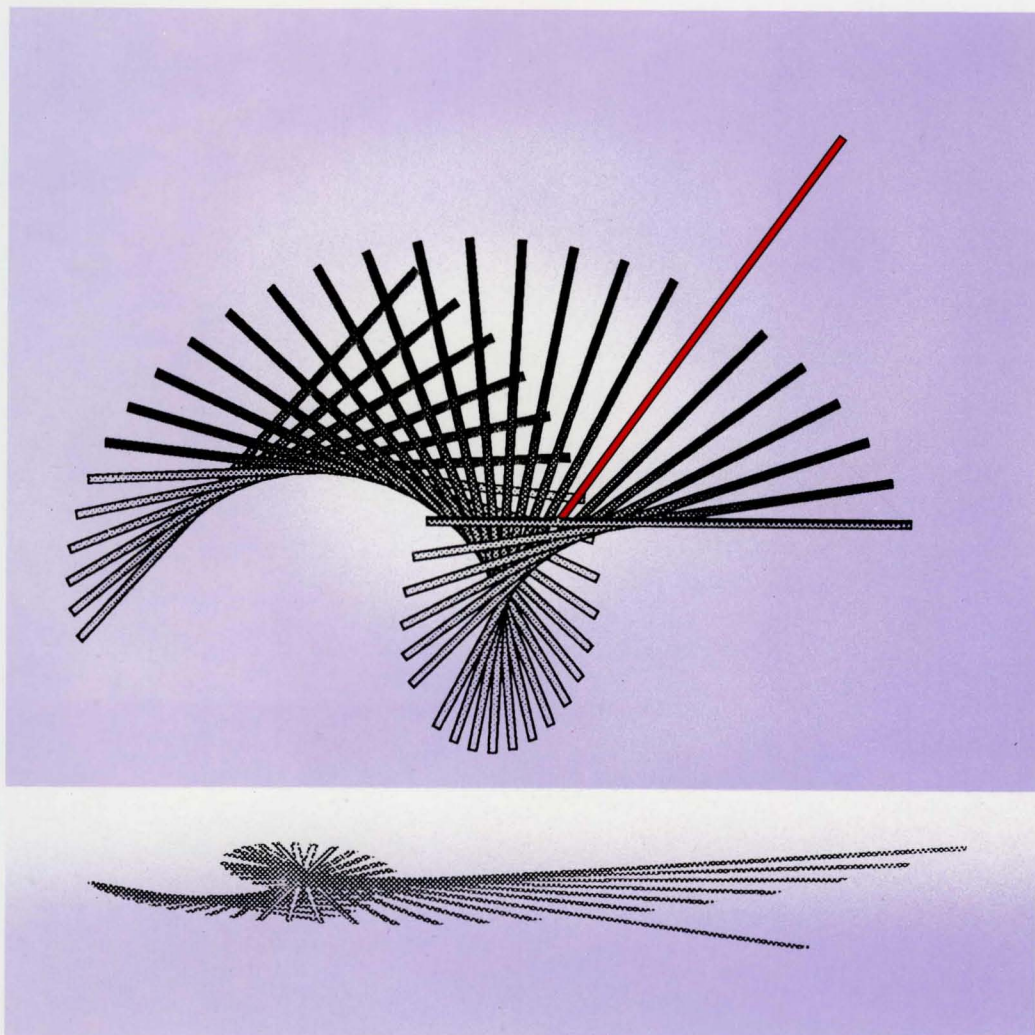


IBM 3745 Communication Controller

SA33-0098-2

All Models

Basic Operations Guide





**IBM 3745 Communication Controller
All Models**

SA33-0098-2

Basic Operations Guide

Note!

Before using this information and the product it supports, be sure to read the general information under "Notices" on page ix.

Third Edition (April 1992)

This manual replaces and obsoletes the *IBM 3745 Communication Controller: Basic Operations Guide, Models 130, 150, and 170*, SA33-0146-0, *IBM 3745 Communication Controller: Basic Operations Guide, Models 210, 310, 410 and 610*, SA33-0098-1, and *IBM 3745 MOSS Console Switching*, SA33-0157-0.

The information contained in this manual is subject to change from time to time. Any such changes will be reported in subsequent revisions.

Order publications through your IBM representative or the IBM branch office serving your locality. Publications are not stocked at the address given below.

A form for readers' comments appears at the back of this publication. If the form has been removed, address your comments to:

IBM France
Centre d'Etudes et Recherches
Service 0797 - BP 79
06610 La Gaude
France

- FAX: (33) 93.24.78.09
- EMAIL: FRIBMFGP at IBMMAIL
- IBM Internal Use: LGERCF at L3EPROFS

When you send information to IBM, you grant IBM a non-exclusive right to use or distribute the information in any way it believes appropriate without incurring any obligation to you.

© Copyright International Business Machines Corporation 1988, 1992. All rights reserved.

Note to U.S. Government Users — Documentation related to restricted rights — Use, duplication or disclosure is subject to restrictions set forth in GSA ADP Schedule Contract with IBM Corp.

Contents

Figures	vii
Notices	ix
Electronic Emission Notices	ix
Trademarks and Service Marks	x
Safety	xi
Preface	xiii
About This Guide	xiii
Who Should Use This Guide	xiii
How this Guide is Organized	xiv
Where to Find More Information	xiv
Operator's Tools	xv
Conventions Used in this Guide	xvi
 Operator Console Procedures	 1
Chapter 1. Using the Operator Consoles	3
Console Screen Layout	3
Moving the Cursor	4
Keyboard Terminology	4
Explanations of Common Commands and Function Keys on Screen	4
Logging On and Off	5
Selecting MOSS Functions	5
Selecting Functions in Disk Mode from the Local or Alternate Console	5
Selecting Functions in Disk Mode from the Remote Console	7
Selecting Functions in Diskette Mode	7
Menu 1 Functions	8
Menu 2 Functions	9
Switching between Menu 1 and Menu 2 Functions	10
Switching from a Function on Menu 1 to a Function on Menu 2	10
Switching from a Function on Menu 2 to a Function on Menu 1	10
How to Start and Stop Refresh	10
Console Configurations	11
Using the IBM 7427 Console Switching Unit	12
 Chapter 2. Logging On	 13
From Local or Alternate Consoles	13
Using the Local Console	15
Using the Alternate Console	15
From Remote Console	16
Using the Remote Console	17
 Chapter 3. Enabling/Disabling Channel Adapters (Models 130, 170, 210, 310, 410, and 610)	 19
Required Conditions for Enabling a CA Interface	19
Required Conditions for Disabling a CA Interface	19
Enabling and Disabling Channel Adapters	20
 Chapter 4. IPLing from an Operator Console	 21

Contents

Single-CCU Configuration (Models 130, 150, 160, 170, 210, and 310)	21
Twin-CCU Configuration (Models 410 and 610)	23
Twin-Standby, Twin-Dual, and Twin-Backup Modes	23
Information Displayed on the Console Screen during IPL	25
Chapter 5. Fallback (Models 410 and 610)	29
Twin-Backup Mode	29
Twin-Standby Mode (Control Program Preloaded in Standby CCU)	31
Twin-Standby Mode (Control Program Not Preloaded in Standby CCU)	33
Chapter 6. Switchback (Models 410 and 610)	35
Chapter 7. IML	39
MOSS IML	39
IMLing a Scanner (Line Adapter)	40

Control Panel Procedures 43

Chapter 8. Manual Power On and IPL	45
Channel-Attached 3745 in Local or Network Mode	45
Single Mode (Models 130, 150, 160, 170, 210 and 310)	45
Twin-Standby Mode (Models 410 and 610)	48
Twin-Dual or Twin-Backup Mode (Models 410 and 610)	51
Link-Attached 3745 in Local or Network Mode	54
Single Mode (Models 130, 150, 160, 170, 210, and 310)	54
Twin-Standby Mode (Models 410 and 610)	57
Twin-Dual or Twin-Backup Mode (Models 410 and 610)	60
Chapter 9. Automatic Power On and IPL	63
Preparation	63
Power On and IPL from the Host	65
Power On and IPL Scheduled in 3745	66
Chapter 10. IPLing In Diskette Mode	67
Chapter 11. IML of the MOSS	69

Appendixes 71

Appendix A. Control Panel	73
Function Display	75
Code Display	76
Service Mode Display	76
Power Control Display	77
Console In Use Display	78
All CAs Disabled Indicator	78
MOSS Inop Indicator	79
MOSS Message Indicator	79
Power On Indicator	79
Pushbuttons	80
Unit Emergency Switch	81
Appendix B. Hexadecimal Codes	83

Abbreviations, Glossary, Bibliography and Index	85
List of Abbreviations	87
Glossary	89
Bibliography	91
Customer Publications for 3745 (Models 130, 150, 160, and 170)	91
Customer Publications for 3745 (Models 210, 310, 410, and 610)	93
Index	95

Figures

1.	3745 Console Keyboard	xv
2.	3745 Control Panel	xv
3.	Console Screen Layout	3
4.	Channel Adapter Display	5
5.	Entering the Password	6
6.	Function Selection Rules Screen	6
7.	Menu 1 Functions for Models 130, 150, 160, and 170	8
8.	Menu 1 Functions for Models 210, 310, 410, and 610	8
9.	Menu 2 Functions for Models 130, 150, 160, and 170	9
10.	Menu 2 Functions for Models 210, 310, 410, and 610	9
11.	IBM 7427 Console Switching Unit	12

Notices

References in this publication to IBM products, programs or services do not imply that IBM intends to make these available in all countries in which IBM operates. Any reference to an IBM product, program, or service is not intended to state or imply that only IBM's product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe any of IBM's intellectual property rights may be used instead of the IBM product, program, or service. Evaluation and verification of operation in conjunction with other products, except those expressly designated by IBM, is the user's responsibility.

IBM may have patents or pending patent applications covering subject matter in this document. The furnishing of this document does not give you any license to these patents. You can send license inquiries, in writing, to the IBM Director of Commercial Relations, IBM Corporation, Purchase, NY 10577, U.S.A.

Electronic Emission Notices

Federal Communications Commission (FCC) Statement

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

Properly shielded and grounded cables and connectors must be used in order to meet FCC emission limits. IBM is not responsible for any radio or television interference caused by using other than recommended cables and connectors or by unauthorized changes or modifications to this equipment. Unauthorized changes or modifications could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

For Canada, Canadian Department of Communication Statement, GX27-3883, applies.

Trademarks and Service Marks

The following terms, denoted by an asterisk (*), used in this publication, are trademarks or service marks of IBM Corporation in the United States or other countries:

IBM

Safety

This product meets IBM Safety standards.

For more information, see the *IBM Telecommunication Products Safety Handbook*, GA33-0126.

Preface

About This Guide

This guide applies to the IBM® 3745 Communication Controller Models 130, 150, 160, 170, 210, 310, 410, and 610.

It describes only **basic** operator functions for the 3745. These include:

- How to use the operator consoles
- How to power on and IPL the 3745
- How to log on to the 3745 maintenance and operator subsystem (MOSS)
- How to enable and disable channel adapters
- How to perform a fallback (Models 210, 310, 410, and 610 only)
- How to perform a switchback (Models 210, 310, 410, and 610 only)
- How to perform initial microcode load of the MOSS and scanners.

These functions, and more advanced functions, are fully described in the *IBM 3745 Communication Controller: Advanced Operations Guide*, SA33-0097.

Who Should Use This Guide

This is a quick reference guide to enable personnel without specialist knowledge to carry out routine daily operations with an IBM® 3745 Model 130, 150, 160, 170, 210, 310, 410, or 610 Communication Controller, and to know when to seek expert help.

Teleprocessing specialists should also use this guide in conjunction with the:

- *IBM 3745 Communication Controller: Problem Determination Guide*, SA33-0096, which contains problem determination procedures.
- *3745 Advanced Operations Guide*, which describes all the 3745 MOSS functions in detail.

How this Guide is Organized

The first section of this guide, "Operator Console Procedures," explains how to use the operator console, how to log on to the maintenance and operator subsystem (MOSS), and how to select and execute MOSS functions.

The second section of this guide, "Control Panel Procedures," from page 43 onwards, provides information on procedures executable from the 3745 control panel.

Appendix A, "Control Panel" on page 73, provides details of the control panel.

Appendix B, "Hexadecimal Codes" on page 83, explains the hexadecimal codes displayed on the control panel.

The following information is included at the back of this guide:

- A list of abbreviations used in this guide, on page 87.
- A glossary of terms which may be unfamiliar, on page 89.
- Related documentation is detailed on page 91.
- An index is provided on page 95.

Where to Find More Information

This guide should be used in conjunction with the publications shown in "Bibliography" on page 91.

Operator's Tools

To perform the 3745 daily operations under normal conditions, you will use:

- An **operator console** and its **keyboard** (remote, local, or alternate). The keys that you will use most frequently are:

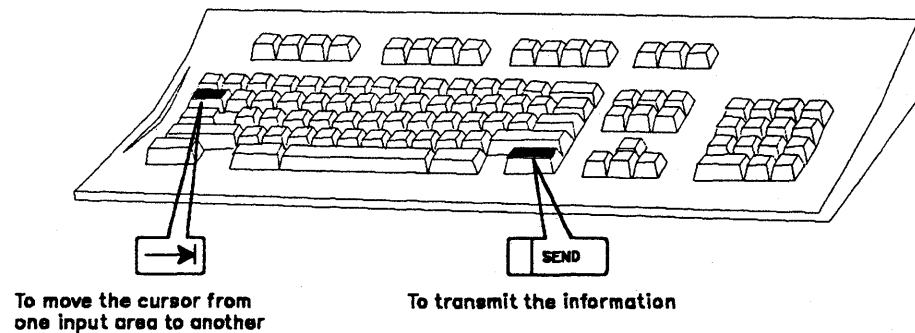


Figure 1. 3745 Console Keyboard

- The 3745 **control panel**.

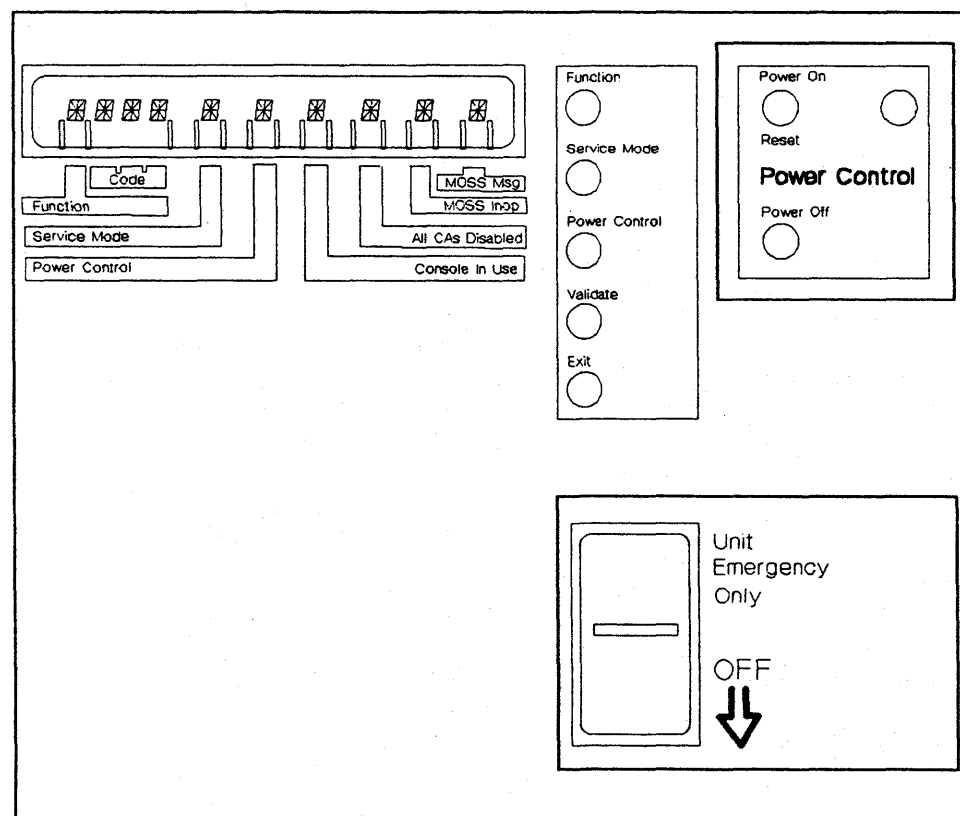


Figure 2. 3745 Control Panel

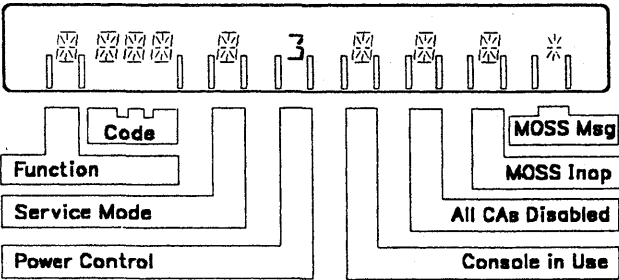
The description of the control panel displays, indicators and switches is detailed on page 73.

Conventions Used in this Guide

Models 130, 150, 160, 170

Models 210, 310, 410, 610

L I D SEND



MOSS functions are applicable to all 3745 models, unless otherwise stated. The graphics shown opposite are used to differentiate between required actions for specific models.

The drawing of a key means that you have to press that key.

This is the control panel display. The control panel is fully illustrated and explained on page 73.



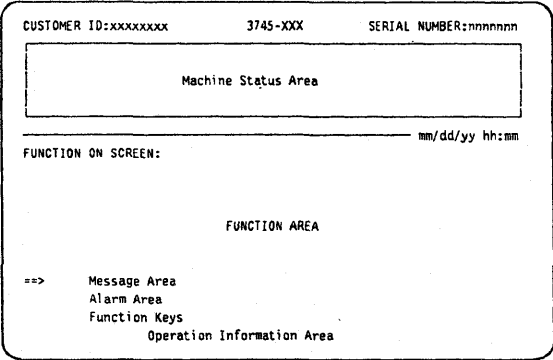
Indicator is off.



Option 3 is selected.



Indicator is on.



This is a screen that you can see when performing a 3745 function on the operator console.

The area referred to as the **machine status area (MSA)** is used to display the status of the 3745 and its different components.

For a thorough description of this area, refer to 3745 *Advanced Operations Guide*.

In all the screens, 3745-xxx denotes the machine and model numbers. See also "Console Screen Layout" on page 3 for a more detailed description of the fields displayed.

HELP

Contact the person in charge of 3745 problem determination.

Write the telephone number here

Operator Console Procedures

Chapter 1. Using the Operator Consoles

The different types of consoles you can use to perform the MOSS functions are documented in the *IBM 3745 Communication Controller: Introduction*.

Console operating characteristics are given in the *IBM 3745 Communication Controller: Console Setup Guide*, SA33-0158.

The console and keyboard of the 3101-like terminal are described fully in the *IBM 3101 Display Terminal Description*, GA18-2033.

Console Screen Layout

The format of the operator console screen is illustrated below:

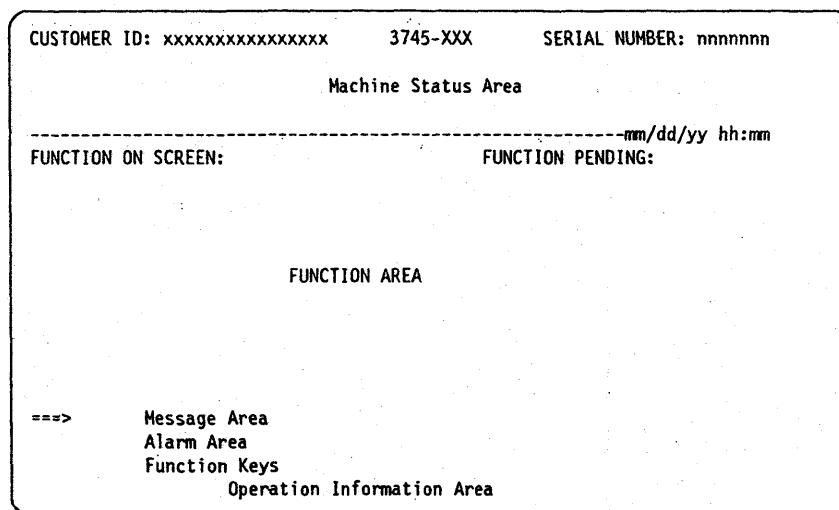


Figure 3. Console Screen Layout

CUSTOMER ID: Customer identification, permanently displayed (16 characters). To enter or modify the customer identification use the Password function described in the *3745 Advanced Operations Guide*.

MACHINE TYPE: The machine type and model: 3745-XXX.

SERIAL NUMBER: Machine serial number of the 3745 (7 characters).

MACHINE STATUS AREA (MSA): Information on the CCU, scanners, token-ring interface couplers and IPL progression. For further details, see the *3745 Advanced Operations Guide*.

FUNCTION ON SCREEN: The name of the function being displayed.

FUNCTION PENDING: The name of the function waiting to be displayed.

FUNCTION AREA: Function display and operator input.

MESSAGE AREA: Area to display messages. Messages are explained in the *3745 Advanced Operations Guide*.

Using the Operator Consoles

ALARM AREA: Area to display alarms. The alarms give the probable cause, the area of the error, and a reference code that may lead to a list of field-replaceable units (FRU list). All alarms are listed in the *3745 Problem Determination Guide*. When there is more than one alarm, the word **ALARM** blinks. Pressing F3 displays the next alarm and erases the previous one.


FUNCTION KEYS: Available F keys are shown on this line.

OPERATION INFORMATION AREA: This area is reserved for the display of:

- Operator information messages
- Test messages.

