
Meridian 1

Option 11C and 11C Mini

Upgrade Procedures Guide

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About this guide

The *Option 11C and 11C Mini Upgrade Procedures Guide* contains the following information required to upgrade existing Option 11 and Option 11E systems to an Option 11C.

- upgrade to Option 11C from an Option 11 or Option 11E
- upgrade to Option 11C compatible with dual port expansion daughterboards from an existing Option 11C that is not compatible

This guide also contains the following procedures for updating software on Option 11C and Option 11C Mini systems:

- upgrade Option 11C software to a new release
- perform a same release software upgrade
- revert to a previous database
- restore a backed up database
- archive databases
- install archived databases
- review and clear upgrade information

This guide does not describe how to add equipment (such as additional cabinets or line cards) to the system. If part of the upgrade is expanding the system, complete the upgrade first (as described in this guide), then add equipment.

Related documents

Refer to the *Option 11C Planning and Installation Guide (553-3021-210)* when the upgrade includes adding equipment (such as another expansion

cabinet at a remote site). It also contains site planning information and new system installation details for Option 11C systems.

Refer to the *Option 11C Mini Planning and Installation Guide* (553-3021-209) for site planning information and system installation details for the Option 11C Mini system.

Where to start for upgrades

“Start here to perform upgrades” on page 11 is your starting point for upgrades.

Start here to perform upgrades

This chapter is the starting point for all Option 11, 11E, and 11C software and hardware upgrades. It indicates which procedure to follow to complete the required upgrade.

Note: This guide describes how to prepare the main cabinet of an Option 11C for a third expansion cabinet. But it does not describe how to add equipment to the system. If you plan to expand the system as part of the upgrade, complete the upgrade first (as described in this guide). Then add equipment as described in the *Option 11C Planning and Installation Guide (553-3021-210)*.

Upgrade systems to hold three or more expansion cabinets

To equip a system with more than two expansion cabinets, the system must be an Option 11C with X11 Release 24.24 or later software. If the existing system is not this type of system, upgrade the system to Option 11C. See “Upgrade selection list” on page 12 for how to select the appropriate upgrade.

When you have upgraded to Option 11C with fiber-optic cable capabilities, follow the procedures to upgrade the hardware. See “Upgrade cabinet hardware” on page 113.

Upgrade selection list

Select the appropriate upgrade from the following upgrade descriptions.

Upgrade an Option 11 or Option 11E

You can upgrade an Option 11 or Option 11E system with

- one cabinet
- two cabinets
- two or more cabinets interconnected by fiber-optic cable

The existing Option 11 or 11E has one cabinet

If the existing system is an Option 11 or Option 11E with a main cabinet, refer to “Upgrade a single-cabinet system to Option 11C” on page 15.

The existing Option 11 or 11E has two cabinets

If the existing system is an Option 11 or Option 11E with one main and one expansion cabinet interconnected with metal cable, refer to “Upgrade a two-cabinet system with metal cable to Option 11C” on page 31.

Note: This upgrade procedure does not apply to systems interconnected with fiber-optic cable.

The existing system is an Option 11E with cabinets interconnected by fiber-optic cable

If the existing system has a main cabinet and one or two expansion cabinets interconnected with fiber-optic cable, refer to “Upgrade an Option 11E with fiber-optic cable to Option 11C” on page 85.

Upgrade an existing Option 11C

You can upgrade an Option 11C system that has one or two cabinets. Or, if you plan to add a third or fourth expansion cabinet, you can upgrade an Option 11C with fiber-optic capabilities.

The existing system is an Option 11C with two cabinets interconnected by metal cable

If the existing system is an Option 11C with two cabinets interconnected by metal cable, refer to “Upgrade a two-cabinet system with metal cable to Option 11C” on page 31.

The existing system is an Option 11C with a single cabinet

If you plan to add expansion cabinets to an Option 11C with a single cabinet, refer to the *Option 11C Planning and Installation Guide (553-3021-210)*.

The existing system is an Option 11C and you plan to add a third expansion cabinet

Note: The existing system must be at least an Option 11C with fiber-optic cable capabilities before you can add a third or fourth expansion cabinet. Upgrade the existing system, if necessary, before trying to add a third (or fourth) cabinet.

To expand the existing Option 11C to include more than two expansion cabinets, complete the following steps:

- 1 Refer to “Upgrade cabinet hardware” on page 113, and upgrade the main cabinet (as needed).
- 2 Refer to “Upgrade the NTDK20AB SSC to NTDK20EA or later” on page 121, and upgrade the SSC card (as needed).
- 3 Refer to the *Option 11C Planning and Installation Guide (553-3021-210)* to add the additional cabinets.

Upgrade Software

The following sections describe the software upgrades you can perform.

Update the boot code

To update the boot code on one of the following cards, refer to “Use the flash boot ROM utility” on page 211:

- NTDK20 SSC card
- NTDK97 MSC card

Upgrade software to Option 11C from a Software Daughterboard or PCMCIA card

To upgrade software from an Option 11 or 11E to Option 11C, refer to “Option 11/11E upgrade from Software Daughterboard or PCMCIA” on page 145.

Update to a new release of software

To update to a new software release, refer to “Upgrade Option 11C/11C Mini software to a new release” on page 165.

Change feature set and ISM parameters

To change the feature set or ISM parameters, refer to “Feature set and ISM parameters upgrade” on page 191.

Database Management

You can restore a backed up database, archive a database, or remove a database.

Restore a backed up database

To restore the backed up database from one of the following, refer to “Archive and remove databases” on page 203:

- backup flash drive
- software delivery card (PCMCIA card)
- Customer Configuration Backup and Restore (CCBR) file

Archive and remove databases

Refer to “Archive and remove databases” on page 203 for direction on how to

- archive a new customer database
- list the archived databases
- remove existing databases

Upgrade a single-cabinet system to Option 11C

This chapter describes how to upgrade an Option 11 or Option 11E with a single cabinet to an Option 11C. Sections in this chapter cover the following topics:

- what items you need for the upgrade
- how to upgrade to Option 11C
- how to revert back to Option 11 or Option 11E

Summary of items required

You need the following items to complete this upgrade:

- NTDK20 Small System Controller (SSC) card
- NTBK48 three-port SDI cable (if you are upgrading from Option 11E, this cable is already present)
- NTDK27 Ethernet cable (optional)
- Software Daughterboard

Note: You must have Release 24 or later software to install dual port expansion daughterboards as part of the upgrade.

- Security Device
- Keycode Data Sheet
- One of the following to extract the customer data from the existing system:

- personal computer (PC) equipped with XModem CRC software to run the Customer Configuration Backup and Restore (CCBR) X11 feature
- NTDK30AA \Database Upgrade Tool (to extract data from the cartridge)

Note: The PC can be on-site or located remotely using a modem.

Upgrade to Option 11C

This section includes a summary of steps and the upgrade to Option 11C procedure.

Summary of steps

The following list of steps describes how to upgrade a single-cabinet Option 11 or Option 11E to an Option 11C:

- 1 Perform a data dump (EDD) on the existing system.
- 2 Extract the customer data from the existing system using the CCBR feature, unless you are using the Database Upgrade Tool.
- 3 Install the NTDK20 SSC card.
- 4 Install the NTBK48 three-port SDI cable, if you upgrade from Option 11E, this cable is already present.
- 5 Load the new system software and customer data into the system.
- 6 Install the NTDK27 Ethernet cable (optional).

Expansion cabinets and additional equipment

This chapter does not describe the installation of additional expansion cabinets or of additional equipment, such as line cards. If you plan to add these items as part of the upgrade, first complete the upgrade as described in this chapter. Then, refer to the *Option 11C Planning and Installation Guide (553-3021-210)* for information about adding expansion cabinets and other equipment to an existing Option 11C system.

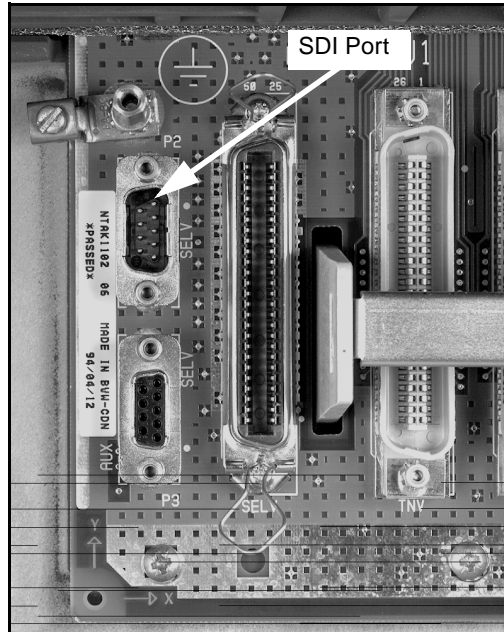
Upgrade procedure

Procedure 1 on page 17 describes how to upgrade a single-cabinet Option 11 or Option 11E to Option 11C.

Procedure 1
Single-cabinet upgrade to Option 11C**1 Connect a TTY terminal to SDI Port 0.**

Make sure the terminal connects to the SDI Port 0 (see Figure 1 on page 17).

Figure 1
SDI Port 0



2 Log into the system and perform a data dump on the existing system.

You must perform this step. It makes sure you back up any changes made after the last data dump. This step is a precautionary measure. If the upgrade fails, you can revert to the earlier system.

- a** Load LD 43.
- b** Enter command **EDD**. Allow the data dump to finish.
- c** Exit LD 43 by entering ****.

3 Load overlay LD 22 and print the ISM parameters. Make a note of the existing parameters.

At the REQ prompt, type **SLT** and press <CR> to print the ISM parameters.

The existing software cartridge indicates the ISM parameters.

4 Do one of the following:

- If you are using the Database Upgrade Tool to extract the customer database from the existing system, disregard this step. Go to Step 5 on page 18.
- If you are using the CCBR feature to extract the customer data from the existing system, perform the following steps.
 - a** Use a PC to log in to the existing Option 11.
 - b** Load LD 43 and enter **XBK** to start a configuration data backup.
 - c** At the INFO prompt, enter a name for the file (up to 128 characters) and press <CR> twice.

Wait for the transfer to finish, until you see an OK message.
The transfer can last up to 30 minutes
 - d** Enter **XVR** to check the backed up data.
 - e** Exit LD 43 by entering ****.

5 Disconnect the power from the cabinet.

Set the circuit breaker switch, on the front of the power supply unit in the cabinet to OFF.

If the system has reserve battery power, set the circuit breaker switch inside the reserve battery power unit, to OFF.

6 Attach the antistatic wrist strap provided at the bottom of the cabinet to your wrist.

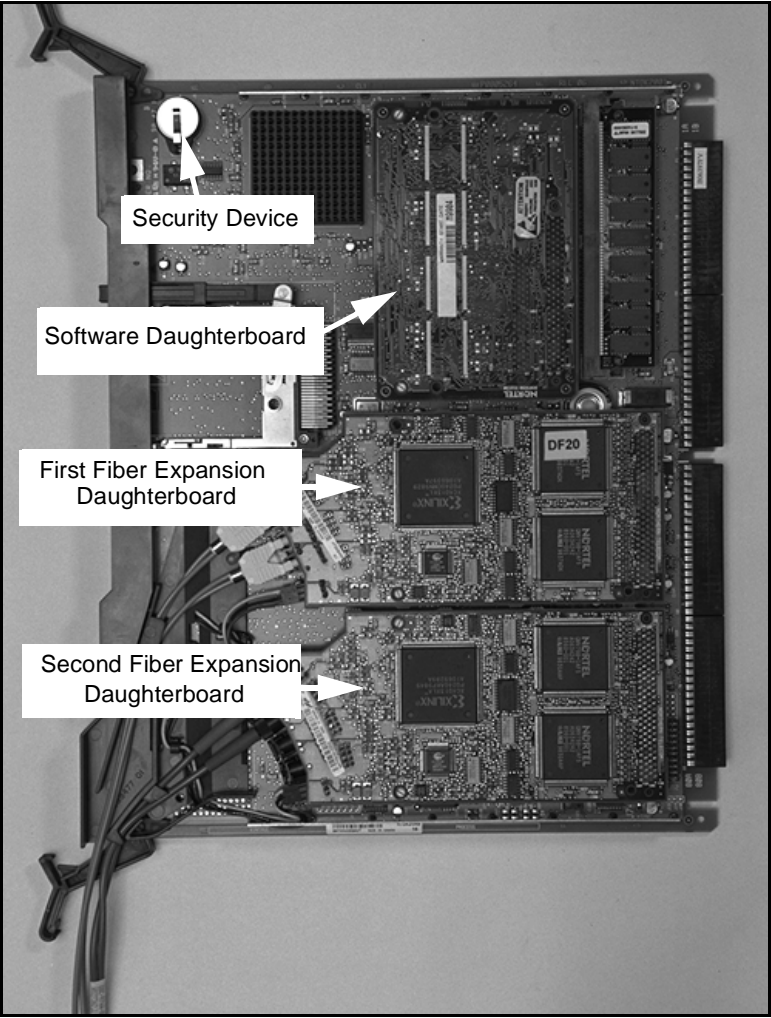
- 7 Remove the NTAK01 CPU/Conf or NTB45 System Core card from the cabinet.
- 8 Set the baud rate switches on the new NTDK20 SSC card to match the settings on the card you removed: either the NTAK01 CPU/Conf card or NTB45 System Core card.

Note: The baud rate switches are on the faceplate of the NTDK20 SSC card.
- 9 Install the Software Daughterboard and Security Device on the NTDK20 SSC card as shown in Figure 2 on page 20.

CAUTION

The NTDK20 SSC card has components on both sides of the circuit board. Be careful not to damage any of the components when handling the card.

Figure 2
NTDK20 SSC card



10 (Optional step) If you plan to add one or more expansion cabinets as part of the upgrade, install a Fiber Expansion Daughterboard.

Note: You can complete this step after you have upgraded the main cabinet to Option 11C. However, you can prevent additional downtime by installing any required Fiber Expansion Daughterboards now. Refer to the *Option 11C Planning and Installation Guide (553-3021-210)* for detailed information about adding expansion cabinets to an existing system.

WARNING

The fiber-optic interface product used in the Option 11C is considered safe. However, as a precaution, do not look directly at the optical port or the end of the fiber-optic cable. Under some conditions, the cable or port can cause eye exposure beyond the limits of Maximum Permissible Exposure recommended in some areas. Do not remove protective caps or plugs until ready to connect the cable.

- a** Install the Fiber Routing Guide as shown in Figure 3 on page 23.

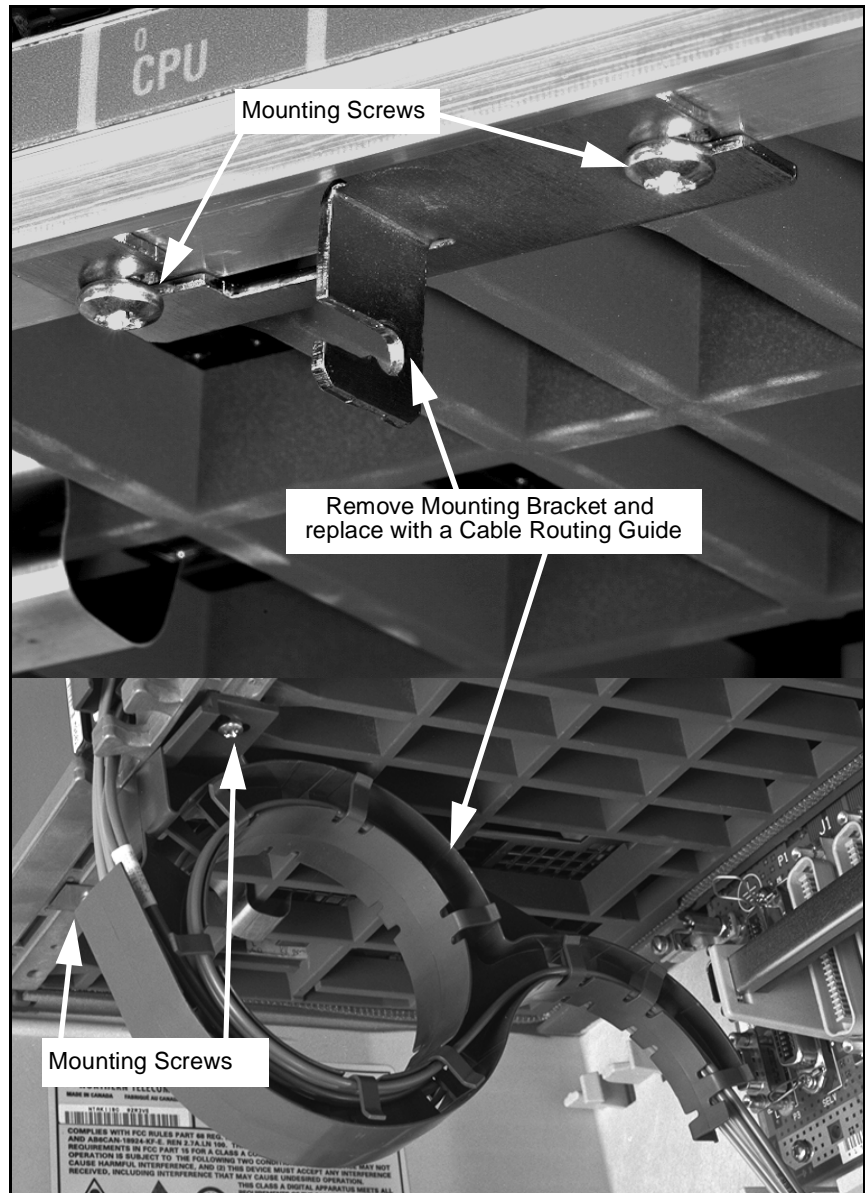
The P0816832 Fiber Routing Guide can hold a maximum of two fiber-optic cables. Use it in cabinets that are operating software released before X11 Release 24 software. The P0888475 Cable Routing Guide can hold up to four cables. Use it in cabinets that run X11 Release 24 and later versions of software.

- b** Install a Fiber Expansion Daughterboard on the NTDK20 SSC card for added expansion cabinets, as shown in Figure 2 on page 20.

There are two types of expansion daughterboards: single port and dual port. Single port expansion daughterboards are compatible with all versions of NTDK20 SSC cards. Dual port expansion daughterboards require an NTDK20CA or later version of the SSC card.

- c** Connect the fiber-optic cable to the daughterboard.
 - If you are using the A0632902 cable
 - i** Remove the two protective plugs from the Fiber Expansion Daughterboard.
 - ii** Connect the cable to the Fiber Expansion Daughterboard. Make sure the "V" shaped groove on the cable connector faces out and the connector seats tightly. When you make the connection correctly, the black mark on the connector is not visible.
 - If you are using glass fiber-optic cable
 - i** Remove the protective plug from the Fiber Expansion Daughterboard. Remove the protective cap from the corresponding plug (Tx or Rx) on the fiber-optic cable.
 - ii** Insert the plug in its connector indicated on the daughterboard.
 - iii** Lock the connector in position by turning it a half turn clockwise.
 - iv** Repeat these steps for the remaining fiber-optic connections.

