NEC AMERICA, INC.
BUSINESS SYSTEMS DIVISION

NEC ENGINEERING TECHNICAL INFORMATION

Electra mark II

ETI NUMBER: MK-004
DATE: AUGUST, 1987

ELECTRA MARKII
DSS/BLF CO ADD-ON MODULE UPGRADE

1. DESCRIPTION

This Engineering Technical Information (ETI) procedure describes the steps necessary to upgrade existing EDE-30-1 Revision A ( ) units to revision B. EDE-30-1 revision B units can be used as either a DSS/BLF Console or as a CO ADD-ON Module.

2. LIMITATIONS

Only EDE-30-1 units in boxes marked with a uP on the outside of the box, after the revison level, can be upgraded to revision B using the information contained in this ETI procedure.

3. PARTS REQUIRED

3.1 Microprocessor D75104CW 063 and revision labels provided with each EDE-30-1 unit by NEC America, Inc
- 3.1.1 Three revision B labels.
- 3.1.2 One revision 3 label.

3.2 Anti static wrist band and grounding strap (3M Model 2213 or similar, locally provided).

3.3 Anti-static mat (3M Model 8501 or similar, locally provided).

3.4 Chip insertion/extraction tool (locally provided).

CAUTION: Microprocessors and some other chips used on the EDE-30-1 unit are static sensitive devices. Proper care in handling is necessary to assure that neither the microprocessor nor the printed circuit board (PCB) is damaged. This procedure minimizes the possibility of damage due to static electricity discharge.

4. SET UP PROCEDURE

4.1 Attach the anti-static mat to earth ground.

4.2 Put on the anti static wrist band and attach the band to the anti-static mat.

4.3 Unpack the new microprocessor and labels provided.

5. PROCEDURE

5.1 Verify that the revision level stamped on the EDE-30-1 unit packing box is **A( )**. Only packing boxes with a **uP** stamped after the revision level contain the microprocessor required to upgrade the EDE-30-1 to revison **B**. For location of revision level, see Figure 1B.

5.2 Turn the EDE-30-1 unit face down and loosen the cross head retaining screw located at the bottom of the EDE-30-1 housing (See Figure 1A).

5.3 Refer to Figure 1A and separate the lower and upper housing halves of the EDE-30 1 unit by applying inward pressure to the upper half while at the same time lifting up on the lower half.

5.4 Using the chip extraction/insertion tool remove the installed microprocessor IC1 from its socket. (Refer to Figure 2) Follow the IC extractor manufacturer's recommended procedure.

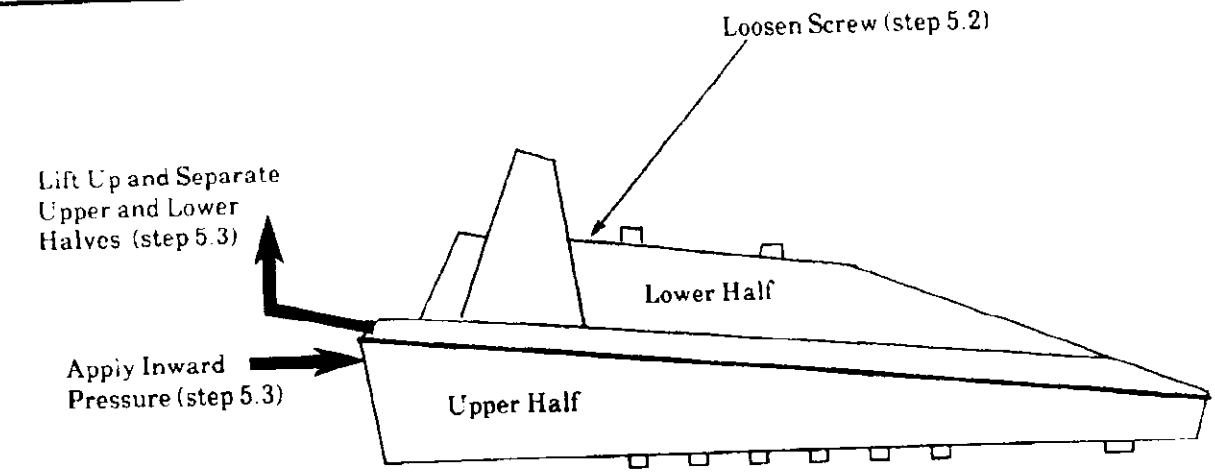
5.5 Using the same tool as in step 5.4, and following the IC insertion tool manufacturer's recommended procedure, insert the supplied microprocessor into the IC1 chip socket. Observe IC polarity and ensure that the IC pins are not bent and that all pins are properly inserted in the IC socket (Refer to Figure 2).