These messages are documented in the appropriate operator console documentation.

Moving the Cursor

To move the cursor from one input area to another, use the Tab key 

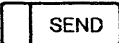
Input areas are represented as follows on the screen:


=== > to enter the acronym of a function, an option, or data.

In display mode, === > is changed into the equal sign (=) or the colon (:).

Keyboard Terminology

Since the consoles may be of different types, the keyboards used may vary. For consistency, the following terminology is used when referring to certain keys:

 This is the key pressed to confirm the data entered. Also called the ENTER key.

 This is the key pressed to stop the refreshing of diagnostics, in order to communicate directly with the system. Also called the ATTN key or the INTERRUPT key.

 To move the cursor from one input area to another.

Explanations of Common Commands and Function Keys on Screen

OFF (Log off): If you enter *OFF*, you are disconnected from the MOSS. You cannot use *OFF* while a function is active or pending; press F1 to terminate it.

F1: END: Pressing F1:

- Terminates any function that is running
- Displays the previous screen.

F2: MENUx: Pressing F2 displays menu 1, menu 2, or the pending function.

F3: ALARM: Pressing F3 erases the latest alarm displayed (if any) from the alarm area, and displays any alarms still queued. You should note all information, especially the reference code, before erasing an alarm. This information can

still be found by selecting the ELD function, as described in the *3745 Advanced Operations Guide*.

F6: RULES: Pressing this key displays the Function Selection Rules screen.

Fx: QUIT: Pressing this key returns you to the previous menu.

Logging On and Off

To log on at the operator console:

1. **Ensure the 3745 is powered on.**
2. **Power on the operator console.** When powered on, the CA INTERFACE DISPLAY screen is displayed. Proceed as in "Selecting MOSS Functions."
3. **To terminate a function, press F1.**
4. **To log off at the console, enter OFF and press SEND.**

Selecting MOSS Functions

You can select MOSS functions in two ways:

- in disk mode from the local, alternate or remote consoles
- in diskette mode from the control panel.

Selecting Functions in Disk Mode from the Local or Alternate Console

When you select MOSS functions from the local or alternate console, the first screen after IML displays the channel adapter statuses. This screen is accessible without entering a password, but only the ENABLE/DISABLE request field of a channel adapter can be modified.

CUSTOMER ID:xxxxxxx		3745-XXX		SERIAL NUMBER:nnnnnnn		
3745 MICROCODE (C) COPYRIGHT IBM CORP. 1987						
CA INTERFACE DISPLAY						
INTERFACE NUMBER	CHANGE E/D REQ	E/D REQUEST	INTERFACE STATUS	HOST OR SWITCH UNIT	CHANNEL ADDRESS	NSC ADDRESS
1A	==>	E	ENABLED			FA
2A	==>	E	ENABLED			FB
3A	==>	E	ENABLED			0C
4A	==>	D	DISABLED			11
5A	==>	D	DISABLED			FC
6A	==>	E	ENABLED			FD
7A		-	-			
8A		-	-			
- TYPE E OR D TO CHANGE THE ENABLE/DISABLE REQUEST, THEN PRESS SEND						
F4:MOSS FUNCTIONS				F5:UPDATE		

Figure 4. Channel Adapter Display

From the previous screen:

You can use the following keys:

- F4 to select MOSS functions. The password screen is displayed.
- F5 to update the channel address field and the host or switch unit.

- **Press F4 to select the following password screen:**

```
CUSTOMER ID:                3745-XXX        SERIAL NUMBER:nnnnnnn

                               3745 MICROCODE (C) COPYRIGHT IBM CORP. 1987
                               mm/dd/yy hh:mm

                               ENTER PASSWORD ==>

                               F4:Channel Interface Display
```

Figure 5. Entering the Password

- **Enter your password and press SEND** . After you have entered your password, the Function Selection Rules screen is displayed.
- **You can also press F4 to select the channel adapter interface display.**

```
----- mm/dd/yy hh:mm

                               FUNCTION SELECTION RULES
- TO SELECT ONE OF THE MENUS, PRESS THE APPROPRIATE F KEY
- TO SELECT A FUNCTION, ENTER ITS 3-CHARACTER NAME THEN PRESS SEND
- ONCE YOU HAVE SELECTED A FUNCTION FROM ONE MENU, YOU MAY SELECT
  A FUNCTION FROM THE OTHER
- TO END THE FUNCTION ON SCREEN, PRESS F1
- TO RETURN TO THE PENDING FUNCTION, PRESS F2
- TO LOG OFF, ENTER OFF THEN PRESS SEND
====>

F1:END  F2:MENU2  F3:ALARM  F4:MENU1
```

Figure 6. Function Selection Rules Screen

From the previous screen:

You can use the following keys:

- F1 to terminate a function.
- F2 to display Menu 2 functions (see "Menu 2 Functions" on page 9).
- F3 to display the next alarm (if any), or clear the displayed alarm (if no other alarms are waiting).
- F4 to display Menu 1 functions (see "Menu 1 Functions" on page 8).
- You can also enter directly the acronym of a particular MOSS function (refer to the *3745 Advanced Operations Guide* for a full description of these functions).

Selecting Functions in Disk Mode from the Remote Console

When you select MOSS functions from the remote console, the first screen displayed is the Password screen. In all other respects, this procedure is the same as that from the local or alternate console (see "Selecting Functions in Disk Mode from the Local or Alternate Console" on page 5).

Selecting Functions in Diskette Mode

To restart the 3745 after a failure, you may be requested to perform an IPL in diskette mode from the control panel. In this case, refer to Chapter 10, "IPLing In Diskette Mode" on page 67.

After an IPL in diskette mode, the model number may be:

- 010 instead of 210, 310, 410 or 610 for models 210, 310, 410, or 610
- 090 instead of 130, 150, 160 or 170 for models 130, 150, 160, or 170.

To install engineering change microcode you also need to start the EC installation in diskette mode. Refer to the *3745 Advanced Operations Guide* for details of this function.

Menu 1 Functions

Models 130, 150, 160, 170

```

----- mm/dd/yy hh:mm

                                MENU 1

CONFIG DATA FILE.: CDF      IML ONE SCANNER.: IMS      PASSWORDS.....: PSW
CONTROL PGM PROC.: CPP      IPL CCU.....: IPL          PORT SWAP FILE...: PSF
DISK FUNCTIONS...: DIF      LD LINK TEST REQ.: LTQ
DISK IPL INFO....: DII      LD LINK TEST RESP.: LTS      SCANNER I/F TRACE: SIT
EVENT LOG DISPLAY: ELD      LINE INTERF DSPLY: LID      STAND ALONE TEST.: SAT
                                LINK IPL PORTS....: LKP
                                MACHINE LVL TABLE: MLT      TIME SERVICES....: TIM
IML MOSS.....: IML          MICROCODE FIXES...: MCF      TRSS INTERF DSPLY: TID
                                ESS INTERF DSPLY.: EID      WRAP TEST.....: WTT

                                ENTER OFF TO LOG OFF

===>

F1:END  F2:MENU2  F3:ALARM      F5:MENU3  F6:RULES
  
```

Figure 7. Menu 1 Functions for Models 130, 150, 160, and 170

Models 210, 310, 410, 610

```

----- mm/dd/yy hh:mm

                                MENU 1

CONFIG DATA FILE.: CDF      IML ONE SCANNER.: IMS      PASSWORDS.....: PSW
CONTROL PGM PROC.: CPP      IPL CCU(S).....: IPL        PORT SWAP FILE...: PSF
DISK FUNCTIONS...: DIF      LD LINK TEST REQ.: LTQ      POWER SERVICES...: POS
DISK IPL INFO....: DII      LINK TEST RESP....: LTS      SCANNER I/F TRACE: SIT
EVENT LOG DISPLAY: ELD      LINE INTERF DSPLY: LID      STAND ALONE TEST.: SAT
FALLBACK.....: FBK          LINK IPL PORTS....: LKP      SWITCHBACK.....: SBK
                                MACHINE LVL TABLE: MLT      TIME SERVICES....: TIM
IML MOSS.....: IML          MICROCODE FIXES...: MCF      TRSS INTERF DSPLY: TID
                                ESS INTERF DSPLY.: EID      WRAP TEST.....: WTT

                                ENTER OFF TO LOG OFF

===>

F1:END  F2:MENU2  F3:ALARM      F5:MENU3  F6:RULES
  
```

Figure 8. Menu 1 Functions for Models 210, 310, 410, and 610

To select one of the displayed functions:

- Enter the acronym of the function next to the arrow at the bottom left-hand corner of the screen, then press SEND.

To log off at the console, enter "OFF" and press SEND.

If a function cannot be accessed, the following message is displayed in the message area:

PRESS SEND TO DISPLAY FUNCTION MENU

Menu 2 Functions

Models 130, 150, 160, 170

```

----- mm/dd/yy hh:mm

                                MENU 2

AC/BT PARAMETERS.: ABP    CCU LV3 INTERRUPT: IL3    RESET CCU..... RST
BYPASS CCU CHECK.: BCK    MOSS OFFLINE..... MOF    SET ADDR COMPARE.: SAC
BYPASS IOC CHECK.: BIK    MOSS ONLINE..... MON    SET BRANCH TRACE.: SBT
COND BRANCH TRACE: CBT    RESET ADDR COMP.: RAC    STOP ON CCU CHCK.: SCK
CA INTERF DISPLAY: CID    RESET BRCH TRACE.: RBT    STOP ON IOC CHECK: SIK
CCU NORMAL MODE... CNM    RESET CCU CHECK.: RCK    SET I-STEP..... SIP
CCU STATUS..... CST      RESET CCU/LSSD... RCL    STOP CCU..... STP
DISPLAY/ALTER..... DAL    RESET IOC..... RIO    START CCU..... STR
DATA EXCHANGE..... DEX    RESET I-STEP..... RIS
DISPLAY LONG..... DLO      ENTER OFF TO LOG OFF

====>

F1:END  F2:MENU2  F3:ALARM          F5:MENU3  F6:RULES

```

Figure 9. Menu 2 Functions for Models 130, 150, 160, and 170

Models 210, 310, 410, 610

```

----- mm/dd/yy hh:mm

                                MENU 2

AC/BT PARAMETERS.: ABP    DISPLAY LONG..... DLO    RESET IOC(S)..... RIO
BYPASS CCU CHECK.: BCK    MOSS OFFLINE..... MOF    RESET I-STEP..... RIS
BYPASS IOC CHECK.: BIK    MOSS ONLINE..... MON    SET ADDR COMPARE.: SAC
CA INTERF DISPLAY: CID    RESET ADDR COMP.: RAC    SET BRANCH TRACE.: SBT
CCU LVL3 INTERRUPT: IL3    RESET BRCH TRACE.: RBT    SET I-STEP..... SIP
CCU NORMAL MODE... CNM    RESET CCU..... RST      START CCU..... STR
CCU SEL/RELEASE... CSR    RESET CCU CHECK.: RCK    STOP CCU..... STP
CCU STATUS..... CST      RESET CCU/LSSD... RCL    STOP ON CCU CHECK: SCK
DATA EXCHANGE..... DEX    ENTER OFF TO LOG OFF    STOP ON IOC CHECK: SIK
DISPLAY/ALTER..... DAL

====>

F1:END  F2:MENU1  F3:ALARM          F5:MENU3  F6:RULES

```

Figure 10. Menu 2 Functions for Models 210, 310, 410, and 610

For models 410, and 610, use the CCU Selection and Release (CSR) function to select a CCU. The CCU selected will appear in the machine status area (MSA).

To select one of the displayed functions:

- Enter the acronym of the function next to the arrow at the bottom left-hand corner of the screen, then press SEND.

To log off at the console, enter "OFF" and press SEND.

If a function cannot be accessed, the following message is displayed in the message area.

PRESS SEND TO DISPLAY FUNCTION MENU

Switching between Menu 1 and Menu 2 Functions

You may enter any function from either menu if you know the acronym of the function. To switch between the display of menu 1 functions and menu 2 functions, use the F2 key.

When switching is not possible, F2 is not displayed on the F key line.

Switching from a Function on Menu 1 to a Function on Menu 2

1. Press F2
2. The menu 1 function is disconnected
3. The name of the menu 1 function is displayed in the function pending area
4. Menu 2 is displayed
5. Select a menu 2 function
6. If you press F2, the menu 1 function that was pending becomes active and the menu 2 function becomes pending
7. When you end the active menu 1 function, the pending menu 2 function appears on the screen and becomes active.

Switching from a Function on Menu 2 to a Function on Menu 1

1. Press F2
2. The menu 2 function is disconnected
3. The name of the menu 2 function is displayed in the function pending area
4. Menu 1 is displayed
5. Select a menu 1 function
6. If you press F2, the menu 2 function that was pending becomes active and the menu 1 function becomes pending
7. When you end the active menu 2 function, the pending menu 1 function appears on the screen and becomes active.

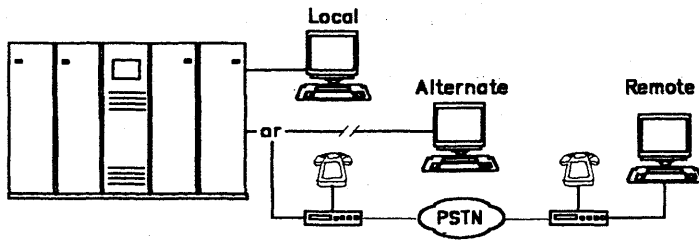
How to Start and Stop Refresh

For certain functions you can press F5:REFRESH to refresh or update the information in the MSA.

To stop the refresh, press the BREAK key.

Console Configurations

The following console configurations are possible on an IBM 3745 Communication Controller:



1. Local console only
2. Local console plus alternate console
3. Local console plus remote console

In addition, a Remote Support Facilities (RSF) console may be temporarily attached for maintenance purposes.

Using the IBM 7427 Console Switching Unit

This unit allows the connection of a single console to a maximum of 6 Communication Controllers as a local or alternate console. Selection is performed by pressing one of six push-buttons.

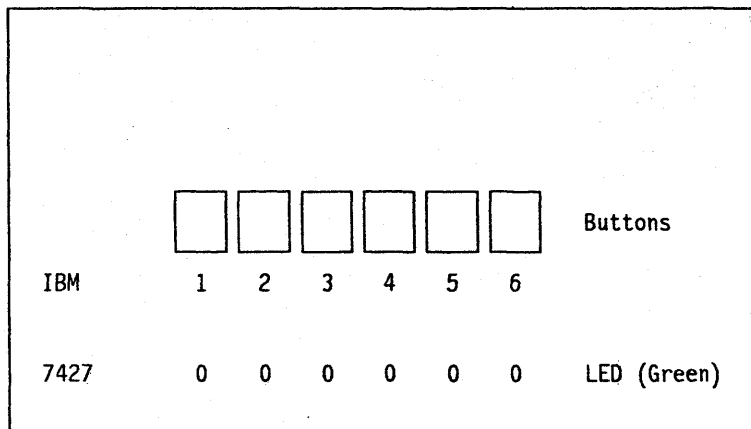


Figure 11. IBM 7427 Console Switching Unit

When an alarm occurs at one of the connected controllers, the corresponding lamp on the 7427 is lit. Proceed as follows:

1. If you are already logged on to another controller, log off in the normal way.
2. Press the button corresponding to the controller with the alarm.
3. Log on to the controller and take any necessary action.

Note: Pressing F3 clears the pending alarm. If there is no other alarm pending, the lamp on the 7427 goes out; if it does not go out, there is another alarm pending at the controller.

Chapter 2. Logging On

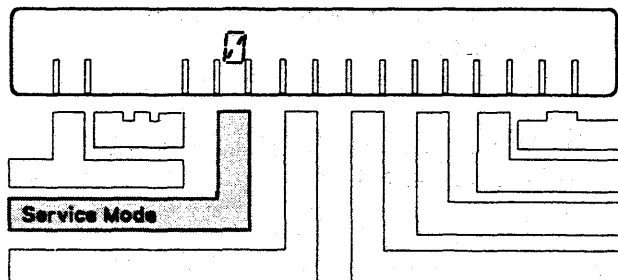
From Local or Alternate Consoles

You can log on at either the local or alternate console.

You can log on at a local or alternate console to one of up to six 3745s when using an IBM 7427 Console Switching Unit. To select a 3745 press the button corresponding to the controller (see page 12.)


1 Make sure that:

- The 3745 is powered on.
- The Console In Use display is off. If not, check the Console in Use display on the 3745 reference card (see page 73). Refer to page 15 or to the *3745 Problem Determination Guide* to get control of the local console if any other console is in use.
- Service mode is 0. If it is not, press the service mode button until it is, then press validate and power on again.



2 Power on the operator console. This screen is displayed. (For the alternate console only, wait 15 seconds.)

3 Enable or disable the channel adapter(s) if necessary. Enter 'E' to enable, 'D' to disable.

Use  to move the cursor to the appropriate CHANGE E/D REQ field.

The INTERFACE STATUS field will be updated at the next IPL.

The message REQUEST SUCCESSFULLY TRANSMITTED appears on this screen.

For more information, go to page 19.

CUSTOMER ID:xxxxxxx			3745-XXX		SERIAL NUMBER:nnnnnn		
3745 MICROCODE (C) COPYRIGHT IBM CORP. 1987							
CA INTERFACE DISPLAY							
INTERFACE NUMBER	CHANGE E/D REQ	E/D REQUEST	INTERFACE STATUS	HOST OR SWITCH UNIT	CHANNEL ADDRESS	NSC ADDRESS	
1A	=>	E	ENABLED			FA	
2A	=>	E	ENABLED			FB	
3A	=>	E	ENABLED			FC	
4A	=>	D	DISABLED			FD	
5A	=>	D	DISABLED			FE	
6A	=>	E	ENABLED			FF	
7A		-	-				
8A		-	-				
- TYPE E OR D TO CHANGE THE ENABLE/DISABLE REQUEST, THEN PRESS SEND							
F4:MOSS FUNCTIONS				F5:UPDATE			

Logging On

4

F4

This screen is displayed.

Enter the local/alternate console password, then:

SEND

If the password is rejected, because the **service mode** is not **0** at the control panel, the MOSS IML was probably not correctly executed. Refer to page 39 for details on the IML procedure.

CUSTOMER ID:xxxxxxxx 3745-XXX SERIAL NUMBER:nnnnnnn
3745 MICROCODE (C) COPYRIGHT IBM CORP. 1987
ENTER PASSWORD ==>
F4:CHANNEL INTERFACE DISPLAY

5

The console is logged on when you see this screen.

mm/dd/yy hh:mm
FUNCTION SELECTION RULES
- TO SELECT ONE OF THE MENUS, PRESS THE APPROPRIATE F KEY
- TO SELECT A FUNCTION, ENTER ITS 3-CHARACTER NAME THEN PRESS SEND
- ONCE YOU HAVE SELECTED A FUNCTION FROM ONE MENU, YOU MAY SELECT A FUNCTION FROM THE OTHER
- TO END THE FUNCTION ON SCREEN, PRESS F1
- TO RETURN TO THE PENDING FUNCTION, PRESS F2
- TO LOG OFF, ENTER OFF THEN PRESS SEND
==>
F1:END F2:MENUE2 F3:ALARM F4:MENUE1

Using the Local Console

Proceed as follows:

1. Switch on the console.
2. If the Channel Interface Display (CID) menu appears, the local console is connected to the MOSS. Enter your password to sign on to the MOSS.
If the CID menu does not appear, either the alternate/remote console or the RSF is already connected.
3. If you need to connect the local console, use the 3745 control panel to select function 4. You now have 15 seconds to log on at the local console.
 - If the alternate console is connected, the message:
RECONNECTION FORCED TO LOCAL CONSOLE
is displayed at the alternate console.

Note: If you do not log on at the local console within 15 seconds, the alternate console will again take control.
 - If the remote console is connected, one of the following messages, depending on MOSS level, is displayed at the console:
RECONNECTION FORCED TO LOCAL CONSOLE
TERMINAL DISCONNECTED
4. If you need to take over the local console immediately, use the 3745 Control Panel function 3.
 - If the alternate/remote console is connected, the following message is displayed at the console:
LOCAL CONSOLE CALLING
The operator at the alternate/remote console should now log off; the local console is active.
 - If the RSF console is connected, the RSF console remains active, and the following message is displayed at the RSF console:
LOCAL CONSOLE CALLING

Using the Alternate Console

Proceed as follows:

1. Switch on the console.
2. If the CID menu appears within 15 seconds, the alternate console is connected to the MOSS. Enter your password to sign on to the MOSS.
If the CID menu does not appear, either the local console or the RSF is already connected. The following message is displayed at the console that is active:
ALTERNATE CONSOLE CALLING
3. If the active console (local or RSF) becomes inactive, the CID menu is displayed at the alternate console.

From Remote Console

- 1 Make sure that the modem at the remote console side is powered on and in voice mode.
- 2 Power on the console.
- 3 Dial the telephone number of the 3745 from your modem associated telephone set.

First you hear the **ringback** tone. Wait until you hear the **answer** tone (steady tone), go to the next step.

If you do not hear the answer tone, the local console is logged on. Try later.

- 4 Set the modem associated with your remote console to data mode.

Hang up the handset.

This screen is displayed:

CUSTOMER ID:xxxxxxxx3745-XXXSERIAL NUMBER:nnnnnnn

3745 MICROCODE (C) COPYRIGHT IBM CORP. 1987

ENTER PASSWORD ==>

F4:CHANNEL INTERFACE DISPLAY

- 5 Enter the remote console password, then:

SEND

The console is logged on when you see this screen:

If the password is rejected, because the **service mode** is not 0 at the control panel, the MOSS is probably not correctly IMLed; go to page 39.

