AP3dot2®

...the standard for **Power** and ***Flexibility*** in Call Processing

Product Reference Manual

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AP3dot2 Product Reference Manual

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Introduction

AP3dot2 is a state of the art voice and call processing system providing unmatched processing power and flexibility. It interfaces with PBX, hybrid, key system, or Centrex telephone systems.

AP3dot2 will enable your organization to streamline call handling, routing, and voice messaging operations. It provides unlimited menuing and accommodates special handling of extensions and mailboxes with ease. Information dissemination and collection can be readily automated.

AP3dot2 Software

The open architecture of AP3dot2 system software enables you to build applications to precisely fit your organization's needs. The software employs an object-oriented application development language designed specifically for call processing. Specialized applications can be easily developed without knowledge of abstract programming concepts.

Applications need not be built from scratch. The standard system comes complete with a pre-programmed application which performs automated attendant, voice mail, and audiotex with day, night, weekend, and holiday operating modes. "Right out of the box" AP3dot2 answers and processes calls; it can be customized to handle an organization's basic call processing needs in minutes.

With Automatic Administration, repetitive administrative tasks such as mailbox creation and deletion are performed automatically. Manual administrative tasks such as password recovery and voice prompt recording may be performed from any Touchtone phone.

Computer Hardware Platform

AP3dot2 software runs on an IBM-compatible 386SX 16 MHz (or faster) personal computer. Since it is floppy disk based, AP3dot2 keeps running in the event of fixed disk failure. The redundant software design preserves your valuable programming investment. With the built in MODEM, a technician can perform service functions from his or her office, saving time consuming trips to the customer site.

Technical Specifications

Port Capacity :	4, 8, 12, 16, or 24 ports
Message Storage:	8 to 60 hours
Ringer Equivalence:	0.9B
FCC:	Complies with Part 68. Complies with Part 15.
FCC Reg. no:	EBZUSA-65588-VM-E
Phone Interface:	RJ-14 connectors, loop start, DID, T1
Environment:	0 - 50 °C, 8 -80% non-condensing

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Chapter 2
Programming Reference

Software Concepts and Terminology

Each business or organization has different requirements for the way telephone calls are handled. These call handling procedures often change as the organization grows and changes. A call processing system must be versatile enough to adapt to these requirements and changes. AP3dot2 employs a specially designed call processing language, called VOCAL™, which allows the system to be configured to process calls according to the needs of a particular application. This section describes some of the program terminology and concepts of AP3dot2 operation.

Blocks

VOCAL™ uses functional building blocks to control the operation of the system. There are three functional block types. The Block types are:

Call Processing Blocks	Class of Service Blocks	USER Blocks
Root	XClass	Extension
Menu	MClass	ACD
Dial	AClass	Mailbox
Bye		List
Query		

Table 2-1. Block Types

Each Block performs a specific function, such as requesting a Touchtone (DTMF) entry from the caller or transferring a call to a specified extension. These blocks may be linked together with others to create the desired sequence of operation. The resulting "program," which controls the

operation of AP3dot2, is called the Block Table.

Each block contains a number of parameters which determine specific operating characteristics of the block, such as the number of DTMF digits to accept from the caller or the voice prompts to be spoken to request an entry. A block also contains information which determines what AP3dot2 will do next, based on the action of the caller or the results of the current operation. POINTERS are used to specify the next block in the sequence, based on the result or outcome of the current block.

Linking blocks together with pointers can be viewed and diagrammed as a call processing "tree" which resembles a family tree or an organization chart.

As shown in the above table, there are twelve Blocks structures which fall into one of three categories. Detailed descriptions of the individual blocks can be found beginning on page 10. Future software releases are likely to add new types of blocks for other features.

Default Blocks

For each type of Block, a Default Block may be defined. Thereafter, each time a block of the same type is created, it will be initialized with the parameter values which are set in the default block. This speeds up the programming process when a large number of blocks must be created. The label of a default block is made up of the word "DEFAULT" plus the name of the block type.
Example: The label of the default extension block is [DEFAULT EXT].

Block Parameters and Programming Considerations

Labels

Each block is a assigned name or Label when it is created. This is used to refer to the block in various programming operations. It can contain up to 16 alpha/numeric characters (including spaces). Each block in a mode must be given a unique Label.

Alias Labels

For convenience, extension (EXT) blocks and mailbox (MBX) blocks may also be referenced by their Alias. The alias consists of the name of the block type plus the KEY value of the block. Example: An extension block for extension 200 may be labeled [Smith, John] and have a KEY value of "200". This block may be referred to as "Smith, John" or by the Alias "EXT 200".

Key Value

The KEY is the Touchtone entry a caller must make in order to access a particular block or announcement message. For example, the number of a mailbox is its KEY value. Key values are also assigned to pointers, both for caller entries and for the results of a block. The following is an example of the syntax for pointers associated with a MENU block:

```
1:<NO-ENTRY>=0:[CONSOLE]
1:<1>=1:[SALES]
```

In the first example, the pointer is active in mode 1: when the result of no entry is made by the caller. It directs AP3dot2 to go to a block labeled [CONSOLE] which is located in Mode 0:. The KEY value is <NO-ENTRY>.

In the second example, the KEY value of the pointer is <1>.

Wild Cards

A question mark, "?", may be used in pointer KEY values to apply to a set of caller entries. A pointer KEY value of <2??> will match any 3-digit entry beginning with 2. A KEY of "4?57" will apply to all 4-digit entries beginning with 4, ending with 57 and having any value in the second digit. The Wild Card is placed in the KEY value to indicate that any digit entered in that position will qualify as a match. The "?" character may also be used in a translation string to indicate that the translated value should include the character from the search value which is in the position of the corresponding "?" in the pointer KEY value. A dot (.) is used in the translation string to indicate that the corresponding "?" in the KEY value should be skipped.

Examples:

```
1:<3?> = 0:[THIRTY SOMETHING]
1:<212???????> = M1:[New York Sales]
1:<?2?4> = (0??24)
1:<?2?4> = (0.?24)
```

The first example will go to block [THIRTY SOMETHING] if the caller makes any two digit entry beginning with a 3. The second might be used with a menu which requests the caller to enter his or her 10-digit phone number, beginning with area code. This pointer would then direct all callers in area code 212 to the New York Sales mailbox. The third and fourth examples demonstrate the power of using wild card KEY values with translation pointers. The third example will accept any four digit entry with the digits 2 and 4 in positions 2 and 4. If the caller enters 1234, it will be translated to 01324. The fourth example is the same, except the first "?" in the entry will be skipped. An entry of 1234 will be translated to 0324.

Pointers

Pointers are powerful tools used to connect the various blocks in a block table together. A pointer is associated with a "parent" block such as a MENU. It determines what AP3dot2 will do based on a particular result or outcome of the operation of the parent block (i.e. what block to go to next if the caller enters a 1 in a MENU block or what to do next if the caller enters nothing). All pointers consist of two parts separated by an equal "=" sign. The left side specifies the mode in which the pointer is active and the KEY value (the KEY value of a pointer is the result or entry which occurred in the parent block). The right side of a pointer specifies the class, mode/group and label of the target.

There are four basic types of pointers: block pointers, translations, password pointers, and breeders. The KEY values of each of these may contain Wild Card values.

Block Pointer

Specifies the next block to execute, based on the KEY value of the pointer.
Examples:

3:<2>=X1:[SALES]
1:<NO-ENTRY>=0:[HELP]

The first pointer specifies that if the caller presses <2> while the system is operating in mode 3, AP3dot2 performs the function of the target EXT block labeled [SALES], located in extension group 1. The second pointer specifies mode 1, no entry made by the caller, go to block [HELP] in mode 0.

Translations

A pointer is used as a translation when the parent is a MENU block. It translates a caller entry to the target value specified. AP3dot2 then searches for a match, using the translated value.
Examples:

2:<123>=(456)
0:<NO-ENTRY>=(1)
1:<387>=(INVALID)

The first example will accept an entry of 123 and treat it as if the caller entered 456. The second will convert a no entry condition to an entry of 1. The last example is a special case used to invalidate the entry 387.

Password Pointer

Used only with MENU blocks. A password pointer is used to restrict access to a target block by requiring the caller to enter a password code.
Example:

1:<300 {P12345678}>=X1:[Computer]

If a caller enters extension 300, AP3dot2 will request a password entry. If the caller then enters 12345678, they will be allowed access to the target block [Computer]. Otherwise AP3dot2 will tell the caller that the number is invalid. For additional security, the prompt which requests the password may be removed, thereby requiring the caller to know that a password must be entered.

Breeders

This type of pointer activates the self-administering features of AP3dot2. Breeders cause AP3dot2 to automatically create EXT and MBX blocks as they are needed and used. A Breeder consists of a numeric KEY value (usually a wild card) pointing to either an XCLASS or MCLASS block.
Example:

1:<12??>=M1:[MCLASS 1]

The wild card KEY validates mailbox numbers 1200 through 1299. When a caller enters one of these numbers, AP3dot2 will first check to see if the corresponding mailbox already exists. If not, it will automatically create it and assign [MCLASS 1] as its class of service. Thereafter, if this mailbox is unused for a specified period of time (the mailbox retention time is set in the MCLASS block), it will be deleted. Thus AP3dot2 can be programmed to take care of "adds, moves, and changes" automatically.

Search Order on Caller Entry

When searching for a match to a caller entry or for a particular pointer, AP3dot2 follows a consistent sequence. MENU blocks require a more elaborate search than other blocks. However, the pattern is consistent. It looks for the most specific match.

A direct digit match on a pointer KEY will take precedence over a wild card match. Also, a wild card pointer with a lesser number of "?" characters will precede one with a greater number.

A match on a pointer in the current mode of operation will take precedence over a pointer in Mode 0.

MENU blocks search and give precedence in the following order:

1. Translation pointers in the current mode.
2. Translation pointers in the global mode.
3. Other Pointers in the current mode.
4. Other Pointers in the global mode.
5. Extensions, if XGROUP is specified.
6. Mailboxes, if MGROUP is specified.
7. Announcement messages, if AGROUP is specified.
8. Breeders.

Groups

User blocks (EXT, ACD, MBX and LIST) as well as Class of Service blocks (XCLASS, MCLASS and ACLASS) are assigned group numbers. In most applications all EXT and MBX blocks are assigned to the same group. However, certain installations require that different groups of extensions or mailboxes be treated independently. An example of this is when a single AP3dot2 is used to service two separate telephone systems or groups of voice mail users. By assigning them different group numbers, users in group 1 may use the same extension or mailbox numbers (KEYs) as group 2 without conflicting. Group numbers may be assigned from 1-99. An extension group number is referred to as the XGROUP, a mailbox group as MGROUP

Modes

AP3dot2 makes use of Modes to handle calls differently depending on the port, date, day of week and time of an incoming call. For example, if ABC company's operating hours are from 8AM to 5PM Monday through Friday, it may not be appropriate for AP3dot2 to answer and process calls the same way at 10PM on Monday evening as it would at 3PM on Monday afternoon. In this case there may be two modes configured as DAY MODE (MODE 1) and NIGHT MODE (MODE 2). Up to 99 modes can be created. Each contains its own call processing tree made up of call processing blocks which have been assigned to it.

AP3dot2 can be made to change modes either manually, by using special Administrative commands, or automatically as specified in the Schedule Table.

Global Mode

Blocks assigned to modes 1-99 are only active when AP3dot2 is operating in the specified mode. However, blocks assigned to Mode 0 are always active and accessible. Because they are globally active, they are referred to as Global Blocks and Mode 0 is often called the Global Mode. The Global Mode avoids the need to duplicate blocks, whose parameters remain constant, regardless of AP3dot2 operating mode.

Even though a block is assigned to the Global mode, it may be assigned pointers which are mode dependent (pointers assigned to modes 1-99), thereby making the function of the parent (global block) different in various operating modes.

Extensions and Mailboxes are assigned to groups, rather than modes. However they are also globally active.

Schedule Table

The SCHEDULE TABLE (S-TABLE) provides automatic selection of the AP3dot2 operating Mode based on port number, date, day of week and time of day. Each port of AP3dot2 runs independently of the others, so that each can be operating in a different Mode at the same time.

Programming Rules

- Each mode must have one, and only one, ROOT block (except mode 0, which has none).
- A Block label (name) can be any alphanumeric string up to 16 characters long (including spaces).
- A Call Processing Block label may not be the same as another block which exists in the same mode or in mode 0.
- An EXT, MBX or Class of Service Block label may not be the same as another in the same group.
- EXT or ACD **KEY** fields may not be duplicated within in the same XGROUP (extension group).
- MBX or LIST **KEY** fields may not be duplicated within the same MGROUP (mailbox group).
- MBX, LIST, EXT or ACD **KEY** values may not contain wild card (?) characters.
- All pointers and parameters designated as "required" in this manual must be set to ensure proper call handling.
- The current editor default mode or group is displayed to the left of the line prompter. **Example**: *1:>* - editor default mode is 1:. *X1:* - editor default group is X1:
- When programming, a block which exists in the editor default mode or group may be referenced by its label only (default mode or group is assumed). A block which exists in another mode or group must be referred to by its mode or group and label. **Example**: *X3:[Doe, John]*

Block Descriptions

On the following pages are descriptions of AP3dot2 programming blocks and their parameters. Blocks designated as "standard" are included in the Basic Platform. *Values in parentheses, to the right of certain parameters, indicate the suggested default values.*

The designation m:<___> indicates the active mode and the KEY value of a pointer. For pointers, the designation mg:[target block] indicates the mode (or group) and label of the target block.

Root Block (ROOT) - Standard

The ROOT block is the entry point into the call processing tree for a particular mode. It contains the opening voice prompts which AP3dot2 will speak when answering a call, along with operating parameters that are unique to the mode. The main purpose of the ROOT block is to provide AP3dot2 with an entry point into the mode and to direct it to the first non-ROOT block (usually a MENU). The ROOT block senses an incoming call, performs any handshaking needed to accept the call, speaks a salutation, then transfers control to the next block. When AP3dot2 is equipped with the optional SIM (Switch Integration Module), Electronic Set Emulation, or DID module, it accepts call ID information which is presented by the phone system with the call, storing this information in CID, FID, and CODE, and branches to the next block according to the call CODE. A mode can have only one ROOT block.

```
Answer after incoming ring number: ____ (1)
Call ID packet length: ____ (0)
Wait for call ID packet (seconds): ____ (0)
Dial when answering: ____ ( )
Salutation prompt-0: ____ (000)
Salutation prompt-1: ____ (000)
Salutation prompt-2: ____ (000)
Salutation prompt-3: ____ (000)
Salutation prompt-4: ____ (000)
Salutation prompt-5: ____ (000)
Max callers allowed to hold in queue: ____ (16)
Dial when disconnecting: ____
<NEXT> = mg:[target block] (Required)
<DEFAULT> = mg:[target block]
<call CODE> = mg:[target block]
```

Figure 2-1. Root Block Screen

Answer after incoming ring number - The number of rings (from 0-99) required before AP3dot2 answers an incoming call. If this is set to 0, it instructs AP3dot2 to answer whenever telephone line loop current goes from off to on. This setting is normally used only with special line interface modules which handle such things as Central Office DID trunk lines.

Call ID packet length - The maximum number of characters AP3dot2 will accept from the phone system at the time the call is presented. For Electronic Set Emulation this is 20. For DID this is either 3 or 4. If AP3dot2 is equipped with the SIM module, this should be set to 0. If this field is 0, AP3dot2 will not wait for a packet.

Wait for call ID packet - The maximum time AP3dot2 should wait, after going off hook, for a call ID packet to be provided by the phone system. If AP3dot2 is equipped with the SIM module, this should be set to 0. If "Call ID pack length" is 0, this field is ignored.

Dial when answering - The string of digits dialed by AP3dot2 upon answering a call. This is likely to be used in applications where other equipment is calling the AP3dot2 system and requires some form of DTMF signaling to indicate that AP3dot2 has answered.

Salutation prompts - The prompt numbers to be spoken when AP3dot2 answers a call in this mode. The prompts are spoken in sequence beginning with prompt-0. These should include

prompts which are only spoken upon answering (e.g., *"Thank you for calling ABC company."*) and are not repeated for the duration of the call. Allowable values include any three digit prompt number from 001 through 849. If DTMF tones are entered while these prompts are being spoken, the they will be interrupted and the digits will be carried forward into the following block (if it is a MENU).

Max callers allowed to hold in queue - This is the maximum number of ports, operating in this mode, which are allowed to hold for busy extensions. Allowable inputs are zero to the number of ports in the system. This is used to ensure that callers, holding for busy extensions, can't monopolize AP3dot2 ports. When this number is exceeded, AP3dot2 will speak the prompt *Prompt to indicate queue full* in the associated XCLASS block and search for a <QUE-FULL> pointer on the active XCLASS, EXT or ACD block indicating the next action to be taken.

Dial when disconnecting - The string of digits dialed by AP3dot2 when it terminates a call. This is likely to be used in applications where other equipment is calling AP3dot2 and requires some form of DTMF signaling to indicate that AP3dot2 has disconnected.

Pointers:

<NEXT> = *mg*:[*target block*] - This points to the next block AP3dot2 will execute after answering a call and speaking the prompts in the ROOT block. If the next block is a MENU, any DTMF digits entered in the ROOT block will be carried forward to the MENU.

<DEFAULT> = mg:[target label] - The Default pointer of the ROOT Block determines what to do if a condition occurs while operating in this mode for which a pointer has not been programmed. This is intended to be a back-up precaution, in the event of a programming error. It is normally directed to a DIAL block which will transfer the caller to the Console or to someone else who can give assistance.

***<call CODE> = mg*:[*target block*]** - Call CODE pointers are used only when AP3dot2 is equipped with the Switch Integration Module (SIM) option or the Electronic Set Emulation option. It determines the next block to be executed if a message packet is received from the switch, upon presentation of the incoming call and the CODE matches the pointer KEY value. The CODE values are as follows:

<TS> - call manually transferred, originating from a station.
<TT> - call manually transferred, originating from a trunk.
<DT> - direct call originating from a trunk.
<DS> - direct call originating from a station.
<BT> - forwarded on busy, originating from a trunk.
<BS> - forwarded on busy, originating from a station.
<NT> - forwarded on no answer, originating from a trunk.
<NS> - forwarded on no answer, originating from a station.
<AT> - all calls forwarded, originating from a trunk.
<AS> - all calls forwarded, originating from a station.
<CS> - call back from station (as requested).

If no code is given or the CODE does not match any programmed <call CODE> pointer, the

<NEXT> pointer is used.
Example: *<DT> = 1:[SALUTATION]* sends direct trunk calls to the *SALUTATION* block.

The wild card character ("?") may be used in one or both characters of the pointer KEY value.
Example: *<D?> = 1:[SALUTATION]* sends all direct calls to the *SALUTATION* block.
Note: AP3dot2 generates call CODEs based on information provided by the phone system when the call is presented. This information varies, depending on the phone system. Some do not provide sufficient information to distinguish between certain types of calls (e.g., forwarded on busy, originating from a trunk *vs.* forwarded on busy, originating from a station). When specific information is not provided by the phone system, AP3dot2 will make the following assumptions:

- Unless a call is specified as a forwarded call, assume it is direct.
- Unless a call is specified as originating from a station and a caller ID is given, assume the origin is a trunk.
- Unless a forwarded call is specified as busy or no answer, assume all calls forwarded.

Menu Block (Menu) - *Standard*

The Menu is the workhorse of AP3dot2. The purpose of a menu is to speak something to the caller, collect a caller's DTMF entry if any, validate and translate the entry, and branch to another block, which can be, for example, an extension, mailbox, AMC message, or another menu. A menu can accept entries from 1 to 10 digits in length.

The menu performs a search operation to match the caller ENTRY, or other values such as the caller ID (CID), to the KEY value of a pointer, extension, mailbox or AMC message. For example, a MENU prompt may be, "You may dial an extension directly or press 1 for sales, 2 for service, or 3 for administration." If the caller presses 1, a pointer with a KEY value of <1> directs AP3dot2 to a block labeled "SALES." If the caller entered 123, the MENU may be configured to search for an extension, mailbox, or announcement message in a particular group with a KEY value of <123>. When a match is found, it transfers control to the next operation or block. It can also translate values into new values before conducting the search.

```
Menu prompt-0: ____ ()
Menu prompt-1: ____ ()
Menu prompt-2: ____ ()
Menu prompt-3: ____ ()
Menu prompt-4: ____ ()
Menu prompt-5: ____ ()
Cache prompts?: ____ (Y)
Repeat Menu prompts if no caller entry: ____ (0)
Max caller entry digits: ____ (3)
Wait for caller entry (sec.): ____ (3)
Admin digit: ____ (#)
ESCape digit: ____ (*)
Prompt to request password: ____ (024)
Prompt to indicate invalid entry (and request retry): ____ (007)
Retries allowed (if invalid entry): ____ (1)
Repeat prompts if no entry: ____ (1)
Search based on (ENTRY, CID, FID, CODE, KEY):____ (ENTRY)
Search Extension group (XGROUP): ____ (0)
Search Mailbox group (MGROUP): ____ (0)
Search AMC group (AGROUP): ____ (0)
Append new KEY to previous value after search?: ____ (N)
Set CID (Caller ID) to (ENTRY, KEY) after search?: ____ ( )
Set FID (Forwarded ID) to (ENTRY, KEY) after search?: ____ ( )
m:<key value> = (translated value) (Translation Pointer)
m:<NO-ENTRY> = mg:[target block] (Required if search is based on ENTRY)
m:<INVALID> = mg:[target block] (Required)
m:<ACLASS> = g:[ACLASS block] (Required only for AMC)
m:<AMC-EXIT> = mg:[target block] (Required only for AMC)
m:<key value> = mg:[target block]
m:<key value {Ppassword}> = mg:[target block] (Password pointer)
m:<key value> = @filename.ext (Only with Database search option)
```

Figure 2-2. Menu Block Screen

Menu prompts - These are the voice prompts that AP3dot2 speaks when the Menu block is entered. Menu prompt-0 through Menu prompt-5 are spoken in succession and are normally used to prompt the caller for an entry. Allowable inputs include any three digit prompt numbers (001 - 849). An entry of 000 means "say nothing."

Cache Menu prompts? - AP3dot2 maintains a RAM memory cache which contains the most recently used prompt files. This improves the speed of operation of AP3dot2 and minimizes the need to access the disk drives. Each time AP3dot2 speaks a prompt, it first checks to see if it is in the cache. If it is not in the cache and the *Cache Menu prompts* parameter is set to 'Y', it loads it from the disk drive into the cache. If there is not enough room, it deletes the oldest files as necessary to make room. The *Cache Menu prompts* parameter is normally set to 'Y' and applies only to Prompt-0 through Prompt-5. If this MENU is not used frequently in your application, you may set *Cache menu prompts* to 'N' to cause the prompts to be played directly from the hard drive and avoid the removal of other more frequently used prompts from the cache.

Repeat Menu prompts (if no caller entry) - Indicates the number of times from (0-9) the Menu prompts are repeated, if no entry is made by the caller.

Max caller entry digits - Indicates the maximum number of digits the caller may enter in response to the Menu prompts. Allowable values are 1-10. This should be set to the length of the maximum valid entry in this Menu. If set greater, AP3dot2 will wait unnecessarily (see *Wait for caller entry*) for additional digits to be entered. If the caller enters more than the specified number of digits, the excess will be carried forward to the next operation.

Wait for caller entry - This is the time, in seconds (from 0-99), that AP3dot2 will wait for the caller to make an entry. This timer begins after the last Menu prompt has been spoken and resets after each digit pressed by the caller, up to the *Max caller entry digits* value.

Admin digit - (normally the "#" key) is used as a prefix for signaling administrative functions. When it is the first digit pressed, it acts somewhat like a typewriter shift key, in that it does not count as one of the digits pressed when compared to *Max caller entry digits*. In other words, it will allow a total of 4 digits to be entered if *Max caller entry digits* is set to 3. Some applications may require restriction of administrative capabilities on specific ports or MENUs. This can be accomplished by setting *Admin digit* to a space ( ) in the MENU blocks where administration is not allowed. Allowable inputs are 0-9, '#', '*', 'a', 'b', 'c', 'd'.

ESCape digit - The ESCape digit (normally the '*' key) causes an immediate exit from a request for digit entry. When the ESCape digit is pressed AP3dot2 will not wait for a subsequent digits to be pressed. The ENTRY value will include any digits entered before the *ESCape digit* as well as the *ESCape digit* itself.
Note: *Admin digit* and *ESCape digit* should never be set to the same value.

Prompt to request password - The prompt which will ask the caller to enter a password (when appropriate). The prompt will be used when a caller entry has been made which requires a password for access to a block or function.

Prompt to indicate invalid entry (and request retry) - The prompt spoken when no match has been found during a MENU search. It normally advises the caller that the entry made is invalid and asks them to try again.

Retries allowed (if invalid entry) - The number of additional attempts that this MENU allows if

the caller makes an invalid entry. Allowable inputs are 0-9. When retries are exhausted, AP3dot2 will exit the MENU using the <INVALID> condition.

Repeat prompts - Number of times from 0-9 this MENU will repeat prompts other than the Menu prompts, such as "Prompt to record password."

Search based on (ENTRY, CID, FID, CODE, KEY): - The value which AP3dot2 will use to search pointers, extensions, mailboxes and AMC messages for a matching KEY value. In a MENU where the caller is expected to enter DTMF digits, this should be set to ENTRY.

The other search values (CID, FID, CODE and KEY) are employed when the MENU is used strictly for a branching operation to select the next block. In this case, the Menu prompts are normally set to 0 so that the caller will not be prompted for an entry. AP3dot2 proceeds immediately to the search operation.

The **CID** and **FID** are the Caller ID and Forwarded ID respectively. These may have been set by a previous MENU (see the Set CID and Set FID parameters, below) or by the ROOT block, according to a Call ID packet received from the phone system.

The call **CODE** value is available only when AP3dot2 is equipped with the Switch Integration Module (SIM) option or the Electronic Set Emulation option. It is set when a message packet is received from the switch, upon presentation of the incoming call. Pointers may be used to direct a call, based on the call CODE value (see ROOT block for a listing of the CODE values). **Example**: *<DT> = 1:[SALUTATION]* sends direct trunk calls to the *SALUTATION* block.

The wild card character ('?') may be used in one or both characters of the pointer KEY value. **Example**: *<D?> = 1:[SALUTATION]* sends all direct calls to the *SALUTATION* block.

If the search value is set to **KEY**, the search is based on the KEY value which existed upon entry to the current MENU block. After all <TRANSLATION> pointers have been performed and a match has been found, the new search value is stored in KEY for later use.

Search XGROUP, Search MGROUP, Search AGROUP - Determines which group(s) of extensions, mailboxes or AMC messages will be searched. Any group may be excluded from the search by setting it to zero. AP3dot2 will first search for a match on a Pointer, then Extensions (in the specified XGROUP), Mailboxes (in the specified MGROUP) and AMC Messages (in the specified AGROUP). It will stop searching when the first match is found.

