is displayed.

2) Dial 62.
Display will show: DAY RING ASSIGN.

3) Press the C.O. line key to be programmed for day ring mode. C.O. line number and previously assigned station numbers are displayed.

4) Press the DSS key of each station that is to ring in Day Mode.

5) Press # key.

* Default: All C.O. lines ring to station 4.

* A C.O. line may have a maximum 8 stations assigned to ring.

#63 DOOR PHONE RING ASSIGNMENT

This program enables you to define which stations will ring when door phone button is pushed.

1) Press # key.
PROGRAMMING is displayed.

2) Dial 63.
Display will show: DOOR RING ASSIGN and current data is displayed.

3) Press DSS button of stations to receive door phone ringing. (Maximum of 8 stations).

4) Press # key.

* DEFAULT: Ring Stations 12345678

#64 RING OVER EXTERNAL PAGE

This program enables the incoming C.O. calls to ring over an externally provided speaker when in night service mode, in addition to the telephone ringing groups defined in Program 61 and 62 .

1) Press # key.
PROGRAMMING is displayed.

2) Dial 64.
Display will show current page ring mode status.

3) Enter new data.

0 --- Ring over page OFF
1 --- Ring over page ON

4) Press # key.

* Default: OFF

#65 DISA SECURITY CODE

Use this program to assign the four digit security code used for DISA feature.

1) Press # key.
PROGRAMMING is displayed.

2) Dial 65.
DISA SECU CODE momentarily appears, then current security code is displayed.

3) Enter new four digit code. * and # are not allowed.

4) Press # key.

* Default: 1234.

#66 ASSIGN DND

This program is used to allow or deny the use of the DND function button on each keyset.

1) Press # key.
PROGRAMMING is displayed.

2) Dial 66.
SET DND STATUS is momentarily displayed then sixteen bits of information representing the status for all sixteen stations.

3) Enter new data for all sixteen stations.

0 = DND disabled.
1 = DND enabled.

4) Press # key.

* Default: 1110111111111111

* NOTE: Disabling DND button will not allow keyset to select a pre-programmed message. Mute function is not affected.

#67 CAMP-ON TONE INTERVAL

This program is used to adjust the time interval between camp-on reminder tones.

1) Press # key.
PROGRAMMING is displayed.

2) Dial 67.
CAMP ON TONE is momentarily displayed then the current timer value.

3) Enter new data as two digits.

00 = A single ring tone at the beginning of a camp-on.

10 - 99 = Duration of time between tones.

4) Press # key.

* Default: 00

* NOTE: Setting this value higher than HOLD/CAMP-ON recall (#52) timer will cause only a single ring tone.

#68 INTERNAL PAGE ZONES

This program is used to assign keysets to one of three internal zones or all page.

1) Press # key.
PROGRAMMING is displayed.

2) Dial 68.
ASSIGN PAGE ZONE shows momentarily followed by current status for each station. (1 thru 16).

3) Enter new data for all sixteen stations.

0 --- included in all page.
1 --- zone 1 only.
2 --- zone 2 only.
3 --- zone 3 only.

4) Press # key.

* Default: 0000000000000000

* NOTE: Program #32 can disable internal paging regardless of status assigned in this program.

#69 STATION HUNT GROUPS

This program is used to assign stations to one of the three hunt groups.

1) Press # key.
PROGRAMMING is displayed.

2) Dial 69.
Display will show: STN HUNT GROUPS.

3) Dial 1, 2 or 3 to select group.
Group number is displayed followed by stations assigned to that group.

4) Press DSS button for each station to be assigned in this group. (Maximum of 8). Stations 10 - 16 will be displayed as letters A - G.

5) Press # key. New data will be entered and previously assigned stations will be erased.

* NOTE: Default access codes are 71, 72 and 73. Press HOLD button to remove all stations from group and exit program.

#70 ATTENDANT ASSIGNMENT

This program enables you to define which station is to act as the Operator's station.

1) Press # key.
PROGRAMMING is displayed.

2) Dial 70.
Display will show the current attendant station number.

3) Press the desired DSS key for new attendant.

4) Press # key.

* Default operator station: 4

* Operator places system into night mode by pressing DND key. If a single line phone is assigned attendant function the system cannot be placed into night service.

