MACROTEL INTERNATIONAL CORPORATION

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WARRANTY

MacTel International Corporation warrants that this equipment (except for fuses, lamps and other consumables) will, upon delivery by an authorized MacTel dealer to a retail customer in new condition, be free from defects in material and workmanship for twelve (12) months after purchase order from MacTel. This warranty is void (a) if the equipment is used under other than normal use and maintenance conditions, (b) if the equipment is modified or altered, unless the modification or alteration is expressly authorized by MacTel, (c) if the equipment is subject to abuse, neglect, lightning, electrical fault or accident, (d) if the equipment is defaced or missing, or (f) if the equipment is installed or used in combination with products not supplied by MacTel and which are incompatible or of inferior quality, design or performance.

The sole obligation of MacTel International Corporation under this warranty, or under any other legal obligation with respect to the equipment, is the repair or replacement by an authorized MacTel dealer, with new or refurbished parts (at their option) of such defective or missing parts causing the malfunction. If MacTel or one of its authorized dealers does not replace or repair such parts, the retail customer’s sole remedy will be a refund of the price charged by MacTel to its dealers for such parts as are proven to be defective, and which are returned to MacTel through one of its authorized dealers within the warranty period and no later than thirty (30) days after such malfunction, whichever first occurs.

Under no circumstances will the retail customer or any user or dealer or other person be entitled to any direct, special, indirect, consequential or exemplary damages, for breach of contract, tort, or otherwise. Under no circumstances will any such person be entitled to any sum greater than the purchase price paid to MacTel for the item of equipment that is malfunctioning.

To obtain service under this warranty, the retail customer must bring the malfunction of the machine to the attention of MacTel’s authorized dealer within the twelve (12) month period and no later than thirty (30) days after such malfunction, whichever first occurs. Failure to bring the malfunction to the attention of an authorized MacTel dealer within the prescribed time, results in the customer being not entitled to warranty service.

THERE ARE NO OTHER WARRANTIES FROM MACROTEL INTERNATIONAL CORPORATION WHICH EXTEND BEYOND THE FACE OF THIS WARRANTY. ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, AND FITNESS FOR USE, ARE EXCLUDED.

No MacTel dealer and no person other than an officer of MacTel may extend or modify this warranty. No such modification or extension is effective unless it is in writing.
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HOLD
HOLD ABANDON
HOLD REMINDER
HOT DIAL PAD
HOUR MODE SELECTION
HUNT GROUPS
ICM RING/VOICE CALL
I HOLD INDICATION
I USE INDICATION
KEY INQUIRY
LAST NUMBER REDIAL (LNR)
LEAST COST ROUTING
LINE GROUP ASSIGNMENT
LINE INTERFACE
LINE NAME PROGRAMMING
LINE POOL
LINE SIGNALING
LINE TO LINE CONFERENCE
LINE TYPE SELECTION
LOUD BELL INTERFACE
MANUAL LINE ACCESS
MEET-ME ANSWER
MESSAGE WAITING
MESSAGING (SENDING / ADVISORY)
MIXED DIALING
MUSIC-ON-HOLD
MUTE (VOICE)
NIGHT SERVICE
NIGHT SERVICE STATION
OFF-HOOK VOICE ANNOUCE
ON-HOOK DIALING
PAGING
PAUSE
POWER FAILURE TRANSFER
PRIVACY
PRIVATE LINE
PROGRAMMABLE USER FEATURE KEYS
PULSE METERING
RECALL
RELEASE
REMEMIDER CLOCK
REMOTE PROGRAMMING
RINGING LINE PREFERENCE
SAVED NUMBER REDIAL
SHIFT
SIMULTANEOUS DATA/VOICE CAPABILITY
SOFT KEY FEATURE ACCESS
SPEED DIALING
STATION FEATURE STATUS CHECK
STATION GROUP ASSIGNMENT
STATION LOCK/UNLOCK
STATION MESSAGE DETAIL RECORDING (SMDR)
STATION NUMBERING PLAN
SYSTEM TIME
TOLL RESTRICTION
TONE DETECTOR
TONE DURATION SELECTION
TRANSFER
TRAVELLING CLASS OF SERVICE
USER NAME PROGRAMMING
VOICE CALL
VOICE MAIL
VOLUME CONTROL
WALL MOUNTABLE
WARNING TONE
- Available in future release
The MT-360 Series is a high performance digital key telephone system capable of supporting both voice and data applications. It is available in a six-line by 16-station configuration, with an optional expansion board available, for a configuration of eight lines by 24 key telephones with growth capabilities of up to 360 ports.

The MT-360 Series is based on truly digital 2B+D technology, with single-pair wire connection between the KSU and the station terminals. Analog terminal adaptors are available, for connection of analog devices (standard telephones, fax machines, voice mail, etc.) to the system. Each Analog Terminal Adaptor uses one station port, and provides connection of two analog devices, doubling the station capacity of the system when standard single line phones are used. (to an 8 X 48 configuration).

Three telephones are available with the MT-360 Series system. The Standard set has programmable feature keys and speakerphone capability. The Display set adds DSS/Speed Dial keys, and an LCD display. The Executive set adds Off-Hook Voice Announce, and a 9-pin data port / data module for integrated data transmission.

Key Service Unit
The KSU (MT-KSU, P/N 3009100) consists of four main circuit boards, as follows:

**MT-COT/6** Six-circuit trunk interface board: (P/N 3009120) Serves six loop start analog trunk interfaces. Trunk 1 is routed to the power failure jack upon system power failure, to provide power failure transfer capabilities. Included in the standard configuration

**MT-STN/16** Sixteen station interface / power supply board: (PN 3009122) This board consists of sixteen digital station interface circuits, a digital intercom call progress tone generator, external call progress tone detector, incoming DTMF decoder for DISA, an external music source input for Music-on-Hold/Background music, an external page interface, a loud bell interface, volume control for music sources, a DC power regulator, and a system power backup battery charger.

Connectors on this board include a 50-position amphenol connector for stations, a phone jack for music source input, a phone jack for external page output, and a terminal block for loud bell and power battery.

Three 64 KBPS digital signal channels are maintained for each station by the octal transceiver. These digital channel signals are designated as 2B+D channels. A high performance pulse transformer is built into each station interface for digital signal transactions. Included in the standard configuration.

**MT-CCB** Common Control Board : (P/N 3009118) This board contains mainly centralized control circuits. It contains an 8088 compatible 16 bit microprocessor, 256 Kbyte ROM for system firmware, 64 Kbyte CMOS RAM with battery backup, a four-party digital conference circuit, and dual RS-232C serial ports interface (used to access SMDR and remote programming). TSI (Time Slot Interchange) switches four PCM highways of 32 channels each. System programming is protected with rechargeable NiCad battery and a SPDT slide switch for programming clearing. Included in the standard configuration.

**MT-EXP** 208 Expansion board (P/N 3009102) : For expansion to 8 X 24. This board bears two C.O. line interface circuits and eight digital station interface circuits. This expands the KSU from 616 to 824. The KSU cabinet measures 17 x 11.5 x 3.5 in, and weighs 15.4 lbs (7 kg).

Service Circuits:

**Tone Plan/Cadence Control:** The tone plan employs digital synthesis technique. The tone signal of specified frequency and level is digitally sampled with A-law or Mu-law encoding scheme. Sampled data are then programmed into an EPROM 27128 (16 KB).

**Music Sources:** Two music sources are implemented: an internal melody synthesizer, and an external music source from a phono jack. The external music source can be any music/audio signal, such as a radio, tape player, CD player, etc.

**Loudbell Interface Circuit:** A dry relay contact for external loud bell ON/OFF control. Any other acoustic device or optical alarm device can be connected to this controlled dry contact.

**Call Progress Tone Detector:** There is an external call progress tone detector to which any of eight trunk signals can be routed. Output of this tone detector is then routed to Common Control of the KSU for feature support.

**DTMF Decoder:** This is used mainly for DISA operation. Any trunk signal can be routed to it during DISA feature access.

**External Page Circuit:** The external page interface offers 600-ohm impedance transformer for coupling audio signals from any extension to the input of external amplifier.

Four station terminals exist for the MT-360 Series, as follows:

**MI-360 Standard Set**
P/N 3009 106
11 feature keys, five fixed function keys, speakerphone. Utilizes the B1 channel for voice, B2 channel is spare, and the D channel is used for control signals to and from the KSU.

**MT-360 Display Set**
P/N 3009108
11 feature keys, five fixed function keys, speakerphone, one shift key, 12 DSS/SPD keys, and three soft keys. 2 X 16 dot matrix LCD display. Utilizes the B1 channel for voice, B2 channel is spare, and the D channel is used for control signals to and from the KSU.
**MT-360 Executive Set**
P/N 30091

11 feature keys, five fixed function keys, speakerphone, one shift key, 12 DSS/SPD keys, and three soft keys. 2 × 16 dot matrix LCD display. Off-Hook Voice Announce, and nine-pin dataport. Uses B1 channel as voice channel, B2 as either OHVA or data channel. This allows for simultaneous voice and data transmission. The D channel is used for control signals to and from the KSU.

**Feature Descriptions**

Associated programming categories for appropriate features are shown below feature names in brackets. For more information please refer to the Installation and Programming Manual.

**ACCOUNT CODE (UNVERIFIED)**

A user may enter an account code of up to eight digits at any time during a call, before the call is terminated. The user can choose on each call whether or not to enter an account code, and the account code can be any combination of digits—they are not verified by the system. Account codes are typically used to charge the cost of a call either to an internal departmental cost center, or to a project account for billing purposes.

Conditions:
- Maximum eight digits
- The entered account codes will be printed out on SMDR report.

**ACCOUNT CODE (FORCED)**

[Set, Resource]

To make an outgoing call, a user must first enter a validated account code, when forced account codes are programmed for his station. These account codes are forced and verified against an account code table. Account codes are typically used to charge the cost of a call either to an internal departmental cost center, or to a project account for billing purposes.

Conditions:
- Forced account codes can be four-to-eight digits in length.
- Maximum number of different account codes is 100.
- Programmable on a per-station basis.
- The entered account codes will be printed out on the SMDR report.

**ALPHANUMERIC DISPLAY**

The MT-360 Series Display and Executive sets have an LCD display used for set messaging, time & date, day or night mode, call processing status, message waiting, and sending messages. It is also a tool for programming and accessing features by scrolling through the feature list on the display and using the three soft keys below the display to invoke the features. Messages are displayed in a preset order according to priority.

Conditions:
- The LCD display has 32 characters (16 Characters X 2 lines).

**ANALOG ADAPTOR**

An analog terminal adaptor (ATA) can be used to connect a standard DTMF single line telephone set or any two-wire analog device (such as voice mail/auto attendant, fax machine, credit card reader, modem, etc.) to the system via a station port. Conditions:
- Each ATA may connect two analog phone sets/devices by using its dedicated B1 and B2 voice channels.
- Because it takes one station port, and connects two standard phones, it in effect doubles the station capacity of the system.
- In this instance, the station numbering plan changes as follows:

<table>
<thead>
<tr>
<th>DEFAULT</th>
<th>ATAsCONNECTED</th>
</tr>
</thead>
<tbody>
<tr>
<td>DK824</td>
<td>10 - 33 FOR B1 CHANNEL</td>
</tr>
<tr>
<td></td>
<td>58 - 81 FOR B2 CHANNEL</td>
</tr>
</tbody>
</table>
ATTENDANT

[Resource]

One station per system is programmed as the attendant. The attendant provides attendant support services, such as line recall, forced incoming ICM call forward, etc. The attendant can be reached by dialing “0.”

Conditions:
- Default: station #10, port one, is designated as the attendant.
- Any station can be programmed as attendant.
- Only one station can be attendant, however, other stations may be programmed to answer incoming line calls, according to requirements.

AUTOMATIC HOLD

A call is automatically put on hold if another ICM or line key is pressed while the call is in progress.

Conditions:
- Programmable by station.
- Automatic hold does not work for an outgoing line call with no digits dialed. The occupied line would be released.

AUTOMATIC LINE SELECTION

The system automatically selects either an ICM link, idle line, specific prime line, or any idle line in a specific line group for the station user when he goes off-hook or presses SPK key.

Conditions:
- Programmable by station.
- The desired line must be programmed as available to that station, otherwise a warning tone or message will be given to the station every time it goes off-hook.

AUTOMATED ATTENDANT INTEGRATION

Individual lines can be set to ring directly to automated attendant ports in a hunt group.

BACKGROUND MUSIC

When station is not in use (on-hook), the user can enjoy music through the speaker. When the station goes off-hook, the music ceases to play and is resumed after the station is back on-hook.

Conditions:
- If an external music source is provided, such as a tape recorder, radio, or CD player, the system will automatically switch from internally synthesized music to the external source.

BARGE-IN

[Call Handling]

A station may intrude on the ICM or line call of another station, by invoking “barge-in” function. This allows him to have a brief conversation with the other party. It is often used in boss/secretary phones for the secretary to alert the boss that he may have an urgent call on another line, etc.

Operation:
- An alert tone may be programmed to notify the barged party of the barging party’s presence on the call.
- The barged party then has three seconds in which to excuse himself from the original call, at which time the original call is put on soft hold.
- The barging party may then talk to the barged party for seven seconds. After seven seconds have expired, another warning tone tells the barged party that his original call has been returned to conversation, and the barging party is disconnected.