Append new KEY to previous value after search? - A 'Y' in this field instructs AP3dot2 to add the new KEY value to the previous value which existed upon entry into this MENU. The new KEY will only be appended if the search in the current MENU was successful. This is useful in applications where the caller is asked to enter DTMF responses (usually one or two digits) to a series of questions (MENUs). Each response is first validated (by matching a pointer KEY) and then added (appended) to the previous response. After the final response, the combined KEY value may be used by another MENU to search for an Extension, Mailbox or AMC message.

If 'N' is specified, the previous KEY is cleared and replaced by the new value.

Set CID (Caller ID) to (ENTRY, KEY) after search? - After a successful search, sets the CID to either the caller ENTRY (untranslated) or the KEY (translated) value for use in subsequent MENU search operations.

Set FID (Forwarded ID) to (ENTRY, KEY) after search? - same as *Set CID*.

Pointers:
***m*:<*search value*> = (*translated value*)** - Converts the digits in the key value to the translated value, then re-enters the MENU search using the translated value.

Wild cards may be used in the pointer "key value" to create translations which apply to a group of search values. A question mark (?) is placed in the "key value" to indicate that any digit in that position will qualify as a match. Wild card characters may also be used in a translation string to extract certain digits from the search value. The first "?" in the translation string corresponds to the first "?" in the search string. It will be replaced with the corresponding digit in the search value. A dot (.) character is used in the translation string as a place marker which causes the corresponding "?" in the search value to be skipped in the translation.

Examples:

1:<1> = (123)	*search value of 1 is translated to 123*
1:<???????> = (...????)	*extract the last four digits of the seven digit search value*
1:<?2?4> = (0??24)	*search value of 1234 is translated to 01324*
1:<?2?4> = (.?24)	*search value of 1234 is translated to 324*
1:<NO-ENTRY> = (123)	*convert a no entry condition to a value of 123*

Table 2-2. Pointer Examples

Pointer Types:
***m*:<NO-ENTRY> = *mg*:[*target block*]** - The block AP3dot2 will execute next if the caller makes no entry in this MENU.

***m*:<INVALID> = *mg*:[*target block*]** - The block AP3dot2 will execute next if the caller has made too many invalid entries (determined by *Retries allowed*) or a search on a value other than ENTRY failed to find a match.

***m*:<ACLASS> = *g*:[*target block*]** - Indicates the AMC class of service (ACLASS) block to use when this MENU is recording or playing AMC messages.

***m*:<AMC-EXIT> = *mg*:[*target block*]** - This applies only when using AMC messaging. It is the block AP3dot2 will execute next after playing an AMC Message to the caller.

***m*:<*search value*> = *mg*:[*target block*]** - These are user defined pointers which direct AP3dot2 to other blocks based on the search value.
Example: *0:<1> = X1:[SALES]* directs AP3dot2 to a block named *SALES*, in extension group

X1:, if the caller presses *<1>* while in the MENU and the search is based on *ENTRY*. The search values of these pointers (left side) may be from 1 to 10 digits long.

m:<search value **{P*password*}>= *mg*:[*target block*]** - These are password protected pointers. If the caller enters the digits specify by *search value*, AP3dot2 will then speak the prompt *Prompt to request password*, requesting that the caller enter the password *password*. If the correct password is given, AP3dot2 proceeds to the block specified by *target block*. If the incorrect password is given, the prompt *Prompt to indicate invalid entry* is spoken. If *Retries allowed* is greater than 0, the caller will be given additional opportunities to enter the correct password. After retries are exhausted, AP3dot2 will exit the MENU with the *<INVALID>* condition.
Example: 0:<123 {P4567}> = X1:[Computer]

The caller must enter 123 followed by the password 4567 in order to gain access to the EXTension block labeled "Computer," which is in extension group *X1:*.

A MENU pointer directed to a class of service block (XCLASS or MCLASS) is called a **Breeder**. Breeders are defined and discussed in detail on page 4.

m:<key value> = @filename.ext (Name of data file to search) - This is called a **file pointer**. It directs AP3dot2 to search the specified data base file, located on the *\DTA* directory of the hard disk, for a match to the search value. The two types of data files are **POINTER** files and **SDF** files which have the filename extensions of *.PTR* and *.SDF* respectively. These are used in applications which would otherwise require a very large number of individual pointers to be programmed on a MENU block.

Pointer files (.PTR) are simple text files, which may be produced on a word processor. Each line of a pointer file appears and acts exactly like a pointer on AP3dot2 screen. This operates as an extension to the pointers on the MENU block. Since the pointers in the file are not memory resident, this saves RAM space on AP3dot2. Also, a single pointer file can be used for more than one MENU block. The following is an example of a few lines of a pointer file:

0:<7045278888> = X1:[Charlotte Sales]
1:<123 {P4444}> = 0:[MODEM]
0:<123> = (456)
0:<???> = X1:[XCLASS 1]
<NO-ENTRY> = 0:[CONSOLE]

Note: The last line has no mode specified for the pointer. In this case AP3dot2 will assume the current mode of operation.

System Data Format (.SDF) files are a universal form of computer generated files. They are composed of individual, fixed-length records of ASCII characters, terminated by carriage return and line feed characters. When AP3dot2 reads this type of file, it treats each record as if it was a translation pointer. The following is the record layout specification:

Record length:	22 characters		
Field layout:	Offset 0	Width 10	Left adjusted, padded with spaces, acts as the search value.
	Offset 10	Width 10	Left adjusted, padded with

		spaces, acts as the translation value.
Offset 20	Width 2	Carriage return and line feed characters.

Dial Block (Dial) - *Standard*

The functions of a DIAL block are to perform a dialing operation and then either release the call (blind transfer) or branch to another block, based on the outcome of the dialing operation (e.g. <BUSY>, <NO- ANSWER>).

This block is commonly used to transfer callers to an operator for assistance. It does not have the extensive automated attendant features of an EXTension block. However, it is useful for transferring calls to another system, such as a dictation system, answering machine, FAX machine, MODEM, or paging terminal. It can also be used to facilitate special features which a telephone system may lack, such as DISA or Least Cost Routing of outgoing long distance calls.

DIAL blocks may also be used in conjunction with an EXTension block to create various types of extension hunt groups.

```
Prompt before dialing: ___ (008)
Dial prefix: ____ () 8 digits max.
Dial: _____ () 16 digits max.
Dial suffix: ____ () 8 digits max.
Rings: ____ (0)
Ring cadence: ___/___  ___/___ (110/100 300/280)
Busy cadence: ___/___  ___/___ (60/50 50/40)
Fast Busy cadence: ___/___  ___/___ (35/25 25/15)
Cadence filter: ____ (1)
Dial to abort No Answer: ____ (&,)
Dial to abort Busy: ____ (&,)
Dial to abort Fast Busy: ____ (&,)
Dial to abort Error: ____ (&,)
m:<ANSWER> = mg:[target block]       (Optional)
m:<NO-ANSWER> = mg:[target block]    (Optional)
m:<BUSY> = mg:[target block]         (Optional)
m:<FBUSY> = mg:[target block]        (Optional)
m:<ERROR> = mg:[target block]        (Optional)
```

Figure 2-3. Dial Block Screen

Prompt before dialing - The prompt spoken to the caller before executing the specified dialing operation. Allowable inputs are 001-849. 0 indicates "say nothing."

Dial prefix, Dial, and Dial suffix - These are the DTMF strings which will be dialed in sequence. The *Dial prefix* is normally set to the flash hook sequence required to execute a call transfer, *Dial* is normally the extension number and *Dial suffix* contains any special characters to be dialed after the extension number. Valid dialing characters are **1234567890*#abcd&;,WKX** where:

& is flash hook
; is pause for dial tone
, is pause for one second
W is wait for answer before continuing to dial
K dial the current KEY value
X dial the dialing string of the EXT block last used

Rings - This determines the call supervision level to be used: 0 for immediate release after dialing, 1 for partial supervision (release after the first ring back signal) and 2 or greater for full supervision. If the number of rings is set to 2 or higher, AP3dot2 will wait that many rings before assuming that the called number is unanswered.

Ring cadence, Busy cadence, Fast Busy cadence - These parameters represent the maximum/minimum intervals of sound and silence (cadence) of the respective call progress signals. Their settings will depend on the particular phone system. If the cadence values of the phone system are unknown, they can be measured using the AP3dot2 **CP** monitor (see "Keyboard and Editing Commands," page 52). The syntax for setting these parameters is as follows:

sound-high/sound-low silence-high/silence-low

All values are in 10 millisecond increments (100 = 1 second).
Example: Ring cadence: 210/205 300/290

This specifies that AP3dot2 will recognize a ring signal if the duration of sound is in the range from 2.10 seconds to 2.05 seconds and the silence interval is in the range from 3.00 seconds to 2.90 seconds.

Cadence filter - This sets the minimum duration of a sound or silence event which will be sensed by AP3dot2 when it is analyzing call progress signals. It is set in 10 millisecond increments (100 = 1 second). AP3dot2 will ignore all events which are shorter than the *Cadence filter*. This is used to filter out noise which may be present on tie lines or off premise lines. The **CP** monitor (see "Keyboard and Editing Commands," page 52) can be used to determine if noise is present on the lines.

Dial to abort No Answer, Busy, Fast Busy, Error - These are the dialing sequences required to abort a failed call transfer. These normally consist of flash hook and DTMF feature codes required by the phone system to reconnect AP3dot2 with the calling party.

Pointers:
***m*:<ANSWER> = *mg*:[*target block*]** - The block AP3dot2 will execute next if the dialed number is answered. Normally this pointer is left blank, in which case AP3dot2 will hang up after completing the call transfer.

***m*:<NO-ANSWER> = *mg*:[*target block*]** - AP3dot2 goes immediately to the designated target block when a ring-no-answer condition is encountered.

***m*:<BUSY> = [*mg*:*target block*]** - AP3dot2 goes immediately to the designated target block when a busy condition is encountered.

***m*:<FBUSY> = *mg*:[*target block*]** - AP3dot2 goes immediately to the designated target block when a fast busy is encountered.

***m*:<ERROR>= *mg*:[*target block*]** - AP3dot2 goes immediately to the designated target block if an error signal is encountered after dialing the number.
Note: If the applicable pointer is not set or the *Rings* parameter is set to zero, AP3dot2 will go on

hook after dialing. This is a typical situation for transferring callers to the Console for assistance.

Bye Block (Bye) - Standard

The BYE block is very simple. Its purpose is to say goodbye to the caller and disconnect the call. The only parameter is the prompt to be spoken before disconnecting.

```
Prompt to speak before disconnecting: ___ (023)
```

Figure 2-4. Bye Block Screen

Prompt to speak before disconnecting - The prompt that AP3dot2 speaks before it disconnects the call (goes on hook). Allowable inputs are 001-849 with 000 indicating "say nothing.".

Query Block (Query) - *Standard*

QUERY blocks are used to create a "voice questionnaire." With these blocks, AP3dot2 can be configured to ask the caller a series of questions, record the caller's voice responses and combine the responses into a single voice message which is placed into a mailbox. Common applications are order entry, caller opinion surveys and information requests.

When the mailbox user reviews a message, recorded by QUERY blocks, each of the responses is played back in the order it was recorded, preceded by a playback prompt to identify it.

The operation can be configured to offer callers the options of playing back, changing or confirming their response with DTMF commands or it can be programmed so that it requires no DTMF entries at all. When used in conjunction with MENU blocks, sequences can be created which involve both voice and DTMF responses (e.g. "Dial 1 to order nails or 2 to order bolts.")
Note: AP3dot2 does not record the caller's DTMF responses into the mailbox. It uses them to "steer" the caller into a particular set of QUERY blocks.

```
Query prompt: ____ (000)
Playback prompt: ____ (000)
Exit prompt: ____ (000)
Error prompt: ____ (000)
Cache prompts?: ____ (Y)
Wait for caller response (sec.): ____ (4)
Repeat query, if no response: ____ (1)
Max response length (secs): ____ (30)
Silence time-out after response (secs): ____ (2)
Wait for DTMF entry (secs): ____ (3)
Repeat Exit prompt, if no DTMF entry: ____ (1)
Digit to playback response: ____ (1)
Digit to change response: ____ (2)
Digit to confirm response: ____ (3)
ESCape digit: ____ (*)
m:<MBX> = g:[MBX block]              (Required)
m:<NEXT> =  mg:[target block]        (Required)
m:<NO-RESP> = mg:[target block]      (Required)
m:<ESCAPE> = mg:[target block]       (Required)
m:<ERROR> = mg:[target block]        (Required)
```

Figure 2-5. Query Block Screen

Query prompt - This prompt requests a voice response to be recorded by the caller. It is followed by a short tone signal which indicates that the system is recording. Valid entries are 001-849, with 000 indicating "say nothing."
Example: "Please speak your name at the tone." (beep)...

Playback prompt - This prompt is used when the message is being played back. It is followed immediately by the caller's recorded response. Valid entries are 001-849, with 000 indicating "say nothing."
Example: "Name." (playback of the name recorded by the caller).

Exit prompt - This prompt is given after the response has been recorded. It may simply say

"Thank you" to acknowledge the response or prompt the caller to enter DTMF tones to playback, change, or confirm their response.

Error prompt - This prompt is played if a system error occurs. The most common error condition is that the message storage disk is full.
Example: "Sorry. The message storage is full. Please hold the line for assistance."

Cache prompts? - AP3dot2 maintains a RAM cache which contains the most recently used prompt files. This improves the operation speed of AP3dot2 and minimizes the need to access the disk drives. When AP3dot2 speaks a prompt, it first checks to see if it is in the cache. If it is not, and the *Cache prompts* parameter is set to 'Y', it loads it from the disk drive into the cache. If there is not enough room, it deletes the oldest prompts as necessary to make room. The *Cache prompts* parameter is normally set to 'Y'. If AP3dot2 has a hard disk, and this QUERY is not used frequently in your application, you may set *Cache prompts* to 'N' to cause the prompts to be played directly from the hard drive and avoid the removal of other more frequently used prompts from the cache.

Wait for caller response - (0-9 seconds) This is the time that AP3dot2 will wait for the caller to begin speaking his/her response to the query.

Repeat query, if no response - (0-9) The number of times to repeat the query prompt if the caller does not begin speaking.

Max response length - (0-999 seconds) The maximum length of recorded response allowed.

Silence time-out after response - (0-99 seconds) The period of silence after which it is assumed that the caller has finished speaking his/her response and recording is stopped.

Wait for DTMF entry - (0-99 seconds) The time to wait for the caller to enter a DTMF tone in response to the *Exit prompt*. The time interval begins after the prompt has been played.

Repeat Exit prompt, if no DTMF entry - (0-9) The number of times to repeat the *Exit prompt* if no DTMF has been dialed.

Digit to playback response - The DTMF digit which causes AP3dot2 to play back the voice response, just recorded, to the caller.

Digit to change response - The DTMF digit which will cause AP3dot2 to repeat the query and allow the caller to change (record over) his/her response.

Digit to confirm response - If this is set to a valid DTMF digit, AP3dot2 will automatically play back the response, just recorded by the caller, then play the *Exit prompt* which should ask the caller to confirm the response by pressing this digit.
Example: "Dial 3 to confirm your response or 2 to change it."

ESCape digit - If the caller presses this key, typically '#', at any time during the query or exit prompt, any response to this query which may have been recorded will be canceled and AP3dot2 will proceed immediately to the block indicated by the <ESCAPE> pointer. This will have no

affect on responses to other queries recorded during the current call.

Pointers:

***m*:<MBX> = *g*:[*target MBX*]** - The mailbox to which this response should be sent. If the same mailbox was previously specified by another QUERY block (during the same phone call) the voice response to the current query will be added to the same voice message, forming a composite message. If the mailbox has not been used by another QUERY, a new voice message will be created.

***m*:<NEXT> = *mg*:[*target block*]** - The next block to go to after a response has been recorded (and confirmed, if *Digit to confirm response* is set).

***m*:<NO-RESP> = *mg*:[*target block*]** - The next block to go to if no response was recorded (or if not confirmed and *Digit to confirm response* is set).

***m*:<ESCAPE> = *mg*:[*target block*]** - The next block to go to if the caller presses the *ESC* digit.

***m*:<ERROR> = *mg*:[*target block*]** - The next block to go to if a system error occurs. The most common error condition is that the message storage disk is full.

Extension Block (EXT) - *Standard*

The EXT block is used to implement the AUTO-TEND automated attendant features on AP3dot2. It controls the operating characteristics specific to an individual extension, unlike an XCLASS (Extension class of service) block which normally applies to a number of extensions.

Pointers are used to assign the EXT a class of service and to provide the flexibility to handle calls differently for various modes of operation (typically at different times of the day).

```
KEY value (Extension number): ____ ( )
Dial: _____________ ( )  16 digits max
Rings: ____ (0)
Call blocking allowed?: (Y)
Call screening allowed?: (N)
Remote call forwarding allowed?: (Y)
Default subscriber to mailbox menu?: (Y)
User password: XXXX
ISSI port number: (0) (Requires the ISSI software option)
ISSI led number: (0) (Requires the ISSI software option)
m:<XCLASS> =       g:[XCLASS block]  (Required)
m:<MSG> =          mg:[target block] (Optional)
m:<NO-ANSR> =      mg:[target block] (Optional)
m:<BUSY> =         mg:[target block] (Optional)
m:<FBUSY> =        mg:[target block] (Optional)
m:<ERROR> =        mg:[target block] (Optional)
m:<FWD> =          mg:[target block] (Optional)
m:<QUE-FULL> =     mg:[target block] (Required only for Sequencer Queuing)
```

Figure 2-6. Extension Block Screen

KEY value (Extension number) - The number which must be entered by the caller in order to access this extension. It does not necessarily have to be the same number dialed by AP3dot2 when transferring to this extension. This can not be the same as the *KEY value* of any other EXT or ACD block in the same extension group.
Note: The *KEY value* in an EXT block does not allow the use of Wild cards to identify groups of numbers. However, MENU pointers may be used to breed large series of extension numbers (EXT blocks). Rather than creating each EXT block in a series individually, AP3dot2 will automatically breed the EXT blocks for you (see "User Defined Pointers" in the MENU Block reference). Allowable inputs are 0-9 up to a maximum of 10 digits.

Dial - The actual number that AP3dot2 will dial to complete the transfer. In other words, this is the number that the *KEY value* is translated to. Valid dialing characters are **1234567890*#abcd&;,WKX** where:

- **&** is flash hook
- **;** is pause for dial tone
- **,** is pause for one second
- **W** is wait for answer before continuing to dial
- **K** is dial the current KEY value
- **X** is dial the dialing string of the EXT block last used

Rings - Determines the degree of call supervision for this extension. A setting of 0 will result in

an immediate release upon transfer. If the value is set to 1, AP3dot2 will dial the extension number, listen for the first ring and then release the line, aborting the transfer only if the phone is busy or an error occurs. If *Rings* is set to a value greater than 1 then AP3dot2 will transfer to the extension and allow it to ring the specified number of times before returning to the caller. If the extension goes unanswered or is busy, AP3dot2 informs the caller and allows them to make another choice. Allowable inputs are 0-99.

Call blocking allowed? - A 'Y' in this parameter allows the called party to set call blocking for their extension. An 'N' in this parameter disables the option.

Call screening allowed? - A 'Y' in this parameter allows the called party to accept or reject a call transferred by AP3dot2. If the call is rejected, AP3dot2 will prompt the caller that their party is unavailable and allow them to dial another extension or leave a message. Allowable inputs are 'Y' for yes or 'N' for no.

Remote call forwarding allowed? - A 'Y' in this parameter allows the called party to redirect calls to another extension. An 'N' in this parameter disables the option.

Default subscriber to mailbox menu? - A 'Y' in this parameter places the caller in their mailbox administration menu when calling in user mode. An 'N' in this parameter leaves the caller in the extension administration menu.

User password - The digits the extension user enters to gain access to the extension menu.

ISSI port number - The AP3dot2 electronic set voice port responsible for monitoring that station. Requires the ISSI software option.

ISSI led number - The line appearance button number on an electronic set which monitors the particular extension. Requires the ISSI software option.

Pointers:

***m*:<XCLASS> = *g*:[*XCLASS block*]** - The name of the XCLASS block that contains all of the prompts and parameters needed to complete the transfer.

***m*:<MSG> = *mg*:[*target block*]** - This causes AP3dot2 to go directly to the designated block if the caller chooses to leave a message for this extension. The target is usually a MBX block. However, it may be another EXT or DIAL block. If left unspecified, AP3dot2 will not give the caller the option to leave a message in the event of a busy or no answer for this extension.
Note: The <MSG> Pointer may also be specified in the associated XCLASS block. However, the <MSG> pointer in this EXT block will take precedence.

***m*:<NO-ANSR> = *mg*:[*target block*]** - AP3dot2 goes immediately to the designated target block when a ring-no-answer condition is encountered. It will not prompt the caller prior to doing this.

***m*:<BUSY> = *mg*:[*target block*]** - AP3dot2 goes immediately to the designated target block when a busy condition is encountered. It will not prompt the caller prior to doing this.

***m*:<FBUSY> = *mg*:[*target block*]** - AP3dot2 goes immediately to the designated target block

when a fast busy condition is encountered. It will not prompt the caller prior to doing this.

***m*:<ERROR> = *mg*:[*target block*]** - AP3dot2 goes immediately to the designated target block when an error is encountered during the transfer. It will not prompt the caller prior to doing this.

***m*:<FWD> = *mg*:[*target block*]** - The forward pointer is used to redirect the call to another block without first attempting to transfer to this extension. Since pointers are mode dependent, this can be used to redirect calls to another block during certain modes of operation (e.g. time of day, etc.).

***m*:<QUE-FULL> = *mg*:[*target block*]** - The next block to go to if the number of callers allowed to hold in queue is exceeded. (See the *Max callers allowed to hold in queue* parameter in the ROOT block.)
Note: The <QUE-FULL> Pointer may also be specified in the associated XCLASS block. However, the <QUE-FULL> Pointer in the EXT block will take precedence.

Automatic Call Distribution (ACD) Block) - *Standard*

An ACD (Automatic Call Distribution) block is a special type of EXTension block. The ACD block is used to distribute calls evenly within a group of EXTensions such as a sales or service department. It acts as a pilot number which callers may enter to be transferred to one of the member extensions in the group. The ACD will first try to transfer the call to the member which has not been busy or received a new call from AP3dot2 for the longest period of time (oldest member). If this member extension is not answered (busy, ring-no-answer, or error), AP3dot2 will abort the transfer and try the next oldest member. If, after trying all members, the call has not been answered, a <BUSY> condition is returned and the caller may be given choices to leave a message, hold, or try another number.

```
KEY value (pilot number): ____ ( )
Rings (used for all members): ____ (0)
m:<MEMBER> =        g:[member EXT block]
m:<XCLASS> =        g:[XCLASS block] (Required)
m:<MSG> =          mg:[target block] (Optional)
m:<BUSY> =  mg:[target block] (Optional)
m:<FWD> =          mg:[target block] (Optional)
m:<QUE-FULL> =     mg:[target block] (Required only for Sequencer Queuing)
```

Figure 2-7. ACD Block Screen

KEY value (Pilot number) - The number which must be entered by the caller in order to access this ACD group. This can not be the same as the *KEY value* of any other EXT or ACD block in the same extension group.

Rings - Determines the degree of call supervision when transferring to the member extensions. A setting of 0 will result in an immediate release upon transfer to the first member. If the value is set to 1, AP3dot2 will dial the member extension number, listen for the first ring and then release the line. If the extension is busy AP3dot2 will abort the transfer and try the next member.
Note: If **Rings** is set to a value greater than 1, AP3dot2 will transfer to the member extension and allow it to ring the specified number of times before considering it to be unanswered. If all of the extensions are either unanswered or busy, AP3dot2 treats this as a <BUSY> condition, informs the caller and allows them to hold or make another choice. Allowable inputs are 0-99.
Note: In an ACD transfer, AP3dot2 will use the *Rings* parameter of the ACD block instead of the ones in the member EXT blocks.

***m*:<MEMBER> = *g*:[*member EXT block*]** - One of these pointers must be set for each member EXTension block.

***m*:<XCLASS> = *g*:[*XCLASS block*]** - The name of the XCLASS block that contains all of the prompts and parameters needed to successfully complete the transfer.

***m*:<MSG> = *mg*:[*target block*]** - This causes AP3dot2 to go directly to the designated block if the caller chooses to leave a message for this ACD group. The target is usually a MBX block. However, it may be another EXT or DIAL block. If left unspecified, AP3dot2 will not give the caller the option to leave a message in the event of a <BUSY> for this ACD.

Note: The <MSG> pointer may also be specified in the associated XCLASS block. However, the <MSG> pointer in this ACD block will take precedence.

***m*:<BUSY> = *mg*:[*target block*]** - AP3dot2 goes immediately to the designated block when a busy condition is encountered. It will not prompt the caller prior to doing this.

***m*:<FWD> = *mg*:[*target block*]** - The forward pointer is used to redirect the call to another block without first attempting to transfer to this ACD group. Since pointers are mode dependent, this can be used to redirect calls to another block during certain modes of operation (e.g. time of day, etc.).

***m*:<QUE-FULL>= *mg*:[*target block*]** - The next block to go to if the number of callers allowed to hold in queue is exceeded. (See the *Max callers allowed to hold in queue* parameter in the ROOT block.)
Note: The <QUE-FULL> pointer may also be specified in the associated XCLASS block. However, the <QUE- FULL> pointer in the ACD block will take precedence.