5.6 Using the revision **3** label provided, change the revision number on the PCB to **REV 3** (See Figure 2).

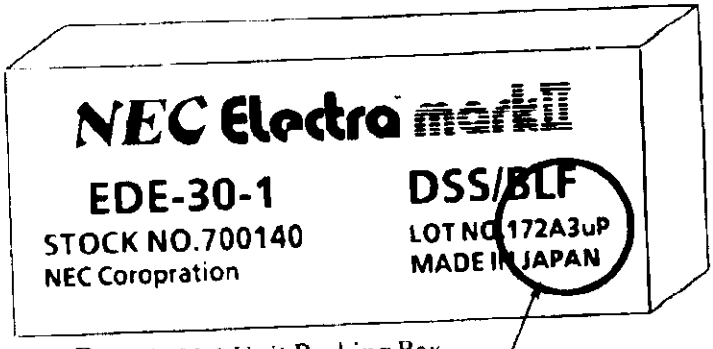
5.7 Use a revision **B** label and change the revision level on the outside of the bottom half of the EDE-30-1 unit (See Figure 1C). Affix the other two revision **B** labels to the outside of the packing box, in two places, following the lot number (See **Figure 1B**).

5.8 Reassemble the upper and lower housing halves of the EDE-30-1 unit.

5.9 Test the unit for proper operation both as a DSS/BLF Console and as a CO ADD-ON Module. Refer to the Electra MarkII Installation Service Manual, Chapter 3, for programming instructions and Chapter 4, Station Operation, for operating instructions.

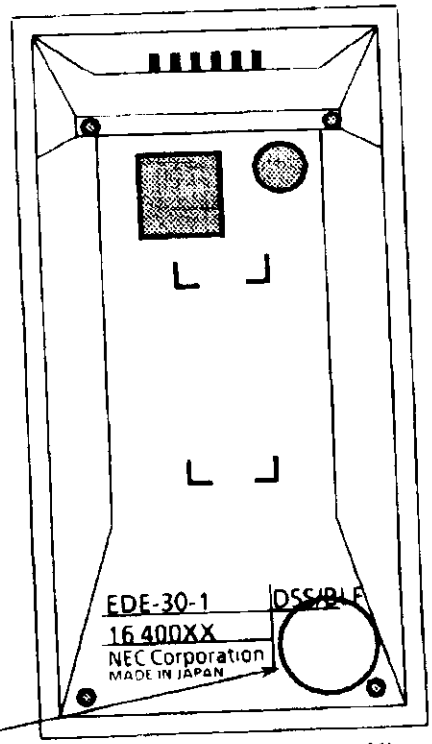


A. EDE-30-1 Unit Side View



B. EDE-30-1 Unit Packing Box

Verify Revision Level Stamped on the outside of box (steps 5.1, 5.7).



Paste Revision Label on the Underside of EDE-30-1 Unit (step 5.7).

C. EDE-30-1 Unit Bottom View

Figure 1 Separating Upper and Lower Housing Halves of EDE-30-1 Unit and Locating Revision Level Label