-----mm/dd/yy hh:mm

FUNCTION SELECTION RULES

- TO SELECT ONE OF THE MENUS, PRESS THE APPROPRIATE F KEY

- TO SELECT A FUNCTION, ENTER ITS 3-CHARACTER NAME THEN PRESS SEND

- ONCE YOU HAVE SELECTED A FUNCTION FROM ONE MENU, YOU MAY SELECT A FUNCTION FROM THE OTHER

- TO END THE FUNCTION ON SCREEN, PRESS F1

- TO RETURN TO THE PENDING FUNCTION, PRESS F2

- TO LOG OFF, ENTER OFF THEN PRESS SEND

====

F1:END F2:MENU2 F3:ALARM F4:MENU1

Using the Remote Console

Proceed as follows:

1. Switch on the console.
2. Dial the number of the MOSS.
3. If the Password Menu appears within 15 seconds, the remote console is connected to the MOSS. Enter your password to sign on to the MOSS.

Notes:

- a. If the local console is powered on, but inactive, the following message is displayed at the local console:
TERMINAL DISCONNECTED FOR REMOTE CONSOLE
- b. If the remote console connection fails, control is returned to the local console after 2 minutes.
4. If the terminal is not connected (no dialing tone from the modem), either the local console or the RSF is already connected. The following message is displayed at the active console:
REMOTE CONSOLE CALLING The message disappears after 15 seconds.
5. Try to dial the number of the MOSS again.



Chapter 3. Enabling/Disabling Channel Adapters (Models 130, 170, 210, 310, 410, and 610)

Required Conditions for Enabling a CA Interface

- The channel adapter must be physically connected to the host.
Any switching unit between the host and the 3745 must be correctly configured.
- There must be the Controller Load/Dump Program (CLDP) or the Network Control Program/Emulation Program (NCP/EP) running in the CCU.
 - When CLDP is loaded, FF4 is displayed at the control panel.
CLDP allows the enabling of all channel adapters that are defined in the CDF. Once the loading of NCP starts, CLDP disables all channel adapters, except the one used for loading, until the control is given to NCP.
 - When NCP is loaded, 000 is displayed at the control panel.
NCP allows only the enabling of channel adapters that are defined in NCP.
- You must type E (enable) and press SEND.

Required Conditions for Disabling a CA Interface

- The channel adapter must be physically connected to the host.
Any switching unit between the host and the 3745 must be correctly configured.
- You must type D (disable) and press SEND.
 - When only CLDP is loaded, the disabling is immediate.
CLDP allows the disabling of all channel adapters that are defined in the CDF.
 - When NCP is loaded and running, the disabling is under control of the control program. The disabling is immediate as long as no channel operation is in progress.
 - When EP/PEP is loaded and running, the disabling may last several minutes. All lines must be stopped (under EP/PEP control) before the CA interface becomes disabled.

Three asterisks in the E/D REQUEST column, means that MOSS could not save or retrieve the information, because of a disk error. Issue the request again, by entering either E or D.

All enable or disable requests are saved on disk and automatically retransmitted when you perform an IML after a power off.

Enabling and Disabling Channel Adapters

- 1 Ensure that the console is powered on and logged on, then press:

to display this screen:

- 2 Press:

- until the cursor is at the appropriate CHANGE E/D REQ field **A**
- to enable, or
 to disable
- Repeat the procedure if there are several channel adapters to update, then
- press

- 3 The E/D REQUEST field **B** is updated immediately.

The INTERFACE STATUS field **C** is updated immediately if the channel adapter is initialized. Otherwise it is updated at the next IPL.

- 4 press to end the procedure.

CUSTOMER ID:xxxxxxxx
3745-XXX
SERIAL NUMBER:nnnnnnnn

3745 MICROCODE (C) COPYRIGHT IBM CORP. 1987

mm/dd/yy hh:mm

FUNCTION ON SCREEN:		CA INTER	DISPLAY			
INTERFACE	CHANGE	E/D	INTERFACE	HOST OR	CHANNEL	NSC
NUMBER	E/D REQ	REQUEST	STATUS	SWITCH UNIT	ADDRESS	ADDRESS
	A	B	C			
1A	=>	D	DISABLED			FA
2A	=>	E	ENABLED			FB
3A	=>	E	ENABLED			BC
4A	=>	D	DISABLED			11
5A	=>	D	DISABLED			FC
6A	=>	E	ENABLED			FD
7A	=>	-	-			
8A	=>	-	-			

- TYPE E OR D TO CHANGE THE ENABLE/DISABLE REQUEST, THEN PRESS SEND
=>=>

F1:END
F3:ALARM
F5:UPDATE

Chapter 4. IPLing from an Operator Console

Single-CCU Configuration (Models 130, 150, 160, 170, 210, and 310)

- 1 Power on and log on at the operator console. Refer to page 13 (for a local or alternate console) or page 16 (for a remote console).

- 2 Press:

I P L **SEND**

This screen is displayed:

CUSTOMER ID:xxxxxxxx	3745-XXX	SERIAL NUMBER:nnnnnn
CCU-A		
RUN		
		mm/dd/yy hh:mm
FUNCTION ON SCREEN: IPL CCU(S)		
- SELECT AN IPL OPTION (1, 2) ==>		
1 = NORMAL		
2 = STEP-BY-STEP		
====>		
F1:END	F2:MENUE2	F3:ALARM

- 3 Press:

1 **SEND**

The IPL starts.

This screen is displayed:

CUSTOMER ID:xxxxxxxx	3745-XXX	SERIAL NUMBER:nnnnnn
CCU-A		
RUN		
IPL CCU-A PHASE	IPL IN PROGRESS	
		mm/dd/yy hh:mm
FUNCTION ON SCREEN: IPL CCU(S)		
CCU AND SCANNER IPL		
WHEN THIS FUNCTION IS COMPLETE (SEE ABOVE). PRESS F1		
====>		
F1:END	F2:MENUE2	F3:ALARM
F4:STOP	F5:RESUME	

IPLing from an Operator Console

4 Wait approximately 5 minutes until one of the following is displayed:

- **IPL FROM MOSS DISK IN PROGRESS.** The control program is being loaded from the disk. Go to next step.
- **ENABLED CA xxxxxxxxxxxxxxxxx
L xxxxxxxx**

This message is explained on page 26.

Ask the host operator to load the control program, then go to next step.

5 Wait until you see **IPL COMPLETE**, then:

F1 to end the procedure.

Other messages may be displayed in **A** field. For the meanings of these messages, go to page 25.

CUSTOMER ID:xxxxxxxx	3745-XXX	SERIAL NUMBER:nnnnnn
CCU-A		
RUN		
IPL CCU-A PHASE 4	IPL FROM MOSS DISK IN PROGRESS	
		mm/dd/yy hh:mm
FUNCTION ON SCREEN: IPL CCU(S) CCU AND SCANNER IPL		
WHEN THIS FUNCTION IS COMPLETE (SEE ABOVE). PRESS F1		
==>		
F1:END	F2:MENU2	F3:ALARM F4:STOP F5:RESUME

CUSTOMER ID:xxxxxxxx	3745-XXX	SERIAL NUMBER:nnnnnn
CCU-A		
RUN		
IPL CCU-A	A	IPL COMPLETE
		mm/dd/yy hh:mm
FUNCTION ON SCREEN: IPL CCU(S) CCU AND SCANNER IPL		
WHEN THIS FUNCTION IS COMPLETE (SEE ABOVE). PRESS F1		
==>		
F1:END	F2:MENU2	F3:ALARM F4:STOP F5:RESUME

Twin-CCU Configuration (Models 410 and 610)

Twin-Standby, Twin-Dual, and Twin-Backup Modes

- 1 The operator console in use must be powered on and logged on.

- 2 Press:



This screen is displayed:

```

CUSTOMER ID:XXXXXXXXX      3745-XXX      SERIAL NUMBER:nnnnnnn
CCU-A
RUN

CCU-B
RUN

mm/dd/yy hh:mm

FUNCTION ON SCREEN: IPL CCU(S)

- SELECT THE CCU YOU WANT TO IPL (1, 2, OR 3) ==>

1 = AVAILABLE CCU(S) ACCORDING TO OPERATING MODE
2 = CCU-A
3 = CCU-B

- SELECT AN IPL OPTION (1, 2) ==>

1 = NORMAL
2 = STEP-BY-STEP

===>

F1:END  F2:MENU2  F3:ALARM
  
```

- 3 Select one CCU option (1, 2, or 3),

- In twin-dual or twin-backup mode, if you selected 1, the CCUs that are not **down** are IPLed.
- In twin-standby mode, if you select 1, the active CCU is IPLed. If the load module has been saved on the disk and made active, the standby CCU will be automatically pre-loaded with the active load module.
- If either 2 or 3 is selected, only the specified CCU will be IPLed.

- 3 Press 

The IPL starts.

```

CUSTOMER ID:XXXXXXXXX      3745-XXX      SERIAL NUMBER:nnnnnnn
CCU-A
RUN

CCU-B
RUN

mm/dd/yy hh:mm

FUNCTION ON SCREEN: IPL CCU(S)

- SELECT THE CCU YOU WANT TO IPL (1, 2, OR 3) ==>

1 = AVAILABLE CCU(S) ACCORDING TO OPERATING MODE
2 = CCU-A
3 = CCU-B

- SELECT AN IPL OPTION (1, 2) ==>

1 = NORMAL
2 = STEP-BY-STEP

===>

F1:END  F2:MENU2  F3:ALARM
  
```


IPLing from an Operator Console

4 Wait approximately 5 minutes until one of the following is displayed:

- IPL FROM MOSS DISK IN PROGRESS. The control program is being loaded from the disk. Go to next step.
- ENABLED CA xxxxxxxxxxxxxxxxxxxx
L xxxxxxxx

This message is explained on page 26.

Ask the host operator to load the control program, then go to next step.

```
CUSTOMER ID:xxxxxxxx 3745-XXX SERIAL NUMBER:nnnn
CCU-A
RUN
IPL CCU-A PHASE 4 IPL FROM MOSS DISK IN PROGRESS

CCU-B
RUN
IPL CCU-B PHASE 4 IPL FROM MOSS DISK IN PROGRESS

_____ mm/dd/yy hh:mm
FUNCTION ON SCREEN: IPL CCU(S)
                   CCU AND SCANNER IPL

      WHEN THIS FUNCTION IS COMPLETE (SEE ABOVE). PRESS F1

===>

F1:END F2:MENU2 F3:ALARM F4:STOP F5:RESUME
```

5 Wait until you see IPL COMPLETE, then:

F1 to end the procedure.

Other messages may be displayed at

A: For the meanings of these messages, refer to page 25.

```
CUSTOMER ID:xxxxxxxx 3745-XXX SERIAL NUMBER:nnnnnnn
IPL CCU-A IPL COMPLETE

IPL CCU-B IPL COMPLETE

FUNCTION ON SCREEN: IPL CCU(S)
                   CCU AND SCANNER IPL

      WHEN THIS FUNCTION IS COMPLETE (SEE ABOVE). PRESS F1

===>

F1:END F2:MENU2 F3:ALARM F4:STOP F5:RESUME
```

Information Displayed on the Console Screen during IPL

IPL information appears in the machine status area (MSA) of the console screen, shown opposite. This area is fully described in the *3745 Advanced Operations Guide*.

The following list shows messages that may appear in the MSA during IPL operations.

CUSTOMER ID:XXXXXXXX		3745-XXX	SERIAL NUMBER:nnnnnn
A	B	C	D
MACHINE STATUS AREA			
FUNCTION ON SCREEN:			mm/dd/yy hh:mm
FUNCTION AREA			
==> Message Area Alarm Area Function Keys Operation Information Area F1:END F2:MENU2 F3:ALARM			

Messages appearing at **A**:

IPL 3745 IPL is started.

Messages appearing at **B**:

- PHASE 1 CCU initialization.
- PHASE 2 Load and start of the control program loader in the CCU.
- PHASE 3 Scanner (line adapter) IML-in progress.
- PHASE 4 Scanners (line adapters) are IMLed.

Messages appearing at **C**:

- STOP 3745 IPL stopped at the beginning of a phase during fallback or on operator's request.
 - SUSPEND The IPL on the current CCU is suspended, and the IPL of the other CCU is started. When it reaches the same phase as the suspended IPL then the suspended IPL resumes. Both IPLs continue until completion.
- When SUSPEND is displayed the suspended CCU is not updated, and remains at phase 4.

Messages appearing at **D**:

CA IPL DETECTED ON CA x

The control program load/dump is started on a channel-attached 3745. x is the channel adapter number. If this message appears permanently: **HELP**

CONTROL PROGRAM LOADED

The control program is loaded.

CP SAVE ON DISK IN PROGRESS

The control program is being saved on the disk. If this message appears permanently: **HELP**

DUMP IN PROGRESS ON CA x

For a channel-attached 3745: The control program is being dumped. x is the channel adapter number.

IPL Messages

DUMP IN PROGRESS ON L xxxx

For a link-attached 3745: The control program is being dumped. xxxx is the decimal communication line address. If this message appears permanently: **HELP**

DUMP ON MOSS DISK IN PROGRESS

The control program is being dumped on the disk. If this message appears permanently: **HELP**

ENABLED CA xxxxxxxxxxxxxxxx L xxxxxxxx

Indicates which channel adapters (CA) or link IPL ports (L) are enabled or disabled.

Y means enabled.

N means disabled.

U means unusable.

- means not installed (for channel adapters) or not defined (for link IPL ports).

If U is displayed, do the following:

- **F1** to end the IPL.
- **P** **O** **S** **SEND** to select the Power Services function.
 - Check the status of the power supply for that channel adapter.
 - If down: Power up that power supply as indicated on the screen.
 - Retry.
 - If the problem persists: **HELP**

The positions of Ys, Ns, and Us gives the channel adapter and link IPL port number. For example: ENABLED CA YYNNNNNNNNNNNNNNNN L NNNNNNNN means that only channel adapters 1 and 2 are enabled.

FALLBACK CANCELED

The 3745 fallback has been canceled. If you did not request the fallback to be canceled: **HELP**

FALLBACK CHECK Fxx

HELP

FALLBACK COMPLETE

The 3745 fallback has successfully completed.

FALLBACK COMPLETE + ERRORS

The 3745 fallback has completed, although errors have been encountered: **HELP**

FALLBACK IN PROGRESS

The 3745 fallback is in progress.

IPL CANCELED

The 3745 IPL has been canceled. If you did not request the IPL to be canceled: **HELP**

IPL CHECK Fxx

The 3745 IPL ends abnormally: **HELP**

IPL CHECK F1B CLDP ABEND xxxx

The 3745 IPL ends abnormally: **HELP**

IPL COMPLETE

The 3745 IPL has successfully completed.

IPL COMPLETE + ERRORS

The IPL has completed although non-disruptive errors have been encountered: **HELP**

IPL FROM MOSS DISK IN PROGRESS

The 3745 IPL from the disk is in progress.

IPL IN PROGRESS

The 3745 IPL is in progress.

LINK IPL DETECTED ON L xxxx

The control program load/dump is started on a link-attached 3745. xxxx is the decimal communication line address. If this message appears permanently: **HELP**

HELP

LINK TEST PROGRAM ABEND

The link test program is loaded.

LINK TEST PROGRAM LOADED

The control program is being loaded on a channel-attached 3745. x is the channel adapter number. If this message appears permanently: **HELP**

LOAD IN PROGRESS ON CA x

The control program is being loaded on a link-attached 3745. xxxx is the decimal communication line address. If this message appears permanently: **HELP**

LOAD IN PROGRESS ON L xxxx

The remote power-off (RPO) command is detected on communication line xxxx. xxxx is the decimal communication line address.

RPO DETECTED ON L xxxx

HELP

SCANNER(S) NOT IMLED: xxxxxxxx

The 3745 switchback is canceled. If you did not request the switchback to be canceled: **HELP**

SWITCHBACK CANCELED

HELP

SWITCHBACK CHECK Fxx

The 3745 switchback is successfully completed.

SWITCHBACK COMPLETE

The 3745 switchback is completed although errors have been encountered: **HELP**

SWITCHBACK COMPLETE + ERRORS

The 3745 switchback is in progress.

SWITCHBACK IN PROGRESS

The standby CCU test ends abnormally: **HELP**

TEST CHECK Fxx

The standby CCU test is in progress.

TEST IN PROGRESS

The standby CCU test is successfully completed.

TEST COMPLETE

The standby CCU test is canceled on operator's request.

TEST CANCELED

Chapter 5. Fallback (Models 410 and 610)

Twin-Backup Mode

- 1 Power on and log on at the operator console. Refer to page 13 (for a local or alternate console) or page 16 (for a remote console).

- 2 Press:

F **B** **K** **SEND**

This screen is displayed:

CUSTOMER ID:XXXXXXXX	3745-XXX	SERIAL NUMBER:nnnnnn
mm/dd/yy hh:mm		
FUNCTION ON SCREEN: FALLBACK		
- SELECT THE CCU THAT WILL SUPPORT THE WHOLE CONFIGURARTION (1,2) ==>		
1 = CCU-A		
2 = CCU-B		
- SELECT THE FALLBACK PHASE (1, 2) ==>		
1 = REQUEST NETWORK OPERATOR TO DEACTIVATE LINES (IF NECESSARY)		
2 = PERFORM FALLBACK		
====>		
F1:END F2:MENU2 F3:ALARM		

- 3 Do the following:

- Enter **1** or **2** at **A** to select the CCU.
- Enter **1** at **B** then press **SEND**

This requests the network operator to deactivate the lines (not necessary if the lines are already deactivated). Alarm B0 is displayed to indicate the request has been sent.

- Wait for the network operator's confirmation, then:

- Enter **2** then press **SEND**

The message PLEASE CONFIRM YOUR SELECTION appears on the screen.

CUSTOMER ID:XXXXXXXX	3745-XXX	SERIAL NUMBER:nnnnnn
mm/dd/yy hh:mm		
FUNCTION ON SCREEN: FALLBACK		
- SELECT THE CCU THAT WILL SUPPORT THE WHOLE CONFIGURARTION (1,2) ==> A		
1 = CCU-A		
2 = CCU-B		
- SELECT THE FALLBACK PHASE (1, 2) ==> 2 B		
1 = REQUEST NETWORK OPERATOR TO DEACTIVATE LINES (IF NECESSARY)		
2 = PERFORM FALLBACK		
- PLEASE CONFIRM YOUR SELECTION: Y OR N. THEN PRESS SEND ==>		
====>		
ALARM B0: HOST OPERATOR NOTIFIED: FALLBACK TO BE PERFORMED		
F1:END F2:MENU2 F3:ALARM		

Fallback

- 4 to confirm.

You can no longer cancel the fallback process.

This screen is displayed:

CUSTOMER ID:XXXXXXXX 3745-XXX SERIAL NUMBER:nnnnnnn

FALLBACK IN PROGRESS

mm/dd/yy hh:mm

====>

F1:END F2:MENU2 F3:ALARM

- 5 Wait until you see FALLBACK COMPLETE, then:

to end the procedure.

Other messages may be displayed in **A** field. For the meanings of these messages, refer to page 25. Alarm B1 is displayed to indicate that the fallback has completed.

Once the fallback is complete, an automatic IPL is started on the other CCU.

CUSTOMER ID:XXXXXXXX 3745-XXX SERIAL NUMBER:nnnnnnn

A FALLBACK COMPLETE

mm/dd/yy hh:mm

FUNCTION ON SCREEN: FALLBACK

FALLBACK

WHEN THIS FUNCTION IS COMPLETE (SEE ABOVE). PRESS F1

====>

ALARM B1: MANUAL FALLBACK OR IPL COMPLETE

F1:END F2:MENU2 F3:ALARM

Twin-Standby Mode (Control Program Preloaded in Standby CCU)

If the load module has been saved on disk and is active, the standby CCU is already preloaded with the active load module.

- 1 Power on and log on at the operator console. Refer to page 13 (for a local or alternate console) or page 16 (for a remote console).

- 2 Press:

This screen is displayed:

CUSTOMER ID:xxxxxxx	3745-XXX	SERIAL NUMBER:nnnnnn
		mm/dd/yy hh:mm
FUNCTION ON SCREEN: FALLBACK		
- SELECT THE FALLBACK PHASE (1, 2) ==>		
1 = REQUEST NETWORK OPERATOR TO DEACTIVATE LINES (IF NECESSARY)		
2 = PERFORM FALLBACK		
====		
F1:END	F2:MENU2	F3:ALARM

- 3 Do the following:

This requests the network operator to deactivate the lines (not necessary if the lines are already deactivated). Alarm B0 is displayed to indicate the request has been sent.

- Wait for the network operator's confirmation, then:

- to start the fallback.

The message PLEASE CONFIRM YOUR SELECTION appears on the screen.

CUSTOMER ID:xxxxxxx	3745-XXX	SERIAL NUMBER:nnnnnn
		mm/dd/yy hh:mm
FUNCTION ON SCREEN: FALLBACK		
- SELECT THE FALLBACK PHASE (1, 2) ==> 2		
1 = REQUEST NETWORK OPERATOR TO DEACTIVATE LINES (IF NECESSARY)		
2 = PERFORM FALLBACK		
- PLEASE CONFIRM YOUR SELECTION: Y OR N. THEN PRESS SEND ==>		
====		
ALARM B0: HOST OPERATOR NOTIFIED: FALLBACK TO BE PERFORMED		
F1:END	F2:MENU2	F3:ALARM

Fallback

- 4 to confirm.

You can no longer cancel the fallback process.

