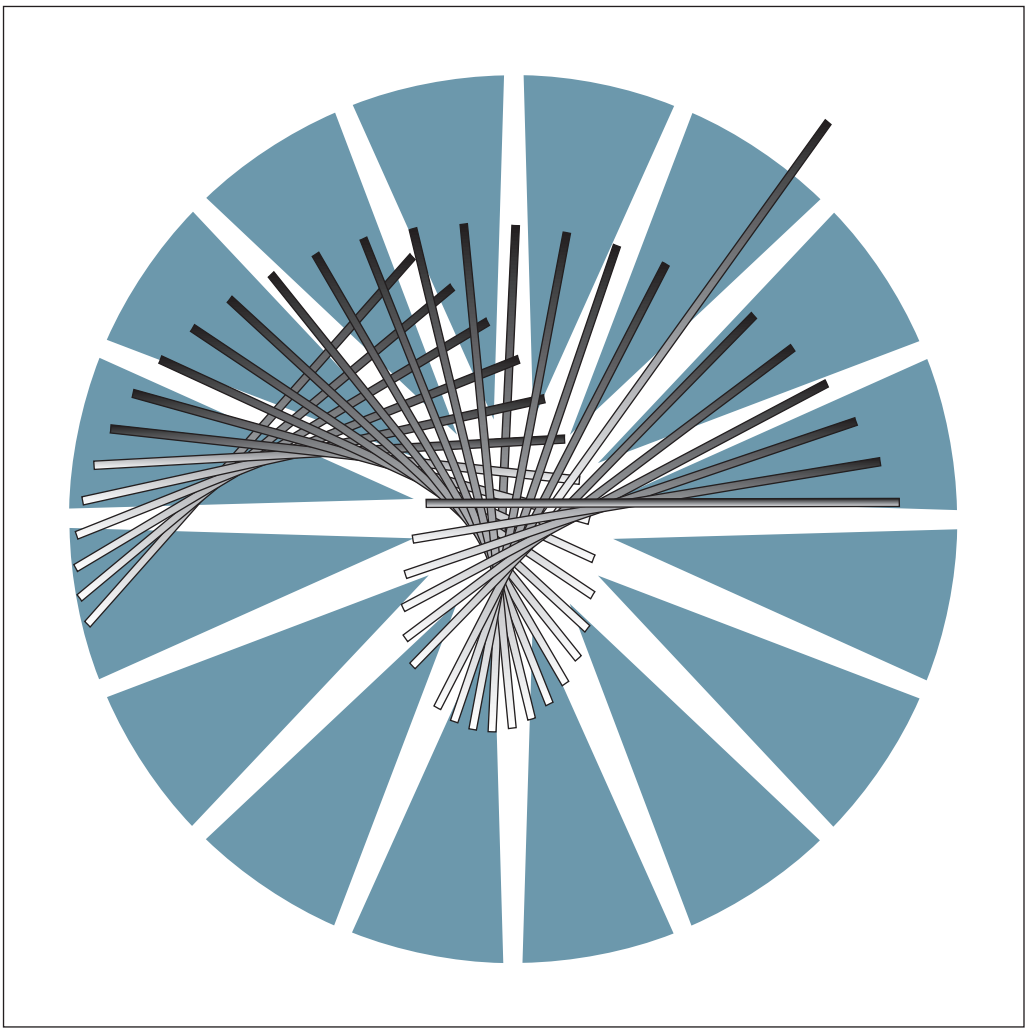
3745 Communication Controller Models A
3746 Expansion Unit Model 900
3746 Nways Multiprotocol Controller Model 950

Service Processor and Network Node Processor Service User's Guide



SY33-2127-02

3745 Communication Controller Models A
3746 Expansion Unit Model 900
3746 Nways Multiprotocol Controller Model 950

Service Processor and Network Node Processor Service User's Guide

SY33-2127-02

Note!

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

Third Edition (July 1999)

This edition applies to the 3745 Controller Models A, and the 3746 Nways Multiprotocol Controller Models 900 and 950.

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Verantwortlich für die Konformitätserklärung nach Paragraph 5 des EMVG ist die IBM Deutschland Informationssysteme GmbH, 70548 Stuttgart.

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Notice to UK Users

The IBM 3746 Model 900 and IBM 3746 Model 950 are manufactured according to the International Safety Standard IEC950 and, as such, are approved in the UK under the General Approval number NS/G/1234/J/100003.

The Active Remote Couplers (ARCs) and the X.21 Interface, housed within the 3746 Model 900 and 3746 Model 950, are approved separately, each having their own independent approval number. These interface adapters, supplied by IBM, do not contain excessive voltages. An excessive voltage is one which exceeds 42.4 V peak ac or 60 V dc. They interface with the 3746 Model 900 or 3746 Model 950, using Safe Extra Low Voltages only.

In order to maintain the independent approval of the IBM adapters, it is essential that other optional cards, not supplied by IBM, do not use mains voltages or any other excessive voltages. Seek advice from a competent engineer before installing other adapters not supplied by IBM.

Year 2000 Statement

This product is Year 2000 ready. When used in accordance with its associated documentation, it is capable of correctly processing, providing, and/or receiving date data within and between the 20th and 21st centuries, provided all other products (for example, software, hardware, and firmware) used with the product properly exchange accurate date data with it.

For more information, refer to:

`http://www.ibm.com/year2000`

The 3745 and 3746 controllers require a certain level of microcode to be Year 2000 ready. For more detailed information, access the URL listed above and click **Product Readiness**.

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Product Safety Information

General Safety

This product meets IBM safety standards.

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

Safety Notices

For *Safety Notices* refer to *IBM 3745 Communication Controller All Models*, *IBM 3746 Expansion Unit Model 900*, *IBM 3746 Nways Multiprotocol Controller Model 950*, *Safety Information*, GA33-0400

Service Inspection Procedures

The Service Inspection Procedures help service personnel check whether the 3745/3746 conforms to IBM safety criteria. They have to be used each time the 3745/3746 safety is suspected. The *Service Inspection Procedures* section is located at the beginning of the:

- *3745 Communication Controller Models 210 to 61A Maintenance Information Procedures*, SY33-2054
- *3745 Communication Controller Models 130 to 17A Maintenance Information Procedures*, SY33-2070
- *3746-950 Service Guide*, SY33-2108.
- *3746-900 Service Guide*, SY33-2116.

The 3745/3746 areas and functions checked through service inspection procedures are:

1. External covers
2. Safety labels
3. Safety covers and shields
4. Grounding
5. Circuit breaker and protector rating
6. Input power voltage
7. Test of emergency power OFF/control power switch.
8. Power-ON indicator

About this Book

Who Should Use this Book

The IBM personnel using this book should be:

- Trained to service the Service Processor, IBM 3745 Communication Controller, 3746-900, and 3746-950.
- Familiar with the configuration of the 3745 Communication Controller, 3746-900, and 3746-950.
- Familiar with the SP and NNP service documentation.

How to Use this Book

This book provides procedures for installing and maintaining the microcode installed on a service processor and a network node processor.
To ensure the efficency of the procedures:

- Read the instructions carefully before attempting to do them,
- Complete each step before going to the next one,
- Go through the chapters sequentially.

How this Book is Organized

Chapter 1	Introduces the service processor configuration and gives general information to access the information.
Chapter 2	Presents the software maintenance procedures for the service processor.
Chapter 3	Presents the software maintenance procedures for the network node processor.
Appendix A	Service and customer documentation bibliography.

A **list of abbreviations**, and an **index** are provided at the end of this book.

Where to Find More Information

For a complete list of the Service Processor, 3745, 3746-900, and 3746-950 customer and service information manuals, see at the end of this manual. In this manual, references are made to the following publications:

Multiaccess Enclosure Installation and Maintenance Guide, SY33-2124

3746-950 Installation Guide, SY33-2107

3746-900 Installation Guide, SY33-2114

3745 Communication Controller Models 210 to 61A Maintenance Information Procedures, SY33-2054

3745 Communication Controller Models 130 to 17A Maintenance Information Procedures, SY33-2070

3746-950 Service Guide, SY33-2108

3746-900 Service Guide, SY33-2116

3745 Communication Controller Models A and 3746 Models 900 and 950: Overview, Installation, and Integration, GA27-4234

3745 Communication Controller Models A and 3746 Models 900 and 950: Serial Line Adapters, GA27-4235

3745 Communication Controller Models A and 3746 Models 900 and 950: Token Ring and Ethernet, GA27-4236

3745 Communication Controller Models A and 3746 Models 900 and 950: ESCON Channels, GA27-4237

3745 Communication Controller Models A and 3746 Models 900 and 950: Physical Planning, GA27-4238

3745 Communication Controller Models A and 3746 Models 900 and 950: Management Planning, GA27-4239

3745 Communication Controller Models A and 3746 Models 900 and 950: Multiaccess Enclosure Planning, GA27-4240

3745 Communication Controller Models A and 3746 Models 900 and 950: Protocol Introductions, GA27-4241

Online Documentation from CD-ROM

The service processor is shipped with a CD containing the LIC and a copy of the 3746 web site. You will find from this web page, marketing, PE, and all information about CCP products.

To access this page:

1. Insert the CD into the CD disk drive of the SP.
2. From the MOSS-E primary menu, click on **Information**
3. Double click on **CD-ROM documentation**
4. Then if you want to display the CCP documentation, click on **Documentation**
5. Click on **La Gaude Information Development: Communication Controllers Information**

World Wide Web

You can access:

- The latest news and information about IBM network products, customer service and support, and microcode upgrades via the Internet at the URL: http://www.lagaude.ibm.com/3746pe
- The last version of the documentation at: http://www.networking.ibm.com
- The MCFs and technical information at: http://w3.lagaude.ibm.com/ccp/pe/3746pe.htm

Service Personnel Definitions

See the:

- *3745 Communication Controller Models 210 to 61A Maintenance Information Procedures*, SY33-2054,
- *3745 Communication Controller Models 130 to 17A Maintenance Information Procedures*, SY33-2070, or
- *3746-950 Service Guide*, SY33-2108.

Chapter 1. Introducing the Service Processor and the Network Node Processor

General Information

Help for Using Your Service Processor

There are **three** ways to access the **Help information** by clicking on:

1. The **Help** option of the **title bar** of the screen (example: see Figure 1-3 on page 1-3).
2. The **Help push button** (example: see Figure 1-7 on page 1-4).
3. An **input field** then pressing **F1** (example: input field "Search For" in Figure 1-7 on page 1-4).

MOSS-E View Primary Window

Figure 1-1 shows the configuration of two communication controllers:

1. A 3745 X1A with a 3746-900 frame and a NNP installed
2. A 3745 X1A.

Figure 1-2 represents the configuration of one 3746-950 with a network node processor installed.

From these screens, clicking on Program , Information, or Help, you will get all the information to manage your controller. The other options will help you find specific information (see Figure 1-4 on page 1-3, Figure 1-5 on page 1-3, and Figure 1-3 on page 1-3).

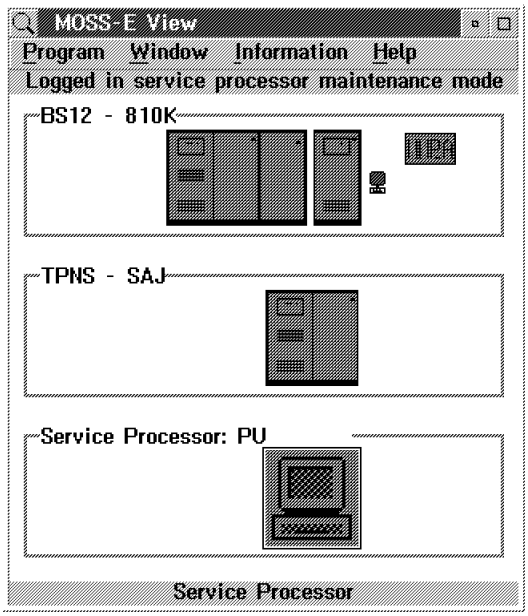


Figure 1-1. MOSS-E View Primary Window

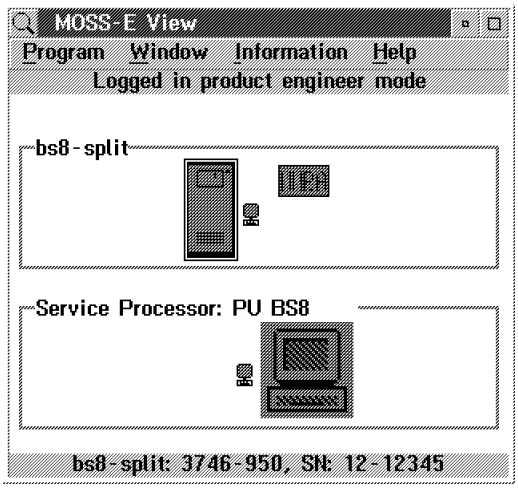


Figure 1-2. One 3746-950

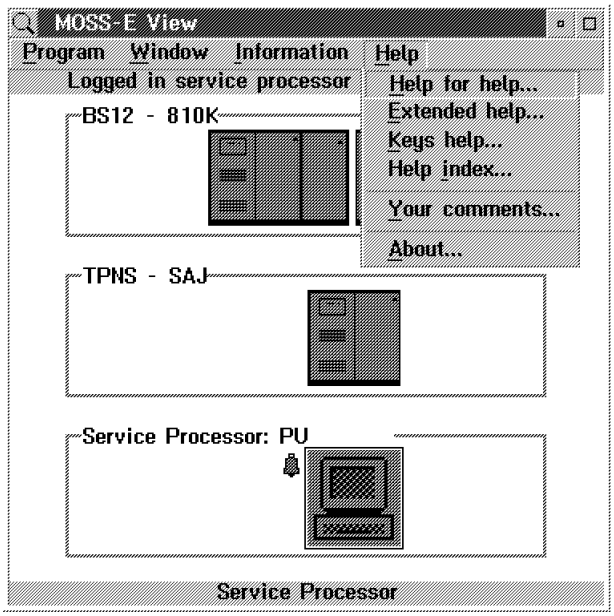


Figure 1-3. Help Pull Down Menu

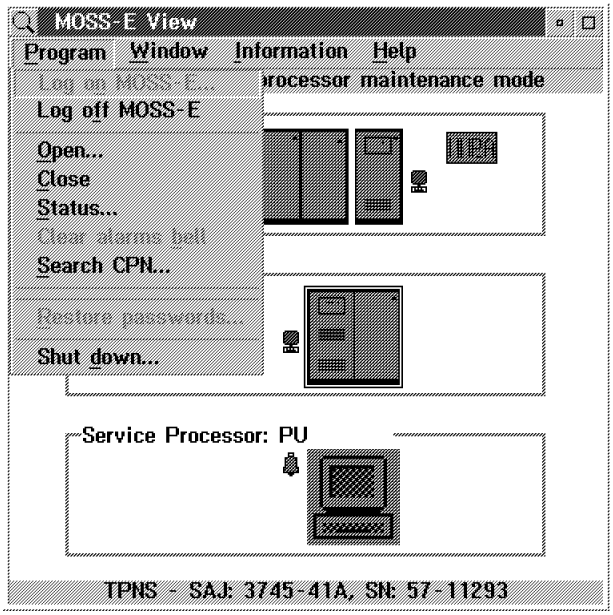


Figure 1-4. Program Pull Down Menu

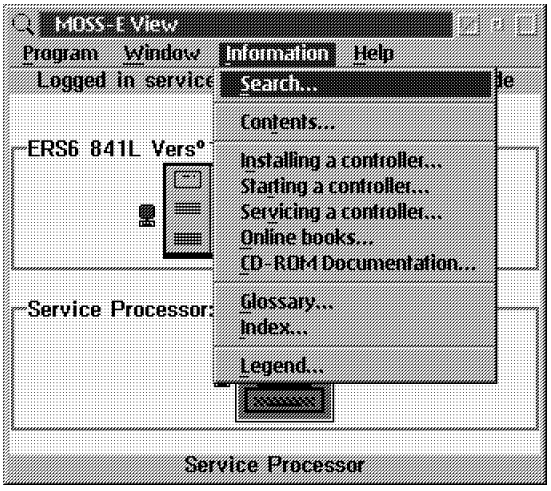


Figure 1-5. Information Pull Down Menu

Searching for Specific Information

1. From the Help pull down menu (see Figure 1-3 on page 1-3), select **Help for Help.**
2. Click on **Services** on the title bar of the MOSS-E help panel.
3. Click on **Search** on the title bar of the search window
4. Enter your search **argument** to get all the occurrences in all the available online information.

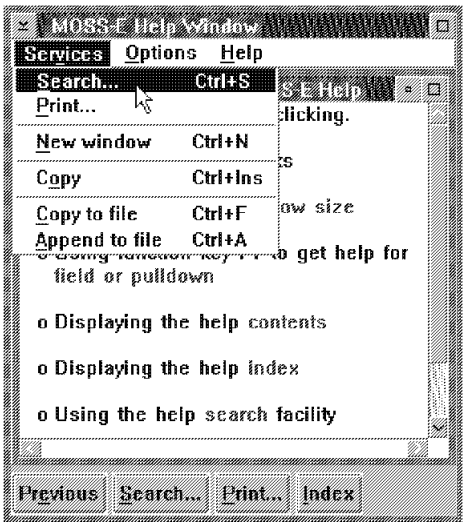


Figure 1-6. Services Pull Down Menu

Figure 1-7. Search Window

Displaying your Machine Status

The first indication of the **machines status** is given by the **color** of the icons displayed on the service processor. To obtain the meaning of the colors do the following:

1. From the **Information pull down menu** click on **Legend** (see Figure 1-5 on page 1-3).
2. The meaning of the colors is now displayed in the MOSS-E legend window. **Scroll forward** to see the complete list of the colors and their meaning, see "Icons Color Meaning" on page 1-7.

At any time during IML, or while the system is operational you can display your machine status:

1. Click on the **3746-9x0** or **3745 object** icon using the **right button** of the mouse
2. Click on **status** pulldown option, the following screens are displayed (see Figure 1-8 for the 3746-9x0 and Figure 1-9 on page 1-6 or Figure 1-10 on page 1-6 for the 3745 X1A or 17A).

3746-9x0 Status Display

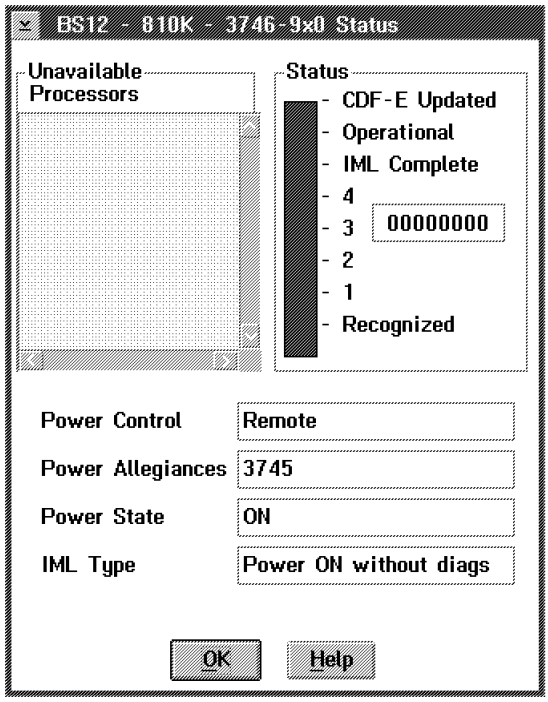


Figure 1-8. 3746-9x0 Status Display

3745 Status Display

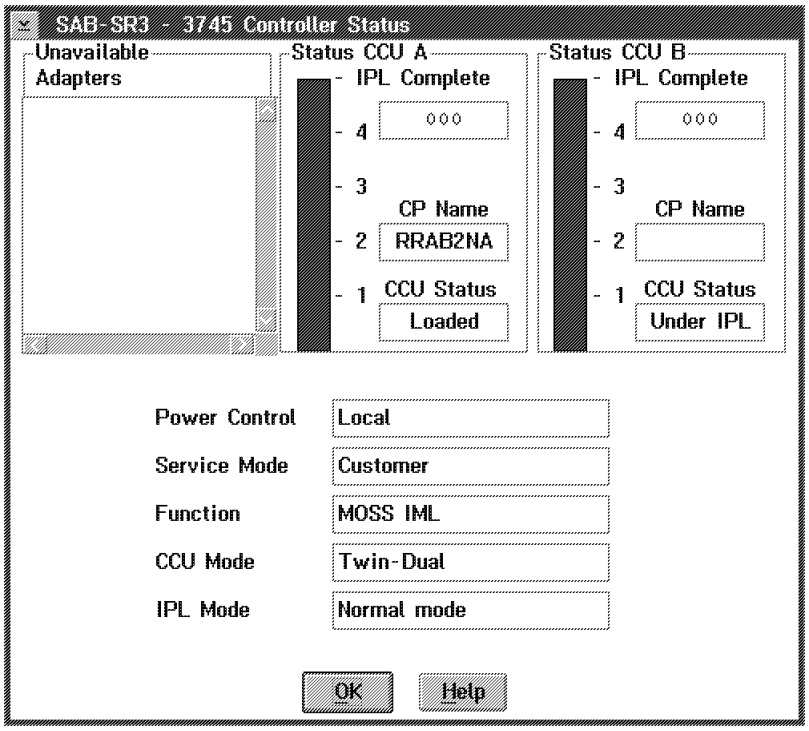


Figure 1-9. 3745 Model X1A Status Display

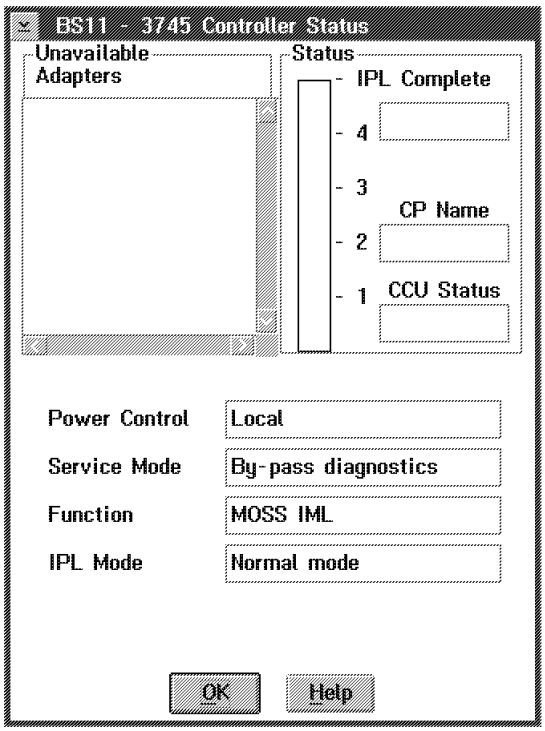


Figure 1-10. 3745 Model 17A Status Display

Icons Color Meaning

The color of the 3745, 3746, service processor, network node processor, or multiacess enclosure icon gives the status of the machine. This information can be obtained on-line from the information pulldown menu when selecting 'Legend' (see “Icon Color Meaning for 3745, 3746-9x0, Service Processor, and MAE” and “Icon Color Meaning for Network Node Processor” on page 1-8).

Icon Color Meaning for 3745, 3746-9x0, Service Processor, and MAE

Top to bottom the icon's color is: Green, yellow, white, grey, purple, and red.

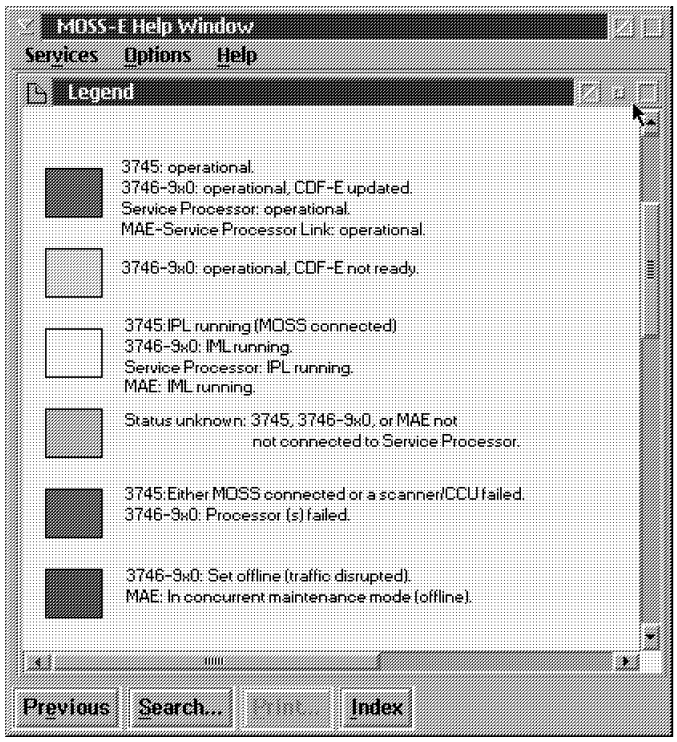


Figure 1-11. Color Meaning for 3745, 3746, Service Processor, or Multiaccess Enclosure

Icon Color Meaning for Network Node Processor

Top to bottom the icon's color is: transparent, grey, blue, purple, white, and green.