Figure 3
Cable Routing Guide



11 Connect the power to the cabinet.

Set the circuit breaker switch on the front of the power supply unit in the cabinet to ON.

If equipped with reserve battery power, set the circuit breaker switch on the reserve battery power unit to ON.

When you power up, the Software Installation Program starts automatically.

Note: The Software Installation Program is menu-driven, allowing the easy installation of software and customer databases in the Option 11C. It is clear and direct and includes a Help facility to help you make correct selections. However, if you need more detailed information, refer to the *Option 11C Planning and Installation Guide (553-3021-210)*.

12 Install the new NTDK20 SSC card in the slot left empty by the NTAK01 or NTBK45 card (Slot 0).

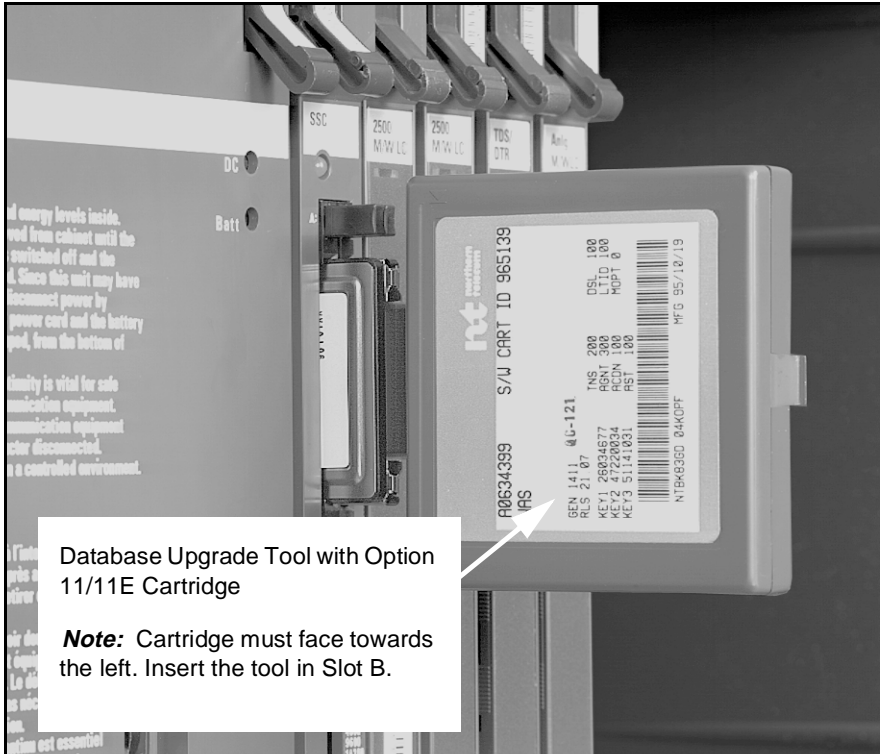
If a fiber-optic cable is present (see optional Step 10 on page 21), make sure that it is in the fiber routing guide.

Note: Do not staple or twist fiber-optic cable. Do not bend it beyond a minimum 35 mm bend radius (90° soft bend).

13 Do one of the following to extract customer data from the existing system:

- If you are using a PC with the CCBP feature, skip this step and go to Step 14 on page 25.
- If you are using the Database Upgrade Tool, install the software cartridge from the existing system to the Database Upgrade Tool.
 - a Remove the software cartridge from the existing NTAK01 CPU/Conf or NTBK45 System Core card.
 - b Connect the Option 11 or Option 11E software cartridge to the connector on the Database Upgrade Tool.
 - c Hold the Database Upgrade Tool with the software cartridge on the left. Insert the Database Upgrade Tool in slot B of the PCMCIA socket located in the faceplate of the NTDK20 SSC card. See Figure 4 on page 25.

Figure 4
Database Upgrade Tool



- 14** Install the NTBK48 three-port SDI cable to SDI port 0 if you have not already installed it.

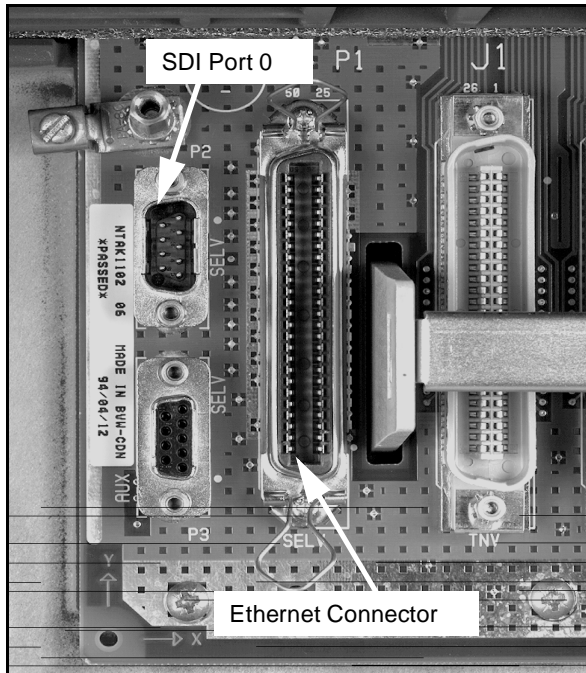
Connect the TTY terminal to the connector on the NTBK48 cable labeled "Port 0" (see Figure on page 26).

Note: Because Option 11E systems also use this cable, when upgrading from Option 11E, this cable is already present.

CAUTION

To access the Software Installation Program, the TTY must connect to port 0.

Figure 5
Cable connection



15 Observe the terminal screen.

When you power up, the Software Installation Program starts automatically.

Note: This program is menu-driven, allowing easy installation of software and customer databases in the Option 11C. It is clear and direct and includes a Help facility to help you to make correct selections. However, if you need more detailed information, refer to the *Option 11C Planning and Installation Guide (553-3021-210)*.

The following is a summary of the steps as described in the *Option 11C Planning and Installation Guide (553-3021-210)*:

- a** Enter the system time and date if the system prompts you. Skip this step if the Software Installation Main Menu appears instead.

Note: The system time and date prompt appears when the Software Installation Program detects a system year date that is not in the range of 1995 to 2095.

- b** Select the type of upgrade you plan to do.
- If using the Software Delivery (PCMCIA) card
 - i** Select System Upgrade from the Software Installation Main Menu.
 - ii** Select "Option 11/11E to Option 11C" from the "Select type of upgrade to be performed" menu.
 - If you are using the Software Daughterboard, select "New System Installation or Option 11/11E Upgrade - From Software Daughterboard."

- c** Select the feature set to be enabled.

Select the feature set from the "Select Feature Set You Wish to Enable" menu.

Note: The items you select in steps c, d, f, g and h must match the one provided with keycode data sheet.

- d** Select feature package numbers to add (if any).

Enter the package numbers. Press <CR> twice to end package selection.

- e** Select the database source.

Select one of the following from the "Select Option 11/11E Database Source" list:

- CCBR file. Select this option if you used the CCBR feature to extract the customer database. This option accesses the Data Transfer mode. To begin the data restoration and upgrading process, enter <CR> when prompted.
- Option 11/11E Software Cartridge. Select this option if you are using the Database Upgrade Tool to extract the customer database from the existing software cartridge.

- f** Select the ISM parameters.

Compare the ISM parameters with the ISM parameters you printed in Step 3 on page 18. Make any required changes.

- g** Define the new AUX ID.

The default AUX ID is the security ID provided with the Option 11C. You need to replace it with the previous Option 11 or Option 11E site ID.

- h** Confirm the information entered and enter the validation keycodes.

The terminal displays New Installation Information Summary. Make any necessary changes to the information then enter the keycodes.

- i** Complete the software installation when prompted.

CAUTION

If you enter YES, the system reloads (SYSLOAD) to complete the installation.

- 16** Wait for the software installation to finish.

- 17** If the Database Upgrade Tool is in the PCMCIA socket on the faceplate of the SSC card, remove it.

- 18** If you have the optional NTDK27 Ethernet cable, connect it to the expansion connector in the cabinet (see Figure on page 26).

- 19** If necessary, change the tone and SDI functions.

The NTDK20 SSC card combines many tone functions. Refer to "Assign TDS/DTR, XTD, and SDI functions" on page 131 for more information.

- 20** Load overlay program 43 (LD 43), and perform a data dump (EDD).

————— *End of Procedure* —————

Restore data when an upgrade fails

This section explains how to revert back to an Option 11 or Option 11E in the event that the upgrade fails. To revert back, insert one of the following back into slot 0 of the main cabinet:

- the Option 11 NTAK01 CPU/Conf card
- the Option 11E NTBK45 System Core card and the software cartridge

Then, reload the system.

Procedure 2

Revert back to Option 11/11E

- 1 Remove all power from the system.**
- 2 Remove the NTDK20 SSC card from slot 0 in the main cabinet.**
- 3 Attach the software cartridge to the NTAK01 CPU/Conf card or NTBK45 System Core card if you removed it before.**
- 4 Insert the NTAK01 CPU/Conf card or the NTDK45 System Core card in slot 0, and power up the system.**
- 5 Restore the NTAK1118 SDI cable if equipped before.**

————— *End of Procedure* —————

Upgrade a two-cabinet system with metal cable to Option 11C

This chapter describes four procedures:

- Procedure 3 on page 38, “Upgrade without fiber-optic connection.” Upgrade an existing two-cabinet system interconnected with an NTAK1204 or NTAK1205 cable
- Procedure 4 on page 45, “Upgrade with fiber-optic connection.” Upgrade a two-cabinet Option 11C with an NTAK1204 or NTAK1205 cable to fiber-optic connection
- Procedure 5 on page 68, “Upgrade to fiber-optic connection on an upgraded Option 11C without fiber connection.” Upgrade a two-cabinet Option 11C with an NTAK1204 or NTAK1205 cable to fiber-optic connection.
- Procedure 6 on page 83, “Restore data because of an upgrade failure.” Revert to an Option 11 or Option 11E.

The main sections in this chapter describe each of these procedures. See the sections under the following headings:

- “Summary of procedures” on page 32
- “Summary of items required” on page 33
- “Summary of steps” on page 36
- “Upgrade procedures” on page 37

Summary of procedures

This section describes the three procedures: Upgrade without fiber-optic connection to Option 11C, Upgrade with fiber-optic connection to Option 11C, Upgrade to fiber-optic connection.

Upgrade without fiber-optic connection to Option 11C

The upgrade without fiber-optic connection keeps the existing NTAK12 expansion cabinet and the NTAK1204 or NTAK1205 interconnecting cable. The new system that results from this upgrade provides all the features made available with Option 11C with the following limits:

- There is no Ethernet capability.
- Symposium Call Center Server, Symposium Express, MAT 6.5, Call Pilot, Internet Telephony Gateway will not be supported.
- There is no fiber-optic interconnect cable capability. Limiting the distance between the main and expansion cabinets to the length of the existing NTAK1204 or NTAK1205 cable.
- The system can only have two cabinets (a main cabinet and one expansion cabinet). This gives a maximum 20 slots.

Procedure 3 on page 38 describes how to do an upgrade without fiber-optic connection.

Upgrade with fiber-optic connection to Option 11C

With the upgrade of fiber-optic connectivity, the new system provides all the features made available by Option 11C without limits. However, this upgrade replaces the existing NTAK12 expansion cabinet with an NTAK11 cabinet, which connects it to the main cabinet with fiber-optic cable.

Procedure 4 on page 45 describes how to do an upgrade with fiber-optic connection.

Upgrade to fiber-optic connection

This upgrade takes an upgraded Option 11C without fiber-optic connection and upgrades it to an Option 11C with fiber-optic connection. This procedure applies to an Option 11C that remains connected to an NTAK12 expansion cabinet with an NTAK1204 or NTAK1205 cable. This upgraded system provides all the features made available by Option 11C without limitations. However, this upgrade replaces the existing NTAK12 expansion cabinet with an NTAK11 cabinet.

Procedure 5 on page 68 describes how to do an upgrade to fiber-optic connection.

Summary of items required

Refer to the appropriate section to find out which items you need to

- upgrade a two-cabinet system to Option 11C
- connect an existing expansion cabinet with an NTAK1204 or NTAK1205 expansion cable

Upgrade without fiber-optic connection

For an upgrade without fiber-optic connection, you need the following items:

- NTDK20 Small System Controller (SSC) card
- NTBK48 three-port SDI cable (if you are upgrading from Option 11E, this cable is already present)
- NTDK26 Backwards Compatible Daughterboard
- Software Daughterboard
- Security Device
- Keycode Data Sheet
- One of the following to extract the customer data from the existing system:
 - personal computer (PC) equipped with XModem CRC software to run the CCBR X11 feature
 - Database Upgrade Tool (extracts data from the cartridge)

Note: The PC can be on-site or located remotely.

Upgrade with fiber-optic connection

For an upgrade with fiber-optic connection, you need the following items:

- NTDK20 Small System Controller (SSC) card

Note: If you use dual port expansion daughterboards, you must have an NTDK20CA or later version of the SSC card.

- NTBK48 three-port SDI cable (if you are upgrading from Option 11E, this cable is already present)
- NTDK22 Single Port or NTDK84 Dual Port Fiber Expansion Daughterboard (30 ft)
- NTDK79 Single Port or NTDK85 Dual Port Fiber Expansion Daughterboard (2 mile)

Note: Use an NTDK22 or NTDK84 Fiber Expansion Daughterboard when the expansion cabinet is within 10 m (33 ft) of the main cabinet. Use one of the following if you plan to move the expansion cabinet up to 3 km (1.8 mi) from the main cabinet:

- NTDK24 (Multimode)
- NTDK79 (Single Mode)
- NTDK85 (Dual Port) Fiber Expansion Daughterboard

- NTDK23 Fiber Receiver card

Note: Use the NTDK23 Fiber Receiver card when the expansion cabinet is within 10 m (33 ft) of the main cabinet. Use one of the following if you plan to move the expansion cabinet up to 3 km (1.8 mi) from the main cabinet:

- NTDK25 (Multimode)
- NTDK80 (Single Mode) Fiber Receiver card

- A0632902 (was A0618443) Fiber-optic cable

Note: Use this cable only with the NTDK22 or NTDK84 daughterboard for distances up to 10 m (33 ft). For distances up to 3 km (1.8 mi), you need to get duplex glass fiber-optic cable from a local provider.

Note: You need Release 24 or later software if you plan to install dual port expansion daughterboards as part of the upgrade.

- Security Device
- Keycode Data Sheet
- One of the following to extract the customer data from the existing system:

- personal computer (PC) equipped with XModem CRC software to run the X11 CCBP feature
- Database Upgrade Tool (extracts data from the cartridge)

Note: The PC can be on-site or located remotely

- NTAK11 cabinet
- Two Fiber Routing Guides (one comes with the NTAK11 cabinet and an additional one is available for the expansion cabinet)
- NTDK27 Ethernet cable (optional)

Upgrade Option 11C without fiber connection to fiber-optic connection

For an NTAK12 expansion cabinet upgrade on an upgraded Option 11C, you need the following items:

- NTAK11 cabinet
- Two Fiber Routing Guides
- NTDK22 Single Port or NTDK84 Dual Port Fiber Expansion Daughterboard

Note: Use the NTDK22 or NTDK84 Fiber Expansion Daughterboard when the expansion cabinet is within 10 m (33 ft) of the main cabinet. Use one of the following if you plan to move the expansion cabinet up to 3 km (1.8 mi) from the main cabinet:

- NTDK24 (Multimode)
- NTDK79 (Single Mode)
- NTDK85 (Dual Port) Fiber Expansion Daughterboard

- NTDK23 Fiber Receiver card

Note: Use the NTDK23 Fiber Receiver card when the expansion cabinet is within 10 m (33 ft) of the main cabinet. Use an NTDK25 (Multimode) or NTDK80 (Single Mode) Fiber Receiver card if you plan to move the expansion cabinet up to 3 km (1.8 mi) of the main cabinet.

- A0632902 (was A0618443) Fiber-optic cable (only required with the NTDK22)

Note: Use this cable only with the NTDK22 or NTDK84 daughterboard for distances up to 10 m (33 ft). For distances up to 3 km (1.8 mi), you need to use duplex glass fiber-optic cable from a local provider.

- NTDK27 Ethernet cable (optional)

Summary of steps

The following sections describe the steps for each type of upgrade covered in this chapter.

Upgrade without fiber-optic connection

You must follow the following steps to upgrade a two-cabinet Option 11 or Option 11E to Option 11C without fiber-optic cabinet interconnection:

- 1 Perform a data dump (EDD) on the existing system.
- 2 Extract the customer data from the existing system using the CCBR feature (unless you use the Database Upgrade Tool).
- 3 Install the NTDK20 Small System Controller (SSC) card equipped with NTBK26 Backwards Compatible Daughterboard.
- 4 Install the NTBK48 three-port SDI cable. If you are upgrading from Option 11E, this cable is present.
- 5 Load the new system software and customer data in the system.

Procedure 3 on page 38 describes these steps in detail.

Upgrade with fiber-optic connection

The following list reviews the steps to upgrade a two-cabinet Option 11 or Option 11E to Option 11C with fiber-optic cabinet interconnection.

- 1 Perform a data dump (EDD) on the existing system.
- 2 Extract the customer data from the existing system using the CCBR feature (unless you are using the Database Upgrade Tool).
- 3 Disconnect the NTAK1204 or NTAK1205 cable from the main cabinet.
- 4 Install the NTDK20 SSC card equipped with Fiber Expansion Daughterboard.
- 5 Install the NTBK48 three-port SDI cable (if upgrading from Option 11E, this cable is already present).
- 6 Load the new system software and customer data in the system.

- 7 Replace the existing expansion cabinet with an NTAK11 cabinet.
- 8 Connect the expansion cabinet to the main cabinet.

Procedure 4 on page 45 describes these steps in detail.

Upgrade to fiber-optic connection on an upgraded Option 11C without fiber connection

You can upgrade a two-cabinet system to an Option 11C with fiber-optic and connection in two parts. Upgrade to an Option 11C. Then, upgrade the NTAK1204 or NTAK1205 cable to a fiber-optic connection. The following list reviews the steps to follow:

- 1 Perform a data dump (EDD).
- 2 Disconnect the NTAK1204 or NTAK1205 cable from the main cabinet.
- 3 Install the Fiber Expansion Daughterboard on the NTDK20 SSC card.
- 4 Replace the existing expansion cabinet with an NTAK11 cabinet.
- 5 Connect the expansion cabinet to the main cabinet.

Procedure 4 on page 45 describes these steps in detail.