This screen is displayed:

CUSTOMER ID:XXXXXXXX 3745-XXX SERIAL NUMBER:nnnnnnn

FALLBACK IN PROGRESS

mm/dd/yy hh:mm

====>

F1:END F2:MENU2 F3:ALARM

- 5 Wait until you see FALLBACK COMPLETE, then:

to end the procedure.

Other messages may be displayed in field. For the meanings of these messages, refer to page 25. An alarm is also displayed.

CUSTOMER ID:XXXXXXXX 3745-XXX SERIAL NUMBER:nnnnnnn

FALLBACK COMPLETE

mm/dd/yy hh:mm

FUNCTION ON SCREEN: FALLBACK

FALLBACK

WHEN THIS FUNCTION IS COMPLETE (SEE ABOVE). PRESS F1

====>

ALARM B1: MANUAL FALLBACK OR IPL COMPLETE

F1:END F2:MENU2 F3:ALARM

Twin-Standby Mode (Control Program Not Preloaded in Standby CCU)

- 1 Power on and log on at the operator console. Refer to page 13 (for a local or alternate console) or page 16 (for a remote console).

- 2 Press:

This screen is displayed:

CUSTOMER ID:xxxxxxx	3745-XXX	SERIAL NUMBER:nnnnnn
		mm/dd/yy hh:mm
FUNCTION ON SCREEN: FALLBACK		
- SELECT THE FALLBACK PHASE (1, 2) ==>		
1 = REQUEST NETWORK OPERATOR TO DEACTIVATE LINES (IF NECESSARY)		
2 = PERFORM FALLBACK (IPL OF CCU-B IS AUTOMATIC)		
==>		
F1:END F2:MENU2 F3:ALARM		

- 3

This requests the network operator to deactivate the lines (not necessary if the lines are already deactivated). Alarm B0 is displayed to indicate that the request has been sent.

- 4 Wait for the network operator's confirmation, then:

to start the fallback.

The message PLEASE CONFIRM YOUR SELECTION then appears on the screen.

CUSTOMER ID:xxxxxxx	3745-XXX	SERIAL NUMBER:nnnnnn
		mm/dd/yy hh:mm
FUNCTION ON SCREEN: FALLBACK		
- SELECT THE FALLBACK PHASE (1, 2) ==>		
1 = REQUEST NETWORK OPERATOR TO DEACTIVATE LINES (IF NECESSARY)		
2 = PERFORM FALLBACK (IPL OF CCU-B IS AUTOMATIC)		
- PLEASE CONFIRM YOUR SELECTION: Y OR N. THEN PRESS SEND ==>		
==>		
ALARM B0: HOST OPERATOR NOTIFIED: FALLBACK TO BE PERFORMED		
F1:END F2:MENU2 F3:ALARM		

- 5 to confirm.

You can no longer cancel the fallback process.

This screen is displayed:

CUSTOMER ID:xxxxxxx	3745-XXX	SERIAL NUMBER:nnnnnn
FALLBACK IN PROGRESS		mm/dd/yy hh:mm
==>		
F1:END F2:MENU2 F3:ALARM		

6 When fallback in twin-standby mode is complete:

- FALLBACK COMPLETE is displayed. Other messages may be displayed in **A** field. For the meanings of these messages, go to page 25. Alarm B1 is displayed to indicate that the fallback has completed.
- The Function Selection Rules screen is displayed, and an automatic re-IPL of the destination CCU is started. Go to next step.

CUSTOMER ID:xxxxxxxxx3745-XXXSERIAL NUMBER:nnnnnnn

A

FALLBACK COMPLETE

mm/dd/yy hh:mm

FUNCTION SELECTION RULES

- TO SELECT ONE OF THE MENUS, PRESS THE APPROPRIATE F KEY

- TO SELECT A FUNCTION, ENTER ITS 3-CHARACTER NAME THEN PRESS SEND

- ONCE YOU HAVE SELECTED A FUNCTION FROM ONE MENU, YOU MAY SELECT A FUNCTION FROM THE OTHER

- TO END THE FUNCTION ON SCREEN, PRESS F1

- TO RETURN TO THE PENDING FUNCTION, PRESS F2

- TO LOG OFF, ENTER OFF THEN PRESS SEND

====>

ALARM B1: MANUAL FALLBACK OR IPL COMPLETE

F1:END F2:MENU2 F3:ALARM F4:MENU1

7 Wait approximately 5 minutes until the following message is displayed:

- ENABLED CA xxxxxxxxxxxxxxxxx
L xxxxxxxxx

This message is explained on page 26. Ask the host operator to load the control program, then go to next step.

CUSTOMER ID:xxxxxxxxx3745-XXXSERIAL NUMBER:nnnnnnn

ENABLED CA xxxxxxxxxxxxxxxxx LA xxxxxxxxx

mm/dd/yy hh:mm

FUNCTION ON SCREEN: IPL CCU(S)
CCU AND SCANNER IPL

WHEN THIS FUNCTION IS COMPLETE (SEE ABOVE). PRESS F1

====>

F1:END F2:MENU2 F3:ALARM F4:MENU1

8 Wait until you see IPL COMPLETE, then:

F1 to end the procedure.

Other messages may be displayed in **B** field. For the meanings of these messages, refer to page 25.

CUSTOMER ID:xxxxxxxxx3745-XXXSERIAL NUMBER:nnnnnnn

B

IPL COMPLETE

mm/dd/yy hh:mm

FUNCTION ON SCREEN: IPL CCU(S)
CCU AND SCANNER IPL

WHEN THIS FUNCTION IS COMPLETE (SEE ABOVE). PRESS F1

====>

F1:END F2:MENU2 F3:ALARM F4:MENU1

Chapter 6. Switchback (Models 410 and 610)

This function can only be performed in **twin-backup** mode.

- 1 Power on and log on at the operator console. Refer to page 13 (for a local or alternate console) or page 16 (for a remote console).

- 2 Press the following keys:

This screen is displayed:

- 3

This requests the network operator to deactivate the lines (not necessary if the lines are already deactivated). Alarm B4 is displayed to indicate that the request has been sent.

CUSTOMER ID:XXXXXXXX	3745-XXX	SERIAL NUMBER:nnnnnn
mm/dd/yy hh:mm		
FUNCTION ON SCREEN: SWITCHBACK		
- SELECT THE SWITCHBACK PHASE (1, 2) ==>		
1 = REQUEST NETWORK OPERATOR TO DEACTIVATE LINES (IF NECESSARY)		
2 = PERFORM SWITCHBACK		
====>		
ALARM B4: HOST OPERATOR NOTIFIED: SWITCHBACK TO BE PERFORMED		
F1:END F2:MENUE2 F3:ALARM		

- 4 Do the following:

- Wait for the network operator's confirmation.

•

- Go to either:

- Step 5 if the switchback has not yet started.
- Step 6 if the switchback has started.

The message:
SWITCHBACK IN PROGRESS
is displayed.

CUSTOMER ID:XXXXXXXX	3745-XXX	SERIAL NUMBER:nnnnnn
mm/dd/yy hh:mm		
FUNCTION ON SCREEN: SWITCHBACK		
- SELECT THE SWITCHBACK PHASE (1, 2) ==>		
1 = REQUEST NETWORK OPERATOR TO DEACTIVATE LINES (IF NECESSARY)		
2 = PERFORM SWITCHBACK		
====>		
F1:END F2:MENUE2 F3:ALARM		

Switchback

5 This screen is displayed if some CCU resources are not deactivated.

Perform actions as requested on the screen:

- ☐ **C** or ☐ **F** on line **A** to cancel or force the switchback.
- ☐
- Line **B** is added. Confirm your selection, then:
- ☐
- Go to next step.

CUSTOMER ID:XXXXXXXXX 3745-XXXX SERIAL NUMBER:nnnnnnnn

SWITCHBACK IN PROGRESS

_____mm/dd/yy hh:mm

FUNCTION ON SCREEN: SWITCHBACK

WARNING:
SOME RESSOURCES ON THE CCU TO BE SWITCHED ARE NOT DEACTIVATED

NETWORK ADDRESS OF A LINE THAT IS NOT DEACTIVATED: XXXX
NOTIFY THE FOLLOWING HOST OPERATORS THAT THEY MUST FREE UP RESOURCES

XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX

CANCEL OR FORCE THE SWITCHBACK: C=CANCEL. F=FORCE ==> **A**

- PLEASE CONFIRM YOUR SELECTION: Y OR N. THEN PRESS SEND ==>

B

==>

F1:END F2:MENU2 F3:ALARM

6 When the switchback is complete:

- **SWITCHBACK COMPLETE** is displayed. Other messages may be displayed in this field. For the meanings of these messages, go to page 25. Alarm B5 is displayed to indicate that the switchback has completed.
- The Function Selection Rules screen is displayed.
- An automatic re-IPL of the original CCU is started. Go to next step.

CUSTOMER ID:XXXXXXXXX 3745-XXXX SERIAL NUMBER:nnnnnnnn

mm/dd/yy hh:mm

FUNCTION SELECTION RULES

- TO SELECT ONE OF THE MENUS, PRESS THE APPROPRIATE F KEY
- TO SELECT A FUNCTION, ENTER ITS 3-CHARACTER NAME THEN PRESS END
- ONCE YOU HAVE SELECTED A FUNCTION FROM ONE MENU, YOU MAY SELECT A FUNCTION FROM THE OTHER
- TO END THE FUNCTION ON SCREEN, PRESS F1
- TO RETURN TO THE PENDING FUNCTION, PRESS F2
- TO LOG OFF, ENTER OFF THEN PRESS END

====>

ALARM B5: SWITCHBACK AND IPL COMPLETE
F1:END F2:MENU2 F3:ALARM F4:MENU1

7 Wait approximately 5 minutes until one of the following is displayed:

- IPL FROM MOSS DISK IN PROGRESS. The control program is being loaded from the disk. Go to next step.
- ENABLED CA xxxxxxxxxxxxxxxxxxxx
L xxxxxxxx

This message is explained on page 26. Ask the host operator to load the control program, then go to next step.

CUSTOMER ID:xxxxxxxx	3745-XXX	SERIAL NUMBER:nnnnnn
<div style="border: 1px solid black; padding: 2px; display: inline-block;">IPL FROM MOSS DISK IN PROGRESS</div>		
mm/dd/yy hh:mm		
FUNCTION SELECTION RULES		
- TO SELECT ONE OF THE MENUS, PRESS THE APPROPRIATE F KEY		
- TO SELECT A FUNCTION, ENTER ITS 3-CHARACTER NAME THEN PRESS SEND		
- ONCE YOU HAVE SELECTED A FUNCTION FROM ONE MENU, YOU MAY SELECT A FUNCTION FROM THE OTHER		
- TO END THE FUNCTION ON SCREEN, PRESS F1		
- TO RETURN TO THE PENDING FUNCTION, PRESS F2		
- TO LOG OFF, ENTER OFF THEN PRESS SEND		
==>		
F1:END F2:MENU2 F3:ALARM F4:MENU1		

8 Wait until you see IPL COMPLETE.

Other messages may be displayed in **A** field. For the meanings of these messages, refer to page 25.

CUSTOMER ID:xxxxxxxx	3745-XXX	SERIAL NUMBER:nnnnnn
<div style="border: 1px solid black; padding: 2px; display: inline-block;"> A <div style="border: 1px solid black; padding: 2px; display: inline-block;">IPL COMPLETE</div> </div>		
mm/dd/yy hh:mm		
FUNCTION SELECTION RULES		
- TO SELECT ONE OF THE MENUS, PRESS THE APPROPRIATE F KEY		
- TO SELECT A FUNCTION, ENTER ITS 3-CHARACTER NAME THEN PRESS SEND		
- ONCE YOU HAVE SELECTED A FUNCTION FROM ONE MENU, YOU MAY SELECT A FUNCTION FROM THE OTHER		
- TO END THE FUNCTION ON SCREEN, PRESS F1		
- TO RETURN TO THE PENDING FUNCTION, PRESS F2		
- TO LOG OFF, ENTER OFF THEN PRESS SEND		
==>		
F1:END F2:MENU2 F3:ALARM F4:MENU1		

Switchback

Chapter 7. IML

MOSS IML

- 1 Power on and log on at the operator console. Refer to page 13 (for local or alternate console) or page 16 (for remote console).

- 2 Press:

I **M** **L** **SEND**

and go to the next step.

This screen is displayed (for about 3 minutes) with the following messages:

On line **A**
PLEASE WAIT, IML IN PROGRESS
(local or alternate console)
or
IML REQUESTED-TERMINAL
DISCONNECTED (remote console)

On line **B**
COMM NOT READY 2 (on an IBM 3151
or 3161 operator console)
or
LINE CHECK 2 (on an IBM 3727
operator console)

A PLEASE WAIT, IML IN PROGRESS

B COMM NOT READY 2

- 3 For the local console:

- Wait approximately 3 minutes.
- When this screen is displayed, MOSS is IMLed.
- If you wish to log on: **F4**

For the remote console:

- The console will be disconnected by the IML.
- Wait approximately 3 minutes.
- The console is disconnected. If you wish to log on the remote console, refer to page 16.

CUSTOMER ID:XXXXXXXXX 3745-XXX SERIAL NUMBER:nnnnnn

3745 MICROCODE (C) COPYRIGHT IBM CORP. 1987

INTERFACE NUMBER	CHANGE E/D REQ	E/D REQUEST	CA INTERFACE STATUS	HOST OR SWITCH UNIT	CHANNEL ADDRESS	NSC ADDRESS
1A	==>	E	ENABLED			FA
2A	==>	E	ENABLED			FB
3A	==>	E	ENABLED			FC
4A	==>	D	DISABLED			11
5A	==>	D	DISABLED			FC
6A	==>	E	ENABLED			FD
7A		-	-			
8A		-	-			

- TYPE E OR D TO CHANGE THE ENABLE/DISABLE REQUEST, THEN PRESS SEND

F4:MOSS FUNCTIONS F5:UPDATE

IMLing a Scanner (Line Adapter)

- 1 Ask the host operator to make sure that all lines of the scanner (line adapter) are deactivated.
- 2 Log on at the console. Refer to page 13 (for local or alternate console) or page 16 (for remote console).

When the console is logged on, this screen is displayed:

- 3 Check the status of the MOSS in **A**

- If **online**, go to step 4.
- If **offline**, set it online:

M **O** **N** **SEND**

then go to step 4.

- If the MOSS is alone, control program should be loaded (IPL) first.

- 4 Select the IML One Scanner function:

I **M** **S** **SEND**

This screen is displayed:

```

CUSTOMER ID:xxxxxxx      3745-XXX      SERIAL NUMBER:nnnnnnn
CCU-A      PROCESS MOSS-ONLINE A
RUN

CCU-B      PROCESS MOSS-OFFLINE
RUN

mm/dd/yy hh:mm

FUNCTION SELECTION RULES
- TO SELECT ONE OF THE MENUS, PRESS THE APPROPRIATE F KEY
- TO SELECT A FUNCTION, ENTER ITS 3-CHARACTER NAME THEN PRESS SEND
- ONCE YOU HAVE SELECTED A FUNCTION FROM ONE MENU, YOU MAY SELECT
  A FUNCTION FROM THE OTHER
- TO END THE FUNCTION ON SCREEN, PRESS F1
- TO RETURN TO THE PENDING FUNCTION, PRESS F2
- TO LOG OFF, ENTER OFF THEN PRESS SEND
==>

F1:END F2:MENU2 F3:ALARM F4:MENU1 F5:MENU3
  
```

```

CUSTOMER ID:xxxxxxx      3745-XXX      SERIAL NUMBER:nnnnnnn
CCU-A      PROCESS MOSS-ONLINE
RUN

CCU-B      PROCESS MOSS-OFFLINE
RUN

mm/dd/yy hh:mm

FUNCTION ON SCREEN: IML ONE SCANNER

- ENTER:

THE SCANNER NUMBER PRECEDED BY S (S1 TO S32)
OR
THE LINE ADDRESS (000 TO 1071)
(0 TO 895 FOR TSS )
(1024 TO 1039 FOR HPTSS)
(1056 TO 1071 FOR ESS )

==>

==>

F1:END F2:MENU2 F3:ALARM
  
```

- 5 Enter either the scanner (line adapter) number or the address of a line attached to the scanner:

x = scanner number

or

y = Line address

IML FOR SCANNER xx IN PROGRESS
is displayed indicating that IML has started.

CUSTOMER ID:xxxxxxx	3745-XXX	SERIAL NUMBER:nnnnnn
CCU-A	PROCESS MOSS-ONLINE	
RUN		
CCU-B	PROCESS MOSS-OFFLINE	
RUN		mm/dd/yy hh:mm
FUNCTION ON SCREEN: IML ONE SCANNER		
- ENTER:		
THE SCANNER NUMBER PRECEDED BY S (S1 TO S32)		
OR ==> Sx		
THE LINE ADDRESS (000 TO 1071)		
(0 TO 895 FOR TSS)		
(1024 TO 1039 FOR HPTSS)		
(1056 TO 1071 FOR ESS)		
==== IML FOR SCANNER xx IN PROGRESS		
F1:END F2:MENU2 F3:ALARM		

- 6 When IML is completed (approximately 1 minute) the display shows:

IML FOR SCANNER xx COMPLETED:
SCANNER IS CONNECTED

Other messages may be displayed:

INVALID INPUT

Restart the step.

**SCANNER CANNOT BE IMLED: MOSS
IS NOT ONLINE**

Set MOSS online. See step 3, page 40

If any other message is displayed:
HELP

- 7 to end the procedure.

CUSTOMER ID:xxxxxxx	3745-XXX	SERIAL NUMBER:nnnnnn
CCU-A	PROCESS MOSS-ONLINE	
RUN		
CCU-B	PROCESS MOSS-OFFLINE	
RUN		mm/dd/yy hh:mm
FUNCTION ON SCREEN: IML ONE SCANNER		
- ENTER:		
THE SCANNER NUMBER PRECEDED BY S (S1 TO S32)		
OR ==>		
THE LINE ADDRESS (000 TO 1071)		
(0 TO 895 FOR TSS)		
(1024 TO 1039 FOR HPTSS)		
(1056 TO 1071 FOR ESS)		
==== IML FOR SCANNER xx COMPLETED: SCANNER IS CONNECTED		
F1:END F2:MENU2 F3:ALARM		



Control Panel Procedures

Chapter 8. Manual Power On and IPL

Channel-Attached 3745 in Local or Network Mode

The console must be powered on and logged on. Refer to page 13 (for a local or alternate console) or page 16 (for a remote console).

Single Mode (Models 130, 150, 160, 170, 210 and 310)

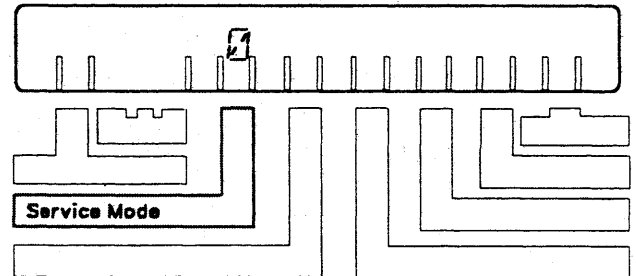
The control program is to be loaded into the CCU from:

- The host via the channel, or
- The disk if it has been saved on it and made active by the host operator.

- 1 Press **Service Mode** repeatedly until 0 is displayed, then:
Press **Validate**.

If 0 is already displayed, go to next step.

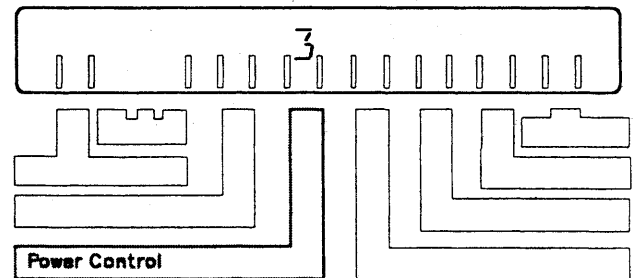
If the 3745 is already powered on, go to step 5



- 2 Press **Power Control** repeatedly until 3 (local mode) or 2 (network mode) is displayed, then:
Press **Validate**.

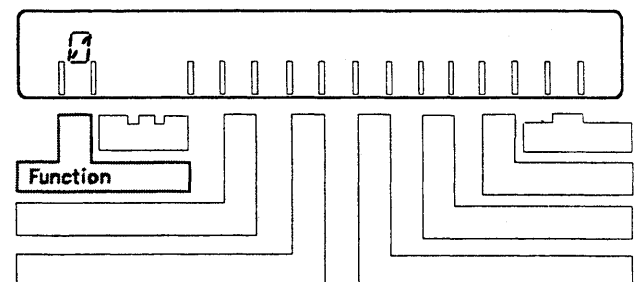
If 3 or 2 is already displayed, go to next step.

Power Control in 3 (local mode) is intended for service operations and is not recommended for normal operations. You will have to **manually POWER ON** after any external power failure when **POWER CONTROL** is left in **LOCAL MODE**.



- 3 Press **Function** repeatedly until 0 is displayed, then:
Press **Validate**.

If 0 is already displayed, go to next step.



4 Press Power On Reset.

5 IPL starts. Codes are displayed on the hex display showing the progression of the IPL. (Codes for normal operation are listed on page 83.)