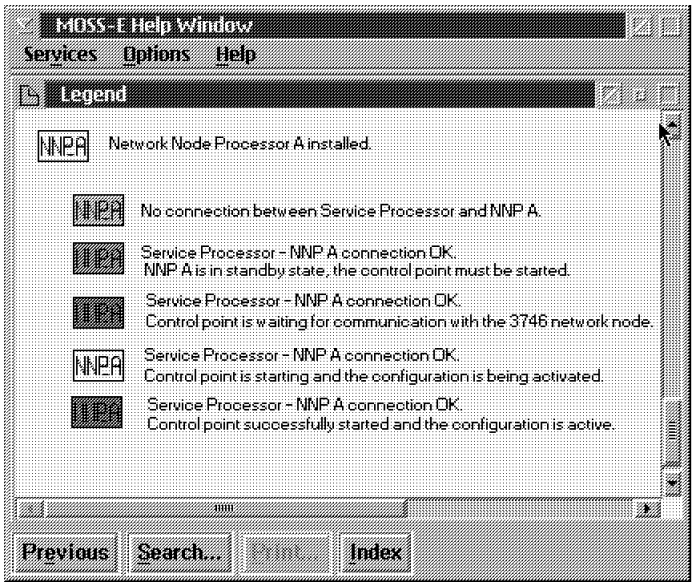


Figure 1-12. Color Meaning for Network Node Processor

Accessing the Functions

Note

All maintenance functions are identified by an **(M)** preceding the text (example: see Figure 1-14 function **(M) Manage 3745/3746-900 Installation/Removal**).

How to Get the Service Processor Maintenance Functions

1. If not already logged, enter the **Service Processor maintenance password** (default is IBM3745), or ask the customer if a specific password has been defined.
2. Double click on the **Service Processor** icon, you will get the following screen:

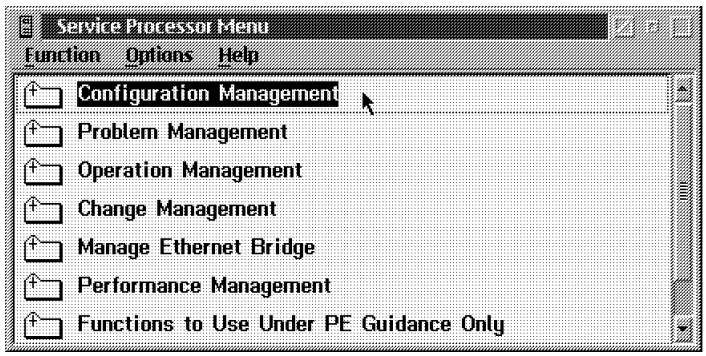


Figure 1-13. Service Processor Maintenance Functions

3. Click on Configuration Management, Operation Management, Problem Management, or Change Management to get the list of all the functions available.

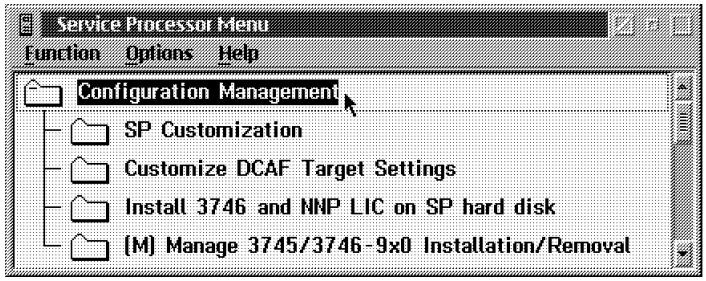


Figure 1-14. Service Processor Configuration Management Functions

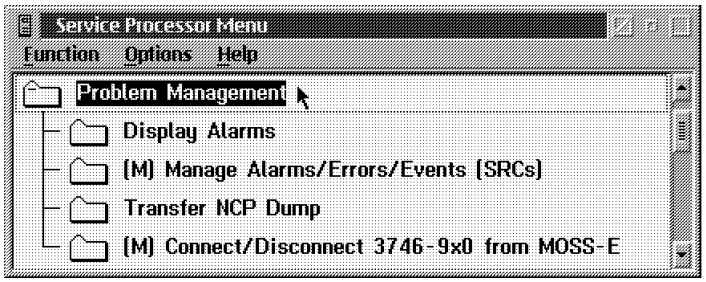


Figure 1-15. Service Processor Problem Management Functions

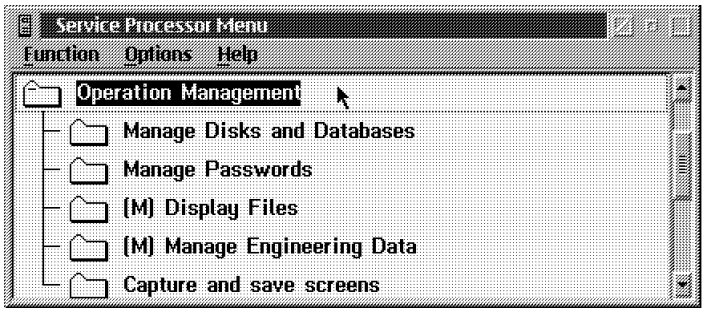


Figure 1-16. Service Processor Operation Management Functions

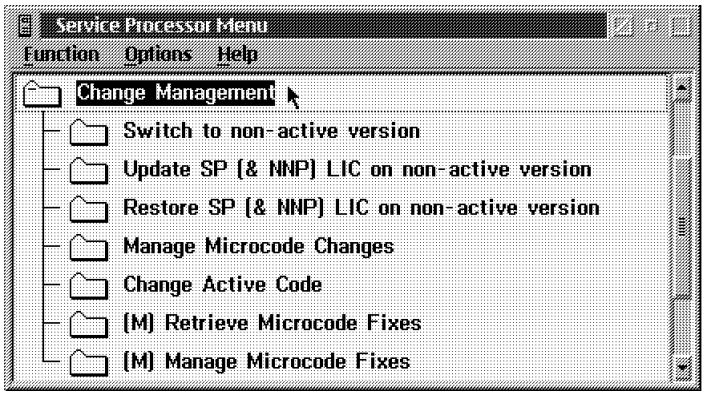


Figure 1-17. Service Processor Change Management Functions

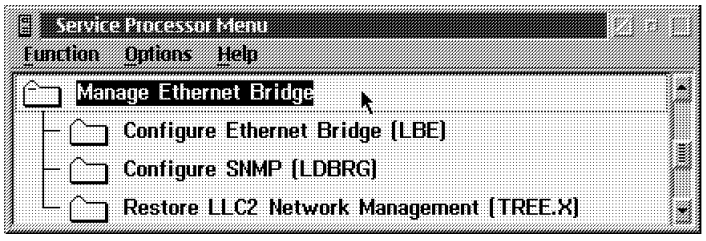


Figure 1-18. Service Processor Ethernet Bridge Functions

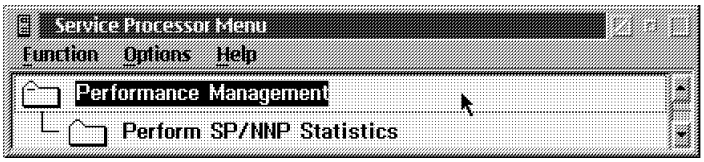


Figure 1-19. Service Processor Performance Management Function

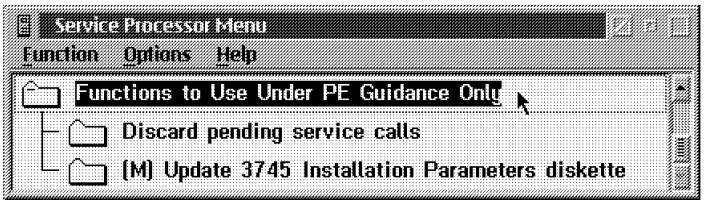


Figure 1-20. Service Processor PE Functions

How to Get the Network Node Processor Functions

1. If not already logged, enter the **Service Processor maintenance password** (default is IBM3745), or ask the customer if a specific password has been defined.
2. Double click on the **3746-900 or 3746-950** icon, you will get the following screen:

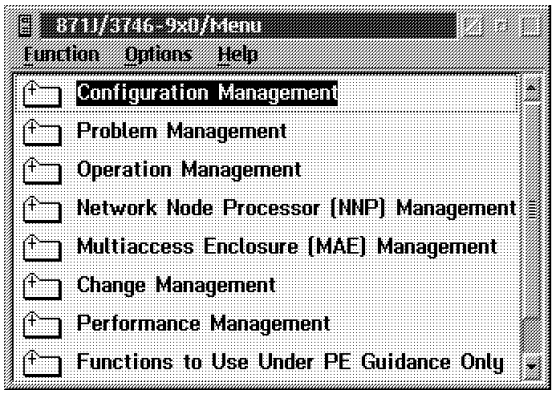


Figure 1-21. 3746-9x0 Maintenance Functions

3. Click on **Network Node Processor (NNP) Management**.

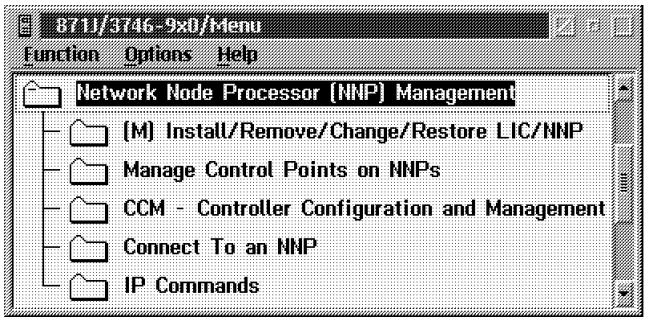


Figure 1-22. Network Node Processor Management Functions

How to Get the 3746-9x0 Controller Maintenance Functions

1. If not already logged, enter the **Service Processor maintenance password** (default is IBM3745), or ask the customer if a specific password has been defined.
2. Double click on the **3746-9x0** icon you will get the following screen:

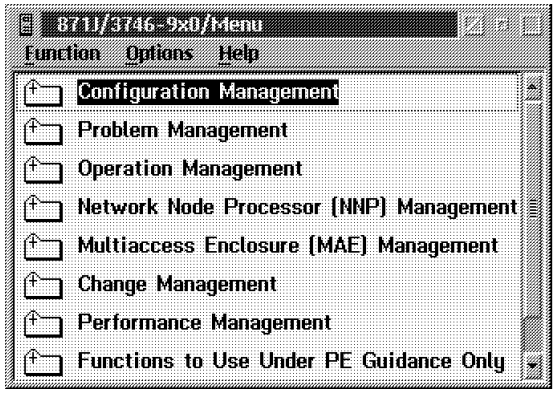


Figure 1-23. 3746-9x0 Maintenance Controller Functions

3. Click on **Configuration Management**, **Problem Management**, **Operation Management**, **Change Management**, **Performance Management**, or **Functions to Use Under PE Guidance** for details of the functions (see the following screens).

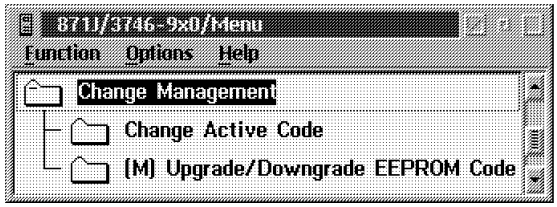


Figure 1-24. 3746-9x0 Change Management Functions

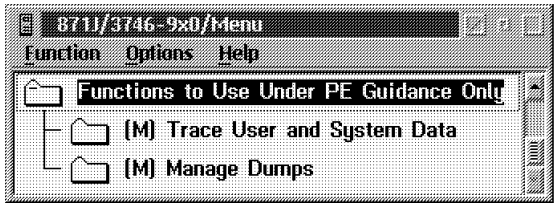


Figure 1-25. 3746-9x0 Functions to Use Under PE Guidance

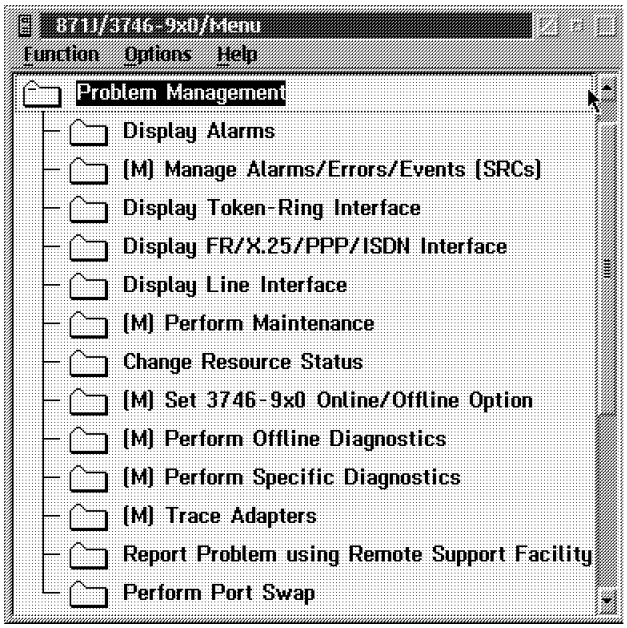


Figure 1-26. 3746-9x0 Problem Management Functions

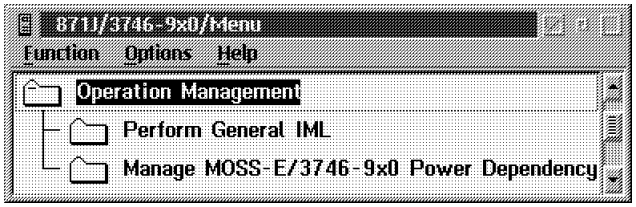


Figure 1-27. 3746-9x0 Operation Management Functions

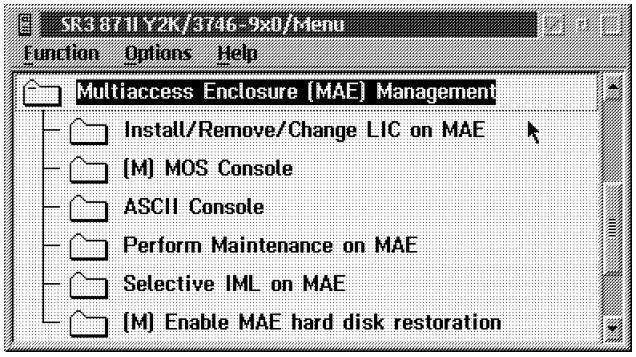


Figure 1-28. MAE Management Functions

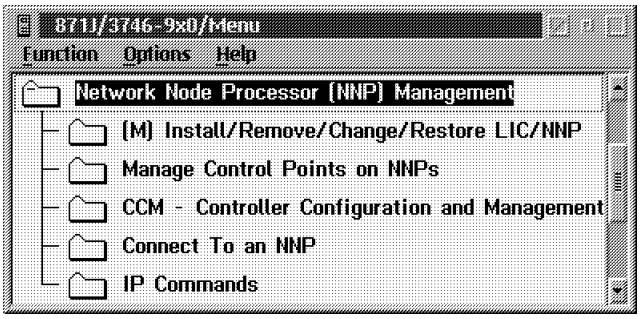


Figure 1-29. Network Node Processor Management Functions

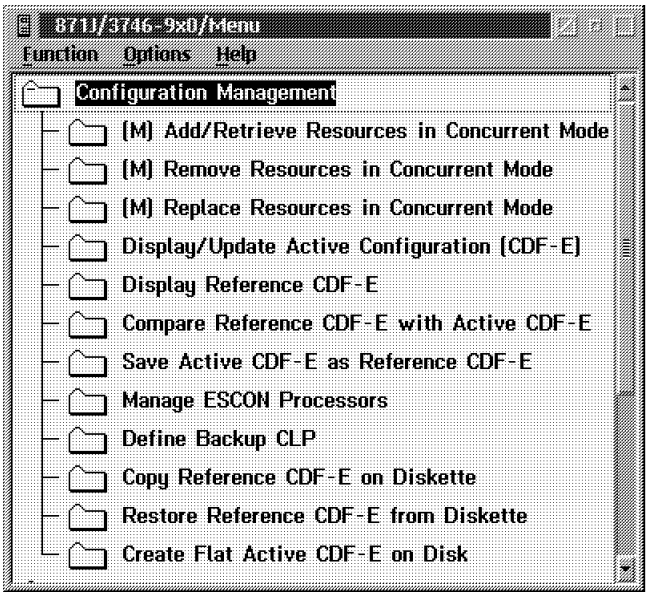


Figure 1-30. 3746-9x0 Configuration Management Functions

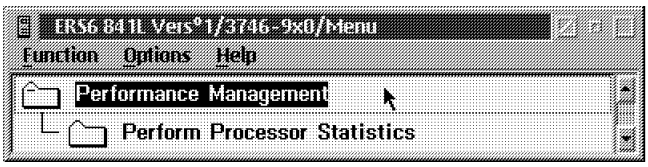


Figure 1-31. 3746-9x0 Performance Management Functions

How to Get the 3745 Maintenance Controller Functions

1. Enter the **Controller Maintenance** password on the signon menu (default password: *IBM3745* or ask the customer if a specific password has been defined).
2. Double click on the **3745 Controller** icon you will get the following screen:

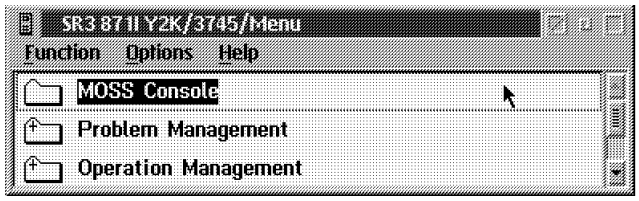


Figure 1-32. 3745 Menu

3. Click on **Problem Management**, or **Operation Management** to get the details of the functions.

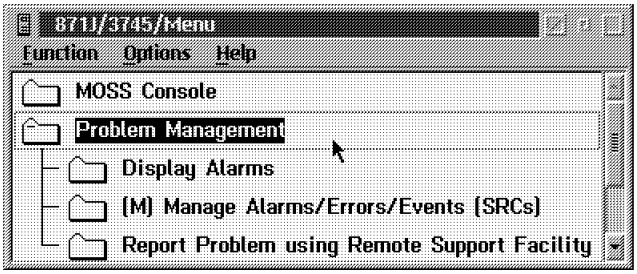


Figure 1-33. Problem Management

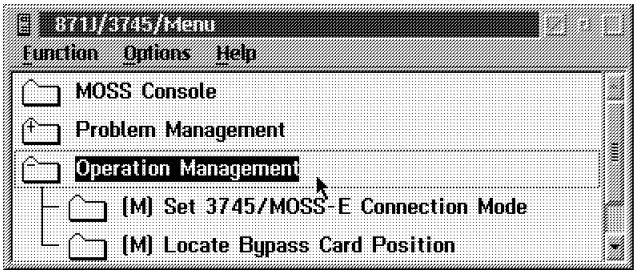


Figure 1-34. Operation Management

4. Double click on **MOSS Console**, you have the **Function Selection Rules** displayed. You can now enter the MOSS commands as usual.

Figure 1-35. MOSS Primary Menu

Chapter 2. Maintaining the Code Loaded on the Service Processor

Note

In this chapter there is no information about the multiaccess enclosure, If a MAE is installed, refer to *Multiaccess Enclosure Installation and Maintenance Guide*, SY33-2124 chapter 'Maintaining the Code on the MAE'.

Overview of Code and Configuration Files Management

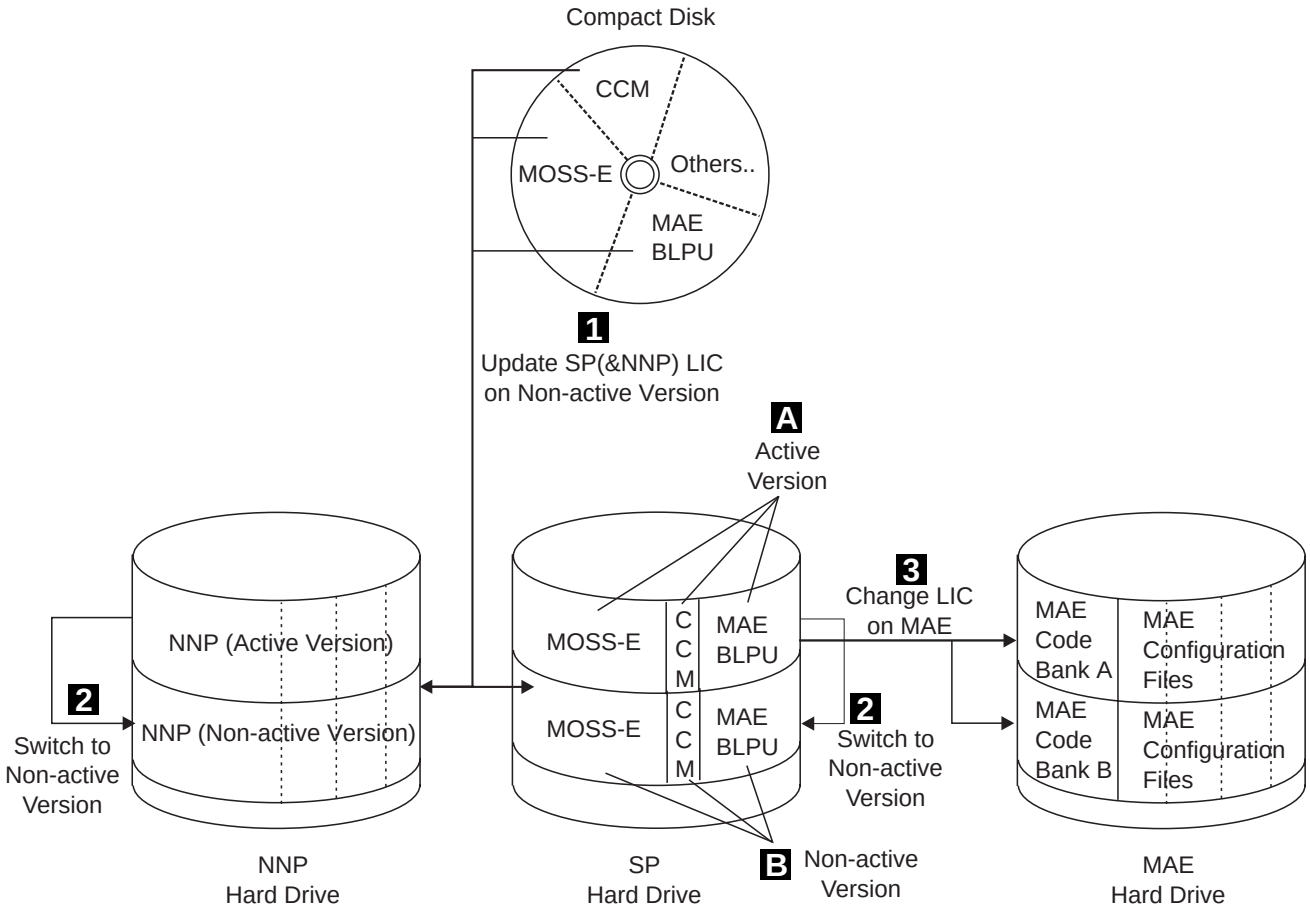


Figure 2-1. Overview of Code and Configuration Files Management

This drawing represents the different functions used to manage the License Internal Code (LIC) on the SP, NNP, and MAE hard drives.