Expansion cabinets and other additional equipment

This chapter does not describe the installation of additional expansion cabinets or of additional equipment such as line cards. To add additional expansion cabinets or other equipment as part of the upgrade to Option 11C, complete the upgrade as described in this chapter. Then refer to the *Option 11C Planning and Installation Guide (553-3021-210)* for information about adding expansion cabinets and other equipment to an existing Option 11C system.

Upgrade procedures

This section contains the three procedures covered in this chapter.

Upgrade without fiber-optic connection

Procedure 3 on page 38 describes how to upgrade a two-cabinet Option 11 or Option 11E to Option 11C without fiber-optic cabinet interconnection.

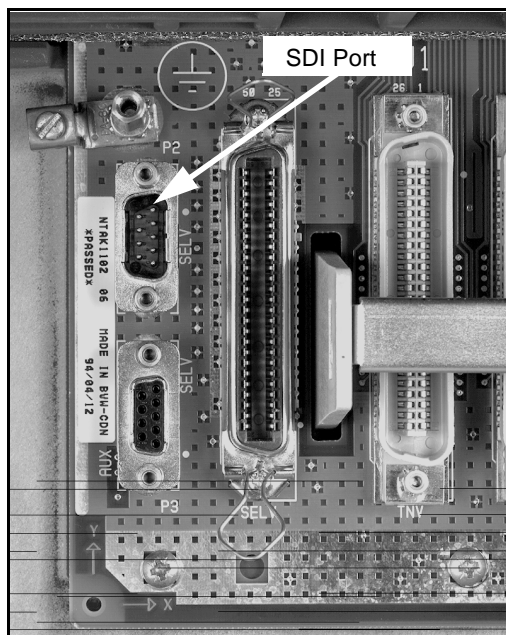
Procedure 3

Upgrade without fiber-optic connection to Option 11C

- 1 Connect a TTY terminal to SDI Port 0 of the existing system.

The terminal must connect to SDI Port 0 (see Figure 6 on page 38).

Figure 6
SDI Port 0



2 Log in to the system and perform a data dump on the existing system.

Note: You must do this step to make sure you back up any changes made after the last data dump. This step is a precautionary measure; if the upgrade fails, you can revert to the earlier system.

- a Load overlay program 43 (LD 43).
- b Enter command **EDD**.
- c Let the data dump finish, then exit LD 43 by entering ****.

3 Load overlay program 22 (LD 22) and print the ISM parameters. Make a note of the existing parameters.

Type **SLT** at the REQ prompt and press <CR> to print the ISM parameters. The ISM parameters are also on the existing software cartridge.

4 Perform one of the following steps to extract the customer data from the existing system:

- If you are using the Database Upgrade Tool, ignore this step and go to Step 5 on page 39.
- If you are using the CCBR feature and a PC, perform the following steps.
 - a Log in to the existing Option 11.
 - b Load overlay program 43 (LD 43) and enter **XBK** to start a configuration data backup.
 - c At the INFO prompt, enter a name for the file (up to 128 characters).
 - d After the backup finishes, enter **XVR**. Check the backed up data.
 - e Exit LD 43 by entering ****.

Note: Refer to the *Option 11 Customer Configuration Backup and Restore Guide (553-3011-330)* for details about the CCBR feature.

5 Disconnect the power from the cabinet.

Set the circuit breaker switch on the front of the power supply unit in the cabinet to OFF.

If equipped with reserve battery power, set the circuit breaker switch inside the reserve battery power unit to OFF.

- 6 **Attach the antistatic wrist strap provided at the bottom of the cabinet to your wrist.**
- 7 **Remove the NTAK01 CPU/Conf or NTBK45 System Core card from the cabinet.**
- 8 **Set the baud rate switches on the new NTDK20 SSC card to match the settings on one of the following:**
 - the NTAK01 CPU/Conf
 - the removed NTBK45 System Core card
- 9 **Remove the jumper plug from connector J7 on the component side of the NTDK20 SSC card, as shown in Figure 7 on page 41.**

Note: Store the jumper plug carefully. You need it to install an expansion cabinet connected with fiber-optic cable. You need the J7 connector plug to activate the Ethernet capability (which is not available with copper connected cabinets).

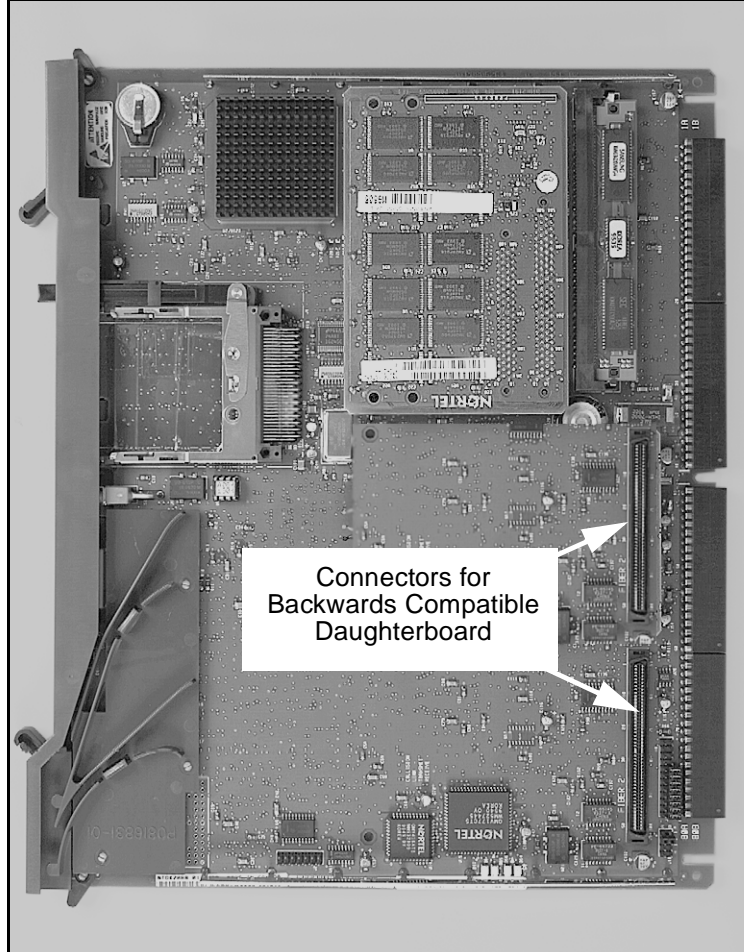
CAUTION

The NTDK20 SSC card has components on both sides of the circuit board. Be careful not to damage any of the components when handling the card.

- 10 **Install the NTDK26 Backwards Compatible Daughterboard on the NTDK20 SSC card, as shown in Figure 7 on page 41.**

Note: Make sure you have removed the J7 connector plug (see Step 9 on page 40).
- 11 **Install the Software Daughterboard and the Security Device on the NTDK20 SSC Card as shown in Figure 7 on page 41.**

Figure 7
Location of NTDK26 Backwards Compatible Daughterboard



- 12** Install the new NTDK20 SSC card in the slot left empty by the NTAK01 or NTBK45 card (Slot 0).

13 Extract the customer database from the existing system.

Do one of the following:

- If you are using the CCBR feature, skip this step and go to Step 14.
- If you are using the Database Upgrade Tool, install the software cartridge from the existing system to the Database Upgrade Tool.
 - a** Remove the software cartridge from the existing NTAK01 CPU/Conf or NTB45 System Core card.
 - b** Connect the Option 11 or Option 11E software cartridge to the connector on the Database Upgrade Tool.
 - c** Make sure the software cartridge on the Database Upgrade Tool faces towards the left. Then insert it in slot B of the PCMCIA socket located in the faceplate of the NTDK20 SSC card.

14 Install the NTB48 three-port SDI cable to the SDI port.

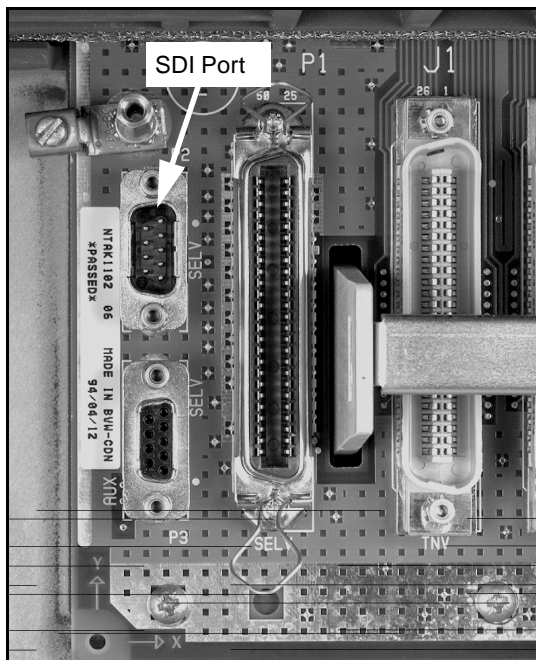
Connect the TTY terminal to the connector on the NTB48 cable labeled "Port 0" (see Figure on page 43).

Note: This cable is used with the Option 11E system.

CAUTION

The TTY must connect to port 0 to access the Software Installation Program.

Figure 8
Cable connection



15 Connect the power to the cabinet.

Set the circuit breaker switch on the front of the power supply unit in the cabinet to ON.

If equipped with reserve battery power, set the circuit breaker switch on the reserve battery power unit to ON.

16 Observe the terminal screen.

When you power up, the Software Installation Program starts automatically.

Note: The Software Installation Program is menu-driven, allowing the easy installation of software and customer databases in the Option 11C. It is clear and direct and includes a Help facility to help you make correct selections. However, if you need more detailed information, refer to the *Option 11C Planning and Installation Guide* (553-3021-210).

The following is a summary of the steps, as described in the *Option 11C Planning and Installation Guide*:

- a** If the system prompts you, enter the system time and date. Skip this step if the Software Installation Main Menu appears instead.

Note: The system time and date prompt appears when the Software Installation Program detects a system year date not in the range of 1995 to 2095.

- b** Do one of the following to select the type of upgrade you are performing:
- If using the Software Delivery (PCMCIA) card:
 - i** Select **System Upgrade** from the Software Installation Main Menu.
 - ii** Then, select **Option 11/11E to Option 11C** from the “Select type of upgrade to be performed” menu.
 - If you are upgrading using the software daughterboard, select **New System Installation or Option 11/11E Upgrade - From Software Daughterboard**.
- c** Select the feature set to be enabled from the “Select Feature Set You Wish to Enable” menu.

Note: The items you select in steps c, d, f, g and h must match the one provided with keycode data sheet.

- d** Select feature package numbers to add, if any.
- Enter package numbers. Press <CR> twice to end package selection.
- e** Select the database source.
- Select one of the following from the “Select Option 11/11E Database Source” list:
- Select **CCBR Restore file** if you extracted the customer database using the CCBP feature. When you select this option, you access the Data Transfer mode. You start the data restoration and upgrade process by pressing <CR> when prompted.
 - Select **Option 11/11E Software Cartridge** if you are using the Database Upgrade Tool to extract the customer database from the existing software cartridge.

- f** Select the ISM parameters.
Compare the ISM parameters with those you got in Step 3. Make any required changes.
- g** Define the new AUX ID.
The default AUX ID is the security ID provided with the Option 11C. You must replace it with the previous Option 11 or Option 11E site ID.
- h** Confirm the information entered and enter the validation keycodes.
The terminal displays a new installation information summary.
Make any necessary changes to the information. Then, enter the keycodes.
- i** Complete the software installation when prompted.

CAUTION

If you enter YES, the system reloads (SYSLOAD) to complete the installation.

- 17 Wait for the software installation to finish.**
- 18 Load overlay program 43 (LD 43) and perform a data dump.**
- 19 If you need to, change the tone and SDI functions.**

The NTDK20 SSC card combines many tone functions. Refer to “Assign TDS/DTR, XTD, and SDI functions” on page 131 for more information.

————— *End of Procedure* —————

Upgrade with fiber-optic connection

Procedure 4 describes how to upgrade a two-cabinet Option 11 or Option 11E to Option 11C with fiber-optic cabinet interconnection.

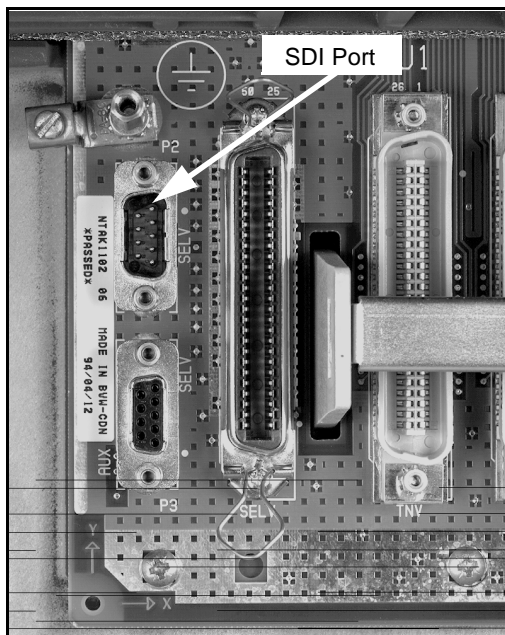
Procedure 4

Upgrade with fiber-optic connection to Option 11C

- 1 Connect a TTY terminal to SDI Port 0 of the existing system.**

You must connect the terminal to SDI Port 0 (see Figure 9 on page 46).

Figure 9
SDI Port 0



- 2 **Log in to and perform a data dump on the existing system.**

You must do this step to make sure you back up any changes made after the last data dump. This step is a precautionary measure. If the upgrade fails, you can revert to the earlier system.

 - a Load Overlay program 43 (LD 43).
 - b Enter command **EDD**.
 - c Wait until the data dump finishes.
- 3 **Load overlay program 22 to print the ISM parameters. Make a note of the existing parameters.**
 - a Type **SLT** at the REQ prompt and press <CR> to print the ISM parameters.
 - b Make sure the ISM parameters are also on the existing software cartridge.
- 4 **Do one of the following to extract the customer data from the existing system:**

- If you are using the Database Upgrade Tool, ignore this step and go to Step 5 on page 47.
- If you are using the CCBR feature and a PC, perform the following steps.
 - a** Log in to the existing Option 11.
 - b** Load overlay program 43 (LD 43), and enter **XBK** to start a configuration data backup.
 - c** At the INFO prompt, enter a name for the file (up to 128 characters).
 - d** After the backup finishes, enter **XVR** to check the backed up data.
 - e** Exit LD 43 by entering ****.

Note: Refer to the Option 11 *Customer Configuration Backup and Restore Guide* for details about the CCBR feature.

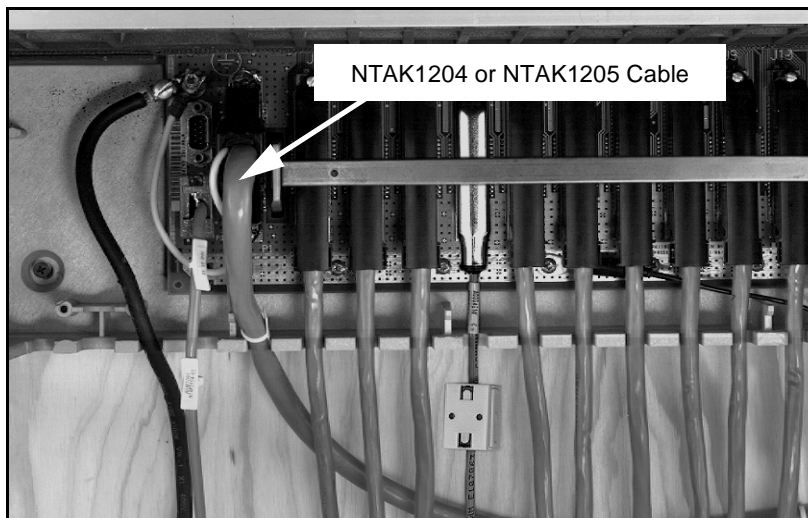
5 Disconnect the power from the main and expansion cabinets.

Set the circuit breaker switch on the front of the power supply unit in each cabinet to OFF.

If equipped with reserve battery power, set the circuit breaker switch inside the reserve battery power units to OFF.

6 Disconnect and remove the NTAK1204 or NTAK1205 cable from both cabinets (see Figure 10 on page 48).

Figure 10
NTAK1204 or NTAK1205 cable connection



- 7 Remove the ground connection from the ground lug in the main cabinet.**
- 8 Install a ground block in the area of the main cabinet.**

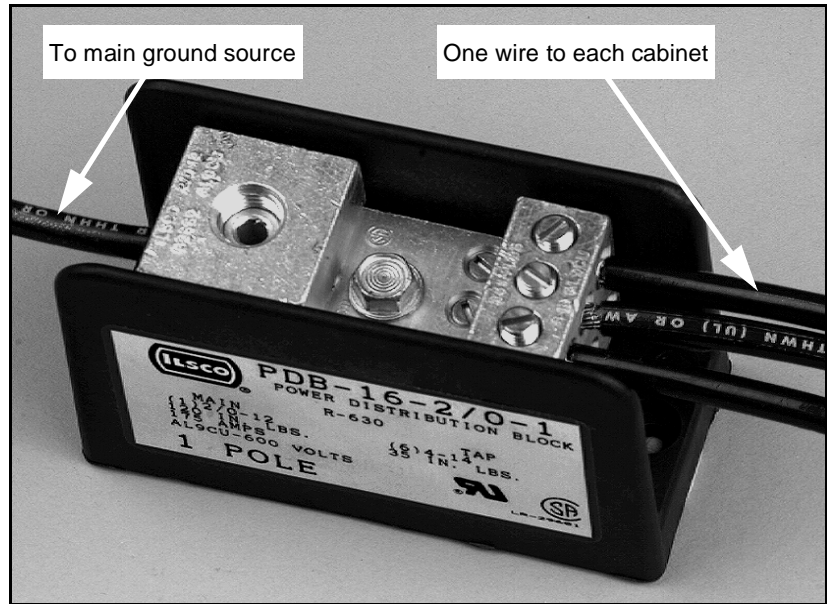
Route the ground wire to the ground block. Install a ground wire from the block to the ground lug in the main cabinet (see Figure 11 on page 49).

Use #6 AWG (40 Metric) ground wire. For more information about grounding, refer to the *Option 11C Planning and Installation Guide (553-3021-210)*.

Note 1: Grounding methods vary depending on the type of cross-connect terminal used. You do not always need an NTBK80 grounding block (such as with the Krone Test Jack Frame used in some countries). Refer to the *Option 11C Planning and Installation Guide (553-3021-210)* for more information.

Note 2: Do not install a ground wire to the existing expansion cabinet. Install a ground wire to the expansion cabinet when the new expansion cabinet is in position.