* DND feature is not allowed on the attendant keyset.

#71 SYSTEM SPEED DIAL RESTRICTION

This program enables you to define whether the system allows or denies long distance numbers in system speed dialing to override toll restriction.

1) Press # key.
PROGRAMMING is displayed.

2) Dial 71.
Display will show current status.

3) Enter new data.

0 --- Allow speed dialing to override toll restriction
1 --- Deny speed dialing to override toll restriction

4) Press # key.

* Default: 0

#72 EXECUTIVE BARGE-IN (OVERRIDE)

This program allows you to assign override feature with or without an intrusion tone.

1) Press # key.
PROGRAMMING is displayed.

2) Dial 72.
Display will show current status.

3) Enter Executive Barge-In option as a single digit:

1 --- Override enable without intrusion tone.
2 --- Override enable with intrusion tone.

4) Press # key.

* To define the interval of intrusion tones, refer to Program 56.

#73 BOSS/SECRETARY

This program designates which station is defined as the Boss and which station is defined as the Secretary.

1) Press # key.
   PROGRAMMING is displayed.

2) Dial 73.
   BOSS/SECRETARY is displayed momentarily then BOSS:

3) Press DSS key which is to be Boss.
   "BOS:xxSEC:" is displayed.

4) Press DSS key which is to be Secretary.
   BOS:xx SEC:xx is displayed.

5) Press # key.

** If the Boss enables DND, all incoming calls are transferred to the secretary. C.O. calls do not forward.

#74 HEADSET OPERATION

This program designates which stations are enabled for headset operation. Only keysets can be assigned this function. System will disable hookswitch and SPK button will act as an answer/release button.

1) Press # key.
   PROGRAMMING is displayed.

2) Dial 74.
   Display will show HEADSET CHECK, and then
   HEADSET:1 NON:0 followed by current data for all sixteen stations.

3) Enter 0 or 1 for all 16 stations.

4) Press # key.

* Default: 0000000000000000

#75 PBX TOLL CHECK

Use this program to inform PROSTAR system of any PBX/CENTREX access codes. (5 maximum). The system will ignore these codes and apply toll restriction as programmed.

1) Press # key.
   PROGRAMMING is displayed.

2) Dial 75.
   Display will show: CENTRX TOLL CHK.

3) Dial access code table 1 - 5.
Display will show CTOLLx:

4) Enter PBX or CENTREX access code (three digits maximum) Access code may include #, *, 0 - 9.

5) Press # key.

Repeat sequence for each access code to be programmed. Press HOLD button to clear previously entered codes.

* Default: All five tables are empty.

#76 HUNT GROUP RING MODES

This program is used to assign a ring pattern for each station group.

1) Press # key.
PROGRAMMING is displayed.

2) Dial 76.
Display will show: HNTGRP RING MODE.

3) Dial group number 1, 2 or 3.
The assigned ring mode is displayed.

4) Enter new data for desired mode.

0 --- Individual
1 --- Distributed - Individual
2 --- Conditional

5) Press # key.

* Default: All groups are empty.

* **INDIVIDUAL RING:** calls will ring the lowest station number first. Caller will receive busy signal if all members are busy.

* **DISTRIBUTED - INDIVIDUAL:** calls will be distributed among all members of the group. A busy member will loose its turn in hunt sequence. Caller will receive a busy signal if all members are busy.

* **CONDITIONAL:** calls will ring all members at the same time. If all members are busy, ringing is applied to the lowest station number if it is a keyset.

* NOTE: CAMP-ON and CALL BACK features cannot be applied to groups 71, 72 and 73.

#77 DOOR CONTACT TIMER

This program will allow the duration of the door phone contact closure to be adjusted.

1) Press # key.
PROGRAMMING is displayed.

2) Dial 77.
DOOR LOCK TIME is momentarily displayed then the current timer value.

3) Enter new data as three digits. The range is 1.50 to 10.0 seconds.

4) Press # key.

* Default: 1.5 seconds.

#78 SMDR PAGE LENGTH

Use this program to assign the number of lines to be printed per page on the SMDR printout.

1) Press # key.
PROGRAMMING is displayed.

2) Dial 78.
Display will show: LINE PER PAGE: 33.

3) Dial the number of lines you want printed on each page of the printout. Included in this number are four lines used for the report header.