There are two versions of the code loaded on the SP and NNP hard drives, the **active version** A and the **non-active version** B. When updating the LIC from the CD-ROM on the SP and NNP hard drives, we apply changes on the non-active version. But when changing the code on the MAE we load the MAE hard drive with the active version from the SP hard drive to the banks A & B on the MAE hard drive.
To maintain the MAE code the following functions are used:

- **Update SP (&NNP) LIC on non-active version** (1): Used to update BLPUs of the non-active version of the LIC installed on the SP and NNP hard drives at the CD-ROM level.
- **Switch to non-active version** (2): this function is used to switch the active and non-active LIC.
- **Change LIC on MAE** (3) this function is used to copy from the SP hard disk the MAE LIC from the active version to the banks A and B of the MAE hard drive.

Maintenance Service Procedures

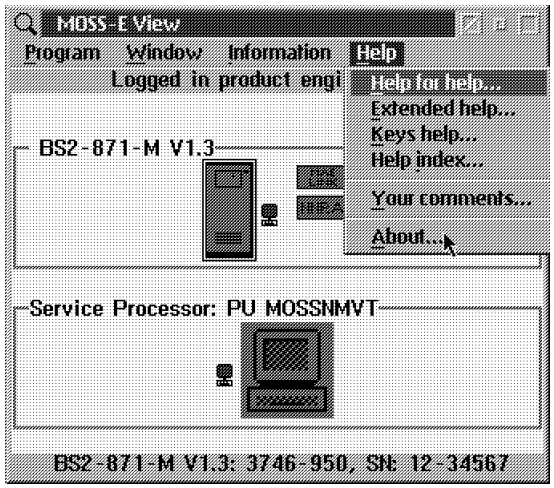
Note

For any error related to the service processor, go to the **START** page of:

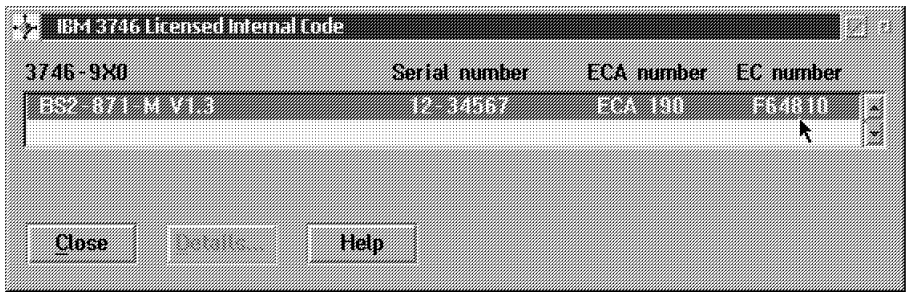
- The *3745 Communication Controller Models 210 to 61A Maintenance Information Procedures*, SY33-2054 (**3745 Model X1A**)
- The *3745 Communication Controller Models 130 to 17A Maintenance Information Procedures*, SY33-2070 (**3745 Model 17A**)
- The *3746-900 Service Guide*, SY33-2116 (**3746-900**)
- Or the *3746-950 Service Guide*, SY33-2108 (**3746-950**)

Displaying the Level of the Code Installed

1. ____ On **MOSS-E View** window, click on **help**.
2. ____ On **Help** window, click on **About**



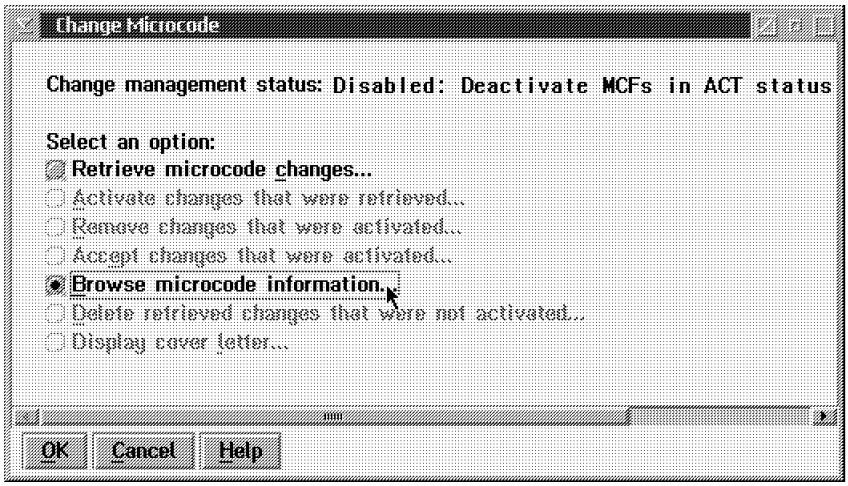
3. ____ On the **MOSS-E View About** window, click on **Licenced Internal Code**. On the window obtained the code EC number is displayed.



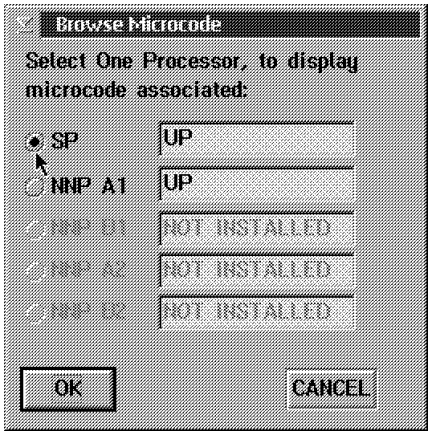
4. ____ Click on **Close**, then **OK** to leave the function.

Displaying the Level of the BLPUs Installed

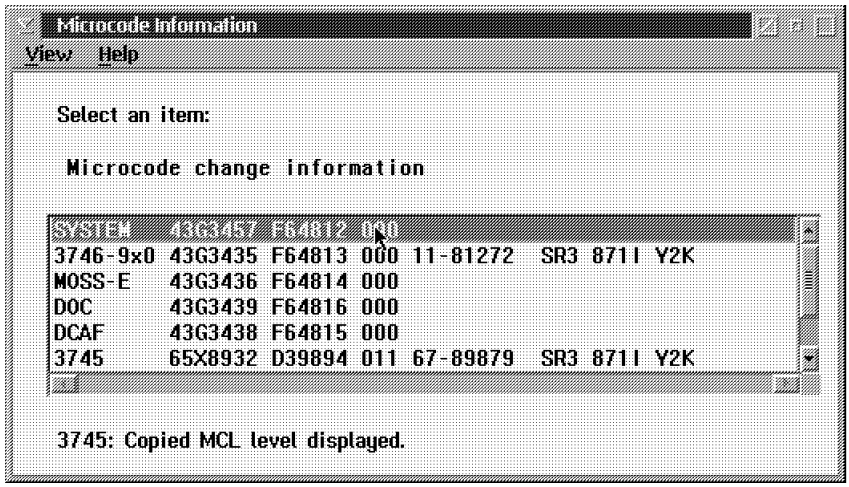
1. ____ Double click on the **Service Processor** icon.
2. ____ Click on **Change Management**.
3. ____ Double click on **Manage Microcode Change** (see Figure 1-17 on page 1-10).
4. ____ The following window is displayed:



5. ____ Select the **Browse Microcode Information** option.
6. ____ Click on **OK** to validate your choice.
7. ____ On the **Browse Microcode** window, select the processor.



8. ____ Click on **OK** to validate your choice.
9. ____ On the following **Browse Microcode** window, select the code to be displayed.



10. ____ Select from the view pulldown menu the **Retrieved, Activated, or Accepted changes** option.
11. ____ Click on **Exit** to leave the function.

Shutting Down the Service Processor

Note

Before powering OFF or to reinitialize the Service Processor from a diskette or from the hard disk, use this procedure to properly close all the active functions.

1. ____ On the **MOSS-E view** window click on **Program** (see Figure 1-4 on page 1-3).
2. ____ Click on **Shut down**, then enter the Service Processor maintenance password (default is IBM3745) and click on **OK**.
   You are now able to power OFF or reboot the Service Processor.

Restoring Code and Configuration on the SP Hard Disk from a CD-ROM

Notes

1. This function is **not disruptive** as it applies to the non-active version of the code loaded on the SP hard drive.
2. This function can be used to **restore a back level** of the code.
3. It restores **only the LIC and configuration**.
4. If an **NNP** is installed, its code is also **restored automatically**.

1. ____ From the **service processor menu**, click on **Change Management**.

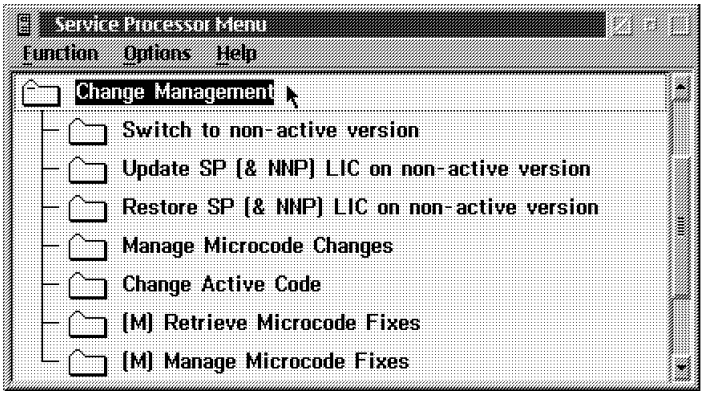


Figure 2-2. SP Change Management Menu

2. ____ Insert the CD-ROM in the appropriate SP disk drive, double click on **Restore SP (&NNP) LIC on non-active version**, then follow the prompts.

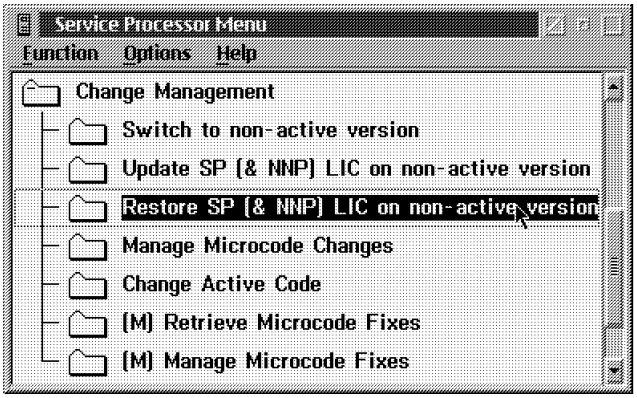


Figure 2-3. Service Processor Menu

3. ____ Then to activate the changes, use the function 'toggle to non-active version' to load and execute the new code in the processors (refer to “Switch to Non-active Version of Code” on page 2-14).

Saving/Restoring Configuration on Diskette

Note

This **MOSS-E** function is used to:

1. **Define** the **frequency** and the time to **reorganize** the hard disk **database**.
2. **Save the configuration parameters** on diskette when the machine configuration has been upgraded.
3. **Restore the configuration parameters** from the diskette.

1. ____ If not already logged, enter the **Service Processor maintenance password** (default is IBM3745), or ask the customer if a specific password has been defined.
2. ____ Double click on the **Service Processor** icon.
3. ____ Click on **Operation Management**.
4. ____ Double click on **Manage Disks and Databases**.

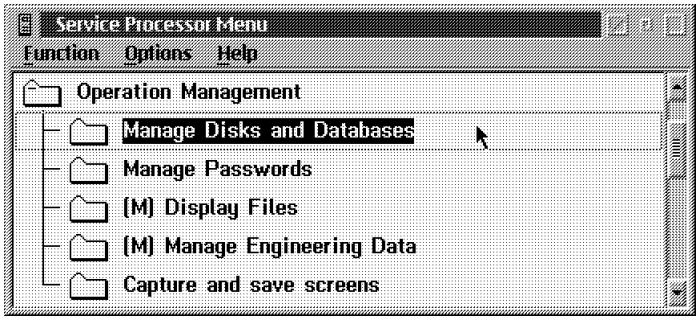


Figure 2-4. Operation Management Service Processor Menu

5. ____ Depending on the function you want to perform, use the radio buttons to select one of the options:

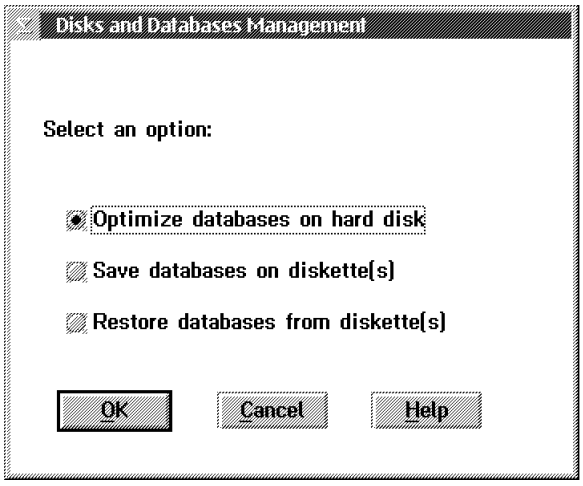


Figure 2-5. Disk and Databases Management

6. ____ Click on **OK** and follow the prompts.
7. ____ Click on **Cancel** to exit from the function.

Note: After restoring the configuration parameters, the Service Processor must be reinitialized to take in account these parameters, press **Ctrl - Alt - Del**.

Saving Configuration Parameters on the 374X Installation Parameters Diskette

Note

This **MOSS-E** function is used to:

1. **Build** a 3745 or 3746-9x0 installation parameters diskette when one of this diskette is damaged or lost. It is the operator responsibility to provide a new formatted diskette free of errors.
2. **Update** a 3745 or 3746-9x0 installation parameters diskette with the information recorded on the hard disk.
3. This function is available when the machine is already configured and recorded on the service processor hard disk.

1. ____ Reboot the service processor by pressing simultaneously the **Ctrl/Alt/Del** keys.
2. ____ For logging on, enter the **Service Processor maintenance password** (default is IBM3745).
3. ____ Double click on the **Service Processor** icon.
4. ____ Click on **Configuration management**.
5. ____ Double click on **Manage 3745/3746-9x0 installation /removal**.
6. ____ Click on line of the 3745 or 3746-9x0 that you want to save the configuration parameters, click on **Save**.

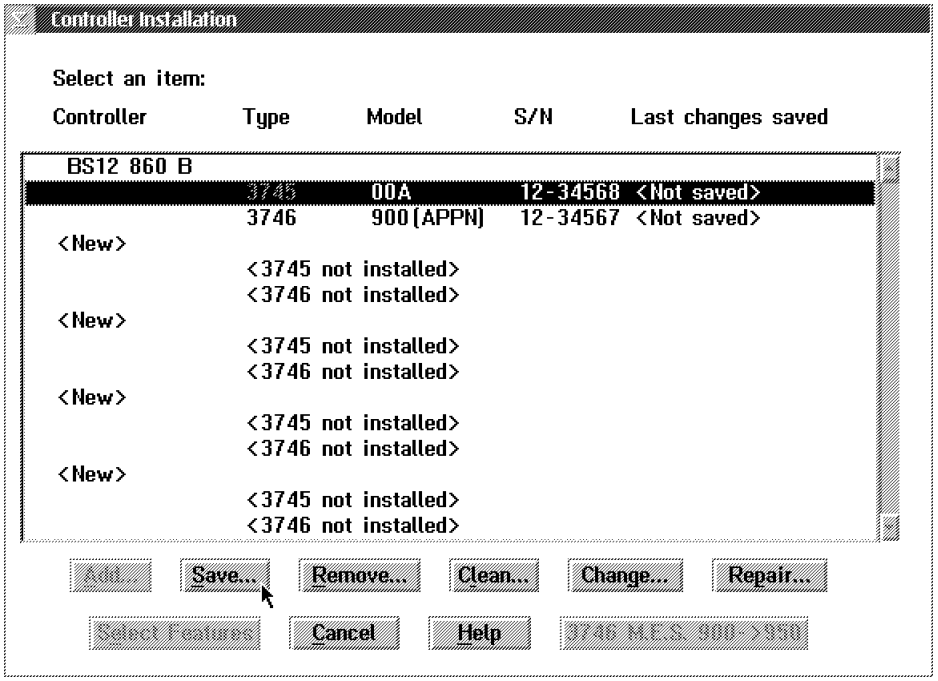


Figure 2-6. Controller Installation

7. ____ When prompted, insert the new diskette.

Saving/Deleting Engineering Data

Note

This **MOSS-E** function is used to:

1. **Save** the engineering data when the DL2 link is not available or in error, or to get additional debug data.
2. **Delete** the engineering data when they have been successfully recorded on diskette, or transferred to a support center via DCAF.

1. ____ If not already logged, enter the **Service Processor maintenance password** (default is IBM3745), or ask the customer if a specific password has been defined.
2. ____ Double click on the **Service Processor** icon.
3. ____ Click on **Operation Management**.
4. ____ Double click on **Manage Engineering Data**, then
5. ____ Enter the PMH number, the branch office and the country codes.
6. ____ Select the **processor** with the radio button.
7. ____ The files selected for Zip are in the **Files selected for Zip** window. If you do not want zip some of these files, select them and click on **Remove**.
8. ____ Repeat the two preceding Steps for each processor.
9. ____ When you have terminated your selection, click on **Create Zip Files...**, then wait until the message **zip files successfully created** is displayed.
10. ____ Click on **OK**.

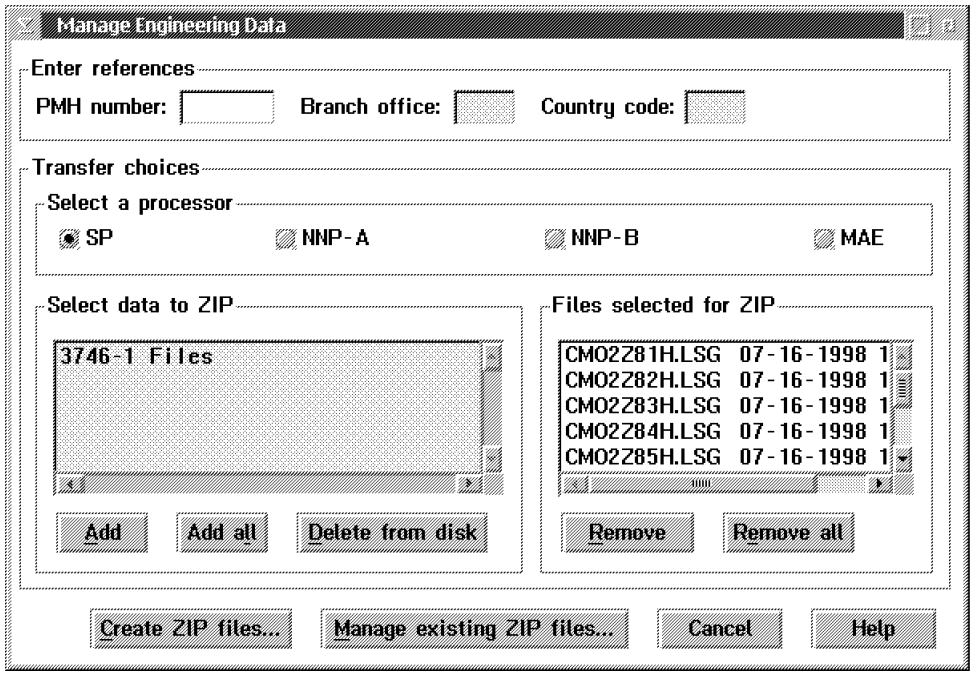


Figure 2-7. Manage Engineering Data Menu

When this data is transferred or recorded properly on the disk, you can erase the file which contained it, by clicking on **Delete from disk**, then follow the prompts.

Installing a New Version of the LIC on a Service Processor

Important Note

The installation procedures depends on the level of the code and the hardware currently installed and the level of the code to be installed.

Use the installation instructions shipped with the microcode to upgrade the LIC of the service processor.

A copy of the installation instructions can be obtained from the web site: **http://www.networking.ibm.com/**.

Switch to Non-active Version of Code

Notes

1. This function is **disruptive** and it is used to switch the non-active partition and the active partition. It reboots the SP and the NNPs (if any). Use this function after a LIC upgrade or a LIC restore to load the processors with the new LIC.
2. It applies only on SP/NNP running LIC EC **F12380 and above** (using CD drive).

1. ____ If not already logged, enter the **Service Processor maintenance password** (default is IBM3745), or ask the customer if a specific password has been defined.
2. ____ Double click on the **Service Processor** icon.
3. ____ Click on **Change Management**.

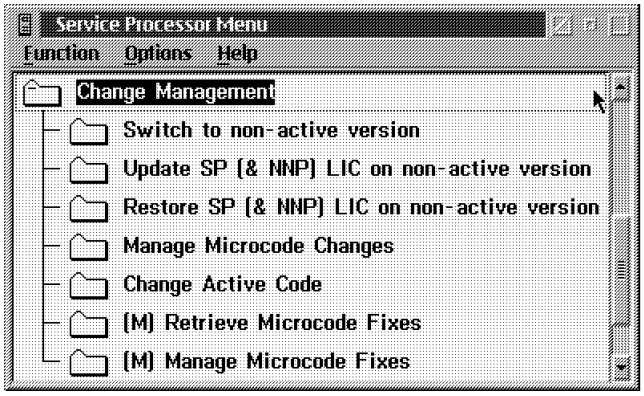


Figure 2-8. Service Processor Change Management Menu

4. ____ Double click on **Switch to non-active version**.

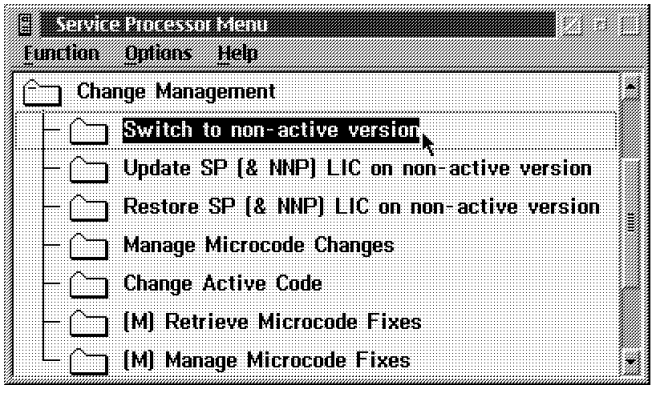


Figure 2-9. Service Processor Change Management Menu

5. ____ The following window is displayed, follow the prompts.

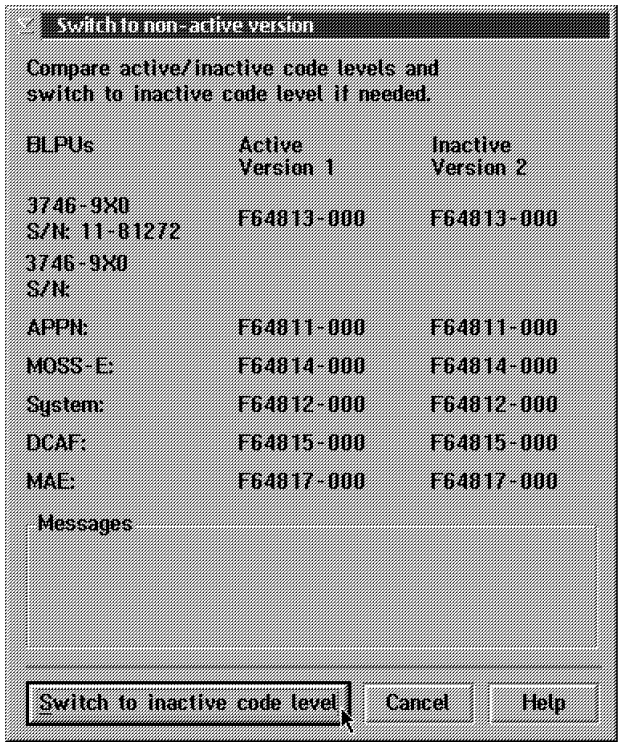


Figure 2-10. Switch to Non-active Version

Notes:

a. If an NNP and NNP backup are installed, their active code is also switched to the non-active version.

b. If you have an MAE installed you have to do a **Change LIC on MAE** in order to update the MAE code (see Figure 2-1 on page 2-2), and **IML** the 3746-9x0.

Reporting Problem to RETAIN

Note

This function is used to initiate the **first link** to **RETAIN** after a 3745 XXA or a 3746-9x0 **installation**.