If any code remains more than 5 minutes (except FF4 when the control program is loaded from the host):

- Restart from step 4.
- If the problem persists: **HELP**

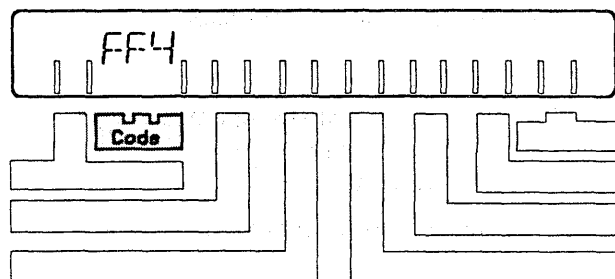
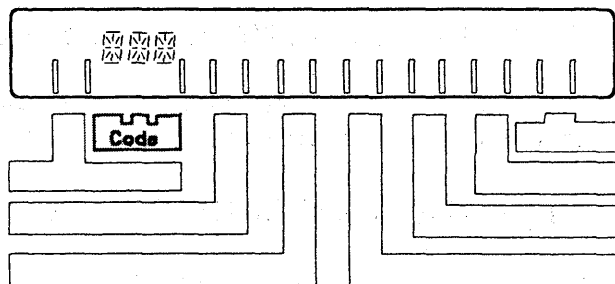
Wait approximately 5 minutes until FF4 is displayed.

- Then go to step 6.

If the control program is **loaded from the disk**:

- Wait approximately 5 minutes until you see this screen on the console.

If you need to enable or disable a channel adapter, go to page 19.



CUSTOMER ID:xxxxxxx		3745-XXX		SERIAL NUMBER:nnnnnn	
3745 MICROCODE (C) COPYRIGHT IBM CORP. 1987					
CA INTERFACE DISPLAY					
INTERFACE NUMBER	CHANGE E/D REQ	E/D REQUEST	INTERFACE STATUS	HOST OR SWITCH UNIT	CHANNEL ADDRESS
1A	==>	E	ENABLED		FA
2A	==>	E	ENABLED		FB
3A	==>	E	ENABLED		0C
4A	==>	0	DISABLED		11
5A	==>	0	DISABLED		FC
6A	==>	E	ENABLED		FO
7A		-	-		
8A		-	-		
- TYPE E OR D TO CHANGE THE ENABLE/DISABLE REQUEST, THEN PRESS SEND					
F4:MOSS FUNCTIONS			F5:UPDATE		

- 6 Ask the host operator to load the control program.

When the control program is loaded, the progression continues on the hex display.

Wait until you see **000**, which indicates that the IPL is complete and successful.

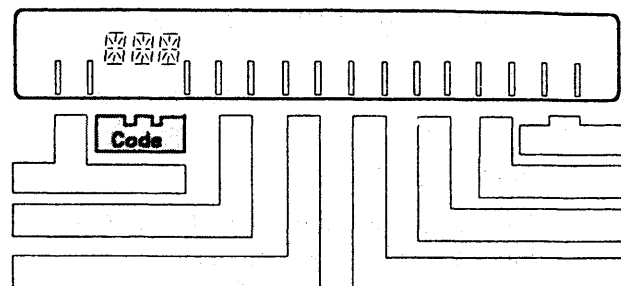
If other codes are displayed, go to page 83.

If FF4 remains more than 2 minutes after the control program is loaded:

- Restart from step 4.
- If the problem persists: **HELP**

- 7 To make sure that the IPL is complete and successful, log on the operator console. Refer to 13 (for a local or alternate console) or 16 (for a remote console).

When the console is logged on, **IPL COMPLETE** should be displayed.



CUSTOMER ID:xxxxxxxx

3745-XXX

SERIAL NUMBER:nnnnnn

CCU-A

IPL COMPLETE

mm/dd/yy hh:mm

FUNCTION ON SCREEN: IPL CCU

CCU AND SCANNER IPL

***>

F1:END F2:MENU2 F3:ALARM

Twin-Standby Mode (Models 410 and 610)

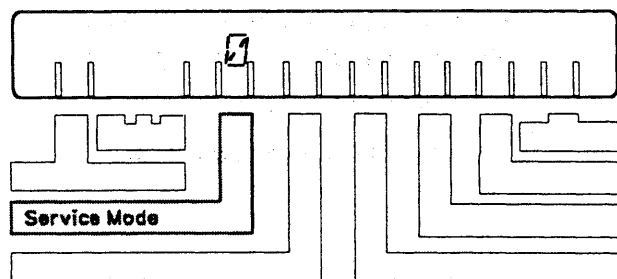
The control program is to be loaded into the CCU from:

- The host via the channel, or
- The disk if it has been saved on it and made active by the host operator (in that case, the standby CCU is already preloaded with the active load module).

- 1** Press **Service Mode** repeatedly until **0** is displayed, then:
Press **Validate**.

If 0 is already displayed, go to next step.

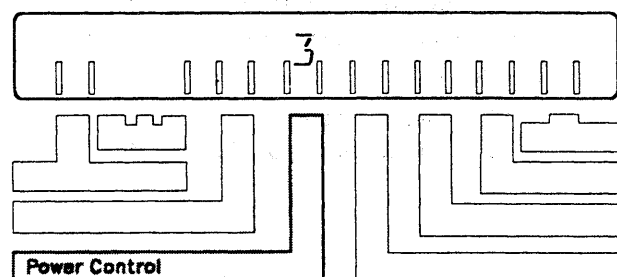
If the 3745 is already powered on, go to step 5.



- 2** Press **Power Control** repeatedly until **3** (local mode) or **2** (network mode) is displayed, then:
Press **Validate**.

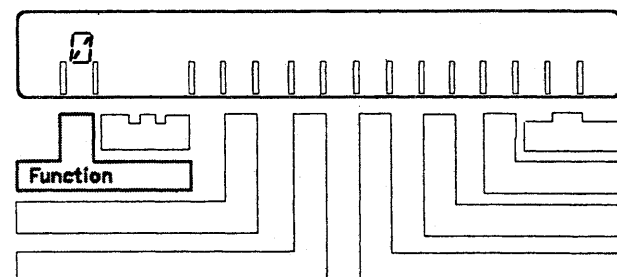
If 3 or 2 is already displayed, go to next step.

Power Control in **3** (local mode) is intended for service operations and is not recommended for normal operations. You will have to **manually POWER ON** after any external power failure when **POWER CONTROL** is left in **LOCAL MODE**.



- 3** Press **Function** repeatedly until **0** is displayed, then:
Press **Validate**.

If 0 is already displayed, go to next step.



4 Press Power On Reset.

5 IPL starts. Codes are displayed on the hex display showing the (Codes for normal operation are listed on page 83.)

If any code remains more than 5 minutes: (except FF4 when the control program is loaded from the host):

- Restart from step 4.
- If the problem persists: **HELP**

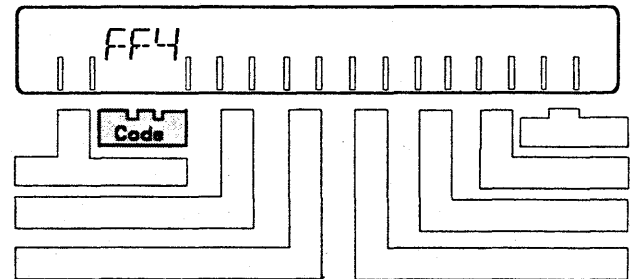
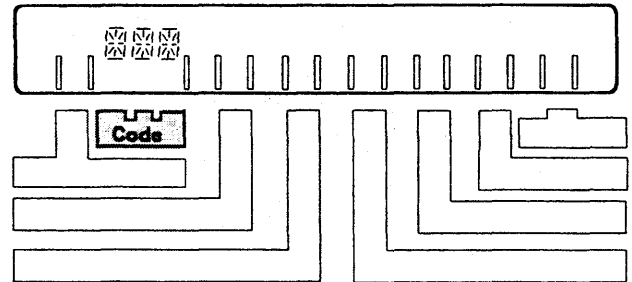
Wait approximately 5 minutes until FF4 is displayed.

- Then go to step 6.

If the control program is **loaded from the disk**:

- Wait approximately 5 minutes until you see this screen on the console.

If you need to enable or disable a channel adapter, go to page 19.



CUSTOMER ID:xxxxxxxx		3745-XXX		SERIAL NUMBER:nnnnnn	
3745 MICROCODE (C) COPYRIGHT IBM CORP. 1987					
INTERFACE NUMBER	CHANGE E/D REQ	E/D REQUEST	CA INTERFACE DISPLAY STATUS	HOST OR SWITCH UNIT	CHANNEL ADDRESS
1A	=>	E	ENABLED		FA
2A	=>	E	ENABLED		FB
3A	=>	E	ENABLED		FC
4A	=>	D	DISABLED		FD
5A	=>	D	DISABLED		FE
6A	=>	E	ENABLED		FF
7A					
8A					

- TYPE E OR D TO CHANGE THE ENABLE/DISABLE REQUEST, THEN PRESS SEND

F4:MOSS FUNCTIONS F5:UPDATE

- 6 Ask the host operator to load the control program.

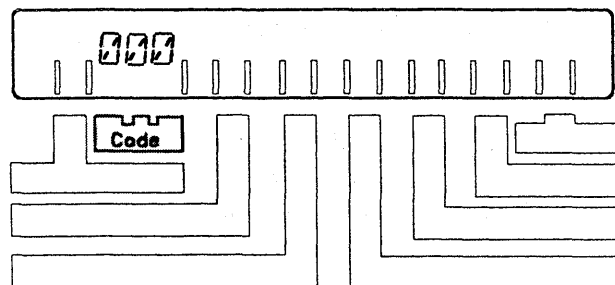
When the control program is loaded, the progression continues on the hex display.

Wait until you see **000**, which indicates that the IPL is complete and successful.

If other codes are displayed, go to page 83.

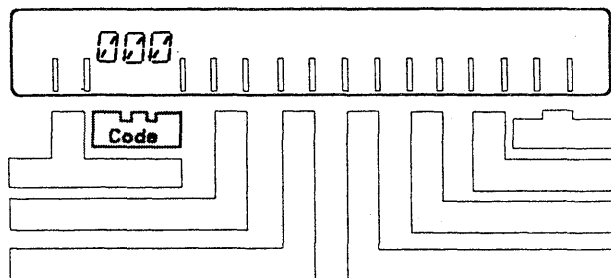
If FF4 remains more than 2 minutes after the control program is loaded:

- Restart from step 4.
- If the problem persists: **HELP**



- 7 IPL from disk starts on the standby CCU. Codes are displayed on the hex display showing the progression of the IPL. (For an explanation of these codes, go to page 83.)

Wait until you see **000**, which indicates that the IPL of the standby CCU is complete and successful.



- 8 To make sure that the IPL is complete and successful **on both CCUs**, log on the operator console. Refer to 13 (for a local or alternate console) or 16 (for a remote console).

When the console is logged on, IPL COMPLETE should be displayed for each CCU.

CUSTOMER ID:xxxxxxxx		3745-XXX	SERIAL NUMBER:nnnnnn
CCU-A	IPL COMPLETE		
CCU-B	IPL COMPLETE		
FUNCTION ON SCREEN: IPL CCU(S)			mm/dd/yy hh:mm
CCU AND SCANNER IPL			

F1:END F2:MENU2 F3:ALARM			

Twin-Dual or Twin-Backup Mode (Models 410 and 610)

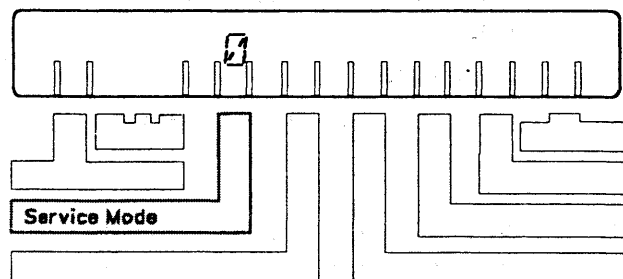
The control program is to be loaded into the CCU from:

- The host via the channel, or
- The disk if it has been saved on it and made active by the host operator (in that case, the standby CCU is already preloaded with the active load module).

- 1 Press **Service Mode** repeatedly until 0 is displayed, then:
Press **Validate**.

If 0 is already displayed, go to next step.

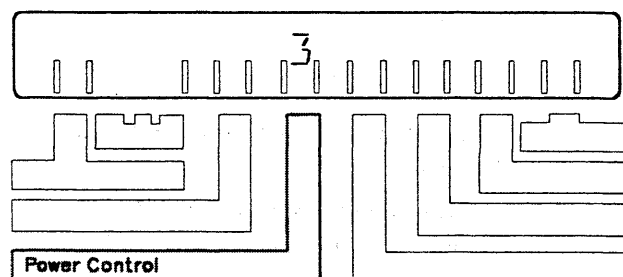
If the 3745 is already powered on, go to step 5.



- 2 Press **Power Control** repeatedly until 3 (local mode) or 2 (network mode) is displayed, then:
Press **Validate**.

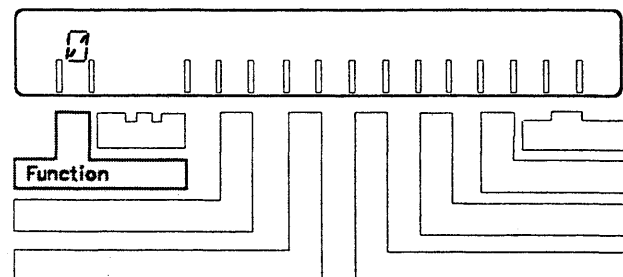
If 3 or 2 is already displayed, go to next step.

Power Control in 3 (local mode) is intended for service operations and is not recommended for normal operations. You will have to **manually POWER ON** after any external power failure when **POWER CONTROL** is left in **LOCAL MODE**.



- 3 Press **Function** repeatedly until 0 is displayed, then:
Press **Validate**.

If 0 is already displayed, go to next step.



4 Press Power On Reset.

5 IPL starts. Codes are displayed on the hex display showing the progression of the IPL. (Codes for normal operation are listed on page 83.)

If any code remains more than 5 minutes: (except FF4 when the control program is loaded from the host):

- Restart from step 4.
- If the problem persists: **HELP**

Wait approximately 5 minutes until FF4 is displayed.

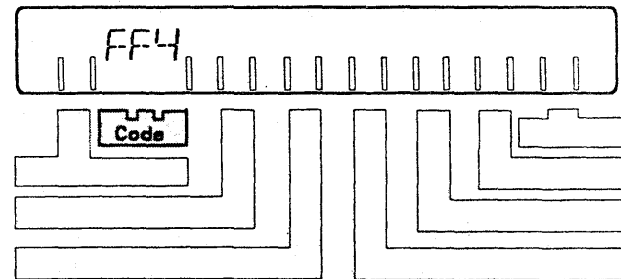
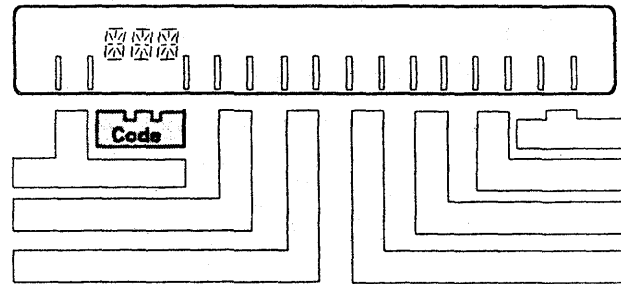
- Then go to step 6.

If the control program is loaded from the disk:

- Wait approximately 5 minutes until you see this screen on the console.

If you need to enable or disable a channel adapter, go to page 19.

- Then go to step 7.



CUSTOMER ID:xxxxxxx		3745-XXX		SERIAL NUMBER:nnnnnn	
3745 MICROCODE (C) COPYRIGHT IBM CORP. 1987					
CA INTERFACE DISPLAY					
INTERFACE NUMBER	CHANGE E/D REQ	E/D REQUEST	INTERFACE STATUS	HOST OR SWITCH UNIT	CHANNEL ADDRESS
1A	=>	E	ENABLED		FA
2A	=>	E	ENABLED		FB
3A	=>	E	ENABLED		BC
4A	=>	D	DISABLED		11
5A	=>	D	DISABLED		FC
6A	=>	E	ENABLED		FD
7A		-	-		
8A		-	-		
- TYPE E OR D TO CHANGE THE ENABLE/DISABLE REQUEST, THEN PRESS SEND					
F4:MOSS FUNCTIONS			F5:UPDATE		

- 6 Ask the host operator to load the control programs in CCU-A and CCU-B.

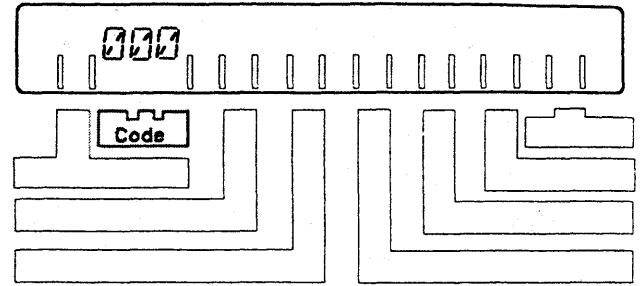
When at least one control program has been loaded, the progression continues on the hex display.

Wait until you see **000**, which indicates that the IPL is complete and successful on **at least one CCU**.

If other codes are displayed, go to page 83.

If FF4 remains more than 2 minutes after the control program is loaded:

- Restart from step 4.
- If the problem persists: **HELP**



- 7 To make sure that the IPL is complete and successful **on both CCUs**, log on the operator console. Refer to 13 (for a local or alternate console) or 16 (for a remote console).

When the console is logged on, **IPL COMPLETE** should be displayed for each CCU.

CUSTOMER ID:xxxxxxx		3745-XXX	SERIAL NUMBER:nnnnnn
CCU-A	IPL COMPLETE		
CCU-B	IPL COMPLETE		
FUNCTION ON SCREEN: IPL CCU(S)			mm/dd/yy hh:mm
CCU AND SCANNER IPL			
==>			
F1:END F2:MENU2 F3:ALARM			

Link-Attached 3745 in Local or Network Mode

The console must be powered on and logged on. Refer to page 13 (for a local or alternate console) or page 16 (for a remote console).

Single Mode (Models 130, 150, 160, 170, 210, and 310)

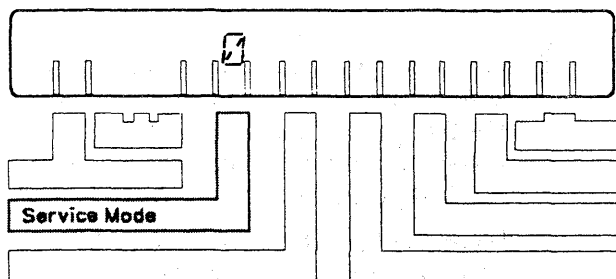
The control program is to be loaded into the CCU from:

- The host via a link-attached 3745 (see the LKP function in the *3745 Advanced Operations Guide* for details on defining the Link IPL Port), or
- The disk if it has been saved on it and made active by the host operator.

- 1** Press **Service Mode** repeatedly until **0** is displayed, then:
Press **Validate**.

If 0 is already displayed, go to next step.

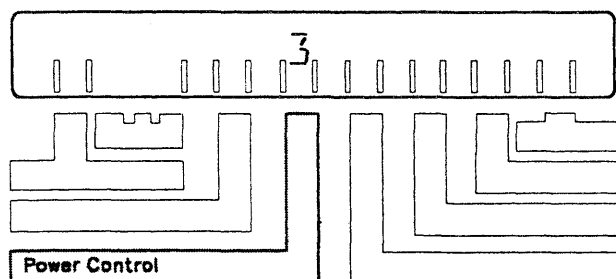
If the 3745 is already powered on, go to step 5.



- 2** Press **Power Control** repeatedly until **3** (local mode) or **2** (network mode) is displayed, then:
Press **Validate**.

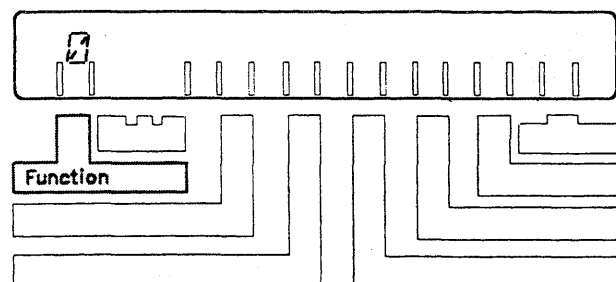
If 3 or 2 is already displayed, go to next step.

Power Control in 3 (local mode) is intended for service operations and is not recommended for normal operations. You will have to **manually POWER ON** after any external power failure when **POWER CONTROL** is left in **LOCAL MODE**.



- 3** Press **Function** repeatedly until **0** is displayed, then:
Press **Validate**.

If 0 is already displayed, go to next step.



4 Press Power On Reset.

5 IPL starts. Codes are displayed on the hex display showing the progression of the IPL. (Codes for normal operation are listed on page 83.)

If any code remains more than 5 minutes (except FF4 when the control program is loaded from the host):

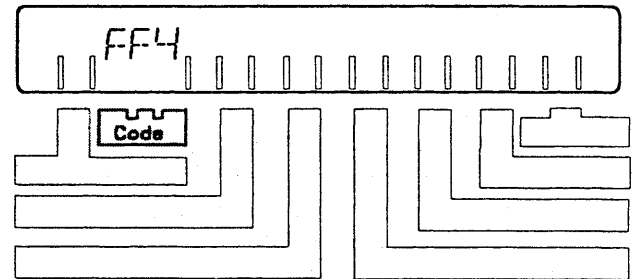
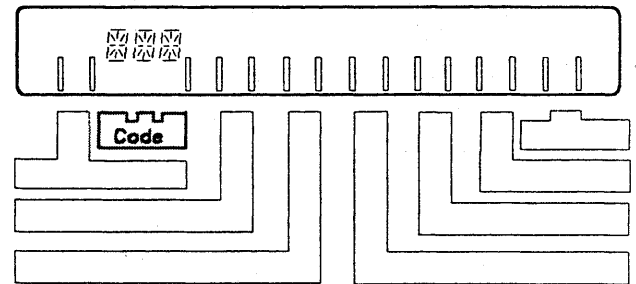
- Restart from step 4.
- If the problem persists: **HELP**

Wait approximately 5 minutes until FF4 is displayed, then go to the next step.

