

**MT-360 SERIES  
PROGRAMMING  
&  
INSTALLATION  
MANUAL**

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**MACROTEL  
INTERNATIONAL  
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**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-360 Series. The KSU cabinet includes power supply and all common control boards. The basic configuration has capacity for 6 Central Office (C.O.) lines, and 16 telephone extensions. Using an expansion board, the configuration becomes 8 C.O. lines, and 24 digital extensions. If analog adaptors are installed, up to 48 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.

**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. The air humidity relationship must prevent condensation.

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.

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## IMPORTANT SAFETY INSTRUCTIONS

1. 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 bath tub, wash bowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool.
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 product on the bed, sofa, rug or similar surface. This product should never be placed near or over a radiator or heat register. This product should not be placed in a built-in installation unless proper ventilation is provided.
7. 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, a plug having 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. (If provided with a polarized attachment plug) This product is equipped with a polarized line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet try reversing the plug. If the plug should still not fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purposes of the polarized plug.
9. Do not allow anything to rest on the power cord. Do not locate this product where the cord will be abused by persons walking on it.
10. Do not overload wall outlets and extension cords as this can result in the risk of fire or electric shock.
11. Never push objects of any kind into this product through cabinet slots as they may touch dangerous voltage points or short out parts that could result in a risk of fire or electric shock. Never spill liquid of any kind on the product.
12. 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. Incorrect 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.
16. Never install telephone wiring during a lightning storm.
17. Never install telephone jacks in wet locations unless the jack is specifically designed for wet locations.
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. Detailed instructions showing the proper method of installation and connections to the telecommunications wiring system.

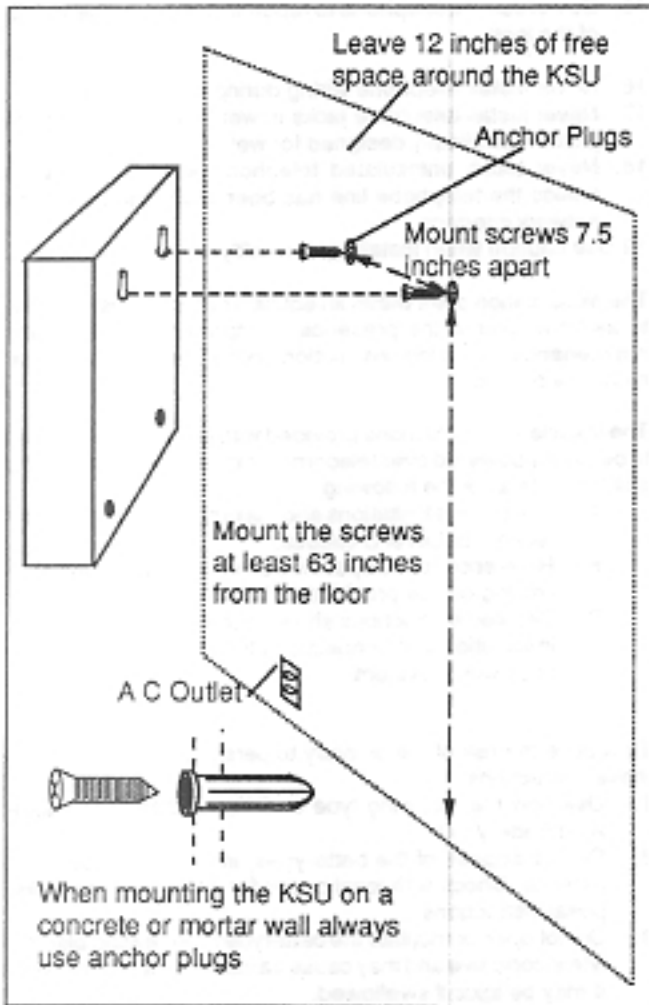
To reduce the risk of fire or injury to persons, read and follow these instructions.

1. 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 6/6 in one end.

Also included is one cable for telephone extensions. It is 25 pair with a 50 pin Amphenol plug (female).

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 115-240 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.

## INSTALLATION OF THE POWER:

Plug the power cord into the AC INPUT.

Check the following items BEFORE turning on the power switch:

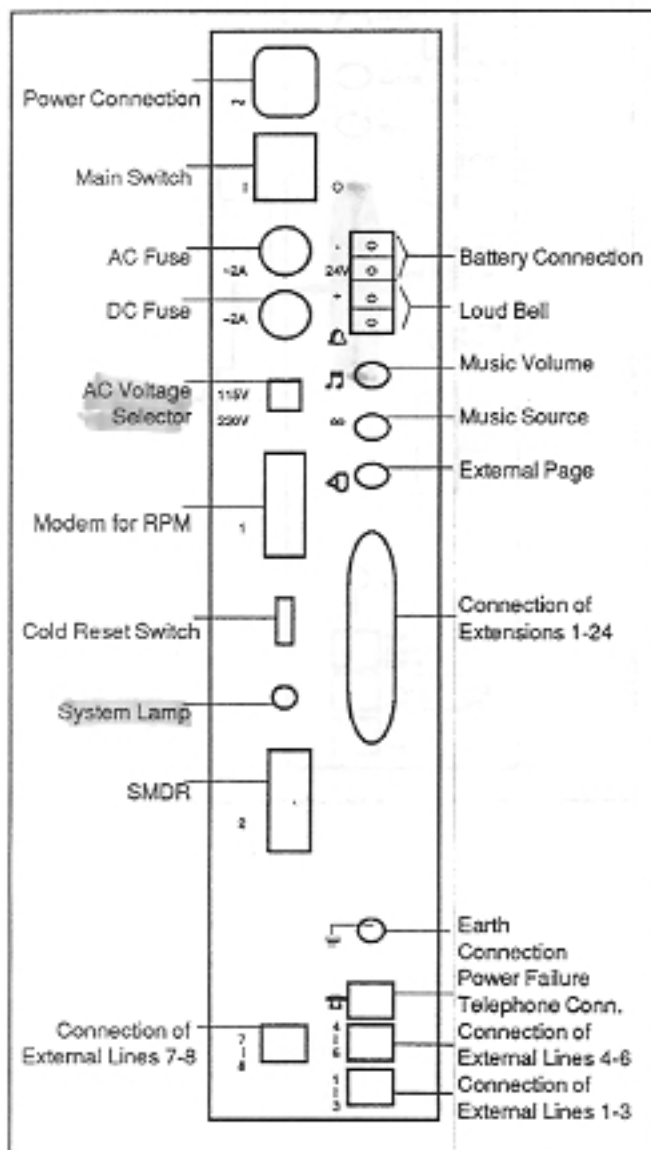
1) Is the voltage range in the correct position?

115V position is for AC voltage input: 105 VAC - 128 VAC, 50 Hz/60 Hz.

220V position is for AC voltage input: 207 VAC - 253 VAC, 50 Hz/60 Hz.