Extension Class of Service Block (XCLASS) - *Standard*

The XCLASS (Class of Service) block is used to specify information related to one or several extensions (EXT block). It specifies the voice prompts and operating parameters to be used when transferring calls to EXTension blocks assigned to this class and what to do in the event of a failed transfer (ring no answer or busy). These parameters designate a Class of Service (XCLASS) to be used, along with other attributes which are particular to the extension.

```
Extension Retention (days): ____ (60)
Prompt to ask caller to record name: ___ (015)
Prompt prior to transfer: (016)
Prompt to announce call to called party: ___ (017)
Prompt to announce redirected call to called party: ___ (018)
Prompt to announce forwarded call to called party: ___ (019)
Prompt to announce caller name to called party: ___ (020)
Prompt called party to enter digit to accept call: ___ (021)
Prompt called party to enter extension for redirect: ___ (022)
Prompt called party to acknowledge redirect: ___ (023)
Prompt caller that party is unavailable: ___ (024)
Prompt caller that extension was unanswered: ___ (025)
Prompt caller that extension is busy: ___ (026)
Prompt caller that extension is still busy: ___ (027)
Prompt caller that call was not connected (transfer error): ___ (029)
Prompt caller with option to leave message: ___ (030)
Prompt caller with option to hold: ___ (031)
Prompt caller with option to continue holding: ___ (032)
Prompt caller with option to enter different extension: ___ (033)
Prompt while holding: ___ (035)
Prompt to indicate que full: ___ (036)
Prompt to request password: ___ (814)
Prompt to indicate invalid entry: ___ (815)
```

Figure 2-7a. XClass Block Screen, part 1

```
Prompt to announce extension user menu: ___ (850)
Prompt to indicate call blocking is on: ___ (851)
Prompt to indicate call blocking is off: ___ (852)
Prompt to indicate extended call blocking is on: ___ (853)
Prompt to indicate call screening is on: ___ (854)
Prompt to indicate call screening is off: ___ (855)
Prompt to indicate that calls are forwarded: ___ (856)
Prompt to indicate remote call forwarding is off: ___ (857)
Prompt set call blocking: ___ (858)
Prompt to cancel call blocking: ___ (859)
Prompt to set call screening: ___ (860)
Prompt to cancel call screening: ___ (861)
Prompt to forward calls: ___ (862)
Prompt to cancel remote call forwarding: ___ (863)
Prompt to change password: ___ (864)
Prompt to access mailbox menu: ___ (865)
Prompt to exit from extension menu: ___ (866)
Prompt to set extended call blocking: ___ (867)
Prompt to request remote call forwarding number: ___ (868)
Prompt to warn of circular forwarding loop: ___ (869)
Prompt to request new password: ___ (870)
Prompt request confirmation or change: ___ (871)
Prompt to confirm password has been set: ___ (872)
Wait for caller entry (secs): ___ (3)
```

Figure 2-7b. XClass Block Screen, part 2

```
Repeat prompts if no entry: ___ (2)
Retries allowed if invalid entry: ___ (4)
Digit to leave message: ___ (1)
Digit to accept a call: ___ (1)
Digit to redirect a call: ___ (2)
Digit to hold: ___ (2)
Hold interval before trying again (secs): ___ (30)
Dial to place caller on PBX hold: ___
Dial to retrieve caller from PBX hold: ___
Dial Prefix: ___ (&,)
Dial Suffix: ___
Ring cadence: __/__  __/__ (110/90  310/290)
Busy cadence: (60/50  50/40)
Fast Busy cadence: __/__  __/__ (35/25)  (25/15)
Cadence filter: (1)
Dial to abort No Answer: ___ (&,)
Dial to abort Busy: ___ (&,)
Dial to abort Fast Busy: ___ (&,)
Dial to abort Error: ___ (&,)
Dial to abort Answer (if screened call is rejected): ,,,
m:<MENU> = m:[MENU block]              (Required)
m:<NO-ENTRY> = mg:[target block]       (Required)
m:<MSG> = mg:[target block]            (Optional)
m:<QUE-FULL> = mg:[target block]       (Optional)
m:<caller entry> = mg:[target block]   (Optional)
0:<USER-EXIT> = 0:[subscriber exit]
```

Figure 2-7c. XClass Block Screen, part 3

Extension Retention - The number of days from 1-999 an inactive extension or EXT block will be retained. If an extension goes unused for the specified number of days, it will be automatically deleted. The default value is 60 days.

Prompt to ask caller to record name - The prompt asking to the caller to speak his or her name so that it can be announced when the called party answers. The standard prompt is 015.

Prompt prior to transfer - The prompt spoken to the caller immediately preceding the attempt to transfer. The standard prompt is 016.

Prompt to announce call to called party - The prompt spoken to the called party to announce the transfer. The standard prompt is 017.

Prompt to announce redirected call to called party - The prompt spoken to the called party upon presentation of a redirected call. The standard prompt is 018.

Prompt to announce forwarded call to called party - The prompt spoken to the called party upon presentation of a forwarded call. The standard prompt is 019.

Prompt to announce caller name to called party - The prompt spoken to the called party when a caller has recorded his/her name for the purpose of call screening. The standard prompt is 020.

Prompt called party to enter digit to accept call - The prompt spoken to the called party when call screening is set. It will be played upon presentation of a screened call, giving the called party the chance to accept or reject the call. The standard prompt is 021.

Prompt called party to enter extension for redirect - The prompt spoken to a called party who has chosen to redirect a screened call. This prompt asks the called party to enter the number of the extension to which the call is to be redirected. The standard prompt is 022.

Prompt called party to acknowledge redirect - The prompt spoken to the called party when a screened call has been rejected or redirected. This prompt informs the called party their command has been accepted and tells them to hang up the phone. The standard prompt is 023.

Prompt caller that party is unavailable - The prompt spoken to a caller when a screened transfer is rejected or call blocking is and there is no message option. The standard prompt is 024.

Prompt caller that extension was unanswered - This is spoken to the caller if there is no answer at the called extension and there is no <MSG> pointer designated by the EXT block or the associated XCLASS. The prompt explains that there was no answer and gives the caller the option of dialing another extension. The standard prompt is 025.

Prompt caller that extension is busy - Spoken to the caller if the called extension is busy and there is no <MSG> pointer designated in the EXT block for the called extension or the related XCLASS. The prompt explains that the extension is busy and gives the caller a choice of holding or dialing another number. The standard prompt is 026.

Prompt caller that extension is still busy - This is the same as the prompt above except that it is spoken to the caller if the extension is still busy on second and subsequent attempts to transfer. The standard prompt is 027.

Prompt caller that call was not connected (transfer error) - Spoken if the transfer fails to be completed. It informs the caller that the call was not connected and instructs them to try again or hold on the line for assistance. The standard prompt is 029.

Prompt caller with option to leave message - The prompt spoken to the caller if the call transfer was unsuccessful. It gives the caller the option of leaving a message by pressing a key. The standard prompt is 030.

Prompt caller with option to hold - The prompt spoken to the caller if the extension is busy upon the initial attempt to transfer. It gives the caller the option of holding for the extension by pressing a key. The standard prompt is 031.

Prompt caller with option to continue holding - The prompt spoken to the caller if the extension is busy on subsequent attempts to transfer. It gives the caller the option to continue holding for a extension by pressing a key. The standard prompt is 032.

Prompt caller with option to enter different extension - The prompt spoken to a caller if the call transfer was unsuccessful. This prompt tells the caller they may try another extension by entering the extension number. The standard prompt is 033.

Prompt while holding - Spoken when the caller chooses to hold for a busy extension. It informs the caller that AP3dot2 will retry the extension in a moment. The standard prompt is 035.

Prompt to indicate queue full - Spoken when a caller attempts to hold for an extension and the number of callers currently holding in queue is at a maximum. It explains that all lines are busy and the caller should try again later. The standard prompt is 036.

Prompt to request password - Spoken when the subscriber logs on to his or her extension, asking the subscriber to enter his or her password. The standard prompt is 814.

Prompt to indicate invalid entry - Spoken when the extension user enters an invalid set of digits. It notifies the caller the entry is invalid and prompts him or her to try again. The standard prompt is 815.

Prompt to announce extension user menu - Spoken when the extension user accesses the extension menu. This prompt informs the caller they have entered the extension user menu. The standard prompt is 850.

Prompt to indicate call blocking is on - Spoken if the extension user has set call blocking. This prompt notifies the caller of their call blocking status within the extension user menu. The standard prompt is 851.

Prompt to indicate call blocking is off - Spoken if the extension user has not set call blocking. This prompt notifies the caller of their call blocking status within the extension user menu. The standard prompt is 852.

Prompt to indicate extended call blocking is on - Spoken if the extension user has set extended

call blocking. This prompt notifies the caller of their call blocking status within the extension user menu. The standard prompt is 853.

Prompt to indicate call screening is on - Spoken if the extension user has set call screening. This prompt notifies the caller of their call screening status within the extension user menu. The standard prompt is 854.

Prompt to indicate call screening is off - Spoken if the extension user has not set call screening. This prompt notifies the caller of their call screening status within the extension user menu. The standard prompt is 855.

Prompt to indicate that calls are forwarded - Spoken if the extension user has set call forwarding. This prompt notifies the caller of their call forwarding status within the extension user menu. The standard prompt is 856.

Prompt to indicate remote call forwarding is off - Spoken if the extension user has not set remote call forwarding. This prompt notifies the caller of their call forwarding status within the extension user menu. The standard prompt is 857.

Prompt set call blocking - The prompt, spoken from within the extension user menu, that informs the extension user of the digit to enter to set call blocking. The standard prompt is 858.

Prompt to cancel call blocking - The prompt, spoken from within the extension user menu when call blocking is set, that informs the extension user of the digit to enter to cancel call blocking. The standard prompt is 859.

Prompt to set call screening - The prompt, spoken from within the extension user menu, that informs the extension user of the digit to enter to set call screening. The standard prompt is 860.

Prompt to cancel call screening - The prompt, spoken from within the extension user menu when call screening is set, that informs the extension user of the digit to enter to cancel call screening. The standard prompt is 861.

Prompt to forward calls - The prompt, spoken from within the extension user menu, that informs the extension user of the digit to enter to set call forwarding. The standard prompt is 862.

Prompt to cancel remote call forwarding - The prompt, spoken from within the extension user menu when call forwarding is set, that informs the extension user of the digit to enter to cancel call forwarding. The standard prompt is 863.

Prompt to change password - The prompt, spoken from within the extension user menu, that informs the extension user of the digit to enter to change the extension password. The standard prompt is 864.

Prompt to access mailbox menu - The prompt, spoken from within the extension user menu, that informs the extension user of the digit to enter to access the mailbox menu. The standard prompt is 865.

Prompt to exit from extension menu - The prompt, spoken from within the extension user menu, that informs the extension user of the digit to enter to exit the extension menu. The standard prompt is 866.

Prompt to set extended call blocking - The prompt, spoken from within the extension user menu, that informs the extension user of the digit to enter to set extended call blocking after he or she has set call blocking. The standard prompt is 867.

Prompt to request remote call forwarding number - The prompt, spoken from within the extension user menu, that asks the extension user to enter the extension to which calls should be forwarded. The standard prompt is 868.

Prompt to wa[illegible]f circular forwarding loop - Spoken if the extension user has chosen to forward calls [illegible] extension which has call forwarding set in such a way as would create a forwarding lo[illegible]ack to the user's extension. The system will not allow call forwarding to be set in this case. The [illegible]tandard prompt is 869.

Prompt to request new password - The prompt that is spoken from within the extension user menu if the extension user has chosen to change the extension password. The standard prompt is 871.

Prompt request confirmation or change - The prompt that is spoken after reciting a new password, requesting the user to confirm that the new password is correct. The standard prompt is 871.

Prompt to confirm password has been set - Spoken after the user confirms a newly entered password to inform the extension user that the extension password has been set. The standard prompt is 872.

Wait for caller entry (secs) - The time, in seconds, that this XCLASS waits for the caller to make an entry. This time begins after a prompt is spoken or after the last digit is pressed. This parameter should be kept in the 3-5 second range to avoid long delays by AP3dot2. Allowable inputs are 0-99 seconds.

Repeat prompts if no entry - The number of times from 0-9 AP3dot2 will repeat prompts if no entry is made by the caller. This only affects prompts associated with the XCLASS block.

Retries allowed if invalid entry - The number of times from 0-99 AP3dot2 will allow the caller to re-enter his/her password if an invalid password was entered. This also applies if a caller makes an invalid entry while recording/editing a message.

Digit to leave message - This is the digit a caller enters to indicate they wish to leave a message. Allowable digits are 0-9, but cannot be the same as Hold digit.

Digit to accept a call - This is the digit a called party enters to indicate they will accept the call. Allowable digits are 0-9.

Digit to redirect a call - This is the digit a called party enters to indicate they wish to redirect the call. Allowable digits are 0-9.

Digit to hold - This is the digit the caller enters when he or she elects to hold for an extension. Allowable digits are 0-9, but cannot be the same as the digit to leave a message. This digit is active after a call transfer that results in a busy condition.

Hold interval before trying again (sec.) - This is the number of seconds, from 1-99, AP3dot2 waits when a caller elects to hold before re-trying the extension.

Dial to place caller on PBX hold - This is a dialing string which is used by AP3dot2 to signal the telephone system to put a caller on "PBX hold." It is used when the caller chooses to hold for a busy extension. This may be used to provide music on hold (assuming that the telephone system provides this feature). When the caller chooses to hold, AP3dot2 will dial this string (normally a flash-hook, followed by a feature code) and remain off hook to prevent another call from ringing into the port. If this parameter is left blank, AP3dot2 will hold the caller without attempting to place the call on PBX hold.

Dial to retrieve caller from PBX hold - This is the dialing string required to retrieve a call which has been placed on PBX hold (see above). This normally consists of a flash-hook, followed by a feature code.

Dial Prefix - This is the dialing prefix to transfer a call and is dependent upon the switch that AP3dot2 will be used with. In most cases it should be set to &, (flash-hook followed by a one second pause). Valid dialing characters are **1234567890*#abcd&;,WKX** where:

& is flash hook
; is pause for dial tone
, is pause for one second
W is wait for answer before continuing to dial
K is dial the current KEY value
X is dial the dialing string of the EXT block last used
123...#abcd are DTMF digits

Dial Suffix - This is the suffix that will be added to the actual extension number when a transfer is made. Again, this parameter depends on the switch that AP3dot2 is used with. Allowable inputs are identical to those of the *Dial prefix* parameter.

Ring cadence, Busy cadence, Fast Busy cadence - These parameters represent the maximum/minimum intervals of sound and silence (cadence) of the respective call progress signals. Their settings will depend on the particular phone system. If the cadence values of the phone system are unknown, they can be measured using the AP3dot2 CP monitor (see "Keyboard and Editing Commands," page 52). The syntax for setting these parameters is as follows:

sound-high/sound-low silence-high/silence-low

All values are in 10 millisecond increments (100 = 1 second).
Example: Ring cadence: 210/205 300/290

This specifies that AP3dot2 will recognize a regular cadence as a ring signal if the duration of sound is in the range from 2.10 seconds to 2.05 seconds and the silence interval is in the range from 3.00 seconds to 2.90 seconds.

Note: These parameters are used **only** when AP3dot2 is transferring a call (transfer supervision) and not when an incoming call is presented to AP3dot2.

Example: This is an excerpt from an AP3dot2 session, using the CP monitor.

0:>CP ALL	Entered at keyboard.
0:>All call progress monitors are ON.	
0:> 4) 1:[DAY] Incoming call. Time 12:07. Mode:1 AUTOMATIC	*Call on port 4*
0:> 4) 1:[MAIN] Caller entered 150	*Caller tries extension 150*
0:> 4) X1:[Doe, John] EXT transfer. Class = X1:[XCLASS 1]	*Class of service used is XCLASS 1*
0:> 4) CP: Dialing: &,150	*AP3dot2 dials flash hook, pause, 150*
0:> 4) CP: Silence:118 Ignored	*First event is ignored, if not a cadence signal*
0:> 4) CP: Sound:57	
0:> 4) CP: Silence:43	
0:> 4) CP: Busy Signal	*Sound and silence are within Busy cadence value.*
0:> 4) CP: Sound:57	
0:> 4) CP: Silence:43	
0:> 4) CP: Busy Signal	*AP3dot2 waits for two consecutive busy signals.*
0:> 4) CP: Busy Detected	
0:> 4) CP: Dialing: &,	*Dial to abort Busy.*
0:> 4) 0:[Doe, John] Busy	
0:> 4) 1:[MAIN] Caller entered 120	*Caller tries another extension.*
0:> 4) X1:[Foster, Mary] EXT transfer. Class = X1:[OFF-PREM]	*Different class of service*
0:> 4) CP: Dialing: &,9	
0:> 4) CP: Waiting for dial tone	*A ';' character in dialing string*
0:> 4) CP: Dial tone detected	
0:> 4) CP: 5278888	*Dials remainder of the string*
0:> 4) CP: Sound: 28	
0:> 4) CP: Silence:396	
0:> 4) CP: Sound:208	
0:> 4) CP: Ring Signal	*Sound and silence are within Ring cadence values*
0:> 4) CP: Silence:392	
0:> 4) CP: Sound:208	
0:> 4) CP: Ring Signal	
0:> 4) CP: Silence:364	
0:> 4) CP: Sound:11	*Break in cadence causes answer detect*
0:> 4) CP: Answer detected	

```
0:> 4) 0:[Foster, Mary] Called party answered
```

Table 2-3. AP3dot2 Session Excerpt

Cadence filter - This sets the minimum duration of a sound or silence event which will be sensed by AP3dot2 when it is sensing call progress signals. It is set in 10 millisecond increments (100 = 1 second). AP3dot2 will ignore all events which are shorter than the *Cadence filter*. This is used to filter out "noise" which may be present on tie lines or off premise lines. The CP monitor (see "Keyboard and Editing Commands," page 52) can be used to determine if noise is present on the lines.

Dial to abort No Answer, Busy, Fast Busy, Error - These are the dialing sequences required to abort a failed call transfer. These normally consist of flash hook and DTMF feature codes required by the phone system to reconnect AP3dot2 with the calling party.

Dial to abort Answer (if screened call is rejected) - This is the dialing sequence required to disconnect the called party and return to the calling party, when a screened call is rejected. **Caution**: Some PBX systems do not allow this to occur unless the called party hangs up. This should be thoroughly tested. If this is the case, it can be accommodated by prompting the called party (*Prompt to announce a screened call to the called party*) to either press 1 to accept the call or hang up to reject it.

Pointers:

***m*:<MENU> = *m*:[*MENU block*]** - Normally, when a transfer to an extension results in a busy or ring no answer condition, the caller is given choices such as *"Press 1 to leave a message, 2 to hold, or enter another extension number."* This pointer determines the MENU block which will be used if the caller enters another extension number. This MENU should be set up to search, based on ENTRY.

***m*:<NO-ENTRY> = *mg*:[*target block*]** - This is the block to go to if no entry is made within the XCLASS block when prompted.

***m*:<MSG>= *mg*:[*target block*]** - This causes AP3dot2 to go directly to the designated block if the caller chooses to leave a message for this extension. This is usually an MCLASS block, which routes the caller to a mailbox. However, it may be a DIAL block or EXT block if messages are to be taken by a secretary or separate voice mail system. AP3dot2 will ignore this pointer if the <MSG> pointer is set on the EXT block.

***m*:<QUE-FULL> = *mg*:[*target block*]** - The next block to go to if the number of callers allowed to hold in queue is exceeded. (See *Max callers allowed to hold in queue* parameter in the ROOT block.) AP3dot2 will ignore this pointer if the <QUE-FULL> pointer is set on the EXT block.

***m*:<*caller entry*> = *mg*:[*target block*]** - The next block to go to if the caller enters a particular value after a failed transfer.
Example: 0:<9> = 0:[HELP] will route a caller to a block called 'HELP' if they dial '9' after a failed transfer.

Mailbox Block (MBX) - *Standard*

The MBX block is used to implement the Voice Mail messaging features on AP3dot2. It controls the operating characteristics specific to an individual mailbox, unlike an MCLASS (Mailbox class of service) block which applies to a number of mailboxes.

The MBX (Mailbox) block enables you to create a Voice Mail Box which allows public callers and other users to leave private voice messages. The MBX block defines information specific to a mailbox. These attributes include Administrative capability, Message Waiting Indication, message playback order, and Message Alert message notification. The MBX block must be associated with a Message Class of Service (MCLASS).

A public caller may record a message after hearing a personal greeting from the Mailbox User and choose to review, re-record, send, or erase their message. A Mailbox User has complete message editing capabilities and other privileges including a personal greeting, personal name, mailbox password, and Message Alert.

Pointers are used to assign the MBX a class of service and to provide the flexibility to handle messaging differently for various modes of operation (typically at different times of the day).

```
KEY value (Mailbox number): ____
User password: ____ (xxxx) 8 digits max
Announcement only mailbox?: ____ (N)
Mailbox administrator?: ____ (N)
Playback messages in LIFO order?: ____ (Y)
Set MWI?: ____ (N)
Extension Dial (for MWI): _________ ( ) 16 digits max.
Message Alert on?: ____ (N)
Message Alert dial: _____________ ( ) 24 digits max.
Message Alert time 0: _____ (IMMEDIATE)
Message Alert time 1: _____ ( )
Message Alert time 2: _____ ( )
Message Alert time 3: _____ ( )
m:<MCLASS> = g:[MCLASS block] (Required)
```

Figure 2-8. Mailbox Block Screen

KEY value (Mailbox number) - The number representing this mailbox. It may not be the same as the KEY value of any other LIST or MBX in the same mailbox group (MGROUP).

User password - Allows the mailbox password to be changed to the default digits specified by **Default password** in the CONFIG Block or removed completely. Inputs are "DEFAULT" or "NONE".

Announcement only mailbox? - A 'Y' in this field designates this as an announcement only mailbox. When a public caller accesses this mailbox, it will play the greeting message (announcement) and exit immediately without recording a message. This may be used for bulletin boards and other simple audiotex applications. AP3dot2 will exit the mailbox with the <PUB-NOMSG> condition (see MCLASS pointers).

Mailbox administrator? - A 'Y' in this field gives the mailbox user the following Mailbox Administration capabilities:

1. Create/Delete mailboxes
2. Delete mailbox distribution lists
3. Record mailbox names/greetings
4. Set mailbox passwords to the default value
5. Set Message Alert for mailboxes

Inputs are 'Y' for yes or 'N' for no.

Playback messages in LIFO order?- If 'Y' messages are reviewed in "Last In First Out" order. If 'N' messages are reviewed in "First In Last Out" order.

Set MWI? - A 'Y' in this parameter signifies that the mailbox has Message Waiting Indicators. Inputs are 'Y' for yes or 'N' for no. Dialing strings for **MWI on** and **MWI off** must also be programmed in the associated MCLASS.

Extension dial (for MWI) - The extension number that will be used to activate a Message Waiting Indicator for this mailbox. This must be set to a valid value if the character 'X' is used in the *Dial to set MWI on* or *Dial to set MWI off* parameters in the MCLASS (mailbox class of service) block assigned to this mailbox. It must also be set if the optional Switch Integration Module (SIM) is used to activate MWIs.

Message Alert on? - A 'Y' in this field enables Message Alert capabilities for this mailbox also allowing the mailbox user to control Message Alert from any Touch Tone telephone. An 'N' restricts the Message Alert feature completely.

Message Alert dial - The number AP3dot2 will dial when making a Message Alert call for this mailbox. It may be an extension number or an off premise number. This number may also be changed by the mailbox user via Touch Tone telephone. When set via keyboard, the valid dialing characters are **1234567890*#abcd&;,WKX** where:

& is flash hook
; is pause for dial tone
, is pause for one second
W is wait for answer before continuing to dial
K is dial the current KEY value
X is dial the dialing string of the EXT block last used
012...9#abcd are the DTMF digits.

Message Alert time 0 - The time of day (in military format) AP3dot2 will make an Alert call if new messages are received. Allowable inputs are any hour of the day and 99:99 or "Immediate" for Immediate Alert of new messages. This time may also be specified by the mailbox user via Touchtone telephone.

Message time 1, time 2, time 3 - The subsequent times of day AP3dot2 will make Alert calls. Not all times must be specified, just as many as desired.
Note: If **Alert time 0** is immediate, subsequent Alert times cannot be specified. These times may

also be changed by the mailbox user via Touch Tone telephone.

Pointers:

***m*:<MCLASS>= *g*:[*MCLASS block*]** - The name of the mailbox class of service which defines necessary characteristics for this mailbox. The named MCLASS must exist in the same mailbox group.

Distribution List Block (LIST) - *Standard*

A LIST is a special type of mailbox block which is used to distribute copies of a message to a predetermined list of mailboxes. It has a special pointer which is used to designate the mailboxes which are <MEMBER>s of the list. When a message is addressed to a LIST mailbox, a copy of it is sent to each of the <MEMBER> mailboxes. Other LIST mailboxes may be members of this list, thereby creating "nested" lists.

The Mailbox class of service block (MCLASS) is used to specify information related to one or several mailboxes within a mailbox group (MGROUP). This information includes the maximum length mailbox number, the number of days messages will be retained, the number of days unused mailboxes will be retained, Message Waiting Indication (MWI) dialing codes, Message Alert, and other parameters.

```
KEY value (Mailbox number): ____
User password to change name, greeting, etc.: __ (xxx) 8 digits max
m:<MCLASS> = g:[MCLASS block]  (Required)
m:<MEMBER> = g:[member MBX or LIST block]  (Required)
```

Figure 2-9. Distribution List Block Screen

KEY value (Mailbox number) - The number representing this LIST mailbox. It may not be the same as the KEY value of any other LIST or MBX in the same mailbox group (MGROUP).

User password to change name, greeting, etc. - Allows the mailbox password to be changed to the default digits specified by **Default password** in the CONFIG Block or removed completely. Inputs are "DEFAULT" or "NONE".

Pointers:

***m*:<MCLASS>= *g*:[*MCLASS block*]** - The name of the mailbox class of service which defines operating characteristics for this mailbox. The named MCLASS must exist in the same MGROUP.

***m*:<MEMBER>= *g*:[*list member MBX or LIST block*]** - Identifies a mailbox which should receive a copy of messages which are sent to this LIST. The number of *<MEMBER>* pointers is not limited. This may also point to another LIST block, thereby creating "nested" LISTs.

Mailbox Class Of Service Block (MCLASS) - *Standard*

The Mailbox class of service block (MCLASS) is used to specify information related to one or several mailboxes within a mailbox group (MGROUP). This information includes the maximum length mailbox number, the number of days messages will be retained, the number of days unused mailboxes will be retained, Message Waiting Indication (MWI) dialing codes, Message Alert, and other parameters.

```
Mailbox retention (days): ____ (30)
Message retention (days): ____ (10)
Max digits in a mailbox KEY: ____ (4)
Max message length (sec.): ____ (180)
Silence time-out when recording message: ____ (5)
Repeat prompts (if no entry): ____ (1)
Retries allowed (if invalid entry): ____ (2)
Wait for caller entry (secs): ____ (3)
Min. DTMF duration during message recording: ____ (5)
Min. DTMF duration during message playback: ____ (7)
DTMF message playback cutout period: ____ (5)
Admin digit: ____ (#)
ESCape digit: ____ (*)
Dial to set MWI on: ________ () 16 digits max
Dial to set MWI off: ________ () 16 digits max
Message Alert dial prefix: ________ () 8 digits max
Message Alert dial suffix: ________ () 8 digits max
Message Alert rings: ____ (4)
Max Message Alert calls: ____ (8)
Message Alert no answer recall time (mins): ____ (15)
Message Alert busy recall time (mins): ____ (5)
Ring cadence: ___/___ ___/___ (110/100 300/280)
Busy cadence: ___/___ ___/___ (60/50 50/40)
Fast Busy cadence: ___/___ ___/___ (35/25 25/15)
Cadence filter: ____ (1)
```

Figure 2-10a. Mailbox Class of Service Block Screen, part 1

```
Prompt-00:____(800) Prompt-01:____(801) Prompt-02:____(802)
Prompt-03:____(803) Prompt-04:____(804) Prompt-05:____(805)
Prompt-06:____(806) Prompt-07:____(807) Prompt-08:____(808)
Prompt-09:____(809) Prompt-10:____(810) Prompt-11:____(811)
Prompt-12:____(812) Prompt-13:____(813) Prompt-14:____(814)
Prompt-15:____(815) Prompt-16:____(816) Prompt-17:____(817)
Prompt-18:____(818) Prompt-19:____(819) Prompt-20:____(820)
Prompt-21:____(821) Prompt-22:____(822) Prompt-23:____(823)
Prompt-24:____(824) Prompt-25:____(825) Prompt-26:____(826)
Prompt-27:____(827) Prompt-28:____(828) Prompt-29:____(829)
Prompt-30:____(830) Prompt-31:____(831) Prompt-32:____(832)
Prompt-33:____(833) Prompt-34:____(834) Prompt-35:____(835)
Prompt-36:____(836) Prompt-37:____(837) Prompt-38:____(838)
Prompt-39:____(839) Prompt-40:____(840) Prompt-41:____(841)
Prompt-42:____(842) Prompt-43:____(843) Prompt-44:____(844)
m:<PUB-MSG> = mg:[target block]          (Required)
m:<PUB-NOMSG> = mg:[target block]        (Required)
m:<PUB-ESC> = mg:[target block]          (Required)
m:<PUB-DTMF> = mg:[target block]         (Required)
m:<USER-EXIT> = mg:[target block]        (Required)
m:<ALERT> = g:[this MCLASS block]        (Required)
g:<TUTOR> = g:[tutorial MCLASS block]    (Optional)
```

Figure 2-10b. Mailbox Class of Service Block Screen, part 2

Mailbox retention (days) - Specifies the number of days from 1-999 an unused mailbox should be retained before being erased.