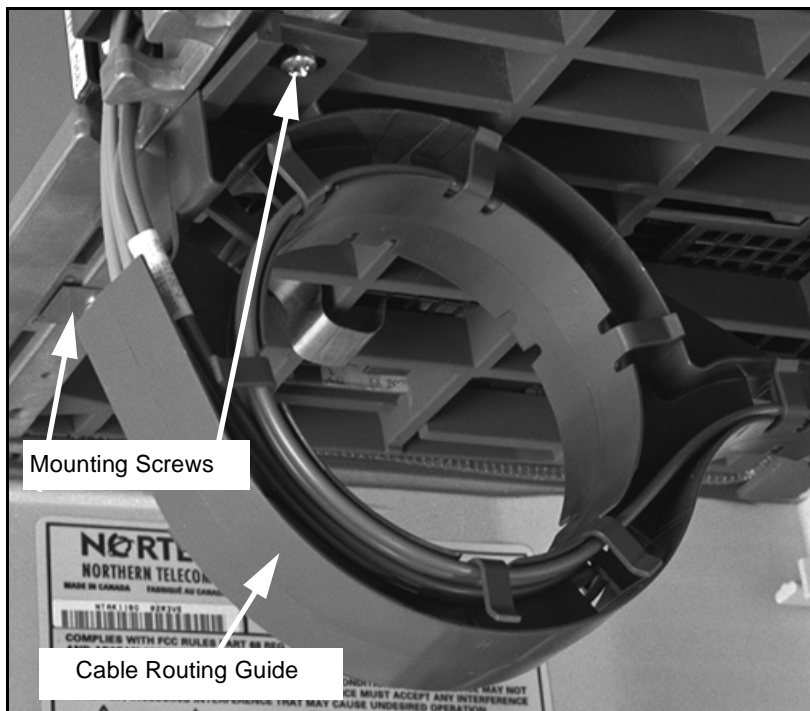
Figure 11
Grounding block



- 9 Install a P0816832 Fiber Routing Guide or P0888475 Multiple Cable Routing Guide under slot 0 (CPU) as shown in Figure 12.**

Install the routing guide in the cable connector area below the circuit cards. Fasten the routing guide with the existing screws below the card slot.

Figure 12
Cable Routing Guide

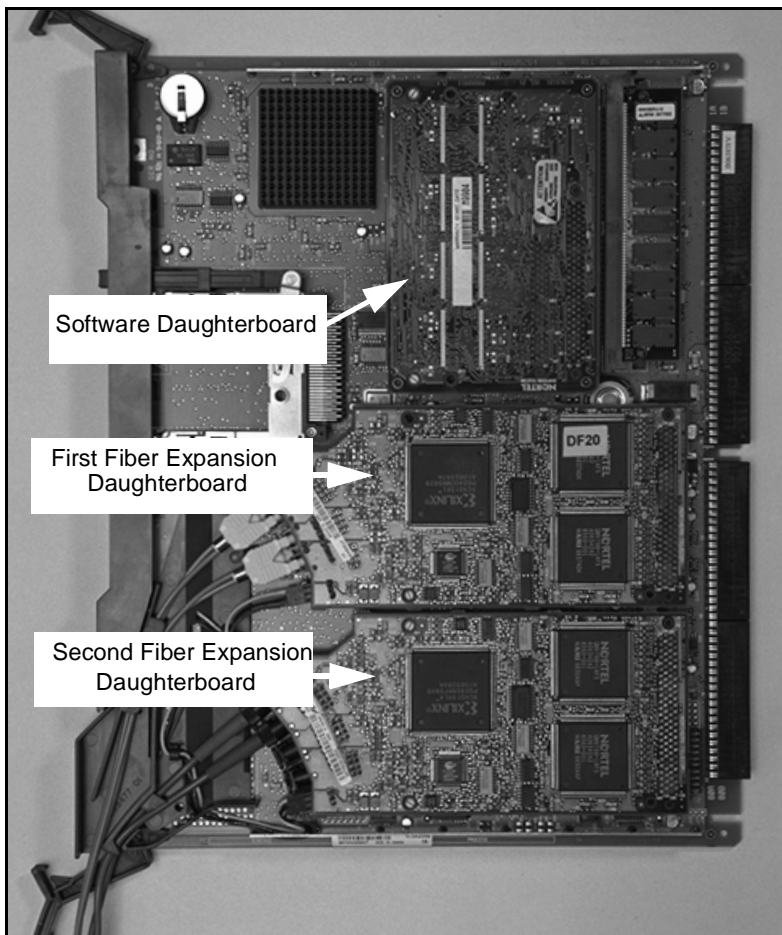


- 10 Remove the NTA01 CPU/Conf or NTB45 System Core card from the cabinet.
- 11 Set the baud rate switches on the new NTDK20 SSC card to match the settings on one of the following:
 - the NTA01 CPU/Conf
 - the removed NTB45 System Core card
- 12 Install the Software Daughterboard and the Security Device on the NTDK20 SSC Card, as shown in Figure 13 on page 51.

CAUTION

The NTDK20 SSC card has components on both sides of the circuit board. Be careful not to damage any of the components when handling the card.

Figure 13
NTDK20 SSC card



13 Install a Fiber Expansion Daughterboard on the NTDK20 SSC card for the expansion cabinet (see Figure 13 on page 51).

Connect the first Fiber Expansion Daughterboard to the connector labeled "Fiber 1."

Note 1: Dual port Fiber Expansion Daughterboards that use glass fiber-optic cable can have a glass fiber extension with plugs at each end. (These plugs make installation easier.) Connect the extension to the daughterboard before installing the extension on the SSC card.

Note 2: If you plan to add a second Fiber Expansion Daughterboard as part of the upgrade, do it now to prevent additional downtime later. Install it to the connector labeled “Fiber 2.” Refer to the *Option 11C Planning and Installation Guide (553-3021-210)* for detailed information about adding expansion cabinets to existing Option 11C systems.

14 Connect the fiber-optic cable to the connector on the Fiber Expansion Daughterboard as shown in Figure 14 on page 53.

WARNING

Use of the fiber-optic interface product in the Option 11C is considered safe. However, as a precaution, do not look directly at the optical port or the end of fiber-optic cable. The optical port can cause eye exposure beyond the limits of Maximum Permissible Exposure recommended in some areas. For example, this condition can occur during cable testing or under light magnification. Do not remove protective caps or plugs until you are ready to connect the cable.

Use one of the following methods:

- If using the A0632902 (was the A0618443) cable:
 - a** Remove the two protective plugs from the Fiber Expansion Daughterboard.
 - b** Connect the cable to the Fiber Expansion Daughterboard. Make sure the V-shaped groove on the cable connector faces outward and the connector seats tightly. The marking (if there is one) on the connector is not visible when you connect the cable correctly. See Figure 15 on page 54.
- If using glass fiber-optic cable:
 - a** Remove the protective plug from the Fiber Expansion Daughterboard. Remove the protective cap from the corresponding plug (Tx or Rx) on the glass fiber-optic cable.
 - b** Insert the plug in its assigned connector on the daughterboard.
 - c** Lock the connector in position by turning it a half turn clockwise. See Figure 16 on page 54.
 - d** Repeat these steps for the second fiber-optic connection.

— If using a glass fiber extension:

- Connect the extension from the daughterboard to the main fiber-optic cable. Make sure you do not interchange the transmit and receive leads.

Figure 14
Fiber-optic cable connections



Figure 15
Plastic fiber-optic cable connection

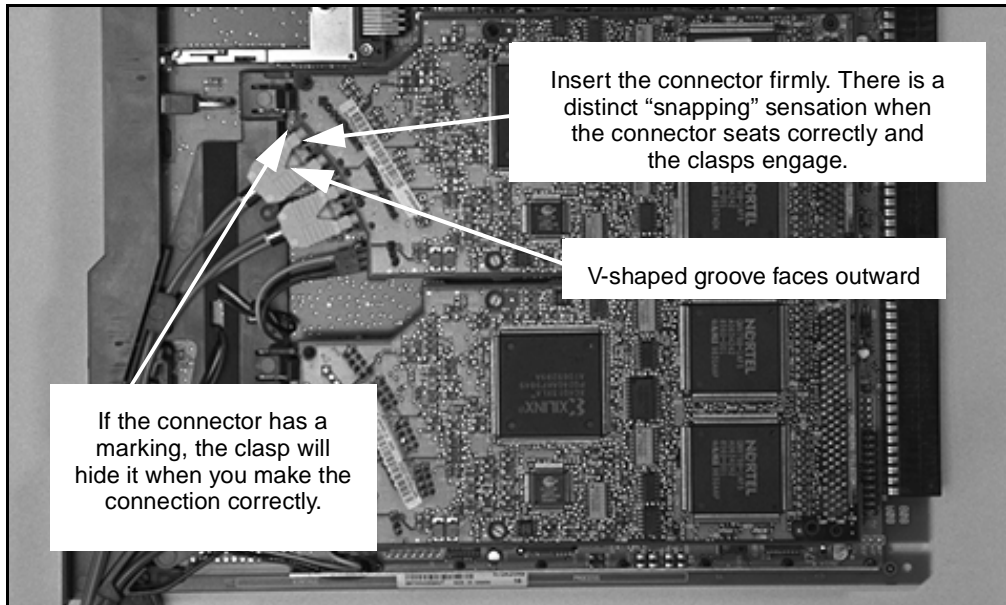
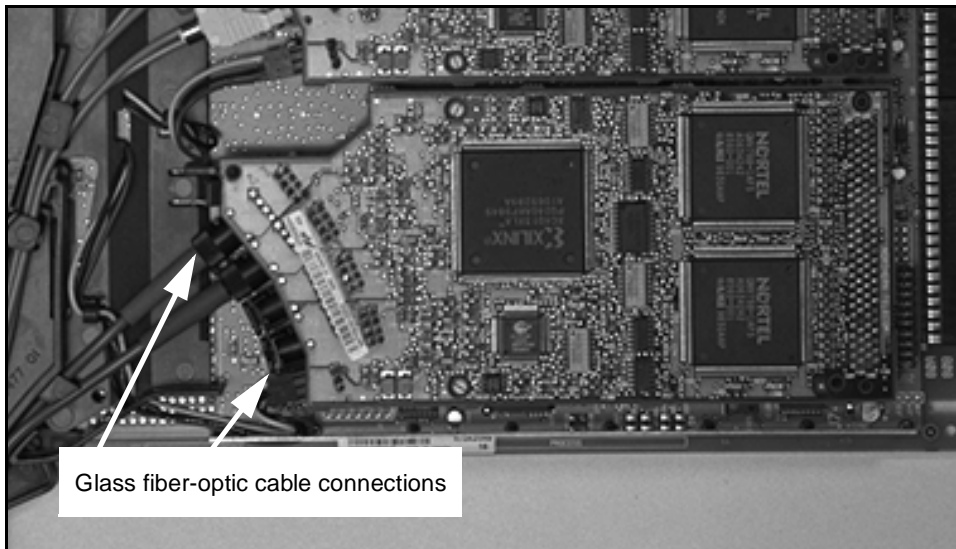


Figure 16
Glass fiber-optic cable connection



15 Route each fiber-optic cable through the fiber routing guide.

Use an A0632902 (was A0618443) 10 m fiber-optic cable to connect the main cabinet to an expansion cabinet located within 10 m (33 ft).

You need a glass fiber-optic cable when connecting an expansion cabinet located up to 3 km (1.8 mi) from the main cabinet. A local facilities provider can supply and install glass fiber-optic cable.

Note: Do not staple or twist fiber-optic cable. Do not bend it beyond a minimum 35 mm bend radius (90° soft bend).

16 Install the new NTDK20 SSC card in the slot left empty by the NTAK01 or NTB45 card (Slot 0).

Store the excess fiber-optic cable on the fiber routing guide.

17 Do one of the following to extract the customer database from the existing system:

- If you are not using the Database Upgrade Tool, skip this step and go to Step 42 on page 67.
- If you are using the Database Upgrade Tool, install the software cartridge from the existing system to the Database Upgrade Tool.
 - a** Remove the software cartridge from the existing NTAK01 CPU/Conf or NTB45 System Core card.
 - b** Connect the Option 11 or Option 11E software cartridge to the connector on the Database Upgrade Tool. See Figure 17 on page 56.
 - c** Position the software cartridge on the Database Upgrade Tool towards the left. Insert the Database Upgrade Tool in slot B of the PCMCIA socket located in the faceplate of the NTDK20 SSC card. See Figure 18 on page 57.

Figure 17
Database Upgrade Tool

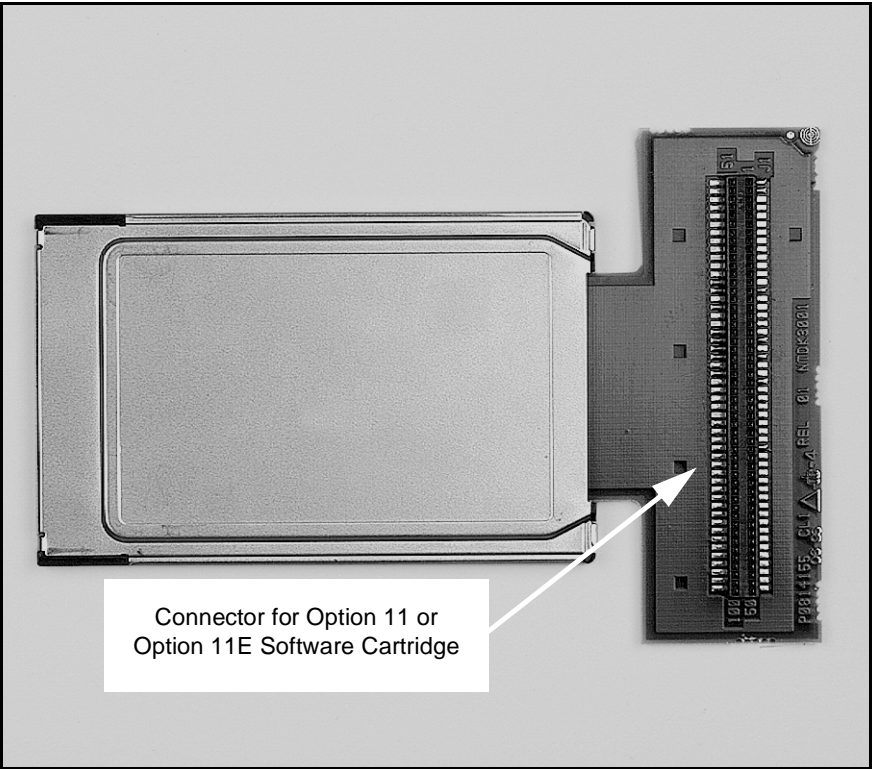
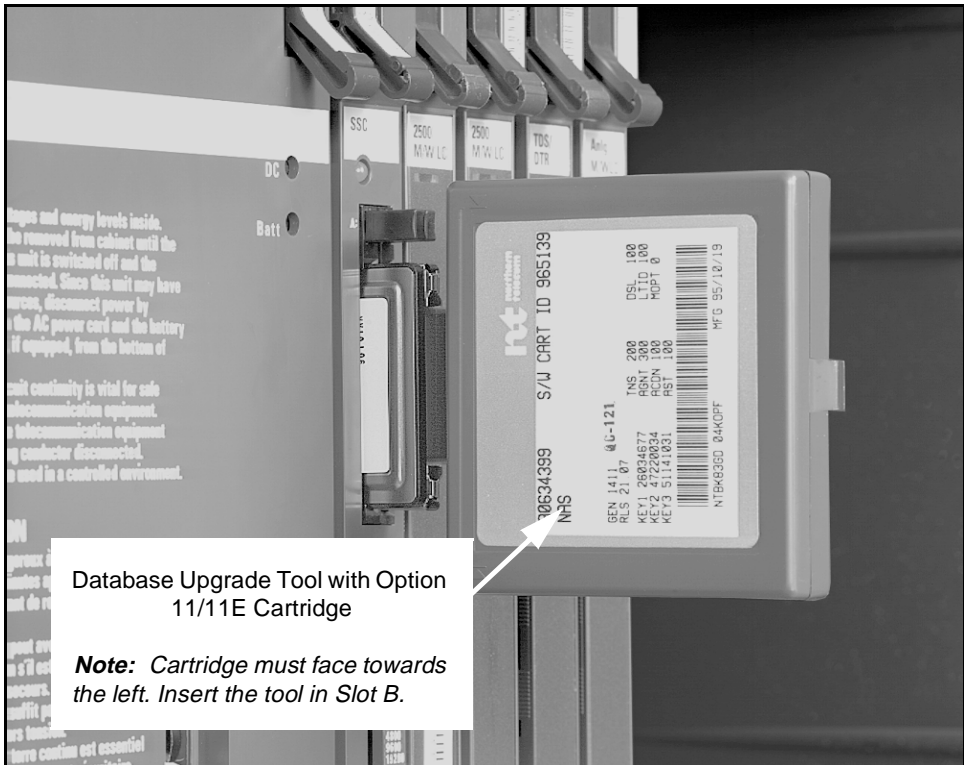


Figure 18
Cartridge and Database Upgrade Tool



18 Install the NTBK48 three-port SDI cable to the SDI port.

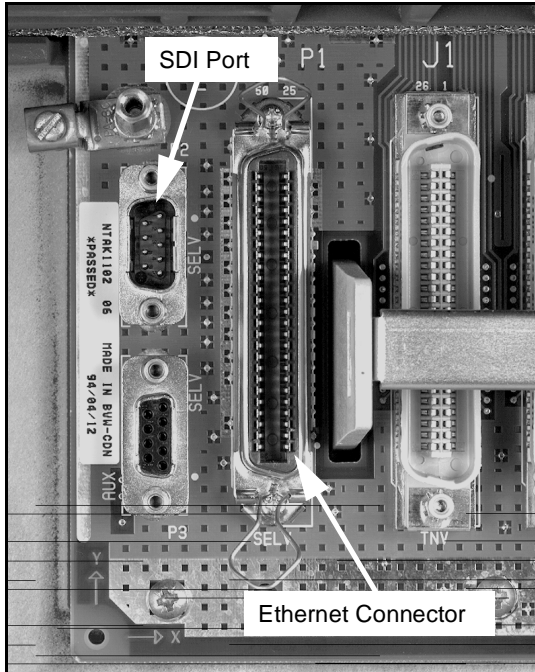
Connect the TTY terminal to the connector on the NTBK48 cable labeled "Port 0" (see Figure 19 on page 58).

Note: Because you use this cable with Option 11E systems, it is present when upgrading from Option 11E.

CAUTION

The TTY must connect to port 0 to access the Software Installation Program.

Figure 19
Cable connection



19 Connect the power to the main cabinet.

Set the circuit breaker switch on the front of the power supply unit in the cabinet to ON.

If equipped with reserve battery power, set the circuit breaker switch on the reserve battery power unit to ON.

20 Observe the terminal screen.

When you power up, the Software Installation Program starts automatically.