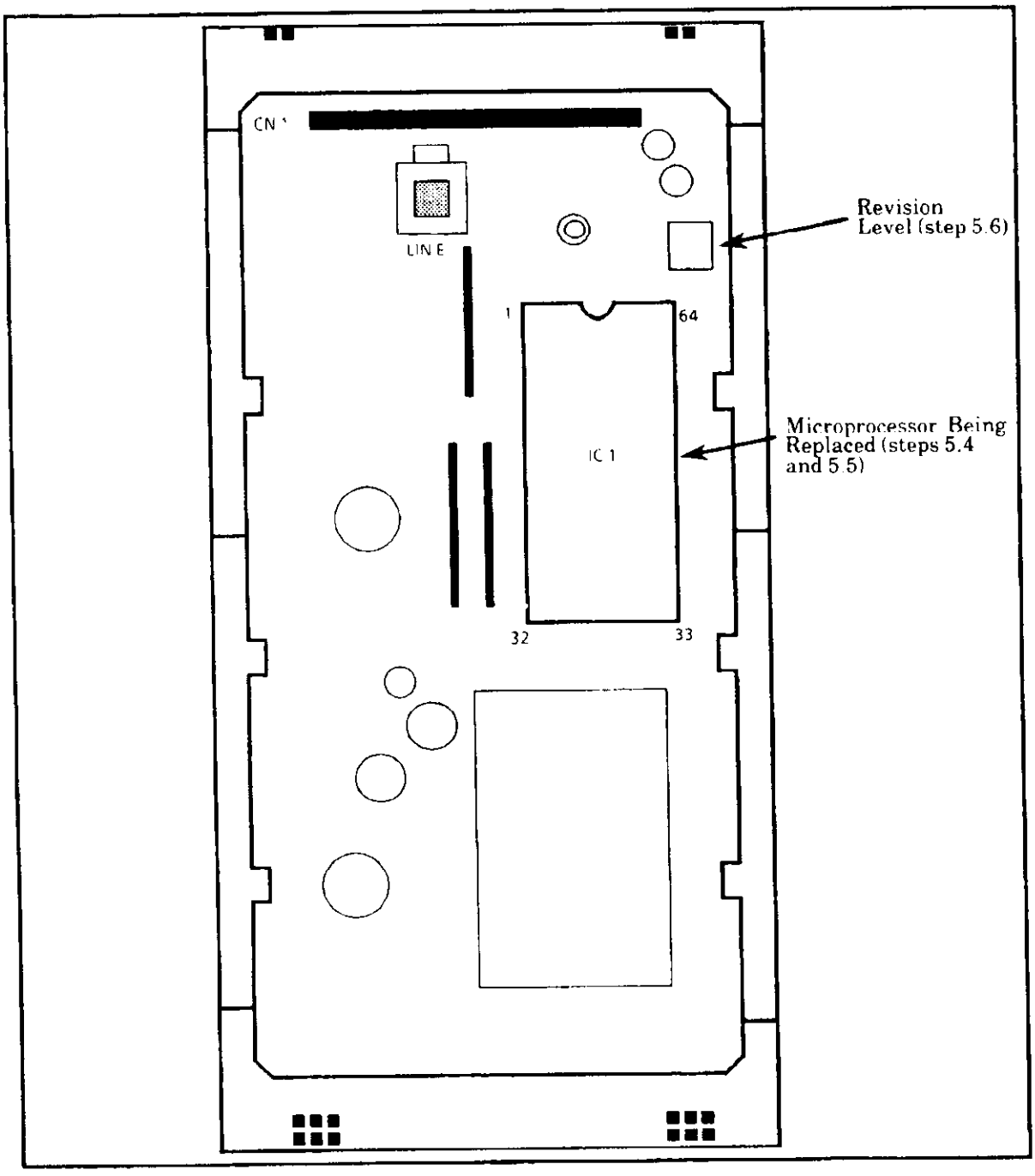


Figure 2 View of EDE-30-1 Unit PCB

A-3 ADD-ON CONFERENCE A-3

GENERAL DESCRIPTION

The Add-On Conference feature establishes a conference call with a maximum of four parties with various combinations of CO/PBX lines and extensions. This increases efficiency by allowing multiple parties to enter into a conversation. Group discussions spread information rapidly and allow exchange of viewpoints. This feature reduces loss of time and improves the decision making process.

STATION APPLICATION

All stations.

OPERATING PROCEDURE

To use this feature with a Multiline Terminal (One Extension Line Key) with a call in progress:

1. Depress the **CNF** key. The **CNF** key LED flashes, the **ANS** key LED is lit, and a second dial tone is received.
2. Dial the internal or outside party and inform answering party of conference.
3. Depress the **CNF** key again, talk with both parties.
4. Repeat steps 1 through 3 to add an additional party.

To use this feature with a Multiline Terminal (Two Extension Line Keys) with a call in progress:

1. Depress the **CNF** key. The **CNF** key LED flashes and a second dial tone is heard.
2. Depress another line key. An outside dial tone is heard if the line key is an outside line. An internal dial tone is heard if the line key is an extension .
3. Dial the internal or outside party and inform answering party of conference.
4. Depress the **CNF** key again, talk with both parties.
5. Repeat steps 1 through 4 to add an additional party.

NOTE

If at least one party is an outside call, the originator's display changes to show Elapsed Conference Call Time on both the One Extension Line Key and Two Extension Line Keys operation explained above.