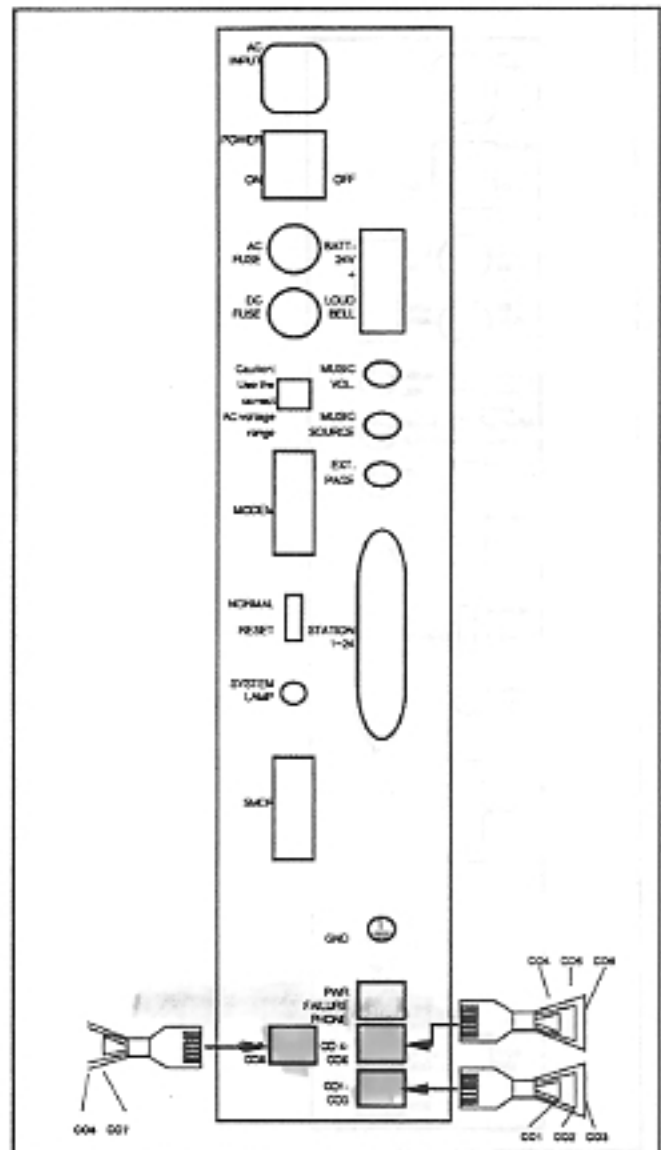
2) Is the "NORMAL/RESET" switch in the NORMAL position?

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."



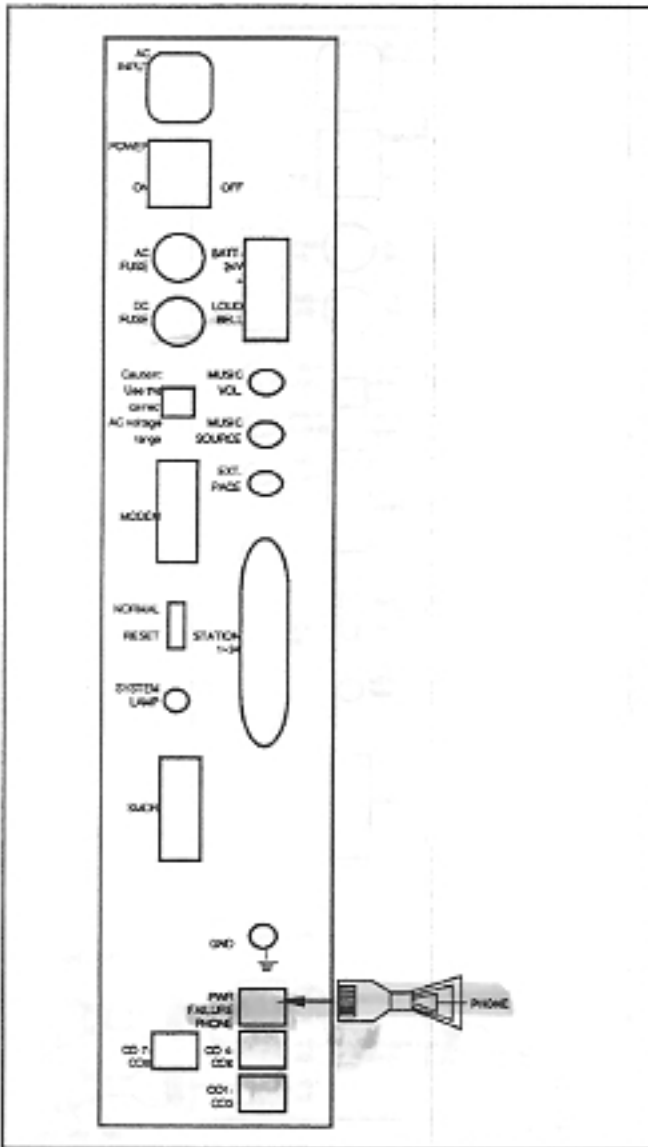
## INSTALLATION OF CENTRAL OFFICE TRUNKS:

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.



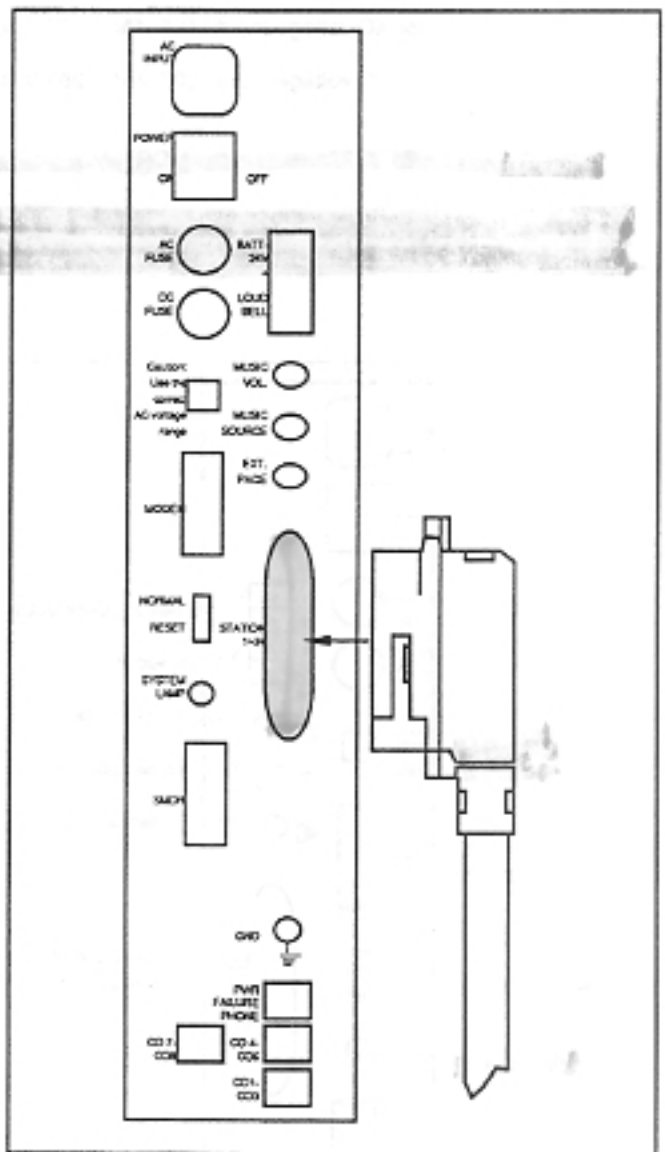
### INSTALLATION OF POWER FAILURE TRANSFER PHONE:

Plug a single line telephone into the jack labeled "PWR FAIL-URE PHONE".