Note: This program is menu-driven allowing the easy installation of software and customer databases in the Option 11C. It is clear and direct and includes a Help facility to help you make correct selections. However, if you need more detailed information, refer to the *Option 11C Planning and Installation Guide (553-3021-210)*.

The following is a summary of the steps described in the *Option 11C Planning and Installation Guide (553-3021-210)*:

- a** If the system prompts you, enter the system time and date. Skip this step if the Software Installation Main Menu appears instead.

Note: The system time and date prompt appears when the Software Installation Program detects a system year date not in the range of 1995 to 2095.

- b** Do one of the following to select the type of upgrade:

- If using the Software Delivery (PCMCIA) card:
 - i** Select **System Upgrade** from the Software Installation Main Menu.
 - ii** **Then** select **Option 11/11E to Option 11C** from the “Select type of upgrade to be performed” menu.
- If you are upgrading using the software daughterboard, select **New System Installation or Option 11/11E Upgrade - From Software Daughterboard**.

- c** Select the feature set to be enabled from the “Select Feature Set You Wish to Enable” menu.

Note: The items you select in steps c, d, f, g and h must match the one provided with keycode data sheet.

- d** Select feature package numbers to add, if any.

Enter package numbers. Press <CR> twice to end package selection.

- e** Select the database source.

Select one of the following from the “Select Option 11/11E Database Source” list:

- Select **CCBR Restore file** if you extracted the customer database using the CCBR feature. When you select this option, you access the Data Transfer mode. You begin the data restoration and upgrading process by pressing <CR> when prompted to do so.
- Select **Option 11/11E Software Cartridge** if you are using the Database Upgrade Tool to extract the customer database from the existing software cartridge.

- f Select the ISM parameters.
Compare the ISM parameters with those you got in Step 3. Make any required changes.
- g Define the new AUX ID.
The default AUX ID is the security ID provided with the Option 11C. You must replace it with the previous Option 11 or Option 11E site ID.
- h Confirm the information entered and enter the validation keycodes.
The terminal displays a new installation information summary. Make any necessary changes to the information, then enter the keycodes.
- i Complete the software installation when prompted.

21 Wait for the software installation to finish.

CAUTION

If you must terminate the upgrade and revert back to the original Option 11 or Option 11E, do it now (see Procedure 6 on page 83). The remaining steps of this procedure require major equipment changes, making it difficult to revert back.

- 22 Remove the Database Upgrade Tool from the PCMCIA socket on the faceplate of the SSC card.**
- 23 Select Utilities from the Software Installation Main Menu and perform a backup.**
- 24 Tag and disconnect all cables from connectors J11 through J20 in the expansion cabinet.**
Tag the cables J11, J12, J13, . . . , J20.
- 25 Disconnect the power connection from under the NTA04, NTA05, NTDK72, or NTDK78 power supply unit in the expansion cabinet.**
- 26 Remove the expansion cabinet from the wall (or pedestal).**
Put the cabinet to the side.

27 Install the new NTAK11 cabinet on the wall (or pedestal).

To install the cabinet on a pedestal, first remove the door hinge opening tabs on each side of the cabinet with a pair of pliers. See Figure 20.

Figure 20
Door hinge opening

**28 Connect a #6 AWG (40 Metric) ground wire from the ground lug in the expansion cabinet to the grounding block installed in Step 8 on page 48.****29 Install a fiber routing guide under slot 0 (Fbr Rx), as shown in Figure 12 on page 50.**

Install the fiber routing guide in the cable connector area below the circuit cards. Fasten the router with the existing screws below the card slot.

30 Connect all the cables that you labeled and disconnected from the old cabinet in Step 24 on page 60.

The connectors in the cabinet for cables going to the cross-connect terminal are J1 to J10 (instead of J11 to J20). Connect the identified cables as shown in Table 1.

Table 1
Cable tags and connectors

| Tag on cable | Connect to connector |
|--------------|----------------------|
| J11 | J1 |
| J12 | J2 |
| J13 | J3 |
| J14 | J4 |
| J15 | J5 |
| J16 | J6 |
| J17 | J7 |
| J18 | J8 |
| J19 | J9 |
| J20 | J10 |

- 31 Route the fiber-optic cable from the main cabinet through the cable entry area of the expansion cabinet.**
- 32 Put on the antistatic wrist strap located in the expansion cabinet.**
- 33 Locate the fiber receiver card.**
- Is the expansion cabinet within 10 m (33 ft) of the main cabinet and connected with A0632902 (before A0618443) plastic fiber-optic cable? If so, use an NTDK23 Fiber Receiver card.
 - Do you want to connect the expansion cabinet with glass fiber-optic cable up to 3 km (1.8 mi) from the main cabinet? If so, use an NTDK25 (Multimode) or NTDK89 (Single Mode) Fiber Receiver card.

34 Connect the fiber-optic cable to the fiber receiver card, as shown in Figure 21 on page 64.

WARNING

Use of the fiber-optic interface product in the Option 11C is considered safe. However, as a precaution, do not look directly at the optical port or the end of fiber-optic cable. The cable or port can cause eye exposure beyond the limits of Maximum Permissible Exposure recommended in some areas. For example, this condition can occur during cable testing or under light magnification. Do not remove protective caps or plugs until you are ready to connect the cable.

Use one of the following methods:

— **If using the A0632902 (was A0618443) cable:**

- a Remove the two protective plugs from the fiber receiver card.
- b Connect the cable to the fiber receiver card. Make sure the V-shaped groove on the cable connector faces in and the connector seats tightly. See Figure 22 on page 65. The marking (if there is one) on the connector is not visible when you connect it correctly.

— **If using glass fiber-optic cable:**

- a Remove the protective plug from the fiber receiver card. Remove the protective cap from the corresponding plug (Tx or Rx) on the glass fiber-optic cable.
- b Insert the plug in its identified connector on the fiber receiver card.
- c Lock the connector in position by turning it a half turn clockwise. See Figure 23 on page 66.
- d Repeat steps a to c for the second fiber-optic connection.

After you connect the fiber-optic cable, wind the excess fiber-optic cable around the spool on the fiber receiver card. Leave enough slack to insert and remove the fiber receiver card from its slot.

Figure 21
Fiber-optic cable (A0632902 shown) connector on the fiber receiver card

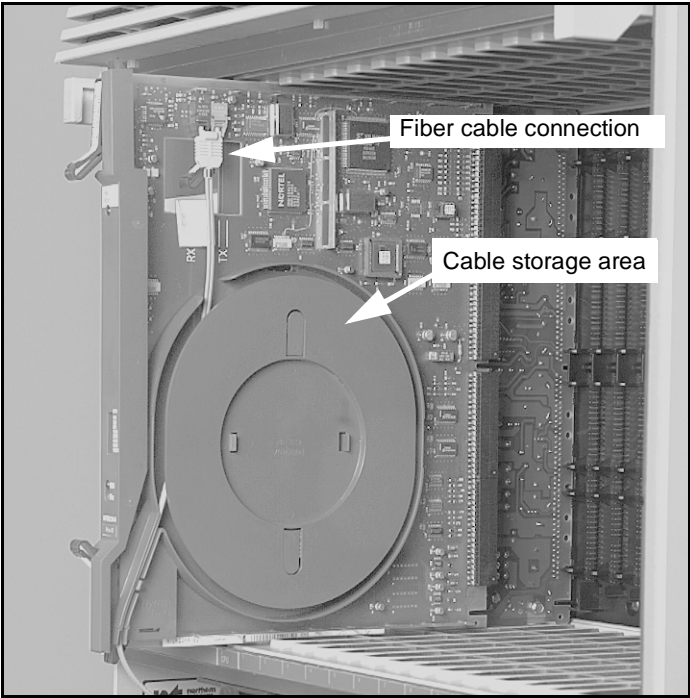


Figure 22
Plastic fiber-optic cable connection

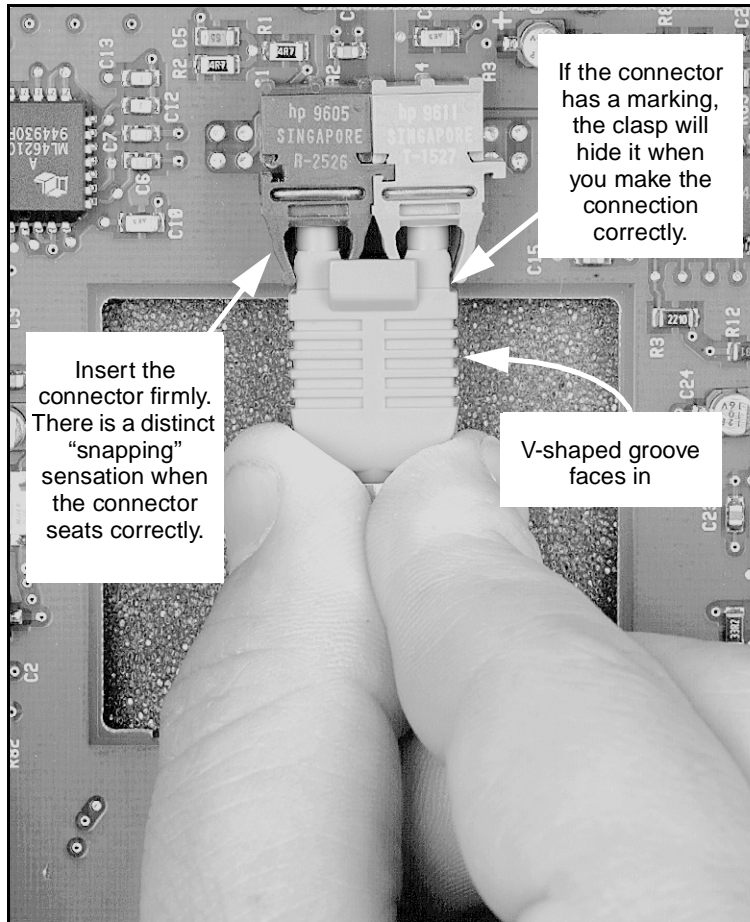
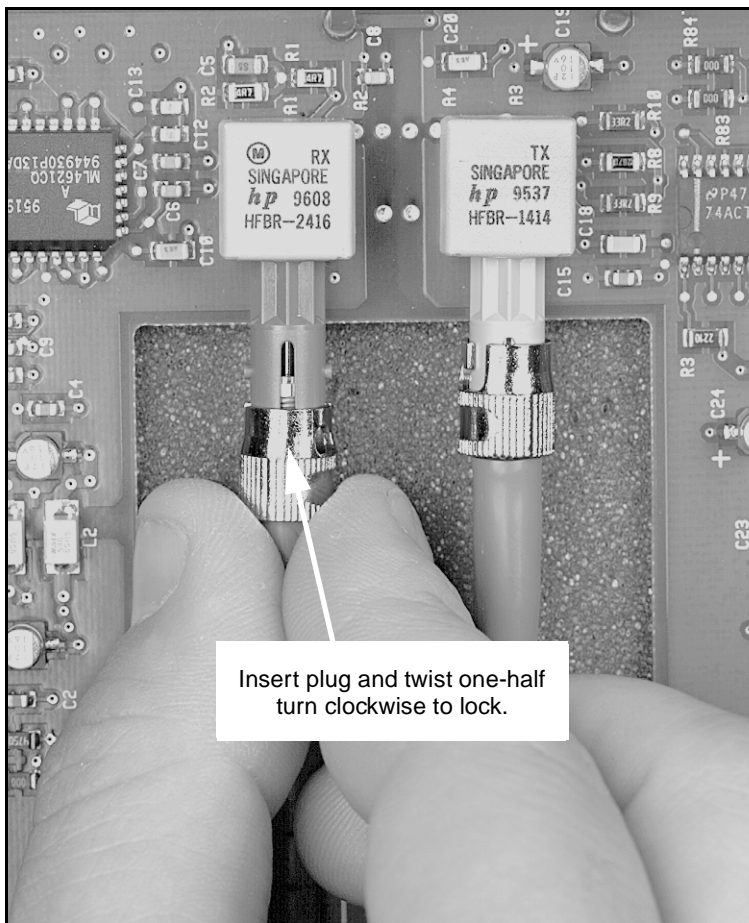


Figure 23
Glass fiber-optic cable connection



- 35** **Install the receiver card in the slot labeled “Fbr Rcvr.”**

Wind the slack fiber-optic cable around the fiber routing guide one time.
- 36** **Remove the NTA04, NTDK78, NTA05, or NTDK72 power supply from the old cabinet and install it in the new expansion cabinet. Connect the power cord to the bottom of the power supply unit.**
- 37** **Remove any circuit cards that you want to save from the old expansion cabinet. Install these circuit cards in the matching slots in the new cabinet.**

Wind the slack fiber-optic cable around the fiber routing guide one time.

- 36 Remove the NTA04, NTDK78, NTA05, or NTDK72 power supply from the old cabinet and install it in the new expansion cabinet. Connect the power cord to the bottom of the power supply unit.**
- 37 Remove any circuit cards that you want to save from the old expansion cabinet. Install these circuit cards in the matching slots in the new cabinet.**

- 37 Remove any circuit cards that you want to save from the old expansion cabinet. Install these circuit cards in the matching slots in the new cabinet.**

38 Connect the power to the expansion cabinet.

Set the circuit breaker switch on the front of the power supply unit in the cabinet to ON.

If equipped with reserve battery power, set the circuit breaker switch on the reserve battery power unit to ON.

39 Check the fiber-related LEDs on the SSC card.

- The LED for the equipped expansion daughterboard is green.
- If the LED shows red (disabled indication):
 - a Load overlay program 135,
 - b Enter **ENL FL1** to enable expansion cabinet 1 (or **ENL FL2** for expansion cabinet 2, if equipped).
- If the LED is yellow (fault indication):
 - a Check all fiber-optic cable. Make sure you connected it correctly and it is not damaged.
 - b If the LED remains yellow, go to the *Option 11C Fault Clearing Guide (553-3011-500)*.

40 If you need to, change the tone and SDI functions.

The NTDK20 SSC card combines many tone functions. Refer to “Assign TDS/DTR, XTD, and SDI functions” on page 131 for more information.

41 If you need to, install the single port TTY cable in the expansion cabinet (Figure 19 on page 58).**42 If you need the optional NTDK27 Ethernet cable, connect it to the expansion connector in the main cabinet. (See Figure 19 on page 58.)**

————— *End of Procedure* —————

Upgrade to fiber-optic connection on an upgraded Option 11C without fiber connection

You can upgrade a two-cabinet upgraded Option 11C system connected to the expansion cabinet with an NTAK1204 or NTAK1205 cable to a fiber-optic connection. The following procedure (Procedure 5 on page 68) describes this upgrade.

Procedure 5
Upgrade to fiber-optic connection

1 Log in and perform a data dump on the existing system.

You must do this step to make sure you back up any changes made after the last data dump.

- a** Load Overlay program 43 (LD 43).
- b** Enter command **EDD**.
- c** Wait until the data dump finishes.

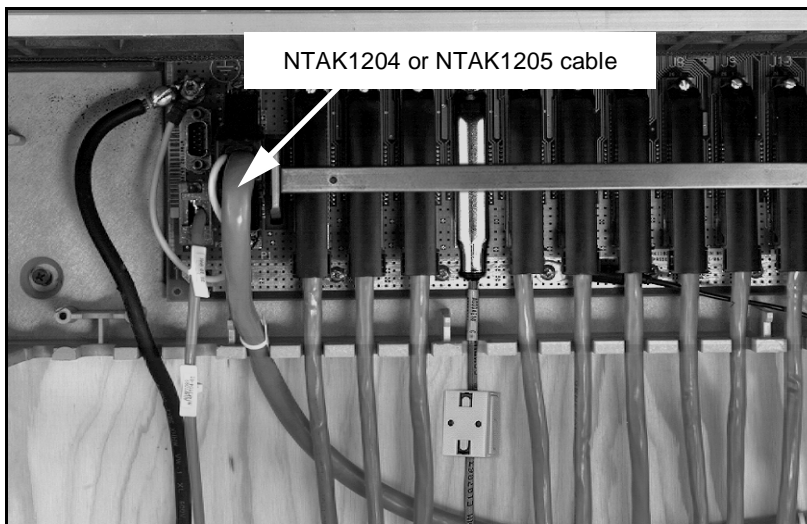
2 Disconnect the power from the main and expansion cabinets.

Set the circuit breaker switch on the front of the power supply unit in each cabinet to OFF.

If equipped with reserve battery power, set the circuit breaker switch inside the reserve battery power units to OFF.

3 Disconnect and remove the NTAK1204 or NTAK1205 cable from both cabinets (see Figure 24 on page 68).

Figure 24
NTAK1204 or NTAK1205 cable connection



4 Remove the ground connection from the ground lug in the main cabinet.

5 Install a grounding block in the area of the main cabinet.

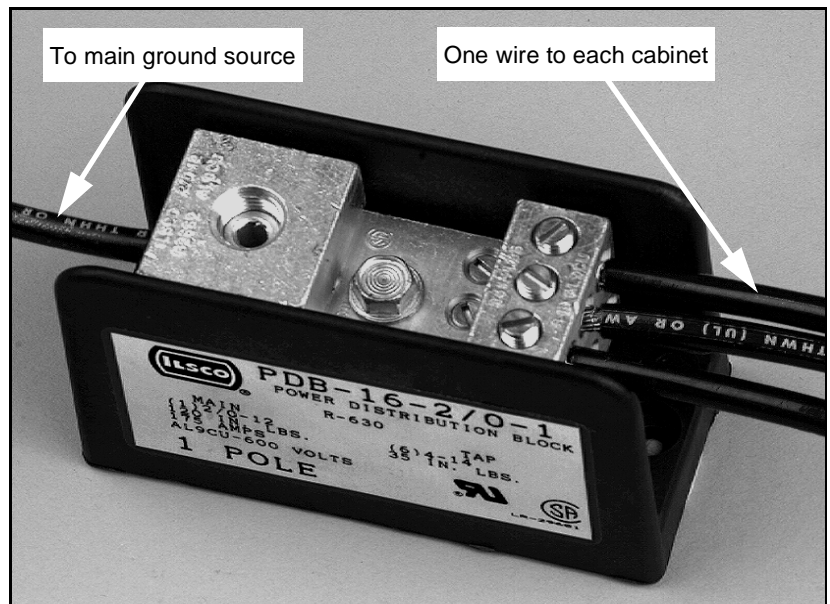
Route the grounding wire to the grounding block, then install a ground wire from the block to the grounding lug in the main cabinet (see Figure 25 on page 69).

Use #6 AWG (40 Metric) ground wire. For more information about grounding, refer to the *Option 11C Planning and Installation Guide* (553-3021-210).

Note 1: Grounding methods vary depending on the type of cross-connect terminal used. You do not always need an NTBK80 grounding block (such as with the Krone Test Jack Frame used in some countries). Refer to the *Option 11C Planning and Installation Guide* (553-3021-210) for more information.