Conditions:
- Barge-in must be program-allowed on a system-wide basis.
- The barging station must have class of service greater than or equal to the party he has called, or
- A station may barge-in on a station with a higher class of service only if they are in a boss/secretary relationship. (This is station programmable. One secretary can have up to two bosses. See “boss/secretary” feature description.)
- A station may be barged-in by only one station at a time.

BATTERY BACK-UP (MEMORY)

Battery back-up ensures that the database will be protected and remain valid for a certain time after a power failure. A NiCad battery provides database programming backup.

Conditions:
- Normally, the memory content may be retained safely for seven days.

BATTERY BACK-UP (SYSTEM)

A connection is provided for an external 24-volt battery supply for total fail-safe operation. Recharging of this battery is provided by circuitry built into the KSU.

BATTERY REVERSAL DETECT

The system provides detection of the outgoing call being answered by an external party. This enables a correct start time for call duration. Whether the battery reversal signal can be sent as soon as the external party answers, depends on the Central Office.

BOSS/SECRETARY

The MT-360 Series stations can be programmed in a boss/secretary relationship. A secretary can have up to two bosses. A secretary can override do-not-disturb on the bosses’ phones, and can use barge-in feature to the bosses’ regardless of class of service programming.

BUSY LAMP FIELD

MT-360 Series Display and Executive sets have a busy lamp field associated with DSS/SPD keys. Through the LED indicators in the BLF, station users can see the busy status of all internal stations.

Conditions:
- 72 LED indicators and a SHIFT key allow user to view 24 stations.

CALL AGAIN (CALLBACK)

Call again feature eliminates repetitive calling of busy or no answer stations. When station A calls station B and receives either busy tone or no answer, he can select call again feature.

He then goes on-hook, and the system will monitor when station B is idle again, or, in the case of no answer, when station B comes back and completes a line or ICM call. Then, the system will call station A, when station A picks up, it will ring station B.

Conditions:
- Any station may either invoke call again feature, or have call again feature made on it by only one other station at one time.
- If the system rings station A for more than 30 seconds, and there is no answer, internal ring will be stopped and the call again cancelled (on a Standard set) or remain effective (for Display or Executive set) with notification message displayed on LCD.
CALL FORWARD
Various call forwarding features allow station users to have all
calls forwarded to the attendant, another extension, or a voice
mail port. This ensures that all calls will be promptly directed to
the proper party so callers are not left waiting. There are five
types of Call Forward:
a) Busy Call Forward: Calls are forwarded on busy only.
b) No Answer Call Forward: Calls are forwarded on no answer only.
c) Always Call Forward: Calls are forwarded always, regard-
less of station’s status.
d) Busy/No Answer Call Forward: Calls are forwarded on
both busy and no answer.
e) Follow Me: This is used when a station user is away from his
desk and wants his phone forwarded to the new location.
Using another station, he can forward his station to that other
station. This option forwards all ICM and line calls to the new
location. Follow me cancel can be used from any station to
cancel the follow me call forward command. This feature
relieves the user from having to go back to his desk/forward
his phone to another station.
Conditions:
Station programmable.
Only one type of call forward can be set on one station at one
time.
Call forward and do not disturb functions are mutually exclu-
sive. Only one of these may be programmed on a set at one
time.
The maximum quantity of call forward steps is two.
The name of the forwarded station will appear on the LCD
display of the station to which a call is forwarded.
No answer time is user programmable per station, that is,
each user can program his station to detect no answer after
10, 20, 30, 40, or 50 seconds.

CALLING PARTY IDENTIFICATION
On a Display or Executive set, the calling party’s identification
is shown on the LCD display. His extension number and, if
programmed, his name is also shown.
Conditions:
• If the user’s name has not been programmed, on/y the
  extension number will be shown.
• Refer to “user name programming” feature.

CALL OPERATOR (CALL ATTENDANT)
[Resource]
To call the attendant, simply dial “O”, or press ICM and dial “0”
directly. This eliminates the need to dial the attendant’s station
number.

CALL PARK
Line calls can be put on hold and “parked” on a certain orbit. Any
station may then pick up the parked call. Each station has an
orbit number equal to its station number. This provides an
efficient means for the attendant to locate people to answer
their calls, and provides excellent telephone coverage - exter-
nal calling parties can easily get in touch with whom they’re
calling.

CALL PARK ANSWER
Any line call that was “parked” on common hold may be
answered by pressing access codes followed by line number or
orbit number at any station.
Condition:
• Call park answer has no constraints due to line access or line
  ring assignments, and can be used by all stations.

CALL PICK-UP (DIRECT/GROUP) [Set]
This feature allows a station user to quickly and easily answer
a call for someone else in the same station group.
Condition:
• Calls that can be picked-up include ringing ICM calls, voice
  calls, recalled C. 0. line calls, incoming C. 0. line calls, and
  transferring C. 0. line calls.
• If a station is not assigned to the same station group as a
  ringing station, he can pick up that incoming call by dialing the
  access code followed by the ringing station number.

CALL WAITING (ALLOW/DENY)
This allows a busy station to accept a waiting call.
Conditions:
• Call waiting must be programmed allowed on a per-station
  basis.
• Call waiting answer automatically places the current call on
  hold.
• This feature is only available on Display and Executive sets.

CAMP-ON (BUSY STATION)
When calling a busy station, a user can use the camp-on
function to ensure that he rings the party as soon as the other
call is completed. The calling party remains off-hook and waits
until the called party hangs up from the other call, then the
system rings the called party immediately.
Conditions:
• Any station that is being camped-on will receive a camp-on
  notification tone from the handset to remind it that there is an
  internal party camped-on.
• The notification time interval is programmable as 0, 10, 20,
  30, 40 or 50 seconds.
• Each station can only be camped on by one other station at
  a time.

CAMP-ON (BUSY LINE)
When a station user wants to access a particular busy line, he
may camp-on that line. When it becomes idle, the system will
ring the camped-on party, who then simply goes off-hook to
access the line.
Conditions:
• The system rings the station for 30 seconds. During this time,
  other stations cannot access this line. If the camped-on party
does not pick up within 30 seconds, the line becomes
  available to other stations.
• A line may be camped-on by only one station at a time.
• Each station may only camp-on one line at a time.

CLASS OF SERVICE (COS)
[Set]
Stations can receive COS assignments, used to designate
which stations can perform certain features, levels of toll
restriction, etc. For example, when barge-in is program
allowed, the station can barge-in the calls of stations with an
equal or lower COS.
Conditions:
• There are eight levels of COS from 0 (the highest) to seven
  (the lowest).
• Class zero and one: no toll restriction.
• Class two through five: restricted using the toll restriction
  tables.
• Class six: ICM and outside calls only using system speed dial
  bins 20-39.
• Class seven: ICM only.
CONFERENCE

Conferences between internal and external parties may be set up by a station user. Conditions:
- Up to four parties may participate in one conference.
- Any combination of C.0 line parties and ICM lines may be used. Each conference is controlled by one station, called the controlling party. The controlling party is permitted either to invite new parties into the conference or to forcibly release any party from the conference in progress.
- The controlling party may hold a private conversation with any of the C.0 line parties or internal parties in the conference, while putting the other parties on hold.
- If the controlling party exits a conference, the most recently added internal party becomes the controller.
- Up to eight four-party conferences can take place simultaneously on the system.
- If one of the outside parties hangs up during a conference, that line is automatically released.
- Default: program allowed, with C07 key programmed as the conference key.

CPID

Called party identification is available for automated attendant/voice mail integration. NOTE: PAUSE TIMER AFFECTS CPID SEND TIME.

DATA CALL

The Executive sets are equipped with a Q-pin data port. Using this data module, two users can establish a voice call, then simultaneously make data transmission using any transmission protocol. This is dependent on the data package they are using in PC or DTE for data communication. Conditions:
- The system provides only a connection bridge in the KSU; it does not contain data transmission protocol.
- The voice call is transparent with the data call. The data call is data transition only between the B2 channel, and the RS-232 port.
- The customer needs to install a third party package in PC/DTE to handle the whole data communication environment, such as protocol handling, data error processing, and retransmission.
- On the Executive Set, the "Redial" key is default programmed as the "Data" key.

NOTE: During simultaneous voice and DATA TRANSFER at 19,200 BPS, sometimes LCD errors may be observed. Integrity of Data Transfer is not affected.

DATA RATE SELECTION (STATION)

Executive sets equipped with a data port may choose the speed of data transmission at which to communicate. Conditions:
- Four rates may be selected: 2400/4800/9600/19200 bps.

NOTE: During simultaneous Voice and Data Transfer at 19,200 BPS sometimes LCD errors may be observed. Integrity of data transfer is not affected.

DEFAULT SETTING

A user may clear all feature programming for a station, returning it to default status. Conditions:
- The features that are reset when the user returns to default

values are as follows:
- DND (do not disturb)
- CFW (call forward)
- Call waiting
- Auto line selection
- Feature key
- Data rate
- User password
- Station lock
- Ring type
- Automatic hold
- Voice call allow

DIAL ACCESS TO FEATURES

Most features can be accessed by pressing access codes as an alternative to using the programmed feature keys.

DIAL INTERCOM NONBLOCKING

Intercom calls are free from constraints on switching link resources. The total number of intercom calls are never restricted due to insufficient switching links in system.

DIALING TYPE SELECTION

[Line]
The C.O. line can be programmed so that dialing is in pulse (rotary) or DTMF (tone) mode. Conditions:
- Default: All lines are programmed for DTMF (tone) dialing.

DIAL PULSE TO DTMF CONVERSION

A station user can change from pulse dialing to DTMF while on a call.

DIRECT INWARD SYSTEM ACCESS (DISA)

[Call Handling]
This feature allows a remote user to access the system to use system features, make outgoing calls, ICM calls, etc., by simply dialing the system and entering his password. This allows employees that are out of the office to make calls using the system’s features, long distance lines, etc. Direct dialing to a station may be performed using DISA, by entering the station number instead of a password at the special dial tone. Conditions:
- Maximum of one line can be programmed with DISA.
- The activation time for DISA is programmable as “Never”, “Day”, “Night”, or “Always”.
- Passwords are in the format of “#00000000#”.
- There is a time limit to the line-to-line conversation.
- The fine-to-fine conversation time is system programmable to one, two, three, five, 10, or 15 minutes. (Default is one minute).
- When the conversation time expires, the user hears a fast busy tone, at which time he can dial “#” to continue the conversation.
- 24 sets of eight digit passwords are available.
- The final digit of the password is the user’s class of service.
- The number of rings before the DISA line pickup is programmable from one to 99 rings, for added DISA line security.

DIRECT STATION SELECT (DSS)

Stations equipped with dual DSS/SPD function buttons are able to press any DSS key to make an ICM call directly to its corresponding station, instead of dialing the station number. Although default values are programmed for DSS locations, each DSS button may also be reprogrammed to access frequently-called stations. Conditions:
- 12 DSS/SPD keys are located on the MT-360 Series Display and Executive Sets.
Each DSS/SPD key stores four numbers: two speed dial locations, and two DSS numbers. When in ICM mode, pressing the DSS/SPD key selects the DSS number. After selecting a line, pressing the DSS/SPD key selects the SPD number. SHIFT key is used to toggle between the two pages of speed dial numbers.

**DISCRIMINATING RINGING**
Incoming C.O. line ring and ICM ring (ICM callback ring) can be distinguished by their different ring time intervals (ring cadence). This informs the station user of the call type so he can answer in a professional manner.

**DISTINCTIVE RINGING (STATION)**
A station user may select one of four different ringing frequencies, so individual stations can be recognized by their different ringing sounds, and answered more efficiently.

**DO NOT DISTURB (DND)**
A station user can enable the do not disturb feature to prevent calls from ringing at his station. Outgoing calls are not affected. Conditions:
- DND and call forward cannot be enabled simultaneously.
- User with DND enabled hears a special dial tone when making a call to remind him that this function is enabled.
- Incoming lines, ICM, and transferred calls are all blocked from ringing at the station when DND is activated.
- If a boss phone (programmed in boss/secretary relationship with another station) has DND enabled, any call to that station will forward automatically to the secretary.

**DND OVERRIDE**
A station user with a Display or Executive set may override another station's DND feature if that station has equal or lower COS than the calling station. Conditions:
- Secretaries can always override their boss' DND regardless of cos.

**DROP TIMEOUT**
[Set] [Call Handling] Drop timeout can be used to limit the length of a user's outgoing line calls. After a specified programmed interval, a warning tone is heard, then the line drop is called. Conditions:
- Drop timeout and warning tone features must be enabled for drop timeout to take place.
- Drop timeout time is programmable corresponding with warning tone time. This is selectable from one to eight minutes.
- The user will hear the Warning tone for 5 seconds before the call is dropped.
- Drop timeout is enabled on a per-station basis.

**DSS/SPD CONTENT VERIFICATION**
The DSS/SPD content verification feature allows the user to examine what station number or programmed speed dial number is assigned to each DSS/SPD button before making a call. Conditions:
- The system provides 12 DSS/SPD keys, each of which can store two SPD numbers, and two DSS numbers.

**DTMF RECEIVER**
The DTMF receiver is used to detect tone digits which are dialed by a remote party in order to activate certain features inside the system, such as DISA, external call forward, etc. Conditions:
- One DTMF receiver is provided with the system.