Message retention (days) - The number of days from 1-999 unread messages will remain before being erased. An individual message's retention will be reset to this value each time the message is reviewed.

Max digits in a mailbox KEY - The maximum number of digits allowed in a mailbox number. Allowable input are 1 to 10.
Note: User mailboxes may be variable lengths but not to exceed *Max digits in a mailbox KEY.*

Max message length - Maximum message length, from 1-999 seconds, that a caller can record.

Silence time-out when recording message - Number of allowable seconds of silence while recording before AP3dot2 terminates the message. Allowable inputs are 0-99 seconds. Recommended default is 5. If the caller remains silent this long while recording a message, AP3dot2 will terminate the record session and allow the caller to edit the message.

Repeat prompts (if no entry) - Number of times from 1 to 99 to repeat editing options after completion of the message. If the caller does not respond to the editing prompts after this number of attempts AP3dot2 will proceed to the next block specified by <no-entry>.

Retries allowed (if invalid entry) - This specifies the number of times from 0-99 a caller may re-enter his/her password if an invalid password was entered. This also applies if a caller makes an invalid entry while recording/editing a message.

Wait for caller entry - This is the number of seconds from 1-99 AP3dot2 waits for an entry during the message editing and message retrieval operations. The time begins at the end of any prompt that requests an entry from the caller. Upon entry of the first digit, the time is reset so that the caller has the full Wait Entry time to enter another digit.

Min. DTMF duration during message play back: - This parameter controls the sensitivity of the DTMF (Touch Tone) detectors **only** during voice message play back. The value represents the minimum time period (in hundredths of seconds) during which a tone must be valid in order to be accepted as a Caller entry. A lower value makes AP3dot2 more sensitive to DTMF tones. If callers experience difficulty interrupting voice message play back, the value should be reduced (minimum value is 4, which equals 40 milliseconds). If excessive "Talk Off" problems are experienced, the value should be increased. Talk Off occurs when a human voice simulates a DTMF tone.
Note: This parameter has no effect during message recording.

DTMF message playback cutout period - If, during message play back, the DTMF detector senses a tone, AP3dot2 will temporarily suspend play back for the time period specified by this parameter. If the tone remains valid during this time, it is considered to be a valid Caller entry and play back is stopped. If the tone becomes invalid while play back is temporarily suspended,

it is considered to be "Talk Off" and play back is resumed.
Note: This parameter has no effect during message recording.

Min. DTMF duration during message recording: - This parameter controls the sensitivity of the DTMF (Touchtone) detectors **only** during voice message recording. The value represents the minimum time period (in hundredths of seconds) during which a tone must be valid in order to be accepted as a Caller entry. A lower value makes AP3dot2 more sensitive to DTMF tones. If excessive "Talk Off" problems are experienced during recording operations, the value should be increased. Talk Off occurs when a human voice simulates a DTMF tone. If callers frequently experience difficulty in stopping recording (as evidenced by touch tones being included in the message recordings), this value should be reduced.
Note: This parameter has no effect during message play back.

Admin digit - The *Admin digit* controls the following functions when using a mailbox:

the mailbox public mode, if entered at any time prior to the end of recording a message, the message will be canceled, AP3dot2 will switch immediately to the user mode and a password will be requested for user access to the mailbox.

- When sending a message, recorded in the mailbox user mode, prefixing the mailbox number with the *Admin digit* will request delivery confirmation.
- If pressed twice in succession, while in the mailbox user opening menu, the *<TUTOR>* pointer will be used to switch to an alternate MCLASS block. This MCLASS block can be equipped with more verbose prompting to aid new voice mail users.

ESCape digit - The *ESCape digit* controls the following functions when using a mailbox:

- In the mailbox public mode, if entered while the mailbox greeting is being played or any time prior to the caller beginning to speak (make sound), the message is canceled and AP3dot2 exits the mailbox using the *<PUB-ESC>* pointer. If entered after the caller begins, it will terminate the recording (just as any other DTMF tone).
- Used to exit from the opening menu of the mailbox user mode. AP3dot2 will use the <USER-EXIT> pointer to determine where to go next.
- In the mailbox user mode, the *ESCape digit* is generally used as a "cancel" key to abort the current operation and return to the previous one.
  Note: *Admin digit* and *ESCape digit* should not be set to the same digit.

Dial to set MWI on, MWI off - These specify the feature code dialing strings necessary to turn Message Waiting Indicators On or Off. The letter 'K' is inserted in the dialing string at the point where AP3dot2 should dial the mailbox (KEY) number. For example, if the *Dial to set MWI on* parameter is set to ";#15K", AP3dot2 will go off hook, wait for dial tone and dial #15 followed by the appropriate mailbox number to turn the MWI on. If the extension number needed to light the MWI is different than the actual mailbox number, it may be specified by setting *Extension Dial (for MWI)* in the MBX block and putting the letter 'X' into the MWI dialing string.

If AP3dot2 is equipped with the Switch Integration Module (SIM) feature, the MWIs may be

operated through the SIM port by setting the *Dial to set MWI on* and *Dial to set MWI off* parameters to "SIM". Make sure that the *Extension dial (for MWI)* parameters in the MBX blocks are set to the proper station ID number.

If AP3dot2 is equipped with the Electronic Set Emulation feature, it may be necessary to send special **escape codes** to the PBX to operate the MWIs. The tilde ('~') character is used to send an ESC character to the voice card, indicating that the string that follows is a special control sequence. It may also be necessary for the port to remain on hook when sending these codes. If the first character of *Dial to set MWI on, MWI off* is 'H' AP3dot2 will not go off hook prior to "dialing" the string of characters.
Note: *Dial to set MWI off* should be left blank for phone systems which require MWIs to be turned off manually.

Message Alert dial prefix - This is the dialing prefix needed to make a Message Alert call. It is dependent upon the switch that AP3dot2 will be used with. In most cases it should be set to ';' (Wait for dial tone). Mailbox users who wish to be Alerted of messages at an off premise number would then specify via Touch Tone phone, the code to access an outside line followed by the number. Valid dialing characters are **1234567890*#abcd&;,WKX** where:

& is flash hook
; is pause for dial tone
, is pause for one second
W is wait for answer before continuing to dial
K is dial the current KEY value
X is dial the dialing string of the EXT block last used
0123...9#abcd are the DTMF digits

Message Alert dial suffix - This is the suffix that will be added to the actual number dialed when an Alert call is made. This parameter is normally set for 'W' (Wait for answer). Allowable inputs are identical to those of the *Message Alert dial prefix* parameter.

Message Alert rings - Specifies the number of rings AP3dot2 should wait when making a Message Alert call, before assuming the number is unanswered. Allowable inputs are 0-99 rings.

Max Message Alert calls - Used to set up the Message Alert feature, which notifies mailbox users of new messages received. *Message Alert Busy recall time* and *Message Alert no answer recall time* are set to the number of minutes (from 0-99) AP3dot2 should wait before trying another call to a busy or unanswered number. *Max Message Alert calls* sets the maximum number of calls (from 0-99) which will be made before giving up.

Message Alert no answer recall time - If a Message Alert call is unanswered, this controls the number of minutes AP3dot2 will wait before trying again. This will also be used if the call is answered, but the answering party does not enter the correct password to access the mailbox.

Message Alert busy recall time - If a Message Alert call results in a busy or fast busy signal, AP3dot2 will wait this number of minutes before trying again.

Ring cadence, Busy cadence, Fast Busy cadence - These parameters represent the

maximum/minimum intervals of sound and silence (cadence) of the respective call progress signals AP3dot2 will encounter when making Message Alert calls. Their settings will depend on the particular phone system. If the cadence values of the phone system are unknown, they can be measured using the AP3dot2 CP monitor (see "Keyboard and Editing Commands," page 52). The syntax for setting these parameters is as follows:

sound-high/sound-low silence-high/silence-low

All values are in 10 millisecond increments (100 = 1 second).
Example: Ring cadence: 210/205 300/290

This specifies that AP3dot2 will recognize a ring signal if the duration of sound is in the range from 2.10 seconds to 2.05 seconds and the silence interval is in the range from 3.00 seconds to 2.90 seconds.

Cadence filter - This sets the minimum duration of a sound or silence event which will be sensed by AP3dot2 when it is sensing call progress signals. It is set in 10 millisecond increments (100 = 1 second). AP3dot2 will ignore all events which are shorter than the *Cadence filter*. This is used to filter out "noise" which may be present on tie lines or off premise lines. The CP monitor (see "Keyboard and Editing Commands," page 52) can be used to determine if noise is present on the lines.

Prompt-00 through Prompt-45 - These are the prompts spoken to callers when they choose to leave a message. These are also used when a mailbox user retrieves messages. The default prompts (800 - 841) are pre-recorded and contain all the appropriate verbiage. If these prompts are to be re-recorded the new prompts should contain the identical information on a per prompt basis to ensure that the caller is prompted for the correct entries.

Pointers:
***m*:<PUB-MSG> = *mg*:[*target block*]** - The block to go to after the caller has recorded and sent a message.

***m*:<PUB-NOMSG> = *mg*:[*target block*]** - The block to go to if the caller did not leave a message.

***m*:<PUB-ESC> = *mg*:[*target block*]** - The block to go to if the caller presses the **ESCape digit** to escape from a mailbox (the escape digit may be pressed anytime before the recording tone). It is recommended that the named block be the initial MENU block. This allows the caller to return to the main options which may include dialing another extension.

***m*:<PUB-DTMF> = *mg*:[*target block*]** - Same as the above except not the ESCape digit.

***m*:<USER-EXIT> = *mg*:[*target block*]** - The block proceeded to if a mailbox user presses star (*) to exit from their mailbox. It is recommended that the named block be the initial MENU block to allow the user to return to the main options.

***m*:<ALERT> = *g*:[*this MCLASS block*]** - This is a special pointer which controls the modes (usually the time of day) during which AP3dot2 will make Message Alert calls. The target may be set **only** to this MCLASS block. However, the pointer may be set to be active only in selected

modes or mode 0 (which will be active at all times).
Example: On a system having a Day mode (1:) and Night mode (2:) it may be desirable to limit Message Alert calls to Mode 1: (daytime only). To do this, the <ALERT> pointer is set as follows (assume that the name of this MCLASS block is "MCLASS 1"):

1:<ALERT> = M1:[MCLASS 1]

Since the pointer is active only in mode "1:," Message Alert calls will not be made during mode "2:". If messages are left at night, the Message Alert calls will be delayed until AP3dot2 switches back to the Day mode.

To make Message Alert active at all times the pointer is set to mode "0:":

0:<ALERT> = M1:[MCLASS 1]

To make Message Alert active during modes "3:" and "5:", two pointers are set:

3:<ALERT> = M1:[MCLASS 1]
5:<ALERT> = M1:[MCLASS 1]

***m*:<TUTOR> = *g*:[*tutorial MCLASS block*]** - This points to an alternate MCLASS block which contains tutorial prompting for inexperienced users. If this is set, it may be activated by the subscriber pressing the *Admin digit* twice in succession (normally "##") in the opening menu of his or her mailbox. The alternate MCLASS will remain in effect for the duration of the mailbox session.
Note: The *<TUTOR>* pointer may also be used to provide prompting in an alternate language.

AMC Class Block (ACLASS) - *Standard*

This provides a "class of service" for AMC messages played by a MENU block. It controls the prompting and other parameters used when recording and playing back AMC messages. The ACLASS (Announcement Message Class) block is used in conjunction with a MENU block to create an Announcement Message Center for disseminating information. The ACLASS defines necessary information about a group of AMC messages. This information includes the allowed length of the message and the number of days it will be retained. A typical application of the Announcement Message Center is a Service Information Center at an automobile repair shop. In this application, the caller is prompted in a MENU block to input his/her home phone number to identify the car being serviced. The associated AMC group (AGROUP) would then return a message informing the caller of the status of their car, e.g., "I'm sorry Mr. Jones, your car is not ready yet. It should be done the latter part of this week." Another application would be in a community college, where the caller entering a course number would hear a description of the subject matter covered in the course.

AMC messages may be up to 15 minutes long and can easily be added or changed by an authorized person calling from any Touchtone phone.

```
Max message length (sec.): ____ (180)
Message retention (days): ____ (10)
Max message plays before erasing: ____ (0)
Wild card digit in message KEY: ____ (#)
Admin password: ____ (0000)
Digit to replay message: ____ ( )
Prompt giving option to replay message: ____ (000)
Prompt to indicate message disk is full: ____ (000)
```

Figure 2-11. AMC Class Block Screen

Max message length - The maximum allowable length in seconds an AMC message may be. Allowable inputs are 1-999 seconds.

Message retention - The number of days, from 1-999, AP3dot2 will retain a message, if it is not played. This is updated each time a message is played.

Max message plays before erasing - The maximum number of times from 1-999 an AMC message will be played before being automatically erased. If set to zero, there is no limit on the number of times played.

Wild card digit in message KEY - The digit which may be used in AMC administration to identify a message by a series of numbers.
Example: Callers who press 500 through 599 when prompted by the AMC MENU should hear the same message. If **Wild card digit** is the pound sign (#), this means the message must be recorded through AMC administration and assigned a record number of "5##".

Admin password - The string of digits dialed to record a message into the AMC. When dialing the administrative password it must be preceded by the *Admin digit* (specified in the MENU

block), plus the message number you wish to edit. The length of the password may be 1 to 8 digits.

Digit to replay message - (optional) The digit which may be pressed by the caller to hear a replay of the AMC message. If this parameter is left blank, the caller will not be given the option of hearing the message again.

Prompt giving option to replay message - (optional) A prompt, after the AMC message has played to completion, which instructs the caller to dial the *Digit to replay message* to hear the message again. Valid entries are 001-849 with 000 indicating "say nothing." This prompt will not be played if "digit to replay message" is blank.

Prompt to indicate message disk is full - (optional) A prompt, which will be played when the message storage unit is unable to record an AMC message of the *Max message length*.

Configuration Block

The Configuration Block contains parameters that affect the whole system. It also displays the software release, version number, the authorized number of ports, message storage hours, and options. Its parameters may be edited using the EDIT command or listed using the LIST command, like any other block (see "Keyboard and Editing Commands," page 52). The Configuration Block is labeled [CONFIG]. The CONFIG block always exists on the AP3dot2 disk and cannot be created or deleted. It can be edited from any mode or group.

Example: 0:>

0:>list config

```
RELEASE: 3.3  VERSION: 3  S/N: 123456-DEMO  DATE: 08/07/1992
Total RUN Time (Hours): 61.3          Total Calls Processed: 31
RUN Time Remaining (Hours): 2098.6
Max. Ports: 24                        Max. Message Storage: 24

Options: Database search, E-Set Emulation, ISSI,
NOTE: '*' indicates system reset is required for changes to take effect.

*Flash hook duration: (60)
*Min. incoming ring on duration: (20)
*Min. incoming ring off duration: (50)
Daily maintenance time: (03:00)
System administration password: (0000)
Default password: (0000)
Min. DTMF duration during recording: (7)
Min. DTMF duration during playback: (4)
DTMF playback cutout period: (1)
*Min. loop current off duration: (30)
*Dialing DTMF tone duration: (8)
*Dialing DTMF inter-digit time: (8)
Message Alert ports: (NNNNNNNNNNN)
MWI ports: (NNNNNNNNNNN)
Refresh MWIs at maintenance time? (N)
*Off Hook delay: (30)
Clock adjust (sec. per day): (10)
```

Figure 2-12a. Config Block Screen, part 1

```
*Max. blocks: (5000)
*Max. messages: (5000)
Use drive A:\ for secondary prompt storage?: (N)
SIM date COMport: (2)          (Optional with SIM module)
SIM Baud rate: (1200)          (Optional with SIM module)
SIM parity type: (Even)        (Optional with SIM module)
SIM word length: (7)           (Optional with SIM module)
SIM stop bits: (1)             (Optional with SIM module)
SIM station ID length: 0       (Optional with SIM module)
SIM modem init string:         (Optional with SIM module)
SIM modem link up string:      (Optional with SIM module)
SIM ID for port: 1:            (Optional with SIM module)
SIM ID for port: 2:            (Optional with SIM module)
...
SIM ID for port: 12:           (Optional with SIM module)
LogOn for port 1:
LogOn for port 2:
...
LogOn for port 12:
```

Figure 2-12b. Config Block Screen, part 2

DATE: - The date of AP3dot2 software serialization.

Total RUN Time (Hours): - The length of time (in hours) that the system has been in operation.

Total Calls Processed: - The total number of calls processed since the system has been in operation.

Flash hook duration: - This parameter sets the length of the flash hook. It is specified in hundredths of seconds. A setting of 50 means 0.5 seconds or 500 milliseconds. The default value is 60. If this value is too low, the switch will not recognize the flash hook. If it is too low, the switch will interpret a flash hook as a disconnect.

Min. incoming ring on duration, Min. incoming ring off duration: - These set the qualifications for ring signal of an **incoming** call to AP3dot2. They are set in hundredths of seconds. The *on duration* is the minimum time a ring signal must be present in order to be recognized as valid. The *off duration* is the minimum time the signal must be off between rings. The default values are 20 on ($^2/_{10}$ sec.) and 50 off ($^1/_2$ sec.).

Daily maintenance time: - This is the time designated for AP3dot2 to perform routine daily maintenance. Daily Maintenance will save the system tables and perform message purging (Voice Mail or AMC features). Inputs must be specified in 24-hour time. The default is 0300 (3:00 AM).

System administration password: - This is the System Administration Password which is used to access the On-Line administration functions. The default is 0000.

Default password: - The digits used as default for mailbox pass codes. Input may be from 1 to 8 digits. When a mailbox or extension password is reset, this the value that will be used. The default is 0000.

Min. DTMF duration during recording: - This parameter controls the sensitivity of the DTMF (Touchtone) detectors **only** during recording of voice prompts and AMC messages. The value represents the minimum time period (in hundredths of seconds) during which a tone must be valid in order to be accepted as a caller entry. A lower value makes AP3dot2 more sensitive to DTMF tones. If excessive "Talk Off" problems are experienced during recording operations, the value should be increased. Talk Off occurs when a human voice simulates a DTMF tone. If users frequently experience difficulty in stopping recording (as evidenced by touch tones being included in the recordings), this value should be reduced. This parameter is expressed in hundredths of a second. The default is 7 (70 ms).
Note: Drastic changes of this value are not recommended. A small change can make a significant difference. This parameter has no effect during playback.

Min. DTMF duration during prompt playback: - This parameter controls the sensitivity of the DTMF (Touchtone) detectors during voice prompt playback and while waiting for DTMF entries. The value represents the minimum time period (in hundredths of seconds) during which a tone must be valid in order to be accepted as an entry. A lower value makes AP3dot2 more

sensitive to DTMF tones. If callers experience difficulty interrupting voice prompts, the value should be reduced (minimum value is 4, which equals 40 milliseconds). If excessive "Talk Off" problems are experienced, the value should be increased or the prompt should be re-recorded. Talk Off occurs when a human voice simulates a DTMF tone. This value is expressed in hundredths of a second. The default is 4 (40 ms).
Note: Drastic changes of this value are not recommended. A small change can make a significant difference.

DTMF playback cutout period - If, during prompt playback, the DTMF detector senses a tone, AP3dot2 will temporarily suspend playback for the time period specified by this parameter. If the tone remains valid during this time, it is considered to be a valid caller entry and playback is stopped. If the tone becomes invalid while playback is temporarily suspended, it is considered to be "Talk Off" and playback is resumed. This value is expressed in hundredths of a second. The default is 1 (10 ms).
Note: This parameter has no effect during recording.

Min. loop current off duration: - This sets the minimum duration of a loop current interruption which will be sensed by the loop current detector in AP3dot2. A loop current interruption is normally used to signal that the calling party has disconnected (wink signal). This value is expressed in hundredths of a second. The default is 3 (30 ms).

Dialing DTMF tone duration, Dialing DTMF inter-digit time: - These parameters control the duration of tones dialed by AP3dot2. *Tone duration* sets the duration of each tone dialed. *Inter-digit time* sets the time between dialed tones. This value is expressed in hundredths of a second. The default is 8 (80 ms).

Message Alert ports: - This is used to specify which ports will make outcalls for Message Alert notification. To allow outcalls specify 'Y' for the desired port or 'N' to restrict outcalling.
Note: It is normally preferable to use the higher numbered ports for outcalls, as they receive less incoming call traffic. Since AP3dot2 is serviced by loop start phone lines, it employs anti-collision logic which prevents a port from making an outcall if the port ahead of it (the next lower port number) is off hook. This assumes that the phone lines are arranged in a linear hunt group, starting at
port 1.

MWI ports: - This is used to specify which ports will make outcalls to activate MWIs (Message Waiting Indicators). To allow outcalls, specify 'Y' for the desired port or 'N' to restrict outcalling.
Note: Many switches require MWIs to be set and cleared by the same station. To avoid problems, it is advisable to allow only one port to set and clear MWIs.
Note: It is preferable to use the higher numbered ports for outcalls, as they receive less incoming call traffic. AP3dot2 employs anti-collision logic which prevents a port from making an outcall if the port ahead of it (the next lower port number) is off hook. This assumes that the phone lines are arranged in a linear hunt group, starting at port 1.

Refresh MWIs at maintenance time? - If this parameter is set to 'Y', the system will reinitialize the MWIs at the system maintenance time. The default is 'N'.

Off hook delay: - When AP3dot2 goes off hook in response to an incoming call, the telephone system may not establish an audio connection with the caller immediately. If AP3dot2 began speaking the first prompt immediately after going off hook, the caller might not hear the first portion of it. The *Off hook delay* parameter causes AP3dot2 to delay the specified period of time after going off hook, before continuing to process the call. The setting is in 10 millisecond increments (i.e., 50 = 500 milliseconds). The default is 30 (300 ms).
Note: The AP3dot2 will ignore all DTMF tones during the delay period.

Clock adjust: - This adjusts the accuracy of the real time clock. It adds the number of seconds specified in *Clock adjust* each day. This may be set to a negative number (subtract seconds) by putting a (-) sign in front of the number of seconds specified. The default is 0.

Max blocks: - The maximum number of blocks and pointers (from 100 to 9999) allowed in the Block table.

Max messages: - The maximum number of messages (Voice Mail, AMC, Confirmation) (from 100 to 9999) allowed on the AP3dot2 system. Refer to the *Top Message* parameter in the STATUS report to determine the current highest message number.

Use drive A:\ for secondary prompt storage?: - This parameter will appear only if primary prompt storage is on the hard disk. If this parameter is 'Y', the diskette drive will be searched when loading prompts. The default is 'N'.

SIM data COMport: - The AP3dot2 serial data port used to communicate with the phone system. This is normally set to 2 (COM2).

SIM baud rate: - The data rate at which the SIM port operates. The default is 1200. Valid values are 110-9100.

SIM parity type: - This is the name of the error detection technique used by the SIM port. The default is 'EVEN'. Valid values are 'NONE', 'EVEN', and 'ODD'.

SIM stop bits: - The number of stop bits used between characters by the SIM port. The default is 1. Valid values are 1 or 2.

Note: Baud rate, parity type, and stop bits should be set to match the analogous settings on the data providing switch.

SIM station ID length: - The length of station ID strings in the SIM data packets. Normally this is 7 digits.

SIM MODEM init string: - This is used only when a MODEM is used to implement the SIM data link to the phone system. It is an ASCII command string, sent by AP3dot2 to the MODEM, which instructs it to perform its initialization procedure. This string is sent on system startup. The default is blank. For a list of valid strings, consult your modem user's guide.

SIM MODEM link up string: - This is used only when a MODEM is used to implement the

SIM data link to the phone system. It is an ASCII command string, sent by AP3dot2 to the MODEM, to establish or re- establish connection to the remote MODEM in the event the connection is broken. This is normally a dialing command. The default is blank. For a list of valid strings, consult your modem user's guide.

SIM ID for port 1 through SIM ID for port 32: - When a message packet is received at the SIM data port, it includes a number which identifies the AP3dot2 port for which the message is intended. In the SMDI protocol this is known as the *message desk terminal number*. These parameters are used to set up a unique ID number for each AP3dot2 port. The default is blank.

Schedule Table (S-TABLE)

The **S-TABLE** or **Schedule Table** determines when AP3dot2 will automatically change **Modes**. The occurrence of these transitions may be based on Port number, Date or Day of Week, and Time of Day. The S-TABLE contains one record for each scheduled transition. This automatic selection of Modes may be manually overridden, via Touch Tone phone, using the SET CURRENT MODE function in **ON-LINE ADMINISTRATION**.

AP3dot2 selects a **Mode** from this schedule based on an Order of Precedence. **S-TABLE** records which select the **Mode** based on **Port** number take precedence over those based on **Date**. **Date** takes precedence over **Day of Week (DOW)**. **Time** is at the bottom of the order.

Example:

0:>list schedule

Port	Date	DOW	Time	Mode
00	12/25	0	8:00	02
00	00/00	2	8:00	01
00	00/00	2	17:00	02
00	00/00	3	8:00	01
00	00/00	3	17:00	02
00	00/00	4	8:00	01
00	00/00	4	17:00	02
00	00/00	5	8:00	01
00	00/00	5	17:00	02
00	00/00	6	8:00	01
00	00/00	6	17:00	02

Figure 2-13. S-Table Screen

In the example, the **S-TABLE** is set up to switch to **Mode #1** at 8:00 A.M. on Monday through Friday (**DOW** = 2 through **DOW** = 6) and switch to **Mode #2** at 17:00 (5:00 P.M.) on each of those days. This would require a total of ten entries (transitions) in the **S-TABLE**. If an additional entry is made which selects **Mode #2** when **Date** = 12/25, it will take precedence over the other records. In other words, AP3dot2 will switch to **Mode #2** on December 25, regardless of what Day of Week it happens to be.