Note 2: Do not install a grounding wire to the existing expansion cabinet. Install a ground wire when the new expansion cabinet is in position.

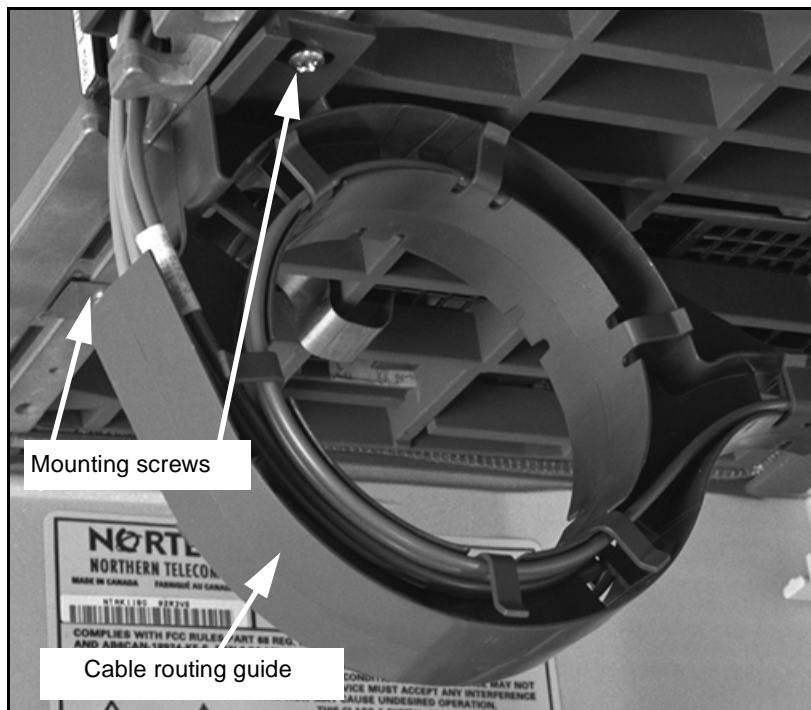
Figure 25
Grounding block



- 6 **Install a cable routing guide under slot 0 (CPU) as shown in Figure 26.**

Install the routing guide in the cable connector area below the circuit cards. Fasten the routing guide with the existing screws below the card slot.

Figure 26
Cable Routing Guide



- 7 **Put on the antistatic wrist strap located in the main cabinet.**
- 8 **Remove the NTDK20 SSC card from the main cabinet. Then, install a Fiber Expansion Daughterboard for the expansion cabinet (see Figure 27 on page 72).**

CAUTION

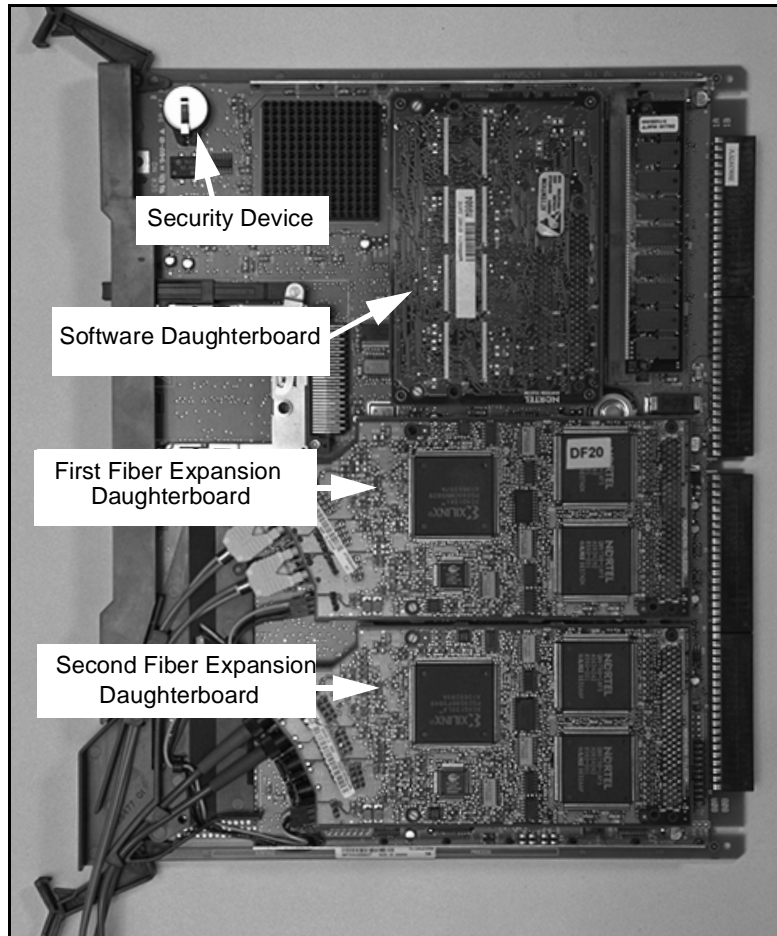
The NTDK20 SSC card has components on both sides of the circuit board. Be careful not to damage any of the components when handling the card.

Note: Dual port Fiber Expansion Daughterboards that use glass fiber-optic cable can have a glass fiber extension equipped with plugs at each end to make installation easier. Connect the extension to the daughterboard before you install the extension on the SSC card.

- a** Connect the first Fiber Expansion Daughterboard to the connector labeled "Fiber 1."

- b** If you plan to add a second expansion daughterboard as part of the upgrade, install it now. Install it to the connector labeled “Fiber 2” to prevent additional downtime later. Refer to the *Option 11C Planning and Installation Guide (553-3021-210)* for detailed information about adding expansion cabinets to existing Option 11C systems.

Figure 27
NTDK20 SSC card



9 Connect the fiber-optic cable to the connector on the Fiber Expansion Daughterboard as shown in Figure 28 on page 74.

WARNING

Use of the fiber-optic interface product in the Option 11C is considered safe. However, as a precaution, do not look directly at the optical port or the end of fiber-optic cable. The cable or port can cause eye exposure beyond the limits of Maximum Permissible Exposure recommended in some areas. For example, this condition can occur during cable testing or under light magnification. Do not remove protective caps or plugs until you are ready to connect the cable.

Use one of the following methods:

— **If using the A0632902 (was A0618443) cable:**

- a** Remove the two protective plugs from the Fiber Expansion Daughterboard.
- b** Connect the cable to the Fiber Expansion Daughterboard. Make sure the V-shaped groove on the cable connector faces outward and the connector seats tightly. The marking (if there is one) on the connector is not visible when you make the correct connection. See Figure 29 on page 75.

— **If using glass fiber-optic cable:**

- a** Remove the protective plug from the Fiber Expansion Daughterboard. Remove the protective cap from the corresponding plug (Tx or Rx) on the glass fiber-optic cable.
- b** Insert the plug in its identified connector on the daughterboard.
- c** Lock the connector in position by turning it a half turn clockwise. See Figure 30 on page 76.
- d** Repeat these steps for the second fiber-optic connection.

— **If using a glass fiber extension:**

Connect the extension from the daughterboard to the main fiber-optic cable. Make sure you do not interchange the transmit and receive leads.

Figure 28
Fiber-optic cable connection on dual port daughterboards

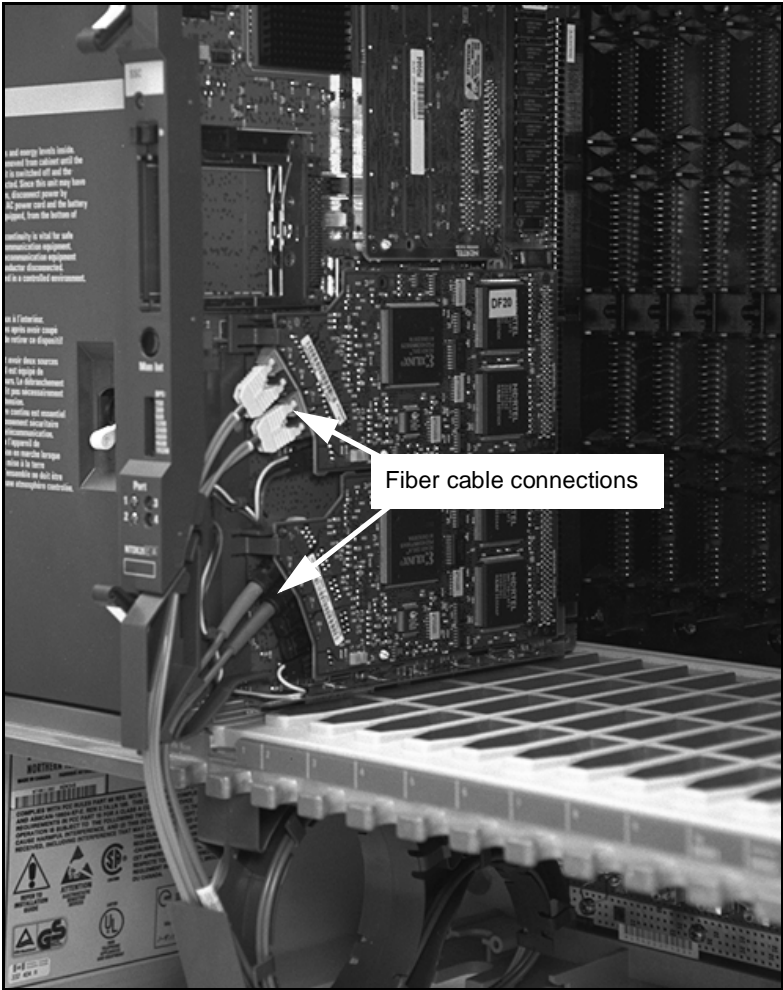


Figure 29
Plastic fiber-optic cable connection

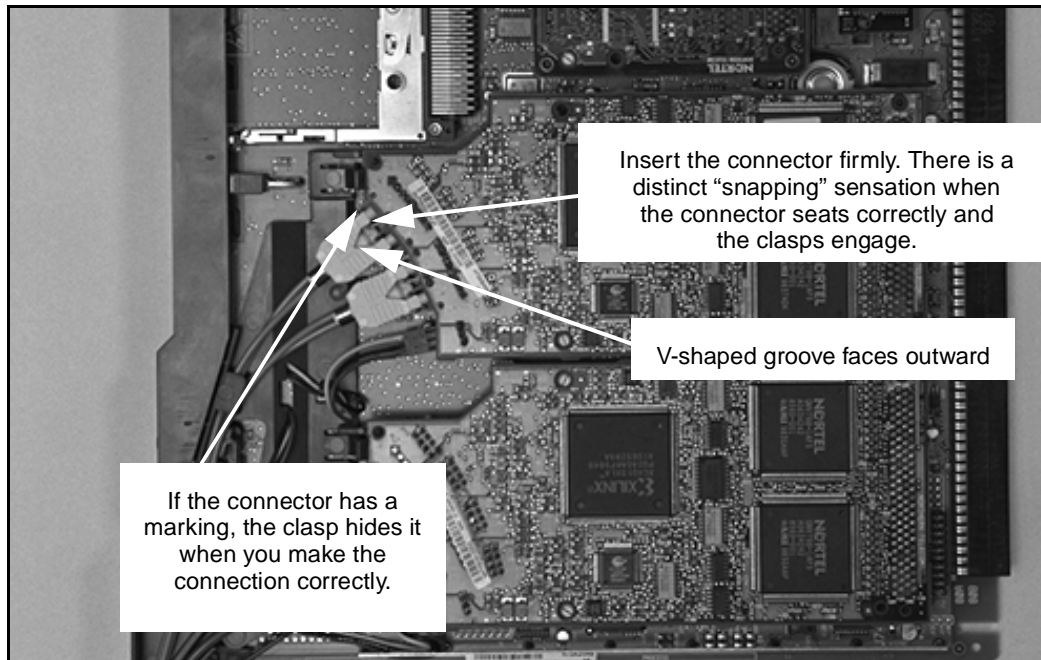
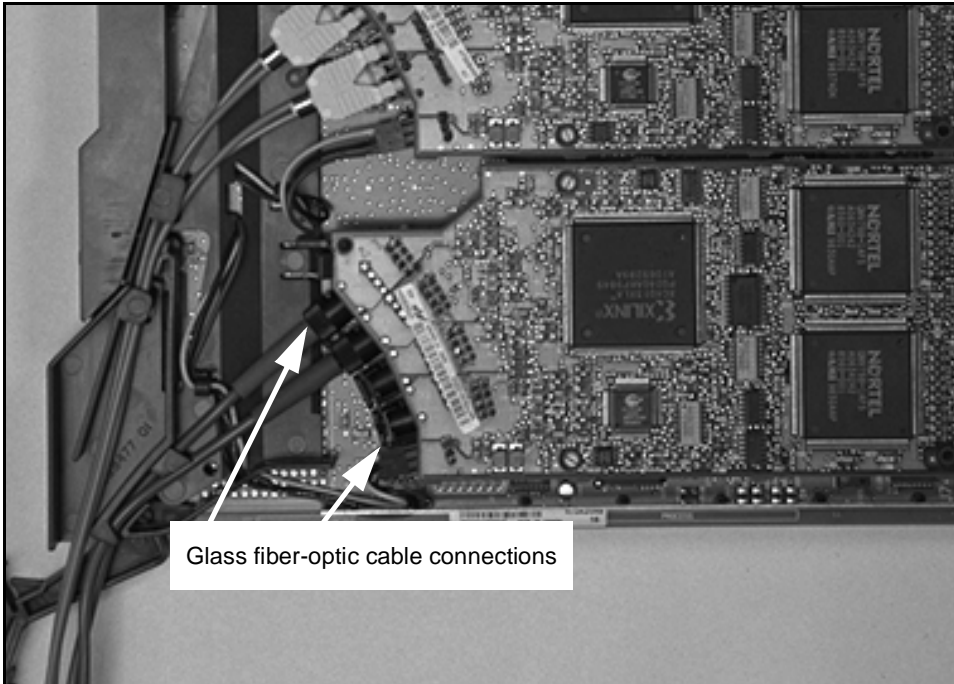


Figure 30
Glass fiber-optic cable connection



10 Route each fiber-optic cable through the fiber routing guide.

Use an A0632902 (was A0618443) 10 m fiber-optic cable to connect the main cabinet to an expansion cabinet located within 10 m (33 ft).

You need a glass fiber-optic cable to connect an expansion cabinet located up to (1.8 mi) from the main cabinet. A local facilities provider can supply and install glass fiber-optic cable.

Note: Do not staple or twist fiber-optic cable. Do not bend it beyond a minimum 35 mm bend radius (90° soft bend).

11 Install the new NTDK20 SSC card in its slot (Slot 0).

Store the excess fiber-optic cable on the fiber routing guide.

12 Connect the power to the main cabinet.

Set the circuit breaker switch on the front of the power supply unit in the cabinet to ON.

If equipped with reserve battery power, set the circuit breaker switch on the reserve battery power unit to ON.

13 Wait for the system reload (SYSLOAD) to finish.**14 Tag and disconnect all cables from connectors J11 through J20 in the expansion cabinet.**

Tag the cables J11, J12, J13, . . . , J20.

15 Disconnect the power connection from under the NTAK04, NTAK05, NTDK72, or NTDK78 power supply unit in the expansion cabinet.**16 Remove the expansion cabinet from the wall (or pedestal).**

Put the cabinet to the side.

17 Install the new NTAK11 Cabinet on the wall (or pedestal).

If you plan to install the cabinet on a pedestal, you must first remove the door hinge opening tabs on each side of the cabinet. Use a pair of pliers as shown in Figure 31 on page 77.

Figure 31
Door hinge opening

**18 Connect a #6 AWG (40 Metric) grounding wire from the grounding lug in the expansion cabinet to the grounding block installed in Step 5 on page 69.**

- 19 Install a fiber routing guide under slot 0 (Fbr Rx), as shown in Figure 26 on page 70.**
- Install the fiber routing guide in the cable connector area below the circuit cards. Fasten the router with the existing screws below the card slot.
- 20 Connect all the cables that you labeled and disconnected from the old cabinet in Step 14 on page 77.**
- Note:** The connectors in the cabinet for cables going to the cross-connect terminal are J1 to J10 (instead of J11 to J20 as in the old expansion cabinet). Connect the labeled cables now as shown in Table 2.

Table 2
Labeled cable connections

| Label on cable | Connect to connector |
|----------------|----------------------|
| J11 | J1 |
| J12 | J2 |
| J13 | J3 |
| J14 | J4 |
| J15 | J5 |
| J16 | J6 |
| J17 | J7 |
| J18 | J8 |
| J19 | J9 |
| J20 | J10 |

- 21 Route the fiber-optic cable from the main cabinet through the cable entry area of the expansion cabinet.**
- 22 Wear the antistatic wrist strap located in the expansion cabinet.**

23 Locate the fiber receiver card.

- Do you want to connect the expansion cabinet with A0632902 (was A0618443) plastic fiber-optic cable within 10 m (33 ft) of the main cabinet? If so, use an NTDK23 Fiber Receiver card.
- Do you want to connect the expansion cabinet with glass fiber-optic cable up to 3 km (1.8 mi) from the main cabinet? If so, use an NTDK25 (multimode) or NTDK89 (single mode) Fiber Receiver card.

24 Connect the fiber-optic cable to the fiber receiver card as shown in Figure 32 on page 80.**WARNING**

Use of the fiber-optic interface product in the Option 11C is considered safe. However, as a precaution, do not look directly at the optical port or the end of fiber-optic cable. The cable or port can cause eye exposure beyond the limits of Maximum Permissible Exposure recommended in some areas. For example, this condition can occur during cable testing or under light magnification. Do not remove protective caps or plugs until you are ready to connect the cable.

Use one of the following methods:

- **If using the A0632902 (was A0618443) cable:**
 - a Remove the two protective plugs from the fiber receiver card.
 - b Connect the cable to the fiber receiver card. Make sure the V-shaped groove on the cable connector faces in and the connector seats tightly. See Figure 33 on page 81. The marking (if there is one) on the connector is not visible when connected correctly.
- **If using glass fiber-optic cable:**
 - a Remove the protective plug from the fiber receiver card. Remove the protective cap from the corresponding plug (Tx or Rx) on the glass fiber-optic cable.
 - b Insert the plug in its identified connector on the fiber receiver card.

- c Lock the connector in position by turning it a half turn clockwise. See Figure 34 on page 82.
- d Repeat steps a to c for the second fiber-optic connection

After you connect the fiber-optic cable, wind the excess cable around the spool on the fiber receiver card. Leave enough slack to insert and remove the fiber receiver card from its slot.