Range is 10 - 99.

4) Press # key.

* Default 33: Report format will be double spaced and print 29 call records plus 4 lines in the header. This assumes carriage return and line feed are enabled on the customer provided printer.

#80 KEYSET BUTTON PROGRAMMING

This program defines what function is assigned to each button on the keysets.

1) Press # key.
PROGRAMMING is displayed.

2) Dial 80.
Display will show: KEY PROGRAMMING.

3) Press the button that is to be reassigned.

4) Display will show the originally assigned function and existing function.

5) Enter selected code from table to change function of this button at all keysets.

6) Press # key.

* NOTE: Buttons are assigned on a system-wide basis. When you change a button to a new function it is for all keysets in the system.

TABLE

01 --- STATION 1	02 --- STATION 2
03 --- STATION 3	04 --- STATION 4
05 --- STATION 5	06 --- STATION 6
07 --- STATION 7	08 --- STATION 8
09 --- STATION 9	10 --- STATION 10
11 --- STATION 11	12 --- STATION 12
13 --- STATION 13	14 --- STATION 14
15 --- STATION 15	16 --- STATION 16
17 --- C.O. LINE 1	18 --- C.O. LINE 2
19 --- C.O. LINE 3	20 --- C.O. LINE 4
21 --- C.O. LINE 5	22 --- C.O. LINE 6
23 --- C.O. LINE 7	24 --- C.O. LINE 8
25 --- HOLD	26 --- SPEAKER BUTTON
27 --- REDIAL	28 --- MUTE/DND BUTTON
29 --- EXTERNAL PAGE	30 --- CONFERENCE
31 --- MESSAGE	32 --- ALARM/SPEED DIAL
33 --- TIMER	34 --- AUTO ANSWER
35 --- AUTO REDIAL	36 --- CALLBACK
37 --- INTERNAL PAGE	38 --- ATTENDANT
39 --- DOOR PHONE	40 --- BOSS/SECRETARY
41 --- GROUP LISTENING	42 --- ACCOUNT CODE
43 --- GROUP 1	44 --- GROUP 2
45 --- GROUP 3	

#81 DIAGNOSTIC KEY TEST

Allows you to check whether each key works properly.

1) Press # key.
PROGRAMMING is displayed.

2) Dial 81.
KEY TEST is displayed and all LED's go ON and OFF with ring.

3) Press any key to test. Corresponding key function name is displayed with LED on.

4) Repeat above (3).

5) Lift the handset in the cradle to complete testing.

#82 PROGRAMMABLE MESSAGE DISPLAY

This program provides up to 20 status messages that can be selected by any display keyset user. Once activated, other display sets calling will have the selected message displayed.

1) Press # key.
   PROGRAMMING is displayed.

2) Dial 82.
   Display will show: MESSAGE WRITING and MSGx.

3) To select programmable messages 0 to 9 press DSS buttons 1 to 10. Display will show message number and any previously entered data

4) Press HOLD button to clear data and write new message. Use keypad and C.O. line buttons 1, 2 and 3 to indicate the first, second, or third letter on each dial button.

   Example: For the letter "N", press Line 2, then dial "6". ("N" is the second letter on the "6" button of the keypad.)

   Press MSG button to insert space between words
   Press HOLD button to clear a message.

5) Press # key to store.

* Up to 10 standard messages and 10 programmable messages are available.

* Standard Messages are as follows:

DO NOT DISTURB	IN A MEETING
OUT OF TOWN	ON VACATION
OUT ON A CALL	OUT TO LUNCH
IN TOMORROW	PAGE ME
RETURN AFTERNOON	GONE HOME

TOLL RESTRICTION OVERRIDE

This program is used to assign the five digit toll restriction override codes.

Enable system programming with technician level password.

1) Press # key and dial 2 digit number to select class.

   01 --- Class A
   02 --- Class B
   03 --- Class C

2) Display will show the class number and the current five digit security code.

3) Enter new security code for this class of service.

4) Press # key.

* Default: Class A --- 00000
Class B --- 11111
Class C --- 22222

To use this feature follow the instructions on page 11 of the keyset user guide titled "TOLL RESTRICTION OVERRIDE". Sometimes referred to as "Travelling Class of Service".

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