Each S-TABLE record contains the following fields:

Port:

The port number (1 through 16) sets a Mode change for a particular Port. If there are no other records entered in the S-TABLE for this Port, it will run the specified Mode continuously. If this field is left blank or set to 0, this record will be used by all ports which do not have specific Port records.

Date:
Month and day of month (mm/dd) when the change of Mode will occur. If a Date is entered in this field, no option will be given to make an entry in the DOW (Day of Week) field. This record will take a higher order of precedence over records based on DOW only on the date specified. Therefore, to guarantee a particular Mode setting over a three day period, a Date record should be created for each day of that period.

DOW:
Day of Week when a **Mode** change is to occur (Sunday=1, Saturday=7). If no time is specified, the **Mode** will run for the entire day. Note in the example above there are no records specified for Sunday (DOW=1) or Saturday (DOW=7). This indicates that there are no required mode changes for the weekend, therefore AP3dot2 will continue operation in Mode #2 as specified for Friday (DOW 6) until the next Day Of Week scheduled, Monday (DOW=2).

Time:
The Hour and Minute when a change in **Mode** should occur. The Hour must be specified in 24 Hr. format (i.e., 1:30 P.M. is entered as 13:30).

Mode:
The **Mode** Number, from 1 to 99. This must be the number of a **Mode** which has been set up in the Block Table (**B-TABLE**).

Editing

To display the current **S-TABLE** records, use the "List Schedule" command. To edit the **S-TABLE**, use the "Edit Schedule" command.

To advance to the next field in a record, press the "Return" or "Enter" key. To back up to a previous field, use the backspace key.

To create a new record, enter the Port, Date or DOW, Time and Mode fields as desired. AP3dot2 will reply with "Record Created."

To delete an existing record, create a new record with the Port, Date or DOW and Time exactly as it appears in the record to be deleted, then set the Mode to zero. AP3dot2 will reply with "Record Deleted."

To change the Mode of an existing record, create a new record with the Port, Date or DOW and Time exactly as it appears in the record, then the Mode to the desired number. AP3dot2 will reply with "Record Changed."

The changes made to the **S-TABLE** will take place immediately. However, to make the changes permanent you must use the "Save S" command.

Keyboard and Editing Commands

On screen administration allows you to manipulate and configure AP3dot2 uniquely for your application. This can be done by connecting a compatible keyboard and monochrome monitor to the AP3dot2 system, or accessing the system via MODEM. The AP3dot2 software is comprised of three major components: the Block Table (**B-TABLE**), **CONFIG** Block, and Schedule Table (**S-TABLE**).

Editing the Blocks

The Block Table consists of multiple blocks which control the operation of AP3dot2 in various modes. There are several commands used to manipulate these building blocks.

To edit a block, you must first "log on" to the appropriate mode or group. To log on to a mode, enter the mode number, followed by a colon. To edit a block in a group, log on to the group by typing the class (X for extensions, M for mailboxes, A for AMCs), followed by the group number and a colon, then press enter.

Examples: 12:[*Enter*] - logs on to mode 12.
M1:[*Enter*] logs on to mailbox group 1.

To display a particular block and its parameters use the **LIST** [block label] command.

To edit the parameters within a block use the **EDIT** [block label] command. To advance to the next parameter while editing press the [*Enter*] key. To back up to the previous parameter use the [*Backspace*] key. To change or delete a parameter value advance the cursor to the desired parameter and press the [*TAB*] key, now enter the new value and press [*Enter*]. Pressing [*Enter*] after [*TAB*] will delete the current value. Pressing [*ESC*] after the [*TAB*] will leave the value unchanged. To exit from editing a block, press [*ESC*].

To add a pointer, advance the cursor to **ADD PT:** and press the [*TAB*] key. Enter the desired pointer as follows:

mode:<key> = mode/group:[target block]
or
mode:key = mode/group:target block

Examples: *1:<2> = X1:[EXT SERVICE]*
1:9 = 1:DIRECTORY

Pointers may also be Changed or Deleted by advancing the cursor to the desired pointer and pressing the [*TAB*] key then entering a new target or pressing [*Enter*] to delete it.

The EDIT session will cancel automatically if no keystroke entries are made within a 90 second period. Additional commands used for block manipulation are: **CREATE**, **COPY**, **DELete**, and **REName**.

Note: The changes made during editing will take effect immediately. However, to make the

changes permanent you must use the "SAVE B" command.

Keyboard and Editing Commands

The following is a list of AP3dot2 keyboard commands and their functions. They may be entered via local keyboard or MODEM terminal. Many of the commands may be abbreviated as indicated by the capitalized letters in the command word.

***mode*:** - Sets the editor to the specified mode.
Example: "1:" sets the editor to mode 1.

***Agroup*:** - Sets the editor to specified AGROUP.
Example: "A1:" sets the editor to AMC group 1.

BACKUP - Initiates back up of system files, prompts and mailboxes to diskettes. All ports must be locked (busied out) before executing this command.

CLEAR REPORT - Clears report counters in all blocks. It also sets the report base time to the current date and time.

COPY *smg*:[*source label*] *tmg*:[*target label*] - Copies a block from source to target. Where *smg*: is the mode or group of the source block and *tmg*: is the mode or group of the target block. If *smg* or *tmg* are not specified, the current editor mode or group will be assumed. If target label is not specified, it will be assumed to be the same as the source. **Note**: A block cannot be copied to itself.

COPY *smg*:[ALL] - Copies all blocks from the source mode or group, specified by *smg*, to the current editor mode or group. The source may be any mode except mode 0.
Example: *COPY 1:[ALL]* - Copies all blocks from mode 1: to the current mode

CP OFF - Deactivates the display of call progress messages for all ports.

CP ALL - Activates display of call progress messages for all ports.

CP *port number* -Activates display of call progress messages for the specified port. Port 0 monitors the SIM data port (on systems equipped with this option).

CREATE [*label*] = *type* - Creates block of specified name and type.
Example: *CREATE [DIRECTORY] = MENU* - Creates a MENU block named DIRECTORY.

Block Types:
ROOT, MENU, DIAL, BYE, XCLASS, MCLASS, ACLASS, EXT, ACD, MBX, LIST.

Block Labels may be any alphanumeric string of up to 16 characters (including spaces). The label must be enclosed in square brackets.

DATE - Lists current date

DATE = *MM/DD/YYYY* - Sets current date. Year must be four digits.

DELete [*label*] - Deletes specified block in the current mode or group.
Example: *DEL DIRECTORY* - Deletes a block named DIRECTORY in the current mode.

DUPLEX ON -Allows display and keyboard control from both the remote and local locations simultaneously during a MODEM access.

DUPLEX OFF - Cancels the DUPLEX command

EDit [*label*] - Sets block editor to the specified block and initiates an editing session.
Examples: *ED [MAIN]* - Edits a block named MAIN in the current mode
ED X1:XCLASS 1 - Edits a block named XCLASS 1 in X1:
Note: You can edit a block in another mode by specifying the mode number prior to the label.

EDIT SCHEDULE - Invokes the Schedule Table editor. Changes are made in memory and must be saved using the SAVE S command in order to make the changes permanent.

FILes - Lists all files on the RAM drive one at a time. Pressing the [*TAB*] key allows for copying, renaming or deleting a file.
Example: *FIL* - Lists all files currently in VDISK.

FILes *drive:* Lists all files on the specified drive. Pressing the [*TAB*] key allows for copying,renaming or deleting a file.
Example: *FIL A:* - Lists all files currently on drive A:.

FILes *drive:filename.ext* - Lists the specified file on the indicated source drive. Pressing the [*TAB*] key allows for copying, renaming or deleting a file.
Example: *FIL A:\PMT.001* - Lists a file on drive A: named PMT.001.
Notes:

1. After listing a particular file, you can RENname, DELete, or COPY it to another drive. When the file is listed, press the [*TAB*] key. You will then be placed into an edit session for that file where you can perform the desired operation.
2. The '*' character may be used in a filename as a wild card character to list a set of files. For example, FIL PMT.* - lists all files which have names beginning with PMT and having any extension, such as PMT.001, PMT.009, and PMT.899.

LIST *mg*:[*label*] - Lists parameters of the specified block. If *mg* (mode or group) is not specified, the current mode or group will be assumed. If [*label*] is not specified, all blocks in the mode or group are listed.
Example: *LIST X1:XCLASS 1* - Lists a block named XCLASS 1 in X1:
Note: Pressing [*TAB*] while listing all blocks in a mode or group will switch to editing of the block which is currently being listed. When editing is completed, AP3dot2 will resume the listing.

LIST ALL - Lists parameters for all blocks in all modes and groups.

Note: Pressing [*TAB*] while listing all blocks will switch to editing of the block which is currently being listed. When editing is completed, AP3dot2 will resume the listing.

LIST *mg:***LABELS** - Lists the name and type of each block in the specified mode or group.
Examples: *LIST LABELS* - Lists the labels of all blocks located in the current mode.
LIST 1:LABELS - Lists the labels of all blocks located in mode 1:

LIST *g:***MSG** - Lists the status of mailbox or AMC messages in the specified group.
Examples: *LIST MSG* - Lists all messages in the current group.
LIST M1:MSG - Lists all messages in M1:

LIST SCHEDULE - Lists the Schedule Table (S-TABLE).
Note: The output of any of the LIST or REPORT commands may be directed to a file. This is done by adding the following:
> drive:\path\filename.
Example: *LIST ALL > A:LISTING* will create a file on drive A: named LISTING. The output may be directed to the parallel printer by changing the file name to **PRINTER**

LOCK - Causes all ports to be busied out (off-hook). If port is processing a call, it will busy out as soon as the call is completed.

LOCK ***port number*** - Causes the specified port to be busied out (off hook). If the port is processing a call, it will busy out as soon as the call is completed.

LOGOFF - Terminates MODEM connection.

Mgroup: - Sets the editor to the specified MGROUP.
Examples: *LIST MSG* - Lists all messages in the current group.

MONITor OFF - Deactivates the call activity messages displayed to screen for all ports.

MONITor ALL - Activates the display of call activity messages to screen for all ports.

MONITor ***port number*** - Activates display of call activity messages to screen for the specified port.

PORT ***port*** **= MODE** ***mode*** - Manually sets an AP3dot2 port to run the specified Mode. If *port* is zero, all ports are set. If *mode* is zero it specifies Automatic Scheduling.
Example: *PORT 0 = MODE 2* - Manually sets all ports to mode 2.

RECEIVE ***drive:path\filename.ext*** - Instructs AP3dot2 to receive the specified file over the modem using XMODEM protocol.
Example: *RECEIVE C:\CHKDSK.COM* - Instructs AP3dot2 to receive a file to drive C: named CHKDSK.COM

REName ***mg:[current block label] [new block label]*** - Renames a block. The current label and new label must be enclosed in square brackets.
Example: *REN [MAIN] [NIGHT MAIN]* - RENames a block named MAIN to NIGHT MAIN.

REPORT ***mg:[block]*** - Lists the report counters for the specified block(s). Uses same format and variations as the LIST command.
Example: *REPORT M1:SALES MBX* - Lists the report counters for a mailbox named SALES MBX in M1:
Note: The output of any of the LIST or REPORT commands may be directed to a file. This is done by adding the following: ***> drive:\path\filename.***
Example: *REPORT ALL > A:REPORT* - will create a file on drive A: named REPORT. The output may also be directed to the parallel printer by changing the file name to PRINTER.

RESET - Resets the system. Same as pressing the Reset Button.

RX ***drive:\path\filename.ext*** - Same as RECEIVE.

SAVE B - Saves the Block table to diskette.

SAVE M - Saves the Message Index to fixed disk.

SAVE S - Saves the Schedule table to diskette.

SAVE ALL - Saves Block Table, Schedule Table and Message Index.

STATus - Displays current Mode and Status of each port, the total number of blocks in the Block table, the message number of last message stored, the available space remaining for AMC or Voice messages, and the current message partition. The Status codes are:

1 = Waiting for a call (port is idle)
2 = Processing an incoming call
3 = Busied Out. (see LOCK command)
4 = Out call in process for Message Alert or MWI
5 = Transferring a call
6 = MODEM accessed
7 = Waiting for Loop Current start
8 = Voice messaging

Example:

STAT
PORT: 1 2 3 4
MODE: 1 1 1 1
STATUS: 5 2 1 1
NUMBER OF BLOCKS: 457
MEMORY AVAILABLE: 159960
TOP MESSAGE: 346
MESSAGE SPACE AVAILABLE: 56 MINUTES
CURRENT MESSAGE PARTITION: C:\MSG\

Note: This example shows a 4 port AP3dot2 with all ports running Mode 1. Port 1 is transferring a call, port 2 is processing a call, while ports 3 and 4 are idle. There are 457 blocks

and pointers in the Block table, there are 159960 bytes of memory available for additional blocks or message records and the highest message record number in the message index is 346. There are 56 total minutes remaining for message storage and the messages are being stored on Drive C: in a directory called MSG.

TIME - Lists current time.

TIME = ***HH:MM*** - Sets current time.

TRANSMIT ***drive:\path\filename.ext*** - Instructs AP3dot2 to transmit the specified file over the modem using the XMODEM protocol.
Example: *TRANSMIT A:B-TABLE* - Instructs AP3dot2 to send the Block Table from DRIVE A: to your remote system.

UNLOCK ALL - Releases all locked ports.

UNLOCK ***port number*** - Releases the LOCK command for the specified port.

X*group*: - Sets the editor to the specified XGROUP (extension group).

XX ***drive:\path\filename.ext*** - Same as TRANSMIT.

SIM Operation

The optional SIM (Switch Integration Module) is used to interface AP3dot2 through its RS-232 data port with phone systems which provide integration features via digital signaling. The SIM uses the **Centrex SMDI (Simplified Message Desk Interface)** protocol. Optional voice bridge equipment is available to convert the proprietary digital protocols of various PBX systems to the SMDI protocol.

The integration features available vary with the telephone system. However, the most common features are call forwarding a station directly to the appropriate voice mailbox and the ability to activate message waiting indicators. When an incoming call is presented to AP3dot2, the phone system provides information about the call via the SIM data port. This information may include the originating station and/or the station being forwarded. The AP3dot2 can be programmed to handle calls in a variety of ways, depending on the information provided. The actual digital message packet sent by the phone system to the SIM can be monitored by turning on the Call Progress monitor for Port 0 on AP3dot2 (type **CP 0[*Enter*]**).

The SIM parameters in the **Config Block** are used only with the SIM option. Their purpose is to assign a station identification number to each port of AP3dot2 and to set up the digital communication port of AP3dot2. When a message packet is received at the SIM data port, it includes a 4-digit number which identifies the AP3dot2 port for which the message is intended. In the SMDI protocol this is known as the *message desk terminal number.*

AP3dot2 interprets the message packet and sets *CODE, CID,* and *FID* accordingly. The format of the complete **SMDI** message packet is as follows:

Type 1 **MD***gggmmmmaxxxxxxx yyyyyyy*	Message includes calling (*CID*) as well as called station identification.
Type 2 **MD***gggmmmmaxxxxxxx*	No calling station identification (*CID*).
Type 3 **MD***gggmmmma yyyyyyy*,	Direct call, not forwarded.
Where ggg = message desk number (001-063)	AP3dot2 ignores this.
mmmm = message desk terminal (0001-2047)	AP3dot2 matches this with port ID.
xxxxxxx = forwarding from station number	AP3dot2 sets forwarded ID (*FID*) to this.
yyyyyyy = calling station number	AP3dot2 sets calling ID (*CID*) to this.
a = call code:	AP3dot2 sets (*CODE*) to:
D = direct call	<DT> - no calling or forwarded station is given. <DS> - if only calling station is given.
A = all calls forwarded	<AT> - if only forwarded station is given. <AS> - if calling and forwarded stations are given.

B = forwarded on busy	<BT> - if only forwarded station is given. <BS> - if calling and forwarded stations are given.
N = forwarded on no answer	<NT> - if only forwarded station is given. <NS> - if calling and forwarded stations are given.

Operation With Electronic Set Emulation

The Electronic Set Emulation feature enables AP3dot2 to emulate the operation of electronic display phone sets on the Mitel or Northern Telecom SL-1 phone systems. These phone systems send information to the display of the phone set with each call presented. By emulating electronic sets, AP3dot2 can receive these display messages (call ID packets) and derive information pertaining to the nature and origin of calls presented to it. It can also control special features available to electronic sets (such as activating message notification on other stations) by simulating the action of special keys on the set.

When a call is presented by the phone system to AP3dot2 and accompanied by a call ID packet, AP3dot2 interprets the packet and sets *CODE, CID* and *FID* accordingly. These values may then be used in ROOT and MENU blocks to control the way each type of call is processed.

Note: The AP3dot2 generates call *CODE*s based on information provided by the phone system when the call is presented. This information varies, depending on the phone system. Some do not provide sufficient information to distinguish between certain types of calls (e.g. forwarded on busy, originating from a trunk *vs.* forwarded on busy, originating from a station). When specific information is not provided by the phone system, AP3dot2 will make the following assumptions:

- Unless a call is specified as a forwarded call, assume it is direct.
- Unless a call is specified as originating from a station, assume the origin is a trunk.
- Unless a forwarded call is specified as busy or no answer, assume all calls forwarded.

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System Administration via Phone

The System Administration functions are accessed by calling AP3dot2 on one of the two highest port numbers on your system. These functions provide for creating, reviewing and changing voice prompts, changing the system date and time and manually selecting the system mode of operation.

When AP3dot2 answers, press the *Admin digit* (usually '#') plus the number of zeroes equivalent to the maximum allowable menu entry (*Max caller entry digits*) and then the administration password specified in the **CONFIG** block.
Example: If the opening menu is set for a maximum 3 digit entry and the Admin Password is 1234, the entry required is "#0001234."

System Administration Opening Menu:

AP3dot2: "Press one for prompts, two for system clock, three to set Mode, or Star to exit."

Dial the appropriate selection.

Note: Throughout the System Administration functions, the "star" (*) key is the Escape command. If you make a mistake, dial "star" (*) to exit from the current process.

Caution: Although AP3dot2 will remain fully operational on other ports, it is generally advisable to perform System Administration at times when the call traffic is light. Disk operations, which occur during this process, may cause temporary pauses (3 to 4 seconds) in the operation of the system. This can be disconcerting to your callers.

Also, you may experience these pauses yourself, particularly when you choose to review or edit a prompt which is not currently loaded in the AP3dot2 memory.

Recording and Editing Prompts

This function enables you to review, change or create AP3dot2 prompts. Each prompt is identified by a three digit number. You should have a copy of your prompt worksheets (see Appendix A) nearby, so that you can identify the correct prompt numbers.

Enter Prompt Number:

AP3dot2: "Enter prompt number."

If you entered fewer than three digits -

AP3dot2: "Invalid number. Try Again."

If you entered the number of an existing prompt, AP3dot2 will load it from the program diskette and give you an opportunity to review it (**Choice**).

If you entered a new prompt number AP3dot2 will assume you want to record a new prompt and go directly to **Record**.

Choice:

AP3dot2: "Press one to review, two to re-record, three to save, four to erase, or five to trim."

Dial "star" (*) to return to **Enter Prompt Number**.

Note: If you wish to change a prompt temporarily, without saving it on the program diskette (i.e., just to hear how it sounds, or to create a special holiday greeting), press "star" (*) at this point. The newly recorded prompt will be used by AP3dot2 until you erase it, when it will be replaced by the original. If you decide to save it permanently, you can do so by re-entering System Administration, entering the prompt number, then pressing three to save the prompt to disk.

Review:

AP3dot2: will play back the prompt you have selected. When playback is completed, AP3dot2 returns to **Choice**.

Record:

AP3dot2: "Dial one to start recording, two to stop."

If it wasn't your intention to record a prompt, press "star" (*) to exit.

When you press 1 to start, AP3dot2 will issue a beep tone then immediately begin to record. When you are finished recording, you may review and re-record the prompt if necessary.

You may press any key to stop recording. When you finish, AP3dot2 will return to **Choice**.

Save:

When you choose this option, the prompt will be permanently saved on the program diskette. The old version of the prompt (if any) will be erased and over-written.

AP3dot2: "Prompt saved."

AP3dot2 returns to **Enter Prompt Number**.

Erase:

This will erase the prompt from the AP3dot2 memory.
Note: This does not erase the prompt from the program disk (this must be done using a keyboard command).

Trim:

AP3dot2: "One to trim front or two to trim back."

These choices enable you to trim (erase) the beginning or end of a prompt to remove unwanted silence or sounds. Each time you trim, approximately one tenth of a second is removed from the prompt. These changes are made to the copy of the prompt which currently resides in the AP3dot2 memory. If you wish to make them permanent, you must save the prompt on diskette using the **Save** command.

When **Trim** is completed AP3dot2 returns to **Choice**.

Setting the System Clock

This function sets the date and time on the system real-time clock. This is important, since the switching of **Modes** is based on this clock. Clock settings are maintained even if the electrical power is removed from the AP3dot2.

AP3dot2: "Enter two digits each for hour and minute, or press Star to exit."

The hour must be entered in 24 hour. format. Example: 09 30 for 9:30AM or 13 30 for 1:30P.M.

AP3dot2: "Enter two digits each for month, day and year, or press Star to exit."
Example: 01 01 87 for Jan. 1 1987
Note: You may skip the date entry by pressing Star.

When completed, AP3dot2 returns to **On-Line Administration**.

Note: The system date and time may also be set by using keyboard commands. (See "Keyboard and Editing Commands," Chapter 2, page XX).

Manual Mode Selection

This function enables you to manually set the current mode on one or more AP3dot2 ports. Once a port is manually set to a particular mode, it will remain in that mode until it is reset to automatic or the AP3dot2 is reset. For instance, you may set AP3dot2 to the off-hours mode if your offices are closed on an unscheduled basis due to weather conditions, etc.

AP3dot2: "Enter port number or zero for all ports."

Enter the port number to change the mode on an individual port or enter zero if the change will apply to all ports.

AP3dot2: "Enter new Mode or zero for automatic scheduling."

Entering **0** will restore the port(s) to automatic selection of **Mode**, based on the **S-TABLE**.

Note: The changes will not take effect until you exit System Administration.

When this function is completed, AP3dot2 returns to the System Administration Menu.

Mailbox Administration via Phone

Any mailbox may be designated to have Mailbox Administration features. This allows these additional capabilities:

- Create/Delete mailboxes in the same MGROUP (mailbox group).
- Record or Change mailbox name or greeting messages.
- Set mailbox passwords (without knowing what the password was originally set to)
- Set Message Alert for mailboxes

These features may be accessed by logging in to the mailbox in the normal fashion (enter mailbox number followed by the password) and then pressing "0" in the voice mail opening menu. Mailboxes created by this method will use the parameter values and pointers set in the DEFAULT MBX.

AMC Message Administration via Phone

Call any AP3dot2 port and proceed to the MENU which is normally used to listen to the AMC message. Once in the MENU, press #, then the Announcement Message number you wish to record or edit. The AP3dot2 will request a password entry. The required password is set in the ACLASS (Announcement class of service) block.

The procedure for recording and editing messages is the same as for prompts (see "Recording and Editing Prompts," page XX) with the exception that erasing a message actually erases it from the message storage disk. AMC messages can be up to 15 minutes long.

After saving, you are prompted for the next message number. When you are finished press "*" to exit from the AMC Administration session.

Generating Reports and Listings

A report of activity for each block or a listing of its programming parameters may be generated using the **Report** or **List** commands. The **Report** command gives information about the use of each block in the system (Keep in mind that Extensions and Mailboxes are blocks). The **List** command gives the settings of the parameters of a block. Variations of these commands may be used to; 1) report or list a single block, 2) report or list all blocks in a particular mode or group, 3) report or list all blocks, 4) list information regarding the messages currently stored in the system, or 5) report on system useage. The output may be directed to a disk file which can then be stored or transferred to another computer via diskette or MODEM. In each of the following examples the **List** command may be substituted for the **Report** command:

Report 1:[Main] - will report on a block in mode 1:, labeled "MAIN." If the editor is currently logged on to mode 1:, it is not neccessary to specify the mode (**Report [Main]** will produce the same result).

Report System - Gives a report of system useage by Port, Hour of the day and Day of the week. It also reports the total calls processed and elapsed time during the report period.

Report X1: - will report on all blocks in XGROUP 1. If the editor is currently logged on to group X1:, it is not neccessary to specify the group (**REPORT** will produce the same result). The system will pause after each block is displayed and prompt you to press ENTER to continue.

Report All - will report on the system, as well as all blocks in all modes and groups.

Report All >A:RPTFILE - will report on all blocks and direct the output to a file on drive A: named RPTFILE. The ">" symbol is used to indicate redirection. To direct a report to the printer, use the filename **Printer**.
Example: **Report M1: >Printer**. As the report or listing is sent to the file or printer, it is also displayed on the screen.

The command **Clear Report** will reset all report counters to zero and change the report base time to the current date and time.

Report Examples

The following pages contain examples of the various block reports along with definitions of the report parameters.

System Report

The AP3dot2 system reports include all calls into the system. The totals are given per hour, per day, and per port.

```
                    *** AP3dot2 REPORT ***

From Date:  04/22/99            To Date: 04/29/99

                    *** SYSTEM TOTALS ***

Calls Processed: 5535                  Hours Elapsed: 1020

              *** CALLS PER HOUR OF THE DAY ***

HOUR      CALLS     HOUR      CALLS     HOUR      CALLS
0         9         8         79        16        227
1         6         9         142       17        101
2         8         10        185       18        60
3         0         11        177       19        39
4         0         12        127       20        28
5         0         13        151       21        26
6         0         14        154       22        18
7         6         15        166       23        10

              *** CALLS PER DAY OF THE WEEK ***

 SUN      MON      TUE      WED      THU      FRI      SAT
 59       507      123      348      315      329      39

          *** CALLS AND CONNECT TIME PER PORT ***

PORT      CALLS     MINUTES   PORT      CALLS     MINUTES
1         1067      1215      5         54        46
2         238       243       6         43        32
3         132       95        7         25        18
4         78        61        8         13        9
```

Figure 3-1. System Report

Report Field Definitions

From Date: The date and time the report counters were last reset to zero.

To Date: The date and time this report was run.

Calls Processed: The total number of calls processed by the system during the report period.

Hours Elapsed: The number of hours elapsed during the report period.

Calls Per Hour Of The Day: The total number of calls handled by AP3dot2 per hour of the day.

Calls Per Day Of Week: The total number of calls handled by AP3dot2 per day of week.