If the control program is loaded from the disk:

- Wait approximately 5 minutes until you see this screen on the console.

If you need to enable or disable a channel adapter, go to page 19.



CUSTOMER ID:xxxxxxxx		3745-XXX		SERIAL NUMBER:nnnnnn		
3745 MICROCODE (C) COPYRIGHT IBM CORP. 1987						
CA INTERFACE DISPLAY						
INTERFACE NUMBER	CHANGE E/D REQ	E/D REQUEST	INTERFACE STATUS	HOST OR SWITCH UNIT	CHANNEL ADDRESS	NSC ADDRESS
1A	==>	E	ENABLED			FA
2A	==>	E	ENABLED			FB
3A	==>	E	ENABLED			9C
4A	==>	D	DISABLED			11
5A	==>	D	DISABLED			FC
6A	==>	E	ENABLED			FD
7A	-	-	-			
8A	-	-	-			
- TYPE E OR D TO CHANGE THE ENABLE/DISABLE REQUEST, THEN PRESS SEND						
F4:MOSS FUNCTIONS				F5:UPDATE		

- 6** Ask the host operator to load the control program.

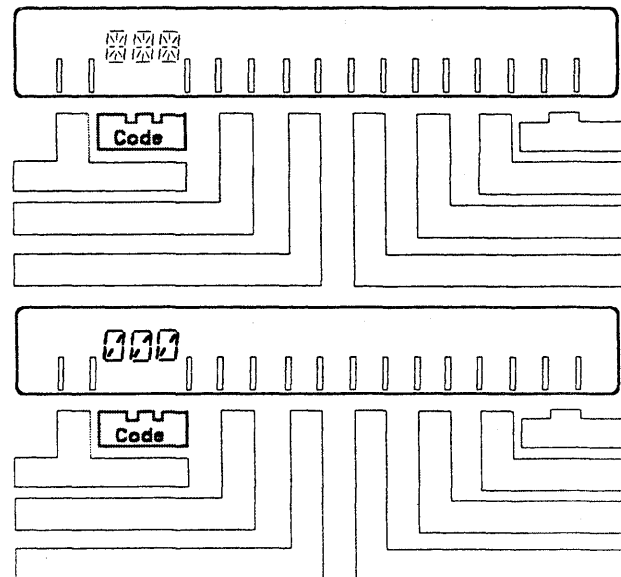
When the control program is loaded, the progression continues on the hex display.

Wait until you see **000**, which indicates that the IPL is complete and successful.

If **FF4** remains more than 2 minutes after the control program is loaded:

- Restart from step 4.
- If the problem persists: **HELP**

If other codes are displayed, go to page 83.



- 7** To make sure that the IPL is complete and successful, log on the operator console. Refer to 13 (for a local or alternate console) or 16 (for a remote console).

When the console is logged on, **IPL COMPLETE** should be displayed.

CUSTOMER ID:xxxxxxxxx
3745-XXX
SERIAL NUMBER:nnnnnnnn

CCU-A
IPL COMPLETE

mm/dd/yy hh:mm

FUNCTION ON SCREEN: IPL CCU
CCU AND SCANNER IPL

===>

F1:END F2:MENU2 F3:ALARM

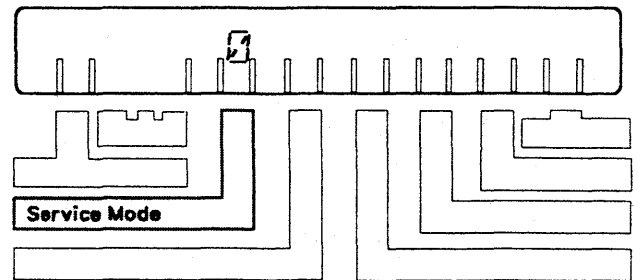
Twin-Standby Mode (Models 410 and 610)

The control program is to be loaded into the CCU from:

- The host via a link-attached 3745 (see the LKP function in the *3745 Advanced Operations Guide* for details on defining the Link IPL Port), or
- The disk if it has been saved on it and made active by the host operator (in that case, the standby CCU is already preloaded with the active load module).

- 1 Press **Service Mode** repeatedly until **0** is displayed, then:
Press **Validate**.

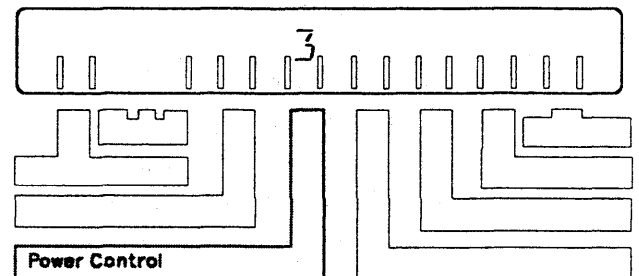
If 0 is already displayed, go to next step.



- 2 Press **Power Control** repeatedly until **3** (local mode) or **2** (network mode) is displayed, then:
Press **Validate**.

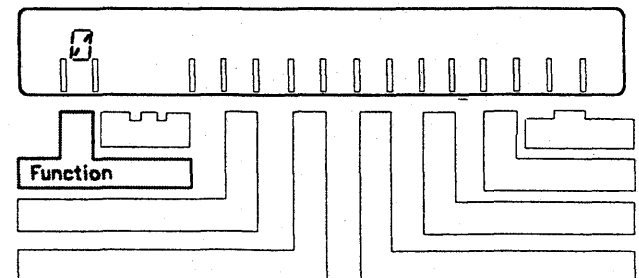
If 3 or 2 is already displayed, go to next step.

Power Control in 3 (local mode) is intended for service operations and is not recommended for normal operations. You will have to **manually POWER ON** after any external power failure when **POWER CONTROL** is left in **LOCAL MODE**.



- 3 Press **Function** repeatedly until **0** is displayed, then:
Press **Validate**.

If 0 is already displayed, go to next step.



- 4 Press **Power On Reset**.

- 5** IPL starts. Codes are displayed on the hex display showing the progression of the IPL. (Codes for normal operation are listed on page 83.)

If any code remains more than 2 minutes (except FF4 when the control program is loaded from the host):

- Restart from step 4.
- If the problem persists: **HELP**

Wait approximately 5 minutes until FF4 is displayed.

- Then go to step 6.

If the control program is **loaded from the disk**:

- Go to step 7.

- 6** Ask the host operator to load the control program.

When the control program is loaded, the progression continues on the hex display.

Wait until you see **000**.

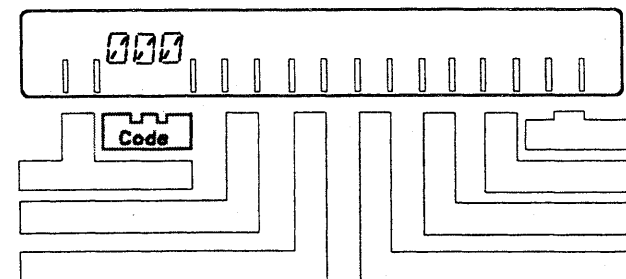
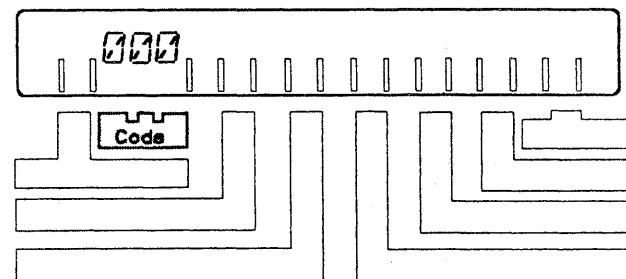
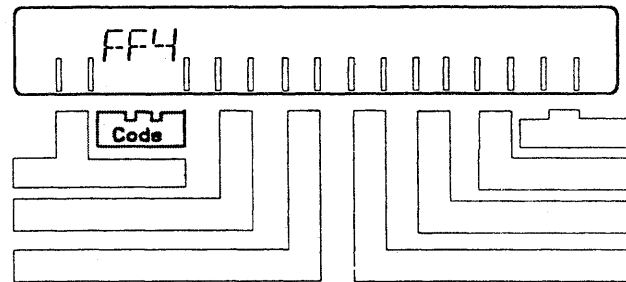
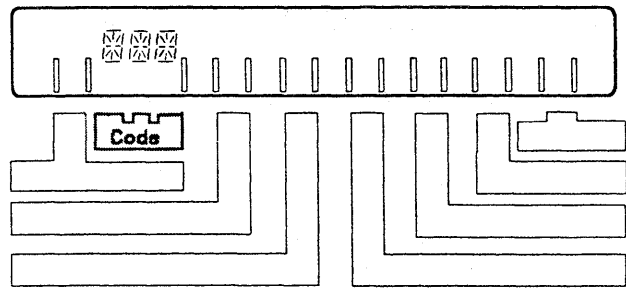
IPL is complete and successful.

If FF4 remains more than 2 minutes after the control program is loaded:

- Restart from step 4.
- If the problem persists: **HELP**

If other codes are displayed, go to page 83.

- 7** IPL from disk starts on the standby CCU. Codes are displayed on the hex display showing the progression of the IPL. (Codes for manual operation are listed on page 83.)
- Wait until you see **000**.
- IPL of the standby CCU is complete and successful.



- 8 To make sure that the IPL is complete and successful **on both CCUs**, log on the operator console. Refer to 13 (for a local or alternate console) or 16 (for a remote console).

When the console is logged on, IPL COMPLETE should be displayed for each CCU.

CUSTOMER ID:xxxxxxx		3745-XXX	SERIAL NUMBER:nnnnnnn
CCU-A	IPL COMPLETE		
CCU-B	IPL COMPLETE		
FUNCTION ON SCREEN: IPL CCU(S)			mm/dd/yy hh:mm
CCU AND SCANNER IPL			
====>			
F1:END F2:MENUE2 F3:ALARM			

Twin-Dual or Twin-Backup Mode (Models 410 and 610)

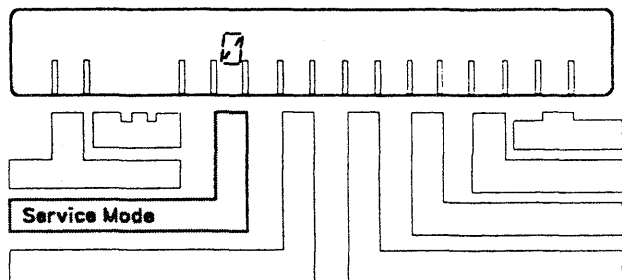
The control program is to be loaded into the CCU from:

- The host via a link-attached 3745 (see the LKP function in the 3745 *Advanced Operations Guide* for details on defining the Link IPL Port), or
- The disk if it has been saved on it and made active by the host operator (in that case, the standby CCU is already preloaded with the active load module).

- 1** Press **Service Mode** repeatedly until **0** is displayed, then:
Press **Validate**.

If 0 is already displayed, go to next step.

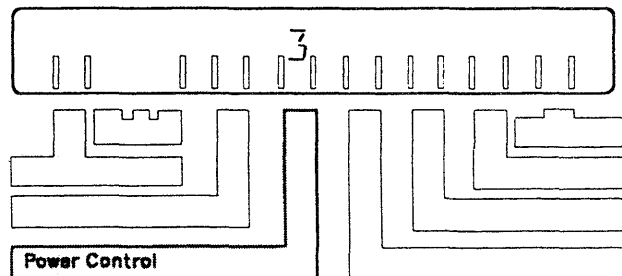
If the 3745 is already powered on, go to step 5



- 2** Press **Power Control** repeatedly until **3** (local mode) or **2** (network mode) is displayed, then:
Press **Validate**.

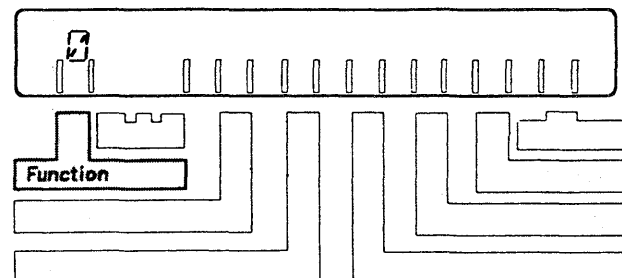
If 3 or 2 is already displayed, go to next step.

Power Control in 3 (local mode) is intended for service operations and is not recommended for normal operations. You will have to **manually POWER ON** after any external power failure when **POWER CONTROL** is left in **LOCAL MODE**.



- 3** Press **Function** repeatedly until **0** is displayed, then:
Press **Validate**.

If 0 is already displayed, go to next step.



- 4** Press **Power On Reset**.

- 5** IPL starts. Codes are displayed on the hex display showing the progression of the IPL. (Codes for normal operation are listed on page 83.)

If any code remains more than 5 minutes (except FF4 when the control program is loaded from the host):

- Restart from step 4.
- If the problem persists: **HELP**

Wait approximately 5 minutes until FF4 is displayed.

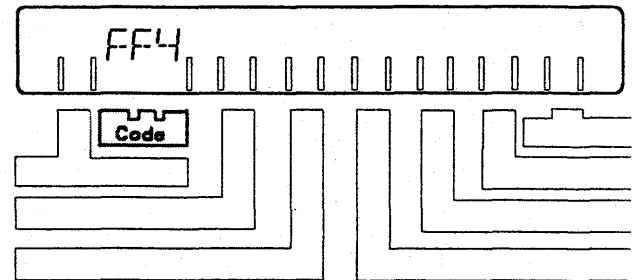
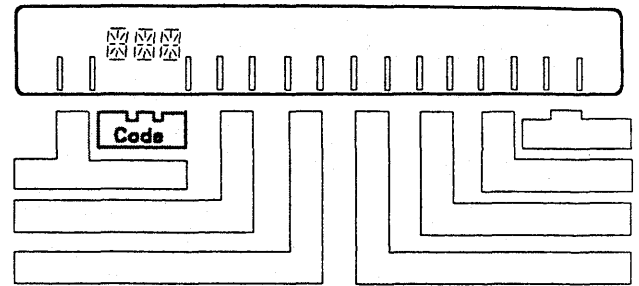
- Then go to step 6.

If the control program is loaded from the disk:

- Wait approximately 5 minutes until you see this screen on the console.

If you need to enable or disable a channel adapter, go to page 19.

- Then go to step 7.



CUSTOMER ID:XXXXXXXXX 3745-XXX SERIAL NUMBER:nnnnnn

3745 MICROCODE (C) COPYRIGHT IBM CORP. 1987

INTERFACE NUMBER	CHANGE E/D REQ	E/D REQUEST	CA INTERFACE STATUS	HOST OR SWITCH UNIT	CHANNEL ADDRESS	NSC ADDRESS
1A	==>	E	ENABLED			FA
2A	==>	E	ENABLED			FB
3A	==>	E	ENABLED			FC
4A	==>	D	DISABLED			FD
5A	==>	D	DISABLED			
6A	==>	E	ENABLED			
7A		-	-			
8A		-	-			

- TYPE E OR D TO CHANGE THE ENABLE/DISABLE REQUEST, THEN PRESS SEND

F6:MOSS FUNCTIONS F5:UPDATE

- 6** Ask the host operator to load the control programs in CCU-A and CCU-B.

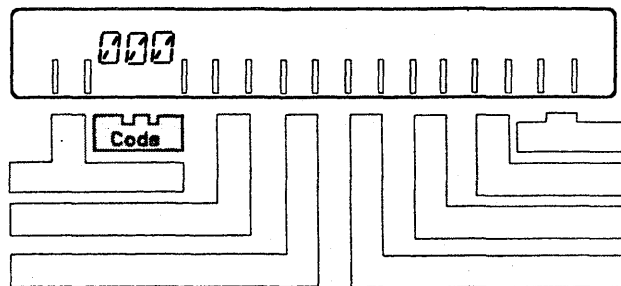
When at least one control program has been loaded, the progression continues on the hex display.

Wait until you see **000**, which indicates that the IPL is complete and successful on **at least one CCU**.

If other codes are displayed, go to page 83.

If FF4 remains more than 2 minutes after the control program is loaded:

- Restart from step 4.
- If the problem persists: **HELP**



- 7** To make sure that the IPL is complete and successful **on both CCUs**, log on the operator console. Refer to 13 (for a local or alternate console) or 16 (for a remote console).

When the console is logged on, **IPL COMPLETE** should be displayed for each CCU.

CUSTOMER ID:xxxxxxxx		3745-XXX	SERIAL NUMBER:nnnnnnn
CCU-A	IPL COMPLETE		
CCU-B	IPL COMPLETE		
mm/dd/yy hh:mm			
FUNCTION ON SCREEN: IPL CCU(S)			
CCU AND SCANNER IPL			
***>			
F1:END F2:MENU2 F3:ALARM			

Chapter 9. Automatic Power On and IPL

An automatic power on and IPL can be performed in two ways:

- By the Host
- By the 3745, at a pre-determined time.

Whichever method is chosen, the following preparation must be done.

Preparation

1 Power on the operator console

- If this screen is displayed, go to step 7.
- If this screen is not displayed, continue with next step.

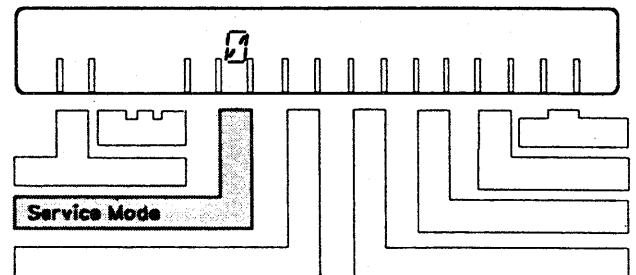
CUSTOMER ID:xxxxxxx		3745-XXX		SERIAL NUMBER:nnnnnn	
3745 MICROCODE (C) COPYRIGHT IBM CORP. 1987					
INTERFACE NUMBER	CHANGE E/D REQ	E/D REQUEST	CA INTERFACE STATUS	HOST OR SWITCH UNIT	CHANNEL ADDRESS
1A	=>	E	ENABLED		FA
2A	=>	E	ENABLED		FB
3A	=>	E	ENABLED		8C
4A	=>	D	DISABLED		11
5A	=>	D	DISABLED		FC
6A	=>	E	ENABLED		FD
7A		-	-		
8A		-	-		

- TYPE E OR D TO CHANGE THE ENABLE/DISABLE REQUEST, THEN PRESS SEND

F4:MOSS FUNCTIONS F5:UPDATE

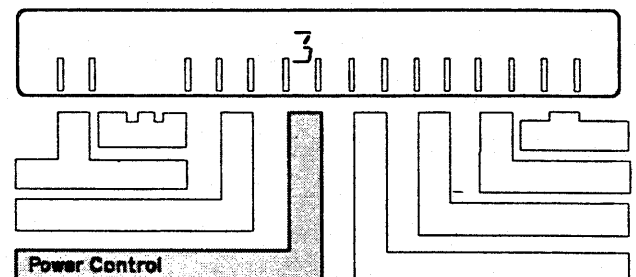
2 Press **Service Mode** repeatedly until 0 is displayed, then: Press **Validate**.

If 0 is already displayed, go to next step.



3 Press **Power Control** repeatedly until 3 is displayed, then: Press **Validate**.

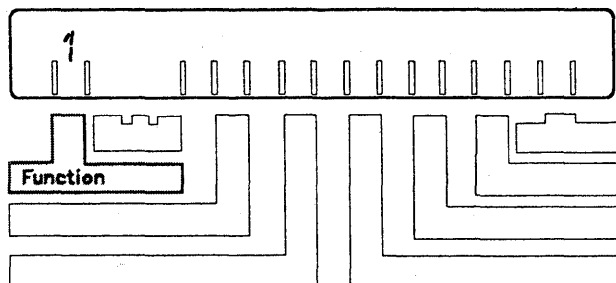
If 3 is already displayed, go to next step.



Automatic Power On and IPL

- 4** Press **Function** repeatedly until **1** is displayed, then:
Press **Validate**.

If 1 is already displayed, go to next step.

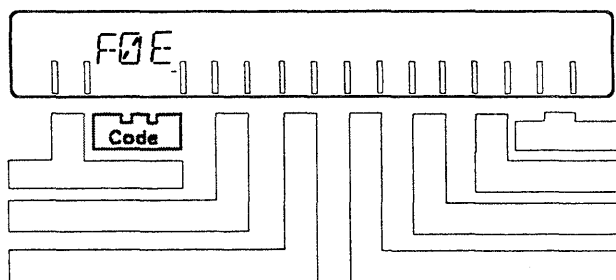


- 5** Do one of the following:
- If the 3745 is powered off, press **Power On Reset** then go to the next step.
 - If the 3745 is powered on, go to the next step.

- 6** MOSS IML starts. The progression of the IML is indicated on the hex display.




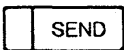
Wait about 3 minutes until you see **F0E** or **F0F**.

If other codes are displayed, go to page 83.



- 7** From the operator console, enable or disable the channel adapter(s) if necessary.

Press:

-  until the cursor is at the appropriate **CHANGE E/D REQ** field **A**
-  to enable, or
 to disable
- Repeat the procedure if there are several channel adapters to update, then
- press 

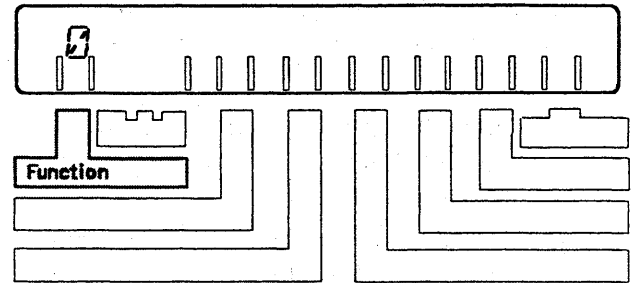
The **E/D REQUEST** field **B** is updated immediately.