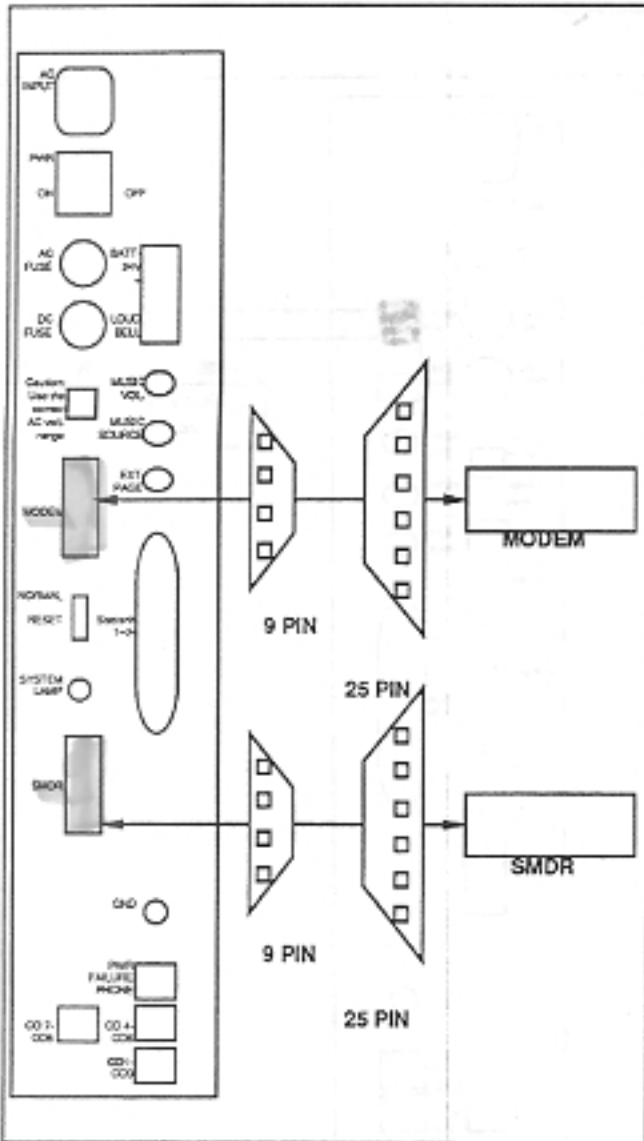
### INSTALLATION OF STATIONS:

Plug the amphenol connectors into the station port labeled "STA1 TO STA24", as below.



## 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.

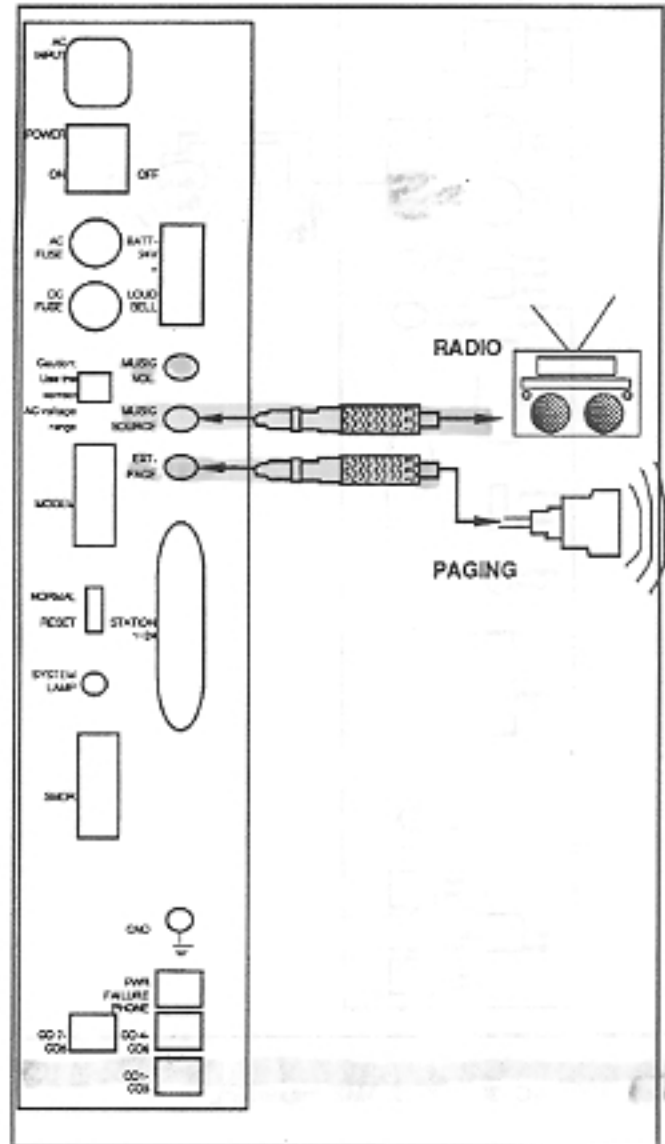


### Modem connection for remote access:

Use of a null modem cable is required for the KSU to modem side. A null modem cable inserts pins 2 and 3 for local connection to connect directly to a computers 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".

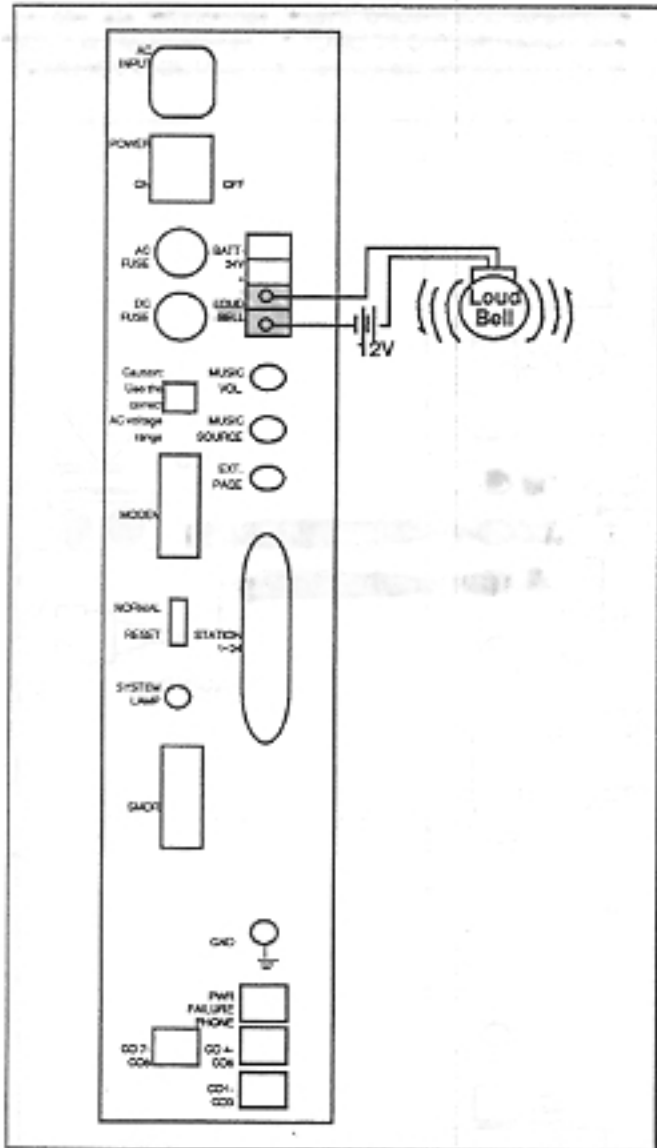


External paging output must be amplified. Therefore use of a separate amplifier or amplified speaker is required.