**DUAL DSS/SPD FUNCTION BUTTON**
DSS/SPD keys are used for DSS calls in ICM mode, and for SPD calls on a C.O. line. Each button stores two DSS locations, and two SPD numbers, accessed by pressing the SHIFT key. Conditions:
- There are 72 DSS/SPD keys located on the MT-360 Series Display and Executive sets.
- When in ICM mode, pressing the DSS/SPD key selects the DSS number.
- After selecting a line, pressing the DSS/SPD key selects the SPD number.
- SHIFT key is used to toggle between the two pages of speed dial numbers.

**DUAL VOICE PATH**
The Executive set is equipped with a second voice path, so the user can conduct two simultaneous conversations—one through the handset, and one through the speakerphone. The speakerphone conversation begins when he is busy on a handset conversation, and another station user makes an off-hook voice announce (OHVA) call to him. Conditions:
- The called party can reject the OH VA by pressing REJECT at the soft key prompt.
- See “off-hook voice announce” feature for more information.

**END-TO-END SIGNALING**
When a station dials an outside call on a rotary line in pulse mode, and needs to change to DTMF during a call (to access voice mail, computer applications, etc.), he simply dials * or # to switch the dialing from pulse to DTMF.

**EXCLUSIVE HOLD**
Normally, when a user puts a call on hold, any other station can pick up that call. Exclusive hold enables the user to prevent other stations from picking up the held call. Conditions:
- Used only for a line call, not on ICM calls.
- The exclusive hold time is programmable from one to eight minutes.
- After the exclusive hold time has expired, the line will recall to the station that had it on exclusive hold. If there is no answer at that station after 30 seconds, the line will recall to the attendant. If there is no answer at the attendant after 30 seconds, the call is put on common hold.
- Pressing the FUNCTION key, then the HOLD key, enables the exclusive hold function, providing an easy way of accessing the feature.

**EXECUTIVE BARGE-IN**
If the boss/secretary relationship has been programmed between two stations, the secretary can barge-in on the boss' line regardless of COS. Conditions:
- The maximum bosses per secretary are two.
- System barge-in function must be enabled.
- See “barge-in” feature for more information.
EXTERNAL CALL FORWARD (ECF)

[Call Handling]
Incoming calls to the system on a given line can be forwarded to one external call forwarding line to be transferred to one remote answering point. This is usually used to transfer to an answering service or home office after hours, especially in applications where it is important to always have a “live” person answer the phone, such as doctor’s offices, etc.
Conditions:
- The ECF can be programmed as “Day”: “Night”: “Always”, or “Never”.
- This remote answering point must be preprogrammed to one specified SPD location.
- The call will be released after a certain time has elapsed, unless the forwarded party dials a specified digit to finish the conversation, or a notification digit is dialed to continue conversation rime.
- The conversation time is programmable as one, two, three, five, 10 or 15 minutes.
- 30 seconds before conversation rime ends, the system will give a two second warning tone to the user. To extend conversation time, caller may dial “*.”

EXTERNAL MUSIC SOURCE
A tape player, radio or CD player, can be connected to the system to provide music-on-hold and background music as an alternative to the internal synthesized music provided with the system.
Conditions:
- When an external source is connected, the system automatically switches from playing the internal synthesized music to the external source.

EXTERNAL PAGE
The MT-360 Series has a connection for external paging. A separate amplifier or amplified speaker is required.

FEATURE ACCESS CODE VERIFICATION
Feature access codes can be verified before entering interprogramming mode, preventing wrong or forgotten feature access codes while programming. This feature acts as a built-in user guide.
Conditions:
- Only available on Display and Executive sets.
- Using the FUNCTION key and “Next” soft key, user can scroll through the feature list to see available features and access codes.
- If desired, the features can be activated during this process, by simply following prompts on the screen and pressing soft keys.

FEATURE CANCELLATION
Station user can cancel some of the programmed features by pressing the FUNCTION key, “*” followed by the corresponding feature access code.
Conditions:
- The following features can be cancelled by pressing “F * nn” (where “F” = FUNCTION key, “nn” = feature number)
  - F * 90 Advisory Message Delete
  - F * 91 Call Again Delete
  - F * 92 Set Reminder Clock Delete
  - F * 93 Camp on Busy Line Delete
  - F * 94 Auto Hold Delete
  - F * 95 Auto Line Selection Delete
  - F * 96 Message Waiting Delete
  - F * 98 Voice Call Deny
  - F * 99 Call Waiting Deny

FLASH

[Call Handling]
The FLASH key or its access code may be pressed to generate a loop break time on the outgoing line call. This is used most commonly behind PABX or Centrex applications, to access the PABX or Centrex features.
Conditions:
- The flash break time is programmable from 100~1500 ms.

FLEXIBLE LINE ASSIGNMENT [Set]
Any C.O. line can be assigned to a specific station to be used for outgoing calls.

FLEXIBLE RING ASSIGNMENT [Set]
Flexible ring assignment allows programming which stations receive line ringing. If assigned to ring, that line may be answered by that station by simply going off-hook.
Conditions:
- Programmed for day and night modes, on a per-line basis.

FORCED INCOMING INTERCOM CALL FORWARD
Station user may enable DND to force an incoming call, as it is ringing, to be forwarded to the attendant. This is especially useful if he has a Display or Executive phone, as he can see from the display who is calling. He may choose to pick up if it is an important call, or to force the call to the attendant if he is busy and the call is not crucial.
Conditions:
- Call forward must be disabled.
- Simply press DND key (if programmed) or press FUNCTION key “4” to force call to attendant.

HANDSFREE ANSWERBACK
This function enables station users to answer any ICM or line call through the speakerphone instead of lifting the handset.
Conditions:
- User activates handsfree key, which stays lit, to enable handsfree answerback.
- MUTE key can be activated in idle mode to prevent callers from listening to private conversation in offices when making handsfree calls.

HEARING AID COMPATIBILITY
All station handsets are hearing aid compatible as defined by FCC part 68.

HOW
A station user can put an ICM or line call on hold at any time. The holding party hears background music-on-hold. An ICM call on hold cannot be picked up by a different station, while a line call on common hold can be picked up by any station.
Conditions:
- Pressing HOLD key will place the current call on hold, or put a conference on exclusive hold (if you are the controlling party).
- For more information, see “exclusive hold” feature.
**HOLD ABANDON**
The held line call will be disconnected automatically when the system detects that the held party has hung up. (A direct current interruption (DCI) signal has been received from the C.O.)

Conditions:
- This function is programmable on a per-line basis.
- This function is performed on all types of hold, such as common hold, exclusive hold, and conference hold.

**HOLD REMINDER**
The system will recall the station user to remind him that a call is on hold (whether on a line or ICM call). It occurs after a programmable interval.

Conditions:
- Hold time is programmable, as 1, 2, 3, 4, 5, 6, 7, or 8 minutes (or disabled).
- After hold time has expired, the line recalls to the station that put it on hold. If no answer after 30 seconds, it recalls the attendant. It is returned to common hold if it is not answered by the attendant within 30 seconds.

**HOT DIAL PAD**
Station may make an ICM call directly by dialing the station number from dial keypad without having to press ICM key first. To initiate a line call without first pressing a line key dial “9.”

**HOUR MODE SELECTION** [Resource]
The clock may be programmed to be either a 12-hour or a 24-hour (military time) clock.

**HOLD INDICATION**
A fast green flash on a line lamp indicates that the line call was placed on hold by you. Other system users see that line on their stations as a slow red flash.

**HUNT GROUPS**
Eight hunt groups are available for intercom hunting and automated attendant/voice mail integration

**I USE INDICATION**
A steady green on a line lamp shows that you are talking on that line. Other users see a steadily lit red lamp on this line.

**ICM RING AND VOICE CALL INTERCHANGING**
When making an ICM call, a user may choose ringing or voice announce. With voice announce, he just speaks to the called party through the speakerphone, and no ringing occurs. If the called party has voice call enabled. This is very useful for applications where the called party is busy and can’t pick up the phone, but can hear and speak to the speaker, such as a doctor in surgery.

Conditions:
- The MUTE key works in idle mode to prevent users from making a voice call, remaining silent, and listening in to a private conversation in another user’s office. If MUTE key is turned on, the called party must press the MUTE key to turn it off in order to answer back a voice call.

**KEY INQUIRY**
A station user may customize his set by programming feature keys. The key inquiry feature displays the feature programming of each key, so user can check to see programming on each key. Please refer to “programmable user feature keys” section.

Conditions:
- The total number of programmable user feature keys is 17.

**LAST NUMBER REDIAL (LNR)**
The system will dial the last number dialed from that station when the LNR feature is invoked.

Conditions:
- When invoked in idle state, the system will access the same line that was used the last time that number was dialed.
- If that line is busy, the user has the choice to “camp-on” that line, or press “autoln” to access any idle line to dial the number.

**LEAST COST ROUTING (LCR)** [Restriction]
With LCR, the system will choose a line based on your programming of four tables. The code dialed, the time of day and the users routing COS are all considered in processing the call. The tables used in LCR are as follows:

1) **Digit Comparison Table (1 each)**
This table has 200 entries and is programmed with each code that is to be routed by LCR. The "**" may be used as a wildcard to indicate any digit (0-9) in any position. For example, "**0**" would represent any area code with a "0" as the middle digit. For each code entry in the “Digit Comparison Table” a “Day Time Table” is specified.

2) **Day Time Table (45 each)**
These tables have six time entries which represent six different periods of the day, and point to a “route list” for each “routing COS.” This allows for different routing at different times of the day.

3) **Route Lists (200 each)**
Each route list has four choices for the use of the available lines. Each choice also allows for pointing to a “Digit Modification Table.”

4) **Digit Modification Tables (100 each)**
The “Digit Modification Tables” allow for stripping digits from the front of the digit string as in the case of using an FX. After stripping, a new digit or string of digits may be dialed at the front end, in place of the original digits. For example, dialing 1-212-245-0987 might call for using an FX into the 212 area code in which case the 1-212 would be stripped and only 245-0987 would be dialed.

Conditions:
- Routes are defined in the route table, and are accessed by route lists.
- Each route list contains the first choice route number and up to three alternative route numbers.
- Selective routing by class of service determines which routes the user can access and at what times during the day, based on his routing class of service.
- Each user is assigned to one of four routing classes of service.
**LINE GROUP ASSIGNMENT** [Line]
Lines can be assigned to one of two line groups. Then, when a user accesses a line group, he will occupy an idle line in that group.
Conditions:
- Maximum of two line groups can exist.
- Each line can only be assigned to one of the groups.

**LINE INTERFACE**
Loop start line interface is used to the Central Office.

**LINE NAME PROGRAMMING** [Resource]
Lines can be given names that appear on the LCD display when ringing, or selected for an outside call. This enables the user to answer the call appropriately.
Conditions:
- The maximum length of a line name is seven characters.
- The line name will be displayed for incoming and outgoing calls.
- Line number is replaced with line name.

**LINE POOL** [Line]
A line key can be programmed as a line pool (line group) key. All lines in that line group are accessed by pressing the line pool key. Incoming line calls in the line group are answered by pressing the line pool key. Pressing the line pool key to make a call accesses an idle line in that line group.
Conditions:
- There is no limitation in assigning lines to keys - a line may be assigned to more than one key with the same line number or line group number.

**LINE SIGNALING** [Set]
When an incoming C.O. line is signaling, stations with ring assignment enabled will begin ringing, and the line call status can be monitored from the display (if it is a Display or an Executive set).
Conditions:
- Only those stations with corresponding line ring assignment can display current incoming line call status and receive ringing.

**LINE-TO-LINE CONFERENCE** [Call Handling]
A conference can be established with one inside party and two outside parties. The inside party can then dropout, leaving only the two outside line parties in the call.
Conditions:
- The inside party can re-enter the conversation at any time.
- There is a programmable time-out period of one, two, three, five, 10, or 15 minutes. After this time has elapsed, the two outside parties are dropped.
- The outside party can dial *** to extend the conversation time period. He will hear a warning tone 30 seconds before the talk time expires, at which time he should enter the extension digit, or end the call.

**LINE TYPE ASSIGNMENT** [Line]
Each C.O. line can be given an assignment based on where it is connected, i.e. to the Central Office, or behind a PABX.
Conditions:
- For PABX type line, the user has to dial a PABX access code before dialing an outside number. If the PABX access code is programmed, dialing it inserts a pause following that digit.

**LOUD BELL INTERFACE**
One loud bell connection port is provided per system. This allows the connection of an external loud bell device to ring when the assigned incoming line is ringing. This connection provides a metallic closure.
Conditions:
- Can be programmed for “Day”, “Night”, “Always” or “Never.”

**MANUAL LINE ACCESS**
A station user may press the line key to make an outgoing call, answer an incoming call, or take a call off hold.
Conditions:
- The corresponding line key must be present on the user's station to manually access the line.

**MEET-ME ANSWER**
A page can be picked up by pressing an access code from a station set. This allows for much flexibility, as the person being paged can pickup from any station.
Conditions:
- The page can be picked up by pressing the “Page” soft key or, the user may press “More” to see other messages or, “Delete” to delete messages.