Manually Reporting a Problem to RETAIN from a 3745 - XXA

1. ____ Double click on the **3745** icon.
2. ____ Click on **Problem Management**, then scroll forward.
3. ____ Double click on **Report Problem using Remote Support Facility**.
4. ____ Enter a **short description** of the problem then click on **OK**.
5. ____ Wait for the message "Call to RETAIN successful" indicating the normal end of the transmission.
   If you get the message "Call to RETAIN unsuccessful", record the Customer Problem Number (CPN) and go to:
   - The **START** page of the *3745 Communication Controller Models 210 to 61A Maintenance Information Procedures*, SY33-2054, if you are working on a **3745 Model X1A**.
   - Or go to the **START** page of the *3745 Communication Controller Models 130 to 17A Maintenance Information Procedures*, SY33-2070, if you are workingon a **3745 Model 17A**.

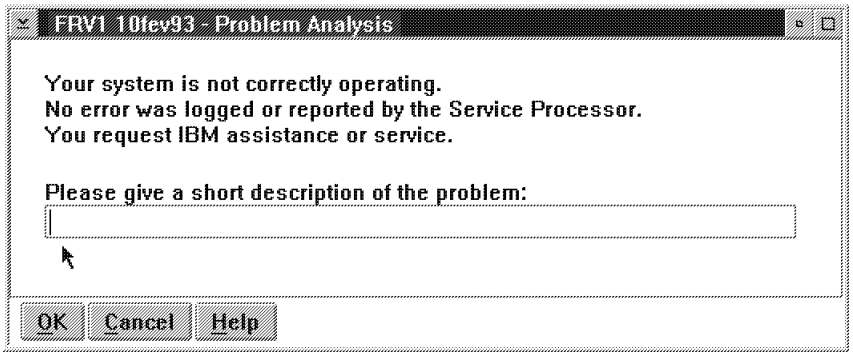


Figure 2-11. Link to RETAIN

Manually Reporting a Problem to RETAIN from a 3746-9x0

1. ____ Double click on the **3746-9x0** icon.
2. ____ Click on **Problem management**.
3. ____ Double click on **Report Problem using Remote Support Facility**.
4. ____ See Figure 2-11 on page 2-16, enter a **short description** of the problem then click on **OK** .
5. ____ Wait for the message "Call to RETAIN successful" indicating the normal end of the transmission.

   If you get the message "Call to RETAIN unsuccessful", record the Customer Problem Number(CPN) and go to:

   - The **START** page of the *3746-950 Service Guide*, SY33-2108, if you are working on a **3746 Model 950**.
   - Or go to the **START** page of the *3746-900 Service Guide*, SY33-2116, if you are working on a **3746 Model 900**.

Handling Microcode Fixes on the Licensed Internal Code

Note

- This function is used to fix emergency problems on code and must be executed on Product Engineering recommendations.

There is two ways to apply the microcode fixes on the LIC:

1. You have a CE ThinkPad Win95 plateform with the FTP server installed (PWS Personal Web Server Microsoft™, or OS/2® plateform with standard FTPD) and the MCFs downloaded from the La Gaude PE WEB server (mandatory prerequisites) continue with “Applying Microcode Fixes on the Licensed Internal Code Using a ThinkPad.” For La Gaude PE WEB server see “World Wide Web” on page xvi.
2. You do not have a CE ThinkPad win95 plateform go to “Applying Microcode Fixes on the Licensed Internal Code” on page 2-21.

Applying Microcode Fixes on the Licensed Internal Code Using a ThinkPad

1. ____ On your service processor, double click on the **Service Processor** icon.
2. ____ Click on **Change Management**.
3. ____ Double click on **Retrieve Microcode Fixes** (see Figure 1-17 on page 1-10).
4. ____ On the **Retrieve Microcodes Fixes** window, record the addresses given in:
   - The **FTP server IP address** (your ThinkPad address)
   - The **IP subnetmask**
5. ____ Power on the ThinkPad.
6. ____ Click on **Network Neighborhood** with the right button of the mouse.
7. ____ On the following window, click on **properties**.
8. ____ On the window displayed search and select for **TCP/IP-->IBM auto 16/4 Credit Card Adapter**, then click on **properties**.
9. ____ On **TCP/IP Properties** window, select the **IP address** folder.
10. ____ Enter the IP address and subnetmask address previously recorded.
11. ____ Click on **OK** (twice).
12. ____ Plug the ThinkPad onto the service ring (use a free connector of the service processor access unit).
13. ____ Follow the prompts to restart the ThinkPad.

    Return to your **service processor**.
14. ____ On the **Retrieve Microcodes Fixes** window, enter:
    a. The User login: anonymous (by default)
    b. The User password: (if necessary)
    c. The ThinkPad path where the MCFs are loaded.

15. ____ Click on **Get MCFs**.

    Each MCF is crosschecked with the BLPU levels installed on the service processor. If the MCF is selected and not already stored in the service processor, then it is stored in the right directory:

    - J:\MCF\ for MCF concerning the MOSS-E, system BLPU, DCAF
    - J:\CM1\ for MCF concerning the 3746-9X0 number 1
    - J:\CM2\ for MCF concerning the 3746-9X0 number 2
    - J:\MAE\ for MCF concerning the MAE

16. ____ Click on **Cancel** to leave the function.

17. ____ Double click on **Manage Microcode Fixes**.

18. ____ Click on the lines of the MCFs to be applied (see example in the Figure 2-12).

19. ____ Click on **Options** and from the **Options** pull down menu click on **Activate microcode fix**

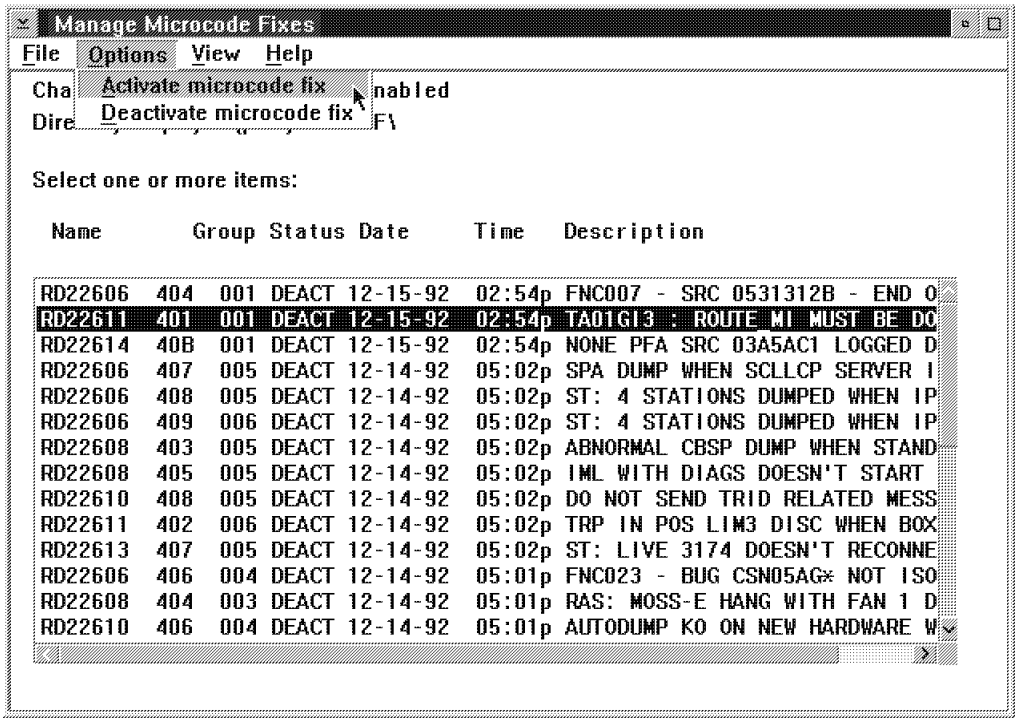


Figure 2-12. Manage Microcode Fixes

20. ____ The service processor or the 3746-9x0 are now reinitialized depending on the MCFs type:

    - If the **MCFs** concern the **3746-900 code**, click on **OK** twice to re-IML the 3746-900, verify the MCFs status it must be **ACT** and then go to **step 22 on page 2-20** .
    - If the **MCFs** concern the **service processor code**, click on **OK** to shutdown the service processor, an automatic IPL of the service processor is performed and then go to **step 21** .

21. ____ Verify the MCFs status:

    a. ____ Enter the Service Processor maintenance password.

b. ____ Double click on the **Service Processor** icon.

c. ____ Click on **Change Management**.

d. ____ Double click on **Manage Microcode Fixes**.

e. ____ Click on **View**, click on **Change directory path**.

f. ____ Enter the **directory path**: **J:\MCF**.

g. ____ Click on **OK** and verify the MCFs status, it must be **ACT**.

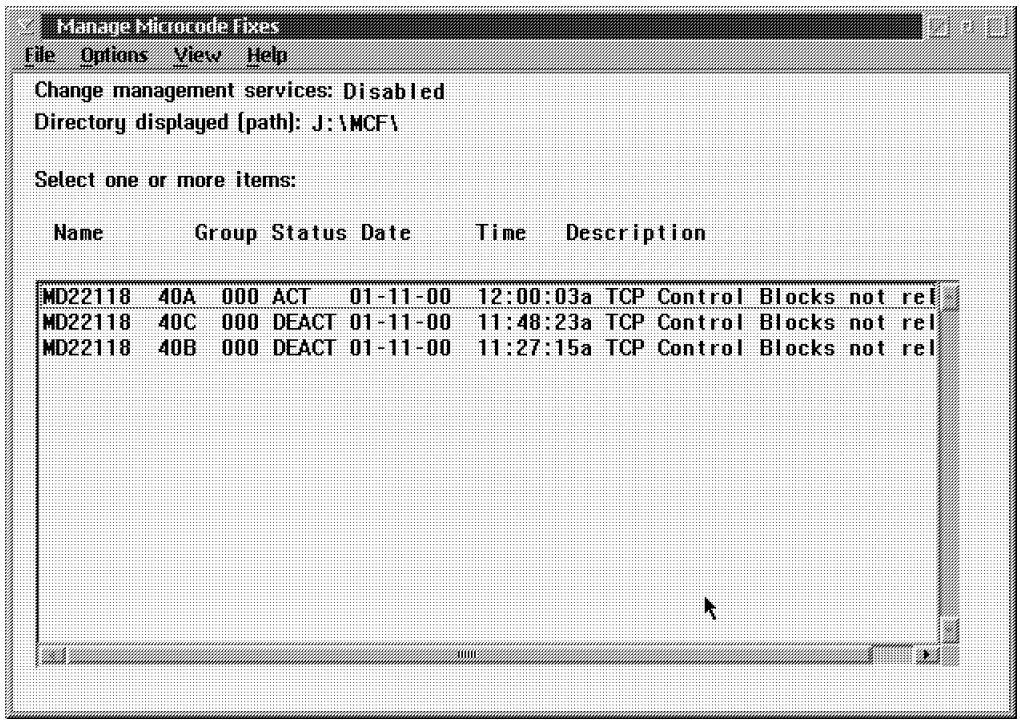
22. ____ Click on the **System Menu** icon, click on **Close** to exit from the function.

Applying Microcode Fixes on the Licensed Internal Code

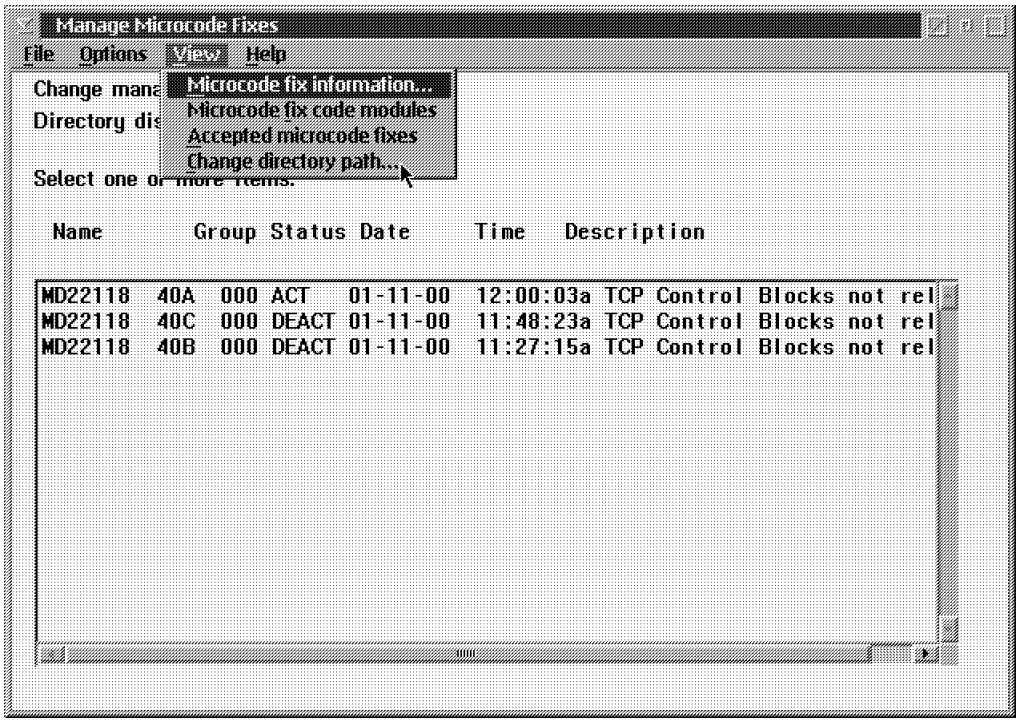
Note

- This function is used to fix emergency problems on code and must be executed on Product Engineering recommendations.

1. ____ If you have received MCFs through VM, copy these MCFs on a diskette or optical disk (we recommend to use ALMCOPY to download these files in binary format).
2. ____ Install the diskette or the optical disk in the Service Processor diskette or disk drive.
3. ____ Enter the Service Processor maintenance password (default is IBM3745).
4. ____ Double click on the **Service Processor** icon.
5. ____ Click on **Change Management**.
6. ____ Double click on **Manage Microcode Fixes** (see Figure 1-17 on page 1-10).
7. ____ The **Manage Microcodes Fixes** window is displayed.



8. ____ Click on **View**, click on **Change directory path**.



9. ____ Enter **A:*.*** to select the MCFs recorded on the diskette.
10. ____ On the list displayed, click on the **fixes** to be applied.
11. ____ Click on **File**, click on **Move**

12. ____ when the change path is displayed, enter the directory path according to the information displayed on the following screen (in this example 'SR3_863D' MCFs are in J:\CM1) , then click on **OK**.
    - **J:\CM1\ALL** for MCF concerning the 3746-9x0 number 1
    - **J:\CM2\ALL** for MCF concerning the 3746-9x0 number 2
    - **J:\MAE\ALL** for MCF concerning the MAE
    - **J:\MCF\ALL** for all other MCFs.

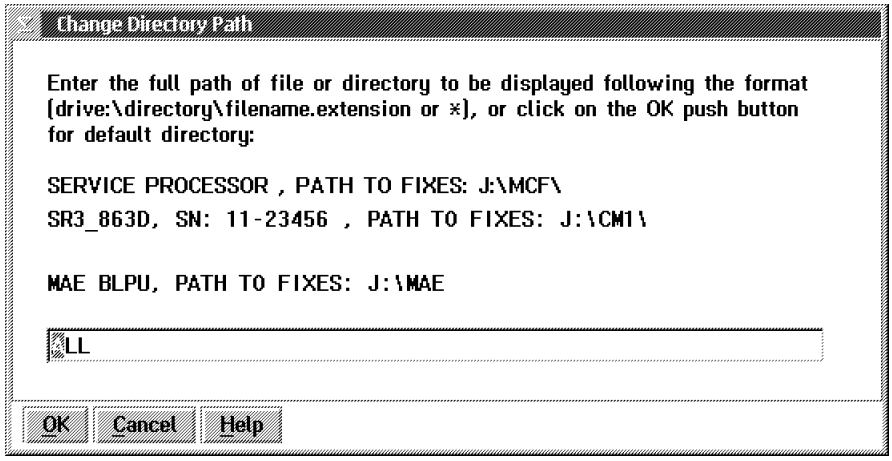


Figure 2-13. Manage Microcode Fixes

13. ____ Enter **the directory path** (see step 12) then click on **OK**.

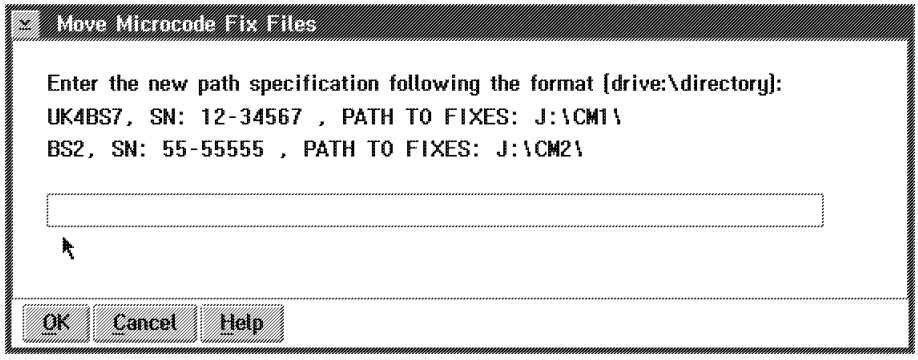


Figure 2-14. Manage Microcode Fixes

14. ____ Click on the lines of the MCFs to be applied (see example in the Figure 2-15 on page 2-24).

15. ____ Click on **Options** and from the **Options** pull down menu click on **Activate microcode fix**.

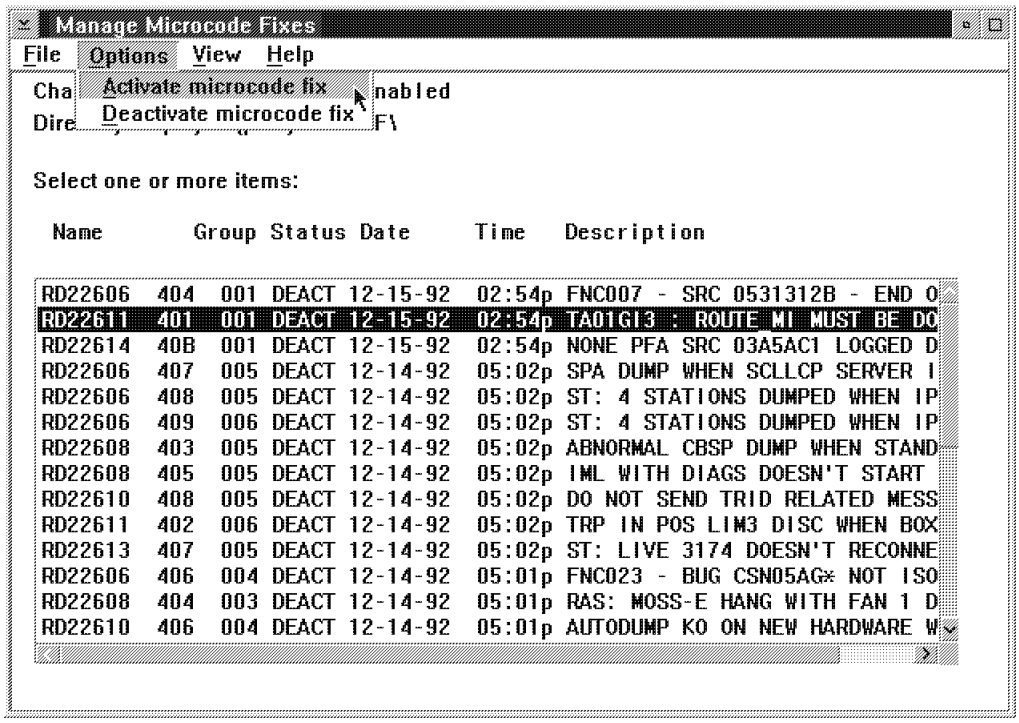


Figure 2-15. Manage Microcode Fixes

16. ____ Remove the diskette or the optical disk from the drive.
17. ____ The service processor or the 3746-9x0 are now reinitialized depending on the MCFs type:
    - If the **MCFs** concern the **3746-900 code**, click on **OK** twice to re-IML the 3746-900. Verify the MCFs status, it must be **ACT**, then go to **Step 19** .
    - If the **MCFs** concern the **service processor code**, click on **OK** to shutdown the service processor, an automatic IPL of the service processor is performed then go to **Step 18** .
18. ____ Verify the MCFs status:
    a. ____ Enter the Service Processor maintenance password.
    b. ____ Double click on the **Service Processor** icon.
    c. ____ Click on **Change Management**.
    d. ____ Double click on **Manage Microcode Fixes**.
    e. ____ Click on **View**, click on **Change directory path**.
    f. ____ Enter the **directory path**: **J:\MCF**.
    g. ____ Click on **OK** and verify the MCFs status, it must be **ACT**.
19. ____ Click on the **System Menu** icon, click on **Close** to exit from the function.

Removing Microcode Fixes on the Licensed Internal Code

Note

If you have a **backup** service processor, perform the same procedures on this SP to remove the MCFs.

1. ____ Enter the Service Processor maintenance password (default is IBM3745).
2. ____ Double click on the **Service Processor** icon.
3. ____ Click on **Change Management**.
4. ____ Double click on **Manage Microcode Fixes** (see Figure 1-17 on page 1-10).
5. ____ Click on **View**, click on **Change directory path**.
6. ____ Enter the **directory path**:
   - **J:\CM1** for MCF concerning the 3746-900 number 1
   - **J:\CM2** for MCF concerning the 3746-900 number 2
   - **J:\MAE\ALL** for MCF concerning the MAE
   - **J:\MCF** for all other MCFs.

   Then click on **OK**.
7. ____ Click on the lines of the MCFs to be removed (see Figure 2-15 on page 2-24).
8. ____ Click on **Options** and from the **Options** pull down menu click on **Deactivate microcode fix**.
   - If the **MCFs** concern the **3746-900 code**, click on **OK** twice to re-IML the 3746-900, verify the MCFs status, it must be **DEACT** then go to **Step 10** .
   - If the **MCFs** concern the **service processor code**, click on **OK** to shutdown the service processor, an automatic IPL of the service processor is performed, then go to **Step 9** .
9. ____ Verify the MCFs status:
   a. ____ Enter the Service Processor maintenance password.
   b. ____ Double click on the **Service Processor** icon.
   c. ____ Click on **Change Management**.
   d. ____ Double click on **Manage Microcode Fixes**.
   e. ____ Click on **View**, click on **Change directory path**.
   f. ____ Enter the **directory path**: **J:\MCF**.
   g. ____ Click on **OK** and verify the MCFs status, it must be **DEACT**.
10. ____ Click on the **System Menu** icon, click on **Close** to exit from the function.

3746-9x0 EEPROM Upgrade or Downgrade

Notes

1. This function will be used after a:
   - Microcode change fix (MCF)
   - EC installation
   - Processor replacement
2. While an EEPROM Upgrade/Downgrade is running, **Do not** power OFF or IML the 3746-9x0
3. Following an EEPROM upgrade/downgrade and if you have a SP backup it is recommended to apply the same procedure on the SP backup.
4. For any error code displayed on the 3746-9x0 panel go to the **START** page of the:
   - *3745 Communication Controller Models 210 to 61A Maintenance Information Procedures*, SY33-2054 (3746-900 attached to 3745-X1A)
   - *3745 Communication Controller Models 130 to 17A Maintenance Information Procedures*, SY33-2070 (3746-900 attached to 3745-17A)
   - *3746-950 Service Guide*, SY33-2108 (3746-950)

1. ____ On the **MOSS-E VIEW** window, double click on the **3746-9x0** icon (see Note 1).
2. ____ On the **3746-9x0 Menu** window click on **Change Management**.
3. ____ Double click on the **Upgrade/Downgrade EEPROM Code Level**.
   A window is displayed with a message box saying that the service processor is searching the 3746-9x0 configuration.
   On **EEPROM Upgrade** window, the upgradable or downgradable processors are **highlighted** according to the preselected status of the options **Upgrade** or **Downgrade** on the top of the window (see Figure 2-16 on page 2-27).

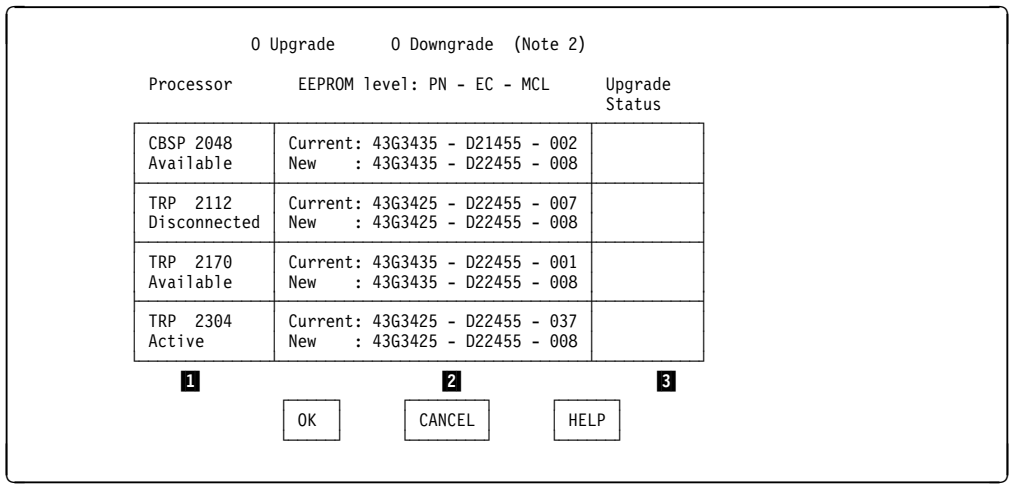


Figure 2-16. Example of An EEPROM Upgrade Window

- **1** Gives the list of the 3746-9x0 processors in CDF-E with their status (available/disconnected/active).
- **2** Gives the current and new EEPROM level: PN/EC/Level of each processor.
- **3** Gives the status after the activation of the function.

4. ____ Select the **Upgrade** or **Downgrade** option on the top of the screen then click on **OK** according to the action that you want do do.
   An **EEPROM Upgrade** window informs you that the EEPROM upgrade or downgrade is in progress with its time duration.
   At the end, a status is displayed for each processor.

5. ____ Check the result of your EEPROM upgrade/downgrade operation with the following table and take the appropriate action:

EEPROM Status	Action
Completed	Upgrade done without error continue with the next step.
Start failed	Call your support
Failed	Call your support
Completion failed	Call your support

Note: If you have done the EEPROM Upgrade after exchanging a processor leave this procedure and return to the point, in the MAP where you come from. Otherwise continue with the next step.

6. ____ Return to the **3746-9x0 Menu** click on **Operation Management**.

7. ____ Double click on the **Perform General IML** with **Diagnostics**.
   A Normal IML must be terminated by 00000000 displayed on the 3746-9x0 control panel.

Managing the Passwords

Changing the Service Processor and Controller Passwords

Different passwords are defined, the default password is **IBM3745**:

1. The Service Processor maintenance password
2. The Service Processor customer password
3. The Controller maintenance password
4. The Controller customer password
5. The password to access password management
6. The CCM/TELNET user profiles management
7. The CCM Batch password.

Refer to the appendix of the *3745/17A-61A and 3746-900 Basic Operations Guide*, SA33-0177 or *3746 Nways Multiprotocol Controller Model 950: User's Guide*, SA33-0356 to obtain the list of the functions accessible to the user depending on the password.

Notes

1. If the password contains numeric digits, don't forget to enable the numeric keys by clicking on the numeric lock key (NumLk).
2. If you have a **backup** Service Processor do not forget to update your passwords on this Service Processor using the same procedure.

1. ____ Double click on the **Service Processor** icon.
2. ____ Click on **Operation Management**.
3. ____ Double click on **Manage Passwords** function (see Figure 1-13 on page 1-9).
4. ____ Ask the customer to obtain the **management password** reserved for this function (the default password is **IBM3745**).
5. ____ Enter the password and click on **OK**.
6. ____ Click on **MOSS-E view passwords** to select the option.

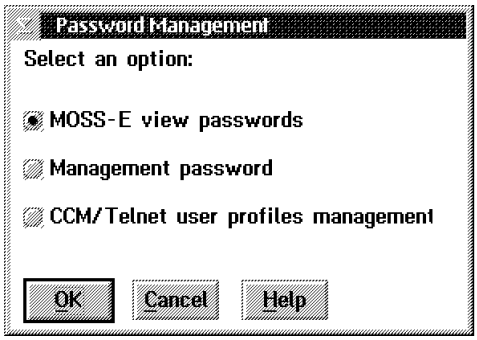


Figure 2-17. Management Password

7. ____ Click on **OK**.
8. ____ On the following screen, enter or ask the customer to enter the **4 different passwords**.

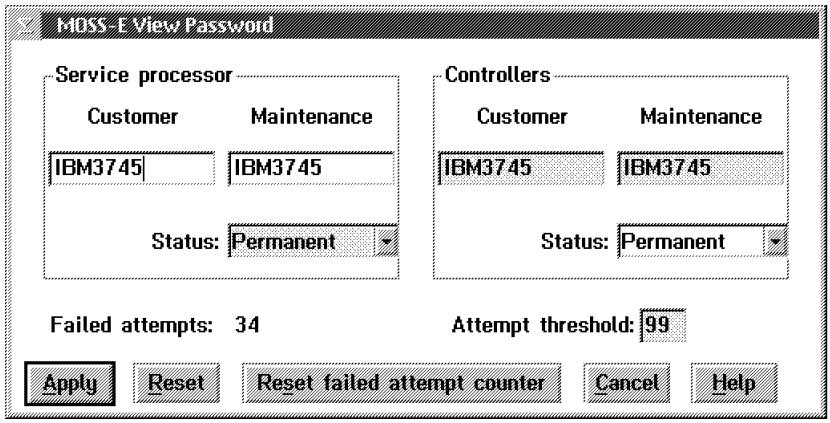


Figure 2-18. MOSS-E View Password

9. ____ Click on **Apply**.
10. ____ Select **Management password**.
11. ____ Click on **OK**.
12. ____ In the following screen, enter or ask the customer to enter the **Management password** and modify the **attempt threshold** value if necessary.

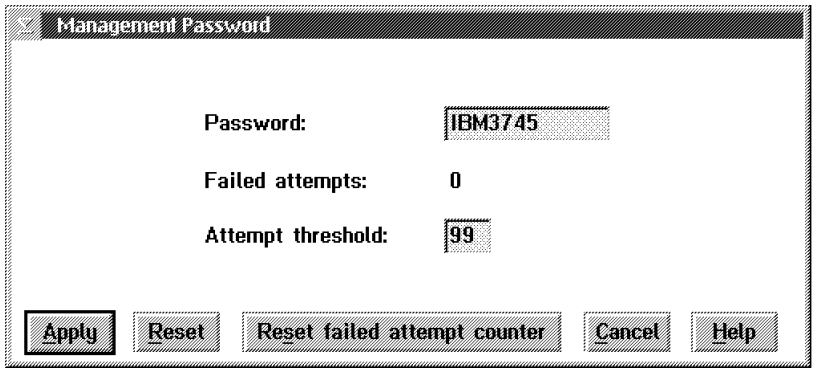


Figure 2-19. Management Password

13. ____ Click on **Apply**.

14. ____ Select **CCM/Telnet user profiles management**, then click on **OK** and enter the required parameters on the following window.

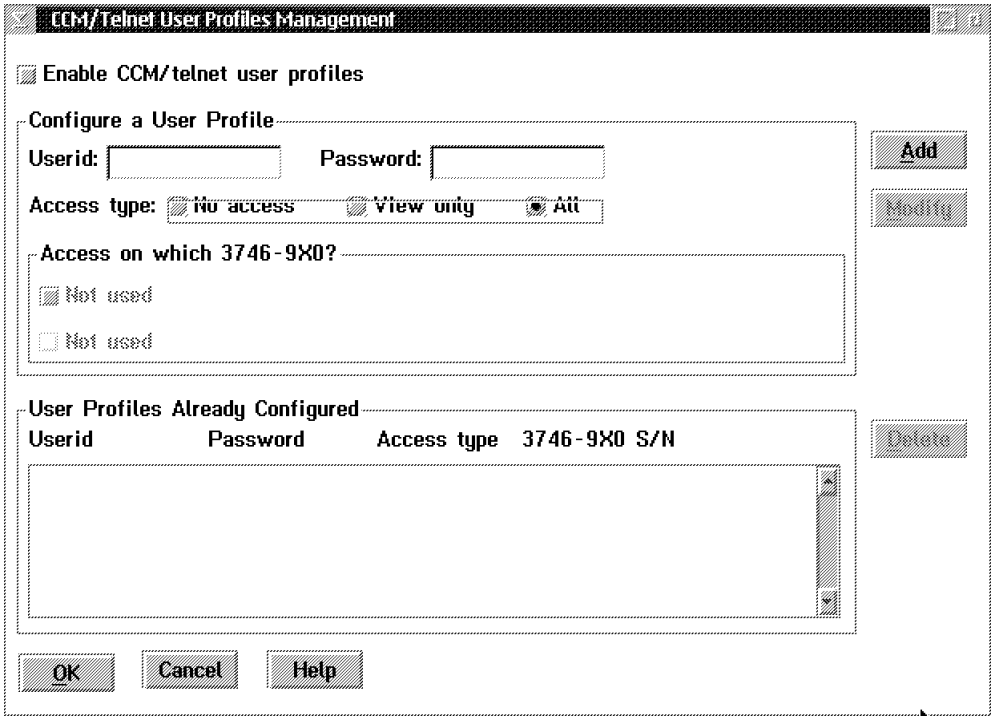


Figure 2-20. CCM/Telnet Management Password

15. ____ Click on **OK**.

16. ____ Click on **Cancel** to leave the function.

Changing the Password for DCAF

Note

If you have a **backup** Service Processor do not forget to update the DCAF password on this Service Processor using the same procedure.

Once a DCAF parameter has been entered, the password stays mandatory, It can be changed but not removed.

1. ____ Double click on the **Service Processor** icon.
2. ____ Click on **Configuration management**.
3. ____ Double click on the **Customize DCAF Target Settings** function (see Figure 1-13 on page 1-9).
4. ____ Click on **Options**, then click on **Password**.

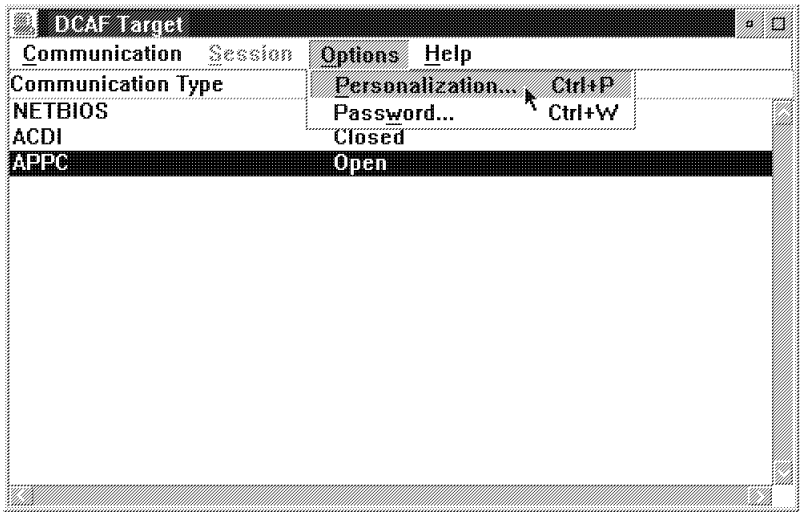


Figure 2-21. DCAF Target

5. ____ Click on **Enable password** then enter the password in the **New password** and **Verify new password** input fields according to the value recorded by the customer on the parameter sheet.

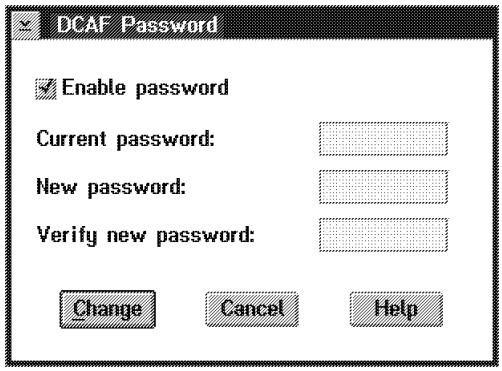


Figure 2-22. DCAF Password

6. ____ Click on **Change**.
7. ____ On the following window, click on **Cancel**, then press **F3** to close DCAF.

Changing the Password for Java Operations

Note

If there is a connection with the Java console, you are not allowed to modify the different parameters of the **Point-to-point Prtocol Configuration** window, and the login passwords of the **Console Configuration for Java** window.

1. ____ If not already logged, enter the **Service Processor maintenance password** (default is IBM3745), or ask the customer if a specific password has been defined.
2. ____ Double click on the **Service Processor** icon.
3. ____ Click on **Configuration management**.
4. ____ Double click on **SP Customization**.
5. ____ Select **Enable Console Link Operations for Java** and click on **Next>>**.

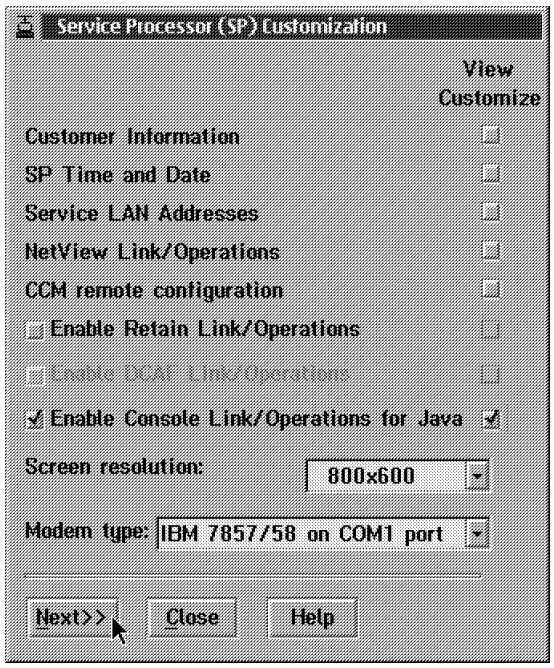


Figure 2-23. Service Processor (SP) Customization

6. ____ On the **Point-to-Point Protocol Configuration** window to change the **PPP password** click on . **View/Change Passwords**.

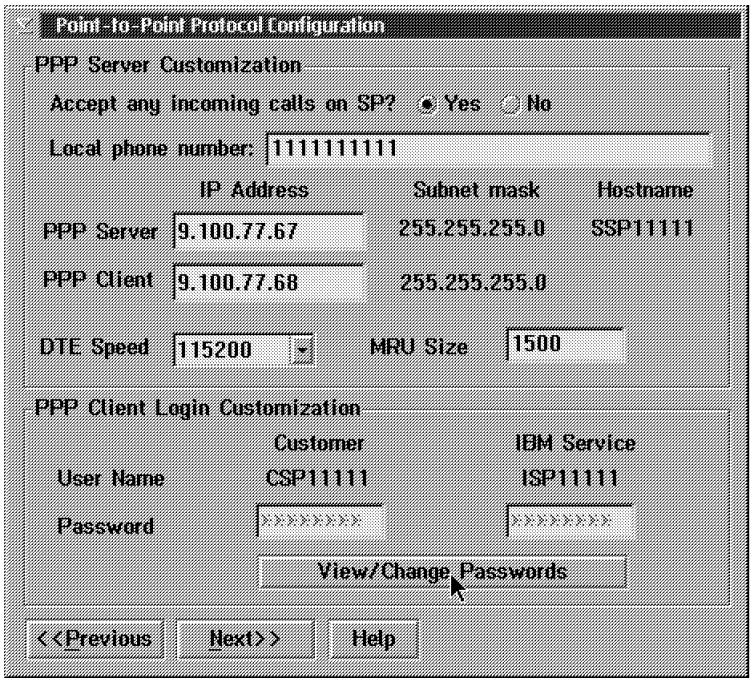


Figure 2-24. Point-to-Point Protocol Configuration

7. ____ The following window is displayed. Enter the password then click on **OK**.

Figure 2-25. Manage Passwords

8. ____ The **Point-to-Point Protocol Configuration** window is again displayed. Click on **Next>>**.
9. ____ The **Console Configuration for Java** window is displayed. To change the password click on **View/Change Passwoprds**.

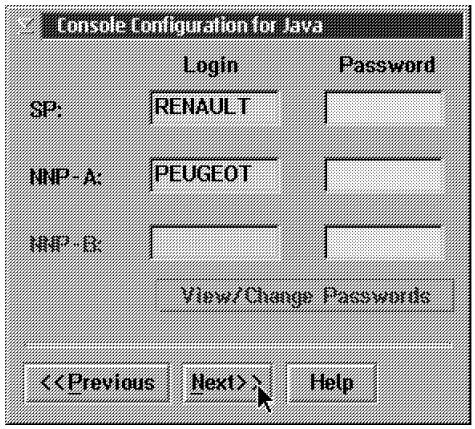


Figure 2-26. Console Configuration for Java

10. ____ The following window is displayed. Enter the password then click on **OK**.

Figure 2-27. Manage Passwords

11. ____ On the windows displayed click on **Next >>**, then on **Close**.
12. ____ Wait until the message *Service Processor customization successfully completed* is displayed, then on click on **OK** to leave.

Changing the Password for CCM Remote

Note

If there is a connection with the Java console, you are not allowed to modify the login and password of the **CCM remote configuration** window.

1. ____ If not already logged, enter the **Service Processor maintenance password** (default is IBM3745), or ask the customer if a specific password has been defined.
2. ____ Double click on the **Service Processor** icon.
3. ____ Click on **Configuration management**.
4. ____ Double click on **SP Customization**.
5. ____ Select **CCM Remote Configuration** and click on **Next>>**.

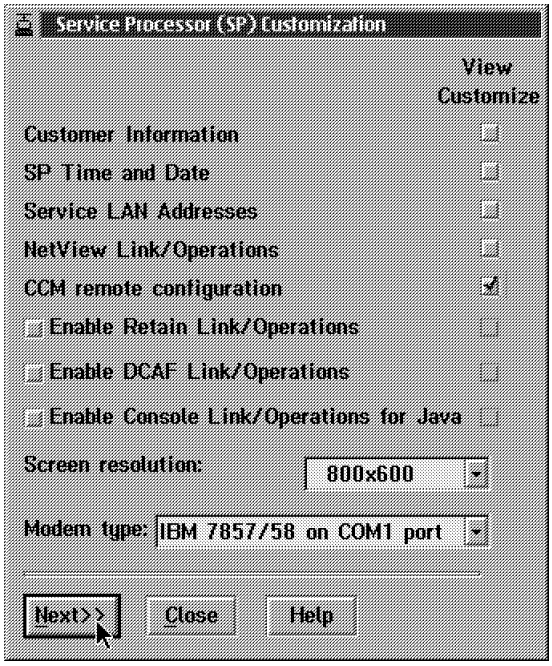


Figure 2-28. Service Processor (SP) Customization

6. ____ On the **CCM remote operation** click on **Customize**.

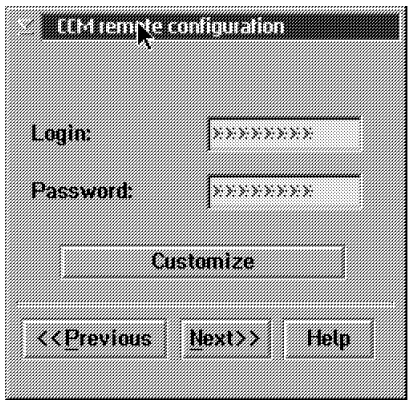


Figure 2-29. CCM Remote Configuration

7. ____ The following window is displayed. Enter the password then click on **OK**.

Figure 2-30. Manage Passwords

8. On the windows displayed, click on **Next>>**, then on **Close**.

Restoring the Passwords to the Default Values

Notes

1. This function is used when the customer has lost his passwords or when the number of unsuccessful logon attempts has reached the maximum number defined, or when reloading the hard disk.
2. If you have a **backup** Service Processor do not forget to restore the passwords on this Service Processor using the same procedure.

1. ____ If you are on the MOSS-E logon window, click on **Cancel**.
2. ____ On the MOSS-E view window, click on **Program** (see Figure 1-4 on page 1-3).
3. ____ From the pull down menu, click on **Restore password**.
4. ____ When requested install the **Service Processor installation diskette 1** in the diskette drive, then follow the prompts.

The passwords are now restored to their default value (*IBM3745*), and the number of logon attempts is reset.

Chapter 3. Managing the Network Node Processor and the Control Point

Note

In this chapter there is no information about the multiaccess enclosure, If a MAE is installed, refer to *Multiaccess Enclosure Installation and Maintenance Guide*, SY33-2124 chapter 'Maintaining the Code on the MAE'.

Installing or Removing a Network Node Processor

1. ____ Double click on the **3746-9x0** icon.
2. ____ Click on the **Network Node Processor (NNP) Management** option.
3. ____ Double click on **Install/Remove/Change/Restore LIC/NNP** .

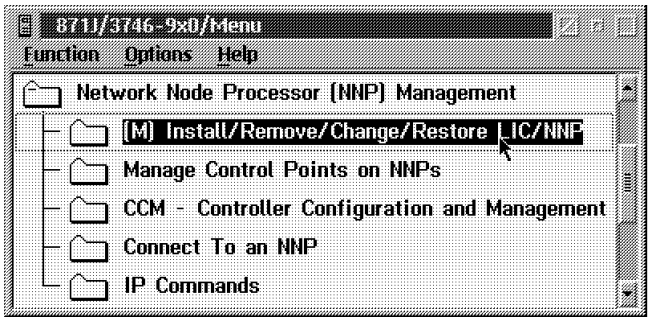


Figure 3-1. NNP-A Licensed Internal Code Management

4. ____ Select the NNP (A or B) then click on **Install NNP** or **Remove NNP**.

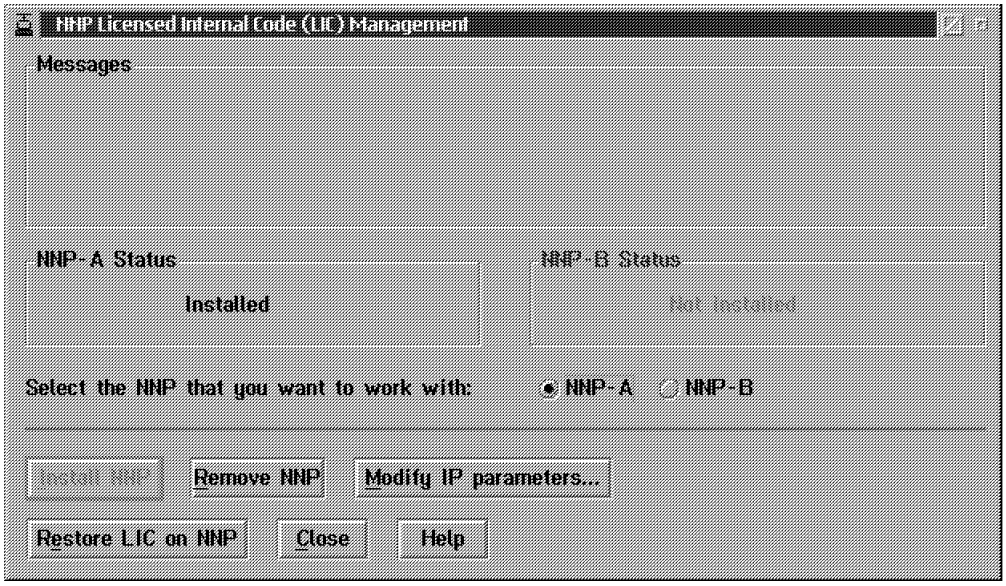


Figure 3-2. Installing or Removing a NNP-A

Installing a New Version of the LIC on a Network Node Processor

Important Note

The installation procedures depends on the level of the code and the hardware currently installed and the level of the code to be installed.

Use the installation instructions shipped with the microcode to upgrade the LIC of the network node processor.

A copy of the installation instructions can be obtained from the web site: **http://www.networking.ibm.com/**.

Restoring the LIC on Service Processor and Network Node Processor

Note: This function is **not disruptive** as it applies on the LIC loaded on the non-active partition. This function can be used to reload a back level of code.

1. ____ Double click on the **Service Processor** icon.
2. ____ Click on **Change Management** option.

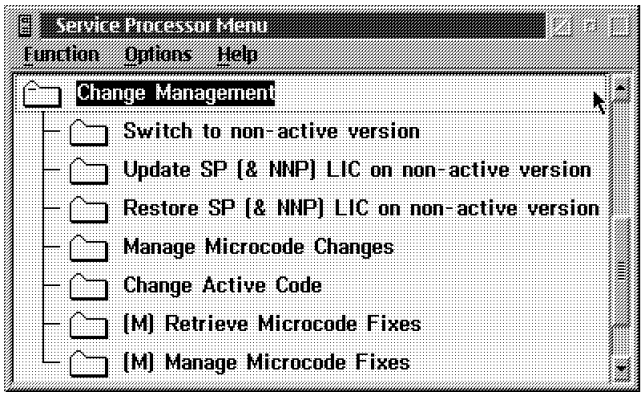


Figure 3-3. SP Change Management Menu

3. ____ Insert the CD-ROM into the CD disk drive and the configuration diskette into the diskette drive. Double click on **Restore SP (&NNP) LIC on non-active version**, then follow the prompts.

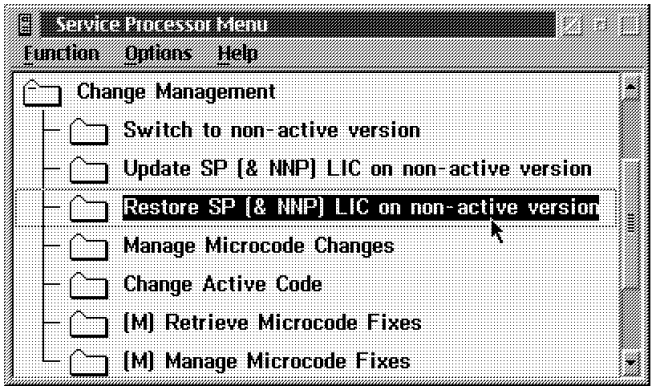


Figure 3-4. Service Processor Menu

4. ____ Then to activate the changes, use the function 'toggle to non-active version' to load and execute the new code in the processors (refer to “Switch to Non-active Version of Code” on page 3-5).

   Note: If an NNP backup is installed, its code is also restored automatically.

Switch to Non-active Version of Code

Notes

1. This function is **disruptive** and it is used to switch the non-active partition and the active partition. It reboots the SP and the NNPs (if any). Use this function after a LIC upgrade or a LIC reload to load the processors with the new LIC.
2. It applies only on SP/NNP running LIC EC **F12380 and above** (using CD drive).

1. ____ Double click on the **Service Processor** icon.
2. ____ Click on **Change Management**.

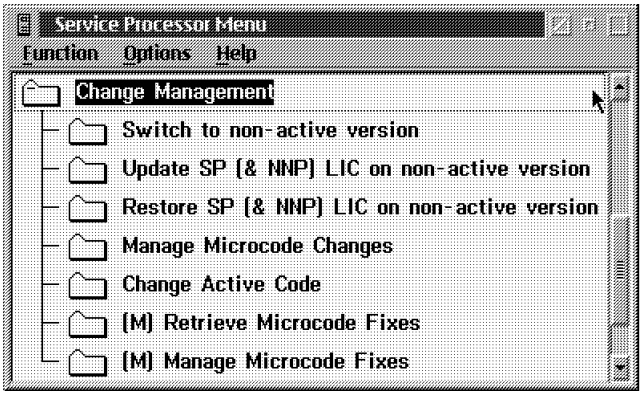


Figure 3-5. SP Change Management Menu

3. ____ Double click on **Switch to non-active version**.

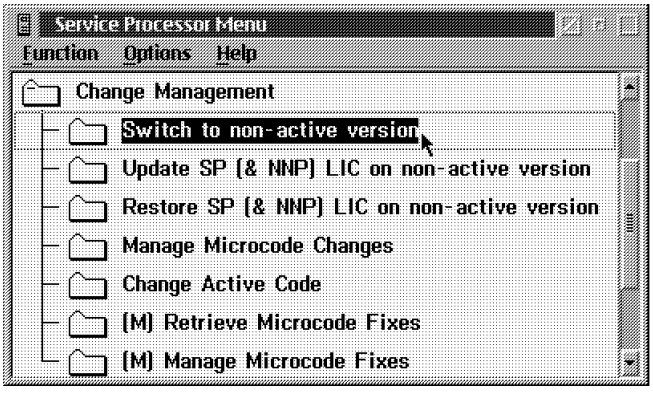


Figure 3-6. Service Processor Menu

4. ____ The following window is displayed, follow the prompts.

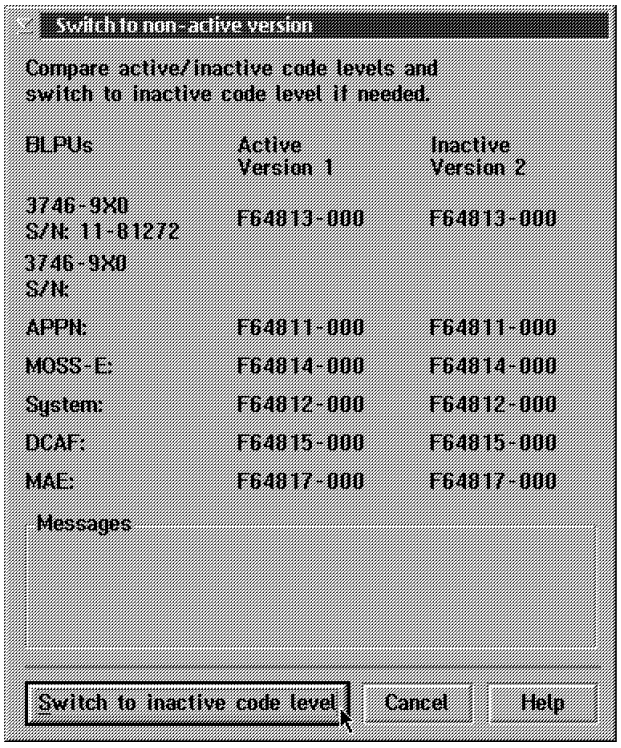


Figure 3-7. Switch to Non-active Version

Notes:

a. If an NNP backup is installed, its active code is also switched to the non-active version.

b. If you have an MAE installed you have to do a **Change LIC on MAE** in order to update the MAE code (see Figure 2-1 on page 2-2), and **IML** the 3746-9x0.

Modifying IP Parameters

Note: Modification of IP paremters can be done in the using the **Service Processor Customization** window, see the appropriate *Service Processor Installation and Maintenance* manual.

1. ____ Double click on the **3746-9x0** icon.
2. ____ Click on the **Network Node Processor (NNP) Management** option.
3. ____ Double click on **Install/Remove/Change/Restore LIC/NNP** .

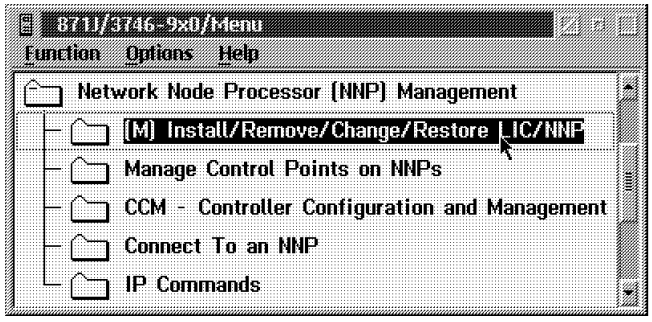


Figure 3-8. NNP Licensed Internal Code Management

4. ____ Select the NNP (A or B) then click on **Modify IP Parameters...**

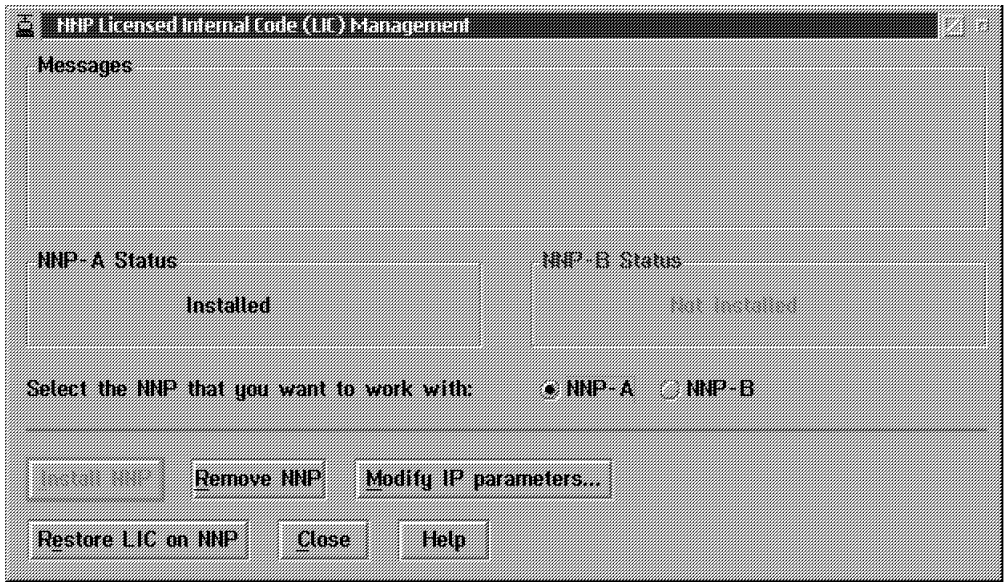


Figure 3-9. Modifying IP Parameters

5. ____ On this screen you can modify the IP address and Subnet mask parameters (press Help pushbutton for details).

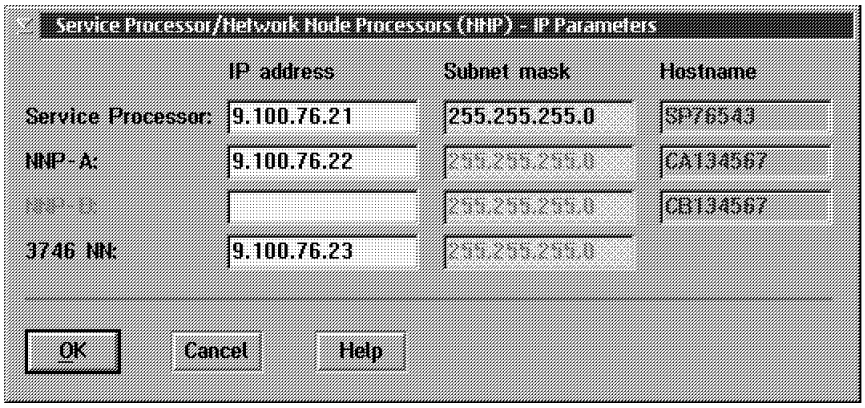


Figure 3-10. IP Parameters

Managing the Control Point on NNP

1. ____ Double click on the **3746-9x0** icon.
2. ____ Click on the **Network Node Processor (NNP) Management** option.
3. ____ Double click on **Manage Control Point on NNPs**.

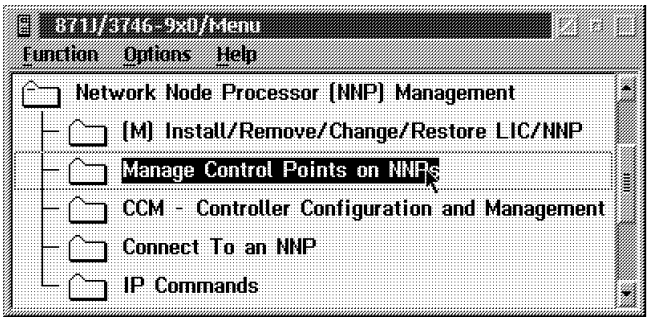


Figure 3-11. Manage Control Point on NNPs

4. ____ From this screen, select the NNP (A or B) then you are able to:
   a. Start, stop, or stop and restart a control point
   b. Activate a specific configuration
   c. Take a dump of a control point
   d. Shutdown and restart a NNP
   e. Manage NPM configuration.

   Note: Press help pushbutton to get details.

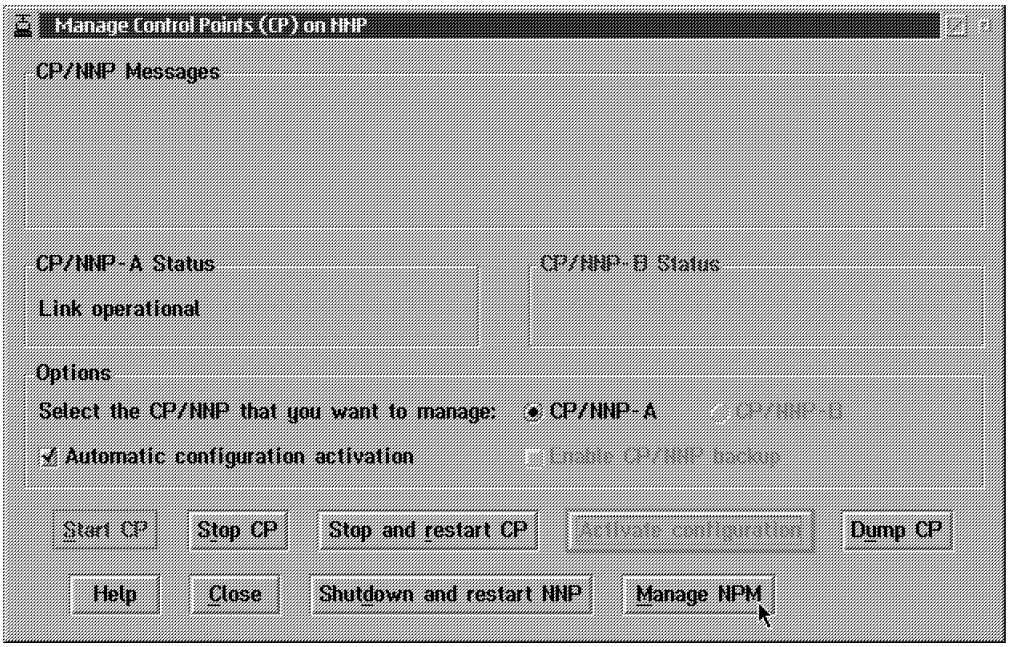


Figure 3-12. Managing the Control Point and NNPs

Importing a Configuration

CCM will be used mainly by the CE to import or export a configuration, for more details refer to *3746 Nways Multiprotocol Controller Model 900 and 950: Controller Configuration and Management: User's Guide*, SH11-3081.

1. ____ Double click on the **3746-9x0** icon.
2. ____ Click on the **Network Node Processor (NNP) Management** option.
3. ____ Double click on **Controller Configuration and Management (CCM)**.

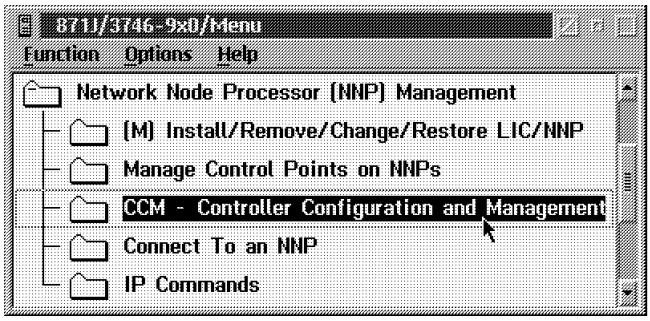


Figure 3-13. CCM

4. ____ Click **File**, in the title bar, then double click on **Import a configuration** .

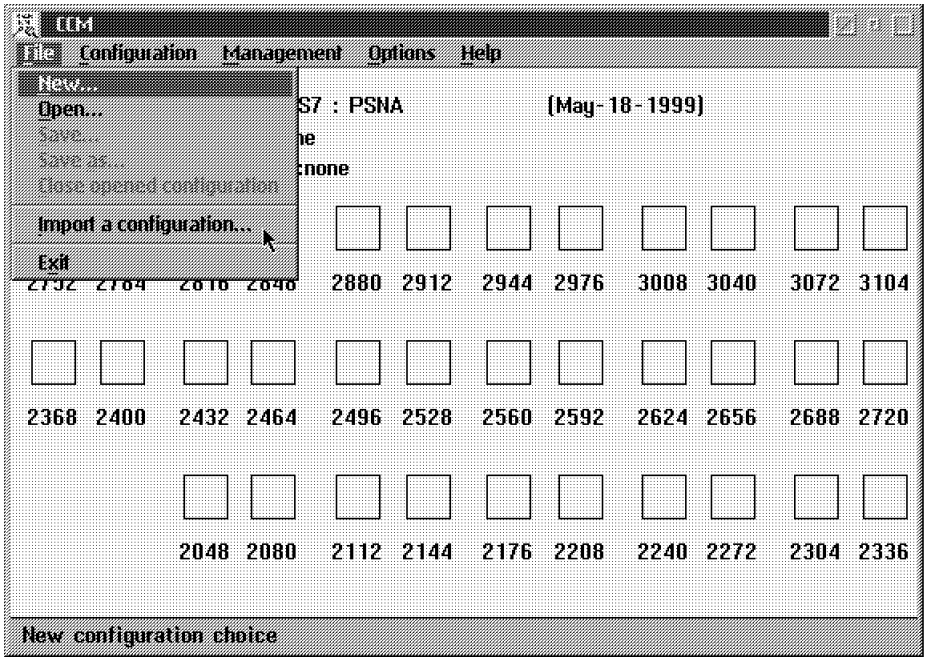


Figure 3-14. Importing a Configuration

5. ____ Insert a diskette in drive A, then click on **OK**.

Exporting a Configuration

1. ____ Double click on the **3746-9x0** icon.
2. ____ Click on the **Network Node Processor (NNP) Management** option.
3. ____ Double click on **CCM - Controller Configuration and Management**.

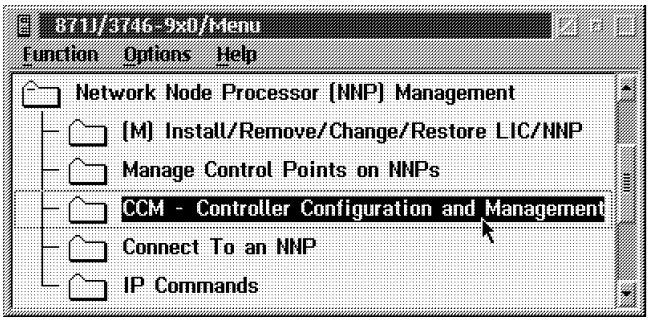


Figure 3-15. CCM

4. ____ Click on **file**, in the title bar, then click on **Open**.

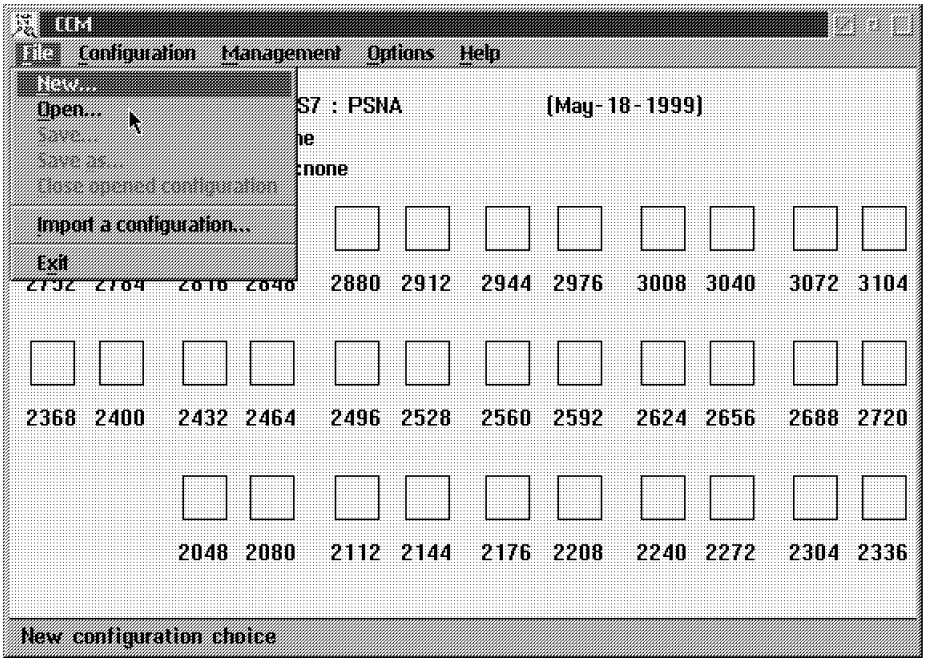


Figure 3-16. Selecting a Configuration

5. ____ Select the configuration to be exported, then click on **Export**.

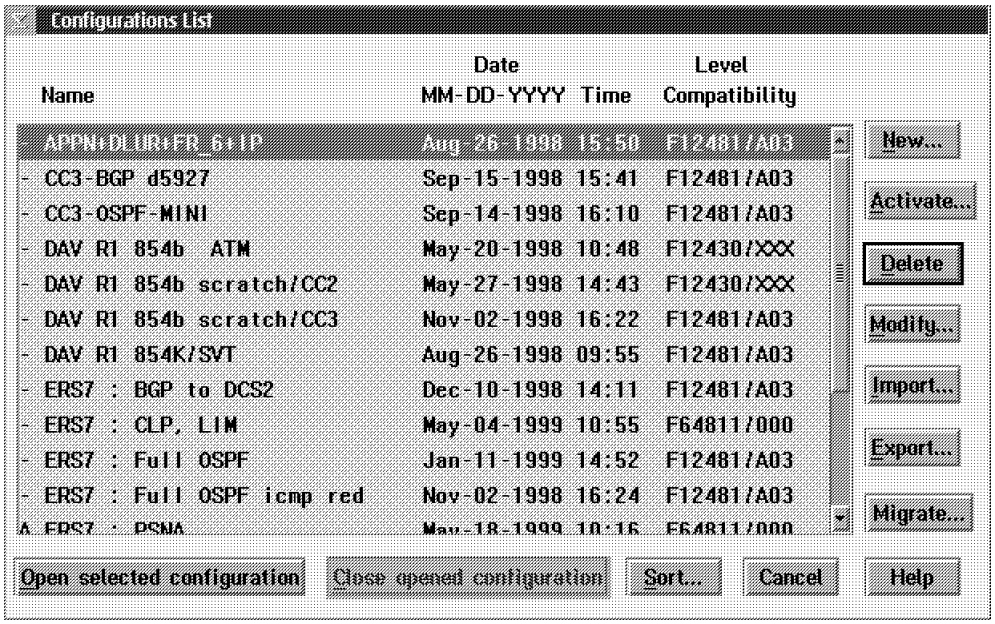


Figure 3-17. Exporting a Configuration

6. ____ Insert a diskette in drive A, then click on **OK**.

Accessing a Network Node Processor

1. ____ Double click on the **3746-9x0** icon.
2. ____ Click on the **Network Node Processor (NNP) Management** option.
3. ____ Double click on **Connect to an NNP**.

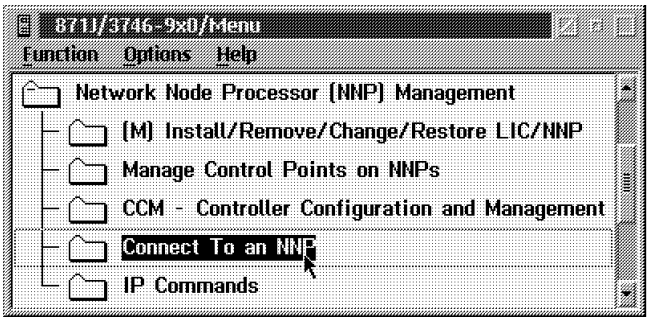


Figure 3-18. Accessing a NNP

4. ____ On the following screen, select the NNP (A or B) then click on **Connect**.

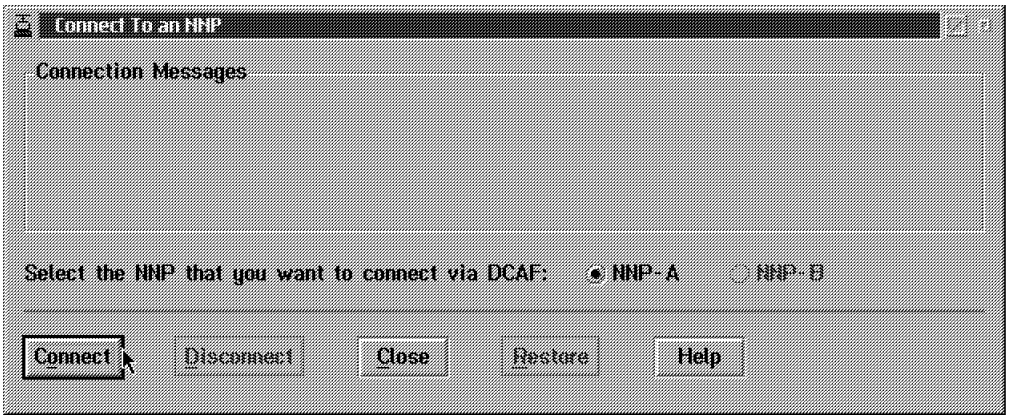


Figure 3-19. Connecting to a NNP

5. ____ Click on **NNP Management - Functions to use**.

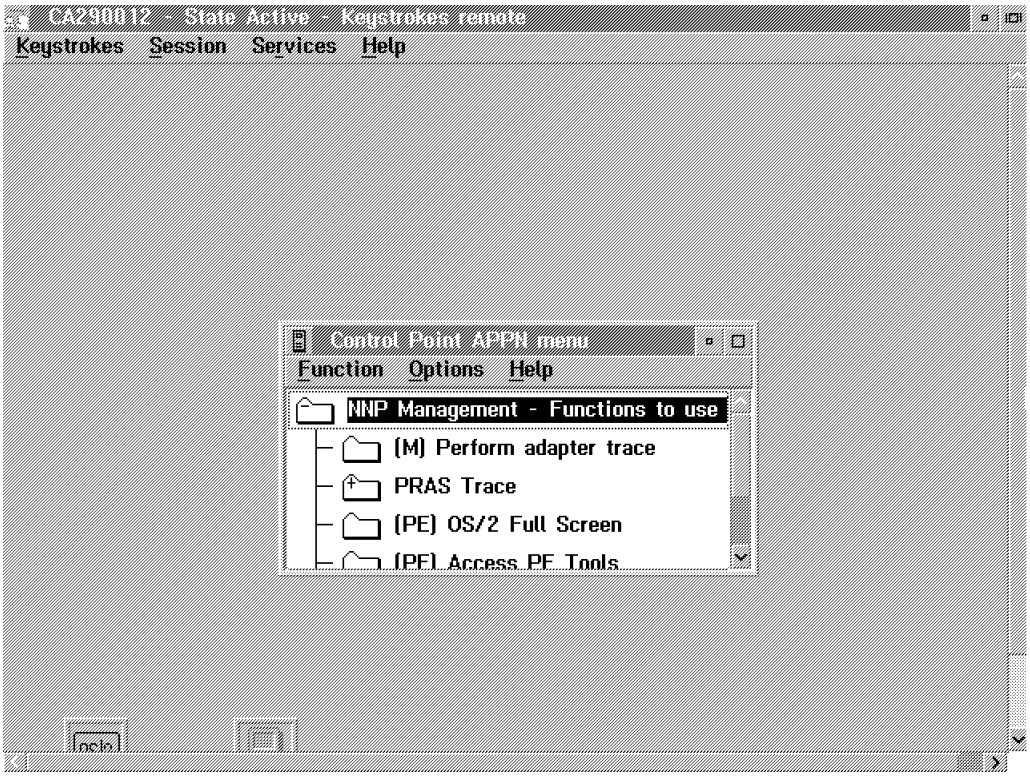


Figure 3-20. NNP Functions

6. ____ Click on **Session**, and click on **Terminate** to close a session.

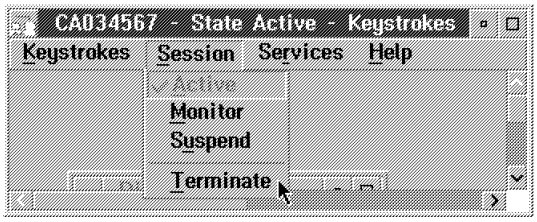


Figure 3-21. Terminating a Session

Accessing IP Commands from the MOSS-E

1. ____ Double click on the **3746-9x0** icon.
2. ____ Click on the **Network Node Processor (NNP) Management** option.
3. ____ Double click on **IP Commands**.

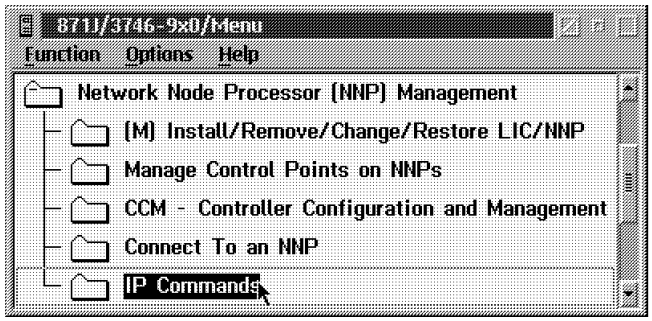


Figure 3-22. Accessing IP Commands

4. ____ On the following screen, enter the user ID and password (defaults are NNPIP and 37469X0A), then click on **enter**.
   You are now able to navigate within the internet protocol environment (for details refer to the *3745/17A-61A and 3746-900 Basic Operations Guide*, SA33-0177 or *3746 Nways Multiprotocol Controller Model 950: User's Guide*, SA33-0356).

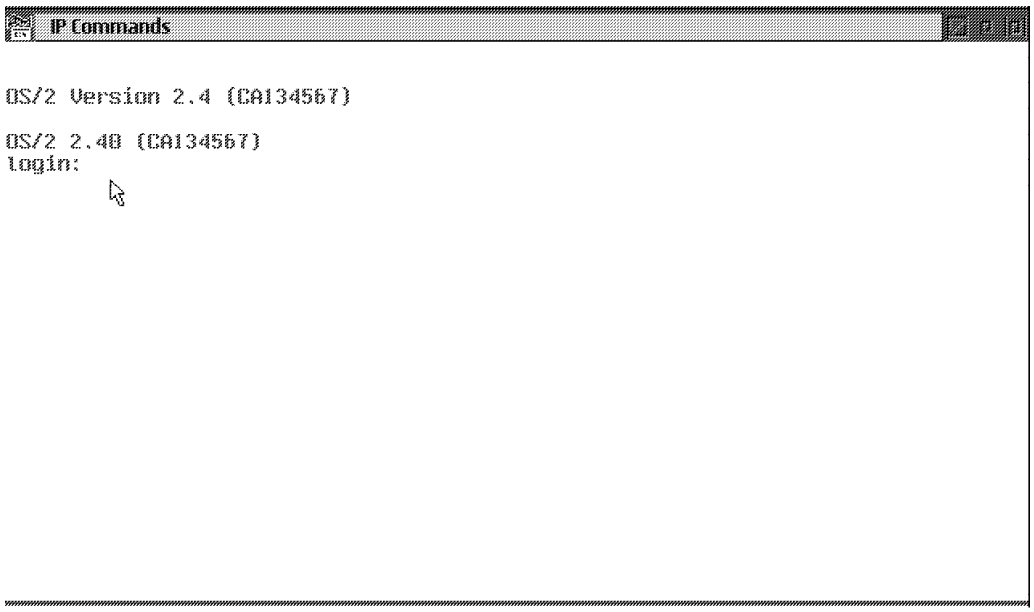


Figure 3-23. IP Commands Window

Appendix A. Bibliography

Customer Documentation for the 3746 Model 950

Table A-1 (Page 1 of 5). Customer Documentation for the 3746 Model 950

This customer documentation has the following formats:

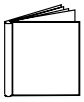
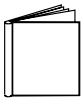
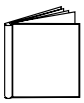
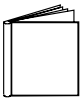
Finding Information		
		3745 Models A and 3746 Books All of the books in the 3745 Models A and 3746 library are available on the CD-ROM that contains the Licensed Internal Code (LIC) for the machine.
Preparing for Operation		
	GA33-0400	***IBM 3745 Communication Controller All Models***[1] ***IBM 3746 Expansion Unit Model 900*** ***IBM 3746 Nways Multiprotocol Controller Model 950*** ***Safety Information***[2] Provides general safety guidelines.
Evaluating and Configuring		
	GA33-0180	***IBM 3745 Communication Controller Models A and 170***[3] ***IBM 3746 Nways Multiprotocol Controller*** ***Models 900 and 950*** ***Overview*** Gives an overview of connectivity capabilities within SNA, APPN, and IP networking.
	GA27-4234	***IBM 3745 Communication Controller Models A***[2] ***IBM 3746 Nways Multiprotocol Controller*** ***Models 900 and 950*** ***Planning Series:*** ***Overview, Installation, and Integration*** Provides information for: • Overall 3746 planning • Installation and upgrade scenarios • Controller and service processor network integration • Related MOSS-E and CCM worksheets for these tasks.

Table A-1 (Page 2 of 5). Customer Documentation for the 3746 Model 950



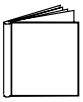
GA27-4235

IBM 3745 Communication Controller Models A[2]
IBM 3746 Nways Multiprotocol Controller
Models 900 and 950

Planning Series:
Serial Line Adapters

Provides information for:

- Serial line adapter descriptions
- Serial line adapter line weights and connectivity
- Types of SDLC support
- Configuring X.25 lines
- Performance tuning for frame-relay, PPP, X.25, and NCP lines.
- ISDN adapter description and configuration.



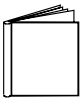
GA27-4236

IBM 3745 Communication Controller Models A[2]
IBM 3746 Nways Multiprotocol Controller
Models 900 and 950

Planning Series:
Token Ring and Ethernet

Provides information for:

- Token-ring adapter description and configuration
- Ethernet adapter description and configuration.



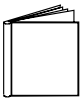
GA27-4237

IBM 3745 Communication Controller Models A[2]
IBM 3746 Nways Multiprotocol Controller
Models 900 and 950

Planning Series:
ESCON Channels

Provides information for:

- ESCON adapter descriptions
- ESCON configuration and tuning information
- ESCON configuration examples.



GA27-4238

IBM 3745 Communication Controller Models A[2]
IBM 3746 Nways Multiprotocol Controller
Models 900 and 950

Planning Series:
Physical Planning

Provides information for:

- 3746 and MAE physical planning details
- 3746 and MAE cable information
- Explanation of installation sheets
- 3746 plugging sheets.

Table A-1 (Page 3 of 5). Customer Documentation for the 3746 Model 950

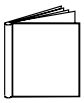
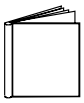
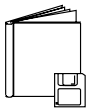
	GA27-4239	***IBM 3745 Communication Controller Models A²*** ***IBM 3746 Nways Multiprotocol Controller*** ***Models 900 and 950*** ***Planning Series:*** ***Management Planning*** Provides information for: • Overview for 3746 • 3746 APPN/HPR, IP router, and X.25 • NetView Performance Monitor (NPM), remote consoles, and RSF • MAE APPN/HPR management.
	GA27-4240	***IBM 3745 Communication Controller Models A²*** ***IBM 3746 Nways Multiprotocol Controller*** ***Models 900 and 950*** ***Planning Series:*** ***Multiaccess Enclosure Planning*** Provides information for: • MAE adapters details • MAE ESCON planning and configuration • ATM and ISDN support.
	GA27-4241	***IBM 3745 Communication Controller Models A²*** ***IBM 3746 Nways Multiprotocol Controller*** ***Models 900 and 950*** ***Planning Series:*** ***Protocols Description*** Provides information for: • Overview and details about APPN/HPR and IP.
	On-line information	***IBM 3745 Communication Controller Models A²*** ***IBM 3746 Nways Multiprotocol Controller*** ***Models 900 and 950*** ***Planning Series:*** ***Controller Configuration and Management Worksheets*** Provides planning worksheets for ESCON, Multiaccess Enclosure, serial line, and token-ring definitions.

Table A-1 (Page 4 of 5). Customer Documentation for the 3746 Model 950

Operating and Testing



SA33-0356

IBM 3746 Nways Multiprotocol Controller Model 950

User's Guide[2]

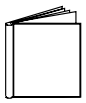
Explains how to:

- Carry out daily routine operations on Nways controller
- Install, test, and customize the Nways controller after installation
- Configure user's workstations to remotely control the service processor using:
  - DCAF program
  - Telnet client program
  - Java Console support.

On-line information

Controller Configuration and Management Application

Provides a graphical user interface for configuring and managing a 3746 APPN/HPR network node and IP Router, and its resources.
It is also available as a stand-alone application, using an OS/2 workstation.
Defines and explains all the 3746 Network Node and IP Router configuration parameters through its on-line help.

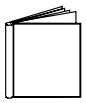


SH11-3081

IBM 3746 Nways Multiprotocol Controller Models 900 and 950

Controller Configuration and Management: User's Guide[2]

Explains how to use CCM and gives examples of the configuration process.



GA33-0479

IBM 3745 Communication Controller Models A
IBM 3746 Nways Multiprotocol Controller Models 900 and 950

NetView Console
APPN Command Reference Guide

Explains how to use the RUN COMMAND from the NetView S/390 Program and gives examples.

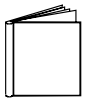
Managing Problems

On-line information

Problem Analysis Guide

An on-line guide to analyze alarms, events, and control panel codes on:

- IBM 3745 Communication Controller Models A[3]
- IBM 3746 Nways Multiprotocol Controller Models 900 and 950.



SA33-0175

IBM 3745 Communication Controller Models A[3]
IBM 3746 Expansion Unit Model 900
IBM 3746 Nways Multiprotocol Controller Model 950

Alert Reference Guide

Provides information about events or errors reported by alerts for:

- IBM 3745 Communication Controller Models A[3]
- IBM 3746 Nways Multiprotocol Controller Models 900 and 950.

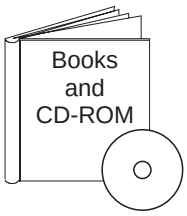
Table A-1 (Page 5 of 5). Customer Documentation for the 3746 Model 950

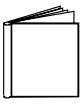
[1] Models 130 to 61A.
[2] Documentation shipped with the 3746-950
[3] 3745 Models 17A to 61A.

Service Documentation for the IBM 3746 Model 950

Table A-2 (Page 1 of 3). Service Documentation for the 3746 Model 950

This service documentation has the following formats:



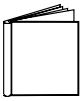


SY33-2107

IBM 3746 Nways Multiprotocol Controller Model 950

Installation Guide[1]

Provides instructions for installing or relocating the Nways Controller.

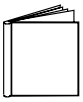


SY33-2108

IBM 3746 Nways Multiprotocol Controller Model 950

Service Guide[1]

Provides procedures for isolating and fixing the IBM 3746-950 problems.

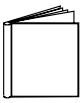


SY33-2115

IBM 3745 Communication Controller Models A[2]
IBM 3746 Expansion Unit Model 900
IBM 3746 Nways Multiprotocol Controller Model 950

Service Processor Installation and Maintenance[3]
(Based on the 7585, 3172, 9585, or 9577)

Provides information on installing and maintaining the service processor based on PS/2 Types 7585, 3172, 9585, or 9577. Can be for systems with microcode that has up to and including EC D46130 (any level) installed.

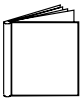


SY33-2120

IBM 3745 Communication Controller Models A[3]
IBM 3746 Expansion Unit Model 900
IBM 3746 Nways Multiprotocol Controller Model 950

Service Processor Installation and Maintenance[4]
(Based on the 7585, 3172, or 9585)

Provides information on installing and maintaining the service processor based on PS/2 Types 7585, 3172, or 9585. Can be for systems with microcode EC F12380 or higher installed.



SY33-2125

IBM 3745 Communication Controller Models A[3]
IBM 3746 Expansion Unit Model 900
IBM 3746 Nways Multiprotocol Controller Model 950

Service Processor Installation and Maintenance[4]
(Based on 6275)

Provides information on installing and maintaining the service processor based on PS/2 Type 6275. Can be for systems with microcode EC F12380 or higher installed.

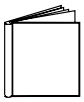
Table A-2 (Page 2 of 3). Service Documentation for the 3746 Model 950

SY33-2118

IBM 3746 Nways Multiprotocol Controller Models 900 and 950

***Multiaccess Enclosure Installation and Maintenance*[4]**

Provides information on installing and maintaining the Multiaccess Enclosure (MAE).

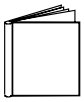


SY33-2124

IBM 3746 Nways Multiprotocol Controller Models 900 and 950

***Multiaccess Enclosure Installation and Maintenance*[4]**
(Starting from EC F12430 and Above)

Provides information on installing and maintaining the Multiaccess Enclosure (MAE). For systems with microcode EC F12430 or higher installed.



SY33-2112

IBM 3746 Nways Multiprotocol Controller
Models 900 and 950

***Network Node Processor Installation and Maintenance*[3]**
(Based on the 7585 or 3172)

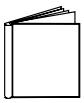
Provides information on installing and maintaining the network node processor based on the PS/2 Type 7585 or 3172.

SY33-2126

IBM 3746 Nways Multiprotocol Controller
Models 900 and 950

***Network Node Processor Installation and Maintenance*[3]**
(Based on 6275)

Provides information on installing and maintaining the network node processor based on the PS/2 Type 6275.

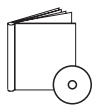


SY33-2127

***IBM 3745 Communication Controller Models A*[3]**
IBM 3746 Expansion Unit Model 900
IBM 3746 Nways Multiprotocol Controller Model 950

***Service Processor and Network Node Processor*[4]**
Service User's Guide

Provides information on installing and maintaining the operational code on service processor, or network node processor.
Can be for systems with microcode EC F12380 or higher installed.

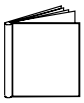


SY33-2117

IBM 3746 Nways Multiprotocol Controller
Models 900 and 950

***External Cable Reference*[4]**

Provides references to console and line cables used for connecting the IBM 3746 Models 900 and 950.



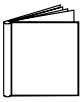
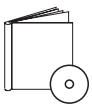
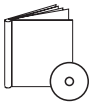
S135-2015

IBM 3746 Nways Multiprotocol Controller
Models 900 and 950

***Parts Catalog*[4]**

Provides reference information for ordering parts for the IBM 3746 Models 900 and 950.

Table A-2 (Page 3 of 3). Service Documentation for the 3746 Model 950

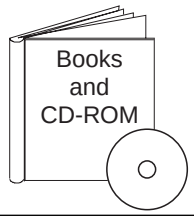
	S135-2014	***IBM Controller Expansion*** ***Parts Catalog*** Provides reference information for ordering parts for the controller expansion attached to the IBM 3745 Models A[2], and 3746 Models 900 and 950.
CD-ROM Bibliography		
	ZK2T-8214	***IBM Networking*** ***Softcopy Collection Kit*** Allows service manuals consulting via CD-ROM viewer. EMEA version.
	ZK2T-8187	***IBM Networking*** ***Softcopy Collection Kit*** Allows service manuals consulting via CD-ROM viewer. US version.

[1] Documentation shipped with the 3746 Model 950
[2] 3745 Models 17A to 61A
[3] Documentation shipped with the processor
[4] Documentation shipped with the 3746 Models 900 and 950

Customer Documentation for the 3745 (All Models), and 3746 (Model 900)

Table A-3 (Page 1 of 6). Customer Documentation for the 3745 Models X10 and X1A, and 3746 Model 900

This customer documentation has the following formats:

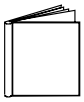


Finding Information

3745 Models A and 3746 Books

All of the books in the 3745 Models A and 3746 library are available on the CD-ROM that contains the Licensed Internal Code (LIC) for the machine.

Evaluating and Configuring



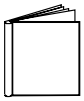
GA33-0092

IBM 3745 Communication Controller
Models 210, 310, 410, and 610

Introduction

Gives an introduction of the IBM Models 210 to 610 capabilities.

For Models A, refer to the *Overview*, GA33-0180.

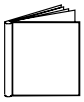


GA33-0180

IBM 3745 Communication Controller Models A and 170[2]
IBM 3746 Nways Multiprotocol Controller
Models 900 and 950

Overview

Gives an overview of connectivity capabilities within SNA, APPN, and IP networking.



GA27-4234

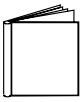
IBM 3745 Communication Controller Models A[2]
IBM 3746 Nways Multiprotocol Controller
Models 900 and 950

Planning Series:
Overview, Installation, and Integration

Provides information for:

- Overall 3746 planning
- Installation and upgrade scenarios
- Controller and service processor network integration
- Related MOSS-E and CCM worksheets for these tasks.

Table A-3 (Page 2 of 6). Customer Documentation for the 3745 Models X10 and X1A, and 3746 Model 900



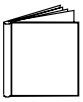
GA27-4235

IBM 3745 Communication Controller Models A2
IBM 3746 Nways Multiprotocol Controller
Models 900 and 950

Planning Series:
Serial Line Adapters

Provides information for:

- Serial line adapter descriptions
- Serial line adapter line weights and connectivity
- Types of SDLC support
- Configuring X.25 lines
- Performance tuning for frame-relay, PPP, X.25, and NCP lines.
- ISDN adapter description and configuration.



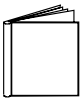
GA27-4236

IBM 3745 Communication Controller Models A2
IBM 3746 Nways Multiprotocol Controller
Models 900 and 950

Planning Series:
Token Ring and Ethernet

Provides information for:

- Token-ring adapter description and configuration
- Ethernet adapter desription and configuration.



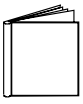
GA27-4237

IBM 3745 Communication Controller Models A2
IBM 3746 Nways Multiprotocol Controller
Models 900 and 950

Planning Series:
ESCON Channels

Provides information for:

- ESCON adapter descriptions
- ESCON configuration and tuning information
- ESCON configuration examples.



GA27-4238

IBM 3745 Communication Controller Models A2
IBM 3746 Nways Multiprotocol Controller
Models 900 and 950

Planning Series:
Physical Planning

Provides information for:

- 3746 and MAE physical planning details
- 3746 and MAE cable information
- Explanation of installation sheets
- 3746 plugging sheets.

Table A-3 (Page 3 of 6). Customer Documentation for the 3745 Models X10 and X1A, and 3746 Model 900

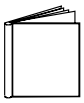
GA27-4239

IBM 3745 Communication Controller Models A²
IBM 3746 Nways Multiprotocol Controller
Models 900 and 950

Planning Series:
Management Planning

Provides information for:

- Overview for 3746
- 3746 APPN/HPR, IP router, and X.25
- NetView Performance Monitor (NPM), remote consoles, and RSF
- MAE APPN/HPR management.



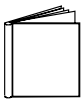
GA27-4240

IBM 3745 Communication Controller Models A²
IBM 3746 Nways Multiprotocol Controller
Models 900 and 950

Planning Series:
Multiaccess Enclosure Planning

Provides information for:

- MAE adapters details
- MAE ESCON planning and configuration
- ATM and ISDN support.



GA27-4241

IBM 3745 Communication Controller Models A²
IBM 3746 Nways Multiprotocol Controller
Models 900 and 950

Planning Series:
Protocols Description

Provides information for:

- Overview and details about APPN/HPR and IP.

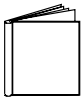
On-line information

IBM 3745 Communication Controller Models A²
IBM 3746 Nways Multiprotocol Controller
Models 900 and 950

Planning Series:
Controller Configuration and Management Worksheets

Provides planning worksheets for ESCON, Multiaccess Enclosure, serial line, and token-ring definitions.

Preparing Your Site



GC22-7064

IBM System/360™, System/370™, 4300 Processor

Input/Output Equipment Installation Manual-Physical Planning
(Including Technical News Letter GN22-5490)

Provides information for physical installation for the 3745 Models 130 to 610.

For 3745 Models A and 3746 Model 900, refer to the *Planning Guide*, GA33-0457.

Table A-3 (Page 4 of 6). Customer Documentation for the 3745 Models X10 and X1A, and 3746 Model 900

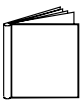
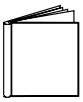
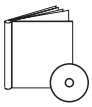
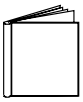
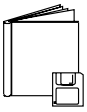
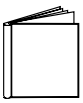
	GA33-0127	***IBM 3745 Communication Controller Models 210, 310, 410, and 610*** ***Preparing for Connection*** Helps for preparing the 3745 Models 210 to 610 cable installation. For 3745 Models A refer to the *Connection and Integration Guide*, SA33-0129.
Preparing for Operation		
	GA33-0400	***IBM 3745 Communication Controller All Models***[3] ***IBM 3746 Nways Multiprotocol Controller Models 900 and 950*** ***Safety Information***[1] Provides general safety guidelines.
	SA33-0129	***IBM 3745 Communication Controller All Models***[3] ***IBM 3746 Nways Multiprotocol Controller Model 900*** ***Connection and Integration Guide***[1] Contains information for connecting hardware and integrating network of the 3745 and 3746-900 after installation.
	SA33-0416	***Line Interface Coupler Type 5 and Type 6 Portable Keypad Display*** ***Migration and Integration Guide*** Contains information for moving and testing LIC types 5 and 6.
	SA33-0158	***IBM 3745 Communication Controller All Models***[3] ***IBM 3746 Nways Multiprotocol Controller Model 900*** ***Console Setup Guide***[1] Provides information for: • Installing local, alternate, or remote consoles for 3745 Models 130 to 610 • Configuring user workstations to remotely control the service processor for 3745 Models A and 3746 Model 900 using: – DCAF program – Telnet Client program – Java Console support.
Customizing Your Control Program		
	SA33-0178	***Guide to Timed IPL and Rename Load Module*** Provides VTAM procedures for: • Scheduling an automatic reload of the 3745 • Getting 3745 load module changes transparent to the operations staff.
Operating and Testing		

Table A-3 (Page 5 of 6). Customer Documentation for the 3745 Models X10 and X1A, and 3746 Model 900

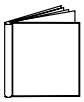
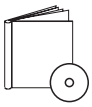
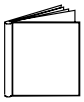
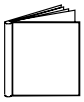
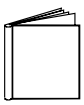
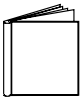
	SA33-0098	***IBM 3745 Communication Controller All Models***[4] ***Basic Operations Guide***[1] Provides instructions for daily routine operations on the 3745 Models 130 to 610.
	SA33-0177	***IBM 3745 Communication Controller Models A***[2] ***IBM 3746 Nways Multiprotocol Controller Model 900*** ***Basic Operations Guide***[1] Provides instructions for daily routine operations on the 3745 Models 17A to 61A, and 3746 Model 900 operating as an SNA node (using NCP), APPN/HPR Network Node, and IP Router.
	SA33-0097	***IBM 3745 Communication Controller All Models***[3] ***Advanced Operations Guide***[1] Provides instructions for advanced operations and testing, using the 3745 MOSS console.
	On-line Information	***Controller Configuration and Management Application*** Provides a graphical user interface for configuring and managing a 3746 APPN/HPR Network Node and IP Router, and its resources. It is also available as a stand-alone application, using an OS/2 workstation. Defines and explains all the 3746 Network Node and IP Router configuration parameters through its online help.
	SH11-3081	***IBM 3746 Nways Multiprotocol Controller Models 900 and 950*** ***Controller Configuration and Management: User's Guide***[5] Explains how to use CCM and gives examples of the configuration process.
	GA33-0479	***IBM 3745 Communication Controller Models A*** ***IBM 3746 Nways Multiprotocol Controller Models 900 and 950*** ***NetView Console*** ***APPN Command Reference Guide*** Explains how to use the RUN COMMAND from the NetView S/390 Program and gives examples.
Managing Problems		
	SA33-0096	***IBM 3745 Communication Controller All Models***[3] ***Problem Determination Guide***[1] A guide to perform problem determination on the 3745 Models 130 to 61A.

Table A-3 (Page 6 of 6). Customer Documentation for the 3745 Models X10 and X1A, and 3746 Model 900

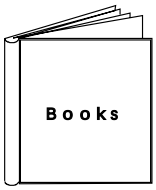
	On-line Information	***Problem Analysis Guide*** An online guide to analyze alarms, events, and control panel codes on: • IBM 3745 Communication Controller Models A[2] • IBM 3746 Nways Multiprotocol Controller Models 900 and 950.
	SA33-0175	***IBM 3745 Communication Controller Models A[2]*** ***IBM 3746 Expansion Unit Model 900*** ***IBM 3746 Nways Multiprotocol Controller Model 950*** ***Alert Reference Guide*** Provides information about events or errors reported by alerts for: • IBM 3745 Communication Controller Models A[2] • IBM 3746 Nways Multiprotocol Controller Models 900 and 950.

[1] Documentation shipped with the 3745.
[2] 3745 Models 17A to 61A.
[3] 3745 Models 130 to 61A.
[4] Except 3745 Models A.
[5] Documentation shipped with the 3746-900.

Additional Customer Documentation for the 3745 Models 130, 150, 160, 170, and 17A

Table A-4. Additional Customer Documentation for the 3745 Models 130 to 17A

This customer documentation has the following format:

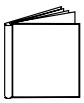


Finding Information

3745 Models A and 3746 Books

All of the books in the 3745 Models A and 3746 library are available on the CD-ROM that contains the Licensed Internal Code (LIC) for the machine.

Evaluating and Configuring



GA33-0138

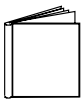
IBM 3745 Communication Controller Models 130, 150, 160, and 170

Introduction

Gives an introduction about the IBM Models 130 to 170 capabilities, including Model 160.

For Model 17A refer to the *Overview*, GA33-0180.

Preparing Your Site



GA33-0140

IBM 3745 Communication Controller Models 130, 150, 160, and 170

Preparing for Connection

Helps for preparing the 3745 Models 130 to 170 cable installation.

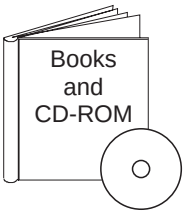
For 3745 Model 17A refer to the *Connection and Integration Guide*, SA33-0129.

[1] Documentation shipped with the 3745.

Service Documentation for the IBM 3745 (Models 210, 21A, 310, 31A, 410, 41A, 610, and 61A) and 3746 (Model 900)

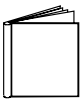
Table A-5 (Page 1 of 4). Service Documentation for the 3745 Models x10 and x1A, and 3746 Model 900

This service documentation has the following formats:



3745 Models A and 3746 Books

All of the books in the 3745 Models A and 3746 library are available on the CD-ROM that contains the Licensed Internal Code (LIC) for the Machine.

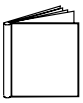


SY33-2057

IBM 3745 Communication Controller
Models 210 to 61A

Installation Guide[1]

Provides instructions for installing or relocating the IBM 3745 Models X10 and X1A.

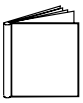


SY33-2114

IBM 3746 Nways Multiprotocol Controller
Model 900

Installation Guide[2]

Provides instructions for installing or relocating a 3746-900.

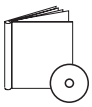


SY33-2116

IBM 3746 Nways Multiprotocol Controller
Model 900

Service Guide[2]

Provides procedures for isolating and fixing the IBM 3746-900 problems.



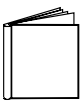
SY33-2055

IBM 3745 Communication Controller
Models 210, 310, 410, and 610

IBM 3746 Expansion Units
Models A11, A12, L13, L14, and L15

Service Functions[1]

Describes MOSS functions using the IBM 3745 Models X10 and X1A consoles.



SY33-2054

IBM 3745 Communication Controller
Models 210 to 61A

Maintenance Information Procedures[1]

Provides procedures for isolating and fixing the IBM 3745 Models X10 and X1A problems.

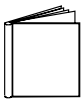
Table A-5 (Page 2 of 4). Service Documentation for the 3745 Models x10 and x1A, and 3746 Model 900

SY33-2115

IBM 3745 Communication Controller Models A[3]
IBM 3746 Expansion Unit Model 900
IBM 3746 Nways Multiprotocol Controller Model 950

Service Processor Installation and Maintenance[4]
(Based on the 7585, 3172, 9585, or 9577)

Provides information on installing and maintaining the service processor based on PS/2 Types 7585, 3172, 9585, or 9577.
Can be for systems with microcode that has up to and including EC D46130 (any level) installed.

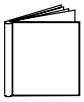


SY33-2120

IBM 3745 Communication Controller Models A[3]
IBM 3746 Expansion Unit Model 900
IBM 3746 Nways Multiprotocol Controller Model 950

Service Processor Installation and Maintenance[4]
(Based on the 7585, 3172, or 9585)

Provides information on installing and maintaining the service processor based on PS/2 Types 7585, 3172, or 9585.
Can be for systems with microcode EC F12380 or higher installed.

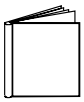


SY33-2125

IBM 3745 Communication Controller Models A[3]
IBM 3746 Expansion Unit Model 900
IBM 3746 Nways Multiprotocol Controller Model 950

Service Processor Installation and Maintenance[4]
(Based on the 6275)

Provides information on installing and maintaining the service processor based on PS/2 Type 6275.
Can be for systems with microcode EC F12380 or higher installed.

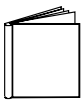


SY33-2127

IBM 3745 Communication Controller Models A[3]
IBM 3746 Expansion Unit Model 900
IBM 3746 Nways Multiprotocol Controller Model 950

Service Processor and Network Node Processor[4]
Service User's Guide

Provides information on installing and maintaining the operational code on service processor, or network node processor.
Can be for systems with microcode EC F12380 or higher installed.



SY33-2118

IBM 3746 Nways Multiprotocol Controller Models 900 and 950

Multiaccess Enclosure Installation and Maintenance[4]

Provides information on installing and maintaining the Multiaccess Enclosure (MAE).

Table A-5 (Page 3 of 4). Service Documentation for the 3745 Models x10 and x1A, and 3746 Model 900

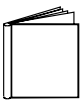
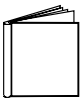
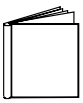
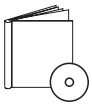
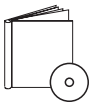
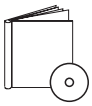
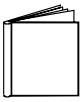
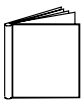
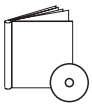
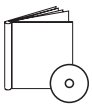
	SY33-2124	***IBM 3746 Nways Multiprotocol Controller Models 900 and 950*** ***Multiaccess Enclosure Installation and Maintenance***[4] (Starting from EC F12430 and Above) Provides information on installing and maintaining the Multiaccess Enclosure (MAE). For systems with microcode EC F12430 or higher installed.
	SY33-2112	***IBM 3746 Nways Multiprotocol Controller Models 900 and 950*** ***Network Node Processor Installation and Maintenance***[4] ***(Based on the 7585 or 3172)*** Provides information on installing and maintaining the network node processor based on the PS/2 Type 7585 or 3172.
	SY33-2126	***IBM 3746 Nways Multiprotocol Controller Models 900 and 950*** ***Network Node Processor Installation and Maintenance***[4] ***(Based on 6275)*** Provides information on installing and maintaining the network node processor based on the PS/2 Type 6275.
	SY33-2056	***IBM 3745 Communication Controller Models 210 to 61A*** ***Maintenance Information Reference***[1] Provides in-depth hardware reference information on the IBM 3745 Models X10 and X1A.
	SY33-2075	***IBM 3745 Communication Controller All Models***[5] ***External Cable References***[1] Provides references to console and line cables used for connecting the IBM 3745 Models 130 to 61A.
	SY33-2117	***IBM 3746 Nways Multiprotocol Controller Models 900 and 950*** ***External Cable Reference***[6] Provides references to console and line cables used for connecting the IBM 3746 Models 900 and 950.
	S135-2015	***IBM 3746 Nways Multiprotocol Controller Models 900 and 950*** ***Parts Catalog***[6] Provides reference information for ordering parts for the IBM 3746 Models 900 and 950.

Table A-5 (Page 4 of 4). Service Documentation for the 3745 Models x10 and x1A, and 3746 Model 900

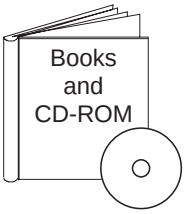
	S135-2010	***IBM 3745 Communication Controller Models 210 to 61A*** ***Parts Catalog***[1] Provides reference information for ordering IBM 3745 Models X10 and X1A parts.
	S135-2014	***IBM Controller Expansion*** ***Parts Catalog*** Provides reference information for ordering parts for the controller expansion attached to the IBM 3745 Models A[3], and 3746 Models 900 and 950.
CD-ROM Bibliography		
	ZK2T-8214	***IBM Networking Softcopy Collection Kit*** Allows service manuals consulting via CD-ROM viewer. EMEA version.
	ZK2T-8187	***IBM Networking Softcopy Collection Kit*** Allows service manuals consulting via CD-ROM viewer. US version.

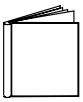
[1] Documentation shipped with the 3745.
[2] Documentation shipped with the 3746-900.
[3] 3745 Models 17A to 61A.
[4] Documentation shipped with the processor.
[5] 3745 Models 130 to 61A.
[6] Documentation shipped with the 3746 Models 900 and 950.

Additional Service Documentation for the IBM 3745 Models 130, 150, 160, 170, and 17A

Table A-6. Additional Service Documentation for the 3745 Models 1x0 and 17A

This service documentation has the following formats:



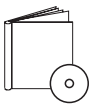


SY33-2067

IBM 3745 Communication Controller Models 130, 150, 160, 170, and 17A

Installation Guide[1]

Provides instructions for installing or relocating the IBM 3745 Models 1X0 and 17A.

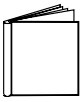


SY33-2069

IBM 3745 Communication Controller Models 130, 150, 160, and 170

Service Functions[1]

Describes MOSS functions using the IBM 3745 Models 1x0 and 17A consoles.

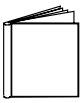


SY33-2070

IBM 3745 Communication Controller Models 130 to 17A

Maintenance Information Procedures[1]

Provides procedures for isolating and fixing the IBM 3745 Models 1X0 and 17A problems.

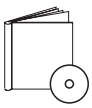


S135-2012

IBM 3745 Communication Controller Models 130 to 17A

Parts Catalog[1]

Provides reference information for ordering IBM 3745 Models 1X0 and 17A parts.



SY33-2066

IBM 3745 Communication Controller Models 130, 150, 160, and 170

Hardware Maintenance Reference[1]

Provides in-depth hardware reference information on the IBM 3745 Models 1X0 and 17A.

[1] Documentation shipped with the 3745.

Glossary

ac. alternating current

ACPW. AC power (box)

AFD. airflow detector

alarm. A message sent to the MOSS 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.

AMD. air moving device

APPN. advanced peer-to-peer networking

ARC. active remote connector

ARC1A1. ARC V.24 DCE attachment with 5 meter tethered cable

ARC1A2. ARC V.24 DCE attachment with 15 meter tethered cable

ARC1B. ARC V.24 DTE attachment with 15 meter tethered cable

ARC1C. ARC V.24 DCE 3745 interface with 5 meter tethered cable

ARC1D. ARC V.24 DTE 3745 interface with 5 meter tethered cable

ARC1E. ARC V.24 3174 AEA interface (1)

ARC1F. ARC V.24 3174 PCA EIA interface (1)

ARC2A. ARC V.25 autocall interface with 5 meter tethered cable

ARC2C. ARC V.25 autocall interface 3745 with 5 meter tethered cable

ARC3A1. ARC V.35 DCE attachment with 5 meter tethered cable

ARC3A2. ARC V.35 DCE attachment with 15 meter tethered cable

ARC3B. ARC V.35 DTE attachment with 15 meter tethered cable

ARC3C. ARC V.35 DCE 3745 interface with 5 meter tethered cable

ARC3D. ARC V.35 DTE 3745 interface with 5 meter tethered cable

ARC4A1. ARC X.21 DCE attachment with 5 meter tethered cable

ARC4A2. ARC X.21 DCE attachment with 15 meter tethered cable

ARC4B. ARC X.21 DTE attachment with 15 meter tethered cable

ARC4C. ARC V.21 DCE 3745 interface with 5 meter tethered cable

ARC4D. ARC V.21 DTE 3745 interface with 5 meter tethered cable

ARC5A. Reserved

ARC5B. Reserved

ARC5C. ARC RS-422 3708 interface (or RJ-11 connection) (1)

ARC5D. ARC RS-422 IBM Cabling System interface (1)

ARC6A. ARC V.25 autocall interface with 15 meter tethered cable

ARC6C. ARC V.25 autocall 3745 interface with 15 meter tethered cable

BA. basic access

BAS. basic board

BATS. basic assurance tests

BER. box event record

BLPU. basic level packaging unit

BMI. bit multiplex interface

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.

bps. bits per second

BSC. binary synchronous communication

BSI. bus synchronism interface

C. Celsius

C&SM. customer and service information

CA. channel adapter

cache. A high-speed buffer storage that contains frequently accessed instructions and data; it is used to reduce access time.

CB. circuit breaker

CBA. controller bus adapter

CBC. controller bus coupler

CBR. circuit burst request

CBSA. controller bus and service adapter (CBSP+CBC+TIC3)

CBSP. controller bus and service processor

CBTRA. controller bus and token-ring adapter (TRP+CBC+TIC3)

CBTRM. cable terminator (IOC and DMA buses)

CCITT. Comite Consultatif International Telephonique et telegraphique

CCU. central control unit

CDF. configuration data file (3745)

CDF-E. configuration data file extended (37CS)

CE. customer engineer

CEPT. Comite Europeen des Postes et Telecommunications

CLA. communication line adapter (CLP+LICnn)

CLDP. controller load/dump program

clear channel. Mode of data transmission where the data passes through the DCE and network, and arrives at the receiving communication controller (for example, the IBM 3745) unchanged from the data transmitted. The DCE or network can modify the data during transmission because of certain network restrictions, but must ensure the received data stream is the same as the transmitted data stream.

CLP. communication line processor

CMIP. common management interface protocol

CNM. communication network management

CP. 1.communication processor 2.control program 3.circuit protector 4.control point

CPLR. coupler

CPN. customer problem number

CPx. FRU name of circuit protector

CRC. cyclic redundancy check character

CS. connectivity switch

CSA. common subassembly

CSB. connectivity switch bus

CSC. connectivity switch cable

CSCE. connectivity switch cable extension

CSM. centralized support module

CSP. central service point

CSS. control subsystem (3745)

CTDA. configuration target device (processor) address

dc. direct current

DCAF. Distributed Console Access Facility (licensed program)

DCCS. DC to connectivity subsystem

DCE. data circuit-terminating equipment

DCDP. DC distribution and protection (box)

DCM. diagnostic control monitor

DCPW. DC power box

DICO. DMA IOC connection card

DM. distribution manager

DMA. direct memory access

DS. data storage

DSB. data storage bus

DSI. data storage interface

DSM. data storage manager

DSS. data storage interface for SBA

DSU. data service unit (DCE-like for high-speed communication lines)

DTE. data terminal equipment

EC. engineering change

EE. extended edition

EIA. Electronic Industries Association

EPO. emergency power-off

EPROM. eraseable PROM

ESCA. ESCON adapter

ESCC. ESCON coupler

ESCON*. Enterprise Systems Connection

ESCP. ESCON processor

ESD. electrostatic discharge

EXP. expansion enclosure

EXP1. first expansion enclosure

EXP2. second expansion enclosure

FCS. frame check sequence

FRU. field-replaceable unit

HCS. Hardware Central Service

HDLC. high-level data link control

hex. hexadecimal

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.*

HPPB. high-performance parallel bus

HSC. hardware support center

HSF. hardware service facility

Hz. Hertz

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

IEEE. Institute of Electrical and Electronics Engineers

IML. initial microcode load

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.

IO. input/output

IOC. input/output control

IOCB. input/output control bus

IPL. initial program load

IRAM. instruction random access memory

ISO. International Organization for Standardization

kbps. kilobits per second

LA. line adapter

LAN. local area network

LCB. line connection box

LED. light-emitting diode

LIC. line interface coupler

LICx. FRU name of line interface coupler type x (3745)

LLC. logical link control

LS. local storage

LSA. link service architecture

LSCT. LIM software configuration table

LSM. local storage manager

LSSD. level-sensitive scan design (total hardware latches chain collection)

LU. logical unit

MAC. medium access control

MAE. Multiaccess enclosure

MAP. maintenance analysis-procedure

MAU. multistation access unit

MB. megabyte; 1 048 576 bytes

MCF. microcode fix

MCL. microcode change level

MES. miscellaneous equipment specification

MG. motor generator

MI. maskable interrupt

microcode. A program, that is loaded in a processor (for example, the MOSS processor)

MLA. MOSS LAN adapter

MMIO. memory mapped input/output

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

MOSS. maintenance and operator subsystem (3745)

MOSS-E. maintenance and operator subsystem extended (37CS)

NA. network addressable

NCP. Network Control Program

NDM. netview distribution manager

NetView. An IBM licensed program used to monitor a network, manage it, and diagnose its problems.

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

NMI. non-maskable interrupt

NMVT. network management vector transport

NNP. network node processor

NODA. next origin device (processor) address

NPM. NetView performance monitor

NTDA. next target device (processor) address

OEMI. original equipment manufacturer's interface

OLT. online test

online tests. Testing of a remote data station concurrently with the execution of the user's programs (that is, with only minimal effect on the user's normal operation).

OSI. open system interconnect

PA. primary access

PBC. packet burst control

PBG. packet burst grant

PCR. 1.pico-processor command register 2.power check reset

PICA. process and intertask communication architecture

PMH. problem management hardware

PN. part number

PNL. control panel

POR. power-ON reset

PP. pico-processor

PPB. primary power box

PPC. PowerPC (system card of MAE)

PRC. processor

PRDA. packet request device (processor) address

PROM. programable read-only memory

PS. power supply

PSI. packet switch interface

PSN. public switched network

PTCE. product-trained CE

PTF. program temporary fix

PTT. Post, Telephone and Telegraph (agency)

PU. physical unit

RETAIN. Remote Technical Assistance Information Network

RNR. receiver not ready

RPL. remote program load

RPO. remote power-off

RSC. remote service center

RSF. remote support facility

RVX. stands for RS232, RS422, V.24-35, X.21-2x connections

SAC. switch adapter card

SATS. specific assurance tests

SBA. switch bus adapter

SBI. switch bus interface

SC. switch control

SDLC. synchronous data link control

SIE. switch interface extender

SL. service logic

SNA. Systems Network Architecture

SNMP. Simple network management protocol

SPD1. signal and power distribution type 1

SPD2. signal and power distribution type 2

SPDL. signal and power distribution card in LCB

SPS. service and power support

SQL. structured query language

SRC. system reference code

SSA. system service architecture

SSCP. system services control point

STCn. signal transfer card n

SSS. subsystem support service

Systems Network Architecture (SNA). The description of the logical structure, formats, protocols, and operational sequences for transmitting information through a user application network. The structure of SNA allows the users to be independent of specific telecommunication facilities.

TB. terminator block

TDM. time division multiplexing

TDR. technical data record

TERC. terminator card

TIC1. token-ring interface coupler type 1 (3745) running at speed of 4 Mbits

TIC2. token-ring interface coupler type 2 (3745) running at speed of 4 or 16 Mbits

TIC3. token-ring interface coupler type 3 (37CS) running at speed of 4 or 16 Mbits

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

TPS. two-processor switch

TR. token-ring

TRA. token-ring adapter (TRP+TIC3)

TRFM. transformer

TRP. token-ring processor

TRS. transmitter/receiver subassembly

UEPO. unit emergency power-off

URSF. universal remote support facility

UTP. Unshielded twisted pair cable

V. volt

V.24. CCITT V.24 recommendation

V.25. CCITT V.25 recommendation

V.28. CCITT V.28 recommendation

V.35. CCITT V.35 recommendation

VPD. vital product data

VTAM*. Virtual Telecommunications Access Method

VTL. vendor technology logic

W. watt

X.21. CCITT X.21 recommendation

X.25. CCITT X.25 recommendation

YZxxx. wiring diagram

Index

Tell Us What You Think!

3745 Communication Controller Models A
3746 Expansion Unit Model 900
3746 Nways Multiprotocol Controller Model 950
Service Processor and
Network Node Processor
Service User's Guide

Publication No. SY33-2127-02

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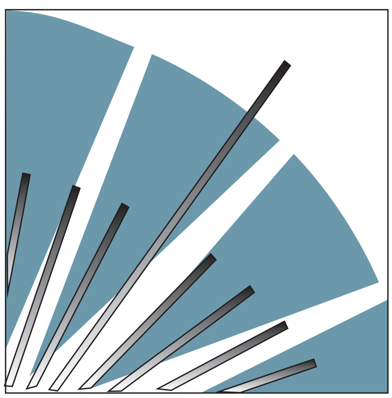

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