Figure 32
Fiber-optic cable (A0632902 shown) connector on the fiber receiver card

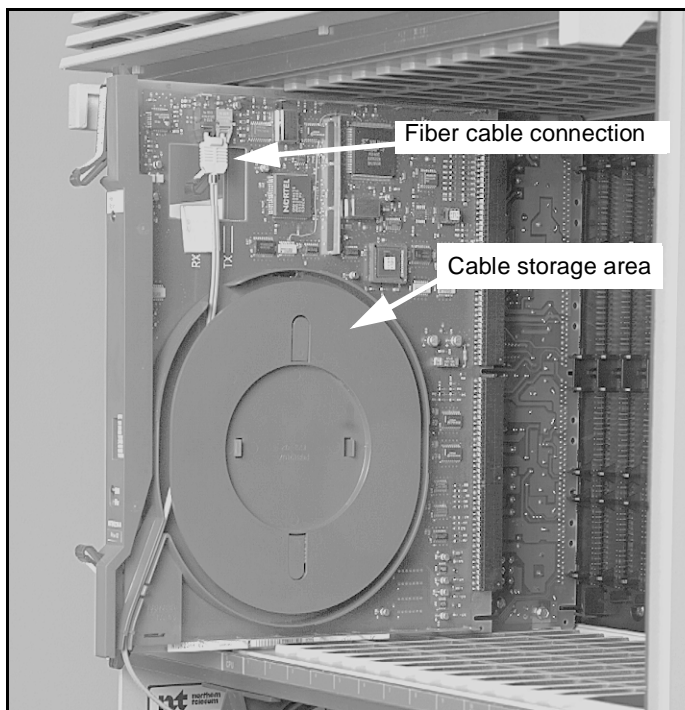


Figure 33
Plastic fiber-optic cable connection

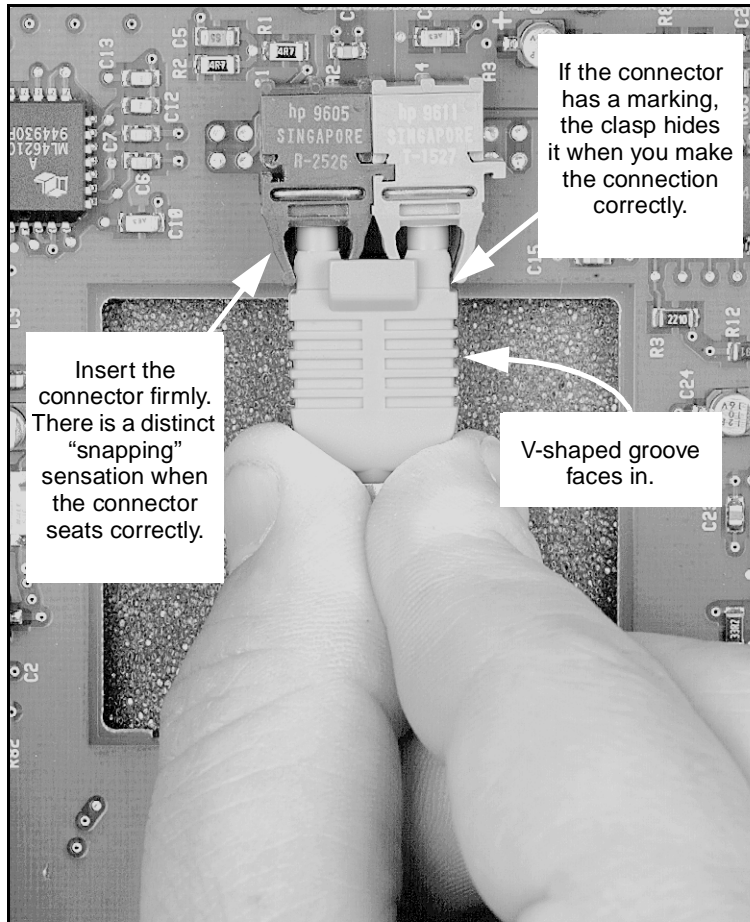
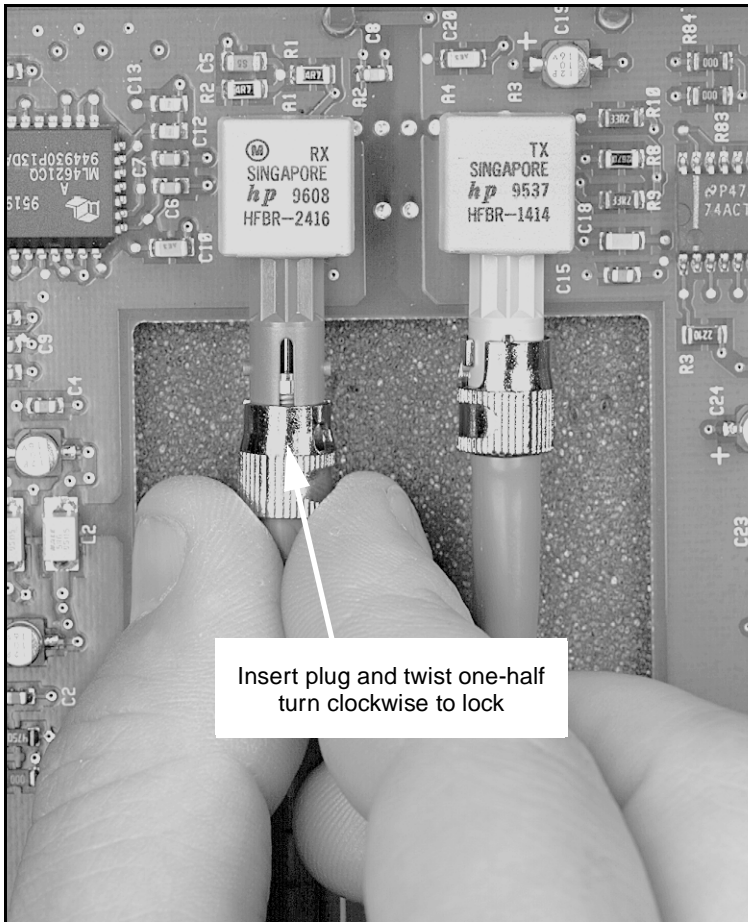


Figure 34
Glass fiber-optic cable connection



- 25** **Install the receiver card in the slot labeled “Fbr Rcvr.”**
Wind the slack fiber-optic cable around the fiber routing guide one time.
- 26** **Remove the NTA04, NTA05, NTDK72, or NTDK78 power supply from the old cabinet and install it in the new expansion cabinet.**
Connect the power cord to the bottom of the power supply unit.
- 27** **Remove any circuit cards that you want to keep from the old expansion cabinet and install them in the corresponding slots in the new cabinet.**

28 Connect the power to the expansion cabinet.

Set the circuit breaker switch on the front of the power supply unit in the cabinet to ON.

If equipped with reserve battery power, set the circuit breaker switch on the reserve battery power unit to ON.

29 Check the fiber-related LEDs on the SSC card.

- The LED for the equipped expansion daughterboard is green.
- If the LED is red (disabled indication):
 - a Load overlay program 135.
 - b Enter **ENL FL1** to enable expansion cabinet 1 (or **ENL FL2** for expansion cabinet 2, if equipped).
- If the LED is yellow (fault indication):
 - a Check all fiber-optic cable to make sure you connected it correctly and it is not damaged.
 - b If the LED remains yellow, refer to the *Option 11C Fault Clearing Guide*.

30 If you need the optional NTDK27 Ethernet cable, connect it to the expansion connector in the main cabinet. See Figure 19 on page 58.

————— *End of Procedure* —————

Restore data because of an upgrade failure

This section explains how to revert back to an Option 11 or Option 11E in the event that the upgrade fails. To revert back, you must insert one of the following back into slot 0 of the main cabinet and reload the system:

- Option 11 NTA01 CPU/Conf card
- Option 11E NTB45 System Core card and the software cartridge

Procedure 6**Revert back to Option 11 or Option 11E**

- 1 Remove all power from the system.**
- 2 Connect the NTA1204 or NTA1205 cable.**
- 3 Remove the NTB20 SSC card from slot 0 in the main cabinet.**

- 4 **Attach the software cartridge to the NTAK01 CPU/Conf card or NTBK45 System Core card, if you removed it before.**
- 5 **Insert the NTAK01 CPU/Conf card or the NTBK45 System Core card in slot 0, and power up the system.**
- 6 **Restore the NTAK1118 SDI cable if your system used it before.**

————— *End of Procedure* —————

Upgrade an Option 11E with fiber-optic cable to Option 11C

This chapter describes how to upgrade an existing two- or three-cabinet Option 11E interconnected with NTBK78 (A0618443 or A0632902) fiber-optic cables.

Summary of items required

You cannot use the existing NTAK12 expansion cabinets used with the Option 11E with the Option 11C. You must replace these cabinets with NTAK11 cabinets. However, you can keep and use the main cabinet, the power supply, and all IPE circuit cards in the new system.

You need the following items to complete this upgrade:

- NTDK20 Small System Controller (SSC) card

Note: You need an NTDK20CA or later version of SSC card if you use dual port expansion daughterboards.
- Security Device
- Keycode Data Sheet
- One of the following to extract the customer data from the existing system:
 - personal computer (PC) equipped with XModem CRC software to run the X11 CCBR feature
 - Database Upgrade Tool (extracts data from the cartridge)

Note: The PC can be on-site or located remotely.
- NTAK11 cabinet for each existing NTAK12 expansion cabinet

- fiber routing guide for each cabinet
- NTDK22 Single Port or NTDK84 Dual Port Fiber Expansion Daughterboard
- NTDK79 Single Port or NTDK85 Dual Port Fiber Expansion Daughterboard

If the expansion cabinet is within 10 m (33 ft) of the main cabinet, use one of the following Fiber Expansion Daughterboards:

- NTDK22
- NTDK84

If you move the expansion cabinet up to 3 km (1.8 mi) from the main cabinet, use one of the following Fiber Expansion Daughterboards:

- NTDK24 (Multimode)
- NTDK79 (Single Mode)
- NTDK85 (Dual Port)

- NTDK23 Fiber Receiver card

If the expansion cabinet is within 10 m (33 ft) of the main cabinet, use an NTDK23 Fiber Receiver card. If you move the expansion cabinet up to 3 km (1.8 mi) from the main cabinet, use one of the following fiber receiver cards:

- NTDK25 (Multimode)
- NTDK80 (Single Mode)

- A0632902 (was A0618443) Fiber-optic cable (only required with the NTDK22)

Use this cable only with the NTDK22 or NTDK84 daughterboard for distances up to 10 m (33 ft). You need a duplex glass fiber-optic cable from a local provider for distances up to 3 km (1.8 mi).

- Software Daughterboard

You need Release 24 or later software if you are installing dual port expansion daughterboards as part of the upgrade.

- NTDK27 Ethernet cable (optional)
- NTAK1118 Single Port SDI cable for each expansion cabinet (optional).

Upgrade to Option 11C

This section gives a summary of the upgrade steps and the upgrade procedure.

Summary of steps

The following list reviews the steps to follow to upgrade a two- or three-cabinet Option 11E to Option 11C:

- 1 Perform a data dump (EDD) on the existing system.
- 2 Extract the customer data from the existing system using the CCBR feature (unless you are using the Database Upgrade Tool).
- 3 Disconnect the NTBK78 cable from the main cabinet.
- 4 Install the NTDK20 Small System Controller (SSC) card with Fiber Expansion Daughterboard.
- 5 Load the new system software and customer data in the system.
- 6 Replace the existing expansion cabinets with an NTAK11 cabinets.
- 7 Connect the expansion cabinet to the main cabinet.

Expansion cabinets and other additional equipment

This chapter does not describe the installation of additional expansion cabinets or of additional equipment, such as line cards. If you plan to add expansion cabinets or other equipment as part of the upgrade, complete the upgrade as described in this chapter first. Then, refer to the *Option 11C Planning and Installation Guide (553-3021-210)* for information about adding equipment to an existing Option 11C system.

Upgrade procedure

Procedure 7 on page 88 describes how to upgrade a two- or three-cabinet Option 11 or Option 11E to Option 11C with fiber-optic cabinet interconnection.

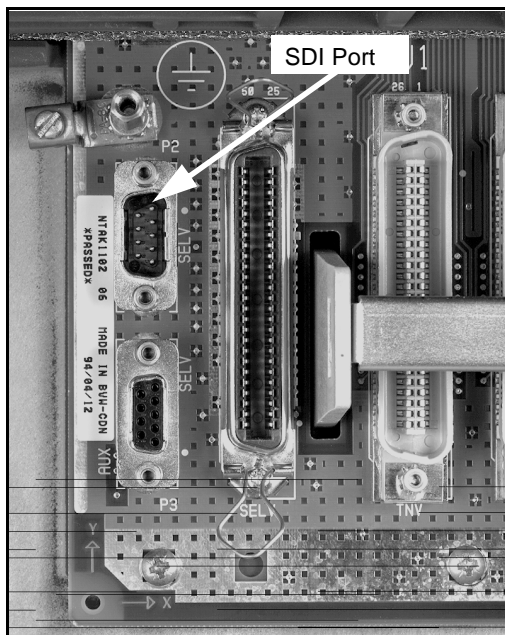
Procedure 7
Upgrade Option 11E to Option 11C

- 1 Connect a TTY terminal to SDI Port 0 of the existing system.

CAUTION

The TTY terminal must connect to SDI Port 0 to access the Software Installation Program later in this procedure. See Figure 35 on page 88.

Figure 35
SDI Port 0



2 Log in to the system and perform a data dump on the existing system.

You must do this step to make sure you back up any changes made after the last data dump. This step is a precautionary measure. If the upgrade fails, you can revert to the earlier system.

- a** Load overlay program 43 (LD 43).
- b** Enter command **EDD**.
- c** After the data dump finishes, exit LD 43 by entering *******.

3 Load overlay program 22 (LD 22) and print the ISM parameters. Make a note of the existing parameters.

Type **SLT** at the REQ prompt and press <CR> to print the ISM parameters. The ISM parameters are also on the existing software cartridge.

4 Do one of the following to extract the customer data from the existing system:

- If you are using the Database Upgrade Tool, ignore this step and go to Step 5 on page 89.
- If you are using the CCBR feature and a PC, perform the following steps.
 - a** Log in to the existing Option 11.
 - b** Load overlay program 43 (LD 43) and enter **XBK** to start a configuration data backup.
 - c** At the INFO prompt, enter a name for the file (up to 128 characters).
 - d** After the backup finishes, enter **XVR** to check the backed up data.
 - e** Exit LD 43 by entering *******.

Note: Refer to the *Option 11 Customer Configuration Backup and Restore Guide* for details about the CCBR feature.

5 Disconnect the power from the main and expansion cabinets.

Set the circuit breaker switch on the front of the power supply unit in each cabinet to OFF.

If equipped with reserve battery power, set the circuit breaker switch inside the reserve battery power units to OFF.

- 6 Disconnect the NTAk78 fiber-optic cables from the MFI unit in the main cabinet (one for each expansion cabinet).**

Note: Do not remove this cable. You need it for the new expansion cabinet.

- 7 Disconnect the NTBk62 fiber power cable from the following units:**

- MFI unit
- cable to the battery backup unit (if there is one)
- the power supply unit (under the unit)

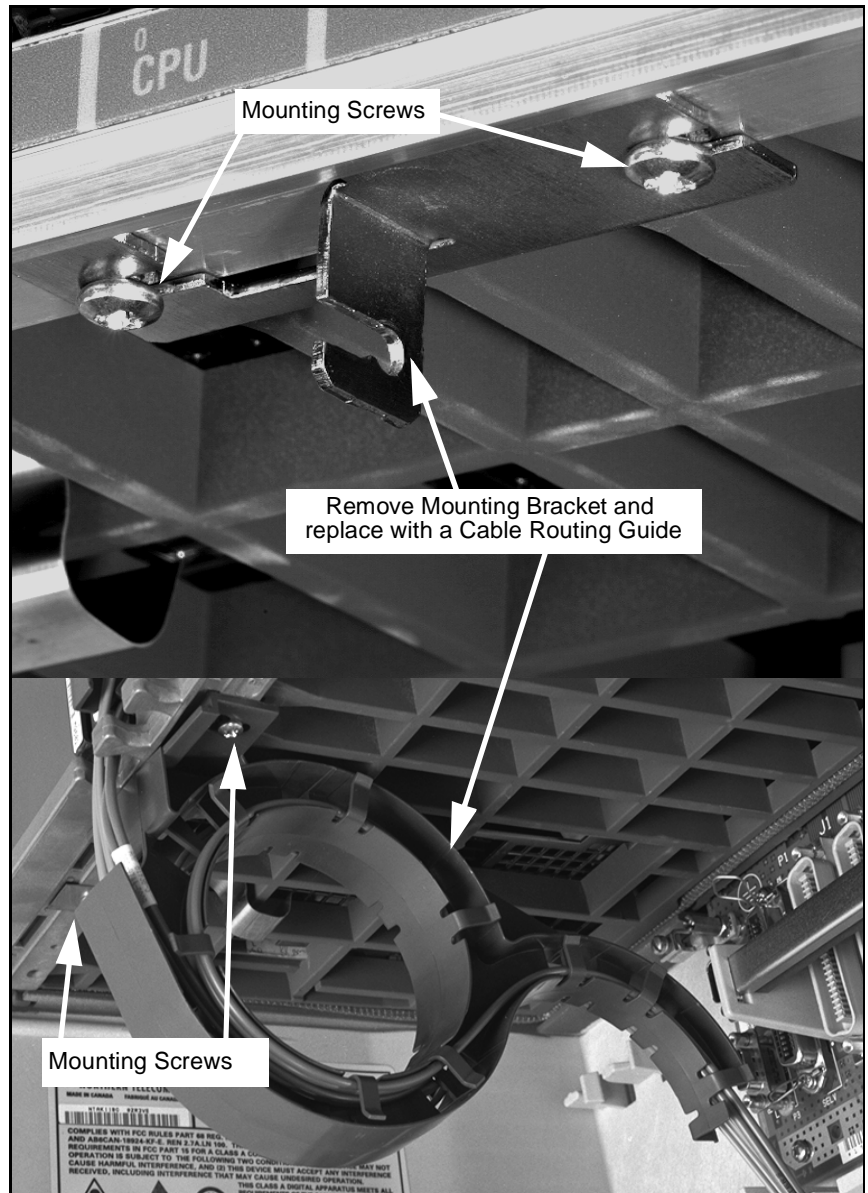
- 8 If the cabinet has battery backup, connect the cable from the battery backup unit directly to the connector on the bottom of the power supply unit.**

- 9 Remove the MFI from the cabinet.**

- 10 Loosen the screws holding the MFI mounting bracket and remove the bracket (see Figure 36 on page 91).**

- 11 Install a cable routing guide in the location left empty by the MFI mounting bracket. Tighten the screws. See Figure 36 on page 91.**

Figure 36
Cable Routing Guide



12 Remove the NTB45 System Core card from the main cabinet.

- 13 **Set the baud rate switches on the new NTDK20 SSC card to match the settings on the card you removed. (The removed card is a NTBK45 System Core card.)**
- 14 **Install the Software Daughterboard and the Security Device on the NTDK20 SSC card as shown in Figure 38 on page 95.**

CAUTION

The NTDK20 SSC card has components on both sides of the circuit board. Be careful not to damage any of the components when handling the card.