Calls And Connect Time Per Port: The total number of calls by port and the total number of minutes the port was occupied

Root Block Report

The Root Block is the base or starting point in an opening mode. Its function is to prompt the caller with a greeting when the AP3dot2 system receives a call (i.e., "thank you for calling ABC company").

```
                    *** AP3dot2 REPORT ***

From Date:  04/22/99              To Date: 04/29/99

ROOT   1:[DAY]
Calls answered in this mode:   1101
Outcalls made in this mode:    0
Abandoned calls:               0
Hour 00:  0   Hour 06:  0      Hour 12:  91        Hour  18:    0
Hour 01:  0   Hour 07:  0      Hour 13:  107       Hour  19:    0
Hour 02:  0   Hour 08:  96     Hour 14:  94        Hour  20:    0
Hour 03:  0   Hour 09:  122    Hour 15:  112       Hour  21:    0
Hour 04:  0   Hour 10:  160    Hour 16:  168       Hour  22:    0
Hour 05:  0   Hour 11:  151    Hour 17:  0         Hour 23:  0
-Pointer-        -Target-        -Count-
1:<NEXT> =       1:[MAIN]        1101
1:<DEFAULT> =    0:[CONSOLE 1]   0
```

Figure 3-2. Root Block Report

Report Field Definitions

From Date: The date and time the report counters were last reset to zero.

To Date: The date and time this report was run.

Calls answered in this mode: The number of callers greeted by AP3dot2 during operation in this mode.

Outcalls made in this mode: Outcalls made to set MWI's or for Message Alert.

Abandoned calls: The number of callers who disconnected while the AP3dot2 was still in the ROOT block.

Hour nn: The number of calls answered in this mode, during the hour of the day indicated.

m:<NEXT> The number of calls that exited the ROOT and entered the target block specified.

m:<DEFAULT> The number of calls which defaulted to the specified block due to an undefined POINTER (ie., lack of a <NO-ENTRY>, <INVALID>, etc.).

Menu Block Report

The function of a menu block is to prompt a caller to make an entry [i.e., "You may dial an extension directly at any time during this announcement or press 1 for service or 2 for production"]. The report information generated will show the number of times each option was chosen.

```
                    *** AP3dot2 REPORT ***
       From Date:  04/22/99              To Date: 04/29/99

MENU  1:[MAIN]
Extension:       538   AMC message:          25
Mailbox:         11    Abandonned:           2
-Pointer-              -Target-      -Count-
1:<NO-ENTRY> =         0:[CONSOLE]       118
1:<INVALID> =          0:[GOODBYE]         7
1:<*> =                0:[GOODBYE]        45
1:<0> =                0:[CONSOLE]        81
1:<1> =                X1:[SALES]         30
1:<2> =                X1:[SERVICE]      111
1:<3> =                X1:[ACCOUNTING]    26
1:<4> =                X1:[ADMIN]         17
1:<5> =                0:[MSG CENTER]     26
1:<6> =                0:[VOICE MAIL]    176
1:<9> =                0:[DIRECTORY]      52
```

Figure 3-3. Menu Block Report

Report Field Definitions

From Date: The date and time the report counters were last reset to zero.

To Date: The date and time this report was run.

Extension: The number of calls which went to an extension from this MENU.

Mailbox: The number of calls which went to a mailbox from this MENU.

AMC message: The number of calls which played an AMC message from this MENU.

Abandoned: The total number of caller disconnects in this MENU.

***m*:<*KEY*>** The number of calls directed to the target block when the MENU search found a match on the KEY value specified.

***m*:<NO-ENTRY>** The number of calls directed to the target block if the caller made <NO-ENTRY> when one was requested.

***m*:<INVALID>** The number of calls directed to the target block if the caller made too many <INVALID> entries.

Dial Block Report

The Dial Block causes the AP3dot2 to dial a specified number. It is generally used as a help block for callers using rotary phones. It contains the number to dial for operator assistance. The report data for this block gives the total number of times it was used.

```
                    *** AP3dot2 REPORT ***

        From Date:  04/22/99            To Date: 04/29/99

DIAL   0:[CONSOLE]

Total Count:     592
```

Figure 3-4. Dial Block Report

Report Field Definitions

From Date: The date and time the report counters were last reset to zero.

To Date: The date and time this report was run.

Total Count: The number of times used.

Bye Block Report

The function of the BYE block is to say "good bye" to the caller before the *AP3dot2* hangs up. The report for this block gives the total number of times it was used.

Note: This number may not be equal to the number of calls greeted by AP3dot2 in the ROOT, as some calls will terminate when AP3dot2 completes an extension transfer.

```
                    *** AP3dot2 REPORT ***

       From Date:  04/22/99            To Date: 04/29/99

BYE   0:[GOODBYE]

Total count:    748
```

Figure 3-5. Bye Block Report

Report Field Definitions

From Date: The date and time the report counters were last reset to zero.

To Date: The date and time this report was run.

Total count: The number of times used.

Query Block Report

The function of the Query block is to request voice responses from the caller in a scripted prompting session.

```
                    *** AP3dot2 REPORT ***

        From Date:  04/22/99            To Date: 04/29/99

QUERY    0:[NAME]
Total count:     48
Abandoned: 4

-Pointer-                -Target-          -Count-
0:<NEXT> =               0:[ADDRESS]        40
0:<NO-RESP> =            0:[GOODBYE]         3
0:<ESCAPE> =             0:[CONSOLE]         1
0:<ERROR> =              0:[CONSOLE]         0
```

Figure 3-6. Query Block Report

Report Field Definitions

From Date: The date and time the report counters were last reset to zero.

To Date: The date and time this report was run.

Total count: The number of times used.

Abandoned: The number of callers who disconnected during this QUERY.

***m*:<NEXT>** The number of callers who recorded a response and proceeded to the next block.

***m*:<NO-RESP>** The number of callers who did not record a response or did not confirm the response, if required.

***m*:<ESCAPE>** The number of callers who dialed the *ESCape digit*.

***m*:<ERROR>** The number of callers who encountered an error condition (typically disk full).

EXT Block Report

The function of the Extension Block is to specify the calling parameters or characteristics for a particular extension. The report data for the extension block relates to the status of each call transferred to that extension by AP3dot2.

```
                    *** AP3dot2 REPORT ***
        From Date:  04/22/99            To Date: 04/29/99

EXT   X1:[Doe, John]      KEY: 123

Answered:                30   No Answer:                      18
Busy:                    19   Screened or DND:                 0
Left message:            12   Tried another number:           29
Made no entry:            3   Abandoned:                       0
Held:                     4   Total hold time (secs)         235
Retention days remain:   60   Last Use:              05/15 11:40
```

Figure 3-7. EXT Block Report

Report Field Definitions

From Date: The date and time the report counters were last reset to zero.

To Date: The date and time this report was run.

Answered: The number of transfers to this extension that were answered.

No Answer: The number of attempted transfers to this extension that were not answered.

Busy: The number of attempted transfers to this extension that resulted in a busy condition.

Screened or DND: The number of attempted transfers to this extension that resulted in a rejected screening or a Do Not Disturb condition.

Left message: The number of callers who elected to leave a message for this extension upon a busy or no answer condition.

Tried another number: The number of callers who elected to dial another extension if this transfer was unsuccessful.

Held: The number of times callers chose to hold for this extension.
Note: The count does not increase when a caller elects to continue holding.

Total hold time (secs): The total amount of time callers held for this extension (in seconds).

Retention days remain: The number of days remaining before this block is deleted from the system.

Note: Each time this block is accessed, this number will be set back to the number of days specified in the XCLASS block (Extension class of Service).

Last Use: The last time a caller attempted a transfer to this extension.

MBX Block Report

The function of the Mailbox Block is to specify the messaging parameters or characteristics for a particular mailbox. The report data relate to the usage and status of this Mailbox.

```
                    *** AP3dot2 REPORT ***

        From Date:  04/22/99              To Date: 04/29/99

MBX   M1:[Doe, Jane]       KEY: 456
Public access:          80        Pub. messages received:    69
User access:            56        User messages received:    17
Messages sent:          10        Connect time (minutes):    3
Current message count:  3         New message(s):            NO
Last user access:       05/15     Retention days remain:     55
```

Figure 3-8. MBX Block Report

Report Field Definitions

From Date: The date and time the report counters were last reset to zero.

To Date: The date and time this report was run.

Public access: The number of public callers (non-subscribers) who were prompted to leave a message.

User access: The number of times the user has gained access to the mailbox.

Messages sent: The number of messages sent to other users (including copies).

Current message count: The number of messages in the mailbox at the current time.

Last user access: The last time the mailbox user gained access to this mailbox.

Pub. messages received: The number of messages received by the mailbox user from public callers.

User messages received: The number of messages received from other users.

Connect time: Total minutes that mailbox was in use by either public callers or the mailbox user.

New message(s): Indicates that messages are in the mailbox which have not been reviewed by the mailbox user.

Retention days remain: The number of days remaining before the mailbox is automatically deleted from the system. NOTE: Each time the mailbox is accessed by the user, this number is reset to the value specified in the MCLASS block (Mailbox class of service).

AMC Message Report

The function of the AMC is to playback a pre-recorded announcement message based on a number entered by a caller. The report information indicates the usage and status of each message.

In order to generate a report for messages in AMC message group 1 (AGROUP A1:), type:
REPORT A1:MSG

```
                    *** AP3dot2 REPORT ***
        From Date:  04/22/99              To Date: 04/29/99

Message Listing for A1:
```

GROUP	KEY	PLAYS	LAST USE	RETEN	INDEX	FILE
1	277	3	05/15-14:00	90	A-35	C:\MSG\35.A
1	236	4	05/12-15:48	88	A-40	C:\MSG\40.A
1	346	6	5/11-14:55	87	A-42	C:\MSG\42.A
1	535	8	05/12-09:02	88	A-45	C:\MSG\45.A
1	232	11	04/20-15:11	66	A-46	C:\MSG\46.A
1	543	2	05/09-13:30	85	A-51	C:\MSG\51.A
1	289	4	05/10-15:36	86	A-53	C:\MSG\53.A
1	546	19	05/15-13:23	90	A-59	C:\MSG\59.A
1	533	13	04/22-09:36	68	A-60	C:\MSG\60.A
1	562	4	05/09-16:20	85	A-62	C:\MSG\62.A
1	727	5	03/23-15:14	47	A-65	C:\MSG\65.A
1	762	2	05/12-14:07	88	A-67	C:\MSG\67.A
1	763	0	04/07-15:22	54	A-69	C:\MSG\69.A
1	723	7	04/12-09:55	59	A-70	C:\MSG\70.A
1	746	14	02/02-14:13	31	A-71	C:\MSG\71.A
1	473	9	03/21-08:16	47	A-72	C:\MSG\72.A
1	737	3	04/14-22:06	60	A-73	C:\MSG\73.A
1	255	11	05/01-17:34	77	A-76	C:\MSG\76.A

Figure 3-9. AMC Message Report

Report Field Definitions

From Date: The date and time the report counters were last reset to zero.

To Date: The date and time this report was run.

Group: The AGROUP to which the message belongs.

Key: The caller entry required to hear this message.

Plays: The number of times the message has been played.

Last Use: The last time this message was played.

Reten: The number of days remaining before this message will be deleted from the system.

Note: Each time this message is accessed, the retention time will be set back to the value specified in the ACLASS block.

Index: The assigned number used by AP3dot2 to locate this message in memory, and the type of message that it is. (A - Announcement message).

File: The actual file name and location of the message on disk. **Note**: All AMC messages have a file extension of ".A".

Mailbox Message Report

To generate the report for messages in M1:, type **REPORT M1:MSG.**

```
                    *** AP3dot2 REPORT ***
        From Date:  04/22/99              To Date: 04/29/99

Message Listing for MGROUP 1

To            From          Date-Time     Reten  Index  File
Doe, John     Smith, Bill   04/29-00:13   S-10   V-1    C:\MSG\1.V
Jones, Mary   Black, James  05/15-14:31   N-10   C-2
Morris, Tom   ???           05/15-13:14   N-10   V-3    D:\MSG\3.V
Doe, Jane     Jones, Mary   05/10-00:55   S-5    V-8    D:\MSG\8.V
Black, James  ???           05/09-19:43   S-10   V-9    C:\MSG\9.V
Smith, Bill   Morris, Tom   04/30-21:36   S-2    V-1    C:\MSG\10.V
```

Figure 3-10. Mailbox Message Report

Report Field Definitions

From Date: The date and time the report counters were last reset to zero.

To Date: The date and time this report was run.

To: The mailbox to which the message is addressed.

From: The mailbox from which the message was sent ("???" if sent by a public caller).

Date-Time: The date and time the message was sent.

Reten: This indicates whether the message is new (N-) or saved (S-) and the number of days remaining before the message is automatically deleted from the mailbox.

Note: Each time a message is saved by the mailbox user, the retention time is set back to the value specified in the MCLASS block (Mailbox class of service).

Index: The assigned number that locates the message in memory, and its type. The possible types are: (V - voice mail, C - delivery confirmation).

File: The actual file name and location of the message on disk. NOTE: All Voice Mail messages are given a file extension of ".V". Delivery Confirmation messages do not have a separate disk file.

Chapter 4
AP3dot2 Maintenance

Chapter 4 Maintenance

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AP3dot2 Maintenance

Remote Maintenance Via Modem

AP3dot2 is equipped with a 1200 Baud MODEM for remote diagnostic purposes. The communication parameters are:

Speed - 1200 Baud
Data Bits - 8
Stop Bits - 1
Parity - None
File Transfer Protocol - XMODEM (Checksum)

The method for accessing the MODEM depends on the installation. See *MODEM Connections*, page XX.

If the MODEM has a separate extension, it may be accessed by calling the AP3dot2 and having it transfer to the MODEM extension.

Note: This will work better if a separate extension block is set up for the MODEM extension, with the "rings" parameter set to 1. The MODEM will answer up with Carrier after three rings.

If the MODEM is bridged across the second highest port of the AP3dot2, first transfer to that extension, then enter DTMF "9's" up to the number of digits in an extension number. This will cause the MODEM to answer up with Carrier.

After connection is established, press the ENTER (or RETURN) key until the AP3dot2 command prompter (0:>)is displayed. All AP3dot2 commands and screen messages are in standard TTY format. See Chapter 2, page XX, "Keyboard and Editing Commands" for available command set.

Files may be transferred to and from AP3dot2 using a software package which supports XMODEM - Checksum file transfer protocol. A partial list of software which supports this protocol follows:

CCTICOM - (part of CCTITOOLS), pre-configured for use with *AP3dot2*
CROSSTALK - version 3.6 or higher
SMARTCOM II
PC TALK
WORDSTAR 2000 PLUS - with telecommunications module

Troubleshooting

Most problems associated with the AP3dot2 system will yield quickly to conventional troubleshooting techniques. However, one can easily be led on a "wild goose chase" if a problem is not methodically isolated. The successful completion of a call transfer transaction requires the proper functioning of several systems, including the telephone company's central office equipment, the on-premises telephone switching system with its associated wiring and the AP3dot2 system. When a problem occurs, it is essential to first determine which of these systems is the source. A useful technique for isolating the source of call transfer problems is to temporarily replace the AP3dot2 with a 2500 set or test set and attempt to perform the call transfer manually, duplicating the actions of the AP3dot2.

Following is a list of symptoms and possible causes:

AP3dot2 Does Not Run

If the "Power" light on the front panel is not on, this indicates that the D.C. power supply is not operating.

Ensure that AC power is getting to the system.

Turn the AC power switch (located at the rear of the right side of the chassis) off, wait a few seconds, and switch it back on. This will reset the surge protection circuit in the AP3dot2 power supply.

AP3dot2 Does Not Initialize

Approximately 15 seconds after the unit is switched on or the Reset button is pressed, the light on the Removable Diskette Drive should blink momentarily. A couple of seconds later, AP3dot2 should emit a single beep tone to confirm that the CPU is operational and the Diskette Drive can be accessed.

If two beep tones are emitted, this indicates a problem reading the Program Diskette. Check to see that it is inserted correctly (label up) and that the retainer lever is closed (pointing down).

AP3dot2 Does Not Answer Calls

If AP3dot2 does not answer, the first step is to determine if the ring signal is getting to the AP3dot2 port. The most effective way to do this is to disconnect the telephone line from the AP3dot2 port and connect it to a standard single-line telephone set.

First try calling the extension locally from another internal extension, then try calling it from an outside trunk. If the extension does not ring when called locally, the problem is either in the telephone switch system or the wires leading to the AP3dot2. If it doesn't ring when called from an outside trunk, the problem is either in the programming of the switch (DIL) or the Central Office trunk lines.

After Attempting a Call Transfer, AP3dot2 Repeats the Greeting Messages

This is a result of the telephone system "bouncing" the call back to the AP3dot2 extensions because it was unable to complete the transfer. The AP3dot2 sees it as a new incoming call.

This may happen for various reasons, depending on the type of telephone switch system and the way it is programmed. It may occur because the **Dialing Sequence to Transfer a Call** in the **B-TABLE** is not set correctly. For example, the AP3dot2 may have to pause after the Flash hook and before dialing the extension number. Manually perform a call transfer from an AP3dot2 extension using a standard telephone set. Observe the exact sequence (including pauses) required to successfully execute a transfer. Then set the **B-TABLE** to match.

Another reason this "bounce back" may occur is if AP3dot2 transfers a call to a busy or un-answered extension and the **rings** parameter in the XCLASS block is set to 0. If there is no call coverage path programmed in the switch for this extension, it has no choice but to send it back to the AP3dot2. Since the AP3dot2 has released the original call, it assumes that the "bounce back" is a new one. This may be corrected either by programming call coverage in the switch or by setting **rings** to 1 or more.

Troubleshooting Chart

Symptom / Error	Diagnosis	Solution
"Invalid Configuration"	Incorrect CMOS.DTA on program diskette	Run setup
	Hardware installed without configuring system	Run setup
	Bad battery pack	Check battery voltage
	Defective CMOS Chip	Replace CMOS chip/system board
	Defective controller	Replace controller
"Hard Disk Failure"	Invalid CMOS.DTA on program diskette	Run setup
	Drive not formatted	Format drive
	Drive type invalid or not set	Run hardprep
	Defective hard disk	Replace hard disk
	Defective controller or cables	Replace controller/cables
"Non System Disk Or Disk Error"	Incompatible DOS version on floppy diskette	Use backup diskette
	Corrupted boot record on floppy diskette	Use backup diskette
	Improper CMOS setup	Run setup
	Defective floppy drive	Replace floppy drive
	Defective controller or cables	Replace controller/cables
"Bad Or Missing Command Interpreter"	Incorrect version COMMAND.COM	Use backup diskette
	Missing COMMAND.COM	Use backup diskette
	Corrupted COMMAND.COM	Use backup diskette
"No Boot Device Available"	Floppy drive lever is open	Close drive lever
	No floppy diskette in drive A:	Insert AP3dot2 diskette and close drive lever
	Improper CMOS setup	Run setup
	Bad floppy diskette	Use backup diskette
	Defective floppy drive	Replace floppy drive
	Defective controller or cables	Replace controller/cables
"Unable To Start Voice System"	Bad or missing voice card driver program diskette	Use backup diskette
	Improper switch/jumper settings on voice card	Check/re-set switch settings on voice card
	Memory setup error	Check memory configuration
	Voice card not well seated	Reseat voice card
	Voice card does not exist	Install voice card
"Memory Parity Error"	Bad memory chip/not well seated	Check memory banks for proper seating
	Ambient temperature too high	Relocate system to cooler environment
	Bad CMOS chip/not well seated	Reseat/replace CMOS chip
"Keyboard Stuck"	Defective keyboard	Replace keyboard
"Keyboard Error"	Normal	Keyboard not required to be plugged in
Power light not on	Power switch is off	Turn switch on
	Bad AC outlet/power cord	Try new outlet/power cord
	Defective power supply	Replace power supply

Troubleshooting Chart, cont'd

Symptom / Error	Diagnosis	Solution
No console display	Monitor not connected to system	Check connection
	No power to monitor	Plug in power cord
	Contrast not adjusted on monitor	Adjust contrast
System does not initialize on power-up but initializes when reset is pressed	Defective power supply	Replace power supply
Unexpected system reset	Defective AC outlet/power cord	Use new outlet/power cord
	Poor grounding	Connect cold water ground
	Power transients	Install surge protector/UPS
	Defective program diskette	Use backup diskette
	Defective hard disk	Disable hard disk
Loss of keyboard control, call activity display haulted	Defective system board	Replace system board
	Defective hard disk	Disable hard disk
Blank screen, flashing cursor	Modem not well seated	Reseat modem card
	Defective modem card	Replace modem card
Unrecognized characters via modem	Improperly configured communication parameters	Refer to AP3dot2 manual-Modem Access
Voice port does not answer	Defective phone line/jack	Monitor extension for ring signal using test set
	Improper switch settings on voice card	Check switches/jumpers
	Defective voice port	Replace voice card
Voice port does not accept Touchtones	Software filters set incorrectly	Refer To AP3dot2 Manual
High frequencies in voice prompts	Defective voice port	Replace voice card
Voice port answers without audio	Prompts missing in AP3dot2 program	Check program
	Defective Voice Port	Replace voice card
Able to record messages but no audio on playback	Corrupted data	Run checkdisk
	Defective voice port	Replace voice card
Caller hears DTMF tones on call transfer	Improper programming in transfer	Refer to AP3dot2 Manual - Installation Sequences Procedure
	Lack of DTMF receivers in PBX	Monitor calls using test set
	Voice port does not flash hook	Replace voice card
Voice port emits distorted DTMF tones to PBX	Defective voice port	Replace voice card
Two voice ports going offhook at same time	Jack wiring crossed	Monitor with test set/check jack wiring
	Improper jack wiring or unstable switch setting on voice card	Reset/check dip switch
Simultaneous conversations heard on one voice port	Improper or unstable switch on voice card	Reset/check dip switch setting
	Jack wiring crossed	Check jack wiring

Appendix A

Setting Up an Application

Appendix A outlines a step-by-step procedure for defining and configuring an application on AP3dot2. Worksheets to be used in configuring the blocks for the application are located at the end of this Appendix. Photocopy the necessary worksheets for use in the application setup.

Application Setup Procedure

Step 1: Define the Modes.

Determine how many different modes will be required to provide proper call handling at all times of day and days of the week. In many cases, two modes are sufficient: a day mode and night (or off hours) mode. A block table diagram should be developed which describes each mode.

Step 2: Create the Block Table Diagram(s).

Create the Block Table diagrams. Most of the information needed to do this is contained within the day and night messages listed in STEP 1. The actual block types to be used depend on the functions needed and the features for which the system has been authorized. Keep these two things in mind: **first,** each diagram (Mode) must begin with a ROOT block. The Label is normally the name of the mode (i.e.. [DAY MODE], [HOLIDAY MODE]); and **second,** most Modes require a Menu block immediately following the Root block, in order to accept an entry from the caller.

Step 3: Record and Edit Prompts.

In each block, the voice prompts to be used must be specified. All prompts are identified by three digit numbers; for example, prompt 001 may say "Thank you for calling." The prompts may be chosen from the pre-recorded set supplied with AP3dot2. These prompts can be altered by re-recording them, or custom prompts may be recorded using a Touchtone phone. A script of the standard prompt set can be found in the Appendix of this manual. A custom prompt may be assigned any three digit number from 100 through 799. The "800" series of prompts is normally reserved for voice mail messaging functions.

The method for recording prompts is explained in the System Administration section.

It is suggested that once a person has been chosen to record prompts, this person record the custom prompts as well as re-record the standard prompts. This will ensure that the "voice" of AP3dot2 will be consistent.

Step 4: Complete the Block Worksheets.

Refer to "Block Parameter and Programming Considerations," Chapter 2, page 3, for a detailed description of the information contained in the blocks.

The block worksheets (at the end of this Appendix) make it possible to specify exactly how AP3dot2 will behave in each block. Very close attention should be paid to all POINTERS since they govern what AP3dot2 will do next, based on the outcome of the current block.

Each block that appears in the diagram should have a corresponding block worksheet. These worksheets must be filled out to ensure that AP3dot2 will run correctly once it enters any specific block. Explanations of the blocks and their parameters can be found beginning on page 2-10 of this manual. The block worksheets can be found at the end of this Appendix.

Step 5: Create the Blocks

After all worksheets are completed, programming of AP3dot2 may begin.

To begin, insert the program diskette into the disk drive and close the drive lever. Ensure the power cord has been connected then switch the power On (the power switch is usually located on the right hand side of the system toward the back). AP3dot2 will take from 45 seconds to 1.5 minutes to initialize. Once it initializes, the system prompt is displayed: 0:>

At the system prompt you may type any system command (see Chapter 2, page XX, for a list of the AP3dot2 commands). These commands will allow you to create and edit the blocks needed to define your application.

Step 6: Set Pointers.

Among the other parameters within each block are several types of blocks with pointers (see "Pointers," Chapter 2, page 5). These parameters determine what AP3dot2 will do next based on caller entry or other conditions. They should be given close attention and should always be set if specified as "required" in this manual.

Step 7: Set Schedule Table.

Once the individual MODES have been set up, AP3dot2 must be told when to run each mode. This is accomplished through the SCHEDULE table. A description of and method for configuring the SCHEDULE table can be found on page 58 of Chapter 2.

Step 8: Set Call Progress Parameters.

At this point, AP3dot2 is configured to run your application; however, in order to "fine tune" the system, the call progress detection parameters must be set to match the switch that will be used by AP3dot2 to complete various call transfers. The methods for this setup are found beginning on page 10 of Chapter 2, "XCLASS/ MCLASS/DIAL Block Descriptions."

Step 9: TEST the Application.

Appendix B

Voice Prompts

AP3dot2 is equipped with a comprehensive set of prerecorded, digitized voice prompts. They are listed here in numerical order within their specialized groups.

Standard Prompts

System Salutation

PMT.001 Thank you for calling.

Usage: ROOT block. System salutation. "Thank you for calling. An operator will be with you in a moment. If you know the extension ... (etc.)."

PMT.002 An operator will be with you in a moment.

Usage: ROOT block. System salutation (when an operator is available). "Thank you for calling. An operator will be with you in a moment. If you know the extension ... (etc.)."

PMT.003 Our office hours are 8 AM to 5 PM, Monday through Friday.

Usage: ROOT block. System salutation (after hours). "Thank you for calling. Our office hours are 8 AM to 5 PM, Monday through Friday. If you know the extension ...(etc.)."

PMT.004 Our office is closed for the holiday.

Usage: ROOT block. System salutation. "Thank you for calling. Our office is closed for the holiday. If you know the extension ...(etc.)."

PMT.005 Our office is closed due to emergency conditions. We hope to return to normal operation soon. Some of our employees may be in.

Usage: ROOT block. System salutation (inclement weather or other emergency conditions). "Thank you for calling. Our office is closed due to emergency conditions. We hope to return to normal operations soon. If you know the extension ...(etc.)."

Main Menu

PMT.006 If you know the extension of the person you are calling, you may enter it now.

Usage: Main MENU block.. "Thank you for calling. An operator will be with you in a moment. If you know the extension of the person you are calling, you may enter it now. To reach the sales department, press 1. For the service department , press 2."

PMT.007 To reach the sales department, press 1. For the service department, press 2.