**MESSAGE WAITING** [Resource]
When a user calls a station and doesn’t get an answer, the user can leave a message on the LCD display of the station he is calling. A regular callback message can be left, or the user can choose a canned message. The station receiving a regular message can respond by pressing the “Reply” soft key or, the user may press “More” to see other messages or, “Delete” to delete messages.
Conditions:
- There are seven canned messages to choose from.
- One of the seven canned messages is programmable by each station user, allowing for truly personalized messages.
- The six system-wide messages are as follows: “Have a Good day”, “Call Operator”, “Call Home”, “Callback”, “Friend Visiting”, and “Urgent”.
- System-wide, a maximum of 24 messages can be let simultaneous.
- A station may receive messages from many different stations, but may receive only one message from the same station simultaneously.
- On the standard set, the message waiting is the ICM key flashing.

**MESSAGING (ADVISORY)** [Resource]
A station user may leave a message on his LCD set, so others calling him will see this message. This is called an advisory message, and provides information to the calling party.
Conditions:
- Six pre-programmed and one user programmable message are available.
- The six default pre-programmed messages are: “At Lunch”, “Be Back Soon”, “Gone Home”, “In A Meeting”, “Out of Office”, and “On Vacation”.

**MIXED DIALING**
The station user may switch from pulse to tone dialing while making an outside call. Pause/flash can also be inserted at any time. This is useful for dialing out pulse, and switching to tone to communicate with automated attendants, voice mail, and other computer applications.
MUSIC ON HOLD
Music is heard by the held party of an ICM or C.O. line call. This music can be from an external music source, or, if no external source is connected, from the system’s internal synthesized music.

MUTE (VOICE MUTE)
The mute feature enables a station user to talk privately to someone in his office without being heard through the phone, while he’s on a call. He can still hear the other party, but they cannot hear him.
Conditions:
- Mute is effective whether on a line or intercom call.
- Mute can also be turned on when the phone is in idle mode.

OFF-HOOK VOICE ANNOUNCE (OHVA)
A station user can talk to a busy station through the second voice channel via the speakerphone, if that busy station is an Executive set.
Conditions:
- The called station’s conversation must be through the handset: it cannot be through the speakerphone if he is to receive an off-hook voice announcement.
- The called party may reject the off-hook voice announce by pressing “Reject” soft key.
- The called party may respond to the voice announce party through speakerphone, while the original call is in progress through the handset.

ON-HOOK DIALING
The user can press ICM or line key to dial an ICM or outgoing call without lifting the handset.
Conditions:
- Because of hot dial pad feature, it is not necessary to press ICM before dialing an ICM call.

PAGING
Five types of paging exist as follows:
- Voice announce (to a single station)
- All paging (to all stations)

PAUSE [Call Handling]
The pause operation is used to stop dialing temporarily, waiting for a response or further processing in the Central Office, in order to perform certain feature applications, such as behind Centrex, etc. Pause may be inserted between two digits in a speed dial string, or manually dialed when placing a call, in order to replicate it for redial.
Conditions:
- Pause time is programmable as 1.5, 2, 3.5, or 5 seconds.

POWER FAILURE TRANSFER
In the event of a power failure, the system will automatically switch the first line to a dedicated phone connection port. Incoming line one will ring at this port. A standard single line phone must be used.

Note: Also affect CPID send time

PRIVACY
All calls are private, except where barge-in has been programmed allowed.

PRIVATE LINE [Line]
A station can be assigned a private, exclusive line to use. No other station can access this line to make outgoing calls. However, incoming calls on this private line can still be answered by other stations with that ring assignment. Held calls can be picked up by any station.
Conditions:
- An incoming call of a station’s private line will ring its private station regardless of whether the line ringing assignment is made.

PROGRAMMABLE USER FEATURE KEYS
Each station is equipped with 11 programmable keys which can be programmed as feature keys. This also allows direct activation of that feature, by simply pressing the feature key. Usually some of these keys will be programmed as line or line group keys.
Conditions:
- Eight of those keys have dual color lamps and can be line group, line or feature keys.
- Default functions and lines are programmed to feature keys upon installation, and may be changed to suit user’s requirements.

RECALL [Call Handling]
Any transferred line call not answered within a specified time will recall the attendant and will appear as a brand new incoming call.
Conditions:
- A recall message (including line number and station number) is briefly displayed on the LCD display upon answer to distinguish it from a new incoming call.
- Recall time is programmable as 30, 60, 120 or 180 seconds.
RELEASE
The RELEASE key is used to finish or abandon feature programming, and to drop a call without hanging up the handset.

REMAINDER CLOCK [Resource]
There are two kinds of reminder clock functions. One is system wide, and one is programmed by station. When the system wide reminder clock is activated, all idle stations receive background music for one minute. When a station reminder clock is programmed, that station will display a notification message on the LCD, and alert ringing will be heard.
Conditions:
- There are eight system reminder clocks, and one station reminder clock.
  - The station reminder clock will alert a set upon reaching the programmed time, even if the set is off-hook on a call.
  - When the station reminder clock has alerted the set at the programmed time, it is cleared automatically. System reminder clock continues to go off daily.
  - To stop the alert tone on a station reminder, the user may press "ACK" (Acknowledge) soft key, or go off-hook.
  - The alert ringer sounds once every five seconds for one minute.
- On a Display or Executive set, an alarm notification message is displayed on the LCD even after the station alert ringer has stopped.

REMOTE PROGRAMMING
When a personal computer is connected to the system, extensive changes / modifications to the system and database can be made, either on site, or from a remote location. This saves much time and money as in many cases a technician does not have to travel on-site to modify the system - it can be done from the dealer’s location via modem.
Conditions:
- Remote programming is connected through the RS-232C port on the KSU, or by a standard modem.
- The station user may change the data base first on the PC according to specific requirements, and then download the new data base, on-line into the system.
- This can also be used to upload the current system data base to PC for backup.

RINGING LINE PREFERENCE
Incoming calls are answered by predefined priority when a user presses handsfree or lifts handset to answer a call.
Conditions:
- This priority is as follows:
  1) Incoming line call
  2) Recalled line call
  3) Transferred line call
  4) Camped line call
  5) Call Again ICM call
  6) Incoming ICM call

SAVED NUMBER REDIAL
A station user may temporarily store a dialed busy number into a predetermined memory location. Upon completion of further calls, the stored number can be retrieved and automatically dialed.
Conditions:
- The system will choose the line on which the call previously went out.
- If the previously used line is busy, the user will hear a tone, and have the choice of camping on until the line is idle, or selecting another line.

SHIFT
The SHIFT key is used on the Display and Executive sets for toggling to the second “page” of DSS or speed dial numbers on the DSS/SPD keys. The button is lit when you are on the second page of keys. When in programming mode, the SHIFT key is used like an EXIT key. It brings you back one step to the immediate higher level programming step or category.

SIMULTANEOUS DATA/VOICE CAPABILITY
The Executive set can interface with any data device, such as a PC, through the O-pin data port. When a data device is connected, the user may activate a data transmission at the same time a voice conversation is in progress.
Because the data and voice calls use different channels (B1 and B2), they do not affect each other.

SOFT KEY FEATURE ACCESS
Three soft keys are provided on the Display and Executive sets. They correspond with prompts on the LCD display, and are used for fast, easy, user-friendly feature operation. They allow the user to scroll through features, and activate features and programming without having to remember or look up feature access codes.

SPEED DIALING (STATION)
Each station can have its-own private speed dial numbers.
Conditions:
- Up to 20 private speed dial numbers (00- 79) can be stored or cancelled at any station set.
- Each private speed dial number can store up to 76 digits.
- Speed dial numbers can contain pause, flash, or SPD chaining as digits.
- The digits "#" and ‘Y’ are treated as normal dialing digits when in the TONE dialing mode. When in the pulse dialing mode, the digit “#” represents the code for pulse to tone conversion, and the digit “#” will be ignored.

SPEED DIALING (SYSTEM) [Resource]
Speed dial numbers can be stored by the system, to be accessed by all specified stations.
Conditions:
- Up to 80 system speed dial numbers can be stored by the system, to be accessed at all specified stations.
- Each system speed dial number can store up to 16 digits.
- Speed dial numbers can contain pause, flash, or SPD chaining as digits.
- Any station COS zero to six can use the SPD numbers 20-39 regardless of the station’s toll restriction.
- The digits “#” and ‘Y’ are treated as normal dialing digits when in the TONE dialing mode. When in the pulse dialing mode, the digit “#” causes the system to begin sending DTMF on the line and the digit “#” will be ignored.
- Speed dial number code assignments are as follows:
  20 - 39: Emergency number.
  40 - 99: Stations with COS 0 to 6 can use this category.
  00 - 09: Common number.

STATION FEATURE STATUS CHECK:
The Display and Executive sets can show the current content of certain feature programming.
The detector responds to signals between 300 Hz and 630 Hz with a threshold of -39dB typical.

- Four kinds of call progress tone can be detected, including dial tone, ringback tone, busy tone, and reorder tone.
- There is one tone detector per system.

TONE DURATION SELECTION
(Call Handling)
Three different tone durations for DTMF dialing are selectable, to ensure compatibility with other exchange systems and analog devices to which the system is connected.

- Can be programmed to 70, 120 or 150 ms.

TRANSFER
A station may transfer an ICM or line call to another station (provided DND is not enabled on that station).

- A screened transfer is made by placing the ICM line call on hold, calling another station, hang up. The held call is then talking to the new internal party.
- During an unscreened transfer, the originator hangs up before the other internal party answers. If it was an ICM call, the original held party becomes the new calling party with ringback tone and wait for answer of the internal party.
- The ring transfer time for a line call is programmable.
- If the transferred line call is not answered within the allowed transfer time, the held call will recall to the transferring party.
- If they do not pick up within a specified time period, the line recalls the attendant.

TRAVELLING CLASS OF SERVICE
A station user can carry his class of service to another station to make outgoing calls. If Station A had a higher class of service than Station B, but was in Station B’s office, he can use his class of service to make an outgoing call, avoiding the toll restriction, or other limitations of Station B’s class of service.

- Travelling class of service is only effective for calls made within one minute of entering class of service.

USER NAME PROGRAMMING
(Resource)
Each station can be assigned a specific name for identification. This name shows up on the LCD display of other stations when they receive an intercom call from that station, when that station leaves a message, etc. If no station name is programmed, the station number will appear.

- The maximum length of user name is seven characters.

VOICE CALL
A station user may voice call another station through the speaker, and the called party can answerback handsfree through the speakerphone.

- The digit '*' is used as a "wildcard" digit in the toll control tables.
- The MUTE key can be enabled in idle mode so when a voice call is made to that station, they cannot hear what is going on in the office until the user de-activates the mute feature. This provides more privacy to the called party, if required.

**VOICE MAIL**

[Peripheral]
Analog voice mail systems can be used with the MT-360 Series system, connected to an Analog Terminal Adaptor (ATA) (P/N 3009104). Each station has a private voice mail box number, that is recognized by voice mail systems. CPID (calling party identification digits) are sent from the system for specialized voice mail applications.

Conditions:
- One ATA uses one station port off the KSU, and provides two analog ports.
- Applications and specific operation will depend on the voice mail system.
- Pause Time Affects CPID send time.

**VOLUME CONTROL**
The station user may control the volume level of ringer, speaker, and handset.

Conditions:
- The handset volume is returned to thenormallevelafter each conversation.
- Ringer and speaker volume remain at the level the user selects.

**WALL MOUNTABLE**
The KSU and station sets are designed to be able to mount on the wall, or sit on the desk, as required. The set stand can be flipped backward to act as a wall mount unit.

**WARNING TONE**

[Call Handling]
This feature provides a warning tone before the Drop timeout feature drops a call.

Conditions:
- This feature must be activated for drop timeout feature to work.
INTRODUCTION
The MT-360 Series is designed to be easy to use, install, and program. This SYSTEM INSTALLATION AND PROGRAMMING GUIDE is written to provide detailed installation instructions, and to guide you through system programming.

INSTALLATION
This section describes the installation of the MT-366 Series. The KSU cabinet includes power supply and all common control boards. The basic configuration has capacity for 6 Central Office (CO) lines, and 16 telephone extensions. Using an expansion board, the configuration becomes 8 CO lines, and 24 digital extensions. If analog adaptors are installed, up to 46 analog extensions can replace the 24 digital extensions.

REGISTRATION NUMBERS
This digital hybrid key system has the following registration numbers:
- FCC: D6XTAI-65783-MF-E
- FCC: D6XTAI-20361-KF-E
- REN 15 B

ENVIRONMENTAL REQUIREMENTS
The area in which the KSU will be installed must comply with the following requirements:
- Relative humidity may vary between 20-80% and the temperature may vary between +40 and +104 degrees Fahrenheit.
- Do not expose equipment to direct sunlight, to avoid heat generation in the unit.
- The KSU must not be located near copy machines or other equipment that can produce electromagnetic interference.
- The air must be free from dust and smoke. It shall not contain gases, or acid fumes that can attack metal parts or insulation materials.

TOOLS
No special tools other than normal installation tools are required.
IMPORTANT SAFETY INSTRUCTIONS

Read and understand all instructions.

2. Follow all warnings and instructions marked on the product.

3. Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaner. Use a damp cloth for cleaning.

4. Do not use this product near water, for example, near a bathtub, wash bowl, kitchen sink, or laundry tub, in a wet basement.

5. Do not place this product on an unstable cart, stand, or table. The product may fall causing serious damage to the product.

6. Slots and openings in the cabinet and the back or bottom are provided for ventilation. To protect it from overheating, these openings must not be blocked or covered. The openings should never be blocked by placing the product on the bed, sofa, rug or similar surface. This product should never be placed near a radiator or heat register. This product should not be placed in a built-in installation unless proper ventilation is provided.