### 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.

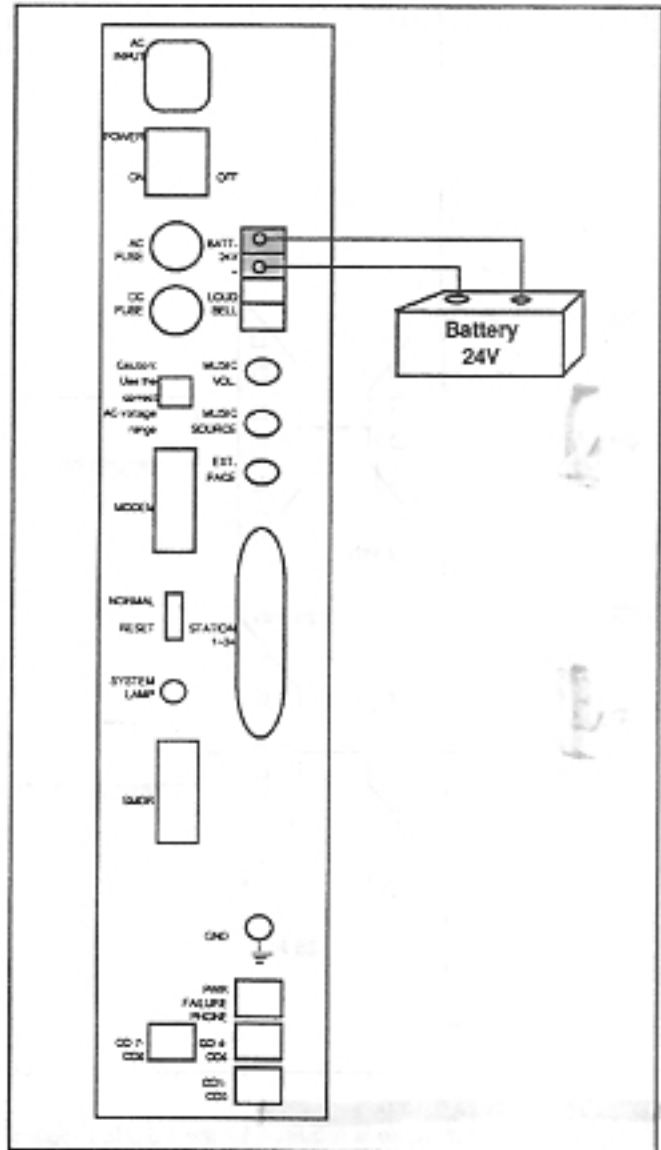


The voltage and current rating for the loud bell that can be used are: 100 VAC, 30 VDC, 2 AMP maximum.

### 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.

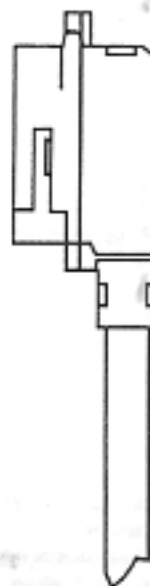


**DB9 TO DB25 CABLE:**

DB9-MALE PIN	DB25 - FEMALE 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:**

STATION	WIRE COLOR
1	BLUE & WHITE
2	ORANGE & WHITE
3	GREEN & WHITE
4	BROWN & WHITE
5	SLATE & WHITE
6	BLUE & RED
7	ORANGE & RED
8	GREEN & RED
9	BROWN & RED
10	SLATE & RED
11	BLUE & BLACK
12	ORANGE & BLACK
13	GREEN & BLACK
14	BROWN & BLACK
15	SLATE & BLACK
16	BLUE & YELLOW
17	ORANGE & YELLOW
18	GREEN & YELLOW
19	BROWN & YELLOW
20	SLATE & YELLOW
21	BLUE & VIOLET
22	ORANGE & VIOLET
23	GREEN & VIOLET
24	BROWN & VIOLET



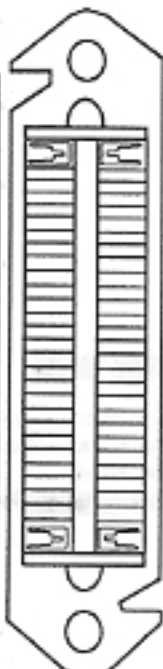
**PROGRAMMING:**

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:

- Set**
  - Day Class
  - Night Class
  - Routing Class of Service
  - Voice Mail Port
  - Line Assignment
  - Ring Assignment
  - AC Code (Forced)
  - Forced LCR
  - Night Service
  - Set Group
  - Hunt Group
  - Warning Tone
  - Drop Timeout
  - Set Position
  - Mailbox
- Line**
  - Dialing
  - Held Abandon
  - Line Type
  - Line Group
  - Private To
- Call Handling**
  - 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

Port No.	Extension No.	Wire Color	Pole No.
34	33	Brown	24
23	32	Green	23
22	31	Orange	22
21	30	Blue	21
20	29	Slate	20
19	28	Brown	19
18	27	Green	18
17	26	Orange	17
16	25	Blue	16
15	24	Slate	15
14	23	Brown	14
13	22	Green	13
12	21	Orange	12
11	20	Blue	11
10	19	Slate	10
9	18	Brown	9
8	17	Green	8
7	16	Orange	7
6	15	Blue	6
5	14	Slate	5
4	13	Brown	4
3	12	Green	3
2	11	Orange	2
1	10	Blue	1



Pole No.	Wire Color	Extension No.	Port No.
50	Violet	No Used	24
49	Violet	33	24
48	Violet	32	23
47	Violet	31	22
46	Violet	30	21
45	Yellow	29	20
44	Yellow	28	19
43	Yellow	27	18
42	Yellow	26	17
41	Yellow	25	16
40	Black	24	15
39	Black	23	14
38	Black	22	13
37	Black	21	12
36	Black	20	11
35	Red	19	10
34	Red	18	9
33	Red	17	8
32	Red	16	7
31	Red	15	6
30	White	14	5
29	White	13	4
28	White	12	3
27	White	11	2
26	White	10	1

4. 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

5. Restriction

Toll Control

LCR Table

6. 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)

DB PSWD :  
BKSP SHOW CHG

Enter six digit password

DB PSWD :  
BKSP SHOW CHG

Press: SHOW

1. Set  
BACK NEXT SHOW

321 2752

NOTE: F = FUNCTION KEY

24 a  
486

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  
Night Service  
Set Group  
Hunt Group  
Warning Tone  
Drop Timeout  
Set Position  
Mailbox

After accessing database programming,

1. Set  
BKSP NEXT SHOW

Press: SHOW

Show Set:  
BKSP SHOW CHG

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

Show Set: 10  
BKSP SHOW CHG

Press: SHOW

Day Class : 0  
BACK NEXT CHG

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 toll restriction, Call barge-in, do not disturb override, etc.

Default: All stations are programmed with class of service for Day and Night = 0.

Press: SHOW

Day Class : 0  
Back NEXT CHG

Press: NEXT

Night Class : 0  
BACK NEXT CHG

Press: CHG

Night Class : 1  
BACK NEXT CHG

Press: CHG  
and so on.

Night Class : 2  
BACK NEXT CHG

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, with 0 being the highest COS.

Default: All stations have routing COS = 0.

Press: NEXT

Routing COS : 0  
BACK NEXT CHG

Press: CHG  
and so on.

Routing COS : 1  
BACK NEXT CHG

5:00 PM  
4:00 PM

**VOICE MAIL PORT ASSIGNMENT:**

If a station port is assigned as a voice mail port, it will be treated as a voice mail device when an analog adaptor is connected to that port.

Default: All stations, voice mail port = N.

Press : NEXT

V.M. Port : N  
BACK NEXT CHG

Press : CHG

V.M. Port : Y  
BACK NEXT CHG

**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

Line Assignment  
BACK NEXT SHOW

Press : SHOW

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

Ring Assignment  
BACK NEXT SHOW

Press : SHOW

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

AC Code Forced : N  
BACK NEXT CHG

Press : CHG

AC Code Forced : Y  
BACK NEXT 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

Forced LCR : N  
BACK NEXT CHG

Press : CHG

Forced LCR : Y  
BACK NEXT 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

Night Service : N  
BACK NEXT CHG

Press : CHG

Night Service : Y  
BACK NEXT 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

Set Group : 1  
BACK NEXT CHG

Press : CHG

Set Group : 2  
BACK NEXT CHG

Press : CHG

Set Group : 3  
BACK NEXT CHG

Continue through set group 8.

NOTE: F = FUNCTION KEY

10  
3847

M900:2  
M900:2

### STATION HUNT GROUP ASSIGNMENT:

There are eight hunt groups to which stations can be assigned. If a station is in a hunt group, any time there is a call to that station, and that station is busy, another station programmed in the same hunt group will receive the call.  
*Default:* No station is assigned to a hunt group.