Usage: Main MENU block. "Thank you for calling. An operator will be with you in a moment. If you know the extension of the person you are calling, you may enter it now. To reach the sales department, press 1. For the service department , press 2."

PMT.008 To leave a message in our after hours message center, please stay on the line.

Usage: Main MENU block. When operator is not available and system is set up to take messages in a general mailbox (assumes rotary phone callers). "Thank you for calling. Our office hours are 8 AM to 5 PM, Monday through Friday. If you know the extension of the person you are calling you may enter it now. To leave a message in our message center, please stay on the line."

PMT.009 Sorry, that is not a valid entry. Please try again.

Usage: Main MENU block. To notify caller of invalid entry. This is used when operator assistance is not available.

PMT.010 Sorry, that is not a valid entry. Please try again or hold for an operator.

Usage: Main MENU block. To notify caller of invalid entry. This is used when operator assistance is available.

PMT.011 Please enter your password.

Usage: MENU block. Used to request password entry for any password protected block accessed from the MENU.

Prior to Call Transfer

PMT.015 Thank you. Who's calling please?

Usage: XCLASS block. Prior to call transfer. Asks caller to speak his or her name so that it can be announced when the called party answers.

PMT.016 Thank you. One moment please.

Usage: XCLASS block. Spoken to caller prior to initiation of a transfer to an extension.

Call Presentation

PMT.017 Transferring a call.

Usage: XCLASS block. To present a call when the called party answers.

PMT.018 This call is redirected from...

Usage: XCLASS block. Spoken to called party upon presentation of a redirected call. "This call was redirected from... extension 123."

PMT.019 This call is forwarded from...

Usage: XCLASS block. Spoken to called party upon presentation of a remote call forwarded call. "This call was forwarded from... extension 123."

PMT.020 This call is from...

Usage: XCLASS block. Spoken to called party when a caller has recorded his/her name for the purpose of call screening. This prompt is followed immediately by the caller's name. "This call is from... John Doe. To accept this call, press 1. To redirect the call, press 2. To reject, press 3."

PMT.021 To accept, press 1. To redirect the call, press 2. To reject the call, press 3.

Usage: XCLASS block. Spoken to called party when call screening is set. "This call is from... John Doe. To accept this call, press 1. To redirect the call, press 2. To reject, press 3 and hang up immediately."

PMT.022 Enter the extension to which this call should be redirected.

Usage: XCLASS block. Spoken to called party who has chosen to redirect a screened call.

PMT.023 Thank you.

Usage: XCLASS block. Spoken to called party when a screened call has been rejected or redirected.

Extension Status

PMT.024 I'm sorry. That party is not available.

Usage: XCLASS block. Spoken to caller when a screened transfer is rejected or call blocking is on and there is no message option. "I'm sorry. That party is not available. To transfer to a different extension, please enter it now."

PMT.025 I'm sorry. That extension was not answered.

Usage: XCLASS block. Spoken to caller if extension is unanswered. "I'm sorry. That extension was not answered. To leave a message, press 1. To transfer to a different extension, please enter it now."

PMT.026 I'm sorry. That extension is busy.

Usage: XCLASS block. Spoken to caller after the initial attempt to transfer to a busy extension. "I'm sorry. That extension is busy. To leave a message, press 1. If you would like to hold, press 2. To transfer to a different extension, pleas enter it now."

PMT.027 I'm sorry. That extension is still busy.

Usage: XCLASS block. Spoken to caller after subsequent attempts to transfer to a busy extension. "I'm sorry. That extension is still busy. To leave a message, press 1. To continue holding, press 2. To transfer to a different extension, please enter it now."

PMT.028 ... currently holding.

Usage: XCLASS block. Spoken to caller to advise him or her of the number of callers already holding in queue for a busy extension. This is spoken prior to the caller's initial choice to hold. Example: "I'm sorry. That extension is busy. Four callers are ...currently holding. To leave a message, press 1. If you would like to hold, press 2. To transfer to a different extension, please enter it now."

PMT.029 I'm sorry. Your call was not completed.

Usage: XCLASS block. Spoken to caller if an attempt to transfer to an extension resulted in a time-out or error signal.

Caller Options

PMT.030 To leave a message, press 1.

Usage: XCLASS block. Option given to caller if call transfer was unsuccessful. "I'm sorry. That extension was not answered. To leave a message, press 1. To transfer to a different extension, please enter it now."

PMT.031 If you would like to hold, press 2.

Usage: XCLASS block. Option given to caller if extension is busy upon the initial attempt to transfer. "I'm sorry. That extension is busy. To leave a message, press 1. If you would like to hold, press 2. To transfer to a different extension, please enter it now."

PMT.032 To continue holding, press 2.

Usage: XCLASS block. Option given to caller if extension is busy on subsequent attempts to transfer. "I'm sorry. That extension is busy. To leave a message, press 1. To continue holding, press 2. To transfer to a different extension, please enter it now."

PMT.033 To transfer to a different extension, please enter it now.

Usage: XCLASS block. Option given to caller if call transfer was unsuccessful. "I'm sorry. That party is not available. To transfer to a different extension, please enter it now."

Caller Queuing

PMT.034 You are now the...

Usage: XCLASS block. Spoken to caller who has chosen to hold in queue. Updates the caller concerning his or her current position. Example: "You are now the... fifth caller."

PMT.035 Thank you. I'll try the extension again in a moment.

Usage: XCLASS block. Spoken to caller who has chosen to hold for a busy extension. Spoken during the hold interval.

PMT.036 All of our lines are currently busy. Please try your call again later.

Usage: XCLASS block. Spoken to caller when a queue full condition exists.

Transfer to Human Assistance

PMT.050 Thank you. I'll transfer you to an operator.

Usage: In a DIAL block which transfers caller to an extension for human assistance.

Goodbye

PMT.051 Thank you for calling.

Usage: BYE block. Spoken to caller prior to system hanging up.

Subscriber Logon

PMT.052 Subscriber menu. Please enter your extension or mailbox number.

Usage: MENU block. Default prompt for a voice mail subscriber menu.

Subscriber Exit Menu

PMT.053 To access the main menu, press 1. To return to the subscriber menu, press the pound key. To end this call, press the star key.

Usage: MENU block. Default prompt for menu which follows subscriber exit from a mailbox or extension menu.

Public Voice Mail Message Center

PMT.054 Your call has been directed to the message center.

Usage: MENU block. Public voice mail message center. When call has been forwarded in a non-integrated installation. "Your call has been directed to the message center. An operator will be with you in a moment. To leave a confidential message for the person you are calling, please re-enter the number you called."

PMT.055 An operator will be with you in a moment.

Usage: MENU block. Public voice mail message center. When call has been forwarded in a non-integrated installation and an operator is available. "Your call has been directed to the message center. An operator will be with you in a moment. To leave a confidential message for the person you are calling, please re-enter the number you called."

PMT.056 To leave a confidential message for the person you are calling, please re-enter the number you called.

Usage: MENU block. Public voice mail message center. When call has been forwarded in a non-integrated DID or split port installation. "Your call has been directed to the message center. An operator will be with you in a moment. To leave a confidential message for the person you are calling, please re-enter the number you called."

PMT.057 If you are calling from a rotary phone, please stay on the line.

Usage: MENU block. Public voice mail message center. When call has been forwarded in a non-integrated DID or split port installation and an operator is not available. "Your call has been directed to the message center. To leave a confidential message for the person you are calling, please re-enter the number you called. If you are calling from a rotary phone, please stay on the line."

PMT.058 Please enter the mailbox number for which the message is intended.

Usage: MENU block. Menu for subscribers who are transferring a caller into someone else's mailbox to leave a message.

Public Voice Mail Exit Menu

PMT.059 To access the main menu, press 1. To end this call, press the star key.

Usage: MENU block. Default prompt in menu which follows subscriber exit from a mailbox or extension menu.

Audiotex Information Center

PMT.060 Please enter the announcement number.

Usage: MENU block. Default prompt for an audiotex information center.

PMT.061 To replay this announcement, press 1.

Usage: ACLASS block. Default prompt to offer replay of the announcement.

Voice Mail Prompts

Public Messaging

PMT.800 To record your message, please begin speaking at the tone. To stop recording, press any key.

Usage: MCLASS block. After mailbox name or greeting. Prompts public caller to leave message. "To record your message, please begin speaking at the tone. To stop recording, press any key... (beep)."

PMT.801 To review your message, press 1. To discard the message and re-record it, press 2. To send your message, press 3. To cancel the message and access other options, press 4.

Usage: MCLASS block. Prompt spoken to public caller after he or she has recorded a message.

Mailbox Logon

PMT.814 Please enter your password.

Usage: MCLASS block.

PMT.815 Invalid entry.

Usage: MCLASS block.

Mailbox Opening Menu

PMT.805 Mailbox menu. To listen to messages, press 1. To record and send a message, press 2. To access other options, press the pound key.

Usage: MCLASS block. When there are either new or saved messages in the mailbox.

PMT.806 Mailbox menu. To record and send a message press 2. To access other options, press the pound key.

Usage: MCLASS block. When there are no new or saved messages in the mailbox.

PMT.804 To retrieve a message, press 3. To change message alert, press 4. To change mailbox greeting, press 5. To change password, press 6. To change mailbox name, press 7...

Usage: MCLASS block. Spoken when subscriber chooses to list other options from the mailbox menu. "To retrieve a message, press 3. To change message alert, press 4. To change mailbox greeting, press 5. To change password, press 6. To change mailbox name, press 7... To access the extension menu, press 9... To exit, press the star key."

PMT.825 Distribution list menu. To change mailbox greeting, press 5. To change password, press 6. To change mailbox name, press 7. To exit, press the star key.

Usage: MCLASS block. Mailbox menu for a LIST mailbox. "To change mailbox greeting, press 5. To change password, press 6. To change mailbox name, press 7. To exit, press the star key."

PMT.842 To access the extension menu, press 9...

Usage: MCLASS block. Mailbox menu. Only used when mailbox has been accessed through an extension. "To retrieve a message, press 3. To change message alert, press 4. To change mailbox greeting, press 5. To change password, press 6. To change mailbox name, press 7... To access the extension menu, press 9... To exit, press the star key."

PMT.843 To access mailbox administration, press zero...

Usage: MCLASS block. Mailbox menu. Only used with mailboxes which are authorized for mailbox administration. "To retrieve a message, press 3. To change message alert, press 4. To change mailbox greeting, press 5. To change password, press 6. To change mailbox name, press 7... To access the extension menu, press 9... To access mailbox administration, press zero... To exit, press the star key."

PMT.844 To exit, press the star key.

Usage: MCLASS block. Mailbox menu. To exit. "To retrieve a message, press 3. To change message alert, press 4. To change mailbox greeting, press 5. To change password, press 6. To change mailbox name, press 7... To access the extension menu, press 9... To exit, press the star key."

Listen to Received Messages

PMT.808 Pause. To continue, press 3.

Usage: MCLASS block. Spoken if caller presses 2 (pause) while listening to a message.

Disposition for a Received Message

PMT.809 End of message. To review this message, press 4. To save, press 5. To erase, press 8. To forward message to another mailbox, press 9.

Usage: MCLASS block. Disposition menu after listening to a voice message received from a public caller (no option to reply).

PMT.830 End of message. To review this message, press 4. To save, press 5. To send a reply message, press 7. To erase, press 8. To forward message to another mailbox, press 9.

Usage: MCLASS block. Disposition menu after listening to a message from another subscriber.

PMT.810 Message saved.

Usage: MCLASS block. Confirms that a message has been saved.

Forwarding a Message

PMT.840 Forward Message. To record an introduction, press 2. Otherwise press 9.

Usage: MCLASS block. Spoken if caller has chosen to forward a received message to another subscriber.

PMT.841 Introduction erased.

Usage: MCLASS block. Confirms that an introduction message has been erased.

PMT.831 You may now dispose of the original message. To save it, press 5. To erase, press 8.

Usage: MCLASS block.

Erase or Cancel a Message

PMT.803 Message erased.

Usage: MCLASS block. Confirms that a message has been erased.

PMT.845 To confirm erasure, press 3. Otherwise, press 1.

Usage: MCLASS block. After caller has elected to erase a message, asks for confirmation.

Receive a Delivery Confirmation

PMT.837 Your message was received by...

Usage: MCLASS block. Confirmation of message delivery. "Your message was received by...Pat Smith. Date 9/25. Time 10:30 AM".

PMT.839 To review, press 4. To save, press 5. To erase, press 8.

Usage: MCLASS block. Disposition menu for delivery confirmation message. "Your message was received by...Pat Smith. Date 9/25. Time 10:30 AM To review, press 4. To save, press 5. To erase, press 8."

Record a Message

PMT.807 To start recording, press 3. To stop, press 1.

Usage: MCLASS block. Spoken when caller has chosen to record a message, a greeting, a mailbox name, or an introduction to a forwarded message.

PMT.828 Sorry. The message storage unit is full.

Usage: MCLASS block. Spoken when a caller has chosen to record something when the disk is full.

Disposition for Newly Recorded Message

PMT.829 To review this message, press 4. To send, press 5. To continue recording, press 6. To cancel this message, press 8.

Usage: MCLASS block. Spoken after subscriber has recorded a new message.

Addressing and Sending a Message

PMT.826 Enter the mailbox number.

Usage: MCLASS block. Used when addressing a newly recorded message or forwarding a received message.

PMT.817 To confirm, press 3. To change, press 1. To exit, press the star key.

Usage: MCLASS block. Used to confirm addressing of a message. Also used to confirm message alert settings.

PMT.802 Message sent.

Usage: MCLASS block. Confirms that a message has been sent.

PMT.838 Confirmation requested.

Usage: MCLASS block. Confirms that a message has been sent with a request for delivery confirmation. "Message sent. Confirmation requested."

PMT.832 To send another copy, enter the mailbox number. Otherwise press the star key.

Usage: MCLASS block. Used to send multiple copies of a message.

Setting Password

PMT.812 Enter the new password or, to exit, press the star key.

Usage: MCLASS block. Change password.

PMT.813 Password has been set.

Usage: MCLASS block. Confirm that a password has been created or changed.

Setting Message Alert

PMT.818 Message alert is off.

Usage: MCLASS block. Announces current status of message alert.

PMT.819 Message alert is on.

Usage: MCLASS block. Announces current status of message alert.

PMT.820 The phone number is...

Usage: MCLASS block. Plays back current message alert phone number. "The phone number is... 1,2,3"

PMT.821 The first message alert time is...

Usage: MCLASS block. Plays back current setting of first message alert time. "The first message alert time is...9:00AM."

PMT.822 The next alert time is...

Usage: MCLASS block. Plays back current setting of a subsequent message alert time. "The next message alert time is...9:00AM."

PMT.823 Enter the phone number.

Usage: MCLASS block. Requests entry of the message alert phone number.

PMT.824 Enter two digits each for the hour and minute.

Usage: MCLASS block. Requests entry of a message alert time.

Editing Mailbox Name and Greeting

PMT.816 Mailbox name...

Usage: MCLASS block. Confirms that caller has chosen to edit mailbox name. "Mailbox name. To review, press 4. To save, press 5. To re-record, press 7. To erase, press 8."

PMT.836 Mailbox greeting...

Usage: MCLASS block. Confirms that caller has chosen to edit mailbox greeting. "Mailbox greeting. To review, press 4. To save, press 5. To re-record, press 7. To erase, press 8."

PMT.811 To review, press 4. To save, press 5. To re-record, press 7. To erase, press 8.

Usage: MCLASS block. Disposition menu for mailbox name or greeting. "Mailbox name. To review, press 4. To save, press 5. To re-record, press 7. To erase, press 8."

Message Alert Out Call

PMT.827 There is a voice message for...

Usage: MCLASS block. Spoken when a message alert out call is answered. "There is a voice message for... Pat Smith. Please enter the password."

Message Hook

PMT.833 Enter the mailbox number to which the message was sent.

Usage: MCLASS block. Message hook.

PMT.834 No retrievable message was found.

Usage: MCLASS block. Spoken if attempt to hook a message is unsuccessful.

PMT.835 The message has been retrieved.

Usage: MCLASS block. Spoken if message hook is successful.

Extension Subscriber Prompts

Extension Menu

PMT.850 Extension menu.

Usage: XCLASS block. "Extension menu... To set call blocking, press 1... To set call screening, press 2... To forward calls to another extension, press 3... To access the mailbox menu, press 9... To exit, press star."

PMT.851 Call blocking is on.

Usage: XCLASS block.

PMT.852 Call blocking is off.

Usage: XCLASS block.

PMT.853 Extended call blocking is on.

Usage: XCLASS block.

PMT.854 Call screening is on.

Usage: XCLASS block.

PMT.855 Call screening is off.

Usage: XCLASS block.

PMT.856 Calls are forwarded to...

Usage: XCLASS block.

PMT.857 Remote call forwarding is off.

Usage: XCLASS block.

PMT.858 To set call blocking, press 1.

Usage: XCLASS block. "Extension menu... To set call blocking, press 1... To set call screening, press 2... To forward calls to another extension, press 3... To access the mailbox menu, press 9... To exit, press the star key."

PMT.859 To cancel call blocking, press 1.

Usage: XCLASS block. "Extension menu... To cancel call blocking, press 1... To set call screening, press 2... To forward calls to another extension, press 3... To access the mailbox menu, press 9... To exit, press the star key."

PMT.860 To set call screening, press 2.

Usage: XCLASS block. "Extension menu... To set call blocking, press 1... To set call screening, press 2... To forward calls to another extension, press 3... To access the mailbox menu, press 9... To exit, press the star key."

PMT.861 To cancel call screening, press 2.

Usage: XCLASS block. "Extension menu... To set call blocking, press 1... To cancel call screening, press 2... To forward calls to another extension, press 3... To access the mailbox menu, press 9... To exit, press the star key."

PMT.862 To forward calls to another extension, press 3.

Usage: XCLASS block. "Extension menu... To set call blocking, press 1... To set call screening, press 2... To forward calls to another extension, press 3... To access the mailbox menu, press 9... To exit, press the star key."

PMT.863 To cancel call forwarding, press 3.

Usage: XCLASS block. "Extension menu... To set call blocking, press 1... To set call screening, press 2... To cancel call forwarding, press 3... To access the mailbox menu, press 9... To exit, press the star key."

PMT.864 To change extension password, press 4.

Usage: XCLASS block. Used when there is no mailbox associated with the extension. "Extension menu... To set call blocking, press 1... To set call screening, press 2... To forward calls to another extension, press 3... To change extension password, press 4... To exit, press the star key."

PMT.865 To access the mailbox menu, press 9.

Usage: XCLASS block. "Extension menu... To set call blocking, press 1... To set call screening, press 2... To forward calls to another extension, press 3... To access the mailbox menu, press 9... To exit, press the star key."

PMT.866 To exit, press the star key.

Usage: XCLASS block. "Extension menu... To set call blocking, press 1... To set call screening, press 2... To forward calls to another extension, press 3... To access the mailbox menu, press 9... To exit, press the star key."

PMT.867 To set extended call blocking, press 1. Otherwise press the star key.

Usage: XCLASS block. Spoken after caller has chosen to set call blocking (from the extension menu).

PMT.868 Enter the extension to which calls should be forwarded.

Usage: XCLASS block. Spoken after caller has chosen to forward calls (from the extension menu).

PMT.869 Calls can not be forwarded to that extension at this time. It will cause a loop which forwards calls back to your extension.

Usage: XCLASS block. Spoken if the extension subscriber, has chosen to forward calls to an extension which is also forwarded in such a way that it would create a forwarding loop back to the subscriber's extension.

PMT.870 Enter the new password or, to exit, press the star key.

Usage: XCLASS block. Spoken if subscriber has chosen to change extension password.

PMT.871 To confirm, press 3. To change, press 1. To exit, press the star key.

Usage: XCLASS block. Used to confirm setting of new password or forwarding extension. "Extension 1,2,3... To confirm, press 3, To change, press 1. To exit, press the star key."

PMT.872 Password has been set.

Usage: XCLASS block. Confirms that password has been set to the new value.

PMT.899 **Note**: This a special indexed prompt containing the prompt segments required for vocalizing date and time stamps and numbers. This requires a special editing procedure:

Element 0	**Zero**	Element 3	**Three**
Element 1	**One**	Element 4	**Four**
Element 2	**Two**	Element 5	**Five**

Element 6	**Six**
Element 7	**Seven**
Element 8	**Eight**
Element 9	**Nine**
Element 10	**Ten**
Element 11	**Eleven**
Element 12	**Twelve**
Element 13	**Thirteen**
Element 14	**Fourteen**
Element 15	**Fifteen**
Element 16	**Sixteen**
Element 17	**Seventeen**
Element 18	**Eighteen**
Element 19	**Nineteen**
Element 20	**Twenty**
Element 21	**Thirty**
Element 22	**Forty**
Element 23	**Fifty**
Element 24	**Date**
Element 25	**Time**
Element 26	**AM**
Element 27	**PM**
Element 28	**Sunday**
Element 29	**Monday**
Element 30	**Tuesday**
Element 31	**Wednesday**
Element 32	**Thursday**
Element 33	**Friday**
Element 34	**Saturday**
Element 35	**Not Set**
Element 36	**Pause**
Element 37	**Wait For Dial Tone**
Element 38	**Wait For Answer**
Element 39	**Immediate**
Element 40	**Star**
Element 41	**Pound**
Element 42	**Mailbox**
Element 43	**Message**
Element 44	**Messages**
Element 45	**Extension**
Element 46	**Oh**
Element 47	**No**
Element 48	**A Public Caller**
Element 49	**Caller**
Element 50	**Next**
Element 51	**First**
Element 52	**Second**
Element 53	**Third**
Element 54	**Fourth**
Element 55	**Fifth**
Element 56	**Sixth**
Element 57	**Seventh**
Element 58	**Eigth**
Element 59	**Ninth**
Element 60	**Tenth**
Element 61	**Eleventh**
Element 62	**Twelvth**
Element 63	**Thirteenth**
Element 64	**Fourteenth**
Element 65	**Fifteenth**
Element 66	**Sixteenth**
Element 67	**Seventeenth**
Element 68	**Eighteenth**
Element 69	**Nineteenth**
Element 70	**Twentieth**
Element 71	**Thirtieth**
Element 72	**Caller is**
Element 73	**Callers are**

Administration Prompts

The following "900" prompts are used for various system administration, announcement administration and mailbox administration functions. They require special editing procedures if it is necessary to change them.

PMT.901 System administration menu. To edit system prompts, press 1. To set system date and time, press 2. To manually set the mode of one or all ports, press 3. To exit from system administration, press the star key.

PMT.902 Enter the prompt number.

PMT.903 Invalid entry. Try again.

PMT.904 To review, press 1. To re-record, press 2. To save, press 3. To erase, press 4. To trim from the front or back, press 5.

PMT.905 To start recording, press 3. To stop, press 1.

PMT.906 File saved.

PMT.907 File erased.

PMT.908 To trim the front, press 1. To trim the back, press 2.

PMT.909 Enter 2 digits each for the month, day and year or, to exit, press the star key.

PMT.910 Enter 2 digits each for the hour and minute or, to exit, press the star key.

PMT.911 Enter the port number for the new mode or, to change the mode on all ports, enter zero.

PMT.912 Enter the new mode number or, for automatic scheduling, enter zero.

PMT.913 Enter the mailbox number or, to exit, press the star key.

PMT.914 Enter message number or, to exit, press the star key.

PMT.915 Disk error.

PMT.916 System error.

PMT.917 ... does not exist. To create it, press 3. Otherwise, press 1.

PMT.918 Mailbox created.

PMT.919 Mailbox deleted.

PMT.920 To set message alert, press 4. To change the greeting message, press 5. To reset the password to the default value, press 6. To change the mailbox name, press 7. To delete this mailbox, press 8. To exit, press the star key.

PMT.921 Good bye.

Optional Prompts

The following prompts are for optional use as preferences or application requirements dictate.

PMT.101 For assistance, please hold. An operator will be with you in a moment.

Usage: Main MENU block (when an operator is available). "Thank you for calling. If you're calling from a touchtone phone you may dial an extension directly at any time during this announcement. To reach the sales department, press 1. For the service department, press 2. For assistance, please hold. An operator will be with you in a moment."

PMT.102 Please enter the password.

Usage: Any MENU block. Used to request password entry for any password protected block accessed from the MENU.

PMT.103 Thank you. Please hold while I connect your call.

Usage: XCLASS block. Spoken to caller prior to initiation of a transfer to an extension.

PMT.104 Thank you. May I say who's calling?

Usage: XCLASS block. Prior to call transfer. Asks caller to speak his or her name so that it can be announced when the called party answers.

PMT.105 To accept, press 1. To redirect the call, press 2. To reject the call, press 3 and hang up immediately.

Usage: XCLASS block. Spoken to called party when call screening is set. "This call is from... John Doe. To accept this call, press 1. To redirect the call, press 2. To reject, press 3 and hang up immediately."

PMT.106 Thank you. Please hang up now.

Usage: XCLASS block. Spoken to called party when a screened call has been rejected or redirected.

PMT.107 Your call is being redirected to...

Usage: XCLASS block. Spoken to caller when a screened transfer is redirected. "Your call is being redirected to ... extension 123."

PMT.110 I'll transfer you to an operator.

Usage: In a DIAL block which transfers caller to an extension for human assistance.

PMT.111 Good bye.

Usage: BYE block. Spoken to caller prior to system hanging up.

PMT.112 To leave a confidential message, for the person you are calling, please enter the mailbox number now.

Usage: MENU block. Public voice mail message center. When call has been forwarded in a non-integrated installation. "Your call has been directed to the message center. An operator will be with you in a moment. To leave a confidential message for the person you are calling, please enter the mailbox number now."

PMT.113 For a directory of extensions, press 1.

Usage: MENU block. When a directory is available.

PMT.114 For a directory of mailboxes, press 1.

Usage: MENU block. When a directory is available.

PMT.115 Please enter the first few letters of the person's last name. For the letter Q, use the 7 key. For the letter Z, use the 9 key. Please enter the letters now.

Usage: MENU block. When a directory is available.

PMT.116 One moment.

Usage: General use.

PMT.117 Thank you. I'll try again in a moment.

Usage: XCLASS block. Spoken to caller who has chosen to hold for a busy extension. Spoken during the hold interval.

Appendix C

Worksheets

Worksheets are provided to enable you to quickly and easily configure applications on AP3dot2. Photocopy the worksheets you need for each procedure.