This product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your home, consult your dealer or local power company.

8. (If provided with a grounded type attachment plug) This product is equipped with a three-wire, grounding type plug. This plug has a third (grounding) pin. This plug will only fit into a grounding type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the safety purposes of the grounding type plug.

9. Do not overload wall outlets and extension cords as this can result in the risk of fire or electric shock.

10. Do not install wall outlets and extension cords as this can result in the risk of fire or electric shock. Never spill liquid of any kind on the product.

11. To reduce the risk of electric shock, do not disassemble this product, but take it to a qualified serviceman when some service or repair work is required. Opening or removing covers may expose you to dangerous voltages or other risks. In correct reassembly can cause electric shock when the appliance is subsequently used.

13. Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:

A. When the power supply cord or plug is damaged or frayed.
B. If liquid has been spilled into the product.
C. If the product has been exposed to rain or water.
D. If the product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions because improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to normal operation.
E. If the product has been dropped or the cabinet has been damaged.
F. If the product exhibits a distinct change in performance.

14. Avoid using a telephone (other than a cordless type) during an electrical storm. There may be a remote risk of electric shock from lightning.

15. Do not use the telephone to report a gas leak in the vicinity of the leak.


17. Never install telephone jacks in wet locations. Never touch uninsulated telephone wires or terminals unless the telephone line has been disconnected at the network interface.

18. Never touch uninsulated telephone wires or terminals unless the telephone line has been disconnected at the network interface.

19. Use caution when installing or modifying telephone lines. The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product. The installation instructions provided with equipment intended to be locally powered over telecommunications wiring systems shall include all of the following:

A. The current limitations and maximum overcurrent protection for Level C circuits.
B. Reference to the specific power supply or current-limiting device provided with the product and
C. Details concerning how to provide the proper method of installation and connections to the telecommunications wiring system.

To reduce the risk of fire or injury to persons, read and follow these instructions:

Use only the following type and size battery(ies): Lead-Acid Battery 24V

2. Do not dispose of the battery(ies) in a fire. The cell may explode. Check with local codes for possible special disposal instructions.

3. Do not open or mutilate the battery(ies). Released electrolyte is corrosive and may cause damage to the eyes or skin. It may be toxic if swallowed.

4. Exercise care in handling batteries in order not to short the battery with conducting materials such as rings, bracelets, and keys. The battery or conductor may overheat and cause burns.

5. Charge the battery(ies) provided with or identified for use with this product only in accordance with instructions and limitations specified in this manual.

6. Observe proper polarity orientation between the battery(ies) and battery chargers

7. Do not mix old and new batteries in this product (applies to products employing more than one user replaceable secondary battery).

8. Do not mix batteries of different sizes or from different manufacturers in this product (applies to products employing more than one user replaceable secondary battery).
MOUNTING THE CABINET

The central unit (KSU) is a single cabinet to be mounted on the wall. It should be situated so that it is easily accessible, to ease installation and maintenance.

At least 12 inches of free space must exist above and below the cabinet. 12 inches are also required on the right side of the cabinet in order to connect the cables.

Screw the mounting screws into the wall, 7.5 inches apart, and about 63 inches from the floor. Allow a bit of the screw to protrude between the wall and the screw head.

Hang the KSU cabinet on the screws.

CONNECTION OF CABLES

Run the cables for the external (C.O.) lines and for the telephone extensions from the cabinet to the MDF or the distribution blocks. A twisted two-wire cable, of 24 AWG, is recommended as the extension cable. The maximum loop range for the digital extensions is 984 feet. Included are three cables for the external lines: cable 1 for lines 1-3, cable 2 for lines 4-6, and cable 3 for lines 7-8. The cables are three-pair with modular plugs in one end. A 25 pair with a 50 pin Amphenol plug (female) cable is required for telephone extensions (Not included)

It is recommended that excess voltage protection be installed on aerial lines or other lines where there is a risk for excess voltage. There is one connection on the KSU for a power failure transfer phone. One standard single line telephone set should be connected here. In the case of a power failure, line 1 will be connected to this telephone set. The power outlet must be dedicated 116-240 volt, 50/60 Hz, 3-wire 10 Amps. IT SHALL NOT BE SWITCHED. Power outlet should be within reach of the KSU's power cord. Avoid using extension cords.

SYSTEM SPECIFICATIONS

ELECTRICAL CHARACTERISTICS

POWER RATING
115V @ 0.5 Amp (105 Vac - 128, 50/60Hz)
220V @ 0.27 Amp (207 Vac - 235 Vac, 50/60Hz)
Current rating 1A
Fuses ac/dc 2 A
Power consumption with no ATA installed 120 watts (add 8 watts per ATA installed

FLASH TIMING
The default is .7 sec. This is programmable from .1~1.5 sec.

PAUSE TIMING
Pause time is programmable as 1.5, 2.0, 3.5 or 5.0 sec. Default pause time is 2.0 sec.

DTMF TONE DURATION
DTMF tone duration are programmable. The tones can be programmed as 70, 120, or 150 msec. Default is 120 msec.

CADANCES
The Cadances are programmed into an EPROM (27128)
Dial Tone 425 Hz Continuous
Special Dial Tone 425 Hz 320ms on 1 Oms off
Ring Tone 425 Hz 1000ms on 4000ms off
Busy Tone 425 Hz 500ms on 50ms off
Fast Busy Tone 425 Hz 200ms on 200ms off
Number Available 950 Hz 330ms on 30ms off
Transfer Dial Tone 1400 Hz 330ms on 30ms off

MUSIC SOURCE
An internal melody source is present. An external music source can be plugged into the external music phono jack.

HEAT DISIPATION
380 BTUS Maximum
**INSTALLATION**

**INSTALLATION OF THE POWER**

Plug the power cord into the AC INPUT.

Check the following items BEFORE turning on the power switch:

1) Is the voltage range in the correct position?

   - **115V .5AMP**, position is for AC voltage input:
     105 VAC - 128 VAC, 50 Hz/60 Hz.
   - **220V .27AMP**, position is for AC voltage input:
     207 VAC - 253 VAC, 50 Hz/60 Hz.

2) Is the “NORMAL/RESET” switch in the NORMAL position?

Now turn on the power switch, and check that the “SYS IND” LED is flashing to indicate the KSU is operating. LED will begin flashing within 15 seconds after turning the system “ON.”

**INSTALLATION OF CENTRAL OFFICE TRUNKS**

Plug the C.O. plugs into the outside line jacks CO1, CO2, and CO3 are plugged into jack labeled CO1, CO3, CO4, 5, and 6 are plugged into jack labeled CO4-CO6, CO7 and 8 are plugged into jack labeled CO7-CO8.
INSTALLATION OF POWER FAILURE TRANSFER PHONE

Plug a single line telephone into the jack labeled "PWR FAILURE PHONE".

INSTALLATION OF STATIONS

Plug the amphenol connectors into the station port labeled "STA1 TO STA24", as below. See page 2.8 for wiring and extension numbers.
**INSTALLATION OF SMDR AND MODEM**

Plug the male end with DB9 of the cable into the SMDR port and MODEM port in the KSU. See below.

*Modem connection for remote access:*

Use of a null modem cable is required on the KSU to modem side. A null modem cable inverts pins 2 and 3 for a local connection, connect directly to a computer's Com 1 or Com 2 port, use a standard 9-pin to 25-pin cable.

**INSTALLATION OF ACCESSORIES**

1) External paging: plug the input jack of the amplifier into the earphone jack labeled “EXT PAGE” in the KSU.

2) Music-on-hold /background music: The KSU automatically has an internal music-source (chimes) for music on hold and background music. If alternative music is required, simply plug the earphone jack of a radio, tape player, etc. into the jack marked “MUSIC SOURCE”. The volume of the music can be changed by the control labeled “MUSIC VOLUME”. External paging output must be amplified. Therefore use of a separate amplifier or amplified speaker is required.
INSTALLING THE LOUD BELL

To perform the loud bell function, a loud bell and a DC power supply which can provide +12 VDC and 1 AMP DC current minimum are needed to connect to the KSU. To avoid electromagnetic interferences, the loud bell should be kept at least 20 feet away from the KSU.

The voltage and current rating for the loud bell that can be used are: 100 VAC, 30 VDC, 2 AMP maximum.

BATTERY INSTALLATION

Install a 24V battery to the KSU, as below, to retain system operation during loss of commercial power.

Note: Two 12V batteries may be substituted maximum amp, and hour.
DB9 TO DB25 CABLE

DES-MALE | DB25 - FEMALE
--- | ---
PIN | PIN
1 | 8 | DCD (DATA CARRIER DETECT)
2 | 3 | TD (TRANSMIT DATA)
3 | 2 | RD (RECEIVE DATA)
4 | 20 | DSR (DATA SET READY)
5 | 7 | GND (SIGNAL)
6 | 6 | DTR (DATA TERMINAL READY)
7 | 4 | CTS (CLEAR TO SEND)
8 | 5 | RTS (REQUEST TO SEND)
9 | 22 | RI (RING INDICATOR)

DISPOSITION OF JACK (AMPHENOL) FOR EXTENSIONS

<table>
<thead>
<tr>
<th>PORT</th>
<th>WIRE COLOR</th>
<th>EXTENSION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>BLUE &amp; WHITE</td>
<td>10</td>
</tr>
<tr>
<td>2</td>
<td>ORANGE &amp; WHITE</td>
<td>11</td>
</tr>
<tr>
<td>3</td>
<td>GREEN &amp; WHITE</td>
<td>12</td>
</tr>
<tr>
<td>4</td>
<td>BROWN &amp; WHITE</td>
<td>13</td>
</tr>
<tr>
<td>5</td>
<td>SLATE &amp; WHITE</td>
<td>14</td>
</tr>
<tr>
<td>6</td>
<td>BLUE &amp; RED</td>
<td>15</td>
</tr>
<tr>
<td>7</td>
<td>ORANGE &amp; RED</td>
<td>16</td>
</tr>
<tr>
<td>8</td>
<td>GREEN &amp; RED</td>
<td>17</td>
</tr>
<tr>
<td>9</td>
<td>BROWN &amp; RED</td>
<td>18</td>
</tr>
<tr>
<td>10</td>
<td>SLATE &amp; RED</td>
<td>19</td>
</tr>
<tr>
<td>11</td>
<td>BLUE &amp; BLACK</td>
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<td>12</td>
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<td>13</td>
<td>GREEN &amp; BLACK</td>
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<td>14</td>
<td>BROWN &amp; BLACK</td>
<td>23</td>
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<td>15</td>
<td>SLATE &amp; BLACK</td>
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<td>16</td>
<td>BLUE &amp; YELLOW</td>
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</tr>
<tr>
<td>23</td>
<td>GREEN &amp; VIOLET</td>
<td>32</td>
</tr>
<tr>
<td>24</td>
<td>BROWN &amp; VIOLET</td>
<td>33</td>
</tr>
</tbody>
</table>

NOTE: ATA Extension Numbering. The first extension number of an ATA is associated with the port it is connected to. Example: Port 24 - Extension 33. The second extension number is the first extension number plus 48. Example: 33+48=81
There are two methods of programming. One is using the Remote Programming package, which comes on a diskette, and is used with a PC. The other way is programming through a Display or Executive set. This document explains the second method.

Database programming is accessed by entering F##. Only one person can access database programming at a given time. A password is then entered to gain access to the programming section. Database programming is divided into six sections. These are: Set, Line, Call Handling, Resource, Restriction, and Peripheral. The following shows which features fall under each category:

1. **System Type**
   MF or KF

2. **Set**
   - Day Class
   - Night Class
   - Routing Class of Service
   - Warning Tone
   - Drop Time-out
   - Set Position
   - Mailbox
   - Forced LCR

3. **Line**
   - Auto Attendant
   - Hunt Group Answer
   - Dialing
   - Held Abandon
   - Line Group
   - Private To

4. **Call Handling**
   - Barge-In
   - Barge Alert
   - Exclusive Hold Time
   - Boss/Secretary
   - External CFW
   - Line-to-Line Conference
   - Camp-On
   - Tone Time
   - Warning Time
   - Flash Time
   - External CFW
   - Warning Time
   - Exclusive Hold Time
   - Flash Time
   - Tone Time

5. **Resource**
   - System Alarm
   - Attendant
   - Service
   - Night Start
   - Night End
   - User Names
   - Line Names
   - System SPD
   - Database Password
   - System Time
   - Set Copy
   - Line Copy
   - User Password
   - Canned Message
   - Account Code Table
   - Hour Mode
   - KSU Revision
   - Default Setting

6. **Restriction**
   - Toll Restriction
   - LCR Table

7. **Peripheral**
   - SMDR Output
   - RMT X Rate
   - SMDR X Rate
   - Loud Bell
   - SLT Hook Flash
   - Voice Mail

When database programming is entered, each of the six categories will appear in turn on the LCD display. Scroll through the categories by pressing the NEXT soft key. To program one of the features in a certain category, press SHOW soft key. Then scroll through the list of features in that category, using the soft keys. Follow the directions on the screen, and press the soft keys to program features.

Using the soft keys and directions on the screen, the user is able to program all the database features. This document is mainly for reference use, as the directions are, for the most part, self-explanatory from the LCD display.