Press : NEXT

Hunt Group : NUL  
BACK NEXT CHG

Press : CHG

Hunt Group : 1  
BACK NEXT CHG

Press : CHG

Hunt Group : 2  
BACK NEXT CHG

Continue through hunt 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.

Press : NEXT

Warning Tone : N  
BACK NEXT CHG

Press : CHG

Warning Tone : Y  
BACK NEXT CHG

### DROP TIMEOUT:

If a station has drop timeout enabled, after a certain programmed period of time, his outgoing line call will be dropped. The drop timeout period is programmed under warning time (in Call Handling category). If a drop timeout period is not programmed, the drop timeout feature will not be enabled.  
*Default:* Drop timeout disabled on all stations.

Press : NEXT

Drop Timeout : N  
BACK NEXT CHG

Press : CHG

Drop Timeout : Y  
BACK NEXT CHG

### STATION POSITION PROGRAMMING:

Default station numbers can easily be changed to another vacant station number. Station numbers 10-99 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.

Set Position : 56  
BACK NEXT CHG

### 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 - 031)

Press : NEXT

Mail Box : 010  
BACK NEXT CHG

Press : CHG

Mail Box :  
BKSP SAVE CHG

Press : New mail box number

Mail Box : 999  
BKSP NEXT CHG

*If new mail box number is 999.*

Press : SAVE

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

Mail Box : 999  
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:

Dialing	Line Group
Hold Abandon	Private To
Line Type	

Press: F##  
(to enter database programming)

DB PSWD :  
BKSP SHOW CHG

Enter six digit password

DB PSWD :  
BKSP SHOW CHG

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

If Line 1 was selected.

## DIALING TYPE SELECTION:

Each line can be programmed for either tone or pulse dialing.  
Default: Each line is programmed for tone dialing.

Press: SHOW

Dialing : TONE  
BACK NEXT CHG

Press: CHG

Dialing : PULSE  
BACK NEXT CHG

## HOLD ABANDON:

If a caller has been put on hold, and hangs up, with hold abandon feature enabled, the system will recognize the disconnect signal, and release the line.

Default: Hold abandon is not enabled for any line.

Press: NEXT

Hold Abandon : N  
BACK NEXT CHG

Press: CHG

Hold Abandon : Y  
BACK NEXT CHG

## LINE TYPE ASSIGNMENT:

Each line can be programmed as either a C.O. line, or behind PABX line.

Default: All lines are C.O. Lines.

Press: NEXT

Line Type : CO  
BACK NEXT CHG

Press: CHG

Line Type : PBX  
BACK NEXT CHG

## 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

Line Group : 1  
BACK NEXT CHG

Press: CHG

Line Group : 2  
BACK NEXT 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

Private to : NULL  
BACK NEXT CHG

Press: CHG

Private to :  
BKSP SAVE CHG

To Setup:

Press: Stn

Private to : 10  
BKSP SAVE CHG

Press: SAVE

Private to : 10  
BACK NEXT CHG

To Cancel:

Press: CHG

Private to :  
BKSP SAVE CHG

Press: SAVE

Private to : NULL  
BACK NEXT 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	Tone Time
Barge Alert	Warning Time
Exclusive Hold Time	Boss/Secretary
Flash Time	DISA
Remind Time	External CFW
Recall Time	Line-to-Line Conference
Pause Time	Camp-On
PBX Code	

Press: F##  
(to enter database programming)

DB PSWD :  
BKSP SHOW CHG

Enter six digit password

DB PSWD :  
BKSP SHOW CHG

Press: SHOW

1. Set  
BACK NEXT SHOW

Press: NEXT

2. Line  
BACK NEXT CHG

Press: NEXT

3. Call Handling  
BACK NEXT SHOW

Press: SHOW

Barge in : N  
BACK NEXT CHG

### BARGE-IN: *Yes*

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.

Barge in : N  
BACK NEXT CHG

Press: CHG

Barge in : Y  
BACK NEXT 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

Barge Alert : N  
BACK NEXT CHG

Press: CHG

Barge Alert : Y  
BACK NEXT CHG

NOTE: F = FUNCTION KEY

## 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 eight minutes.

Press: NEXT

Exclusive Hold : 8  
BACK NEXT CHG

Press: CHG

Exclusive Hold : 1  
BACK NEXT CHG

Press: CHG

Exclusive Hold : 2  
BACK NEXT CHG

and so on, through eight minutes.

### 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 .9 second.

Press: NEXT

Flash Time : .7  
BACK NEXT CHG

Press: CHG

Flash Time : .8  
BACK NEXT CHG

and so on, from .1 through 1.5.

### HOLD REMINDER: *1 min*

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 8 minutes.

Press: NEXT

Remind Time : 8  
BACK NEXT CHG

Press: CHG

Remind Time : 0  
BACK NEXT CHG

Press: CHG until the required remind time is shown.

### RECALL TIME: *30*

This feature sets the amount of time before a transferred call recalls the originating station. The recall time can be 30, 60, 90, or 120 seconds.  
Default: The recall time is 30 seconds.

Press: NEXT

Recall Time : 30  
BACK NEXT CHG

Press: CHG

Recall Time : 60  
BACK NEXT CHG

Continue pressing CHG until required recall time is shown.

### 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

Pause Time : 2  
BACK NEXT CHG

Press : CHG

Pause Time : 3.5  
BACK NEXT CHG

Continue pressing CHG until the required pause time is shown.

### 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

PBX Code : 9  
BACK NEXT CHG

Press : CHG

PBX Code :  
BKSP SAVE CHG

Press : 90

PBX Code : 90  
BKSP SAVE CHG

Press : SAVE

PBX Code : 90  
BACK NEXT CHG

### 120 ms 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

Tone Time : 120  
BACK NEXT CHG

Press : CHG

Tone Time : 150  
BACK NEXT 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

Warning Time : 3  
BACK NEXT CHG

Press : CHG

Warning Time : 4  
BACK NEXT CHG

Continue pressing CHG until the required time is shown.

### BOSS / SECRETARY

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

Boss/Secretary  
BACK NEXT SHOW

Press: SHOW

Secretary:  
BKSP SHOW CHG

Press: Stn of Secretary

Secretary: 10  
BKSP SHOW CHG  
*If secretary is station 10.*

Press: SHOW

Boss 1: NULL  
BACK NEXT CHG

Press: CHG

Boss 1:  
BKSP SAVE CHG

Press: Stn of Boss

Boss 1: 16  
BKSP SAVE CHG  
*If boss is station 16.*

Press: SAVE

Boss 2: 16  
BACK NEXT CHG

Press: NEXT

Boss 2: NULL  
BACK NEXT CHG

Continue as above until all bosses and secretaries are programmed.

NOTE: F = FUNCTION KEY



## 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

DISA  
BACK NEXT SHOW

Press : SHOW

Active Line : NONE  
BACK NEXT CHG

Press : CHG

Active Line : 1  
BACK NEXT CHG

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

Press : NEXT

Service: NEVER  
BACK NEXT CHG

Press : CHG

Service: DAY  
BACK NEXT CHG

Continue pressing CHG until the required service is shown (Never, Day, Night, Always)

Press : NEXT

Talk Time : 5  
BACK NEXT CHG

Press : CHG

Talk Time : 10  
BACK NEXT CHG

Continue pressing CHG until the required talk time is shown. (1,2,3,5,10, or 15 minutes).