To use this feature with a Single Line Telephone (SLT) with a call in progress:

1. Provide a hookflash to receive second dial tone.
2. Dial the internal or outside party and inform the answering party of conference.
3. Provide a hookflash again to establish the conference. Talk with both parties.
4. Repeat steps 1 through 3 to add an additional party.

SERVICE CONDITIONS

- A maximum of four (4) simultaneous conferences per system are allowed. A CNF-E ETU is required for each conference. Each CNF-E ETU occupies an interface slot and uses four (4) universal ports in a Central Control Unit (CCU).

- Allowed conference configurations are:

  4 stations - no outside line
  3 stations - 1 outside line
  3 stations - no outside line
  2 stations - 2 outside lines
  2 stations - 1 outside line
  1 station - 2 outside lines

  No more than two (2) outside lines can be members of a conference.

- The CNF key LED lights on all Multiline Terminals when all CNF-E ETUs are in use. A station user trying to establish a conference receives an error tone burst when all CNF-E ETUs are in use. The existing call remains connected.

- The CNF-E ETU does not amplify the signal. The volume of a conference, including outside parties, varies as it is affected by the connections made in the outside network.

- A station which is in an established conference cannot enter an account code.

- A conference established on one line key stays intact when put on hold. The parties held do not receive music on hold and can continue to talk. A conference established on several line keys when put on hold, puts the individual lines on hold and ends the conference.

- When a single line telephone puts a conference on hold, the entire conference is held and the parties can talk.

- A Multiline Terminal can establish a conference with one outside line key and 1 or 2 internal stations. If a disconnect signal from the exchange is received when the outside party disconnects, the automatic release feature of the Electra MarkII releases the outside line. The Multiline Terminal can continue to talk to the internal parties. The Multiline Terminal cannot place the internal parties on hold when the outside line appearance is idle.

- A conference can not be transferred to another line.

- Depression of the **RECALL** key is ignored during a conference.

- All internal parties must be using their handset or HFU-E Unit to begin the conference.

- Need Conference KTU installed

KEY FUNCTION (OFF LINE)

SPKR - ON/OFF Line
TEL # - Enters ROW number
F/W (Forward) Increments key assignment
CLEAR - Clears previous assignment
ENTER - Enters key assignment
B/W (Backward) - Decrements key assignment

GUIDE TO FEATURE PROGRAMMING

MEMORY BLOCK BEING PROGRAMMED	MEMORY BLOCK THAT MUST BE PROGRAMMED	MEMORY BLOCK THAT MAY HAVE TO BE PROGRAMMED
1C3	1C1	2C10
		3A2, 3A4
		1C4

All CPU levels. (See Step 6.)

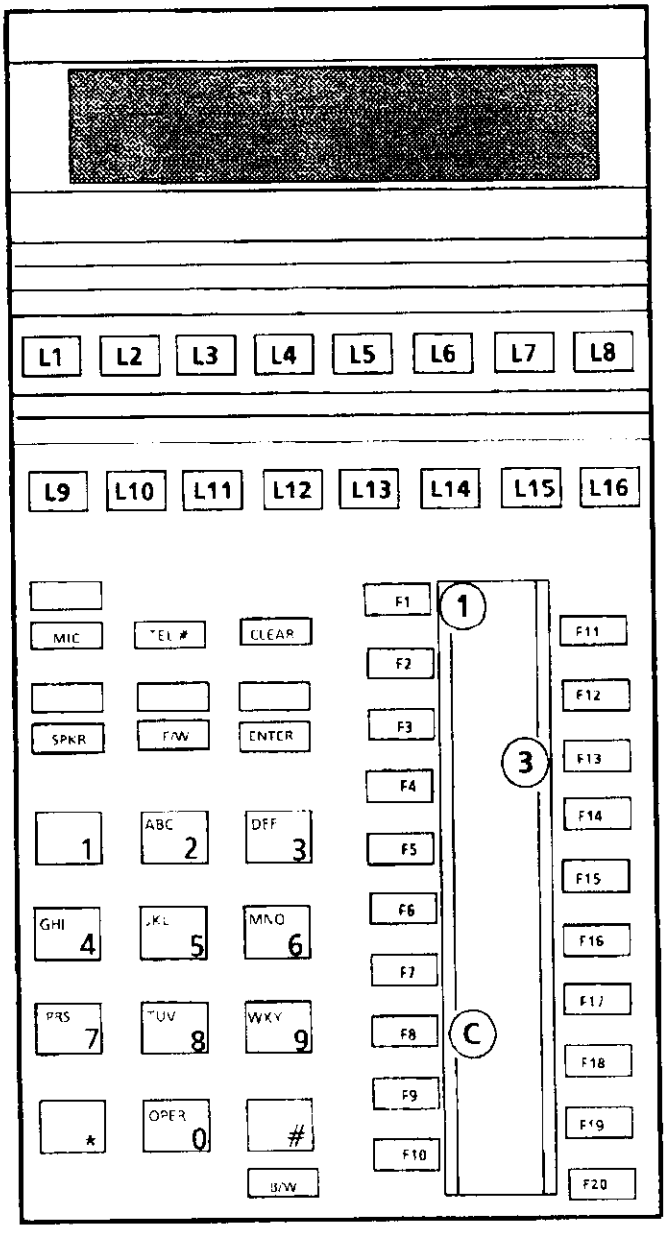
NOTES

1. After the device number is entered, the program automatically moves to row 1, button 1 of the selected DSS/BLF which is shown by the LED of L1~L5 of the programming station.
2. Pressing L16 toggles the programming between feature assignment and station assignment. When in feature assignment mode, assignments are made from right to left, starting with row 6 button 5.
3.

FEATURE #	FEATURE
2	Paging
3	Message Wait
4	Transfer
5	Attendant Override
6	Night Transfer

   These features are assigned to row 6, button 5 from right to left in any order, but must be assigned without skipping a button.
4. The following is a list of codes which can be used when assigning paging:

05	All internal call
06	Internal zone 1
07	Internal zone 2
08	Internal zone 3
09	All internal zones
10	External zone 1
11	External zone 2
12	External zone 3
13	All external zones



5. A station or feature should not be assigned to more than one DSS/BLF button per console.

GENERAL INFORMATION - DSS/BLF BUTTON ASSIGNMENT (Feature and Station Appearance)

This area of the Memory Block is used to designate appearances on the DSS/BLF. Each position on the DSS/BLF can have the appearance of either an extension or a feature. Extension number assignments appear on the DSS/BLF from the *upper left to the lower right key*, while feature assignments appear from the *lower right* (Row 6, Button 5) *to the upper left key*.

MEMORY BLOCK 1C3 - DSS/BLF BUTTON ASSIGNMENT
(Feature and Station Appearance)

OPERATION ← AND → **DISPLAY**

1. Go off line.

	O	F	F	-	L	I	N	E		(	X	·	X	X	)
	P	R	O	G	R	A	M		M	O	D	E			

2. Press F1, then F8.

T	E	R	M	I	N	A	L		D	S	S	/	B	L	F

3. Press F13.

D	S	S			D	S	S		K	E	Y				
D	E	V	I	C	E	?									

4. Enter device number (1~6) for the DSS/BLF desired. Example: DSS 1. (See Note 1.)

D	S	S	1		D	S	S		K	E	Y				
R	O	W	1							V	A	C	A	N	T

5. For feature assignment, go to Step 8.

6. Dial terminal, virtual extension, or station hunting pilot number to be assigned. Example: Station 104. (VE requires CPU-EB or higher level ETU.) (Hunting pilot number requires CPU-EB3 or higher level.)

D	S	S	1		D	S	S		K	E	Y				
R	O	W	1			T	E	L	/	V	E	1	0	4	

7. Go to Step 10.

8. Press L16 to enter feature mode. (See Note 2 and General Information.)

D	S	S	1		F	E	A	T	U	R	E		K	E	Y
R	O	W	6							V	A	C	A	N	T

9. Dial feature number required. Example: Number 2. (See Notes 3 and 4.)

D	S	S	1		F	E	A	T	U	R	E		K	E	Y
R	O	W	6		P	A	G	E		Z	O	N	E	?	?