The **INTERFACE STATUS** field **C** is updated at the next IPL.

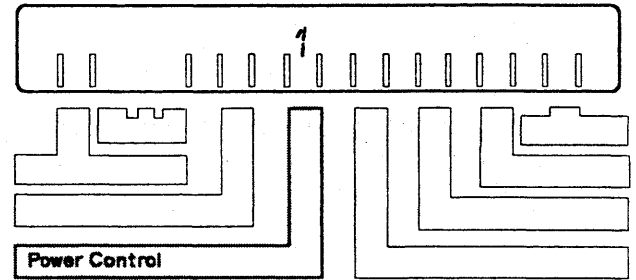
CUSTOMER ID:xxxxxxx				3745-XXX		SERIAL NUMBER:nnnnnn	
3745 MICROCODE (C) COPYRIGHT IBM CORP. 1987							
mm/dd/yy hh:mm							
FUNCTION ON SCREEN:	CA	INTERF	DISPLAY				
INTERFACE	CHANGE	E/D	INTERFACE	HOST OR	CHANNEL	NSC	
NUMBER	E/D REQ	REQUEST	STATUS	SWITCH	UNIT	ADDRESS	ADDRESS
	A	B	C				
1A	=>	D	DISABLED	FA			
2A	=>	E	ENABLED	FB			
3A	=>	E	ENABLED	BC			
4A	=>	D	DISABLED	11			
5A	=>	D	DISABLED	FC			
6A	=>	E	ENABLED	FD			
7A		-	-				
8A		-	-				
- TYPE E OR D TO CHANGE THE ENABLE/DISABLE REQUEST, THEN PRESS SEND							
=>							
F1:END		F3:ALARM		F5:UPDATE			

Power On and IPL from the Host

- 1 Press **Function** repeatedly until **0** is displayed, then:
Press **Validate**.



- 2 Press **Power Control** repeatedly until **1** is displayed, then:
Press **Validate**.



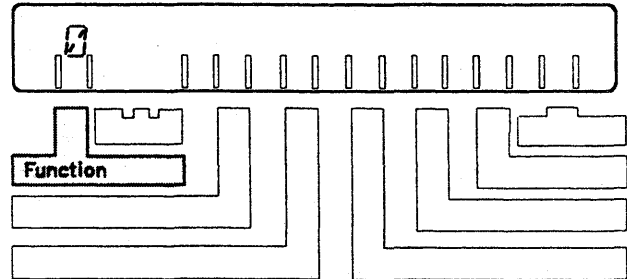
The 3745 is now ready to be powered on and IPLed from the host.

Power On and IPL Scheduled in 3745

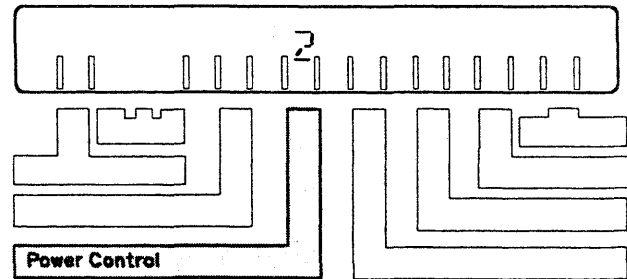
The time and date must have been set from the console, via the Time Services Functions (TIM) as described in the *3745 Advanced Operations Guide*.

- 1 Press **Function** repeatedly until **0** is displayed, then:
Press **Validate**.

The 3745 is now ready to be powered on and IPLed by the host.



- 2 Press **Power Control** repeatedly until **2** is displayed, then:
Press **Validate**.



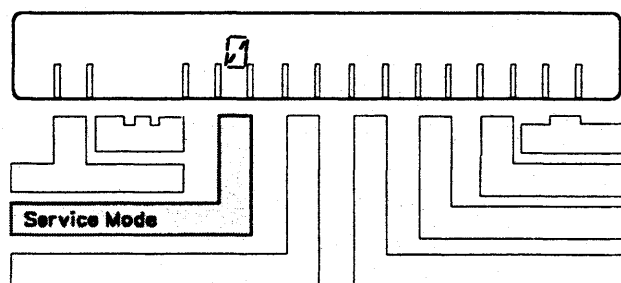
The 3745 is now ready to be powered on and IPLed at the day and time specified in the Time Services (TIM) function.

Chapter 10. IPLing In Diskette Mode

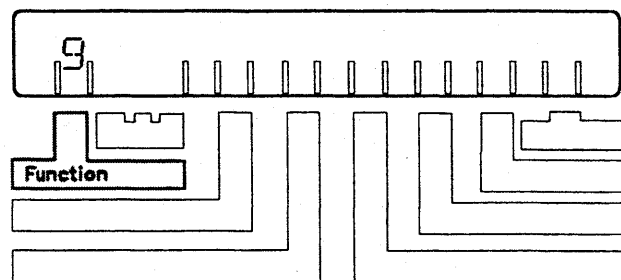
If you encounter a problem, refer to the *3745 Problem Determination Guide*.

When the disk is not available, this procedure allows the control program to be loaded from the host and data traffic to continue while the MOSS is not connected (offline). This procedure should only be performed after the service personnel have been called to resume manual operation. In this particular mode, errors cannot be reported to the host.

- 1 The **Local** console must be powered on.
- 2 Press **Service Mode** repeatedly until 0 is displayed, then:
Press **Validate**
If 0 already displayed, go to next step.



- 3 Insert the primary backup diskette on which you saved the disk.
- 4 Press **Function** repeatedly until 9 is displayed, then:
Press **Validate**.

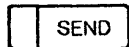


5 Press Power On Reset.

MOSS IML starts.

Wait until **F0E** is displayed on the control panel, then this screen is displayed.

Select: **1 = GENERAL IPL** then press



Codes are displayed on the hex display showing the IPL progression.

Wait approximately 5 minutes until you see **FF4** on the control panel, then go to the next step.

CUSTOMER ID:xxxxxxxx

3745-XXX

SERIAL NUMBER:nnnnnnn

CCU-A

mm/dd/yy hh:mm

IPL IN DISKETTE MODE

- SELECT ONE OF THE FOLLOWING FUNCTION ==>

1 = GENERAL IPL

1 = DISK FUNCTIONS

==>

F1:END F2:MENU2 F3:ALARM

6 From the operator console, enable or disable the channel adapter(s) if necessary.

Press:

- until the cursor is at the appropriate CHANGE E/Q REQ field
- E

 to enable, or
- D

 to disable
- Repeat the procedure if there are several channel adapters to update, then
- press

SEND

For more information, refer to page 19.

CUSTOMER ID:xxxxxxxx

3745-XXX

SERIAL NUMBER:nnnnnnn

3745 MICROCODE (C) COPYRIGHT IBM CORP. 1987

CA INTERFACE DISPLAY

INTERFACE NUMBER	CHANGE E/D REQ	E/D REQUEST	INTERFACE STATUS	HOST OR SWITCH UNIT	CHANNEL ADDRESS	NSC ADDRESS
1A	==>	E	ENABLED			FA
2A	==>	E	ENABLED			FB
3A	==>	E	ENABLED			BC
4A	==>	D	DISABLED			11
5A	==>	D	DISABLED			FC
6A	==>	E	ENABLED			FD
7A		-	-			
8A		-	-			

- TYPE E OR D TO CHANGE THE ENABLE/DISABLE REQUEST, THEN PRESS SEND

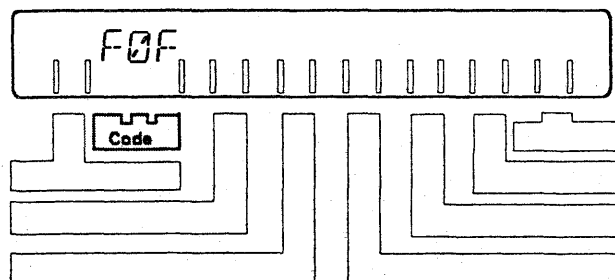
F4:MOSS FUNCTIONS F5:UPDATE

7 Ask the host operator to load the control program.

Wait until you see **F0F**.

IPL is complete and successful.

If other codes are displayed, go to page 83.

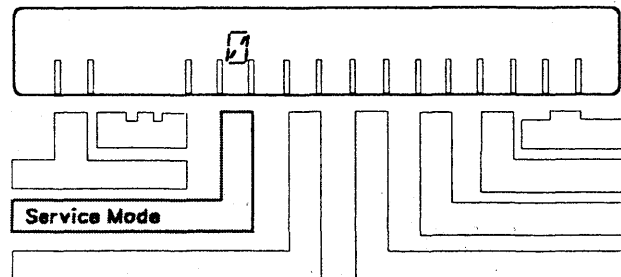


Chapter 11. IML of the MOSS

If you encounter a problem, refer to the 3745 Problem Determination Guide.

- 1 Press **Service Mode** repeatedly until 0 is displayed, then:
Press **Validate**.

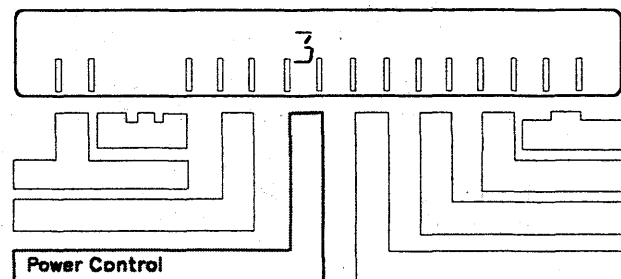
If 0 is already displayed, go to next step.



- 2 Press **Power Control** repeatedly until 3 (local mode) or 2 (network mode) is displayed, then:
Press **Validate**.

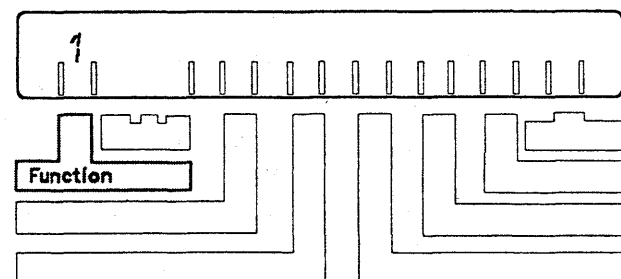
If 3 or 2 is already displayed, go to next step.

Power Control in 3 (local mode) is intended for service operations and is not recommended for normal operations. You will have to **manually POWER ON** after any external power failure when **POWER CONTROL** is left in **LOCAL MODE**.

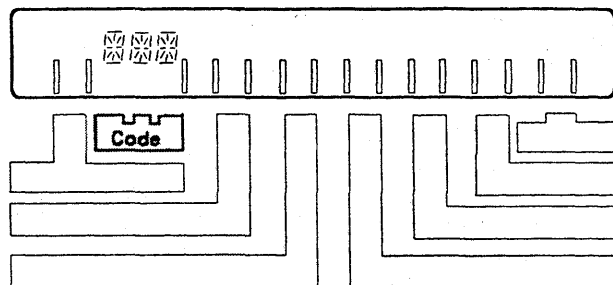


- 3 Press **Function** repeatedly until 1 is displayed, then:
Press **Validate**.

If 1 is already displayed, go to next step.



- 4** MOSS IML starts. The progression of the IML is indicated on the hex display.



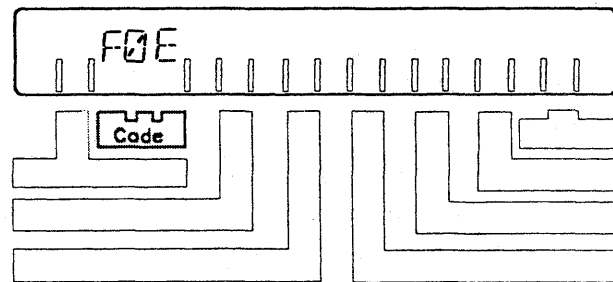
- 5** Wait about 3 minutes until you see **F0E** or **F0F**.

F0E = MOSS is alone (NCP not loaded).

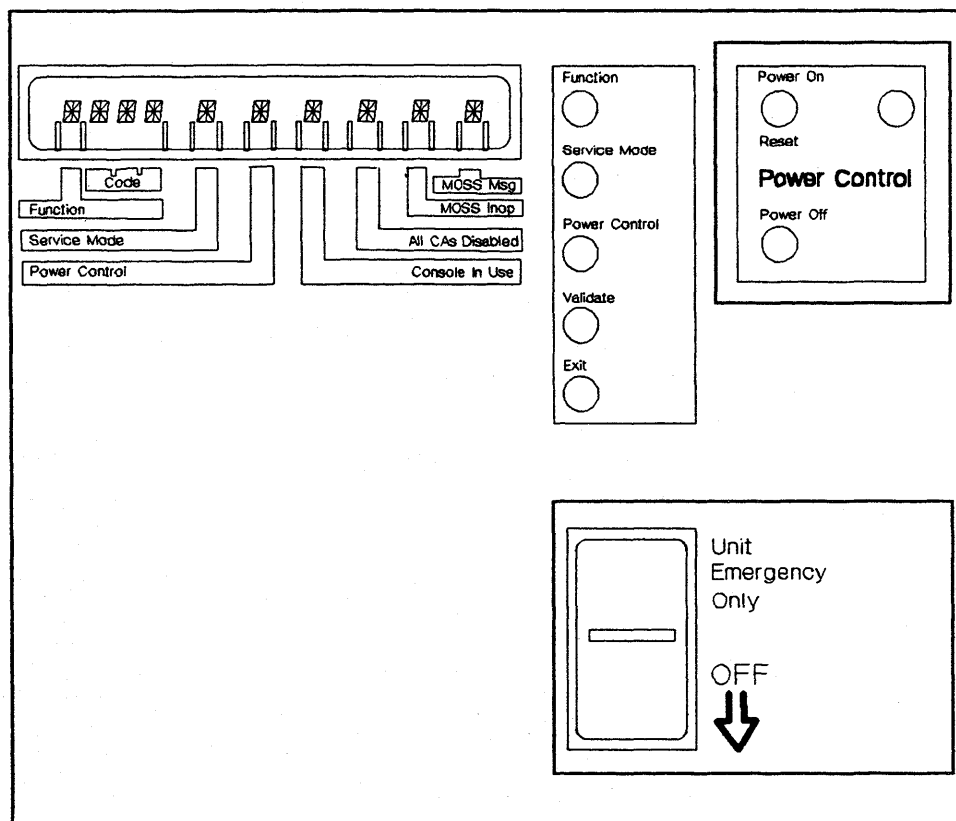
F0F = MOSS is offline, or IPL is complete in diskette mode.

To change the status of the MOSS, refer to the *3745 Advanced Operations Guide*.

If other codes are displayed, go to page 83.



Appendix A. Control Panel



Notes:

1. A reference card is located in the diskette storage compartment to the left of the control panel. The following diagram illustrates this reference card, and a detailed explanation is given in the following pages.
2. The control panel display should never be totally blank.
If it is, or if you suspect a problem on the control panel: **HELP**

Control Panel

The diagram illustrates the Control Panel interface, which includes a series of vertical indicators at the top and several functional sections below.

Code

Function

- 0 General IPL
- 1 MOSS IML
- 2 MOSS Dump
- 3 Request Local Console
- 4 Force Local Console
- 5 Panel Test
- 6 Remote/Alternate Console Link Test
- 7 RSF Console Link Test
- 8 Local Console Link Test
- 9 Load from Diskette

A Service Personnel Only
B Service Personnel Only
C Service Personnel Only

MOSS Mag
MOSS Inop
All CAs Disabled

Console In Use

- 1 Remote/Alternate
- 2 RSF
- 3 Local

*** Power Control**

- 1 Host
- 2 Network
- 3 Local

Service Mode

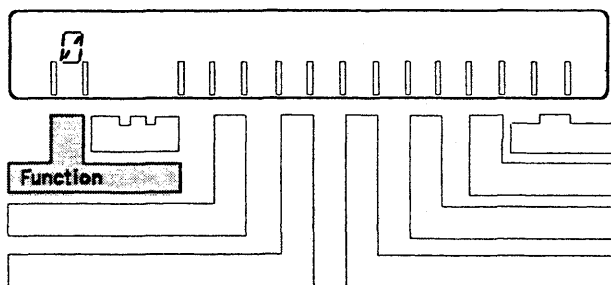
- 0 Normal
- 1 Service Personnel Only
- 2 Service Personnel Only
- 3 Service Personnel Only

Press Function, Service Mode or Power Control to scroll options then
Press Validate to perform an option, or
Press Exit to cancel an option.

*** HOST NETWORK OPTIONS: POWER ON CAN BE AUTOMATIC**

Function Display

This display indicates which function has been selected.



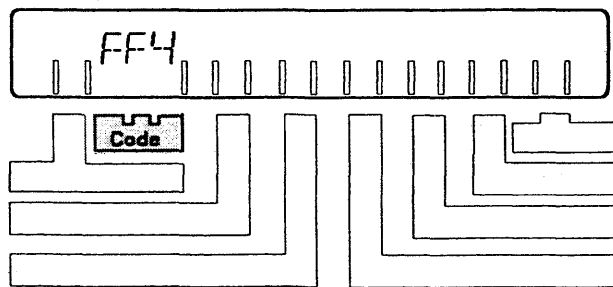
To select a function:

1. Press **Function** repeatedly until the digit corresponding to the desired function is displayed.
2. Press **Validate**.

Displayed digits and corresponding functions are:

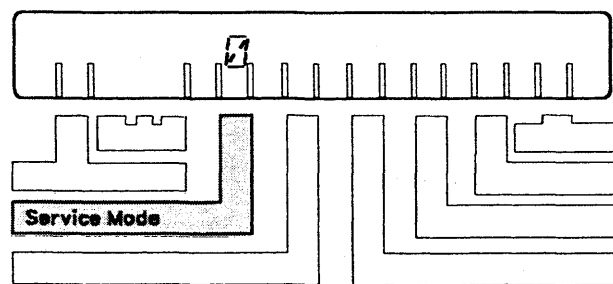
- 0** To IPL the 3745.
- 1** To IML the MOSS only.
- 2** To dump the MOSS to disk.
- 3** To inform the remote, alternate, or RSF console operator that the local console operator wants to log on.
- 4** To disconnect the remote, alternate, or RSF console so that the local console operator can log on.
- 5** To test the panel. (Refer to the *3745 Problem Determination Guide*.)
- 6** To perform a remote console link test. (Refer to the *3745 Problem Determination Guide*.)
- 7** To perform an RSF console link test (only when requested by service representative. (Refer to the *3745 Problem Determination Guide*.)
- 8** To perform a local console link test. (Refer to the *3745 Problem Determination Guide*.)
- 9** To IPL the 3745 from the diskette.
- A, B, or C** Service representative use only.

Code Display



Hexadecimal codes are displayed here. See page 83 for an explanation of these codes.

Service Mode Display



Indicates which service mode is selected.

Displayed digits and corresponding modes are:

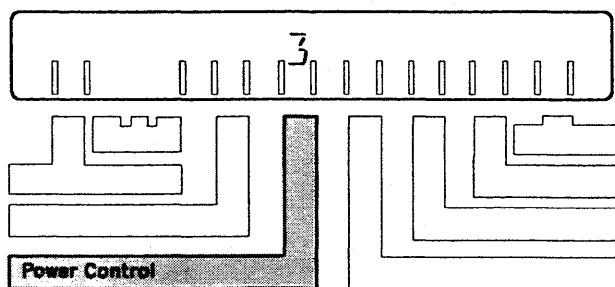
0 Customer mode (it must **always** be 0).

1, **2**, or **3** Service representative only.

If 0 is not displayed here:

- Press **Service Mode** repeatedly until **0** is displayed, then:
- Press **Validate**.
- IML the MOSS from the control panel as described on page 69.

Power Control Display



This display indicates which power control option is selected. To select an option:

- Press **Power Control** until the required option is displayed, then:
- Press **Validate**.

Displayed digits and corresponding options are:

1 (HOST) The 3745 is powered on and off from the host. If ac power is lost then restored, an automatic restart is performed.

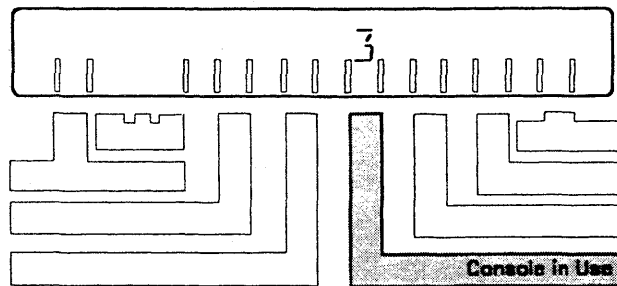
2 (NETWORK) The 3745 is powered on:

- From the control panel (Power On Reset pushbutton), or
- By a scheduled power on.

The 3745 is powered off by a remote power-off (RPO) command. If power is lost then restored, an automatic restart is performed.

3 (LOCAL) The 3745 is powered on and off from the control panel.