Press : NEXT

Access Code  
BACK NEXT SHOW

Press : SHOW

01. EMPTY  
BACK NEXT CHG

Press : CHG

01.  
BKSP SAVE CHG

Press : Enter 9 digit password

01. 123456780  
BKSP SAVE CHG

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

Press : SAVE

01. 123456780  
BACK NEXT CHG

Press : NEXT

02. EMPTY  
BACK NEXT CHG

Continue until all passwords are entered. (Up to 24)

Press : NEXT

DISA Rings: 01  
BACK NEXT CHG

Press : CHG

DISA Rings :  
BKSP SAVE CHG

Press : Number of DISA rings

DISA Rings : 10  
BKSP SAVE CHG

DISA rings can be from 1 - 99.

Press : SAVE

DISA Rings : 10  
BACK NEXT CHG

## EXTERNAL 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

External CFW  
BACK NEXT SHOW

Press : SHOW

Incoming : NONE  
BACK NEXT CHG

Press : CHG

Incoming : 1  
BACK NEXT CHG

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

Press : NEXT

Outgoing : NONE  
BACK NEXT CHG

Press : CHG

Outgoing : 1  
BACK NEXT CHG

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

Press : NEXT

Service : NEVER  
BACK NEXT CHG

Press : CHG

Service : Day  
BACK NEXT CHG

NOTE: F= FUNCTION KEY

Continue pressing CHG until the required service mode appears. (Never, Day, Night, Always)

Press : NEXT

Talk Time : 5  
BACK NEXT CHG

Press : CHG

Talk Time : 10  
BACK NEXT CHG

Continue pressing CHG until the required conversation time appears. (1,2,3,5,10, or 15 minutes.)

### LINE-TO-LINE CONFERENCE

15 min

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:* The talk time for line-to-line conferences is one minute.

Press : NEXT

Ln to Ln CONF  
BACK NEXT SHOW

Press : SHOW

Talk Time : 5  
BACK NEXT CHG

Press : CHG

Talk Time : 10  
BACK NEXT CHG

Continue pressing CHG until the required Conversation time appears. (1,2,3,5,10, or 15 minutes.)

### CAMP-ON TIME:

20

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 0 seconds.

Press : NEXT

Camp On : 10  
BACK NEXT CHG

Press : CHG

Camp On : 20  
BACK NEXT CHG

Continue pressing CHG until the required camp-on time appears. (00, 10, 20, 30, 40, Or 50 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	System Time
Attendant	Set Copy
Service	Line Copy
NightStart	User Password
Night End	Canned Message
User Names	Account Code Table
Line Names	Hour Mode
System SPD	KSU Revision
Database Password	Default Setting

*NOTE: F = FUNCTION KEY*

Press: F##

(to enter database programming)

DB PSWD :  
BKSP SHOW CHG

Enter six digit password

DB PSWD :  
BKSP SHOW CHG

Press: SHOW

1. Set  
BACK NEXT SHOW

Press : NEXT

2. Line  
BACK NEXT SHOW

Press : NEXT

3. Call Handling  
BACK NEXT SHOW

Press : NEXT

4. Resource  
BACK NEXT SHOW

Press : SHOW

System Alarm  
BACK NEXT SHOW

### SYSTEM ALARM CLOCK:

Eight system alarm clocks can be set to notify all stations at programmed times. When the alarm is invoked, all idle stations hear background music from the speaker for one minute. Alarms cannot be set within two minutes of each other, or the later one will be ignored.

*Default:* No alarms are programmed.

Press : SHOW

System Alarm  
BACK NEXT SHOW

Press : SHOW

Alarm 1 : NULL  
BACK NEXT CHG

(if Alarm 1 is empty)

Press : CHG

Alarm 1 :  
BKSP SAVE CHG

Enter: Time to be reminded

Alarm 1 : 08:00  
BKSP SAVE CHG

*If 8:00 is to be set*

Press : SAVE

Alarm 1 : 08:00  
BACK NEXT CHG

Press : NEXT

Alarm 2 : NULL  
BACK NEXT CHG

**NOTE: F = FUNCTION KEY**

To Delete an Alarm Setting:

Press : NEXT

Alarm 3 : 11:58  
BACK NEXT CHG

Press : CHG

ALARM 3 :  
BACK NEXT CHG

Press : SAVE

Alarm 3 : NULL  
BACK NEXT CHG

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

Attendant : 10  
BACK NEXT CHG

Press : CHG

Attendant :  
BKSP SAVE CHG

Press : New attendant station

Attendant : 11  
BKSP SAVE CHG  
*If Station 11 is new attendant*

Press : SAVE

Attendant : 11  
BACK NEXT CHG

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

Service : DAY  
BACK NEXT CHG

Press : CHG

Service : NIGHT  
BACK NEXT CHG

Press : CHG

Service : TIME  
BACK NEXT CHG

NOTE: F = FUNCTION KEY

NIGHT SERVICE:

01700  
5:00PM  
800 AM 0800

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

NightStart: NULL  
BACK NEXT CHG

Press : CHG

NightStart:  
BKSP SAVE CHG

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

NightStart: 17:20  
BKSP SAVE CHG

To begin night mode at 5:20 pm.

Press : SAVE

NightStart: 17:20  
BACK NEXT CHG

Press : NEXT

Night End: NULL  
BACK NEXT CHG

Press : CHG

Night End:  
BKSP SAVE CHG

Press : Time to end night mode, and begin day mode

Night End: 08:00  
BKSP SAVE CHG

To begin day mode at 8:00 am

Press : SAVE

Night End: 08:00  
BACK NEXT CHG

USER NAME PROGRAMMING:

scott  
dave

Names of up to seven characters may be assigned to stations. - The dialpad 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 six 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

User Names  
BACK NEXT SHOW

Press : SHOW

Show Set :  
BKSP SHOW CHG

Press : Sn

Show Set : 10  
BKSP SHOW CHG

Press : SHOW

SET 10: EMPTY  
BACK NEXT CHG

Press : CHG

SET 10 :  
BKSP SAVE CHG

Press : Keypad to enter letters in user's name.

SET 10: JOHN  
BKSP SAVE CHG

If 5#66#44#66# was entered.

Press : SAVE

SET 10: JOHN  
BACK NEXT CHG

Phone #

### 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 dialpad to enter letters for the name, see user name programming.

**Default:** No line is given a name.

Press : NEXT

Line Names  
BACK NEXT SHOW

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#666# 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 (F1nn, 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

System SPD  
BACK NEXT SHOW

Press : SHOW

Show SPD :  
BKSP SHOW CHG

**NOTE:** F=FUNCTION KEY.

Press : Bin number

Show SPD : 20  
BKSP SHOW CHG

*If 20 is the speed dial bin required.*

Press : SHOW

EMPTY  
BACK NEXT CHG

Press : CHG

BKSP SAVE CHG

Enter phone number  
To save

9975500  
BKSP SAVE CHG

*If 997-5500 is to be saved*

Press : SAVE

997-5500  
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

DB PSWD : 000000  
BACK NEXT CHG

Press : CHG

DB PSWD :  
BKSP SAVE CHG

Enter new password

DB PSWD : 123456  
BKSP SAVE CHG

*If 123456 is new password*

Press : SAVE

DB PSWD : 123456  
BACK NEXT CHG

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

System Time  
BACK NEXT SHOW

Press : SHOW

Year : 91  
BACK NEXT CHG

Press : CHG

Year :  
BKSP SAVE CHG

Enter last two digits of current year.

Year : 92  
BKSP SAVE CHG

*If 1992 is the current year.*

Press : SAVE

Year : 92  
BACK NEXT CHG

Press : NEXT

Month : JAN  
BACK NEXT CHG

Press : CHG

Month : FEB  
BACK NEXT CHG

Continue to press CHG until the required month appears.

Press : NEXT

Day : 01  
BACK NEXT CHG

The process to change the date is the same as to change the year.