10. Press ENTER key.

D	S	S	1		D	S	S		K	E	Y				
R	O	W	1			T	E	L	/	V	E	1	0	5	

11. Repeat Steps 5--10 for all DSS buttons as required.

12. Press SPKR key to go back on line.

KEY FUNCTION (OFF LINE)

SPKR - ON/OFF Line
TEL # - Returns display to number 01
F/W (Forward) - Increment BLF number
CLEAR - Clears station BLF assigned
ENTER - Enter each assignment
B/W (Backward) - Decrement BLF number

GUIDE TO FEATURE PROGRAMMING

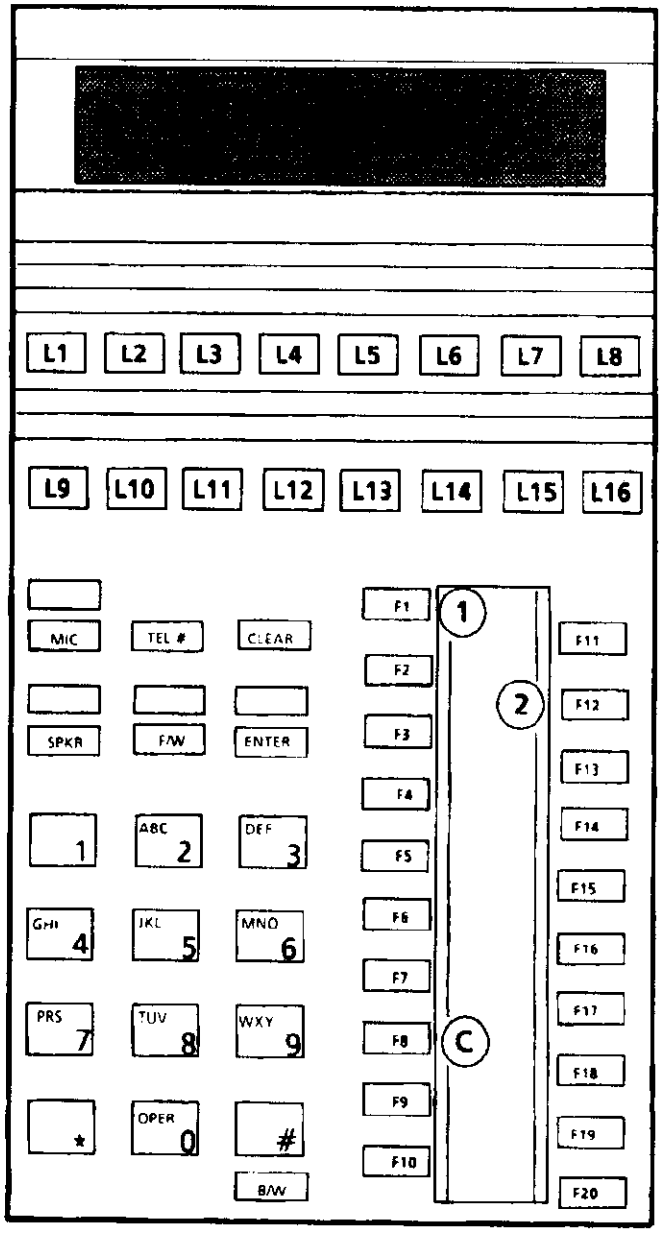
MEMORY BLOCK BEING PROGRAMMED	MEMORY BLOCK THAT MUST BE PROGRAMMED	MEMORY BLOCK THAT MAY HAVE TO BE PROGRAMMED
1C2		1E2

All CPU levels.

NOTES

1. A maximum of 30 stations (10 per module) can be assigned the station BLF feature. Only the ETE-16D-( ) Multiline Terminals can be assigned.

2. Pressing the ENTER key causes the display to increment to the next station BLF assignment.



GENERAL INFORMATION - BLF TERMINAL ASSIGNMENT

This area of the Memory Block allows or denies the station Busy Lamp Field (BLF) function onto specific ETE-16D-( ) Multiline Terminals. Stations assigned indicate the station busy status via the LEDs associated with function keys programmed for Direct Station Selection (DSS).

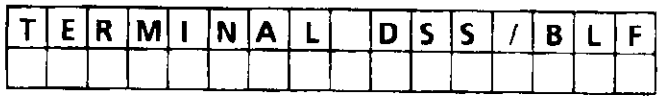
Phone CAn't Be in 4th Middle

MEMORY BLOCK 1C2 - BLF TERMINAL ASSIGNMENT

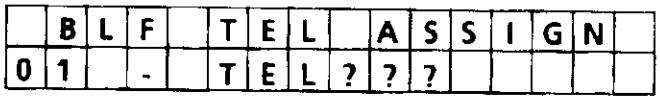
OPERATION ← *AND* → **DISPLAY**

1. Go off line.

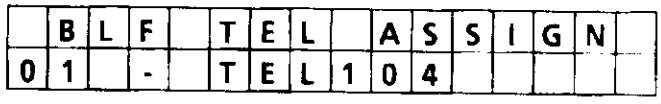
2. Press F1, then F8.