Table of Contents

Prompt Worksheet

Prompt Number	Prompt

Root Block Worksheet

Mode #: _____

Label: _____

Salutation prompt-0: ____ (000)

Salutation prompt-1: ____ (000)

Salutation prompt-2: ____ (000)

Salutation prompt-3: ____ (000)

Salutation prompt-4: ____ (000)

Salutation prompt-5: ____ (000)

Answer after incoming ring number: ____ (1)

Dial when answering: ____ ()

Dial when disconnecting: ____ ()

Max callers allowed to hold in queue: ____ (16)

<NEXT> = __:[_____] (Required)

<DEFAULT> = __:[_____]

<____> = __:[_____] (CODE pointers)

<____> = __:[_____]

<____> = __:[_____]

<____> = __:[_____]

<____> = __:[_____]

<____> = __:[_____]

<____> = __:[_____]

<____> = __:[_____]

Menu Block Worksheet

Mode #: _____

Label: _____

Menu prompt-0: ____ (003)

Menu prompt-1: ____ (004)

Menu prompt-2: ____ (000)

Menu prompt-3: ____ (000)

Menu prompt-4: ____ (000)

Menu prompt-5: ____ (000)

Cache Menu prompts?: ____ (Y)

Repeat Menu prompts (if no caller entry): ____ (0)

Max caller entry digits: ____ (3)

Wait for caller entry (secs): ____ (3)

Admin digit: ____ (#)

ESCape digit: ____ (*)

Prompt to request password: ____ (024)

Prompt to indicate invalid entry (and request retry): ____ (007)

Retries allowed (if invalid entry): ____ (1)

Repeat prompts if no entry: ____ (1)

Search based on (ENTRY, CID, FID, CODE, KEY): ____ (ENTRY)

Search Extension group (XGROUP): ____ (0)

Search Mailbox group (MGROUP): ____ (0)

Search AMC group (AGROUP): ____ (0)

Append new KEY to previous value after search?: ____ (N)

Set CID (Caller ID) to (ENTRY, KEY) after search: ____ ()

Set FID (Forwarded ID) to (ENTRY, KEY) after search: ____ ()

Menu Block Worksheet

__:<NO-ENTRY> = __:[_____] (Required)

__:<INVALID> = __:[_____] (Required)

__:<ACLASS> = __:[_____] (Required only for AMC)

__:<AMC-EXIT> = __:[_____] (Required only for AMC)

__:<_____> = (_____) (Translation)

__:<_____> = (_____) (Translation)

__:<_____> = (_____) (Translation)

__:<_____> = (_____) (Translation)

__:<_____> = (_____) (Translation)

__:<_____{P____}> = [_____] (Password pointer)

__:<_____{P____}> = [_____] (Password pointer)

__:<_____> = __:[_____]

__:<_____> = __:[_____]

__:<_____> = __:[_____]

__:<_____> = __:[_____]

__:<_____> = __:[_____]

__:<_____> = __:[_____]

__:<_____> = __:[_____]

__:<_____> = __:[_____]

__:<_____> = __:[_____]

Dial Block Worksheet

Mode #: _____

Label: _____

Prompt before dialing: ___ (008)

Dial prefix: _____ () 8 digits max.

Dial: _____ () 16 digits max.

Dial suffix: _____ () 8 digits max.

Rings: ____ (0)

Ring cadence: ___/___ ___/___ (110/100 300/280)

Busy cadence: ___/___ ___/___ (60/50 50/40)

Fast Busy cadence: ___/___ ___/___ (35/25 25/15)

Cadence filter: ____ (1)

Dial to abort No Answer: ____ (&,)

Dial to abort Busy: ____ (&,)

Dial to abort Fast Busy: ____ (&,)

Dial to abort Error: ____ (&,)

__:<ANSWER> = __:[_____]

__:<NO-ANSWER> = __:[_____]

__:<BUSY> = __:[_____]

__:<FBUSY> = __:[_____]

__:<ERROR> = __:[_____]

__:<_____> = __:[_____]

__:<_____> = __:[_____]

__:<_____> = __:[_____]

__:<_____> = __:[_____]

__:<_____> = __:[_____]

Bye Block Worksheet

Mode #: _____

Label: _____

Prompt to speak before disconnecting = ____ (023)

Query Block Worksheet

Query prompt: ____ (000)

Playback prompt: ____ (000)

Exit prompt: ____ (000)

Error prompt: ____ (000)

Cache prompts?: ____ (Y)

Wait for caller response (secs): ____ (4)

Repeat query if no response: ____ (1)

Max response length (secs): ____ (30)

Silence timeout after response (secs): ____ (2)

Wait for DTMF entry (secs): ____ (3)

Repeat Exit prompt if no DTMF entry: ____ (1)

Digit to playback response: ____ (1)

Digit to change response: ____ (2)

Digit to confirm response: ____ (3)

Escape digit: ____ (*)

__:<MBX> = __:[_____] (Required)

__:<NEXT> = __:[_____] (Required)

__:<NO-RESP> = __:[_____] (Required)

__:<ESCAPE> = __:[_____] (Required)

__:<ERROR> = __:[_____] (Required)

__:<_____> = __:[_____]

__:<_____> = __:[_____]

__:<_____> = __:[_____]

__:<_____> = __:[_____]

__:<_____> = __:[_____]

EXT Block Worksheet

XGroup #: _____

Label: _____

KEY value (Extension number): ____ ()

Dial: _____ ()

Rings: ____ (0)

Call screening?: ____ (N)

__:<XCLASS> = __:[_____] (Required)

__:<MSG> = __:[_____] (Optional)

__:<NO-ANSR> = __:[_____] (Optional)

__:<BUSY> = __:[_____] (Optional)

__:<FBUSY> = __:[_____] (Optional)

__:<ERROR> = __:[_____] (Optional)

__:<FWD> = __:[_____] (Optional)

__:<QUE-FULL> = __:[_____] (Required only for Sequencer Queuing)

__:<_____> = __:[_____]

__:<_____> = __:[_____]

__:<_____> = __:[_____]

__:<_____> = __:[_____]

__:<_____> = __:[_____]

ACD Block Worksheet

XGroup #: _____

Label: _____

KEY value (Pilot number): ____ ()

Rings: ____ (0)

__:<MEMBER> = __:[_____]

__:<MEMBER> = __:[_____]

__:<MEMBER> = __:[_____]

__:<MEMBER> = __:[_____]

__:<MEMBER> = __:[_____]

__:<MEMBER> = __:[_____]

__:<MEMBER> = __:[_____]

__:<MEMBER> = __:[_____]

__:<XCLASS> = __:[_____] (Required)

__:<MSG> = __:[_____] (Optional)

__:<BUSY> = __:[_____] (Optional)

__:<FWD> = __:[_____] (Optional)

__:<QUE-FULL> = __:[_____] (Required only for Sequencer Queuing)

__:<_____> = __:[_____]

__:<_____> = __:[_____]

__:<_____> = __:[_____]

__:<_____> = __:[_____]

__:<_____> = __:[_____]

XClass Block Worksheet

Group #: _____

Label: _____

Extention Retention (days): ____ (90)

Prompt to ask caller to record name: _____ (015)

Prompt prior to transfer: _____ (016)

Prompt to announce call to called party: _____ (017)

Prompt to announce redirected call to called party: _____ (018)

Prompt to announce forwarded call to called party: _____ (019)

Prompt to announce caller name to called party: _____ (020)

Prompt called party to enter digit to accept call: _____ (021)

Prompt called party to enter extension for redirect: _____ (022)

Prompt called party to acknowledge redirect: _____ (023)

Prompt caller that party is unavailable: _____ (024)

Prompt caller that extension was unanswered: _____ (025)

Prompt caller that extension is busy: _____ (026)

Prompt caller that extension is still busy: _____ (027)

Prompt caller that call was not connected (transfer error): _____ (029)

Prompt caller with option to leave message: _____ (030)

Prompt caller with option to hold: _____ (031)

Prompt caller with option to continue holding: _____ (032)

Prompt caller with option to enter different extension: _____ (033)

Prompt while holding: _____ (035)

Prompt to indicate que full: _____ (036)

Prompt to request password: _____ (814)

Prompt to indicate invalid entry: _____ (815)

Prompt to announce extension user menu: _____ (850)

Prompt to indicate call blocking is on: _____ (851)

Prompt to indicate call blocking is off: _____ (852)

XClass Block Worksheet

Prompt to indicate extended call blocking is on: _____ (853)

Prompt to indicate call screening is on: _____ (854)

Prompt to indicate call screening is off: _____ (855)

Prompt to indicate that calls are forwarded: _____ (856)

Prompt to indicate remote call forwarding is off: _____ (857)

Prompt set call blocking: _____ (858)

Prompt to cancel call blocking: _____ (859)

Prompt to set call screening: _____ (860)

Prompt to cancel call screening: _____ (861)

Prompt to forward calls: _____ (862)

Prompt to cancel remote call forwarding: _____ (863)

Prompt to change password: _____ (864)

Prompt to access mailbox menu: _____ (865)

Prompt to exit from extension menu: _____ (866)

Prompt to set extended call blocking: _____ (867)

Prompt to request remote call forwarding number: _____ (868)

Prompt to warn of circular fowarding loop: _____ (869)

Prompt to request new password: _____ (870)

Prompt request confirmation or change: _____ (871)

Prompt to confirm password has been set: _____ (872)

Wait for caller entry (secs): _____ (3)

Repeat prompts if no entry: _____ (2)

Retries allowed if invalid entry: _____ (4)

Digit to leave message: _____ (1)

Digit to accept a call: _____ (1)

Digit to redirect a call: _____ (2)

Digit to hold: _____ (2)

Hold interval before trying again (secs): _____ (30)

Dial to place caller on PBX hold: _____ ()

Dial to retrieve caller from PBX hold: _____ ()

Dial Prefix: _____ (&,)

Dial Suffix: _____ ()

XClass Block Worksheet

Ring cadence: _____ (110/90 310/290

Busy cadence: _____ (60/50) (50/40)

Fast Busy cadence: _____ (35/25) (25/15)

Cadence filter: _____ (1)

Dial to abort No Answer: _____ (&,)

Dial to abort Busy: _____ (&,)

Dial to abort Fast Busy: _____ (&,)

Dial to abort Error: _____ (&,)

Dial to abort Answer (if screened call is rejected): _____ (,,,)

1:<MENU> = 0:[OPEN MAIN]

0:<MENU> = 0:[CLOSED MAIN]

0:<NO-ENTRY> = 0:[GOODBYE]

0:<USER-EXIT> = 0:[SUBSCRIBER EXIT]

__:<MENU> = __:[_____] (Optional)

__:<NO-ENTRY> = __:[_____] (Required)

__:<MSG> = __:[_____] (Optional)

__:<QUE-FULL> = __:[_____] (Optional)

__:<_____> = __:[_____]

__:<_____> = __:[_____]

__:<_____> = __:[_____]

__:<_____> = __:[_____]

__:<_____> = __:[_____]

MBX Block Worksheet

MGroup #: _____

Label: _____

KEY value (Mailbox number): ____

User password: ____ (xxxxxxxx)

Announcement only mailbox?: ____ (N)

Mailbox administrator?: ____ (N)

Playback messages in LIFO order?: ____(Y)

Set MWI?: ____ (N)

Extension Dial (for MWI): _____ () 16 digits max.

Message Alert on?: ____ (N)

Message Alert dial: _____ () 24 digits max.

Message Alert time 0: _____ (IMMEDIATE)

Message Alert time 1: _____ ()

Message Alert time 2: _____ ()

Message Alert time 3: _____ ()

__:<MCLASS> = __:[_____] (Required)

List Block Worksheet

MGroup #: ______

Label: ________________________

KEY value (Mailbox number): ________

User password to change name, greeting, etc.: ________ (xxxxxxxx)

__:<MCLASS> = __:[__________] (Required)

__:<MEMBER> = __:[__________]   __:<MEMBER> = __:[__________]
__:<MEMBER> = __:[__________]   __:<MEMBER> = __:[__________]
__:<MEMBER> = __:[__________]   __:<MEMBER> = __:[__________]
__:<MEMBER> = __:[__________]   __:<MEMBER> = __:[__________]
__:<MEMBER> = __:[__________]   __:<MEMBER> = __:[__________]
__:<MEMBER> = __:[__________]   __:<MEMBER> = __:[__________]
__:<MEMBER> = __:[__________]   __:<MEMBER> = __:[__________]
__:<MEMBER> = __:[__________]   __:<MEMBER> = __:[__________]
__:<MEMBER> = __:[__________]   __:<MEMBER> = __:[__________]
__:<MEMBER> = __:[__________]   __:<MEMBER> = __:[__________]
__:<MEMBER> = __:[__________]   __:<MEMBER> = __:[__________]
__:<MEMBER> = __:[__________]   __:<MEMBER> = __:[__________]
__:<MEMBER> = __:[__________]   __:<MEMBER> = __:[__________]
__:<MEMBER> = __:[__________]   __:<MEMBER> = __:[__________]
__:<MEMBER> = __:[__________]   __:<MEMBER> = __:[__________]
__:<MEMBER> = __:[__________]   __:<MEMBER> = __:[__________]
__:<MEMBER> = __:[__________]   __:<MEMBER> = __:[__________]
__:<MEMBER> = __:[__________]   __:<MEMBER> = __:[__________]
__:<MEMBER> = __:[__________]   __:<MEMBER> = __:[__________]
__:<MEMBER> = __:[__________]   __:<MEMBER> = __:[__________]
__:<MEMBER> = __:[__________]   __:<MEMBER> = __:[__________]
__:<MEMBER> = __:[__________]   __:<MEMBER> = __:[__________]

MClass Block Worksheet

MGroup #: _____

Label: _____

Mailbox retention (days): ____ (30)

Message retention (days): ____ (10)

Max digits in a mailbox KEY: ____ (4)

Max message length (secs): ____ (180)

Silence timeout when recording message: ____ (5)

Repeat prompts (if no entry): ____ (1)

Retries allowed (if invalid entry): ____ (2)

Wait for caller entry (secs): ____ (3)

Min. DTMF duration during message play back: ____ (5)

Min. DTMF duration during message recording: ____ (7)

Admin digit: ____ (#)

ESCape digit: ____ (*)

Dial to set MWI on: _____ () 8 digits max

Dial to set MWI off: _____ () 8 digits max

Message Alert dial prefix: _____ () 8 digits max

Message Alert dial suffix: _____ () 8 digits max

Message Alert rings: ____ (4)

Max Message Alert calls: ____ (8)

Message Alert no answer recall time (mins): ____ (15)

Message Alert busy recall time (mins): ____ (5)

Ring cadence: ___/___ ___/___ (110/100 300/280)

Busy cadence: ___/___ ___/___ (60/50 50/40)

Fast Busy cadence: ___/___ ___/___ (35/25 25/15)

Cadence filter: ____ (1)

MClass Block Worksheet

Prompt-00: ____ (800) Prompt-01: ____ (801) Prompt-02: ____ (802) Prompt-03: ____ (803)

Prompt-04: ____ (804) Prompt-05: ____ (805) Prompt-06: ____ (806) Prompt-07: ____ (807)

Prompt-08: ____ (808) Prompt-09: ____ (809) Prompt-10: ____ (810) Prompt-11: ____ (811)

Prompt-12: ____ (812) Prompt-13: ____ (813) Prompt-14: ____ (814) Prompt-15: ____ (815)

Prompt-16: ____ (816) Prompt-17: ____ (817) Prompt-18: ____ (818) Prompt-19: ____ (819)

Prompt-20: ____ (820) Prompt-21: ____ (821) Prompt-22: ____ (822) Prompt-23: ____ (823)

Prompt-24: ____ (824) Prompt-25: ____ (825) Prompt-26: ____ (826) Prompt-27: ____ (827)

Prompt-28: ____ (828) Prompt-29: ____ (829) Prompt-30: ____ (830) Prompt-31: ____ (831)

Prompt-32: ____ (832) Prompt-33: ____ (833) Prompt-34: ____ (834) Prompt-35: ____ (835)

Prompt-36: ____ (836) Prompt-37: ____ (837) Prompt-38: ____ (838) Prompt-39: ____ (839)

Prompt-40: ____ (840) Prompt-41: ____ (841) Prompt-42: ____ (842) Prompt-43: ____ (843)

Prompt-44: ____ (844) Prompt-45: ____ (845)

__:<PUB-MSG> = __:[_____] (Required)

__:<PUB-NOMSG> = __:[_____] (Required)

__:<PUB-ESC> = __:[_____] (Required)

__:<USER-EXIT> = __:[_____] (Required)

__:<ALERT> = __:[_____] (Required)

__:<TUTOR> = __:[_____]

__:<_____> = __:[_____]

__:<_____> = __:[_____]

__:<_____> = __:[_____]

__:<_____> = __:[_____]

__:<_____> = __:[_____]

AClass Block Worksheet

AGroup #: _____

Label: _____

Max message length (secs): ____ (180)

Message retention (days): ____ (10)

Max message plays before erasing: ____ (0)

Wild card digit in message KEY: ____ (#)

Admin password: ____ (0000)

Digit to replay message: ____ ()

Prompt giving option to replay message: ____ (000)

Prompt to indicate message disk is full: ____ (000)

S-Table Worksheet

DESCRIPTION:____

____

____

PORT	DATE	DOW	TIME	MODE
[___]	[___/___]	[__]	[___:___]	[___]
[___]	[___/___]	[__]	[___:___]	[___]
[___]	[___/___]	[__]	[___:___]	[___]
[___]	[___/___]	[__]	[___:___]	[___]
[___]	[___/___]	[__]	[___:___]	[___]
[___]	[___/___]	[__]	[___:___]	[___]
[___]	[___/___]	[__]	[___:___]	[___]
[___]	[___/___]	[__]	[___:___]	[___]
[___]	[___/___]	[__]	[___:___]	[___]
[___]	[___/___]	[__]	[___:___]	[___]
[___]	[___/___]	[__]	[___:___]	[___]
[___]	[___/___]	[__]	[___:___]	[___]
[___]	[___/___]	[__]	[___:___]	[___]
[___]	[___/___]	[__]	[___:___]	[___]
[___]	[___/___]	[__]	[___:___]	[___]
[___]	[___/___]	[__]	[___:___]	[___]
[___]	[___/___]	[__]	[___:___]	[___]
[___]	[___/___]	[__]	[___:___]	[___]
[___]	[___/___]	[__]	[___:___]	[___]
[___]	[___/___]	[__]	[___:___]	[___]
[___]	[___/___]	[__]	[___:___]	[___]
[___]	[___/___]	[__]	[___:___]	[___]
[___]	[___/___]	[__]	[___:___]	[___]
[___]	[___/___]	[__]	[___:___]	[___]
[___]	[___/___]	[__]	[___:___]	[___]

Appendix D

Phone System Feature Survey

The phone system survey is provided to assist you in integrating AP3dot2 with the telephone system.

Manufacturer: _____

Model: _____

Hardware/Software Level: _____

AP3dot2 Dealers (who have experience with this switch):

_____

Customer Sites: _____

Instructions for Completing This Survey

This survey is to collect information regarding the characteristics and capabilities of the telephone switching system which may have significance with respect to operation of the AP3dot2. It is also excellent as a check list for pre-installation surveys to ensure that the switch/AP3dot2 combination will provide the customer with the required functionality.

The fact that a particular function is not provided by the switch does not necessarily mean that it is incompatible with AP3dot2. For example, if the application is for a voice mail or audiotext application, call transfer capabilities may not be important or even desirable.

In the comment section of each question, explain the method used to implement the function and any special or proprietary switch terminology used by the manufacturer, hardware or software features required, unusual characteristics and any alternate methods (special tricks) which may be helpful.

In areas where you are not sure of the answer, give the information to the best of your knowledge while still indicating your uncertainty.

Configuring Station Ports for AP3dot2

The AP3dot2 ports closely emulate a standard single line telephone set. Does this switch provide support for this type of set?

[ ] Yes [ ] No Comments:

Are special port cards or other hardware or software options required to support 2500 sets?

[ ] Yes [ ] No Comments:

Can the station ports servicing the AP3dot2 be configured in a hunt group?

[ ] Yes [ ] No Comments:

If no, are there any alternate arrangements to provide distribution of incoming calls to the AP3dot2?

[ ] Yes [ ] No Comments:

Are there any special features which should be enabled or disabled on the station ports servicing the AP3dot2 (such as configuring them as voice mail ports or disabling call waiting signals)?

[ ] Yes [ ] No Comments:

Can calls be directed to the console or an alternate station if all AP3dot2 ports are busy?

[ ] Yes [ ] No Comments:

Can calls be directed to the console or an alternate station if the AP3dot2 ports are unanswered?

[ ] Yes [ ] No Comments:

Can incoming trunk calls be directed to ring automatically at the AP3dot2 stations?

[ ] Yes [ ] No Explain:

Can the switch be configured to overflow calls from the console to the AP3dot2 station ports?

[ ] Yes [ ] No Comments:

Signaling of Calling Party Disconnects

What type of signaling is provided by the switch to the AP3dot2 station ports when calling party disconnects on a trunk call?

[ ] Wink signal
[ ] DTMF signal _____
[ ] Busy signal
[ ] Fast busy signal
[ ] Reorder or error tone
[ ] Dial tone
[ ] Continuous Silence
[ ] Silence of _____ seconds, followed by _____
[ ] Other, explain:

What type of signaling is provided by the switch to the AP3dot2 station ports when calling party disconnects on a station to station call?

[ ] Wink signal
[ ] DTMF signal _____
[ ] Busy signal
[ ] Fast busy signal
[ ] Reorder or error tone
[ ] Dial tone
[ ] Continuous Silence
[ ] Silence of _____ seconds, followed by _____
[ ] Other, explain:

DTMF Signaling To AP3dot2 (End To End Signaling)

Can station sets (including electronic sets) send DTMF tones to the AP3dot2 after a station to station connection has been established?

[ ] Yes [ ] No Comments:

If no, can a trunk port "loop back" be arranged to provide this function?

[ ] Yes [ ] No Comments:

Can console send DTMF tones to the AP3dot2 after connection has been established?

[ ] Yes [ ] No Comments:

If no, can a separate tone generator be connected to the console handset/headset port (or any other arrangement) to provide this function?

[ ] Yes [ ] No Comments:

AP3dot2 Call Transfers

Is the required flash hook time consistent, even when the switch is under heavy traffic load?

[ ] Yes [ ] No Comments:

What is the shortest flash hook time which the switch will reliably detect?

_____ (hundredths of seconds)

During a call transfer, are the signal cadences provided by the switch to the AP3dot2 stations consistent, even when the switch is under heavy traffic load?

[ ] Yes [ ] No Comments:

Does the switch provide distinctive ring back signals (double ring sounds) on some or all call transfers?

[ ] Yes [ ] No Comments:

What are the minimum and maximum sound and silence values for each type of signal? Give values in hundredths of seconds.

Ring:	Sound max. _____	/ min. _____
	Silence max. _____	/ min. _____
Busy:	Sound max. _____	/ min. _____
	Silence max. _____	/ min. _____
Fast Busy:	Sound max. _____	/ min. _____

Distinctive Ring:
Silence max. _____ / min. _____
Sound max. _____ / min. _____
Short silence max. _____ / min. _____
Long silence max. _____ / min. _____

Are blind (unsupervised) transfers to stations allowed?

[ ] Yes [ ] No Comments:

What happens if an unsupervised call transfer is not picked up?

Are supervised transfers to stations allowed?

[ ] Yes [ ] No Comments:

What is the sequence (e.g. flash hook, wait for dial tone, dial feature code, etc.) to initiate a transfer to a station?

What is the sequence to abort a call transfer to an unanswered station and return to the calling party?

What is the sequence to abort a call transfer to a busy station and return to the calling party?

What is the sequence to abort a call transfer to an invalid station and return to the calling party?

Does the switch return a busy signal when AP3dot2 transfers to a busy station (This may seem like a silly question. However, there are some switches which automatically redirect calls for busy stations to unanswered stations.)?

[ ] Yes [ ] No Comments:

Are there any station features which should be disabled or adjusted in order to avoid interference with supervised transfers from the AP3dot2 (e.g., call forwarding, hands-free answering, timeout parameters, etc.)?

[ ] Yes [ ] No Comments:

What types of transfers to the console are allowed or required?

Blind transfer:

[ ] Required
[ ] Allowed
[ ] Not allowed
Comments:

Supervised transfer:

[ ] Required
[ ] Allowed
[ ] Not Allowed
Comments:

What happens if an unsupervised call transfer to the console is not picked up?

Are transfer and abort sequences for the console the same as transfers to stations?

[ ] Yes [ ] No Comments:

Does the switch support trunk to trunk transfers by AP3dot2 (Remember that AP3dot2 goes on hook when the calling party answers)?

[ ] Yes [ ] No Comments:

Does the switch support internal station to trunk transfers by Ap3DOT2 (Remember that Ap3DOT2 goes on hook when the calling party answers)?

[ ] Yes [ ] No Comments:

Are transfer and abort sequences the same as transfers to stations?

[ ] Yes [ ] No Comments:

Are there any special hardware, software or trunk features required to support transfers to trunks? **Note**: Switches normally require that disconnect signaling be provided by the Central Office in order to allow this feature.

[ ] Yes [ ] No Comments:

What types of transfers to station groups are allowed or required?

Blind transfer:

[ ] Required
[ ] Allowed
[ ] Not allowed
Comments:

Supervised transfer:

[ ] Required
[ ] Allowed
[ ] Not allowed
Comments:

What happens if an unsupervised call transfer to a station group is not picked up?

Are transfer and abort sequences the same as transfers to stations?

[ ] Yes [ ] No Comments:

What types of transfers via tie lines are allowed or required?

Blind transfer:

[ ] Required

[ ] Allowed
[ ] Not allowed
Comments:

Supervised transfer:
[ ] Required
[ ] Allowed
[ ] Not allowed
Comments:

What happens if an unsupervised call transfer via tie line is not picked up?

What is the sequence (e.g. flash hook, wait for dial tone, dial feature code, etc.) to initiate a transfer via tie line?

What is the sequence to abort a call transfer, via tie line, to an unanswered station and return to the calling party?

What is the sequence to abort a call transfer to a busy station, via tie line, and return to the calling party?

What is the sequence to abort a call transfer to an invalid station, via tie line, and return to the calling party?

What type of signal is given by the switch if all tie lines are busy?

[ ] Busy
[ ] Fast busy
[ ] Other
Comments:

What is the sequence to abort a call transfer and return to the calling party if tie lines are busy?

What type of signal is given by the switch if Ap3dot2 attempts to transfer to an invalid number?

[ ] Ring
[ ] Busy
[ ] Fast busy
[ ] Error tone
[ ] Other
Comments:

What is the sequence to abort a call transfer to an invalid number and return to the calling party?

Switch Integration with AP3dot2

Is the switch capable of forwarding calls to AP3dot2?

[ ] Yes [ ] No Comments:

Is the switch capable of pausing until AP3dot2 goes off hook, then identifying the forwarded station via DTMF signaling?

[ ] Yes [ ] No Comments *(If yes, explain the method used)*:

Is the switch capable of identifying the forwarded station via digital link to the AP3dot2?

[ ] Yes [ ] No Comments *(If yes, explain the method used)*:

Does switch allow AP3dot2 to activate/deactivate message waiting indicators, either by DTMF or digital signaling?

[ ] No message waiting indicators available on the switch.

[ ] Control by AP3dot2 not allowed by switch.

[ ] DTMF activation allowed. Feature code:

[ ] DTMF deactivation allowed. Feature code:

[ ] Digital activation allowed.

[ ] Digital deactivation allowed.

[ ] Manual deactivation (by the user) required

Comments: