

IBM INSTALLATION INSTRUCTIONS

IBM 3494 Tape Library Dataserver - Feature Code 5219 IBM Token Ring LAN Attachment or Feature Code 5220 Ethernet LAN Attachment

Document Number 05H4083 EC F23308A

SSD, Tucson

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Status: Field Use

Note: Install this Field Feature Bill of Material (FFBM) only on the IBM 3494 Tape Library Dataserver for which it was shipped.

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Before Installation (Sections 1 through 8)

1.0 Machines Affected

This FFBM affects IBM 3494 Tape Library Dataserver models needing a Local Area Network (LAN) Card.

Note: If this 3494 has the High Availability model HA1 installed, then one Feature 5219 or 5220 must be installed in **each** of the two Library Managers. However, this single set of installation instructions will guide you through the installation of both features. You will not need the second set of installation instructions contained in the second Feature 5219/5220. You will only need the LAN card itself.

Menu.... If asked for, type the password **SERVICE**.

- b. From the **Service** pulldown menu, select **View Code Levels...**
- c. From the **View Code Levels...** window, scroll down to **LM EC Level is...** and read the current EC level.

3494 Library Manager Code must be at EC C88764 or higher.

- d. From the **View Code Levels** window, scroll down to **LM Patch Level is...** and read the current Patch level.

3494 Library Manager Code must be at Patch level LM514.XX or higher.

2.0 Prerequisites / Concurrent / Companion

2.1 Prerequisites

- 1. 3494 Library Manager Code must be at EC C88764 at Patch level LM514.XX or higher.

Note: If the 3494 has the High Availability model HA1 installed, you do not need to check the EC level. It is already at the appropriate level. Proceed to section 2.2, "Concurrent."

Checkpoint for Microcode ECs: Check the EC level of the Library Manager by using the following steps:

- a. From the **Mode** pulldown menu on the Library Manager, select **Service**

2.2 Concurrent

This feature is installed concurrently with other features. They are 5211 or 5212 or 5224 or 5226 or 9203 or 9204. During the install of those features, their Installation Instruction could state when to install the LAN card.

2.3 Conflict

Refer to Figure 1 on page 7 to determine if this 3494 subsystem current contains a PS Value/Point Library Manger.

PS/ValuePoint Library Manager installations will require the installation of FFBM 05H7702 if either FC 5219 (*IBM Token Ring LAN Attachment* OR FC 5220 (*Ethernet LAN Attachment* OR FC 5229 (*Expansion Attachment Card*) is **ALREADY INSTALLED**. If FFBM 05H7702 is supplied, it must be installed **PRIOR TO** the FFBM(s) supplied within the appropriate group(s) of Section 3.0, "FFBMs To Install" on page 6.

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3.0 FFBMs To Install

3.1 IBM Token Ring (FC 5219)

FFBM	Description
05H4076	Hardware, installation instructions, and diskettes

3.2 IBM Ethernet Card (FC 5220)

FFBM	Description
05H4078	Hardware and installation instructions

3.3 Model 7588 Industrial Computer System Unit

FFBM	Description
05H7702	Hardware and installation instructions

4.0 Preparation

- 1. Read and understand the purpose and details of this installation instruction.

Refer to Figure 1 on page 7, Figure 2 on page 7 and Figure 3 on page 8 to verify if you have the PS/ValuePoint Library Manager, or the Industrial Computer System Unit currently installed.

Follow all instructions closely and complete each section before moving on to another section. You should read and understand all instructions and figures before beginning this procedure.

- 2. Check all items and count parts listed on the bill of material.
- 3. If you are installing a Token Ring and using telephone twisted-pair media, a wrap plug, IBM P/N 72X8011, may be used (Not supplied by IBM).

Note: You will be removing power from the Library Manager and the customer cannot operate in Manual Mode during this down time of the installation.

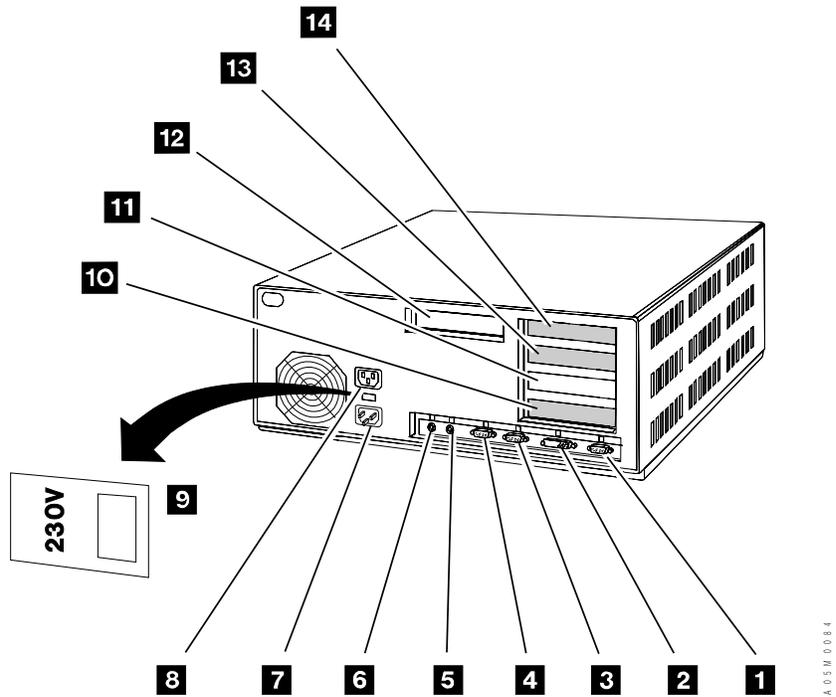


Figure 1. PS/ValuePoint System Unit

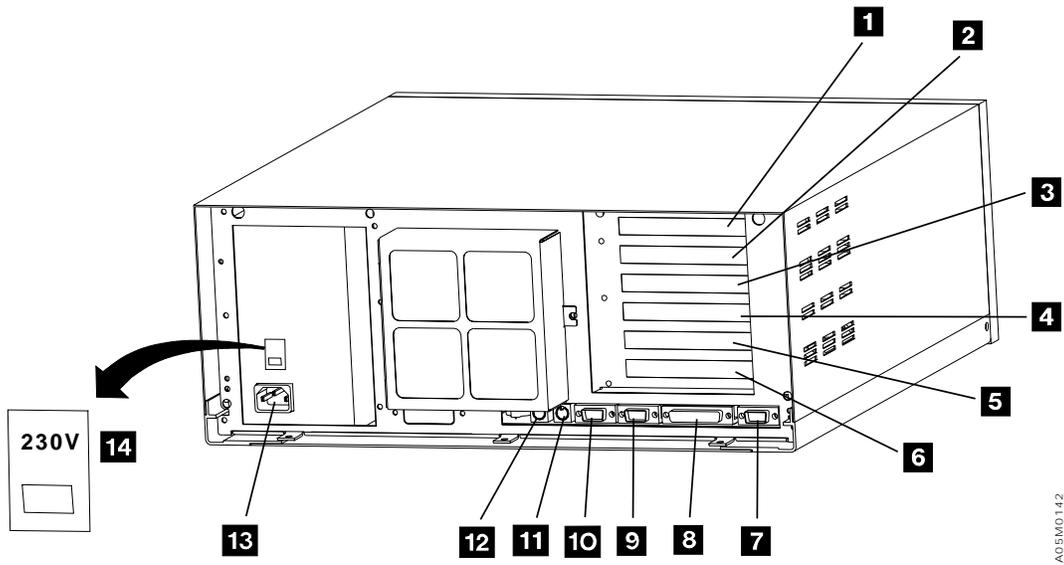


Figure 2. Model 7585 Industrial Computer System Unit

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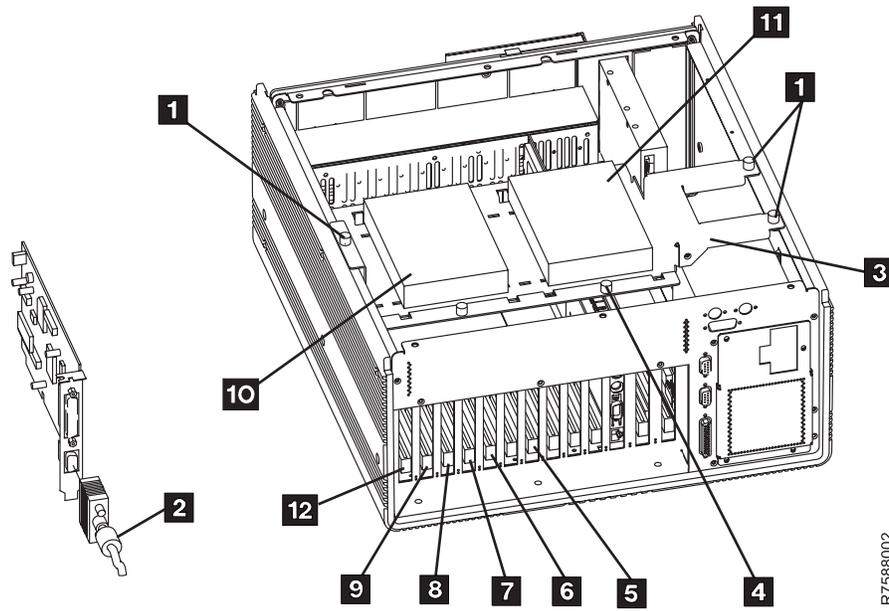


Figure 3. Model 7588 Industrial Computer System Unit

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4.1 Installation Order

Although these instructions cannot foresee any updates to the microcode levels installed on the 3494, they can suggest that you check or install updates for this bill of material in a reasonable order to insure a successful installation.

Therefore, if you are installing this feature **to gain a host attachment connection** (such as a host LAN attachment from an AS/400 or RISC System/6000), there is a suggested order for installation and/or code update:

- 1. Insure the level of OS/2 Operating System is correct. OS/2 must be at level 2.1 (EC C88496) or higher.
- 2. Insure the level of Library Manager code is correct. The Library Manager must be at level LM514.XX or higher (EC C88764 or higher).
- 3. Insure any necessary emergency fixes are installed (Patch level LM50D.07 or higher).
- 4. Install the Feature 5219/5220 LAN adapter using these installation instructions. When the feature installation is complete, come back to this list and perform the following steps.
- 5. If this 3494 has the High Availability model HA1 installed, then the second feature 5219/5220 LAN adapter will need to be installed.
- 6. Make the 3494 aware of the LAN installation by following the instructions in Appendix A of these instructions.

Appendix A is a reproduction of the section of the Library Manager installation instructions (at EC level C88757) called **Install 3494 Host Device Driver Features**.

Note: The following two steps may be followed at this time to assist the customer with setting up hosts that will be attached to the 3494.

- 7. When the Library Manager is brought up after the previous step, it will now be **LAN** aware. Use the instructions in Appendix B to make the 3494 aware of the LAN **hosts** that the 3494 will be connected to.

Appendix B is a reproduction of the section of the *3494 Operators Guide* for adding, deleting, and updating a LAN host or hosts using the **LAN Options** under the **Commands** pulldown of the Library Manager.

- 8. If this feature is being installed to provide a 3494 connection to a VSE host, Appendix C may be useful as a guide because it provides many examples of how to configure VSE for a 3494.

4.2 Installation Aid

An installation aid is available on the LAN Attachment Feature Diskette (P/N 09L0885, if this is a 5219 feature install, i.e. Token-Ring, or P/N 09L4286, if this is a 5220 feature install, i.e. Ethernet) to help guide service personnel through the installation of the LAN adapter feature. In general, if the steps in the previous section are followed in order, the aid will probably not be needed.

To use the aid, type the following from a service window:

LANCHECK

The program will analyze the 3494 Library Manager and indicate which steps are already done and which steps still need to be done. The results will be displayed using the **EPM** editor.

When finished viewing the analysis, press the **F3** key to exit the program.

LANCHECK can be used at any time. In general, it checks each of the steps outlined above to insure they have all been completed.

4.3 Appendices

Three appendices have been added to these instructions so all the needed information for LAN installation is in one place. The appendices are:

1. Appendix A is **Install 3494 Host Device Driver Features** from the *Install Functional Microcode for 3494 L10/L12*.
2. Appendix B explains how to add, delete, and update LAN hosts using the Library Manager user interface. This section is taken from the *3494 Operators Guide*.
3. Appendix C is information specific to VSE installations. It provides many examples of configurations.

4.4 Cabling for Ethernet

The Ethernet Adapter card (Feature 5220) has three different connectors on the card for use with three types of cabling:

1. 10 Base-T cabling uses the telephone type connector.
2. 10 Base-2 cabling uses the BNC type connector.
3. Thicknet uses the D-shell type connector.

The Ethernet adapter only uses one connector at a time and it is software selectable. These

instructions will allow you to select the cabling during installation.

5.0 Programming Updates

None.

6.0 Purpose and Description

6.1 Purpose

Adds LAN support hardware to the Library Manager to provide LAN capability.

6.2 Description

Will add a LAN card Ethernet or IBM Token Ring (with cable) to the Library Manager.

7.0 Installation Time

CE's Hours	Machine Hours	System Hours	CE's
1.5	1.5	0	1

8.0 Special Tools and/or Materials Required

Warning: Some parts handled during this installation are sensitive to electrostatic discharge (ESD). See "Working with ESD-Sensitive Parts" in the CARR section of the 3494 Maintenance Information Manual.

If you have a PS/ValuePoint, you will require a copy of the **IBM PS/ValuePoint Installing Options** manual that was shipped with the 3494. You will also require the **IDE Hard Disk Drive User's Guide** that is supplied with this FFBM. Familiarize yourself with Chapter 1, "Option Installation Overview", located in the **IBM PS/ValuePoint Installing Options** manual.

If you have a Model 7585 IBM Industrial PC you will require a copy of the **IBM 7585 Industrial**

Computer Information: Installation, Operation, Hardware Maintenance (S06H-2298) that was shipped with the 3494. You will also require the **IDE Hard Disk Drive User's Guide** that is supplied with this FFBM. Familiarize yourself with Chapter 3, "Installing Options", located in the **IBM 7585 Industrial Computer Information: Installation, Operation, Hardware Maintenance** manual.

If you have a Model 7588 IBM Industrial PC you will require a copy of the **IBM 7588 Industrial Computer Information: Installation, Operation, Hardware Maintenance (S76H-4349)** that was shipped with the 3494. You will also require the **IDE Hard Disk Drive User's Guide** that is supplied with this FFBM. Familiarize yourself with Chapter 3, "Installing Options", located in the **IBM 7588 Industrial Computer Information: Installation, Operation, Hardware Maintenance** manual.

Go to Section 9.0, "Safety" on page 13.

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Installation (Sections 9 through 11)

9.0 Safety

9.1 Safety Notice

Refer to 10.1 Subsystem Power and follow steps.

10.0 Details Of Installation

10.1 Subsystem Power

Note: Proceed to step 7 if part of this installation involved the migration of cards and hard drive(s) between a previously installed PS/ValuePoint Library Manager, and a new Industrial Computer System Unit.

- ___ 1. Ask the operator to complete or cancel jobs in the queue.
- ___ 2. Ask the operator to vary all library devices offline.

Note: From step 3 to step 8, if the 3494 has the High Availability model HA1 installed, perform them on the **Active Library Manager only**.

The standby Library Manager will be the one with a window in the middle of the screen that says **This is the Standby Library Manager**. The active Library Manager is the other one.

Do not shutdown the standby Library Manager.

- ___ 3. Place the library manager in **Offline** mode by selecting the **Offline** option from the **Mode** pull-down menu.
- ___ 4. Wait for the Library Manager to go offline.

- ___ 5. Place the library in **Pause** by selecting the **Pause** option from the **Mode** pull-down menu.
- ___ 6. Wait for the Library Manager to go to pause.
- ___ 7. Shut down the library manager by selecting the **Shutdown** option from the **Mode** pull-down menu (on the active Library manager only if the HA1 is installed).
- ___ 8. Click on **Yes** when it asks if you're sure.
- ___ 9. When the shutdown completes on the Library Manager (or on the active Library manager if the HA1 is installed,) open a Service Window by selecting the **Service Window** button on the **3494 Tape Library Dataserver Shutdown** panel. A Service window is opened for you. If asked for, type the password: **SERVICE**.
- ___ 10. Insert the LAN Attachment Feature Diskette (P/N 09L0885, if this is a 5219 feature install, i.e. Token-Ring, or P/N 09L4286, if this is a 5220 feature install, i.e. Ethernet) into the diskette drive.
- ___ 11. In the service window, type **A:LANSTEP1** and press the **Enter** key.
- ___ 12. After copying some files, the screen will ask if you are adding the LAN Attachment feature. Type **Y** to add the LAN feature.
- ___ 13. It will then ask if you are adding Feature 5219 (Token Ring) or Feature 5220 (Ethernet). Type **T** if you are installing Feature 5219 (Token Ring) or type **E** if you are installing Feature 5220 (Ethernet).
- ___ 14. Type **y** to confirm your selection.
- ___ 15. The window will be removed while **Communications Manager Setup** is run.
- ___ 16. When Communications Manager is complete, the service window will return and ask if the customer wants to use a Locally Administered Address (LAA). If he does,

enter the LAA on the line below (for future reference) and enter the LAA at the prompt on the screen followed by the **Enter** key. If he is not using an LAA, just press the **Enter** key.

LAA - _____

- ___ 17. The screen will now indicate that it is configuring LAPS and will take about 30 seconds. If there are no errors indicated, LANSTEP1 is complete.

If you need to reenter the Locally Administered Address, you may go back to step 10 on page 13.

- ___ 18. Type **LANSTEP2** to finish up the configuration.
- ___ 19. Type **exit** to exit the Service Window.
- ___ 20. The **3494 Tape Library Dataserver Shutdown** window should now be visible and have four buttons that may be selected:
 - a. Start 3494...
 - b. Service window...
 - c. Shutdown computer for re-boot...
 - d. Shutdown computer for power-off...

Select **Shutdown computer for power-off**. If there are any B16 subsystems and/or L14 units in the 3494, this will also prepare those units to be powered down.

- ___ 21. Click on **Yes** when it asks if you're sure.
- ___ 22. Wait until the screen says that it is OK to power the Library Manager down.
- ___ 23. If this is a 3494 that does **not** have the high availability model HA1 installed, the library is now ready to power down. Proceed to step 39 on page 15.
- ___ 24. If the 3494 **does** have HA1 installed (that is, it has **two** Library Managers and **two** accessors), then the standby Library Manager must also be prepared, so continue with the next step by going over to the standby Library Manager.
- ___ 25. When the shutdown completes on the standby Library Manager, open a Service

Window by selecting the **Service Window** button on the **3494 Tape Library Dataserver Shutdown** panel. A Service window is opened for you. If asked for, type the password: **SERVICE**.

- ___ 26. Insert the LAN Attachment Feature Diskette (P/N 09L0885, if this is a 5219 feature install, i.e. Token-Ring, or P/N 09L4286, if this is a 5220 feature install, i.e. Ethernet) into the diskette drive.
- ___ 27. In the service window, type **A:LANSTEP1** and press the **Enter** key.
- ___ 28. After copying some files, the screen will ask if you are adding the LAN Attachment feature. Type **Y** to add the LAN feature.
- ___ 29. It will then ask if you are adding Feature 5219 (Token Ring) or Feature 5220 (Ethernet). Type **T** if you are installing Feature 5219 (Token Ring) or type **E** if you are installing Feature 5220 (Ethernet).
- ___ 30. Type **y** to confirm your selection.
- ___ 31. The window will be removed while **Communications Manager Setup** is run.
- ___ 32. When complete with Communications Manager, the window will return and ask if the customer wants to use a Locally Administered Address (LAA). If he does, enter the LAA on the line below for future reference and enter the LAA at the prompt on the screen. If he is not using an LAA, just press the enter key.

LAA - _____

- ___ 33. The screen will now indicate that it is configuring LAPS and will take about 30 seconds. If there are no errors indicated, LANSTEP1 is complete.
- If you need to reenter the Locally Administered Address, you may go back to step 27.
- ___ 34. Type **LANSTEP2** to finish up the configuration.
 - ___ 35. Type **exit** to exit the Service Window.

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- ___ 36. The **3494 Tape Library Dataserver Shutdown** window should now be visible and have four buttons that may be selected:
 - a. Start 3494...
 - b. Service window...
 - c. Shutdown computer for re-boot...
 - d. Shutdown computer for power-off...

Select **Shutdown computer for power-off**.

- ___ 37. Click on **Yes** when it asks if you're sure.
- ___ 38. Wait until the screen says that it is OK to power the Library Manager down.
- ___ 39. At this point, the Library Manager (or both Library Managers, if the HA1 is installed) is ready to be powered down. Press the **Unit Power switch** on the Operator Panel to the off position and power will be removed from the library.
- ___ 40. Turn off **CB1** on the 3494 Control Unit power control compartment (PCC) for this frame.
- ___ 41. If not already done, remove the disk from the diskette drive.
- ___ 42. If this 3494 has the High Availability model HA1 installed:
 - a. Go to the other Library Manager.
 - b. Turn off **CB1** on the 3494 Control Unit power control compartment (PCC) for that frame.

Go to Section 10.2, "Prepare the Library Manager System Unit for Service."

10.2 Prepare the Library Manager System Unit for Service

- ___ 1. If this 3494 has the High Availability model HA1 installed, then go back to the first Library Manager that you started working on. That will be the Library Manager that was **active** when it was brought down. Starting installation on the active Library

Manager will allow you to get the features installed in the least amount of time.

- ___ 2. With the exception of the Model 7588 Industrial Computer System Units, you should loosen the screw holding the braided strap to the MIC1 card or the metal stiffener around the MIC and LPC cards and remove the strap.
 - a. Proceed to step 6 on page 16 if part of this installation involved the migration of cards and hard drive(s) between a previously installed PS/ValuePoint Library Manager, and a new Model 7588 Industrial Computer System Unit.
 - b. If you have a PS/ValuePoint Library Manager, proceed to step 3.
 - c. If you have a Model 7585 Industrial Computer System Unit, proceed to step 4.
 - d. If you have a Model 7588 Industrial Computer System Unit, proceed to step 5 on page 16.
- ___ 3. If you have a PS/ValuePoint Library Manager, remove the cover of the library manager by following the instructions below. For additional detail on removing the cover, see **PS/ValuePoint Installing Options** manual.
 - ___ a. With the front of the computer facing you, unlock the cover lock.
 - ___ b. Push down and hold the cover-release latch (on the top left-hand side of the unit) as you slide the cover toward you until it separates from the computer.
 - ___ c. Proceed to step 6 on page 16.
- ___ 4. If you have a Model 7585 Industrial Computer System Unit remove the cover of the library manager by following the instructions below.
 - ___ a. Unscrew the two knurled thumbscrews near the top on the back of the system unit, until they

- release (the two thumbscrews are retained inside the top cover; they will not come out).
- ___ b. Slide the top cover toward the back approximately 50mm, and then lift it off.
- ___ c. Proceed to step 6.
- ___ 5. If you have a Model 7588 Industrial Computer System Unit remove the cover of the library manager by following the instructions below.
 - ___ a. Loosen the six screws on the top cover of the system unit, and place the cover to the side for future reinstallation.
 - ___ b. Disconnect the IDE ribbon cable(s) and the power cable(s) from the rear of each hard disk drive (HDD).
 - ___ c. Loosen the three knurled thumbscrews that secure the HDD carrier to the sheet metal chassis, and then gently place the HDD carrier assembly to the side for future reinstallation.
- ___ 6. Open the cable clamps that secure the library manager signal and power cables to the control unit frame.
- ___ 7. Remove the cables from the cable clamps to allow enough slack in the cables to rotate the library manager counter-clockwise 90 degrees.
- ___ 8. Rotate the library manager 90 degrees to the right.

Go to Section 10.3, "Install LAN Card."

10.3 Install LAN Card

Note: Using the *Maintenance Information Manual*. Locate **CARR** Table of Contents, then go to **Working with ESD-Sensitive Parts** and follow the procedure.

1. Proceed to section 10.3.1, "Install IBM Token

Ring LAN Attachment" if you will be adding the IBM Token Ring LAN Attachment (FC 5219); OR

2. Proceed to section 10.3.2, "Install Ethernet LAN Attachment" on page 21 if you will be adding the Ethernet LAN Attachment (FC 5220).

10.3.1 Install IBM Token Ring LAN Attachment

Note: Based upon the Library Manager installed within this 3494 subsystem, proceed to one of the following appropriate steps to add the feature card:

- Step 1 for a PS/ValuePoint Library Manager; OR
- Step 2 for a Model 7585 Industrial Computer System Unit; OR
- Step 3 on page 17 for a Model 7588 Industrial Computer System Unit.

Use Figure 1 on page 7 as a guide when performing the following step.

- ___ 1. PS/ValuePoint Library Manager: Counting from the bottom, install the card (PN 72H3482, supplied) in the second slot **11**.
 - a. If required, refer to the **PS/ValuePoint Installing Options** manual.)
 - b. Proceed to step 4 on page 17.

See Figure 2 on page 7 when performing the following step.

- ___ 2. Model 7585 Industrial Computer System Unit: Counting from the bottom, install the card (PN 72H3482, supplied) in the fourth **3** slot.
 - a. If required, refer to the **7585 Industrial Computer Information: Installation, Operation, Hardware Maintenance** manual.)
 - b. Proceed to step 4 on page 17.

See Figure 6 on page 20 when performing the following step.

- 3. Model 7588 Industrial Computer System Unit: Install the card (PN 72H3482, supplied) in the twelfth slot **9**.
 - a. If required, refer to the “7588 Industrial Computer Information: Installation, Operation, Hardware Maintenance” manual.
 - b. Proceed to step 4.
- 4. If the RJ-45 connection is being used (telephone twisted pair media), connect the LAN cable to the adapter using the RJ-45 connector.
- 5. If the IBM cabling system is being used, connect the IBM Token-Ring Network PC

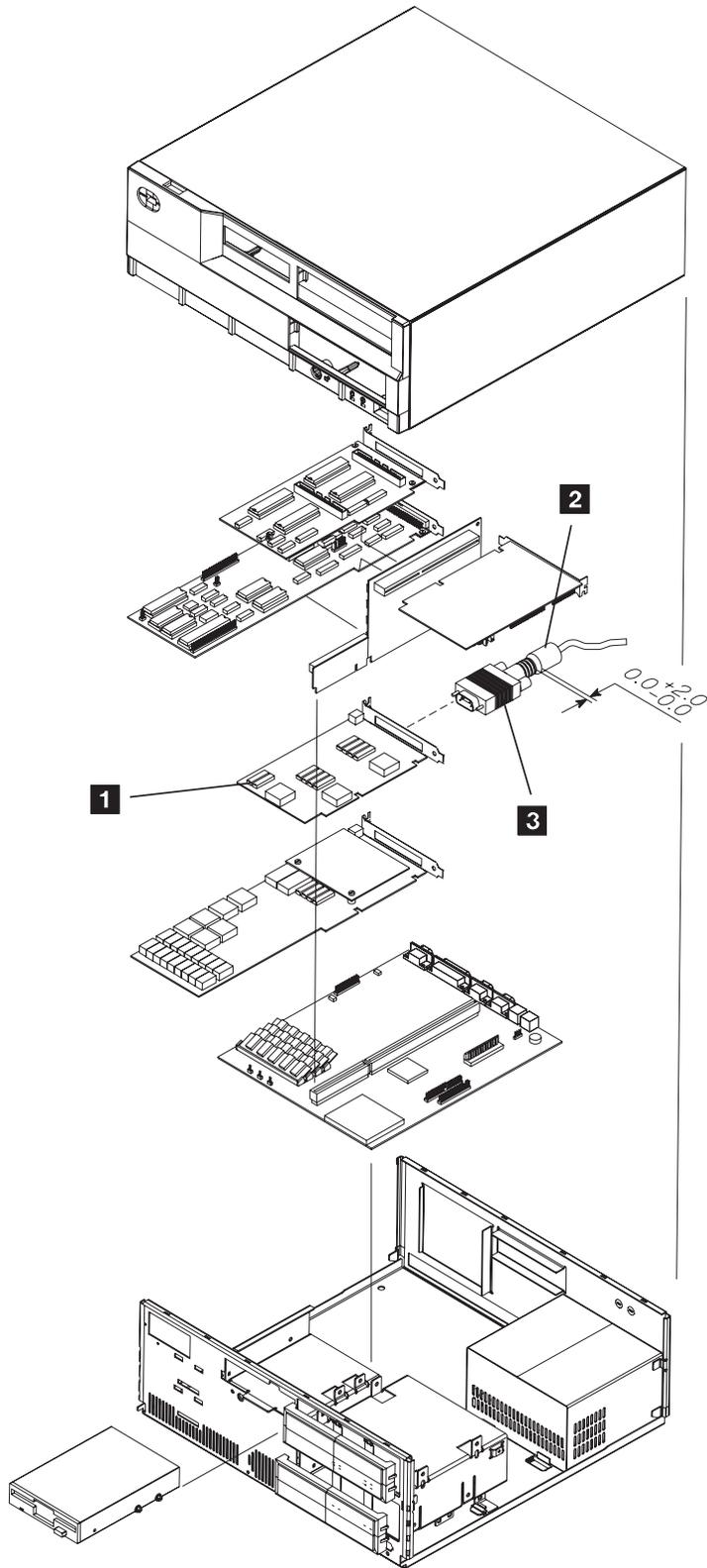
Adapter Cable cable into the 9-pin D shell connector on the back of the card.

See Figure 4 on page 18 for PS/ValuePoint Library Manager installations; Figure 5 on page 19 for Model 7585 Industrial Computer System Unit installations; OR Figure 6 on page 20 Model 7588 Industrial Computer System Unit installations.

- a. Install ferrite **2** (PN 05H4259, supplied) to the Token Ring cable as close as possible to the connector.

Proceed to Section 10.4, “Secure the Library Manager Cables” on page 21.

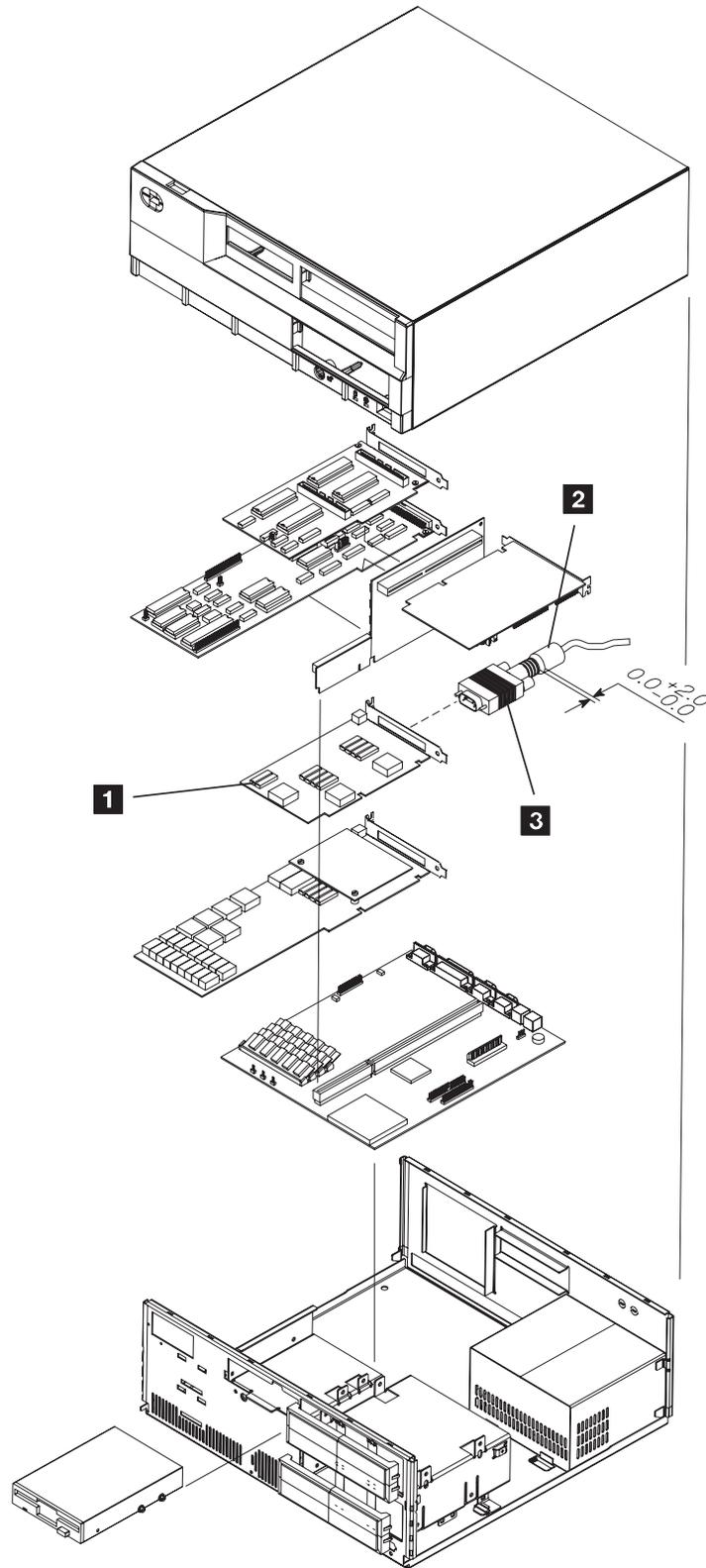
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Figure 4. PS/ValuePoint Library Manager Card Layout

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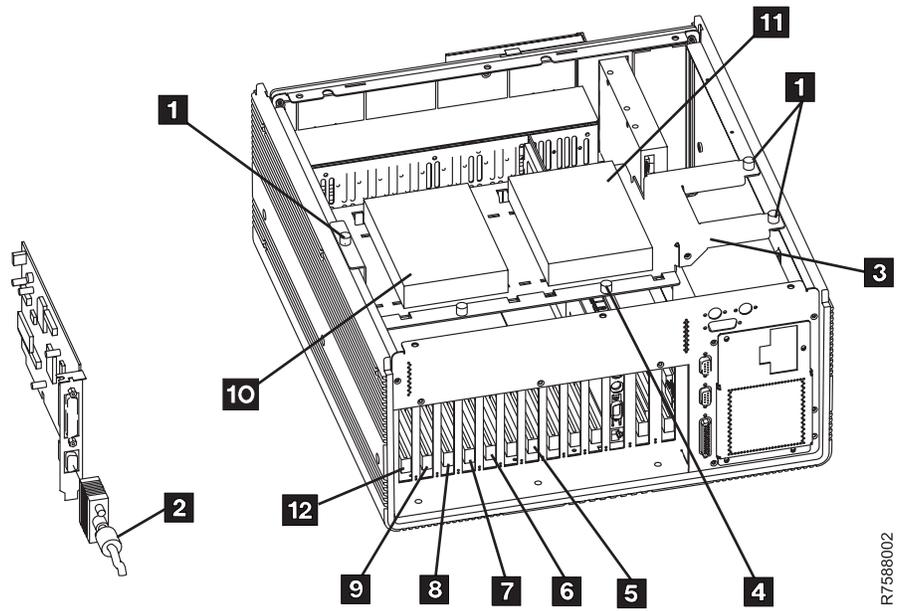


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Figure 5. Model 7585 Industrial Computer System Unit Card Layout

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L10/L12/L14

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Figure 6. Model 7588 Industrial Computer System Unit Card Layout

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10.3.2 Install Ethernet LAN Attachment

Note: Based upon the Library Manager installed within this 3494 subsystem, proceed to one of the following appropriate steps to add the feature card:

- Step 1 for a PS/ValuePoint Library Manager; OR
- Step 2 for a Model 7585 Industrial Computer System Unit; OR
- Step 3 for a Model 7588 Industrial Computer System Unit.

Use Figure 1 on page 7 as a guide when performing the following step.

- ___ 1. PS/ValuePoint Library Manager: Counting from the bottom, install the card (PN 85H3371, supplied) in the second slot **11**.
 - a. If required, refer to the **PS/ValuePoint Installing Options** manual.)
 - b. Proceed to step 4.

See Figure 2 on page 7 when performing the following step.

- ___ 2. Model 7585 Industrial Computer System Unit: Counting from the bottom, install the card (PN 85H3371, supplied) in the fourth **3** slot.
 - a. If required, refer to the **7585 Industrial Computer Information: Installation, Operation, Hardware Maintenance** manual.)
 - b. Proceed to step 4.

Note: If appropriate to this installation, retighten the screws you previously loosened at the back of the Model 7585 Industrial Computer System Unit.

See Figure 6 on page 20 when performing the following step.

- ___ 3. Model 7588 Industrial Computer System Unit: Install the card (PN 85H3371, supplied) in the twelfth slot **9**.
 - a. If required, refer to the “7588 Industrial Computer Information: Installation, Operation, Hardware Maintenance” manual.
 - b. Proceed to step 4.
- ___ 4. Connect the customer's Ethernet cable into the appropriate connector on the back of the Ethernet LAN adapter card.

Proceed to Section 10.4, “Secure the Library Manager Cables.”

10.4 Secure the Library Manager Cables

- ___ 1. Rotate the library manager clockwise 90 degrees so the front of the library manager is facing you.
- ___ 2. Reinstall the cables that were removed within step 7 on page 16.

Proceed to Section 10.5, “Reinstall the Computer Cover.”

10.5 Reinstall the Computer Cover

Note: Based upon the Library Manager installed within this 3494 subsystem, proceed to one of the following appropriate steps to reinstall the computer cover.

- Step 1 for a PS/ValuePoint Library Manager; OR
- Step 2 on page 22 for a Model 7585 Industrial Computer System Unit; OR
- Step 3 on page 22 for a Model 7588 Industrial Computer System Unit.
- ___ 1. If you have a PS/Value Point Library Manager, do the following procedures:

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- ___ a. Align the glides of the cover with the tracks on the front of the computer.
- ___ b. Slide the cover to the back of the computer until it snaps into place.
- ___ c. Lock the cover lock.
- ___ 2. If you have a Model 7585 Industrial Computer System Unit, do the following procedures:
 - ___ a. Place the cover over the computer, and slide the cover toward the front of the computer.
 - ___ b. Tighten the two knurled thumbscrews near the top rear of the cover.
- ___ 3. If you have a Model 7588 Industrial Computer System Unit, do the following procedures:
 - ___ a. Reinstall the HDD carrier assembly by tightening the three knurled thumbscrews that secure the HDD carrier to the sheet metal chassis.
 - ___ b. Connect the IDE ribbon cable(s) and the power cable(s) to the rear of each HDD.
 - ___ c. Reinstall the cover, and tighten the six screws on the top cover of the system unit.

- ___ 4. If this 3494 **does not have** the High Availability model HA1 installed, then proceed to Section 10.12, "3494 Power-up" on page 25 to begin the power up procedure.

10.7 Prepare the Second Library Manager System Unit for Service

- ___ 1. Go to the **second** Library Manager to begin the installation of the Feature 5219/5220 for that Library Manager.
- ___ 2. With the exception of the Model 7588 Industrial Computer System Units, you should loosen the screw holding the braided strap to the MIC1 card or the metal stiffener around the MIC and LPC cards and remove the strap.
- ___ 3. Remove the cover of the Model 7588 Industrial Computer System library manager by following the instructions below.
 - ___ a. Loosen the six screws on the top cover of the system unit, and place the cover to the side for future reinstallation.
 - ___ b. Disconnect the IDE ribbon cable(s) and the power cable(s) from the rear of each hard disk drive (HDD).
 - ___ c. Loosen the three knurled thumbscrews that secure the HDD carrier to the sheet metal chassis, and then gently place the HDD carrier assembly to the side for future reinstallation.
- ___ 4. Open the cable clamps that secure the library manager signal and power cables to the control unit frame.
- ___ 5. Remove the cables from the cable clamps to allow enough slack in the cables to rotate the library manager counter-clockwise 90 degrees.

10.6 Reinstall Ground Strap

- ___ 1. Reinstall the ground strap if it was removed within step 2 on page 15 from the MIC1 card, or the metal stiffener around the MIC2 and LPC2 cards.
- ___ 2. Tighten the ground strap mounting screw.
- ___ 3. If this 3494 has the High Availability model HA1 installed, then proceed with Section 10.7, "Prepare the Second Library Manager System Unit for Service" to install the second Feature 5219/5220 LAN adapter card.

- ___ 6. Rotate the library manager 90 degrees to the right.

Go to Section 10.8, "Install LAN Card."

10.8 Install LAN Card

Note: Using the *Maintenance Information Manual*. Locate **CARR** Table of Contents, then go to **Working with ESD-Sensitive Parts** and follow the procedure.

1. Proceed to section 10.8.1, "Install IBM Token Ring LAN Attachment" if you will be adding the IBM Token Ring LAN Attachment (FC 5219); OR
2. Proceed to section 10.8.2, "Install Ethernet LAN Attachment" on page 25 if you will be adding the Ethernet LAN Attachment (FC 5220).

10.8.1 Install IBM Token Ring LAN Attachment

See Figure 7 on page 24 when performing the following step.

- ___ 1. Model 7588 Industrial Computer System Unit: Install the card (PN 72H3482, supplied) in the twelfth slot **9**.

- a. If required, refer to the "7588 Industrial Computer Information: Installation, Operation, Hardware Maintenance" manual.

- ___ 2. If the RJ-45 connection is being used (telephone twisted pair media), connect the LAN cable to the adapter using the RJ-45 connector.
- ___ 3. If the IBM cabling system is being used, connect the IBM Token-Ring Network PC Adapter Cable cable into the 9-pin D shell connector on the back of the card.

See Figure 7 on page 24 for Model 7588 Industrial Computer System Unit installations.

- ___ a. Install ferrite **2** (PN 05H4259, supplied) to the Token Ring cable as close as possible to the connector.

Proceed to Section 10.9, "Secure the Library Manager Cables" on page 25.

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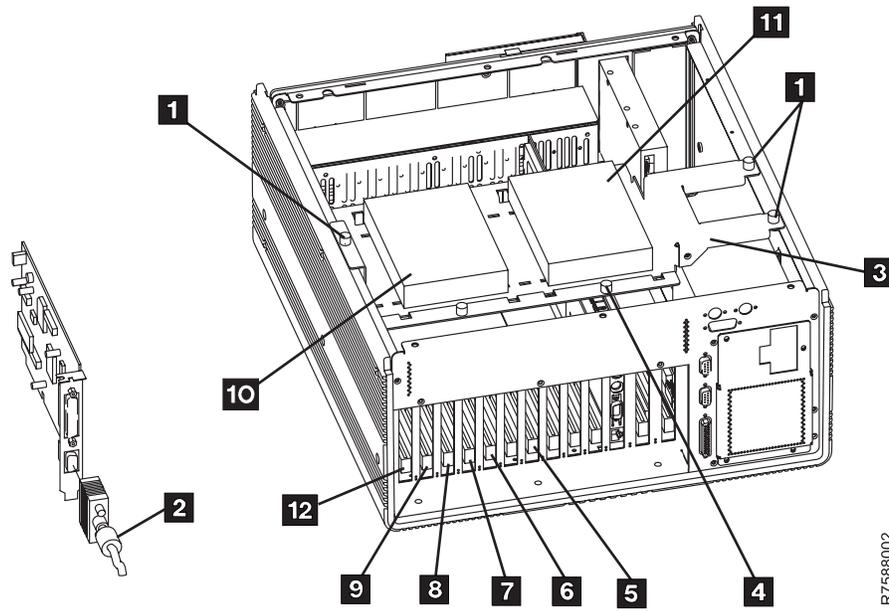


Figure 7. Model 7588 Industrial Computer System Unit Card Layout

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10.8.2 Install Ethernet LAN Attachment

See Figure 7 on page 24 when performing the following step.

- ___ 1. Model 7588 Industrial Computer System Unit: Install the card (PN 85H3371, supplied) in the twelfth slot **9**.
 - a. If required, refer to the “7588 Industrial Computer Information: Installation, Operation, Hardware Maintenance” manual.
 - b. Proceed to step 2.
- ___ 2. Connect the customer's Ethernet cable into the appropriate connector on the back of the Ethernet LAN adapter card.

Proceed to Section 10.9, “Secure the Library Manager Cables.”

10.9 Secure the Library Manager Cables

- ___ 1. Rotate the library manager clockwise 90 degrees so the front of the library manager is facing you.
- ___ 2. Reinstall the cables that were removed within step 5 on page 22.

Proceed to Section 10.10, “Reinstall the Computer Cover.”

10.10 Reinstall the Computer Cover

- ___ 1. On the Model 7588 Industrial Computer System Unit, do the following procedures:
 - ___ a. Reinstall the HDD carrier assembly by tightening the three knurled thumbscrews that secure the HDD carrier to the sheet metal chassis.

- ___ b. Connect the IDE ribbon cable(s) and the power cable(s) to the rear of each HDD.
- ___ c. Reinstall the cover, and tighten the six screws on the top cover of the system unit.

10.11 Reinstall Ground Strap

- ___ 1. Reinstall the ground strap if it was removed within step 2 on page 22 from the MIC1 card, or the metal stiffener around the MIC2 and LPC2 cards.
- ___ 2. Tighten the ground strap mounting screw.
- ___ 3. Proceed to Section 10.12, “3494 Power-up” to begin the power up procedure.

10.12 3494 Power-up

- ___ 1. If this 3494 has the High Availability model HA1 installed, then go back to the first Library Manager that you started working on. That will be the Library Manager that was active when it was brought down. Starting installation on the active Library Manager will allow you to get the Library up and running in the least amount of time.
- ___ 2. If you are installing feature 5219 (Token-Ring adapter card), insert the *Token-Ring Configuration Diskette* (P/N 09L0886) into the diskette drive of the Library Manager. Go to step 4.
- ___ 3. If you are installing feature 5220 (Ethernet adapter card), insert the *Ethernet Configuration Diskette* (P/N 09L4287) into the diskette drive of the Library Manager.
- ___ 4. Turn on **CB1** on the 3494 Control Unit power control compartment (PCC) for this frame to power on the Library Manager PC.

Go to next Section 11.0, “Test Procedure” on page 26.

11.0 Test Procedure

11.1 Configure / Test the First (or only) Feature Card

- ___ 1. Power up the Library using the **Unit Power** switch.
- ___ 2. If you are installing feature 5219 (Token-Ring adapter card), go to step 16
- ___ 3. If you are installing feature 5220 (Ethernet adapter), continue with these next steps.
- ___ 4. Insure the *Ethernet Configuration Diskette* (P/N 09L4287) is in the "A" diskette drive.
- ___ 5. If you get a 162 configuration error during the power up of the 3494:
 - ___ a. Press **Enter** to run configuration.
 - ___ b. If you get a window indicating a device has been installed which can be used as a startup device, press **Enter**.
 - ___ c. Press **Esc** to end configuration.
 - ___ d. Press **Enter** to save the configuration.
- ___ 6. The screen will tell you that it is configuring the adapter card.
- ___ 7. At the end of configuration, the screen will show you the results of the adapter card configuration and will tell you if it completed successfully.

If it completed successfully, the Ethernet LAN adapter is now configured.
- ___ 8. For the configuration to take effect, you **must** power down the Library Manager. Turn off **CB1** on the 3494 Control Unit power control compartment (PCC) for this frame to power down the Library Manager.

Note: This **must** be done for the new configuration to take place. Rebooting the system does not change the configuration.

- ___ 9. Remove the *Ethernet Configuration Diskette* (P/N 09L4287) from the "A" diskette drive.
- ___ 10. Insert the *Ethernet Diagnostics Diskette* (P/N 09L4288) into the "A" diskette drive.
- ___ 11. Wait 30 seconds.
- ___ 12. Turn on **CB1** on the 3494 Control Unit power control compartment (PCC) for this frame to power up the Library Manager.
- ___ 13. When the diagnostics diskette boots up, you will be presented with a screen that indicates that diagnostics are about to begin. **Ensure that the Ethernet cable is connected to the LAN adapter card.** Press the **Enter** key to begin diagnostics.
 - ___ a. The IBMLANAID menu will appear for a few moments followed by the LANAID V2.22 for EtherJet menu.
 - ___ b. Use the TAB key to select **Diagnostics**. Press **Enter** to begin diagnostics.
 - ___ c. The test runs for about one second. Afterwards, it should say **Diagnostics Passed** at the bottom of the screen.
 - ___ d. Diagnostics is now complete.
 - ___ e. Record the Ethernet Adapter address in this space.

_____The address is located next to the words **MAC Address**.
 - ___ f. Diagnostics can be run again, if desired, by pressing the **Enter** key and going back to step 13b.
- ___ 14. If finished with diagnostics, remove the *Ethernet Diagnostics Diskette* (P/N 09L4288) from the "A" diskette drive.
- ___ 15. Testing of Ethernet is complete. Proceed to step 26 on page 28.
- ___ 16. Turn on **CB1** on the 3494 Control Unit power control compartment (PCC) for this frame to power on the Library Manager PC.

- ___ 17. If you get a 162 configuration error during the power up of the 3494:
 - ___ a. Press **Enter** to run configuration.
 - ___ b. If you get a window indicating a device has been installed which can be used as a startup device, press **Enter**.
 - ___ c. Press **Esc** to end configuration.
 - ___ d. Press **Enter** to save the configuration.

- ___ 18. The Token-Ring configuration program will bootup and ask you to select the speed of the customers' Token-Ring LAN.

Note: You **must** correctly select the speed that matches the customers LAN speed. Failure to do so will probably cause the LAN ring to fail.

After you select the speed, it will issue a warning that you may ignore.

- a. Type **1** if the speed is to be 4 Mbits.
- b. Type **2** if the speed is to be 16 Mbits.

- ___ 19. Once the configuration program is complete, a message will appear asking you to check to ensure no errors have occurred. Ignore the interrupt conflict warning. The card should be configured with the following settings:

- ___ a. PnP Support:
BIOS
- ___ b. Adapter Number:
1
- ___ c. Adapter MAC:
{DON'T CARE}
- ___ d. Microcode Level:
{DON'T CARE}
- ___ e. Serial Number:
{DON'T CARE}
- ___ f. Adapter Mode:
Auto 16 Compatible

- ___ g. Configuration:
Legacy
- ___ h. Adapter State:
Active
- ___ i. I/O Address:
A20-A23
- ___ j. Interrupt:
g*
- ___ k. RAM Address:
D0000-D3FFF
- ___ l. ROM Address:
CC000-CDFFF
- ___ m. Remote IPL:
Disabled
- ___ n. Token-Ring Data Rate:
{4 Mbps or 16 Mbps}
- ___ o. Auto Sense Data Rate:
Disabled
- ___ p. Adppter Bus Width:
16 bits
- ___ 20. Once the Token-Ring settings have been confirmed, remove the diskette from the diskette drive.
- ___ 21. Insert the *Token-Ring Diagnostics Diskette* (P/N 09L0887) into the diskette drive.
- ___ 22. Turn off **CB1** on the 3494 Control Unit power control compartment (PCC) for this frame to power off the Library Manager PC.

Note: This **must** be done for the new configuration to take place. Rebooting the system does not change the configuration.
- ___ 23. Wait 30 seconds.
- ___ 24. Turn on **CB1** on the 3494 Control Unit power control compartment (PCC) for this

frame to power on the Library Manager PC.

- ___ 25. Diagnostics will begin running automatically as the Library Manager boots up.
 - ___ a. During testing, the window will say **TESTING IN PROGRESS**.
 - ___ b. Record the Token-Ring Adapter address located at the top of the screen (in Token-Ring format) in this space.

 This address will be needed later if the customer is using the Universally Administered Address (UAA). Normally, this will not be needed because a Locally Administered Address (LAA) is used.
 - ___ c. If the adapter is connected to the LAN and it tests OK, it will say **FINISHED TESTING - ADAPTER OK**. Continue with step 26.
 - ___ d. If the adapter is not connected to the LAN, it result will be **DIAGNOSTICS INDICATE A FAILURE**.
 - ___ e. Select **Retest** by pressing the **Enter** key to test the adapter in wrap mode. The screen will indicate **TESTING IN PROGRESS** while it is testing the adapter.
 - ___ f. When complete, it will say **FINISHED TESTING - ADAPTER OK** and there will be a check mark in the box to the right of the picture of the adapter card.
 - ___ g. Assuming that the adapter tests OK, connect the cable (if not already connected) to the customers LAN using appropriate cables.
 - ___ h. Reboot the Library Manager by pressing the **Ctrl-Alt-Del** keys. This will run the diagnostics again while being connected to the customers LAN (if not already done).

- ___ i. When complete, it will say **FINISHED TESTING - ADAPTER OK**.
- ___ j. Testing of the Token-Ring adapter is complete.
- ___ k. Remove the *Token-Ring Diagnostics Diskette* (P/N 09L0887) from the "A" diskette drive.

- ___ 26. The Library Manager now has a LAN adapter card installed and tested. Insure that the diskette has been removed from the drive.
- ___ 27. Reboot the Library Manager by pressing the **Ctrl-Alt-Del** keys.
- ___ 28. If the Library Manager will be connected to LAN attached hosts, you must configure the library by following the instructions in Appendix A of these instructions. After performing the configuration in Appendix A, return here.

Appendix A is a reproduction of the section of the Library Manager installation instructions (at EC level C88757) called **Install 3494 Host Device Driver Features**.
- ___ 29. If this is a 3494 that does **not** have the High Availability model HA1 installed, then proceed to Section 12.0, "Field Updating" on page 33.
- ___ 30. If this 3494 has the High Availability model HA1 installed, then proceed to Section 11.2, "Configure / Test the Second Feature Card for Libraries with Model HA1" to install the second LAN adapter feature.

11.2 Configure / Test the Second Feature Card for Libraries with Model HA1

- ___ 1. If you are installing feature 5219 (Token-Ring adapter card), insert the *Token-Ring Configuration Diskette* (P/N 09L0886) into the diskette drive of the second Library Manager.

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- Go to step 16 on page 29.
- ___ 2. If you are installing feature 5220 (Ethernet adapter card), insert the *Ethernet Configuration Diskette* (P/N 09L4287) into the diskette drive of the second Library Manager, then continue with these next steps.
 - ___ 3. Turn on **CB1** on the 3494 Control Unit power control compartment (PCC) for this frame to power on the Library Manager PC.
 - ___ 4. If you get a 162 configuration error during the power up of the 3494:
 - ___ a. Press **Enter** to run configuration.
 - ___ b. If you get a window indicating a device has been installed which can be used as a startup device, press **Enter**.
 - ___ c. Press **Esc** to end configuration.
 - ___ d. Press **Enter** to save the configuration.
 - ___ 5. The screen will tell you that it is configuring the adapter card.
 - ___ 6. At the end of configuration, the screen will show you the results of the adapter card configuration and will tell you if it completed successfully.

If it completed successfully, the Ethernet LAN adapter is now configured.
 - ___ 7. For the configuration to take effect, you **must** power down the Library Manager. Turn off **CB1** on the 3494 Control Unit power control compartment (PCC) for this frame to power off the Library Manager PC.

Note: This **must** be done for the new configuration to take place. Rebooting the system does not change the configuration.
 - ___ 8. Remove the *Ethernet Configuration Diskette* (P/N 09L4287) from the "A" diskette drive.
 - ___ 9. Insert the *Ethernet Diagnostics Diskette* (P/N 09L4288) into the "A" diskette drive.
 - ___ 10. Wait 30 seconds.
 - ___ 11. Turn on **CB1** on the 3494 Control Unit power control compartment (PCC) for this frame to power on the Library Manager PC.
 - ___ 12. When the diagnostics diskette boots up, you will be presented with a screen that indicates that diagnostics are about to begin. Insure that the Ethernet cable is connected to the LAN adapter card. Press any key to begin diagnostics.
 - ___ a. The IBMLANAID menu will appear for a few moments followed by the LANAID V2.22 for EtherJet menu.
 - ___ b. Use the TAB key to select **Diagnos-tics**. Press **Enter** to begin diagnostics.
 - ___ c. The test runs for about one second. Afterwards, it should say **Diagnos-tics Passed** at the bottom of the screen.
 - ___ d. Diagnostics is now complete.
 - ___ e. Record the Ethernet Adapter address in this space.

The address is located next to the words **MAC Address**.
 - ___ 13. Diagnostics can be run again, if desired, by pressing the **Enter** key and going back to step 12b.
 - ___ 14. If finished with diagnostics, remove the *Ethernet Diagnostics Diskette* from the "A" diskette drive.
 - ___ 15. Testing of Ethernet is complete. Proceed to step 26 on page 28.
 - ___ 16. Turn on **CB1** on the 3494 Control Unit power control compartment (PCC) for this frame to power on the Library Manager PC.
 - ___ 17. If you get a 162 configuration error during the power up of the 3494:

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- a. Press **Enter** to run configuration.
- b. If you get a window indicating a device has been installed which can be used as a startup device, press **Enter**.
- c. Press **Esc** to end configuration.
- d. Press **Enter** to save the configuration.

18. The Token-Ring configuration program will bootup and ask you to select the speed of the customers' Token-Ring LAN.

Note: You **must** correctly select the speed that matches the customers LAN speed. Failure to do so will probably cause the LAN ring to fail.

After you select the speed, it will issue a warning that you may ignore.

- a. Type **1** if the speed is to be 4 Mbits.
- b. Type **2** if the speed is to be 16 Mbits.

19. Once the configuration program is complete, a message will appear asking you to check to ensure no errors have occurred. Ignore the interrupt conflict warning. The card should be configured with the following settings:

- a. PnP Support:
BIOS
- b. Adapter Number:
1
- c. Adapter MAC:
{DON'T CARE}
- d. Microcode Level:
{DON'T CARE}
- e. Serial Number:
{DON'T CARE}
- f. Adapter Mode:
Auto 16 Compatible
- g. Configuration:
Legacy

- h. Adapter State:
Active
- i. I/O Address:
A20-A23
- j. Interrupt:
9*
- k. RAM Address:
D0000-D3FFF
- l. ROM Address:
CC000-CDFFF
- m. Remote IPL:
Disabled
- n. Token-Ring Data Rate:
{4 Mbps or 16 Mbps}
- o. Auto Sense Data Rate:
Disabled
- p. Adpter Bus Width:
16 bits

20. Once the Token-Ring settings have been confirmed, remove the diskette from the diskette drive.

21. Insert the *Token-Ring Diagnostics Diskette* (P/N 09L0887) into the diskette drive.

22. Turn off **CB1** on the 3494 Control Unit power control compartment (PCC) for this frame to power off the Library Manager PC.

Note: This **must** be done for the new configuration to take place. Rebooting the system does not change the configuration.

- 23. Wait 30 seconds.
- 24. Turn on **CB1** on the 3494 Control Unit power control compartment (PCC) for this frame to power on the Library Manager PC.
- 25. Diagnostics will begin running automatically as the Library Manager boots up.

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- ___ a. During testing, the window will say **TESTING IN PROGRESS**.
- ___ b. Record the Token-Ring Adapter address located at the top of the screen (in Token-Ring format) in this space.

 This address will be needed later if the customer is using the Universally Administered Address (UAA). Normally, this will not be needed because a Locally Administered Address (LAA) is used.
- ___ c. If the adapter is connected to the LAN and it tests OK, it will say **FINISHED TESTING - ADAPTER OK**. Continue with step 26.
- ___ d. If the adapter is not connected to the LAN, it result will be **DIAGNOSTICS INDICATE A FAILURE**.
- ___ e. Select **Retest** by pressing the **Enter** key to test the adapter in wrap mode. The screen will indicate **TESTING IN PROGRESS** while it is testing the adapter.
- ___ f. When complete, it will say **FINISHED TESTING - ADAPTER OK** and there will be a check mark in the box to the right of the picture of the adapter card.
- ___ g. Assuming that the adapter tests OK, connect the cable (if not already connected) to the cus-

tomers LAN using appropriate cables.

- ___ h. Reboot the Library Manager by pressing the **Ctrl-Alt-Del** keys. This will run the diagnostics again while being connected to the customers LAN (if not already done).
- ___ i. When complete, it will say **FINISHED TESTING - ADAPTER OK**.
- ___ j. Testing of the Token-Ring adapter is complete.
- ___ k. Remove the *Token-Ring Diagnostics Diskette* (P/N 09L0887) from the "A" diskette drive.
- ___ 26. The second Library Manager now has a LAN adapter card installed and tested. Insure that the diskette has been removed from the drive.
- ___ 27. Reboot this Library Manager by pressing the **Ctrl-Alt-Del** keys.
- ___ 28. If the Library Manager will be connected to LAN attached hosts, you must configure the library by following the instructions in Appendix A of these instructions. After performing the configuration in Appendix A, return here.

Appendix A is a reproduction of the section of the Library Manager installation instructions (at EC level C88757) called **Install 3494 Host Device Driver Features**.

Proceed to Section 12.0, "Field Updating" on page 33.

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After Installation (Sections 12 through 15)

12.0 Field Updating

None.

09L4286), Ethernet Configuration diskette (P/N 09L4287) and the Ethernet Diagnostic diskette (P/N 09L4288) in the "3494 LIC Licensed Internal Code" binder for backup.

13.0 Field Support Publications

Store these instructions and diskette(s) in the 3494 Licensed Internal Code binder. If the hard drive fails, the instructions and diskette(s) will be needed to re-install this feature.

If the hard drive fails, these diskettes will be needed to re-install this feature.

Scrap kit P/N 05H7591 locally if if you determined that the update was not required for this Library Manager.

14.0 Parts Disposition

- ___ 1. If this is Feature 5219, put the LAN Attachment Feature diskette (P/N 09L0885), Token-Ring Configuration diskette (P/N 09L0886) and the Token-Ring Diagnostic diskette (P/N 09L0887) in the "3494 LIC Licensed Internal Code" binder for backup.
- ___ 2. If this is Feature 5220, put the LAN Attachment Feature diskette (P/N

15.0 Machine Records

- ___ 1. Install updated Machine History provided. According to existing procedures, update all field records to reflect that feature code 5219 ("IBM Token Ring LAN Attachment") or feature code 5220 ("Ethernet Lan Attachment") has been installed.
- ___ 2. According to existing procedures, report installation and quality.
- ___ 3. Return to the Installation Instructions that in most cases sent you here.

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Appendix A. Install 3494 Host Device Driver Features

Note: This appendix has been taken from the *Library Manager Functional Microcode Installation Instructions L10/L12*. It is for reference only, provided for the convenience of the service person. If any difficulties arise, the actual *Library Manager Functional Microcode Installation Instructions L10/L12* should be consulted.

This section is used when you are reinstalling features due to a re-install of the OS/2 Operating System (possibly due to a lost hard drive) or when you have been directed here by a new host LAN attachment (device driver) such as:

1. AS/400 Device Driver (feature code 5211)
2. VSE Device Driver (feature code 9203)
3. SUN Device Driver (feature code 9204)
4. RISC System/6000 Device Driver (feature code 5212 or 5224)

Note: The next steps assume that either feature 5219 or 5220 (Token-Ring or Ethernet card) has already been installed. If one of these features has not been installed, proceed to those installation instructions and install the card first. Then return here to continue the installation.

If the 3494 Tape Library Dataserver is attached to the host via LAN, do the following steps:

- ___ 1. If the Library Manager is active, it must be shutdown as described in section 10.1, "Subsystem Power" on page 13. Return here after performing those steps.
- ___ 2. If a Service Window is not open, open a Service Window by selecting the **Service window** button on the **3494 Tape Library Dataserver Shutdown** panel. A Service window is opened for you. If asked, type the password: 'SERVICE'.

- ___ 3. Type **HOSTINST** in the Service Window. Follow the displayed instructions, selecting any defaults by pressing the enter key.
- ___ 4. The following question will be asked when **HOSTINST** is started:

Is this a TCPIP LAN, an APPC LAN, or both? (t/A/b)

Use the information in the next three sub-steps to help answer the question.

- ___ a. If the following feature either is installed or is being installed, make a note that this is an APPC LAN.
 - AS/400 Device Driver (5211)
- ___ b. If the following feature either is installed or is being installed, make a note that this is an APPC LAN. (APPC/VTAM)
 - VSE Device Driver (9203)
- ___ c. If the following feature either is installed or is being installed, make a note that this is a TCP/IP LAN.
 - RISC System/6000 Device Driver (5212 or 5224)
 - SUN Device Driver (feature code 9204)

Press **t** if only TCP/IP is being used, **a** if only APPC is being used or **b** if both TCP/IP and APPC are being used. Then press the **Enter** key.

- ___ 5. If you answered **t** (TCP/IP only) in step 4, go to step 8 on page 2.
- ___ 6. If APPC communications, or Both, is selected, it will be necessary to enter the Network ID and the Network Location that uniquely identify the Library Manager on the LAN. This information can be obtained from the LAN administrator. The definitions are:

Network ID This specifies the name of the remote network in which the adjacent control point (the Library Manager) resides.

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The common Programming Interface (CPI) Communications partner LU name of the Library Manager consists of the remote network identifier and the remote location. For example, if the Library Manager partner LU name is USIBMSU.LIBMGR01 then the Network ID is USIBMSU.

Network Location Name This specifies the remote location name of the host to which the Library Manager will communicate.

The Common Programming Interface (CPI) Communications partner LU name of the Library Manager consists of the remote network identifier and the remote location. For example, if the Library Manager partner LU name is USIBMSU.LIBMGR01 then the Network Location Name is LIBMGR01.

- ___ a. When asked, enter the **Network ID**.
- ___ b. When asked, enter the **Network Location**.
- ___ c. Select **Y** if the information is correct and press the **Enter** key.

___ 7. If you answered **A** (APPC protocol only) in step 4 on page 1, go to step 13 on page 5.

___ 8. If TCP/IP communications, or Both, is selected, it will be necessary to enter the IP Address, the subnet mask, and the host name that uniquely identify the Library Manager on the LAN. This information can be obtained from the LAN administrator. The definitions are:

IP Address The 32-bit dotted decimal notation Internet Protocol (IP) address that is to be used for the Library Manager. For

example 9.67.43.126 is an IP Address.

Note: The IP address is **NOT** the same as the Ethernet or Token-Ring "burned-in" card address. That type of address is a twelve digit address of the form:

10005A123456

Subnet Mask The Subnet Mask field specifies how much of the local address portion of the IP address to reserve for a sub-network address.

Host Name The name that is to be used for the Library Manager, such as **libmgr01**.

In addition, if the LAN is anything other than a simple configuration such as a Thinnet Ethernet where there are only a few machines on the LAN, you may also need more information. This will usually be obtained from a LAN administrator. The extra needed information might be:

Domain name In a larger TCP/IP installation, a particular machine might have a machine name of **libmgr01.vnet.ibm.com**. The domain name, in this example, is **vnet.ibm.com**.

Nameserver In a larger installation, there may be a machine that is dedicated to resolving a 'nickname'. This is called a Nameserver. Sometimes, there are two nameservers; one as a primary and a second as a backup.

Router In a larger installation that consists of several networks in the overall LAN, a router may be used to direct traffic.

If TCP/IP is being installed, the **TCP/IP Configuration** notebook will appear. Depending on the version of the operating

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system that you have, you will use two slightly different sets of entry panels. The next steps will direct you to the appropriate sections.

- ___ 9. The screen that comes up is the **Configure Network Interface Parameters**. If the upper left part of the screen says **Enable LAN Adapter 0** and the lower right part says **Page 1 of 8**, this is the OS/2 version 2 of TCP/IP. Go to step 11 and enter the TCP/IP configuration data.
- ___ 10. For OS/2 Warp version 4, you will see a list box with 9 items in it containing the words **LAN Interface 0** through **LAN Interface 7** and **loopback interface** as the last item. Go to step 12 on page 4 and enter the TCP/IP configuration data.
- ___ 11. Enter the TCP/IP data for OS/2 version 2.11.
 - ___ a. On the **Network** tab (page 1), place a checkmark in the **Enable LAN Adapter 0** box.
 - ___ b. Enter the IP Address in the appropriate field.
 - ___ c. Enter the Subnet Mask in the appropriate field.
 - ___ d. If a router is to be used (usually a LAN administrator provides this information):
 - ___ 1) Select the **Routing** tab.
Use the **Help** button for further help.
 - ___ 2) Click on **Insert Before** to enter a router.
 - ___ 3) Under **Route Type**, enter the router type to be used. To use a default router, type **D**.
 - ___ 4) Usually, the next parameter to enter is the IP address in the **Router** section.
 - ___ 5) When finished, click on **Insert**.
 - ___ e. Select the **Services** tab.
 - ___ f. Enter the host name in the **This Machines' Hostname** field.
 - ___ g. If a Domain Name is to be used (usually a LAN administrator provides this information), put this information in the **Domain Name** field.
Note: Do not use a Domain Name unless a Domain Nameserver is also used.
 - ___ h. If a Domain Nameserver is to be used (usually a LAN administrator provides this information):
Note: Do not use a Domain Nameserver unless a Domain Name is also used.
 - ___ 1) Click in the **Domain Nameserver** field.
 - ___ 2) Click on **Add** to add a nameserver.
 - ___ 3) Enter the primary nameserver's IP address in the **Nameserver Address** field.
 - ___ 4) Click on **Add** to add this nameserver to the list of nameservers.
 - ___ i. If a second Domain Nameserver is to be used:
 - ___ 1) Click on **Add** to add the second nameserver.
 - ___ 2) Enter the secondary nameserver's IP address in the **Nameserver Address** field.
 - ___ 3) Click on **Add** to add this nameserver to the list of nameservers.
 - ___ j. Click on the system icon to the left of the **TCP/IP Configuration** title.

- ___ k. Click on **Close** to end the configuration.
 - ___ l. Click on **Save** to save the configuration.
 - ___ m. If the configuration has changed, a **Configuration Tool** window will appear that asks if you want to update the **CONFIG.SYS** file. Click on **Yes**.
 - ___ n. At this point, you are finished with TCP/IP configuration for OS/2 version 211. Go to step 13 on page 5.
- ___ 12. Enter the TCP/IP data for OS/2 Warp version 4.
- ___ a. On the **Network** tab (page 1), select **LAN Interface 0** by clicking on the line.
 - ___ b. Place a checkmark in the **Enable interface** box.
 - ___ c. Insure the **Manually, using** button is selected.
 - ___ d. Enter the IP Address in the appropriate field.
 - ___ e. Enter the Subnet Mask in the appropriate field.
 - ___ f. If a router is to be used (usually a LAN administrator provides this information):
 - ___ 1) Select the **Routing** tab.
Use the **Help** button for further help.
 - ___ 2) Click on **Add** to enter a router.
 - ___ 3) Under **Route Type**, enter the router type to be used. To use a default router, type **D**.
 - ___ 4) Usually, the next parameter to enter is the router IP address in the **Router Address** section.
 - ___ 5) When finished, click on **Add**.
 - ___ 6) It will add two lines showing a **DEFAULT** and a **NET**.
 - ___ g. Select the **Hostnames** tab.
 - ___ h. Enter the host name in the **This Machines' Hostname** field.
 - ___ i. If a Domain Name is to be used (usually a LAN administrator provides this information), put this information in the **Local domain name** field.
Note: Do not use a Domain Name unless a Nameserver is also used.
 - ___ j. If a Nameserver is to be used (usually a LAN administrator provides this information):
Note: Do not use a Nameserver unless a Domain Name is also used.
 - ___ 1) Click in the **Nameserver Addresses** field.
 - ___ 2) Click on **Add** to add a nameserver.
 - ___ 3) Enter the primary nameserver's IP address in the **Nameserver Address** field.
 - ___ 4) Click on **Add** to add this nameserver to the list of nameservers.
 - ___ k. If a second Nameserver is to be used:
 - ___ 1) Click on **Add** to add the second nameserver.
 - ___ 2) Enter the secondary nameserver's IP address in the **Nameserver Address** field.

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- ___ 3) Click on **Add** to add this nameserver to the list of nameservers.
- ___ l. Click on the system icon to the left of the **TCP/IP Configuration** title.
- ___ m. Click on **Close** to end the configuration.
- ___ n. Click on **Save** to save the configuration.
- ___ o. If you have added a default router, a question panel called **Default Router Entry** may appear with an **OK** button at the bottom. If it does, after reading the panel, press **OK**.
- ___ p. You may then be presented with a panel titled **Autostarting Sendmail**. If you do, select **No**. If this panel does not appear, go on to the next step.
- ___ q. A **Configuration Tool** window will appear that asks if you want to update the **CONFIG.SYS** file. Click on **Yes**.
- ___ r. At this point, you are finished with TCP/IP configuration for OS/2 version 211. Continue with step 13.
- ___ 13. At the end of the 3494 Host Device Driver Features install, three or four steps will be displayed. Ignore the steps displayed on the screen and follow these steps instead:
 - ___ a. Type **exit** at the prompt (either [C:] or [C:\LM\EXE]).
 - ___ b. Select either **Shutdown computer** or **Shutdown computer for re-boot...** from the Shutdown dialog box. The actual words on the dialog box buttons will depend on the current code level of the Library Manager.
 - ___ c. When asked if you're sure, click on **Yes**.
 - ___ d. Remove the Installation Disk (if any) from the diskette drive.
- ___ 14. When the screen indicates that the shutdown is complete, reboot this Library Manager by pressing Ctrl-Alt-Del keys.
- ___ 15. The 3494 Host Device Driver Feature is now installed on the Library Manager side. When the Library Manager is brought up after the previous step, it will now be **LAN** aware. Use the instructions in Appendix B to make the 3494 aware of the LAN **hosts** that the 3494 will be connected to.

Appendix B is a reproduction of the section of the *3494 Operators Guide* for adding, deleting, and updating a LAN host or hosts using the **LAN Options** under the **Commands** pulldown of the Library Manager.
- ___ 16. If this feature is being installed to provide a 3494 connection to a VSE host, Appendix C may be useful as a guide because it provides many examples of how to configure VSE for a 3494.
- ___ 17. When completed with host set-up, go to Section 12.0, "Field Updating" on page 33.

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Appendix B. Adding, Deleting, and Updating LAN Hosts

Note: This appendix has been taken from the *3494 Operators Guide*. It is for reference only, provided for the convenience of the service person. If any difficulties arise, the actual *3494 Operators Guide* should be consulted.

In addition, it assumes that you go to the **Commands** pulldown on the Library Manager and select **LAN Options...** to get to these panels.

B.1 Add LAN Host

This panel allows a LAN attached host to be configured for communication with this 3494. The information to be entered may be available from a command on the host. For example, on the AS/400, the Display LAN Information (DSPLANMLD) command will provide this information. The person who set up your LAN configuration may also be able to provide this information. Figure 8 on page 2 shows the Add LAN Host to Library pop-up window.

Communication Protocol

Select the type of communication protocol for use with this host.

Each LAN host has a particular LAN protocol that it uses to communicate with the 3494. The following are some of the hosts and their associated protocols:

AS/400	uses APPC
VSE/ESA	uses APPC/VTAM
RISC System/6000	uses TCP/IP
SUN	uses TCP/IP
90765 SP2	uses TCP/IP

If APPC is selected as the communications protocol, a pop-up window as shown in Figure 8 on page 2 will appear. This allows a LAN connected host such as an AS/400 to be added to the 3494 configuration. Fill in the following fields:

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Figure 8. Add LAN Host to Library Pop-Up Window (APPC Selected)

Host Alias

The alias for a host is a customer supplied nickname for that host. This is an optional field and may be left blank if an alias is not desired.

Host Transaction Program Name

Specifies the name of the LAN transaction program that runs on the host to receive data from the Library Manager. For example, on the AS/400, the LAN transaction program name is **QMLD/QMLDSTRCC**.

Host Network ID

Specifies the name of the remote network in which the adjacent control point (the host) resides.

The Common Programming Interface (CPI) - Communications partner_LU_name of the host, consists of the host remote network identifier and the host remote location. For example, if the host partner_LU_name is **USIBMSU.S10A4045**, then the Host Network ID is **USIBMSU**.

Host Location Name

Specifies the remote location name (of the host) to which the 3494 will communicate.

The Common Programming Interface (CPI) - Communications partner_LU_name of the host, consists of the remote network identifier and the remote location. For example, if the host partner_LU_name is **USIBMSU.S10A4045**, then the Host Location Name is **S10A4045**.

Host Adapter Address

Specifies the LAN adapter address of the remote controller (the host). This can be the host adapter card universally administered address (UAA), such as 10005A1E3338, or a locally administered address (LAA), such as 400012345678.

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Ethernet Check Box

If the adapter address is in Ethernet Format, check this box.

Note: If the host is AS/400, DSPLANMLD, Display LAN Information (on the AS/400) will provide the information needed to fill in the Add LAN Host Screen.

The following are the push buttons:

OK The information on this window will be used to add a LAN attached host to the library system.

Cancel Close this window without adding a host operation.

Help Display the help panel.

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If APPC/VTAM is selected as the communications protocol, an Add LAN Host to Library pop-up window as shown in Figure 9 will appear. This allows a LAN connected host such as VSE/ESA to be added to the 3494 configuration. Fill in the following fields:

Figure 9. Add LAN Host to Library Pop-Up Window (APPC/VTAM Selected)

Host Alias

The alias for a host is a customer supplied nickname for that host. This is an optional field and may be left blank if an alias is not desired.

Host Transaction Program Name

Specifies the name of the LAN transaction program that runs on the host to receive data from the Library Manager.

For example, if the host is VSE/ESA, the default transaction program name is **VSE1LCA**.

Host Network ID

Specifies the name of the remote network in which the adjacent control point (the host) resides.

The Common Programming Interface (CPI) - Communications partner_LU_name of the host, consists of the host remote network identifier and the host remote location. For example, if the host partner_LU_name is **USIBMSU.VSE1LCA**, then the Host Network ID is **USIBMSU**.

Host Location Name

Specifies the remote location name (of the host) to which the 3494 will communicate.

The Common Programming Interface (CPI) - Communications partner_LU_name of the host, consists of the remote network identifier and the remote location. For example, if the host partner_LU_name is **USIBMSU.VSE1LCA**, then the Host Location Name is **VSE1LCA**.

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Host Adapter Address

Specifies the LAN adapter address of the remote controller (host). This can be the host adapter card universally administered address (UAA), such as 10005A1E3338, or a locally administered address (LAA), such as 400012345678.

Ethernet Check Box

If the adapter address is in Ethernet Format, check this box.

Physical Unit Name

This is the name of the physical unit the 3494 will communicate with for this host, for example, VSE3174.

The following are the push buttons:

- OK** The information on this window is used to add a LAN attached host to the library system.
- Cancel** Close this window without adding a host operation.
- Help** Display the help panel.

If TCP/IP is selected as the communications protocol, an Add LAN Host to Library pop-up window as shown in Figure 10 will appear. This allows a LAN connected host such as a RISC System/6000 to be added to the 3494 configuration. Fill in the following fields:

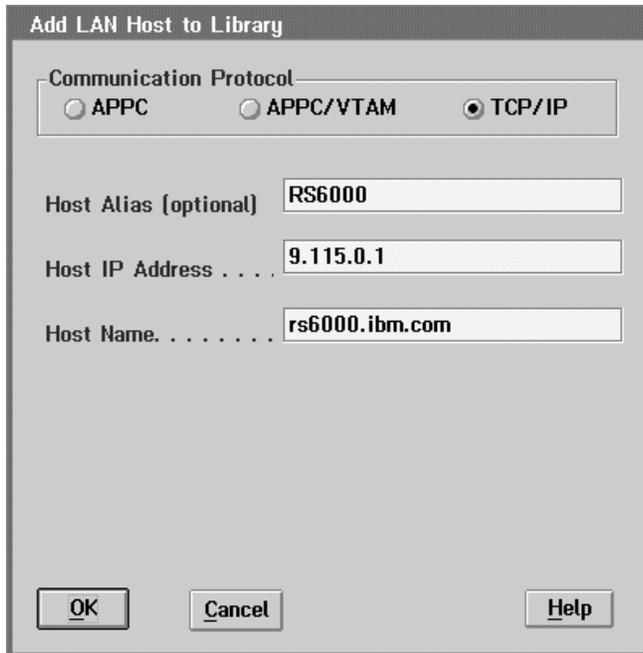


Figure 10. Add LAN Host to Library Pop-Up Window (TCP/IP Selected)

Host Alias (optional)

The alias for a host is a customer supplied nickname for that host. This is an optional field and may be left blank if an alias is not desired.

Host IP Address

The Host IP Address is the unique internet address assigned to the host.

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Host Name

The Host Name is the Hostname defined in the TCP/IP network.

The following are the push buttons:

- OK** The information on this window will be used to add a LAN attached host to the library system.
- Cancel** Close this window without adding a host.
- Help** Display the help panel.

B.2 Delete LAN Host

Figure 11 shows the Delete Host from Library pop-up window. From this pop-up window, select the LAN-connected host to be deleted from the 3494 configuration. The 3494 will no longer respond to requests from the deleted host.

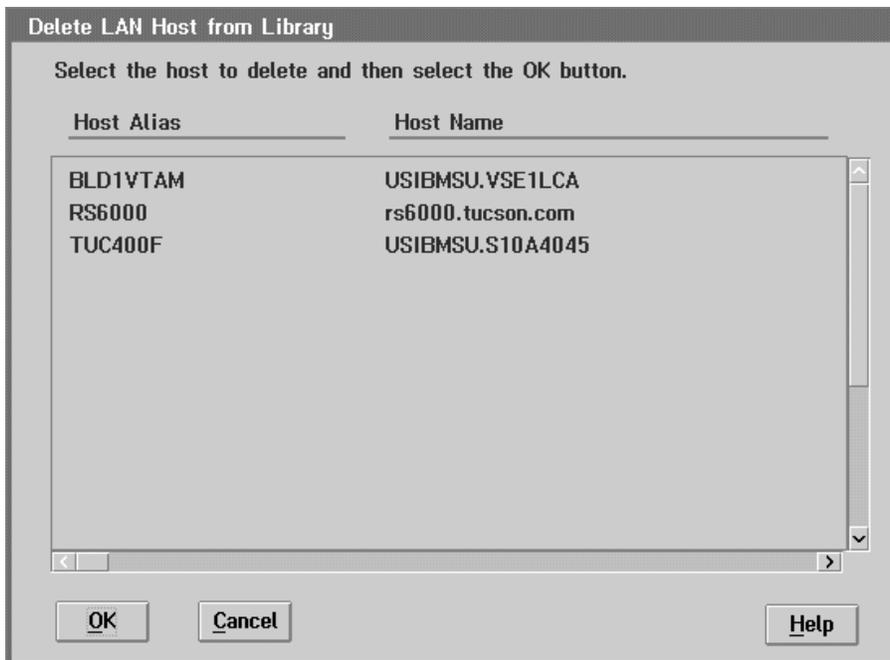


Figure 11. Delete LAN Host from Library Pop-Up Window

Host Alias (optional)

The alias for a host is a customer supplied nickname for that host. This is an optional field and may be left blank if an alias is not desired.

Host Name

This field lists the names of all hosts that are configured with the library system via LAN.

For TCP/IP hosts, the Host Name is the Hostname defined in the TCP/IP network. In Figure 11, **rs6000.tucson.com** is a TCP/IP Hostname.

For APPC and APPC/VTAM hosts, the Host Name is a combination of the Host Network ID and the Host Location Name. For example, if the Host Network ID is **USIBMSU**, and the Host Location Name is **S10A4045**, then the Host Name is **USIBMSU.S10A4045**.

This window displays the host names and (if set up) the host aliases of all the hosts that are configured with the library system via LAN. Select the host to be deleted and select the **OK** button.

A caution window will pop up to make sure that you really want to delete this host. Selecting the **Yes** button on this window will delete the host from the library system. The following are the push buttons:

OK Delete the selected host from the library system.

Cancel Close this window without deleting a host.

Help Display the help panel.

B.3 Update LAN Host Information

Figure 12 shows the Update Host Information pop-up window. This pop-up window allows a particular LAN connected host to be selected to update that host's 3494 LAN configuration data. After a host is selected, the host information can be updated.

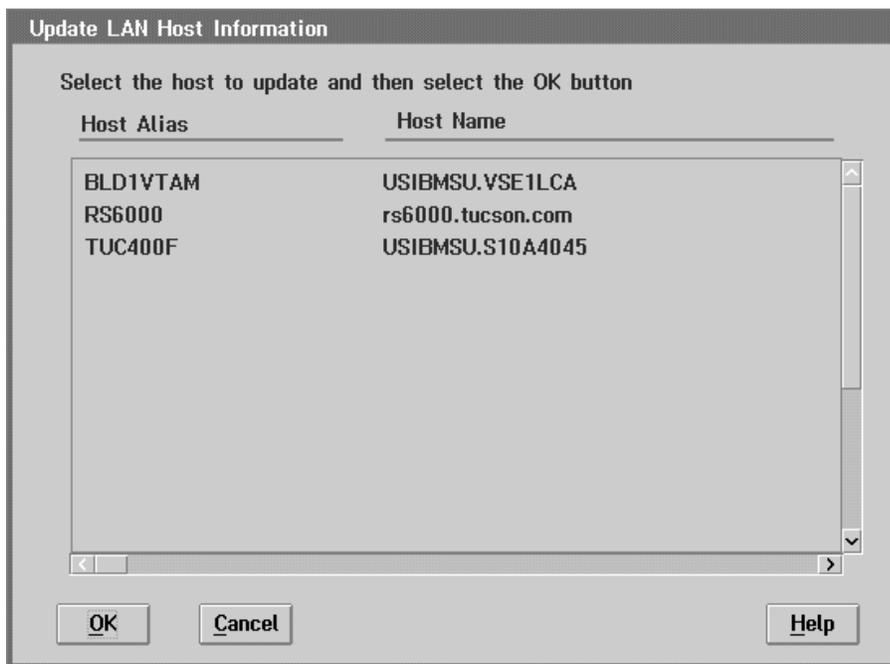


Figure 12. Update LAN Host Information Pop-Up Window

Host Alias (optional)

The alias for a host is a customer supplied nickname for that host. This is an optional field and may be left blank if an alias is not desired.

Host Name

This field lists the names of all the hosts that are configured with the library system via LAN.

For TCP/IP hosts, the Host Name is the Hostname defined in the TCP/IP network. In Figure 12 on page 7, **rs6000.tucson.com** is a TCP/IP Hostname.

For APPC and APPC/VTAM hosts, the Host Name is a combination of the Host Network ID and the Host Location Name. For example, if the Host Network ID is **USIBMSU**, and the Host Location Name is **S10A4045**, then the Host Name is **USIBMSU.S10A4045**.

Select the host that requires updating and select the **OK** button. This will display the Change LAN Host Information window showing the current LAN host information. The following are the push buttons on the Update LAN Host Information pop-up window:

- OK** Close the window and open a new window showing the information for the host selected.
- Cancel** Close the panel without selecting a host for update.
- Help** Display the help panel.

Figure 13 shows the Change Host Information pop-up window. This pop-up window allows information about a LAN host to be changed in the 3494 configuration. When this is done, the 3494 responds to the host with the new configuration data.

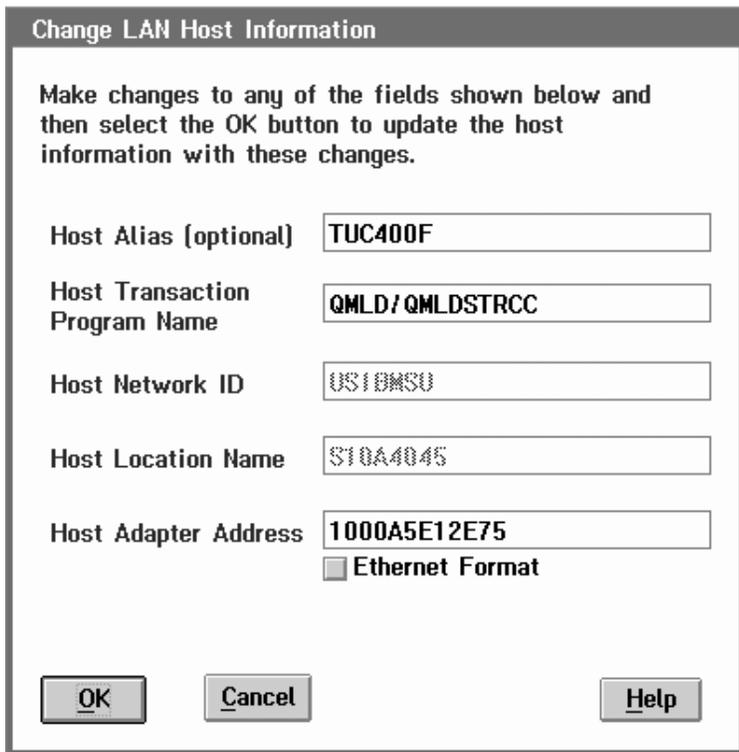


Figure 13. Change LAN Host Information Pop-Up Window

Host Alias

The alias for a host is a customer supplied nickname for that host. This is an optional field and may be left blank if an alias is not desired.

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Host Transaction Program Name

Specifies the name of the LAN transaction program that runs on the host to receive data from the Library Manager.

Host Network ID

Specifies the name of the remote network in which the adjacent control point (host) resides.

The Common Programming Interface (CPI) - Communications partner_LU_name of the host, consists of the host remote network identifier and the host remote location. For example, if the host partner_LU_name is **USIBMSU.S10A4045**, then the Host Network ID is **USIBMSU**.

Host Location Name

Specifies the remote location name (of the host) to which the 3494 will communicate.

The Common Programming Interface (CPI) - Communications partner_LU_name of the host, consists of the remote network identifier and the remote location. For example, if the host partner_LU_name is **USIBMSU.S10A4045**, then the Host Location Name is **S10A4045**.

Host Adapter Address

Specifies the LAN adapter address of the remote controller (host). This can be the host adapter card universally administered address (UAA), such as 10005A1E3338, or a locally administered address (LAA), such as 400012345678.

Ethernet Check Box

If the adapter address is in Ethernet Format, check this box.

Note: If the host is AS/400, DSPLANMLD, Display LAN Information, (on the AS/400) will provide the information needed to update the Change LAN Host Information screen.

The following are the push buttons on the Change Host Information pop-up window:

- OK** Update the LAN host information using the changes entered on this window.
- Cancel** Close the panel without updating the host information.
- Help** Display the help panel.

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B.4 LM LAN Information

This window supplies the LAN information about the library that is required by the host system for the host and library to communicate. The window shown in Figure 14 displays the following information:

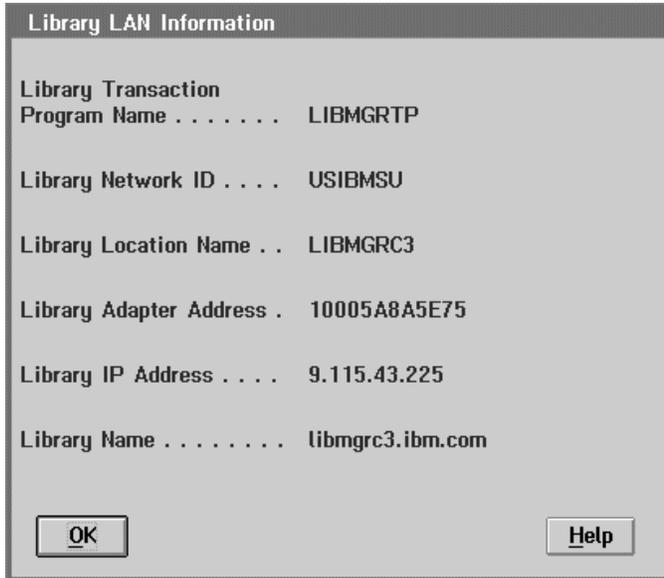


Figure 14. Library LAN Information Pop-Up Window

Library Transaction Program Name

Specifies the name of the LAN transaction program that runs on the Library Manager to receive data from the Host.

Library Network ID

Specifies the name of the remote network in which the adjacent control point (the Library Manager) resides.

The Common Programming Interface (CPI) - Communications partner_LU_name of the host, consists of the Library Manager network identifier and the Library Manager location name. For example, if the Library Manager partner_LU_name is **USIBMSU.LIBMGR3**, then the Library Manager Network ID is **USIBMSU**.

Library Location Name

Specifies the remote location name (of the 3494 Library Manager) to which the Host will communicate.

The Common Programming Interface (CPI) - Communications partner_LU_name of the Library Manager, consists of the network identifier and the location name. For example, if the Library Manager partner_LU_name is **USIBMSU.LIBMGR3**, then the Library Manager Location Name is **LIBMGRC3**.

Library Adapter Address

Specifies the LAN adapter address of the remote controller (the Library Manager). This can be the Library Manager adapter card universally administered address (UAA), such as 10005A8A5E75, or a locally administered address (LAA), such as 40003494001A.

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Library IP Address

The Library Manager IP Address is the unique internet address assigned to the 3494 Library Manager.

Library Name

The Library Name is the Hostname defined in the TCP/IP network for the Library Manager. In Figure 14 on page 10, **libmgrc3.tucson.com** is a TCP/IP Hostname.

The following are the push buttons:

OK Close the information window.

Help Display the help panel.

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Appendix C. Network Configuration Examples for VSE

If you do not routinely perform network definition tasks, the setting up the 3494 LAN definitions may seem complex. To clarify this process, this appendix describes the setup procedure for configuring APPC/VTAM communication protocol at the 3494 Library Manager and provides two sets of sample ACF/VTAM files for completing the associated network definitions.

WARRANTY

The information contained in this appendix is based on actual install experience but has not been submitted to any formal IBM test. Requirements for any specific scenario are contingent upon many variables that may not match all aspects of the examples provided here. This appendix is distributed on an "**AS IS BASIS**" without any warranty either expressed or implied.

This appendix contains the following material:

- General information
 - Procedural notes, a lists of the items (variables) central to the sample network definitions, and overview of the relationships among the definition sets
- Tasks Performed at the 3494
 - Procedures for LAN configuration and host definition
- Example 1
 - Sample files containing network resource definitions when using IBM 3174 Establishment Controller
- Example 2
 - Sample files containing network resource definitions when using IBM 3745 Communication Controller

C.1 General Information

C.1.1 Some Useful Hints and Reminders

Sequence considerations: After completing necessary definitions and customization tasks, **shutdown** the 3494 completely, and then restart the Library Manager PS/2 with a "soft" IPL. When then 3494 is operational, start the LCDD job on the host.

(Note that routinely, before starting the VSE/ESA IPL procedure, the Library Manager should be operational so that VSE recognizes that the 3490E drives belongs to an automated tape library.)

IPL Load Parameter: Be sure to specify **ATL=VSE** in the **SYS** Command if you are using LCDD and APPC/VTAM LAN support to provide library control for a VSE host that is running as a guest of VM/ESA.

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Usage with VSE/ESA Version 2 Release 1: The new LIBSERV command or statement provides control interfaces for IBM 3494 Tape Library Dataserver. These requests are routed in a native environment via the LCCD for VSE/ESA. For further information refer to *VSE/ESA System Control Statements V2R1, SC33-6613*.

Usage with VSE/ESA Version 1: In supported releases (1.3.5 or higher), it is recommended you use a tape management system that exploits the new LBSERV macro.

ACF/VTAM software requirements:

Depending on the level of VSE/ESA in use, one of the following ACF/VTAM releases is used:

- VSE/ESA Version 1, Release 3 and above)
 - ACF/VTAM Version 3 Release 4
- VSE/ESA Version 2 Release 1
 - ACF/VTAM Version 4 Release 2

C.1.2 Network Resource Names and Variable

Table 1 itemizes the resources that you must specify in setting up the network and startup definitions for APPC/VTAM control of the 3494. Note that the ID number or letter associated with each name will be referenced throughout the sample definition files in the examples that follow. The ID is not part of the definition itself and is intended only to clarify relationships among variable names. Also, it is important to understand that the last column in this table provides names of variables where the definition is *automatically* generated in the NDF file, if applicable. **Do not make manual modifications to the NDF file.**

Table 1 (Page 1 of 2). Use and Relationship of Resource Definition Items		
ID and Associated Definition Name	Where defined	Automatic NDF file location
1 Network ID	<ul style="list-style-type: none"> • 3494 "Add LAN Host to Library" Pop-Up Window HOST NETWORK ID • 3174 Customization, Worksheet 14 • ACF/VTAM Startup 	<ul style="list-style-type: none"> • DEFINE_LOCAL_CP FQ_CP_NAME • DEFINE_LOGICAL_LINK FQ_ADJACENT_CP_NAME • DEFINE_PARTNER_LU FQ_PARTNER_LU_NAME • DEFINE_PARTNER_LU_LOCATION FQ_PARTNER_LU_NAME FQ_OWNING_CP_NAME
2 Network Location Name	<ul style="list-style-type: none"> • HOSTINST procedure • 3174 Customization, Worksheets 16 and 17 • ACF/VTAM CDRSC Catalog job 	<ul style="list-style-type: none"> • DEFINE_LOCAL_CP FQ_CP_NAME
3 VSE Host Identity	<ul style="list-style-type: none"> • 3494 "Add LAN Host to Library" Pop-Up Window HOST TRANSACTION PROGRAM NAME HOST LOCATION NAME • ACF/VTAM Applications (Extension) job • LCDD Startup job LOCAL_VSE_ID 	<ul style="list-style-type: none"> • DEFINE_PARTNER_LU FQ_PARTNER_LU_NAME PARTNER_LU_ALIAS • DEFINE_PARTNER_LU_LOCATION FQ_PARTNER_LU_NAME

Table 1 (Page 2 of 2). Use and Relationship of Resource Definition Items		
ID and Associated Definition Name	Where defined	Automatic NDF file location
4 Host Adapter Address (MAC)	<ul style="list-style-type: none"> 3494 "Add LAN Host to Library" Pop-Up Window HOST ADAPTER ADDRESS 3174 Customization, Worksheets 45, 46 and 51A 	<ul style="list-style-type: none"> DEFINE_LOGICAL_LINK DESTINATION_ADDRESS
5 Physical Unit Address (adjacent SSCP name)	<ul style="list-style-type: none"> 3494 "Add LAN Host to Library" Pop-Up Window PHYSICAL UNIT NAME 3174 Customization, Worksheets 14 and 17 	<ul style="list-style-type: none"> DEFINE_LOGICAL_LINK FQ_ADJACENT_CP_NAME DEFINE_PARTNER_LU_LOCATION FQ_OWNING_CP_NAME
6 Name of PU	<ul style="list-style-type: none"> ACF/VTAM APPN Catalog job ACF/VTAM CDRSC Catalog job 	<ul style="list-style-type: none"> DEFINE_LOGICAL_LINK PU_NAME
7 DLOGMODE=APPCMODE	<ul style="list-style-type: none"> ACF/VTAM APPN Catalog job ACF/VTAM APPL2 Catalog job ACF/VTAM MODETAB definition assembly job 	
8 ACF/VTAM Application Major Node Name	<ul style="list-style-type: none"> ACF/VTAM APPL Catalog job ACF/VTAM ATCCON00 Catalog job 	
9 ACF/VTAM Application Major Node Name (Extension)	<ul style="list-style-type: none"> ACF/VTAM APPL2 Catalog job ACF/VTAM ATCCON00 Catalog job 	
10 ACF/VTAM Major Node APPN	<ul style="list-style-type: none"> ACF/VTAM APPN Catalog job ACF/VTAM ATCCON00 Catalog job 	
11 ACF/VTAM CDRSC Major Node Name	<ul style="list-style-type: none"> ACF/VTAM. CDRSC Catalog job ACF/VTAM ATCCON00 Catalog job 	
12 MODETAB=APPCTABL	<ul style="list-style-type: none"> ACF/VTAM APPN Catalog job ACF/VTAM APPL2 Catalog job ACF/VTAM MODETAB definition assembly job 	
13 Serial Number of Tape Control Unit	<ul style="list-style-type: none"> LCDD Startup job DEVICE_LIST <p>Get this from the distribution list or from the CE. Remember to include the dash (-), for example: DEVICE_LIST 77-43384 B40 B41, where 77-43384 is the CU serial number</p>	
14 Addresses of tape devices	<ul style="list-style-type: none"> LCDD Startup job DEVICE_LIST 	
15 Address of Tokenring card	<ul style="list-style-type: none"> LANINST procedure 3174 Customization, Worksheets 16 and 46 	
A Transaction Program for 3494, LIBMGRTP	<ul style="list-style-type: none"> LCDD Startup job LIBRARY_ID 	<ul style="list-style-type: none"> DEFINE_TP TP_NAME

C.1.3 Overview

A high-level view of APPC/VTAM communication between the 3494 and LCDD on the VSE/ESA host is shown in Figure 15 on page 4. Note that definitions placed above the lines in each block represent terminology for defining variables in the Library Manager, VTAM, and LCDD. Definitions below the lines are samples variable names from C.3, "Example 1: Connection with IBM 3174" on page 7.

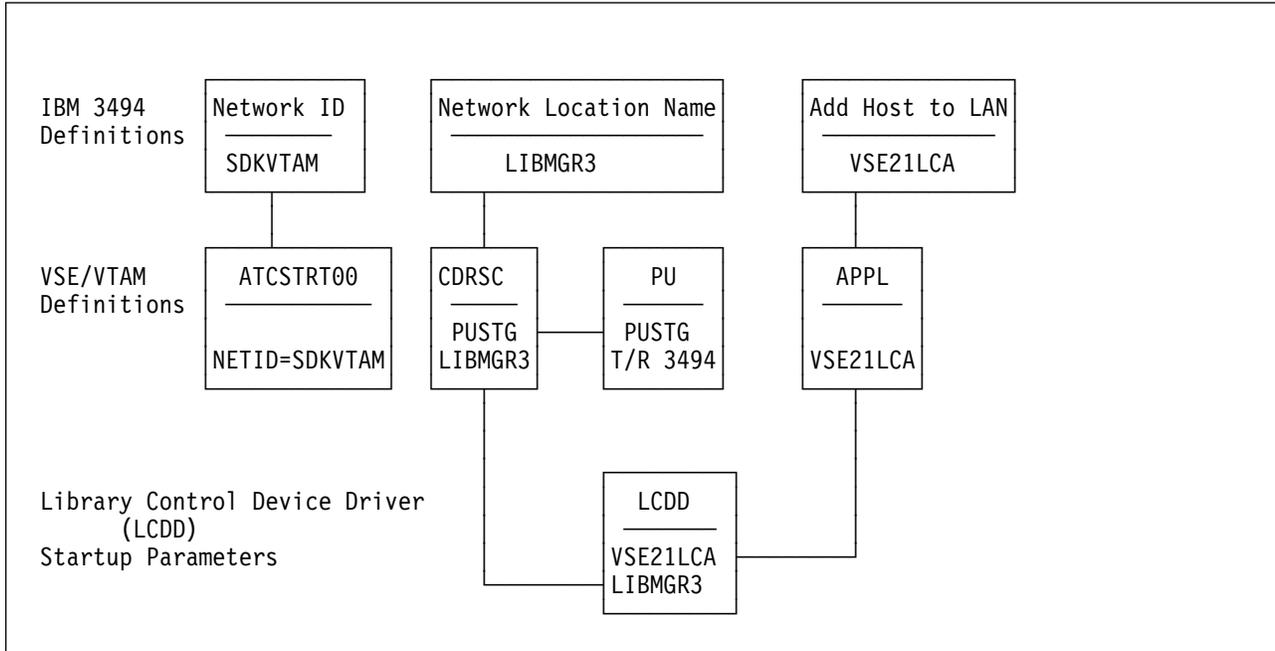


Figure 15. Relationships of Definitions

C.2 Customizing APPC/VTAM on the 3494

Please note

The procedures that follow and the examples in later sections use the TokenRing LAN adapter feature. The 3494 is capable also of communicating with APPC/VTAM on an Ethernet LAN.

C.2.1 Preparation for LAN Attachment

The 3494 is prepared for LAN attachment by using the Feature 5219/5220 Installation Instructions (the main body of these instructions). Go to 1.0, "Machines Affected" on page 5 and perform those steps.

C.2.2 Setting up the 3494 Host Driver

When the 3494 Tape Library Dataserver is host-controlled via LAN, you must set up the 3494 to know what kinds of LAN protocols will be used. To do this, go to Appendix A, "Install 3494 Host Device Driver Features" on page 1 (Appendix A) and follow those instructions. The instructions will ask certain things and this section is designed to help answer those questions.

The prompts will ask whether LAN is communicating via APPC, TCP/IP or both to a host. (Prior to prompting for this information, it will tell you if either APPC or TCP/IP has been installed.)

VSE requires the APPC protocol. It will be necessary to enter the Network ID and the Network Location that uniquely identify the Library Manager on the LAN. The Common Programming Interface (CPI) Communication partner LU name of the Library Manager consists of the remote network identifier and the remote location.

1. Network ID **1**

Specifies the name of the remote network in which the adjacent control point (the 3494 Library Manager) resides. In C.3, "Example 1: Connection with IBM 3174" on page 7, the Network ID is **SDKVTAM** and the remote location is defined to VTAM as Cross Domain Resource (CDRS). The Network ID is used in:

- VTAM -> ATCSTR00 Parameter NETID=
- CM/2 -> Network Definition File IBM3494.NDF

2. Network Location Name **2**

Specifies the name of the remote location name of the host to which the Library Manager will communicate. In C.3, "Example 1: Connection with IBM 3174" on page 7, the Network Location Name is **LIBMGR3**. The Network Location Name is identical with the VTAM Cross Domain Resource.

The Network Location Name is used in:

- VTAM -> VTAMCDRSC Major Node name ALSLIST=
- CM/2 -> Network Definition File IBM3494.NDF

Save this information because it will be needed for ACF/VTAM and LCDD customization.

C.2.3 Adding LAN Host to the Library

For the VSE/ESA LAN-attach environments, you must add a host with an APPC/VTAM connection.

To do this, go to Appendix B, "Adding, Deleting, and Updating LAN Hosts" on page 1 (Appendix B). Additional help is provided below to aid in filling in the information in Appendix B.

Fill in the fields, as described below, on the **Add LAN Host to Library** Pop-Up window (accessed thru **Commands** pull-down by selecting **LAN options**.)

Host Alias (optional)

Can be ignored. If provided, will be used on the LAN status panel.

Host Transaction Program Name **3**

Name of the VTAM application which must be define in the **VBUILD Type=Appl statement**. This name also becomes the **Local_VSE_ID** in the startup for the LCDD driver.

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Host Network ID **1**

ID you have used during 3494 setup running procedure **Hostinst** It is also the **VTAM start up parameter NETID=**

Host Location Name **3**

Again, the name of the VTAM application, and the **Local_VSE_ID**.

Host Adapter Address **4**

MAC address of the Tokenring Host Gateway. The information comes from the configuration of the 3174 or 3745 (3720/3725)

Physical Unit Name **5**

Name of the adjacent communication control point, either the one inside the 3174 or the VTAM connected to the 3494.

You can verify these definitions by entering **Service Mode** and opening an OS/2 window. Change to subdirectory **IBMCOM** and look at member **IBM3494.NDF**

The NDF file is created automatically and reflects the information provided in the **Add LAN Host to Library** panel.

For detailed information refer to *IBM 3494 Tape Library Dataserver Operator's Guide, GA32-0280*. **Do not make manual changes to the NDF file.**

Examples of generated NDF files are included in C.3, "Example 1: Connection with IBM 3174" on page 7 and C.4, "Example 2: Connection with IBM 3744" on page 21.

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C.3 Example 1: Connection with IBM 3174

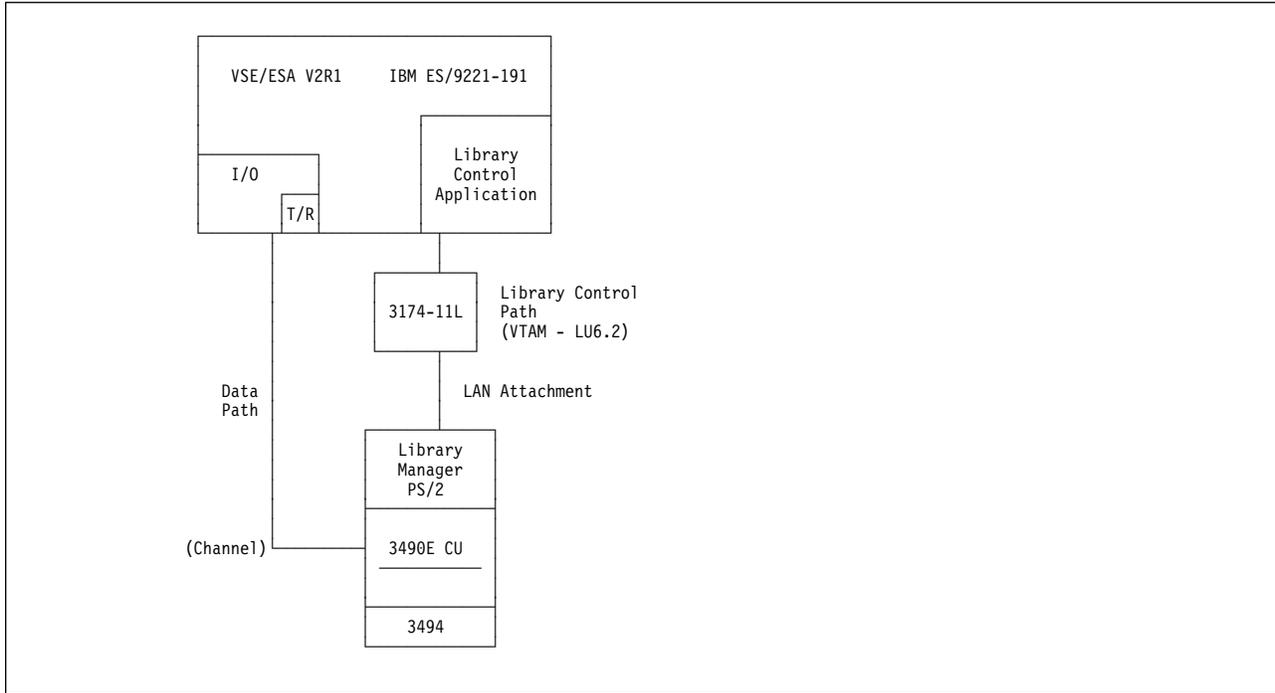


Figure 16. Environment with IBM 3174 Establishment Controller and Tokenring

The IBM 3490E is connected via ESCON channel with addresses 200 and 201.

The IBM 3174-11L has BOTH:

- #3026 - IBM 16/4 BPS Token-Ring Network Gateway, AND
- #6010 - Configuration Support "C 5.1"

C.3.1 NDF

The following NDF file was generated as a result of adding the VSE/ESA host to the library.

```

DEFINE_LOCAL_CP   FQ_CP_NAME(SDKVTAM.LIBMGR3 )
                  DESCRIPTION(MRLM LM CP NAME)
                  CP_ALIAS(MRLMLMØX)
                  NAU_ADDRESS(INDEPENDENT_LU)
                  NODE_TYPE(EN)
                  NODE_ID(X'05D00000')
                  NW_FP_SUPPORT(NONE)
                  HOST_FP_SUPPORT(NO)
                  MAX_COMP_LEVEL(NONE)
                  MAX_COMP_TOKENS(0);

DEFINE_LOGICAL_LINK LINK_NAME(LN940012)

                  FQ_ADJACENT_CP_NAME(SDKVTAM.VSE3174 )
                  ADJACENT_NODE_TYPE(LEARN)
                  DLC_NAME(IBMTRNET)
                  ADAPTER_NUMBER(0)

                  DESTINATION_ADDRESS(X'40003174999904')
                  ETHERNET_FORMAT(NO)
                  CP_CP_SESSION_SUPPORT(NO)
                  SOLICIT_SSCP_SESSION(NO)
                  ACTIVATE_AT_STARTUP(YES)
                  USE_PUNAME_AS_CPNAME(NO)
                  LIMITED_RESOURCE(USE_ADAPTER_DEFINITION)
                  LINK_STATION_ROLE(USE_ADAPTER_DEFINITION)
                  MAX_ACTIVATION_ATTEMPTS(USE_ADAPTER_DEFINITION)
                  EFFECTIVE_CAPACITY(USE_ADAPTER_DEFINITION)
                  COST_PER_CONNECT_TIME(USE_ADAPTER_DEFINITION)
                  COST_PER_BYTE(USE_ADAPTER_DEFINITION)
                  SECURITY(USE_ADAPTER_DEFINITION)
                  PROPAGATION_DELAY(USE_ADAPTER_DEFINITION)
                  USER_DEFINED_1(USE_ADAPTER_DEFINITION)
                  USER_DEFINED_2(USE_ADAPTER_DEFINITION)
                  USER_DEFINED_3(USE_ADAPTER_DEFINITION);

```

Figure 17. NDF Definitions (Part 1)

```

                                1      3
DEFINE_PARTNER_LU  FQ_PARTNER_LU_NAME(SDKVTAM.VSE21LCA )
                                3
                    PARTNER_LU_ALIAS(VSE21LCA)
                    MAX_MC_LL_SEND_SIZE(32767)
                    CONV_SECURITY_VERIFICATION(NO)
                    PARALLEL_SESSION_SUPPORT(YES);

                                1      3
DEFINE_PARTNER_LU_LOCATION  FQ_PARTNER_LU_NAME(SDKVTAM.VSE21LCA )
                            WILDCARD_ENTRY(NO)

                                1      5
                            FQ_OWNING_CP_NAME(SDKVTAM.VSE3174 )
                            LOCAL_NODE_NN_SERVER(NO);

DEFINE_MODE  MODE_NAME(APPCMODE)
            COS_NAME(#CONNECT)
            DEFAULT_RU_SIZE(YES)
            RECEIVE_PACING_WINDOW(4)
            MAX_NEGOTIABLE_SESSION_LIMIT(32767)
            PLU_MODE_SESSION_LIMIT(8)
            MIN_CONWINNERS_SOURCE(0)
            COMPRESSION_NEED(PROHIBITED)
            PLU_SLU_COMPRESSION(NONE)
            SLU_PLU_COMPRESSION(NONE);

DEFINE_DEFAULTS  IMPLICIT_INBOUND_PLU_SUPPORT(YES)
                DEFAULT_MODE_NAME(BLANK)
                MAX_MC_LL_SEND_SIZE(32767)
                DIRECTORY_FOR_INBOUND_ATTACHES(*)
                DEFAULT_TP_OPERATION(NONQUEUED_AM_STARTED)
                DEFAULT_TP_PROGRAM_TYPE(BACKGROUND)
                DEFAULT_TP_CONV_SECURITY_RQD(NO)
                MAX_HELD_ALERTS(10);

                                A
DEFINE_TP  TP_NAME(LIBMGRTP)
          PIP_ALLOWED(NO)
          FILESPEC(C:\LM\EXE\LIBMGRTP.EXE)
          CONVERSATION_TYPE(ANY_TYPE)
          CONV_SECURITY_RQD(NO)
          SYNC_LEVEL(EITHER)
          TP_OPERATION(NONQUEUED_AM_STARTED)
          PROGRAM_TYPE(PRESENTATION_MANAGER)
          RECEIVE_ALLOCATE_TIMEOUT(INFINITE);

START_ATTACH_MANAGER;

```

Figure 18. NDF Definitions (Part 2)

C.3.2 IBM 3174 Customization

This setup described here is for a VSE/LAN Token-Ring Gateway Connection to a 3494 Tape Library Dataserver. Shown here are necessary configuration elements for the 3174 Controller (in this case a 3174-11L) which enables the host (VSE/ESA with ACF/VTAM) to communicate with the downstream physical units (DSPU's) on the LAN. The 3494 with appropriate microcode, operating system support, and Library Manager code acts as the DSPU.

The environment on this example uses:

- #3026 - IBM 16/4 BPS Token-Ring Network Gateway
- #6010 - Configuration Support "C 5.1"

C.3.2.1 3174 Configuration Questions

Option 1 of the **CUSTOMIZE CONTROL DISK MENU** shows the worksheets in this sequence:
1, 51A, 7, 14, 45-47, and 50

And then **Option 6**, worksheets **15, 16 and 17**

Answers for tailoring the 3174-11L are shown.

- Worksheet 1 - Host Attachment
 - Question 100 - 11L
 - Question 101 - 5 (Local SNA Control Unit)
 - Question 102 - 1 (LAN Adapter Type)

- Worksheet 7 - SNA (Channel)
 - Question 104 - 00
 - Question 105 - 04
 - Question 108 - 77F0020 (Serial # of customer 3174)
 - Question 110 - 0 0000
 - Question 116 - 0- --
 - Question 121 - 03
 - Question 123 - 0
 - Question 125 - 00000000
 - Question 126 - 00000000
 - Question 127 - 0 0
 - Question 132 - 0 0 0 0
 - Question 136 - 0 0 0 0
 - Question 137 - 0 0 0 0
 - Question 138 - 0

- Question 141 - A
- Question 150 - 1 0
- Question 165 - 0
- Question 166 - A
- Question 168 - 0
- Question 172 - 0
- Question 173 - 00000000
- Question 179 - 0 0 0
- Question 190 - 00
- Question 213 - 1
- Question 215 - F0020
- Question 220 - 0
- Question 222 - 1
- Question 223 - 10
- Question 224 - 2
- Question 225 - 4
- Question 242 - 0

- Worksheet 14 - Common SNA

- Question 500 - 0
- Question 501 - SDKVTAM_ (Network ID) **1**
- Question 502 - _____
- Question 510 - 1
- Question 511 - VSE3174_ (APPN Control Point Name) **5**
- Question 512 - VSE3494_

- Worksheet 15 - APPN Node Definition

- Question 610 - 1
- Question 612 - 1
- Question 611 - 1
- Question 613 - 1A (Default)

- Worksheet 16 - Network Resources

2

15

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LIBMGR3 2 X 1 4000 3270 0003 04

- Worksheet 17 - Associated LUs

2 2 5

LIBMGR3 LIBMGR3 VSE3174 (Serving NN)

- Worksheet 45 - Common Network

Question 900 - 400031749999 04 (Gateway Address and SAP) 4

Question 905 - 1

Question 908 - IBMLAN

- Worksheet 46 - LAN Address Assignment

00 4000 31749999 04 4

01 0000 83703B82 04 0 02 0000 83709700 04 0

15

03 4000 32700003 04 0 04 0000 83702E96 04 0

- Worksheet 47 - LAN Transmission Definitions

00 04

01 04 02 02 04 02

03 04 02 04 04 02

- Worksheet 50 - End-User Productivity Functions

Question 001 - 0000

Question 002 - 0

Question 003 - 0

Question 004 - 5

Question 005 - 07

Question 006 - N

Question 007 - N

Question 008 - 9

Question 009 - 0

- Worksheet 51A - Token-Ring Description

Question 080 - 400031749999 **4**

Question 082 - 1

The examples shown here are for information/planning purposes only. Responses may change based upon individual configuration.

C.3.3 ACF/VTAM Definitions

C.3.3.1 ACF/VTAM APPN

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```

* $$ JOB JNM=VTMAPPN,DISP=D,CLASS=0
* $$ LST DISP=H
// JOB VTMAPPN
// EXEC LIBR
ACCESS S=PRD2.CONFIG
DELETE ALTAPPN.B
RENAME VTMAPPN.B:ALTAPPN.B
CATALOG VTMAPPN.B REPLACE=YES
10
VTMAPPN VBUILD TYPE=LOCAL
6
PUSTG PU CUADDR=800,XID=YES,DYNLU=YES,MODETAB=APPCTABL, 12 X
7
LU02 LU DLOGMOD=APPCMODE,PUTYPE=2,ISTATUS=ACTIVE,MAXBFRU=6 X
LOCADDR=2, X
DLOGMOD=SP32702S, X
MODETAB=IESINCLM, X
USSTAB=VTMUSSTR, X
PACING=1,VPACING=2, X
MDLTAB=VTMMDL, X
MDLENT=VSELU2A, X
LU03 LU ISTATUS=ACTIVE,SSCPFM=USSSCS X
LOCADDR=3, X
DLOGMOD=SP32702S, X
MODETAB=IESINCLM, X
USSTAB=VTMUSSTR, X
PACING=1,VPACING=2, X
MDLTAB=VTMMDL, X
MDLENT=VSELU2A, X
ISTATUS=ACTIVE,SSCPFM=USSSCS X
*
...
other customer definitions may follow
...
*
/+
/*
/&
* $$ E0J

```

Figure 19. ACF/VTAM APPN Definitions

C.3.3.2 ACF/VTAM Applications

```

* $$ JOB JNM=VTMAPPL,DISP=D,CLASS=0
* $$ LST DISP=H
// JOB VTMAPPL
// EXEC LIBR
ACCESS S=PRD2.CONFIG
DELETE ALTAPPL.B
RENAME VTMAPPL.B:ALTAPPL.B
CATALOG VTMAPPL.B REPLACE=YES
8
VTMAPPL VBUILD TYPE=APPL
DBDCCICS APPL AUTH=(PASS,ACQ),MODETAB=IESINCLM,PARSESS=YES
PRODCICS APPL AUTH=(PASS,ACQ),MODETAB=IESINCLM,PARSESS=YES
POWER APPL AUTH=(ACQ)
PNET APPL AUTH=(PASS,ACQ),VPACING=3,MODETAB=VTMLOGTB,DLOGMOD=PNET
PSFAPPL APPL AUTH=ACQ,EAS=1,SONSCIP=YES
IESWAITT APPL AUTH=(NOACQ)
/+
/*
/&
* $$ EOJ

```

Figure 20. ACF/VTAM Application Definitions

C.3.3.3 ACF/VTAM Applications (Extension)

```

* $$ JOB JNM=VTMAPPL2,DISP=D,CLASS=0
* $$ LST DISP=H
// JOB VTMAPPL2
// EXEC LIBR
ACCESS S=PRD2.CONFIG
DELETE ALTAPPL2.B
RENAME VTMAPPL2.B:ALTAPPL2.B
CATALOG VTMAPPL2.B REPLACE=YES
9
VTMAPPL2 VBUILD TYPE=APPL
3
VSE21LCA APPL APPC=YES, *
AUTH=(ACQ), *
AUTOSSES=0,MODETAB=APPCTABL,DLOGMOD=APPCMODE, *
PARSESS=YES,SECACPT=NONE,VPACING=0
/+
/*
/&
* $$ EOJ

```

Figure 21. ACF/VTAM Application (Extension) Definitions

C.3.3.4 ACF/VTAM CDRSC

```

* $$ JOB JNM=VTMCDRSC,DISP=D,CLASS=0
* $$ LST DISP=H
// JOB VTMCDRSC
// EXEC LIBR
ACCESS S=PRD2.CONFIG
DELETE ALTCDRSC.B
RENAME VTMCDRSC.B:ALTCDRSC.B
CATALOG VTMCDRSC.B REPLACE=YES
11
VTMCDRSC VBUILD TYPE=CDRSC
2
LIBMGR3 CDRSC ALSLIST=(PUSTG),ALSREQ=YES
/+
/*
/&
* $$ EOJ

```

Figure 22. ACF/VTAM CDRSC Definitions

C.3.3.5 ACF/VTAM MODETAB

```

* $$ JOB JNM=VTMMODET,DISP=D,CLASS=0
* $$ LST DISP=H
// JOB VTMMODET
// OPTION CATAL
// LIBDEF PHASE,CATALOG=PRD2.CONFIG
// EXEC ASMA90,SIZE=ASMA90
PUNCH ' PHASE APPCTABL,S'
12
APPCTABL MODETAB
7
APPCMODE MODEENT LOGMODE=APPCMODE,FMPROF=X'13',TSPROF=X'07',
PRIPROT=X'B0',SECPROT=X'B0',COMPROT=X'D0B1',
RUSIZES=X'8585',ENCR=B'0000',
PSERVIC=X'0602000000000000000000000300'
MODEEND
END
/*
// EXEC LNKEDT
/&
* $$ EOJ

```

Figure 23. ACF/VTAM MODETAB Definitions

C.3.3.6 ACF/VTAM ATCCON00

```

* $$ JOB JNM=ATCCON00,DISP=D,CLASS=0
* $$ LST DISP=H
// JOB ATCCON00
// EXEC LIBR
ACCESS S=PRD2.CONFIG
DELETE ALTCON00.B
RENAME ATCCON00.B:ALTCON00.B
CATALOG ATCCON00.B REPLACE=YES
          8      9      10     11
          VTMAPPL,VTMAPPL2,VTMAPPN,VTMCDRSC
/+
/*
/&
* $$ EOJ

```

Figure 24. ACF/VTAM ATCCON00-Definition

C.3.3.7 ACF/VTAM Startup

```

* $$ JOB JNM=ATCSTR00,DISP=D,CLASS=0
* $$ LST DISP=H
// JOB ATCSTR00
// EXEC LIBR
ACCESS S=PRD2.CONFIG
DELETE ALTSTR00.B
RENAME ATCSTR00.B:ALTSTR00.B
CATALOG ATCSTR00.B REPLACE=YES
SSCPID=1,SSCPNAME=SSCP01,
1
NETID=SDKVTAM,
HOSTSA=1,
HOSTPU=NODE01,
SSCPDYN=YES,SSCPORD=PRIORITY,DYNASSCP=YES,CDRSCTI=32767,
MAXSUBA=255,
CONFIG=00,
NOPROMPT,
IOINT=0,SGALIMIT=0,
BSBUF=(28,,,1),
CRPLBUF=(60,,,1),
LFBUF=(70,,,11),
IOBUF=(70,288,,11),
LPBUF=(12,,,6),
SFBUF=(20,,,20),
SPBUF=(210,,,32),
XDBUF=(6,,,1)
/+
/*
/&
* $$ EOJ

```

Figure 25. ACF/VTAM Startup. 1: see *VTAM V4R2 Resource Definition Reference, SC31-6498*. for details.

C.3.4 Library Control Device Driver Definitions

C.3.4.1 Libraries

The **product code** is installed in sublibrary **LCA.PROD**, which is the default. A second sublibrary **LCA.LIBMGR3** is defined for host copies of 3494 inventory lists. ***This library must be available before the LCDD application can start.***

C.3.4.2 Startup Job

```

* $$ JOB JNM=LCDDRUN,CLASS=K,DISP=D
* $$ LST DISP=H
// JOB LCDDRUN
  LIBDEF *,SEARCH=(LCA.PROD,LCA.LIBMGR3)
// ASSGN SYSLST,00E
// EXEC FSMLCITM,SIZE=200K

  LOCAL_VSE_ID VSE21LCA
    LIBRARY_ID LIBMGR3 LIBMGRTP SCRDEF=SCRATCH00 INSERT=PRIVATE
    DEVICE_LIST 77-C3384 200 201
    MSG_LEVEL 1
    QUERY_INV_LISTS LIB=LCA
    MANAGE_INV_LISTS LIB=LCA
/*
/&
* $$ EOJ

```

Figure 26. Job to start LCDD

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C.3.4.3 Console List of Library Control Device Driver Start