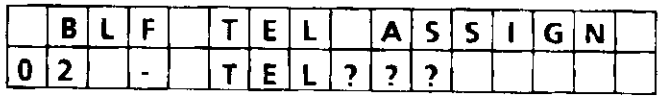
3. Press F12.



4. Enter extension number to be assigned. Example: 104. (See Notes 1~3.)



5. Press ENTER key.



6. Repeat Steps 4 and 5 for each of the required stations to be assigned.

7. When all required stations are assigned, press the SPKR key to go back on line.

KEY FUNCTION (OFF LINE)
SPKR - ON/OFF Line
TEL # - Selects DSS/BLF to be assigned
F/W (Forward) - Increment device number
CLEAR - Clears previous assignment
ENTER - Enter for each Attendant assigned
B/W (Backward) - Decrement device number

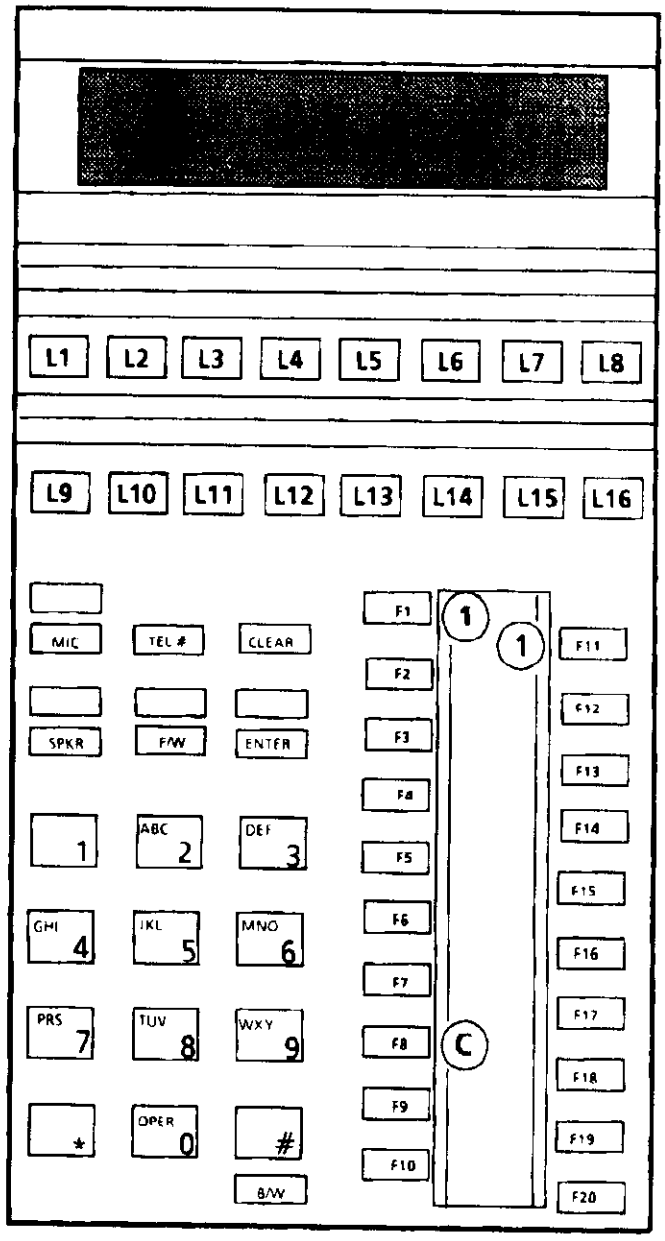
GUIDE TO FEATURE PROGRAMMING

MEMORY BLOCK BEING PROGRAMMED	MEMORY BLOCK THAT MUST BE PROGRAMMED	MEMORY BLOCK THAT MAY HAVE TO BE PROGRAMMED
1C1	1C2	3A2, 3A4
		1C3, 1C4

All CPU levels.

NOTES

1. Before a DSS/BLF can be assigned to the third or fourth Attendant station, the station must first be assigned as an Attendant (MB 3A2).
2. Display will show **VACANT** or **ATT X** (X = 1~4) depending on whether an assignment was made previously.
3. A maximum of two DSS/BLFs can be assigned to one Attendant.
4. Use the B/W and F/W keys to quickly locate a particular device, when required.



GENERAL INFORMATION - DSS/BLF TO ATTENDANT ASSIGNMENT

The DSS/BLF console (a maximum of six) is assigned to Attendant positions in this Memory Block. This programming area is closely related to Memory Block 3A2 (Attendant 3rd and 4th Assignment) where stations are assigned as Attendant positions. Memory Blocks 3A2 and 3A4, when needed, must be programmed prior to programming this Memory Block.

KEY FUNCTION (OFF LINE)

SPKR - ON/OFF Line
TEL # - Select station to be assigned.
F/W (Forward) - Increment station number.
CLEAR -
ENTER - Entry to each station assigned.
B/W (Backward) - Decrement station number.

GUIDE TO FEATURE PROGRAMMING

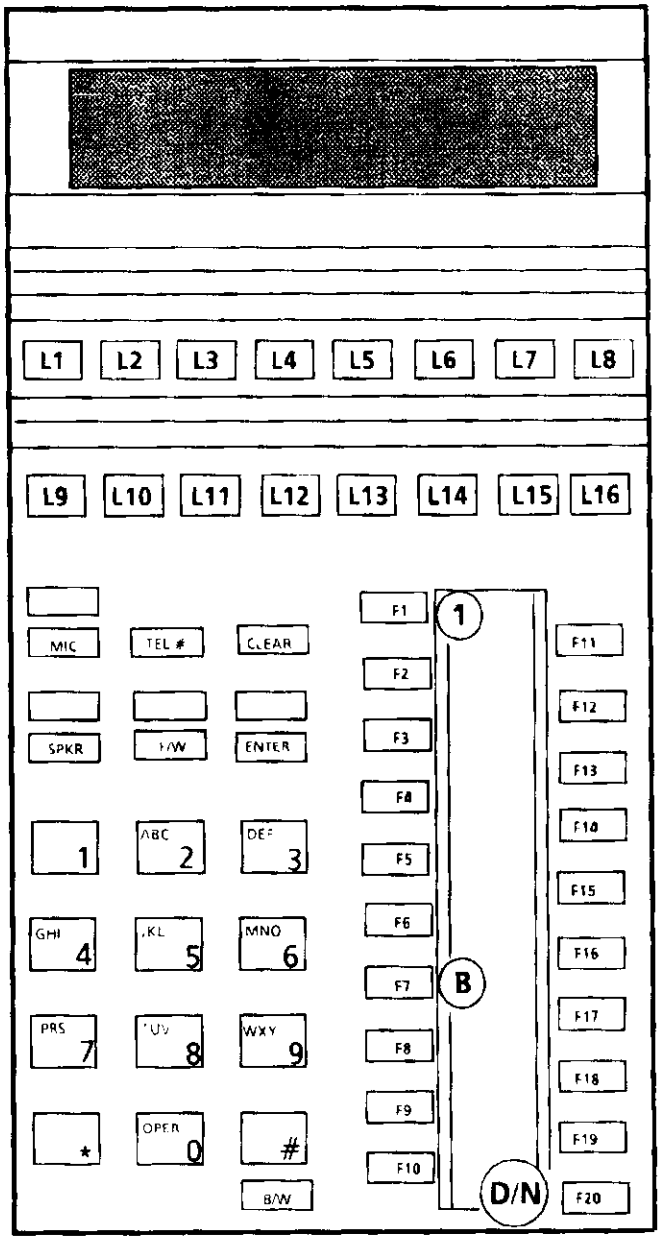
MEMORY BLOCK BEING PROGRAMMED	MEMORY BLOCK THAT MUST BE PROGRAMMED	MEMORY BLOCK THAT MAY HAVE TO BE PROGRAMMED
1B	1A	1D3, 2D2

See Step 5 for CPU levels.

NOTES

1. Pressing the ENTER key causes the assignment to advance to the next station number.

2. When programming ring assignment for a 6 button station, L1~L5 are selected on the programming station.



GENERAL INFORMATION - RINGING ASSIGNMENT

This area of memory is used to assign both day and night mode ringing features for the line appearances of each Multiline Terminal (other than the primary extension). The programming allows the flexibility of a per line button per station with immediate or delayed ringing option for day and night conditions.