Press : NEXT

Weekday : MON  
BACK NEXT CHG

Press : CHG

Weekday : TUE  
BACK NEXT CHG

Continue to press CHG until the required day of the week appears.

Press : NEXT

Hour : 00  
BACK NEXT CHG

The process to change the hour is the same as to change the year.

Press : NEXT

Minute : 00  
BACK NEXT CHG

The process to change the minute is the same as to change the 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 timeout
10. Mail box
11. Feature map
12. DSS/SPD key map

Default: None.

Press : NEXT

Set Copy  
BACK NEXT SHOW

Press : SHOW

Copy from :       
BKSP SAVE CHG

Press : Sn to be copied

Copy from : 10  
BKSP SAVE CHG

Press : SAVE

Copy to :       
BKSP SAVE CHG

Press : Sn to be copied from

Copy to : 12  
BKSP SAVE CHG

Press : SAVE

Set Copy  
BACK NEXT SHOW

#### 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

Line Copy  
BACK NEXT SHOW

Press : SHOW

Copy from :       
BKSP SAVE CHG

Press : Ln to copy from

Copy from : 1  
BKSP SAVE CHG

Press : SAVE

Copy to :       
BKSP SAVE CHG

Press : Ln to receive copy

Copy to : 2  
BKSP SAVE CHG

Press : SAVE

Line Copy  
BACK NEXT SHOW

#### 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

User Password  
BACK NEXT SHOW

Press : SHOW

Show Set :       
BKSP SHOW CHG

Press : Sn

Show Set : 10  
BKSP SHOW CHG

Press : SHOW

Set PSWD : 0000  
BACK NEXT

NOTE: F = FUNCTION KEY

### 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 Operator
Call Home	Call Back
Friend Visiting	Urgent
Empty (station user programmable)	

The default advisory messages are:

At Lunch	Be Back Soon
Gone Home	In a Meeting
Out of Office	On Vacation
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
<small>If 222#2#555#555#ABC#33# was entered</small>

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
---------------

Enter digits to spell out message

AT COPIER BKSP SAVE CHG
<small>If 2#6#9#22#9000#7#44#33#77# was entered</small>

Press : SAVE

AT COPIER BACK NEXT CHG
----------------------------

Continue pressing NEXT to scroll through all advisory messages.

### 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 BACK NEXT CHG
-----------------------------

Press : CHG

Length : 5 BACK NEXT CHG
-----------------------------

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
<small>If 12345 is an account code to be entered in table.</small>

Press : SAVE

001. 12345 BACK NEXT CHG
-----------------------------

Continue for account codes 001 - 100.

### HOOR 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
---------------------------------

### 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
------------------------------

**NOTE:** F = FUNCTION KEY

## 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

Default Setting  
 BACK NEXT SHOW

Press : SHOW

CHK PSWD :  
 BKSP SHOW CHG

Enter six-digit database password

CHK PSWD : 000000  
 BKSP SHOW CHG

*If password is 000000.*

Press : SHOW

Are You Sure?  
 NO YES

Press : YES

(to activate default settings.)  
 (system is returned to  
 default status.)

Or, Press : NO

Default Setting

Nothing happens.

5. Restriction  
 BACK NEXT SHOW

## RESTRICTION CATEGORY:

The Restriction Category refers to features that are used to restrict and/or control calling.

The features that fall under the Restriction Category are:

### Toll Control

Press: F##

(to enter database programming)

### Least Cost Routing

DB PSWD :  
 BKSP SHOW CHG

Enter Password

DB PSWD : 000000  
 BKSP SHOW CHG

*If password is 000000.*

Press: SHOW

1. Set  
 BACK NEXT SHOW

Press : NEXT

2. Line  
 BACK NEXT CHG

Press : NEXT

3. Call Handling  
 BACK NEXT SHOW

Press : NEXT

4. Resource  
 BACK NEXT SHOW

Press : NEXT

5. Restriction  
 BACK NEXT SHOW

## TOLL RESTRICTION:

Toll restriction prohibits stations, based on class of service, from making toll calls. Allowed and disallowed tables list the area codes or certain numbers that are restricted. Outside calls with a sequence of digits which are within the restricted tables will be dropped.

Several types of restriction tables exist, as follows:

### A) Leading Digit Tables

These tables are used to restrict calls on a per station basis by leading digits. These tables have five entries for each station which may be marked either 'Y' or 'N'. The following may be programmed to be allowed or disallowed: ('0', '01', '0+', '10', and '1+')

### B) Blocked NNX Code Tables

These tables are used to restrict office codes like '976' from being called, and have 20 entries for each class 2 thru 5.

### C) Allowed NPA Codes Table

These tables are used to allow calls to codes in the format of N 0/1 X. Any codes listed in these tables are allowed without regard to leading digit, i.e., if 1+ dialing has been allowed to a given class then the entry of '212' would allow calls to '212XXXXX' or '212XXXXX'. These tables exist for each class 2 thru 5 and have 20 entries each.

### D) Blocked NPA Codes Tables

These tables allow for blocking certain office codes within an otherwise allowed area. An example of its use would be to restrict '976' calls to all other area codes. For example, the entries of '1\*976' and '0\*976' would block all calls to '976' regardless of the area code.

### E) Allowed NPA NXX Codes Tables

These tables are used to allow NPA NXX combinations for NPA's otherwise not allowed. An example would be to disallow calls to the '212' area by not listing it in the allowed NPA code table and then list '212457' in this table. This would allow calls only to the '457' office in '212'. This can be used to allow certain office codes which may be free calls due to their proximity to the border of an area code in which the KSU is installed. There are four tables for each class 2-5 and they have 20 entries each.

### F) Blocked Number Tables

These tables are used to block given telephone numbers in areas or offices otherwise allowed. These tables may contain up to 16 digits and have 20 entries each. There is a table for each class 2-5.

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

Default: All toll restriction tables are empty.

Press : SHOW

Toll Control  
 BACK NEXT SHOW

Press : SHOW

Leadingdgt Table  
 BACK NEXT SHOW

Press : SHOW

Show Set :  
 BKSP SHOW CHG

Press : Sn

Show Set : 12  
 BKSP SHOW CHG

Press : SHOW

0 Allow : N  
 BACK NEXT CHG

Press CHG to change to Y.

Press : NEXT

01 Allow : N  
 BACK NEXT CHG

NOTE: F = FUNCTION KEY

Press CHG to change to Y.

Press : NEXT

0+ Allow : N  
BACK NEXT CHG

Press CHG to change to Y.

Press : NEXT

10 Allow : N  
BACK NEXT CHG

Press CHG to change to Y.

Press : NEXT

1+ Allow : N  
BACK NEXT CHG

Press CHG to change to Y.

Press : NEXT

COS :  
BKSP SHOW CHG

Press CHG to change COS. COS can be from 2-5.

**To Program Blocked NNX Codes:**

Press : SHOW

Blocked NNX Code  
BACK NEXT SHOW

Press : SHOW

01. EMPTY  
BACK NEXT CHG

Press : CHG

01.       
BKSP SAVE CHG

Enter a three digit code to be disallowed.

Press : 234

01. 234  
BKSP SAVE CHG

Press : SAVE

01. 234  
BACK NEXT CHG

Continue by pressing NEXT and CHG for up to 20 blocked codes.

**Allowed NPA Code Table Programming:**

Press : NEXT

Allowed NPA Code  
BACK NEXT SHOW

Press : SHOW

01. EMPTY  
BACK NEXT CHG

Press : CHG

01.       
BKSP SAVE CHG

Enter a three digit code to be allowed.

Press : 456

01. 456  
BKSP SAVE CHG

Press : SAVE

01. 456  
BACK NEXT CHG

Continue pressing NEXT and CHG for up to 20 allowed codes.