To begin, enter database programming, as follows:

Press: F## (to enter database programming)

Enter six digit password

Press: SHOW

NOTE: Default password is 000000

NOTE: F = FUNCTION KEY
**SYSTEM TYPE**

The installer assigns the FCC Registration type with this program section. Either KF or MF can be selected. After accessing database programming:

- Press: Show
- Press: CHG to change or
- Press: Next to Accept.

**SET CATEGORY**

The features in the Set Category refer to those features that are programmable on a per-set basis. The MT-360 Series is very flexible in this way - many of the features are programmable by set. Many of these features can be programmed by the individual user, through feature programming. Those features to be programmed under database programming are as follows:

- Day Class
- Night Class
- Routing Class of Service
- Voice Mail Port
- Line Assignment
- Ring Assignment
- AC Code (Forced)
- Forced LCR

After accessing database programming,

1. set BKSP NEXT SHOW

Press: SHOW

Press: 10
if 10 is the set you wish to program.

Press: SHOW

**CLASS OF SERVICE (COS)**

This section programs the day and night COS for the selected station. Stations can be programmed to have COS of 0 - 7, with 0 being the highest COS. COS is associated with features such as toil restriction, Call barge-in, do not disturb override, etc.

NOTE: F = FUNCTION KEY

**ROUTING CLASS OF SERVICE**

The routing COS is used for route selection in least cost routing tables. Routing classes of service are programmed from 0 - 3, to allow for different routing of a given call by different users. Default: All stations have routing COS = 0.

**VOICE MAIL PORT ASSIGNMENT**

A station port may be assigned as a voice mail port, in order to use it as the interface to a voice mail system. If a port is programmed as voice mail, calls to any stations forwarded to this port will cause the system to send DTMF to the voice mail system. This DTMF information includes the mailbox number and digits indicating the reason for the forward. Default: All stations, voice mail port = N.

**FLEXIBLE LINE ASSIGNMENT**

This feature programs which lines will be available to a station user to make and receive outside line calls.

A station user will then use a line key, or line group key to access the idle line, or to answer an incoming ringing call.
Default: All lines are accessible by all stations.

Press: NEXT

Press: SHOW

Line Assignment
BACK NEXT SHOW

Press: CHG

Line 1: Y
BACK NEXT CHG

To Change to No,
Press: CHG

Line 1: N
BACK NEXT CHG

To Continue to Next Line,
Press: NEXT

Line 2: Y
BACK NEXT CHG

Continue through line 8
Press: NEXT

Line 8: Y
BACK NEXT CHG

FLEXIBLE RING ASSIGNMENT

This feature programs which lines will ring at each station.
Default: Only the attendant (station 10) receives outside line ringing.

Press: NEXT

Press: SHOW

Line Assignment
BACK NEXT SHOW

Press: CHG

Line 1: Y
BACK NEXT CHG

To Change to No
Press: CHG

Line 1: N
BACK NEXT CHG

Press: NEXT

Line 2: Y
BACK NEXT CHG

Continue through line 8.
Press: NEXT

Line 8: Y
BACK NEXT CHG

FORCED ACCOUNT CODE

When a station is programmed with forced account code feature enabled, he must enter a code before making an outgoing call. These codes must be programmed into an account code table (See Resource Category of database programming to program the account code table.) The entered account code must exactly match one of the possible 100 codes in the account code table in order to place an outgoing call.
Default: Forced account codes disabled for every station.

Press: NEXT

Press: CHG

FORCED LEAST COST ROUTING

When making an outgoing call with forced LCR programming, the digits are compared with the LCR tables to choose the most economical route.
Default: Forced LCR is disabled for all stations.

Press: NEXT

Press: CHG

NIGHT SERVICE STATION

When the system is in night service mode, any station programmed as a night service station will ring for all incoming lines, regardless of ring assignment programming.
Default: No station is assigned as night service station.

Press: NEXT

Press: CHG

STATION GROUP ASSIGNMENT

There are eight groups to which stations can be assigned. Features such as group call pickup are associated with station group assignments.
Default: All stations belong to set group 1.

Press: NEXT

Press: CHG

Continue through set group 8.

WARNING TONE

This is associated with other features, such as drop timeout. If warning tone is enabled, a station will be given a warning tone 10 seconds before the specified warning time has elapsed.
Default: Warning tone disabled for all stations.

NOTE: F = FUNCTION KEY
STATION POSITION PROGRAMMING

Default station numbers can easily be changed to another vacant station number. Station numbers 10-89 can be used. Default: Stations are numbered from 10 to 33 sequentially. If an analog adaptor is connected, station numbers 58 to 81 are used for the second channel of the analog adaptor.

Press: NEXT

Set Position: 10
BKSP SAVE CHG

Press: CHG

Set Position:
BKSP SAVE CHG

Press: New Stn

Set Position: 56
BKSP SAVE CHG

If new station number is 56

Press: SAVE

Extension 10 is now vacant, the station is now extension 56.

MAIL BOX ASSIGNMENT

A mail box number can be assigned to each station, to correspond with a voice mail system, such as MacroVoice. Each mail box number must be three digits in length. Default: Each station has the same mail box number and station number. (010 - 033)

Press: NEXT

Mail Box: 010
BACK NEXT CHG

Press: CHG

Mail Box: 999
BKSP SAVE CHG

Press: New mail box number

Mail Box: 999
BKSP SAVE CHG

If new mail box number is 999:

Press: SAVE

Mail Box: 999
BACK NEXT CHG

Now, the mail box number for station 10 is 999, not 010.

Press: NEXT

Warning Tone: N
BACK NEXT CHG

Press: CHG

Warning Tone: Y
BACK NEXT CHG

NOTE: F = FUNCTION KEY

LINE CATEGORY

The second category of database programming, Line Category, refers to features that apply to individual lines. The features that fall under Line Category are:

- Auto Attendant
- Line Group
- Hunt Group Answer
- Private To
- Dialing
- Hold Abandon
- Line Type

Press: F# (to enter database programming)

Enter six digit password

Press: SHOW

1. Set
BACK NEXT SHOW

Press: NEXT

2. Line
BACK NEXT SHOW

Press: SHOW

Show Line:
BKSP SHOW CHG

Press: Ln

Show Line: 1
BKSP SHOW CHG

Line 1 was selected.

AUTO ATTENDANT

Each line can be designated to be answered by an automated attendant. Two choices are available; Yes or No. Default: Each line is set to no.

Press: SHOW

AUTO ATTENDANT: N
BACK NEXT CHG

Press: CHG

AUTO ATTENDANT: Y
BACK NEXT CHG

Note: When a line is set to Auto Attendant Yes, any assignments for that line to ring at a station in Flexible Ring Assignments are overridden.

Associated Programming:
- Hunt Group Answer
- Extension Hunt Groups
HUNT GROUP ANSWER

When a line is set to auto attendant Yes, then it will ring into a hunt group. Each line can be set to ring into ONE of 8 hunt groups.
Default: Each auto attendant line rings into hunt group 1.

Press: SHOW
Press: CHG
Press: CHG

Continue through hunt group 8.

Associated Programming. AUTO ATTENDANT

LINE GROUP ASSIGNMENT

Lines can be assigned to groups, for features such as line pool. Two line groups are available.
Default: All lines belong to line group 1.

Press: NEXT
Press: CHG

PRIVATE LINE

A line can be programmed as private to a certain station. Then, only that station can access that line for outgoing calls, or answer that ringing line. Private line programming overrides line and ring assignment programming.
Default: No private lines are assigned to any station.

Press: NEXT
Press: CHG

CALL HANDLING CATEGORY

The third category of database programming, Call Handling Category, refers to features that apply to the handling of calls. The features that fall under Call Handling Category are as follows:

- Barge-In
- Barge Alert
- Exclusive Hold Time
- Flash Time
- Remind Time
- Recall Time
- Pause Time
- PBX Code

Tone Time
Warning Time
Boss/Secretary
DISA
External CFW
Line-to-Line Conference
Camp-On
### PROGRAMMING

Press: **F#**
(to enter database programming)  
**DB PSWD:** **BKSP SHOW CHG**  
Enter six digit password  
**DB PSWD:** **BKSP SHOW CHG**  
Press: **SHOW**  
1. **Set**  
2. **Line**  
3. **Call Handling**  
Press: **NEXT**  
Press: **SHOW**  
Press: **NEXT**  
**Barge in:** **N**  
Press: **CHG**  
Press: **CHG**

#### BARGE-IN

When barge-in is program enabled, stations can barge-in to other stations with an equal or lower class of service than their own. Other features to be programmed in conjunction with this feature are class of service (in Station Category), and barge alert (in Call Handling Category).  
**Default:** Barge-in is disallowed.  
Press: **CHG**  
Press: **CHG**

#### BARGE-IN ALERT TONE

When the barge-in alert tone is enabled, the called party will hear a tone when another party barges-in his call.  
**Default:** Barge-in alert tone is disabled.  
Press: **NEXT**  
Press: **CHG**

#### EXCLUSIVE HOLD

Program the amount of time that should expire before a call is released from exclusive hold, and is returned to common hold. Choose between 0 - 8 minutes. If 0 minutes is selected, exclusive hold feature is disabled.  
**Default:** Exclusive hold time is three minutes.  
Press: **NEXT**

**NOTE:** **F = FUNCTION KEY**

---

<table>
<thead>
<tr>
<th>Feature</th>
<th>Default</th>
<th>Description</th>
</tr>
</thead>
</table>
| **FLASH**                      |                  | Flash time is programmable to work behind **Centrex** or **PABX.** The flash time can be from .1 - 1.5 seconds.  
**Default:** Flash time is .7 second.  
Press: **NEXT**  
Press: **CHG**
|                                |                  | and so on, through 1.5.                                                                                                                   |

**HOLD REMINDER**

This feature will remind a station user that he has placed a call on hold by recalling holding station after 0, 1, 2, 3, 4, 5, 6, 7, or 8 minutes have elapsed. (If it is set for 0 minutes, recall does not occur.)  
**Default:** The hold reminder time is every 3 minutes  
Press: **NEXT**  
Press: **CHG**

**RECALL TIME**

This feature sets the amount of time before a transferred call recalls the originating station. The recall time can be 30, 60, 120, or 180 seconds.  
**Default:** The recall time is 60 seconds.  
Press: **NEXT**  
Press: **CHG**

Continue pressing **CHG** until required recall time is shown.
**PROGRAMMING**

**PAUSE TIME**

Pause time is programmable as 1.5, 2.0, 3.5, or 5.0 seconds. This feature is used primarily when programmed into speed dial numbers to insert a pause to allow time for response from the C.O. or for other applications.

*Default:* Pause time is 2.0 seconds.

Press : NEXT

Press : CHG

Continue pressing CHG until the required pausetime is shown.

*NOTE:* Pause Time Affects CPID Send Time.

**PABX COMPATIBILITY (ACCESS CODES)**

PABX access codes can be assigned as either one digit (from 0 - 9), or two digits (from 00 - 99), to interface with a variety of PABXs. After the PABX access code is entered, a fixed pause time of two seconds will be automatically inserted before dialing out the subsequent digits, to ensure that real C.O. dial tone has been achieved before sending the digits.

*Default:* PABX access code is “9”.

Press : NEXT

Press : CHG

Press : 90

Press : SAVE

**TONE DURATION**

DTMF tone duration from the dial pad are programmable to be compatible with varying connected switching systems. The tones can be programmed as 70, 120, or 150 ms in length.

*Default:* Tone duration is 120 ms.

Press : NEXT

Press : CHG

Continue pressing CHG until the required tone duration time is shown.

**WARNING TONE TIME**

This feature is associated with the drop timeout feature. It provides a tone to notify the user that the line is about to be dropped. This is programmable for 1, 2, 3...8 minutes after the call begins.

*Default:* The warning tone is activated after three minutes have elapsed.

Press : NEXT

Press : CHG

Continue pressing CHG until the required time is shown.

**BOSS / SECRETARY PROGRAMING**

A boss/secretary relationship can be set up between stations. It is related to such features as DND override, barge-in, etc. One secretary can serve up to two bosses.

*Default:* No boss/secretary relationships are programmed.

Press: NEXT

Press: SHOW

Press: Stn of Secretary

Press: SHOW

Press: Stn of Boss

Press: SAVE

Press: NEXT

Continue as above until all bosses and secretaries are programmed.
DISA
(DIRECT INWARD SYSTEM ACCESS)

One line can be programmed as a DISA line. Several associated items have to be programmed with DISA, as follows:

- Active line (1,2,3,...8)
- Service (Never, Day, Night, Always)
- Talk time on DISA line? (1,2,3,5,10,15 minutes)
- DISA password (9 digits. The last digit is the class of service for users with that password.)
- DISA rings (how many rings before the DISA line is answered?) (1,2,3...99)

If a DISA user accesses another outside line, that line will be toll restricted based on the user’s DISA password, and the Day/Night service mode. Also, if a line to line conference is established using the DISA function, the conversation time will be limited to the DISA talk time limit.

Default: No line is programmed as a DISA line.

The default ring count before answering is 1 time.

Press : NEXT

Press : CHG

Continue pressing CHG until the required line is shown (None, 1,2,3,...8)

Press : NEXT

Service: NEVER

Press : CHG

Service: DAY

Press : NEXT

Talk Time: 5

Press : CHG

Talk Time: 10

Press : NEXT

Access Code

Press : SHOW

01. EMPTY

Press : CHG

01. BKSP

Press : NEXT

Bksp 123456780

Press : CHG

The last digit of the password is the Class of Service associated with that password.