```

K1 0045 // JOB LCDDRUN
      DATE 19/07/95,CLOCK 20/28/24
K1 0045 LCAITM2308I INITIALIZATION HAS STARTED 3
K1 0045 LCAITM2311I LOCAL RESOURCE NAME IS VSE21LCA
K1 0045 LCAITM2310I CONSOLE MESSAGE LEVEL IS 1 2
K1 0045 LCALUM2330W MESSAGE RECEIVED FROM LIBRARY LIBMGR3: LIB MANAGER IS
      ONLINE
K1 0045 LCAXPM2307I LCA IS INITIALIZED AND READY FOR SERVICE

MSG K1,DATA=LCA QD 200
AR 0015 1I40I  READY
K1 0045 LCAMRB2423I STATUS FOR DRIVE 0200 IS 0000, VOLUME MOUNTED IS NONE

MSG K1,DATA=LCA QL LIBMGR3
AR 0015 1I40I  READY
K1 0045 LCAMRB2425I LIBRARY LIBMGR3 MODE IS OPERATIONAL

MSG K1,DATA=LCA STOP_I
AR 0015 1I40I  READY
K1 0045 LCAMCH2404I APPLICATION STOPPED BY REQUEST
F3 0003 IST804I CLOSE IN PROGRESS FOR VSE21LCA OPENED BY FSMLCITM
F3 0003 IST400I TERMINATION IN PROGRESS FOR APPLID VSE21LCA
F3 0003 IST805I VTAM CLOSE COMPLETE FOR VSE21LCA
K1 0045 EOJ LCDDRUN  MAX.RETURN CODE=0000

```

Figure 27. Console output of LCDD start

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C.4 Example 2: Connection with IBM 3744

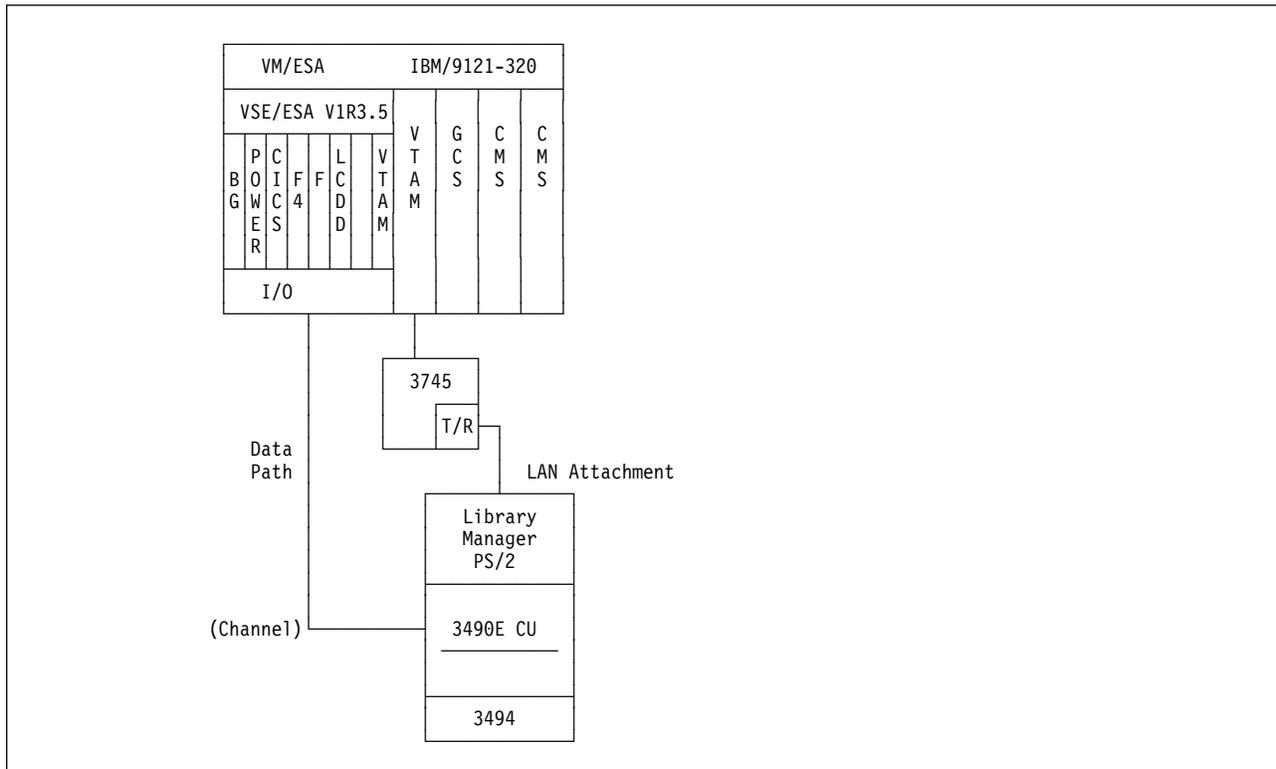


Figure 28. Environment with IBM 3745 Communication Controller and Tokenring

The IBM 3490E is connected via parallel channel with addresses B40, B41 and B50.

The IBM 3745 Communication Controller runs with NCP Version 5.4.

C.4.1 NDF

The following NDF file was generated as a result of adding the VSE/ESA host to the library.

```

DEFINE_LOCAL_CP 1 2
                  FQ_CP_NAME(DEEMIO00.PUROBY )
                  DESCRIPTION(LOCAL CP REQUIRED FOR SNA APPC)
                  CP_ALIAS(MRLMLM1A)
                  NAU_ADDRESS(INDEPENDENT_LU)
                  NODE_TYPE(EN)
                  NODE_ID(X'05D91001')
                  NW_FP_SUPPORT(NONE)
                  HOST_FP_SUPPORT(NO)
                  MAX_COMP_LEVEL(NONE)
                  MAX_COMP_TOKENS(0);
    
```

Figure 29. NDF Definitions (Part 1)

```

DEFINE_LOGICAL_LINK LINK_NAME(LN940000)
                      FQ_ADJACENT_CP_NAME(APPN.S44B1295 )
                      ADJACENT_NODE_TYPE(LEARN)
                      DLC_NAME(IBMTRNET)
                      ADAPTER_NUMBER(0)
                      DESTINATION_ADDRESS(X'400004000101')
                      ETHERNET_FORMAT(NO)
                      CP_CP_SESSION_SUPPORT(NO)
                      SOLICIT_SSCP_SESSION(NO)
                      ACTIVATE_AT_STARTUP(NO)
                      USE_PUNAME_AS_CPNAME(NO)
                      LIMITED_RESOURCE(USE_ADAPTER_DEFINITION)
                      LINK_STATION_ROLE(USE_ADAPTER_DEFINITION)
                      MAX_ACTIVATION_ATTEMPTS(USE_ADAPTER_DEFINITION)
                      EFFECTIVE_CAPACITY(USE_ADAPTER_DEFINITION)
                      COST_PER_CONNECT_TIME(USE_ADAPTER_DEFINITION)
                      COST_PER_BYTE(USE_ADAPTER_DEFINITION)
                      SECURITY(USE_ADAPTER_DEFINITION)
                      PROPAGATION_DELAY(USE_ADAPTER_DEFINITION)
                      USER_DEFINED_1(USE_ADAPTER_DEFINITION)
                      USER_DEFINED_2(USE_ADAPTER_DEFINITION)
                      USER_DEFINED_3(USE_ADAPTER_DEFINITION);

```

```

DEFINE_LOGICAL_LINK LINK_NAME(LN940011)

                      1 5
                      FQ_ADJACENT_CP_NAME(DEEMIO00.E10M )
                      ADJACENT_NODE_TYPE(LEARN)
                      DLC_NAME(IBMTRNET)
                      ADAPTER_NUMBER(0)

                      4
                      DESTINATION_ADDRESS(X'400006010000')
                      ETHERNET_FORMAT(NO)
                      CP_CP_SESSION_SUPPORT(NO)
                      SOLICIT_SSCP_SESSION(NO)
                      ACTIVATE_AT_STARTUP(NO)

                      NODE_ID(X'05D91001')

                      6
                      PU_NAME(PUROB1 )
                      USE_PUNAME_AS_CPNAME(NO)
                      LIMITED_RESOURCE(USE_ADAPTER_DEFINITION)
                      LINK_STATION_ROLE(USE_ADAPTER_DEFINITION)
                      MAX_ACTIVATION_ATTEMPTS(USE_ADAPTER_DEFINITION)
                      EFFECTIVE_CAPACITY(USE_ADAPTER_DEFINITION)
                      COST_PER_CONNECT_TIME(USE_ADAPTER_DEFINITION)
                      COST_PER_BYTE(USE_ADAPTER_DEFINITION)
                      SECURITY(USE_ADAPTER_DEFINITION)
                      PROPAGATION_DELAY(USE_ADAPTER_DEFINITION)
                      USER_DEFINED_1(USE_ADAPTER_DEFINITION)
                      USER_DEFINED_2(USE_ADAPTER_DEFINITION)
                      USER_DEFINED_3(USE_ADAPTER_DEFINITION);

```

Figure 30. NDF Definitions (Part 2)

```

DEFINE_PARTNER_LU  FQ_PARTNER_LU_NAME(APPN.S44B1295  )
                   PARTNER_LU_ALIAS(S44B1295)
                   MAX_MC_LL_SEND_SIZE(32767)
                   CONV_SECURITY_VERIFICATION(NO)
                   PARALLEL_SESSION_SUPPORT(YES);

DEFINE_PARTNER_LU  FQ_PARTNER_LU_NAME(1DEEMIO00.3VSEHOST1)
                   3PARTNER_LU_ALIAS(VSEHOST1)
                   MAX_MC_LL_SEND_SIZE(32767)
                   CONV_SECURITY_VERIFICATION(NO)
                   PARALLEL_SESSION_SUPPORT(YES);

DEFINE_PARTNER_LU_LOCATION  FQ_PARTNER_LU_NAME(APPN.S44B1295  )
                            WILDCARD_ENTRY(NO)
                            FQ_OWNING_CP_NAME(APPN.S44B1295  )
                            LOCAL_NODE_NN_SERVER(NO);

DEFINE_PARTNER_LU_LOCATION  FQ_PARTNER_LU_NAME(1DEEMIO00.3VSEHOST1)
                            WILDCARD_ENTRY(NO)
                            1FQ_OWNING_CP_NAME(5DEEMIO00.E10M  )
                            LOCAL_NODE_NN_SERVER(NO);

```

Figure 31. NDF Definitions (Part 3)

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```

DEFINE_MODE MODE_NAME(APPCMODE)
             COS_NAME(#CONNECT)
             DEFAULT_RU_SIZE(YES)
             RECEIVE_PACING_WINDOW(4)
             MAX_NEGOTIABLE_SESSION_LIMIT(32767)
             PLU_MODE_SESSION_LIMIT(8)
             MIN_CONWINNERS_SOURCE(0)
             COMPRESSION_NEED(PROHIBITED)
             PLU_SLU_COMPRESSION(NONE)
             SLU_PLU_COMPRESSION(NONE);

DEFINE_MODE MODE_NAME(DCAFMODE)
             DESCRIPTION(DCAF 1.1 Session Values)
             COS_NAME(#CONNECT)
             DEFAULT_RU_SIZE(NO)
             MAX_RU_SIZE_UPPER_BOUND(1024)
             RECEIVE_PACING_WINDOW(8)
             MAX_NEGOTIABLE_SESSION_LIMIT(6)
             PLU_MODE_SESSION_LIMIT(6)
             MIN_CONWINNERS_SOURCE(1)
             COMPRESSION_NEED(PROHIBITED)
             PLU_SLU_COMPRESSION(NONE)
             SLU_PLU_COMPRESSION(NONE);

DEFINE_DEFAULTS IMPLICIT_INBOUND_PLU_SUPPORT(YES)
                DEFAULT_MODE_NAME(BLANK)
                MAX_MC_LL_SEND_SIZE(32767)
                DIRECTORY_FOR_INBOUND_ATTACHES(*)
                DEFAULT_TP_OPERATION(NONQUEUED_AM_STARTED)
                DEFAULT_TP_PROGRAM_TYPE(BACKGROUND)
                DEFAULT_TP_CONV_SECURITY_RQD(NO)
                MAX_HELD_ALERTS(10);
    
```

Figure 32. NDF Definitions (Part 4)

```

DEFINE_TP TP_NAME(IBM.DCAF.TARGET.TRANSACTION.PROGRAM)
          DESCRIPTION(DCAF 1.1 Target TP)
          PIP_ALLOWED(NO)
          FILESPEC(C:\DCAF11\EQNTGAUT.EXE)
          PARM_STRING(LU62)
          CONVERSATION_TYPE(BASIC)
          CONV_SECURITY_RQD(NO)
          SYNC_LEVEL(EITHER)
          TP_OPERATION(NONQUEUED_AM_STARTED)
          PROGRAM_TYPE(PRESENTATION_MANAGER)
          RECEIVE_ALLOCATE_TIMEOUT(INFINITE);

          A
DEFINE_TP TP_NAME(LIBMGRTP)
          DESCRIPTION(Library Manager)
          PIP_ALLOWED(NO)
          FILESPEC(C:\LM\EXE\LIBMGRTP.EXE)
          PARM_STRING(LU62)
          CONVERSATION_TYPE(MAPPED)
          CONV_SECURITY_RQD(NO)
          SYNC_LEVEL(EITHER)
          TP_OPERATION(NONQUEUED_AM_STARTED)
          PROGRAM_TYPE(PRESENTATION_MANAGER)
          RECEIVE_ALLOCATE_TIMEOUT(INFINITE);

START_ATTACH_MANAGER;

```

Figure 33. NDF Definitions (Part 5)

C.4.2 ACF/VTAM Definitions

C.4.2.1 ACF/VTAM APPN

```

E10R0BY  VBUILD TYPE=SWNET,          *
          MAXGRP=...,                *
          MAXNO=...
*
6
PUROB1   PU   ADDR=0C1,              *
          DYNLU=YES,                 *
          12
          DLOGMOD=APPCMODE,          *
          7
          MODETAB=MTUSER,            *
          MAXDATA=1024,              *
          MAXBFRU=6,                 *
          MAXPATH=6,                 *
          MAXOUT=7,                  *
          XID=YES,                   *
          IDBLK=05D,                 *
          IDNUM=91001,               *
          PUTYPE=2,                  *
          ISTATUS=ACTIVE
          15
          PATH DIALNO=000448005AE86E84, *
          GRPNM=....,                *
          GID=..,                    *
          PID=..
          ...
          other customer definitions may follow
          ...

```

Figure 34. ACF/VTAM APPN Definitions

C.4.2.2 ACF/VTAM Applications

```

* $$ JOB JNM=S06APMN,DISP=D,CLASS=0
* $$ LST DISP=H
// JOB S06APMN
// EXEC LIBR
ACCESS S=PRD2.CONFIG
DELETE ALTAPMN.B
RENAME S06APMN.B:ALTAPMN.B
CATALOG VTMAPMN.B REPLACE=YES
S06APMN VBUILD TYPE=APPL
3
VSEHOST1 APPL ACB=VSEHOST1,APPC=YES,AUTH=(ACQ),AUTOSSES=0, *
                                12 7
                                MODETAB=MTUSER,DLOGMOD=APPCMODE,PARSESS=YES, *
                                SECACPT=NONE,VPACING=0

/ +
/ *
/ &
* $$ EOJ

```

Figure 35. ACF/VTAM Application Definitions

C.4.2.3 ACF/VTAM CDRSC

```

* $$ JOB JNM=S06CDRT,DISP=D,CLASS=0
* $$ LST DISP=H
// JOB S06CDRT
// EXEC LIBR
ACCESS S=PRD2.CONFIG
DELETE ALTCDRT.B
RENAME VTCDRT.B:ALTCDRT.B
CATALOG S06CDRT.B REPLACE=YES
S06CDRT VBUILD TYPE=CDRSC
2 5
PUROBY CDRSC CDRM=E10M,ISTATUS=ACTIVE,
                                6
                                ALSLIST=(PUROB1), *
                                7 12
                                MODETAB=MTUSER,DLOGMOD=APPCMODE,ALSREQ=YES

/ +
/ *
/ &
* $$ EOJ

```

Figure 36. ACF/VTAM CDRSC Definitions

C.4.3 Library Control Device Driver Definitions

C.4.3.1 Libraries

The **product code** is installed in sublibrary **LCA.PROD**, which is the default. A second library **LCAINV.PUROBY** is defined for host copies of 3494 inventory lists. ***This library must be available before the LCDD application will start.***

C.4.3.2 Startup Job

```

* $$ JOB JNM=LCDDRUN,CLASS=K,DISP=D
* $$ LST DISP=H
// JOB LCDDRUN
  LIBDEF *,SEARCH=(LCA.PROD,LCAINV.PUROBY)
// ASSGN SYSLST,00E
// EXEC FSMLCITM,SIZE=200K

  LOCAL_VSE_ID VSEHOST1
  LIBRARY_ID PUROBY LIBMGRTP SCRDEF=SCRATCH00 INSERT=PRIVATE
  DEVICE_LIST 77-43384 B40 B41
  MSG_LEVEL 1
  QUERY_INV_LISTS LIB=LCAINV
  MANAGE_INV_LISTS LIB=LCAINV
/*
/&
* $$ EOJ

```

Figure 38. Job to start LCDD

C.5 Related Information

For further details on operation and configuration of the IBM 3494 Tape Library Dataserver and the required software products refer to the following publications.

- IBM 3494 Tape Library Dataserver Publications
 - IBM 3494 Tape Library Dataserver Operator's Guide, GA32-0280
 - IBM 3494 Tape Library Dataserver Introduction and Planning Guide, GA32-0279
 - IBM 3494 Tape Library Dataserver, User's Guide: Library Control Device Driver for VSE/ESA, GC35-0176-01
- IBM 3174 Establishment Controller Publications
 - IBM 3174 Planning Guide, GA27-3918
 - IBM 3174 Central Site Customizing Guide, GA27-3919
 - IBM 3174 Utilities Guide, GA27-3920
- Other software Publications
 - VTAM V4R2 Resource Definition Reference, SC31-6498
 - VSE/ESA System Control Statements V2R1, SC33-6613