**Blocked NPA NNX Code Table Programming:**

Press : NEXT

Blocked NPA NNX  
BACK NEXT SHOW

Press : SHOW

01. EMPTY  
BACK NEXT CHG

Press : NEXT

02. EMPTY  
BACK NEXT CHG

Press : CHG

02.       
BKSP SAVE CHG

Enter a six digit code to be disallowed.

Press : 123456

02. 123456  
BKSP SAVE CHG

Press : SAVE

02. 123456  
BACK NEXT CHG

Continue pressing NEXT and CHG for up to 20 disallowed NPA NNX codes.

**Allowed NPA NNX Code Table :**

Press : NEXT

Allowed NPA NNX  
BACK NEXT SHOW

Press : SHOW

01. EMPTY  
BACK NEXT CHG

Press : CHG

01.       
BKSP SAVE CHG

Enter six digit code for allowed NPA NNX code.

Press : 456789

01. 456789  
BKSP SAVE CHG

Press : SAVE

01. 456789  
BACK NEXT CHG

Continue pressing NEXT and CHG for up to 20 allowed NPA NNX codes.

**Blocked Number Table Programming:**

Press : NEXT

Blocked Number  
BACK NEXT SHOW

Press : SHOW

Show Number :       
BKSP SHOW CHG

Enter blocked number to be shown, from 01-20.  
Press : 01

Show Number : 01  
BKSP SHOW CHG

Press : SHOW

EMPTY  
BACK NEXT CHG

Press : CHG

      
BKSP SAVE CHG

Enter the phone number you wish to block.

Press : 9975500

9975500  
BKSP SAVE CHG

Press : SAVE

9975500  
BACK NEXT CHG

Continue to press NEXT and CHG for up to 20 blocked number locations.

NOTE: F = FUNCTION KEY



*LCR Programming Steps*

**LEAST COST ROUTING:**

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 three 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 LCR Table  
BACK NEXT SHOW

Press : SHOW Dgt Comparison  
BACK NEXT SHOW

Press : SHOW Show Table :  
BKSP SHOW CHG

Enter a table number from 001 to 200.

Press : 001 Show Table : 001  
BKSP SHOW CHG

Press : SHOW Time List : NULL  
BACK NEXT CHG

Press : CHG Time List :  
BKSP SAVE CHG

Select time list 01 - 45.

Press : 25 Time List : 25  
BKSP SAVE CHG

Press : SAVE Time List : 25  
BACK NEXT CHG

Press : NEXT EMPTY  
BACK NEXT CHG

Press : CHG BKSP SAVE CHG

Press : 1407 1407  
BKSP SAVE CHG

Press : SAVE 1407  
BACK NEXT CHG

Continue pressing NEXT and CHG to build time lists.

Day Time Table Programming:

Press : NEXT Day Time Table  
BACK NEXT SHOW

Press : SHOW Show Table :  
BKSP SHOW CHG

Enter table number to show, from 01 - 45.

Press : 01 Show Table : 01  
BKSP SHOW CHG

Press : SHOW Show Period :  
BKSP SHOW CHG

Enter time period from 1 - 6.

Press : 1

Show Period : 1  
BKSP SHOW CHG

Press : SHOW

Start Time : NULL  
BACK NEXT CHG

Press : CHG

Start Time :  
BKSP SAVE CHG

Press : 0825

Start Time : 08:25  
BKSP SAVE CHG

Press : SAVE

Start Time : 08:25  
BACK NEXT CHG

Press : NEXT

RCS 0 Rate : NUL  
BACK NEXT CHG

Enter the routing class of service 0 rate from 001 - 200.

Press : NEXT

RCS 1 Rate : NUL  
BACK NEXT CHG

Enter the routing class of service 1 rate from 001 - 200.

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  
BACK 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.

**NOTE: F= FUNCTION KEY**

Press : NEXT

**Digit Modification Table Programming:**

Repeat above for choices 1-4.

Press : NEXT

Press : SHOW  
Enter table # from 001-100

Press : 001

Press : SHOW

Enter the deleted digit number, from 00 - 12.

Press : CHG

Press : 01

Press : SAVE

Press : NEXT

Press : SHOW

Press : CHG

Enter a maximum of 16 digits.

Press : 123456789

Press : SAVE

2nd Choice  
BACK NEXT SHOW

Dgt Modification  
BACK NEXT SHOW

Show Table :  
BKSP SHOW CHG

Show Table : 001  
BKSP SHOW CHG

Deleted Digit : 00  
BACK NEXT CHG

Deleted Digit :  
BKSP SAVE CHG

Deleted Digit : 01  
BKSP SAVE CHG

Deleted Digit : 01  
BACK NEXT CHG

Inserted Digit  
BACK NEXT SHOW

EMPTY  
BACK NEXT CHG

BKSP SAVE CHG

123456789  
BKSP SAVE CHG

123456789  
BACK NEXT CHG

**PERIPHERAL CATEGORY:**

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

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

Press: F#\*  
(to enter database programming)

Enter Password

Press: SHOW

Press : NEXT

Press : NEXT

Press : NEXT

Press : NEXT

Press : NEXT

DB PSWD :  
BKSP SHOW CHG

DB PSWD : 00000000  
BKSP SHOW CHG  
*if password is 00000000.*

1. Set  
BACK NEXT SHOW

2. Line  
BACK NEXT CHG

3. Call Handling  
BACK NEXT SHOW

4. Resource  
BACK NEXT SHOW

5. Restriction  
BACK NEXT SHOW

6. Peripheral  
BACK NEXT SHOW

**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

Press : SHOW

To Change to No,  
Press : CHG

Press : NEXT

Press : CHG

SMDR Output  
BACK NEXT SHOW

Incoming Call : Y  
BACK NEXT CHG

Incoming Call : N  
BACK NEXT CHG

Account Code : Y  
BACK NEXT CHG

Account Code : N  
BACK NEXT CHG



### 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, 9600, or 19200 bits per second.

Default: The default data rate is 9600 bps.

Press : NEXT

RMT X\_Rate : 9600  
BACK NEXT CHG

Press : CHG

RMT X\_Rate : 19200  
BACK NEXT CHG

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

Press : NEXT

SMDRX\_Rate : 9600  
BACK NEXT CHG

Press : CHG

SMDRX\_Rate : 19200  
BACK NEXT CHG

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

### 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

Service : Disable  
BACK NEXT CHG

Press : CHG

Service : DAY  
BACK NEXT CHG

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

Press : NEXT

Line 1 : N  
BACK NEXT CHG

Press : NEXT

Line 2 : N  
BACK NEXT CHG

Press : CHG

Line 2 : Y  
BACK NEXT CHG

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

### 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 60 to 300 ms.

Press : NEXT

SLT Hook Flash  
BACK NEXT SHOW

Press : SHOW

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.)

### 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.

Busy EXT : 123  
BKSP SAVE CHG

*If 123 are the CPID digits to be sent with busy station*

NOTE: F = FUNCTION KEY

Press : SAVE

Busy EXT : 123  
BACK NEXT CHG

Press : NEXT

No\_Ans EXT : EMPTY  
BACK NEXT CHG

Make changes as above.

Press : NEXT

Always EXT : EMPTY  
BACK NEXT CHG

Make changes as above.

Press : NEXT

Busy INT : EMPTY  
BACK NEXT CHG

Make changes as above.

Press : NEXT

No\_Ans INT : EMPTY  
BACK NEXT CHG

Make changes as above.

Press : NEXT

Always INT : EMPTY  
BACK NEXT CHG

Make changes as above.

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

Press : NEXT

Originator : N  
BACK NEXT CHG

This feature sends the CPID digits for originator of the call.

Press : CHG

Originator : Y  
BACK NEXT CHG

HOLD  
RECALL (XFER)