EXTERIOR CALL FORWARDING (ECF)

A call can be forwarded to an external location. Any call coming in on the line that is forwarded externally is forwarded out on a designated line to the number located in speed dial #99.

- The incoming, outgoing ECF lines must be programmed as such, and speed dial #99 must be programmed.
- The service mode in which the ECF should be activated must also be programmed as Never, Day, Night, or Always.
- There is a limit to the conversation time on the ECF call. It is programmable as 1,2,3,5,10, or 15 minutes.

Default: No lines are assigned as incoming or outgoing ECF lines.

Press : NEXT

Press : SHOW

Press : CHG

Continue pressing CHG until the required incoming line # appears. (None, 1,2,3,...8)

Press : NEXT

Outgoing: NONE

Press : CHG

Outgoing: 1

Press : NEXT

Service: NEVER

Press : CHG

Service: Day
PROGRAMMING

LINE-TO-LINE CONFERENCE

The talk time for line-to-line (sometimes called trunk-to-trunk) conferences is programmable as 1, 2, 3, 5, 10, or 15 minutes.

Default: Talk time for line-to-line conferences is five minutes.

CAMP-ON TIME

The camp-on time is programmable from 0, 10, 20,...50 seconds. If 0 seconds is programmed, it means there will be no camp-on tone. Each programmable interval will have a camp-on tone, and a camp-on message will appear on LCD display.

Default: The default camp-on time is 10 seconds.

RESOURCE CATEGORY

The fourth category of database programming, Resource Category, refers to features that apply to system resources. The features that fall under Resource Category are:

System Alarm
Attendant
Service
Night Start
Night End
User Names
Line Names
System SPD
Database Password
System Time
Set Copy
Line Copy
User Password
Canned Message
Account Code Table
Hour Mode
KSU Revision
Default Setting

NOTE: F = FUNCTION KEY
PROGRAMMING

ATTENDANT

One station must be programmed as the attendant. The attendant is used for such features as recall, forced incoming ICM call forward, etc.

Default: Station 10 is the attendant.

Press: NEXT

Press: CHG

Press: New attendant station

Press: SAVE

SYSTEM SERVICE MODE

Three system service modes may be selected. These are “Day, Night, and Time”. If the “Day” mode is selected, system will always work in day mode. If “Night” mode is selected, the system will always work in night mode. If “Time” mode is selected, the system will work in either day or night mode, depending on the time of day. (See night service programming.)

Default: System is in Day service mode.

Press: NEXT

Press: CHG

Press: Time to begin night mode, enter in 24 hour clock format

Press: SAVE

USER NAME PROGRAMMING

Names of up to seven characters may be assigned to stations.
- The dial pad is used to enter characters. The letters are printed on the keys. Pressing a key once chooses the first letter on the key, pressing again chooses the second, and again the third. For example, pressing the 6 key twice chooses the letter N.
- The letters are uppercase. If you want to switch to lowercase, dial #. To proceed to the next letter, dial #. To go back a space, press BKSP soft key. Also dial # to insert a space.
- At the end of the name, press # to proceed to the next letter before pressing SAVE.

Default: No station has a name assigned.

Press: NEXT

Press: SHOW

Press: SHOW

NIGHT SERVICE

When system mode is programmed as “Time”, the service mode will automatically be changed from “Day” to “Night” depending on the programmed night start and night end times.

Default: System is in “Day” mode, and night start/end times are not programmed.

Press: NEXT

Press: CHG

Press: Time to begin night mode, enter in 24 hour clock format

Press: SAVE

LINE NAME PROGRAMMING

Lines can be assigned names, which are viewed on the LCD display when that line is selected or ringing. The name may have up to seven characters.

- To use dial pad to enter letters for the name, see user name programming.

Default: No line is given a name.

Press: NEXT

Line Names

BACK NEXT SHOW

Z-18
**PROGRAMMING**

Press: SHOW
Show Line:  
BKSP SHOW CHG

Press: Ln number
Show Line: 1
BKSP SHOW CHG

Press: SHOW
Line 1: EMPTY
BACK NEXT CHG

Press: CHG
Line 1: 
BKSP SAVE CHG

Press: Keypad to enter letters in line name
Line 1: ABC CO
BKSP SAVE CHG
If 2#22#222#222#686# was entered

Press: SAVE
Line 1: ABC CO
BACK NEXT CHG

**SYSTEM SPEED DIALING**

System speed dial numbers can be programmed to bin numbers 20 - 99. (00 - 19 are reserved for personal speed dial numbers).

- Digits saved under speed dial locations may be digits 0 - 9, #, Flash (F3), Pause (F70), and speed dial chaining code (F1n, where nn = speed dial bin number to be chained).
- Speed dial numbers can be chained together by including the speed dial chaining code in the speed dial digits. There is only one "layer" of speed dial chaining, meaning you can chain from bin 01 to a number in bin 02, but if bin 02 has a chaining digit to bin 03, it would not continue to chain to bin 03. If you wanted to include the number in bin 03, you would have to put the chaining digit for bin 03 into bin 01.

For example:
- Bin 01: 3456@02@03...
  (where @ shows the speed dial chaining digit (F1))

  Bin 02: 1234@04
  Bin 03: 56789
  Bin 04: 7777

  The number 3456123456789 would be dialed. Note that the chain to 04 from bin 02 was ignored.
- Flash and Pause are counted as one digit, while speed dial chaining code is counted as three digits.
- Speed dial numbers can be up to 16 digits.

**Default:** No speed dial numbers have been programmed.

Press: NEXT
Press: CHG
Enter phone number
To save 9975500
BKSP SAVE CHG
If 9975500 is to be saved

Press: SAVE
9975500
BACK NEXT CHG
The number "9975500" is saved in SPD location 20. Continue as above for speed dial locations 20 - 99.

**CHANGEABLE SYSTEM PASSWORD**

The system password can be changed to any six digit number. **Default:** The password is 000000.

Press: NEXT
Press: CHG
Enter new password
Press: SAVE
If 123456 is new password
The database password is now 123456.

**SYSTEM TIME**

The year, month, date, day of week, hour, and minute can be programmed. This appears on the LCD of Display and Executive sets.

**Default:** The initial system time is 12:00 am, TUE, JAN 1, 1991.

Press: NEXT
Press: SHOW
Enter last two digits of current year.
Press: SAVE
Year: 92
BACK NEXT CHG
If 1992 is the current year
### SET COPY

Programming can be copied from one set to another. Simply program one station with required features, then use set copy to copy to other stations.

The features that are copied with set copy are:

1. COS day
2. COS night
3. Line assignment
4. Ring assignment
5. Night set (Yes/No)
6. Set group number
7. Hunt group number
8. Warning tone (enable/disable)
9. Drop time-out
10. Mail box
11. Feature map
12. DSS/SPD key map

**Default:** None.

- Press: NEXT
- Press: SHOW
- Press: Sn to copy from
- Press: SAVE
- Press: Ln to receive copy
- Press: SAVE
- Press: NEXT

### USER PASSWORD

Although a station user's password is set through station lock/unlock feature, not in database programming, the password can be seen in database programming. This is useful if a user has forgotten his password.

**Default:** Each station's password is "0000".

- Press: NEXT
- Press: SHOW
- Press: Sn
- Press: SHOW
- Press: NEXT

---

### LINE COPY

Line programming can be copied using line copy. Simply program one line with all required features, then copy the programming to another line or lines.

Features that are copied through line copy are:

1. Dialing type
2. Hold abandon (yes/no)
3. Line type
4. Loud bell (enable/disable)
5. Line group number
6. Private to

**Default:** None.

- Press: NEXT
- Press: SHOW
- Press: Ln to copy from
- Press: SAVE
- Press: Ln to receive copy
- Press: SAVE
- Press: NEXT
PROGRAMMABLE CANNED MESSAGE

There are two types of messages to be programmed in the system. The first canned messages are sent when calling a busy or no answer station to provide them information, or request them to return the call. The second type, advisory messages, are left on a station user's phone to provide information to calling parties.

Both types of messages have six system programmable messages, and one station user programmable message. There is a maximum of 16 characters per message. See user name programming for details on using the dial keypad to enter messages.

**Default:** The default canned messages are:
- Have a Good Day
- Call Home
- Friend Visiting
- Empty (station user programmable)

**Default:** The default advisory messages are:
- At Lunch
- Gone Home
- Out of Office
- Empty (station user programmable)

Press : NEXT  
Canned Message  
BACK NEXT SHOW

Press : SHOW  
Sending Message  
BACK NEXT SHOW

"Sending Message" are the canned messages to send when calling a busy or no answer station.

Press : SHOW  
Have a Good Day  
BACK NEXT CHG

Press : CHG  
BKSP SAVE CHG

Enter digits to spell out message  
CALL ME  
BKSP SAVE CHG

Press : SAVE  
CALL ME  
BACK NEXT CHG

Continue pressing NEXT to scroll through all seven messages.

Press : NEXT  
Advisory Message  
BACK NEXT SHOW

Advisory messages are the messages that are left on a station user's set to provide information to calling parties for more efficient call handling.

Press : SHOW  
At Lunch  
BACK NEXT CHG

Press : CHG  
BKSP SAVE CHG

ACCOUNT CODE TABLE

This table holds all account codes to be matched against entered code when forced account codes are enabled on a station.

- The account codes can be from four to eight digits in length.

**Default:** Account code table is empty.

Account codes are four digits in length.

Press : NEXT  
AC Code Table  
BACK NEXT SHOW

Press : SHOW  
Length : 4

Press : CHG  
Length : 5

Continue to press CHG until required account code digit length appears. (4 - 8)

Press : NEXT  
001. EMPTY  
BACK NEXT CHG

Press : CHG  
001.  
BKSP SAVE CHG

Enter Account Code

001. 12345  
BKSP SAVE CHG

If 12345 is an account code to be entered in table

Press : SAVE  
001. 12345  
BACK NEXT CHG

Continue for account codes 001 - 100.

HOUR MODE SELECTION

The hour mode for the time (as shown on the LCD displays) can be in 12 or 24 hour mode, as required.

**Default:** The system time is displayed in 12 hour mode.

Press : NEXT  
Hour Mode : 12  
BACK NEXT CHG

Press : CHG  
Hour Mode : 24  
BACK NEXT CHG

NOTE: F = FUNCTION KEY

2-21
PROGRAMMING

**KSU SOFTWARE VERSION DISPLAY**

This feature shows the software revision number currently installed in system.

*Default:* None.

Press: NEXT

| KSU Revision | BACK | NEXT | SHOW |

Press: SHOW

| KSU: K06UM0_F1 | BACK | NEXT |

**DEFAULT SETTING**

When this function is activated, all settings are returned to default status, and any operation in progress is terminated.

*Default:* None.

Press: NEXT

Press: SHOW

Enter six-digit database password

Press: SHOW

Press: NEXT

Press: NEXT

Press: NEXT

Press: NEXT

Press: SHOW

Enter Password

From / To: Maximum 10 digits can be programmed; valid digits are 0-9 and x (wild card). Day / Night Class: These two fields relate to the station's "Class of Service" and the system "Service Mode". If the dialed digits are assigned in the range between "From" and "To", the system will check the "Day Class" or "Night Class" and station "Class Of Service". If the corresponding field is programmed as 'N', then the call is restricted, otherwise the system will continue checking the following entries of the tables until all the tables are checked.

**TOLL RESTRICTION**

Outside calls with a sequence of digits which are within the tables will be denied or allowed.

*NOTE:* The digit '*' is used as a "wildcard" digit in the toll control tables.

*Default:* All toll restriction tables are empty.

**General description and default value:**

<table>
<thead>
<tr>
<th>From (0-9, x)</th>
<th>To (0-9, x)</th>
<th>Day Class</th>
<th>Night Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>001</td>
<td>0</td>
<td>Y N N N N N</td>
<td>Y N N N N N</td>
</tr>
<tr>
<td>002</td>
<td>EMPTY</td>
<td>N N N N N N</td>
<td>N N N N N N</td>
</tr>
<tr>
<td>003</td>
<td>EMPTY</td>
<td>N N N N N N</td>
<td>N N N N N N</td>
</tr>
<tr>
<td>004</td>
<td>EMPTY</td>
<td>N N N N N N</td>
<td>N N N N N N</td>
</tr>
<tr>
<td>005</td>
<td>EMPTY</td>
<td>N N N N N N</td>
<td>N N N N N N</td>
</tr>
<tr>
<td>...</td>
<td>...</td>
<td>...</td>
<td>...</td>
</tr>
<tr>
<td>100</td>
<td>EMPTY</td>
<td>N N N N N N</td>
<td>N N N N N N</td>
</tr>
</tbody>
</table>

From / To: Maximum 10 digits can be programmed; valid digits are 0-9 and x (wild card). Day / Night Class: These two fields relate to the station's "Class of Service" and the system "Service Mode". If the dialed digits are assigned in the range between "From" and "To", the system will check the "Day Class" or "Night Class" and station "Class Of Service". If the corresponding field is programmed as 'N', then the call is restricted, otherwise the system will continue checking the following entries of the tables until all the tables are checked.