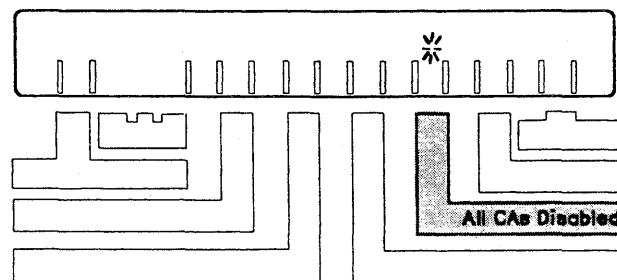
Console In Use Display



This display indicates which operator console is logged on. Displayed digits have the following meanings:

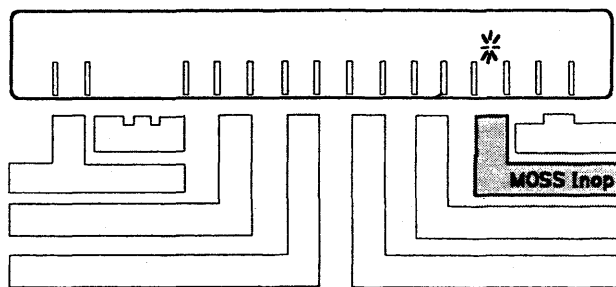
- 1 The remote or alternate console is logged on.
- 2 The RSF console is logged on.
- 3 The local console is logged on.

All CAs Disabled Indicator



When the indicator is lit, all channel adapters are disabled. When not lit, at least one channel adapter is enabled.

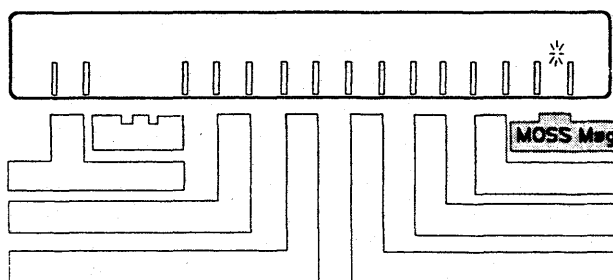
MOSS Inop Indicator



When the indicator is lit, the MOSS is inoperative. Refer to the *3745 Problem Determination Guide*.

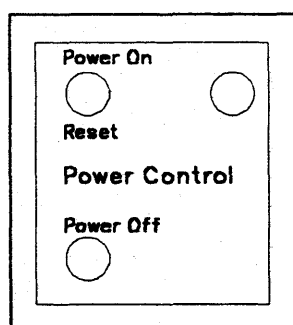
If **3** is displayed: **HELP**

MOSS Message Indicator



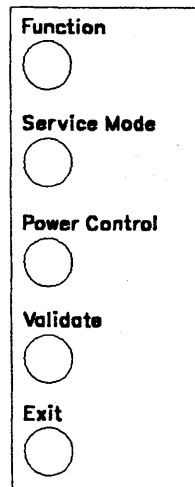
When lit, an alarm is generated. Refer to the *3745 Problem Determination Guide*.

Power On Indicator

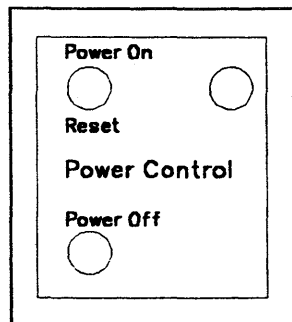


When lit, the **Power On** indicator means that the 3745 is completely powered on. It is lit when the power on procedure is started.

Pushbuttons

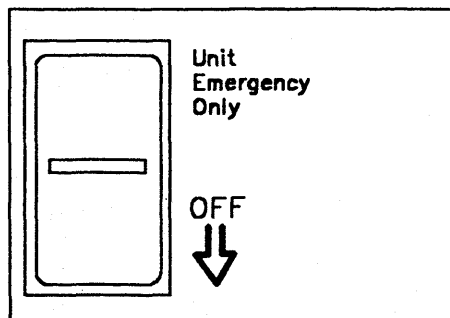


- **Function** to select a control panel function (see page 75).
- **Service Mode** to select a service mode (see page 76).
- **Power Control** to select a power control option (see page 77).
- **Validate** to perform or validate the function, service mode, or power control option.
- **Exit** to cancel a function, service mode, or power control option that is not yet validated.



- **Power On Reset** to start the 3745 power-on procedure.
- **Power Off** to power off the 3745. If you have to power on again, wait 10 seconds before pressing **Power On Reset**.

Unit Emergency Switch



- Use this switch to stop the 3745 in case of an emergency.

When the switch is in the **lower** position the power supply is disabled. It can be reset only by an IBM representative.

When the switch is in the **upper** position the power supply is enabled.

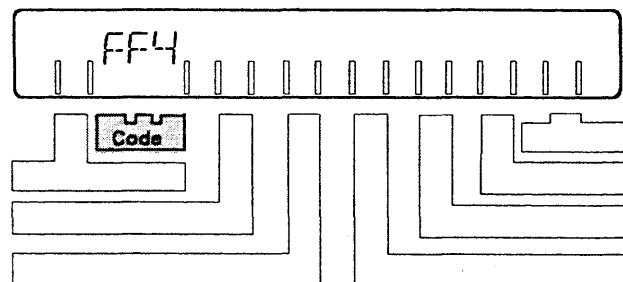
This is a standard safety feature.

Control Panel

Appendix B. Hexadecimal Codes

Hexadecimal codes are displayed on the control panel to indicate:

- The progression of a function (for example, IPL)
- The status of the 3745 components
- An error. In this case, the code blinks. The list below shows the normal condition codes. Other progression codes will be displayed for short times. Generally, if any code remains more than 2 minutes: **HELP**



Code	Explanation and Action
000	3745 is successfully IPLed. The control program is loaded and MOSS is online.
DFC	Wrong diskette in drive. Insert the correct primary diskette. Restart IPL in diskette mode.
F0E	Successful completion of the MOSS IML. MOSS is alone.
F0F	Successful completion of the MOSS IML. CCU is running and MOSS is offline or IPL complete in diskette mode.
F28	Failed diskette. Retry with another set of saved diskettes. If you do not have another set of diskettes (on which disk data is saved): HELP
FD6	Control program load from disk in progress. If this code remains more than 2 minutes: HELP
FD7	Control program dump to disk in progress. If this code remains more than 4 minutes: HELP
FD8	Control program save on disk in progress. If this code remains more than 2 minutes: HELP
FF0	Start of 3745 IPL. If this code remains more than 2 minutes: HELP
FF1	3745 IPL phase one. If this code remains more than 2 minutes: HELP
FF2	3745 IPL phase two. If this code remains more than 2 minutes: HELP
FF3	3745 IPL phase three. If this code remains more than 5 minutes: HELP
FF4	3745 IPL phase four. The control program is to be loaded from the host. For a link-attached 3745, the period of time this code is displayed depends on the size of the load module and the speed of the link.
FF5	Channel-attached 3745 only: Control program(s) being loaded. If this code remains more than 2 minutes: HELP
FF6	Link-attached 3745 only: Control program(s) being loaded.
FF7	The control program is loaded.
FFB	3745 IPL canceled on operator's request.
FFE	3745 IPL complete with non-disruptive errors. If it recurs: HELP

Abbreviations, Glossary, Bibliography and Index



List of Abbreviations

abend	abnormal end of task	FE	field engineering
AC	alternating current	I	indication (signal)
ACF	Advanced Communications Function	ID	identifier
bps	bits per second	IML	initial microcode load
CA	channel adapter	INOP	inoperative (line, modem, or terminal)
CCU	central control unit	IO	input/output
CDF	configuration data file	IPL	initial program load function
CI	calling indicator	K	1024 (bytes or words)
CID	channel adapter interface display	kbps	kilobits per second
CLDP	controller load/dump program	LA	line adapter
CNM	communication network management	LIC	line interface coupler card
CP	control program	MB	megabyte; 1 048 576 bytes
CR	call request (signal)	MOSS	maintenance and operator subsystem
CS	communication scanner	MSA	machine status area
CSS	control subsystem	NCP	Network Control Program
DC	direct current	OS	Operating System
DCE	data circuit-terminating equipment	RPO	remote power-off
EC	engineering change	RSF	remote support facility
EP	Emulation Program		

Abbreviations

Glossary

This glossary defines all new terms used in this manual. It also includes terms and definitions from the *IBM Dictionary of Computing*, SC20-1699.

addressing. A technique where the control station selects, among the DTEs that share a transmission line, the DTE to which it is going to send a message.

alarm. A message sent to the MOSS operator console. In case of an error, a reference code identifies the nature of the error.

alert. A message sent to the host console. In case of an error, a reference code identifies the nature of the error.

box event record (BER). Information about an event detected by the controller. It is recorded on the disk/diskette and can be displayed on the operator console for event analysis.

Note: The word *box* is used instead of *controller* to contrast with the *network* in which the controller is only a component.

central control unit (CCU). In the 3745, the controller hardware unit that contains the circuits and data flow paths needed to execute instructions and to control its storage and the attached adapters.

channel adapter (CA). A communication controller hardware unit used to attach the controller to a host processor.

channel interface. The interface between the controller and the host processors.

communication controller. A communication control unit that is controlled by a program stored and executed in the unit. Examples are the IBM 3705, IBM 3725/3726, IBM 3720, and IBM 3745 models 130, 150, 170, 210, 310, 410, and 610.

communication network management (CNM) application program. An ACF/VTAM application program authorized to issue formatted management services request units containing physical-unit-related requests and to receive formatted management services requests containing information about physical units.

communication scanner. See *line adapter*.

communication scanner processor (CSP). The processor of a scanner.

communication subsystem. The part of the controller that controls the data transfers over the transmission interface.

configuration data file (CDF). A MOSS file that contains a description of all the hardware features (presence, type, address, and characteristics).

control panel. A panel that contains switches and indicators for the customer's operator and service personnel.

control program. A computer program designed to schedule and to supervise the execution of programs of the controller.

control subsystem (CSS). The part of the controller that stores and executes the control program, and monitors the data transfers over the channel and transmission interfaces.

diskette. A thin, flexible magnetic disk, and its protective jacket, that records diagnostics, microcode, and 3745 files.

diskette drive. A mechanism that reads and writes diskettes.

Emulation Program (EP). An IBM licensed program that allows a channel-attached communication controller to emulate the functions of an IBM 2701 Data Adapter Unit, an IBM 2702 Transmission Control, or an IBM 2703 Transmission Control, or an IBM 3705 Communication Controller.

fallback. In twin backup mode, a state where the traffic of the failing CCU has been redirected to the second one.

In standby mode, a state where the traffic of the failing CCU has been redirected to the standby CCU after it is IPLed.

host processor. (1) A processor that controls all or part of a user application network. (2) In a network, the processing unit in which the access method for the network resides. (3) In an SNA network, the processing unit that contains a system services control point (SSCP). (4) A processing unit that executes the access method for attached communication controllers. Also called *host*.

IBM service representative. An individual in IBM who performs maintenance services for IBM products or systems.

initial microcode load (IML). The process of loading the microcode into a scanner or into MOSS.

initial program load (IPL). The initialization procedure that causes the 3745 control program to commence operation.

Glossary

LIC unit. A line interface coupler unit (LIU) consisting of:

- One power supply (PS) associated with
- Two line interface boards (LIBs), housing
- Multiplex cards (DMUX, SMUXA, or SMUXB), and
- Line interface coupler cards (LICs).

line. See *transmission line*.

line adapter (LA). The part of the TSS, HPTSS, ESS, or TRSS that scans and controls the transmission lines. Also called *scanner* or *communication scanner*.

For the TSS the line adapters are low-speed scanners (LSSs).

For the HPTSS the line adapters are high-speed scanners (HSSs).

For the ESS the line adapters are Ethernet LAN adapters (ELA).

For the TRSS the line adapters are token-ring adapters (TRAs).

line interface coupler (LIC). A circuit that attaches up to four transmission cables to the controller (from DTEs, DCEs, or telecommunication lines).

low-speed scanner. Line adapter for lines up to 256 kbps. It is composed of as communication scanner processor (CSP) and a front-end low-speed scanner (FESL).

maintenance and operator subsystem (MOSS). The part of the controller that provides operating and servicing facilities to the user's operator and the IBM service representative.

microcode. A program that is loaded in a processor (for example, the MOSS processor) to replace a hardware function. The microcode is not accessible to the customer.

network. See *user application network*.

Network Control Program (NCP). An IBM licensed program that provides communication controllers supports for single-domain, multiple domain, and interconnected network capability.

offline. Status of MOSS when the later is not connected to the CCU control program.

operator console. The IBM Operator Console that is used to operate and service the 3745 through the MOSS. A local console must be located within 7 m of the 3745. Optionally an alternate console may be installed up to 120 m from the 3745, or a remote console may be connected to the 3745 through the switched network.

partitioned emulation programming (PEP) extension. A function of a network control program that enables

a communication controller to operate some telecommunication lines in network control mode while simultaneously operating others in emulation mode.

scanner. See *line adapter*.

single. Configuration with one CCU.

switchback. Operation to reset a twin backup configuration from fallback to initial state.

time out. The time interval allotted for certain operations to occur.

token-ring adapter (TRA). Line adapter for IBM Token-Ring Network, composed of one token-ring multiplexor card (TRM), and two token-ring interface couplers (TICs).

token-ring subsystem (TRSS). The part of the controller that controls the data transfers over an IBM Token-Ring Network.

transmission interface. The interface between the controller and the user application network.

transmission line. The physical means for connecting two or more DTEs (via DCEs). It can be nonswitched or switched. Also called a *line*.

transmission subsystem (TSS). The part of the controller that controls the data transfers over low- and medium-speed, switched and non switched transmission interfaces.

The TSS consists of:

- Low-speed scanners (LSSs) associated with
- LIBs
- Serial links (SLs).

twin. Configuration with two CCUs.

twin-dual. Mode of operation with two CCUs operating simultaneously in two distinct subareas.

twin-backup. Mode of operation identical to twin-dual with fallback capability.

twin-standby. Mode of operation with one CCU active and the other in standby, ready to take over.

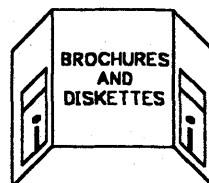
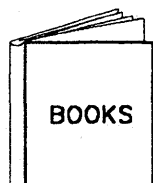
two-processor switch (TPS). A feature of the channel adapter that connects a second channel to the same adapter.

user application network. A configuration of data processing products, such as processors, controllers, and terminals, for the purpose of data processing and information exchange. This configuration may use circuit-switched, packet-switched, and leased-circuit services provided by carriers or the PTT. Also called *user network*.

Bibliography

Customer Publications for 3745 (Models 130, 150, 160, and 170)

The product library is presented in two formats:



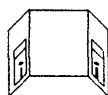
Evaluating and Configuring



GA33-0138

Introduction

To evaluate and learn about the 3745 capabilities



GA33-0093

Configuration Program

To configure a 3745

Preparing Your Site



GC22-7064

SI370 I/O Installation Manual Physical Planning

To plan the physical site



GA33-0140

Preparing for Connection

To prepare cable installation and LIC5 or LIC6 configuration

Preparing for Operation



GA33-0126 ¹

Telecommunication Products Safety Handbook

To recall safety principles



SA33-0141 ¹

Connection and Integration Guide

To install and test LICs and customize your 3745 after installation



SA33-0158 ¹

Console Setup Guide

To install local, alternate, or remote consoles

Customizing Your Control Program



SA33-0102

Principles of Operation

To understand the 3745 instruction set in order to write or modify a control program

Note: ¹ Documentation shipped with the 3745.

Customer Documentation - Continued

Operating and Testing



SA33-0098 ¹

Basic Operations Guide

To carry out routine daily operations



SA33-0097 ¹

Advanced Operations Guide

To carry out advanced operations and testing from the 3745 operator console



SA33-0161

Remote Loading/Activation Guide

To customize VTAM, NCP, and NPSI generations to support a remote controller



SA33-0178

Guide to Timed IPL and Rename Load Module

VTAM procedures:

- To schedule an automatic reload of 3745 communication controllers
- To keep 3745 load module changes transparent to the operations staff.

Managing Problems



SA33-0096 ¹

Problem Determination Guide

To perform problem determination

Finding Information



SA33-0142 ¹

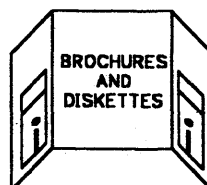
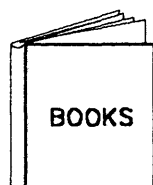
Master Index

To find information in the customer library

Note: ¹ Documentation shipped with the 3745.

Customer Publications for 3745 (Models 210, 310, 410, and 610)

The product library is presented in two formats:



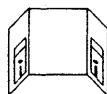
Evaluating and Configuring



GA33-0092

Introduction

To evaluate and learn about the 3745 capabilities



GA33-0093

Configuration Program

To configure a 3745

Preparing Your Site



GC22-7064

S/370 I/O Installation Manual Physical Planning

To plan the physical site



GA33-0127

Preparing for Connection

To prepare cable installation and LIC5 or LIC6 configuration

Preparing for Operation



GA33-0126 ¹

Telecommunication Products Safety Handbook

To recall safety principles



SA33-0129 ¹

Connection and Integration Guide

To install and test LICs and customize your 3745 after installation



SA33-0158 ¹

Console Setup Guide

To install local, alternate, or remote consoles

Customizing Your Control Program



SA33-0102

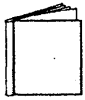
Principles of Operation

To understand the 3745 instruction set in order to write or modify a control program

Note: ¹ Documentation shipped with the 3745.

Customer Documentation - Continued

Operating and Testing



SA33-0098 1

Basic Operations Guide

To carry out routine daily operations



SA33-0097 1

Advanced Operations Guide

To carry out advanced operations and testing from the 3745 operator console



SA33-0161

Remote Loading/Activation Guide

To customize VTAM, NCP, and NPSI generations to support a remote controller



SA33-0178

Guide to Timed IPL and Rename Load Module

VTAM procedures:

- To schedule an automatic reload of 3745 communication controllers
- To keep 3745 load module changes transparent to the operations staff.

Managing Problems



SA33-0096 1

Problem Determination Guide

To perform problem determination

Finding Information



SA33-0172 1

Master Index

To find information in the customer library

Note: 1 Documentation shipped with the 3745.

Index

A

alarm area 4
 alternate console 15
 using 15
 ATTN key 4

B

BREAK key 4, 10

C

channel adapters
 disabling 19
 enabling 19
 console 3
 console configurations 11
 control panel 73
 all Cas disabled indicator 78
 code display 76
 console in use display 78
 function display 75
 MOSS inop indicator 79
 MOSS message indicator 79
 power control display 77
 power on indicator 79
 pushbuttons 80
 service mode display 76
 unit emergency switch 81
 cursor 4
 customer identification

D

disabling channel adapter 19
 from operator console
 information displayed 25
 single mode 21
 twin-backup mode 23
 twin-dual mode 23
 twin-standby mode 23
 in twin-standby mode
 control program not preloaded in standby
 CCU 33
 control program preloaded in standby CCU 31
 diskette
 select diskette mode 7

E

enabling channel adapter 19
 ENTER key 4

F

F keys 4
 fallback
 in twin-backup mode 29
 in twin-standby mode 31, 33
 function area 3
 function on screen 3
 function pending 3

I

IBM 7427 console switching unit 12
 IML
 from the control panel 69
 of the MOSS 69
 of a line adapter 40
 of a scanner 40
 of the MOSS 39
 INTERRUPT key 4
 IPL
 from control panel 67
 in diskette mode 67
 from manual power on 45
 from operator console 21, 23
 from the host 65, 66
 scheduled in 3745 66
 with automatic power on 65
 in diskette mode 7

K

keyboard terminology 4

L

local console 15
 using 15
 log off 4
 log off at the console 5
 logging on 13
 logon
 from local console 5
 from local or alternate console 13
 from remote console 16

M

machine status area (MSA) 3
 machine type 3
 menu
 menus
 menu 1 functions 8
 menu 2 functions 9

Index

message area 3

MOSS

selecting functions 5

MSA (machine status area)

information 3

O

operation information area 4

operator console

command commands 4

function keys 4

screen layout 3

using 3

operator consoles 3

P

power on

automatic 63, 65

from the host 65

channel attached 3745 45

link-attached 3545 in local or network mode 54

manual 45

power on the 3745 5

R

refresh 10

remote console 17

disabling

required conditions 19

enabling

required conditions 19

using 17

S

screen layout 3

selecting functions

in disk mode from the remote console 7

in diskette mode 7

SEND key 4

serial number 3

switchback

switchback function 35

automatic

preparation 63

channel attached 3745

local or network mode 45

single mode 45

twin-dual or twin-backup mode 51

twin-standby mode 48

link-attached 3545 in local or network mode

single mode 54

twin-dual or twin-backup 60

twin-standby mode 57

switching

between functions 10

T

tab key 4

U

unit emergency switch 81

Readers' Comments

**IBM 3745 Communication Controller
All Models
Basic Operations Guide**

Publication No. SA33-0098-2

Please write your comments concerning this manual in the space reserved below. We will greatly appreciate them and will consider them for later releases of the present manual.

If you prefer sending comments by FAX or electronically, use:

- FAX: (33) 93.24.78.09
- EMAIL: FRIBMFGP at IBMMAIL
- IBM Internal Use: LGERCF at LGEPROFS

In advance, thank you.

Note: Staples can cause problems with automated mail sorting equipment. Please use pressure sensitive or other gummed tape to seal this form.

For IBM Internal Users Only:

VNET NODE

USERID

For All Users:

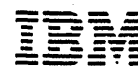
Name

Address

Company or Organization

Phone No.

Readers' Comments
SA33-0098-2



Cut or Fold
Along Line



Fold and Tape

Please do not staple

Fold and Tape

PLACE
POSTAGE
STAMP
HERE

IBM France
Centre d'Etudes et Recherches
Service 0797 BP 79
06610 La Gaude
France

Fold and Tape

Please do not staple

Fold and Tape



SA33-0098-2

Cut or Fold
Along Line

0

0

0

0

0

IBM

Part Number: 26F1737

Printed in U.K.