**NOTE:** F7 # generates "x" generates "xl" during the keyphone programming.

Press: SHOW

Press: NEXT

| Toll Restriction | BACK | Next Show |

Press: SHOW

Press: NEXT

| Table Entry | BACK | SHOW | CHG |

Press: CHG
**LEASTCOSTROUTING**

Least cost routing allows the system to choose the most economical route when making a call. Routes are defined in the route table, and are accessed by route lists.
- Each route list contains the first choice route number and up to three alternative route numbers.
- Each user is assigned to one of four routing classes of service. Selective routing by class of service determines which routes the user can access and at what times during the day, based on his routing class of service.

Default: All LCR tables are empty.

Press: NEXT

Press: SHOW
Press : CHG  
RCS 1 Rate :  
BKSP SAVE CHG  

Press : 054  
RCS 1 Rate : 054  
BKSP SAVE CHG  

Press : SAVE  
Route List Table Programming :  
RCS 1 Rate : 054  
BKSP NEXT CHG  

Continue for routing classes of service 0 - 3.

Press : NEXT  
Route List Table  
BACK NEXT SHOW  

Press : SHOW  
Show Table :  
BKSP SHOW CHG  

Select route list table to show, from 001 - 200.

Press : 001  
Show Table : 001  
BKSP SHOW CHG  

Press : SHOW  
1st Choice  
BACK NEXT SHOW  

Press : SHOW  
Modify Table : NUL  
BACK NEXT CHG  

Press : CHG  
Modify Table :  
BKSP SAVE CHG  

Press : 001  
Modify Table : 001  
BKSP SAVE CHG  

Press : SAVE  
Line 1 : N  
BACK NEXT CHG  

Press : CHG  
Line 1 : Y  
BACK NEXT CHG  

Continue pressing NEXT and CHG for each of Lines 1 - 8.

Press : NEXT

Digit Modification Table Programming:  
2nd Choice  
BACK NEXT SHOW  

Repeat above for choices 1 - 4.

Press : NEXT  
Dgt Modification  
BACK NEXT SHOW  

Press : SHOW  
Show Table :  
BKSP SHOW CHG  

Enter table # from 001 - 00

Press : 001  
Show Table : 001  
BKSP SHOW CHG  

Press : SHOW  
Deleted Digit : 00  
BACK NEXT CHG  

Enter the deleted digit number, from 00 - 12.

---

**PERIPHERAL CATEGORY**

The sixth and final category, Peripheral Category, refers to those features associated with peripheral equipment, as follows:

- SMDR Output
- Loud Bell
- RMT X Rate
- SLT Hook Flash
- SMDR X Rate
- Voice Mail
- Ext Hunt Group

**Press: F#**

(to enter database programming)

**Enter Password**

DB PSWD : 00000000

If password is 00000000

---

2-24
**PROGRAMMING**

**SMDR OUTPUT**
This determines the information to be sent to the SMDR report.
Default: All types of SMDR call records will appear on the printout.

- Press: SHOW
  - SMDR Output

- Press: SHOW
  - Incoming Call: Y

- To Change to No,
  - Press: CHG
    - Incoming Call: N

- Press: NEXT
  - Account Code: Y

- Press: CHG
  - Account Code: N

Press: SHOW
Service: Disable

Press: CHG
Service: DAY

Continue to press CHG until the required Service mode is shown. (Disable, Day, Night, Always).

Press: NEXT
Line 1: N

Press: NEXT
Line 2: N

Press: CHG
Line 2: Y

Continue to press NEXT and CHG for each line (1-8).

**DATA RATE SELECTION**
For RS-232C Data Port.

Two RS-232C data ports are provided on the KSU. One is used as a DCE terminal to interface to a serial printer or data terminal for output of SMDR records. The other data port is to be connected to a MODEM for remote programming, or to a PC for on-site programming.

- The data rate is selectable as 110, 300, 600, 1200, 2400, 4800, 9600, or 19200 bits per second.
- Default: The default data rate is 9600 bps.

Press: NEXT
RMT X_Rate: 9600

Press: CHG
RMT X_Rate: 19200

Continue to press CHG until the required data rate is shown.

Press: NEXT
SMDR_Rate: 9600

Press: CHG
SMDRX_Rate: 19200

Continue to press CHG until the required data rate is shown.

**SLT HOOK FLASH TIME**

**PROGRAMMING**

The hook flash time for SLT operation is programmable to start at 60, 100, 200, 300, ..., 1400 ms, and to end at 100, 200, 300, ..., 1500 ms. The start time must always be less than the end time.

- Default: The hook flash time is from 300 to 900 ms.

Press: NEXT
SLT Hook Flash

Press: SHOW
Start Time: 60

Press: CHG
Start Time: 100

Continue to press CHG until the required hook flash start time is shown. (60, 100, 200, 300, ..., 1400 ms.)

Press: NEXT
End Time: 1500

Press: CHG
End Time: 200

The end time of 100 has been skipped because the start time has been changed to 100 ms.

Press: CHG
End Time: 300

Continue to press CHG until the required end time for hook flash is shown. (100, 200, 300, ..., 1500 ms.)

**LOUD BELL INTERFACE**

One loud bell interface is provided, which can be assigned to ring for one or more lines. If the loud bell is assigned to a certain line, the loud bell will sound when that line is signaling, and be turned off when the line is answered.

- Default: The loud bell is not assigned to any line.

Press: NEXT
Loud Bell

BACK NEXT SHOW

Press: SHOW
SLT Hook Flash

BACK NEXT CHG

Press: CHG
Start Time: 60

BACK NEXT CHG

Press: CHG
Start Time: 100

BACK NEXT CHG

Continue to press CHG until the required hook flash start time is shown. (60, 100, 200, 300, ..., 1400 ms.)

Press: NEXT
End Time: 1500

BACK NEXT CHG

Press: CHG
End Time: 200

BACK NEXT CHG

The end time of 100 has been skipped because the start time has been changed to 100 ms.

Press: CHG
End Time: 300

BACK NEXT CHG

Continue to press CHG until the required end time for hook flash is shown. (100, 200, 300, ..., 1500 ms.)
**PROGRAMMING**

**VOICE MAIL**

Stations can be assigned to be forwarded to their voice mail ports upon a busy or no answer condition. They can be programmed such that the system will see the CPID digits, and know whether it was busy or no answer, internal or external, in order to give the appropriate personal greeting.

It is then programmed to either tell the reason (N, Y), and the originator (external, or a certain station).

- Press : NEXT  
  Voice Mail  
  BACK NEXT SHOW

- Press : SHOW

  Reason for CFW  
  BACK NEXT SHOW

- Press : SHOW

  Busy EXT : EMPTY  
  BACK NEXT CHG

- Press : CHG

  Busy EXT :  
  BKSP SAVE CHG

Enter CPID digits, maximum of five digits.

- Press : SAVE  
  Busy EXT : 123  
  BKSP SAVE CHG

- Press : NEXT  
  No Ans EXT : EMPTY  
  BACK NEXT CHG

- Press : NEXT  
  Always EXT : EMPTY  
  BACK NEXT CHG

- Press : NEXT  
  Busy INT : EMPTY  
  BACK NEXT CHG

- Press : NEXT  
  No-Ans INT : EMPTY  
  BACK NEXT CHG

- Press : NEXT  
  Always INT : EMPTY  
  BACK NEXT CHG

- Press : NEXT  
  CFW Access Condition  
  BACK NEXT SHOW

This feature sends the CPID digits for reason the call is forwarded (as programmed above).

- Press : SHOW

  Reason : N  
  BACK NEXT CHG

- Press : CHG

  Reason : Y  
  BACK NEXT CHG

**EXTENSION HUNT GROUPS**

Eight Hunt Groups are available. Up to 24 stations can be in one hunt group. A station can be in only one hunt group.

- Press : NEXT  
  Extension Hunt Group  
  BACK NEXT SHOW

- Press : SHOW  
  Hunt Group :  
  BACK NEXT CHG

- Press : I-8  
  Hunt Group: 1  
  BKSP SHOW CHG

- Press : SHOW

  Group Member  
  BACK NEXT SHOW

- Press : SHOW

  Member 01: NULL  
  BACK NEXT CHG

- Press : CHG

  Member 01:  
  BKSP SAVE CHG

- Press : SHOW

  Member 01: 10  
  BKSP SAVE CHG

- Press : SAVE

  Member 01: 10

Continue to add members, go to next Hunt Group or EXIT.

**NOTE:** F = FUNCTION KEY

- Eight Hunt Groups are available. Up to 24 stations can be in one hunt group. A station can be in only one hunt group.

- Four Hunt Groups are available. Up to 16 stations can be in one hunt group. A station can be in only one hunt group.

- Eight Hunt Groups are available. Up to 24 stations can be in one hunt group. A station can be in only one hunt group.

- Eight Hunt Groups are available. Up to 24 stations can be in one hunt group. A station can be in only one hunt group.
<table>
<thead>
<tr>
<th>SYSTEM TYPE</th>
<th>ME</th>
<th>KF</th>
</tr>
</thead>
<tbody>
<tr>
<td>SET CATEGORY</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| STATION NUMBER | DEF. | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 |
|----------------|------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| Day Class of Service (O-7) |      |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Night Class of Service (O-7) |      |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Routing Class of Service (O-3) |      |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Voice Mail Port Assignment (Y,N) |      |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Line Assignment (√) |      |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Ring Assignment (J) |      | 10 |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Forced Account Codes (Y,N) | N   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Forced LCR (Y, N) | N   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Night Service Station (Y, N) | N   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Station Group (1, 2, 3, 4, 5, 6, 7, 8) | 1 |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Warning Tone (Y, N) | N   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Drop Time-out (Y, N) | N   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Station Position (two-digit number 1 O-89) Mail Box Assignment | 10-33 |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |   |

3-1
### LINE CATEGORY

<table>
<thead>
<tr>
<th>Line #</th>
<th>Def.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>No</td>
</tr>
<tr>
<td>2</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td></td>
</tr>
</tbody>
</table>

- **Auto Attendant (Y,N)**: No
- **Hunt Group Answer (1-8)**: 1
- **Dialing Type (Tone, Pulse)**: Tone
- **Hold Abandon (Y, N)**: N
- **Line Type (C.O., PBX)**: C.O.
- **Line Group (1, 2)**: 1
- **Private To (Station Number)**: None

### CALL HANDLING CATEGORY

- **Barge-In (Y, N)**: I
- **Barge-In Alert Tone (Y, N)**: N
- **Exclusive Hold Time (0, 1, 2, 3, 4, 5, 6, 7, 8 minutes)**: 3 min.
- **Flash Time (.1, .2, .3, . . . 1.5 seconds)**: .7 sec.
- **Hold Reminder Time (0, 1, 2, 3, 4, . . . 8 minutes)**: 3 min.
- **Recall Time (Transfer) (30, 60, 120 or 180 seconds)**: 60 sec.
- **Pause Time (1.5, 2, 3.5 or 5 seconds)**: 2.0 sec.
- **PABX Access Code (0-9 or 00-99)**: 9
- **Tone Duration (70, 120 or 150 milliseconds)**: 120 ms
- **Warning Tone Time (1, 2, 3, 4, 5, 6, 7, 8 minutes)**: 3 min.
- **DISA: Active Line (None, 1, 2, 3, 4, 5, 6, 7, 8)**: None
- **DISA Service (Day, Night, Never, Always)**: Never
- **DISA Talk Time (1, 2, 3, 5, 10 or 15 minutes)**: 5 min.
**DISA Access Code** (Up to nine digits, up to 21 passwords)

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**DISA Ring (1-99)**

- External Call Forward
  - Incoming Line (None, 1, 2, 3, 4, 5, 6, 7, 8)
  - Outgoing Line (None, 1, 2, 3, 4, 5, 6, 7, 8)
  - Service (Never, Day, Night, Always)
  - Talk Time (1, 2, 3, 5, 10 or 15 minutes)

*Note: Program the number to which calls will be forwarded in speed dial bin number 99.*

- Line-To-Line Conference
  - Talk Time (1, 2, 3, 5, 10 or 15 minutes)

- Camp-On Time (0, 10, 20, 30, 40 or 50 seconds)

**RESOURCE CATEGORY**

<table>
<thead>
<tr>
<th>System Alarm Clock</th>
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# PERIPHERAL CATEGORY

## SMDR Output
- **Incoming Call (Y, N):** Y
- **Account Code (Y, N):** Y

## Data Rate Selection
- **Remote Baud Rate:** (110, 300, 600, 1200, 2400, 4800, 9600, 19200)
- **SMDR Baud Rate:** (110, 300, 600, 1200, 2400, 4800, 9600, 19200)

## Loud Bell
- **Service (Y, N):**
  - **Line 1:** N
  - **Line 2:** N
  - **Line 3:** N
  - **Line 4:** N
  - **Line 5:** N
  - **Line 6:** N
  - **Line 7:** N
  - **Line 8:** N

## SLT Hook Flash
- **Start Time (60 - 1400 ms):** 60
- **End Time (100-1506):** 300

## Voice Mail (Reason for call forward)
- **Busy External (Y, N):** Empty
- **No Answer External (Y, N):** Empty
- **Always External (Y, N):** Empty
- **Busy Internal (Y, N):** Empty
- **No Answer Internal (Y, N):** Empty
- **Always Internal (Y, N):** Empty

## Call Forward Access Condition
- **Reason (Y, N):** Empty
- **Originator (Y, N):** Empty

## Ext Hunt Group
- **Hunt Group 1-8:** Empty
- **Group Member:** Null