- 15 **Install one or two Fiber Expansion Daughterboards on the NTDK20 SSC card as required (see Figure 38 on page 95).**

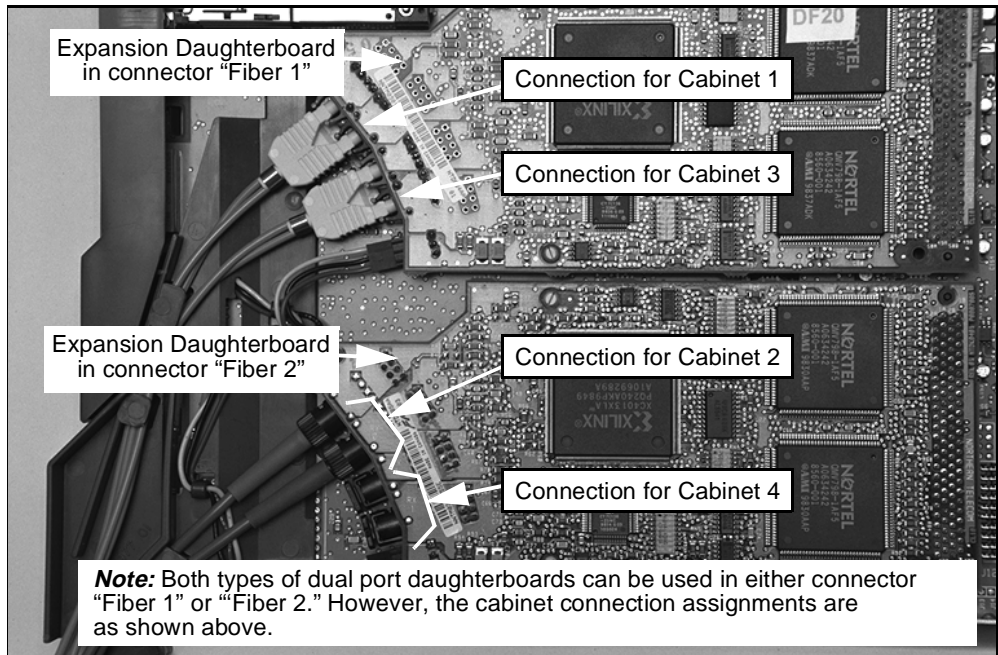
One single port expansion daughterboard can connect to one expansion cabinet.

One dual port expansion daughterboard can connect to two expansion cabinets.

When you use single port expansion daughterboards, connect the daughterboard in connector "Fiber 1" to expansion cabinet 1. Connect the daughterboard in connector "Fiber 2" to expansion cabinet 2.

When you use dual port expansion daughterboards, connect the daughterboard in connector "Fiber 1" to cabinet 1 (top connection on the daughterboard) and cabinet 3 (bottom connection). Connect the daughterboard in connector "Fiber 2" to cabinet 2 (top connection on the daughterboard) and cabinet 4 (bottom connection on the daughterboard). See Figure 37 on page 93.

Figure 37
Cabinet assignments on dual port daughterboards



Note: Figure 37 shows both types of daughterboards.

When upgrading a system with two expansion cabinets (three-cabinet system), check the following:

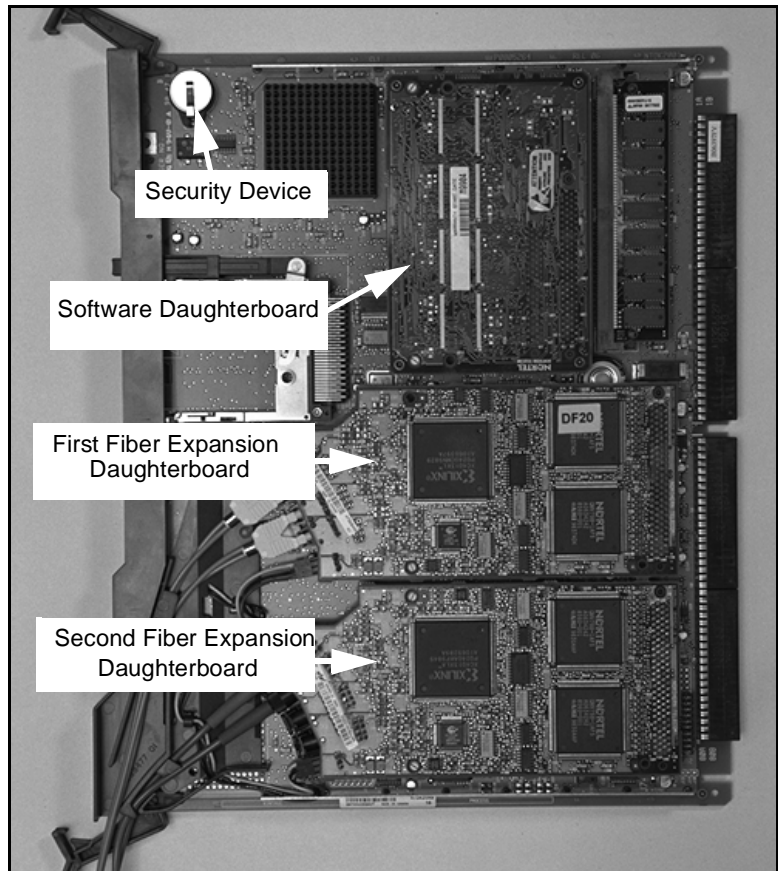
- If you use **single port expansion daughterboards**, connect existing expansion cabinet 1 to the daughterboard in connector "Fiber 1" and cabinet 2 to the daughterboard in connector "Fiber 2."
- If you use **two dual port expansion daughterboards**, connect existing expansion cabinet 1 to the top connection on the daughterboard in connector "Fiber 1." Connect cabinet 2 to the top connection on the daughterboard in connector "Fiber 2."
- If you use **one dual port expansion daughterboard**, connect existing expansion cabinet 1 to the top connection on the daughterboard in connector "Fiber 1." Connect cabinet 2 to the bottom connection on the same daughterboard. The existing

cabinet 2 becomes cabinet 3. You must reassign the services that slots 21 to 30 provided to slots 31 to 40 in the upgraded system.

- **If you use one dual-port and one single-port expansion daughterboard**, replace the single port daughterboard in connector “Fiber 1” with a dual port expansion daughterboard. Connect the existing expansion cabinet 1 to the top connection in the dual port daughterboard. Leave existing connection for expansion cabinet 2 connected to the single port daughterboard in connector “Fiber 2.”

Note: If you plan to add additional expansion cabinets, install a second expansion daughterboard now (if you need it) to the connector labeled “Fiber 2.” Doing this step now prevents additional downtime later. Refer to the *Option 11C Planning and Installation Guide (553-3021-210)* for detailed information about adding expansion cabinets to existing Option 11C systems.

Figure 38
NTDK20 SSC card



- 16 Connect each fiber-optic cable to the connector on the Fiber Expansion Daughterboard, as shown in Figure 39 on page 97.**

WARNING

Use of the fiber-optic interface product in Option 11C is considered safe. However, as a precaution, do not look directly at the optical port or the end of fiber-optic cable. The cable or port can cause eye exposure beyond the limits of Maximum Permissible Exposure recommended in some areas. For example, this condition can occur during cable testing or under light magnification. Do not remove protective caps or plugs until you are ready to connect the cable.

Use one of the following methods:

- **If using the NTBK78 (A0618443 or A0632902) cable:**
 - a** Remove the two protective plugs from the Fiber Expansion Daughterboard.
 - b** Connect the cable to the Fiber Expansion Daughterboard. Make sure the V-shaped groove on the cable connector faces outward and the connector seats completely. The marking (if there is one) on the connector is not visible when you make the connection correctly. See Figure 40 on page 98.
- **If using glass fiber-optic cable:**
 - a** Remove the protective plug from the Fiber Expansion Daughterboard. Remove the protective cap from the corresponding plug (Tx or Rx) on the glass fiber-optic cable.
 - b** Insert the plug in its assigned connector on the daughterboard.
 - c** Lock the connector in position by turning it a half turn clockwise. See Figure 41 on page 99.
 - d** Repeat these steps for the second fiber-optic connection.
- **If using a glass fiber extension:**

Connect the extension from the daughterboard to the main fiber-optic cable. Make sure you do not interchange the transmit and receive leads.

Figure 39
Fiber-optic cable connections

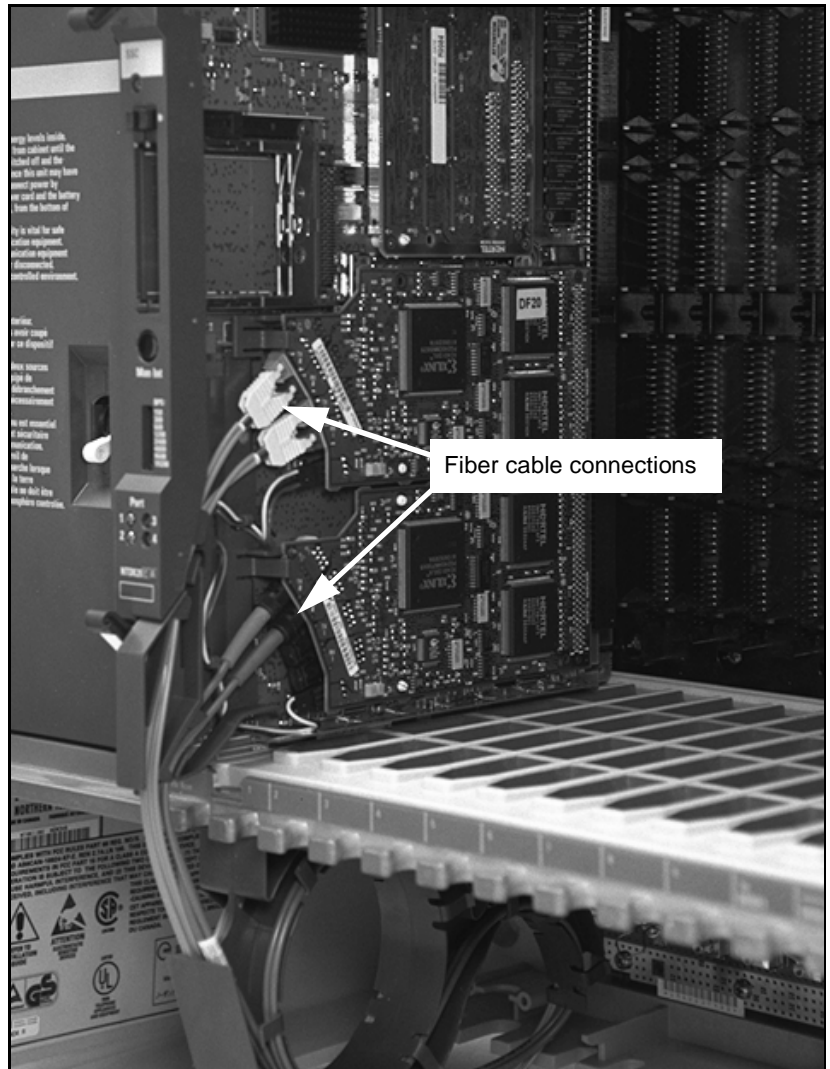


Figure 40
Plastic Fiber-optic Cable Connection

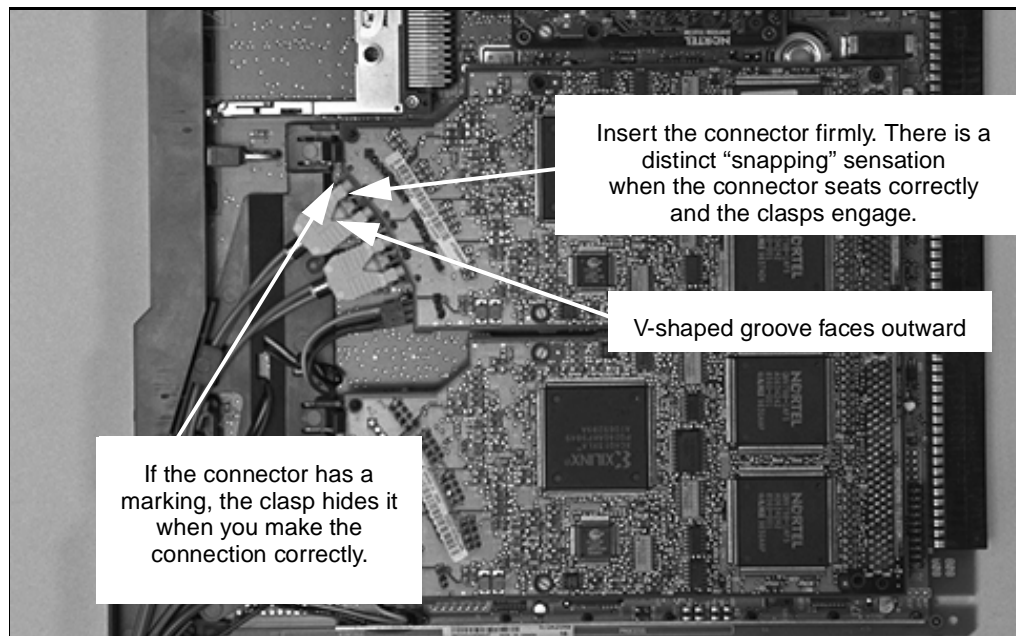
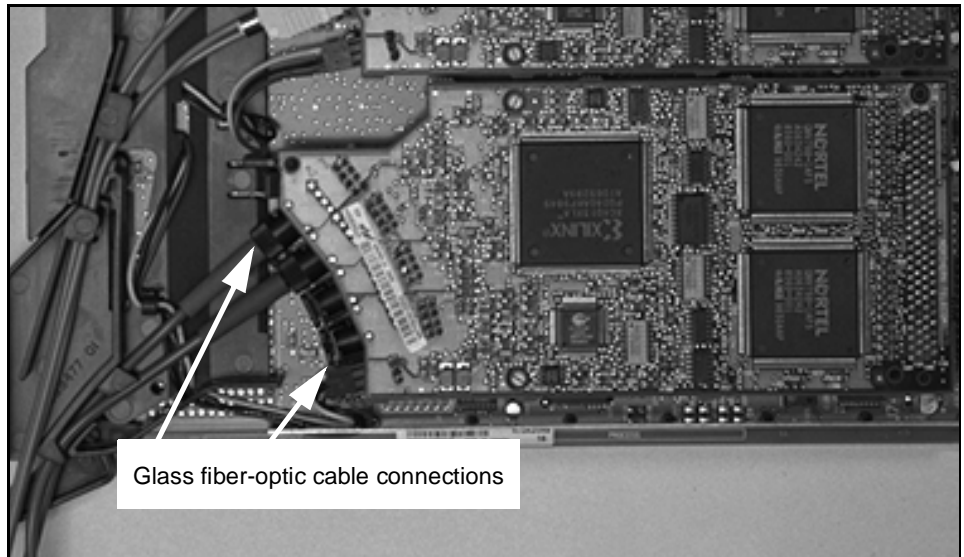


Figure 41
Glass fiber-optic cable connection



17 Route each fiber-optic cable through the fiber routing guide.

Use an NTBK78 (A0632902) 10 m fiber-optic cable to connect the main cabinet to an expansion cabinet located within 10 m (33 ft).

You need a glass fiber-optic cable to connect an expansion cabinet located up to 3 km (1.8 mi) from the main cabinet. A local facilities provider can supply and install glass fiber-optic cable.

Note: Do not staple or twist fiber-optic cable. Do not bend it beyond a minimum 35 mm bend radius (90° soft bend).

18 Install the new NTDK20 SSC card in the slot left empty by the NTBK45 card (Slot 0).

Store the excess fiber-optic cable on the fiber routing guide.

19 Do one of the following to extract the customer database from the existing system:

- If you are not using the Database Upgrade Tool, skip this step and go to Step 20 on page 100.
- If you are using the Database Upgrade Tool, install the software cartridge from the existing system to the Database Upgrade Tool.
 - a Remove the software cartridge from the existing NTB45 System Core card.
 - b Connect the Option 11E software cartridge to the connector on the Database Upgrade Tool.
 - c Position the software cartridge on the Database Upgrade Tool towards the left. Insert the Database Upgrade Tool in slot B of the PCMCIA socket located in the faceplate of the NTDK20 SSC card.

20 Connect the power to the main cabinet.

Set the circuit breaker switch on the front of the power supply unit in the cabinet to ON.

If equipped with reserve battery power, set the circuit breaker switch on the reserve battery power unit to ON.

21 Observe the terminal screen.

When you power up, the Software Installation Program automatically starts.

Note: This program is menu-driven allowing the easy installation of software and customer databases in the Option 11C. It is clear and direct and includes a Help facility to help you make correct selections. However, if you need more detailed information, refer to "Upgrade the software" on page 146.

The following is a summary of the steps described in "Upgrade the software" on page 146:

- a If the system prompts you, enter the system time and date. Skip this step if the Software Installation Main Menu appears instead.

Note: The system time and date prompt appears when the Software Installation Program detects a system year date that is not in the range of 1995 to 2095.

- b Do one of the following to select the type of upgrade:
 - If using the Software Delivery (PCMCIA) card:

- i Select **System Upgrade** from the Software Installation Main Menu.
- ii Select **Option 11/11E to Option 11C** from the "Select type of upgrade to be performed" menu.
- If you are using the Software Daughterboard, select **New System Installation or Option 11/11E Upgrade - From Software Daughterboard**.
- c Select the feature set to be enabled from the "Select Feature Set You Wish to Enable" menu.

Note: The items you select in steps c, d, f, g and h must match the one provided with keycode data sheet.

- d Select feature package numbers to add, if any.
Enter package numbers. Press <CR> twice to end package selection.
- e Select the database source.
Select one of the following from the "Select Option 11/11E Database Source" list:
 - Select **CCBR Restore file** if you extracted the customer database using the CCBR feature. When you select this option, you access the Data Transfer mode. You begin the data restoration and upgrade process by pressing <CR> when prompted to do so.
 - Select **Option 11/11E Software Cartridge** if you are using the Database Upgrade Tool to extract the customer database from the existing software cartridge.
- f Select the ISM parameters.
Compare the ISM parameters with those you printed in Step 3. Make any required changes.
- g Define the new AUX ID.
The default AUX ID is the security ID provided with the Option 11C. You must replace it with the previous Option 11 or Option 11E site ID.
- h Confirm the information entered and enter the validation keycodes.

The terminal displays a new installation information summary. Make any necessary changes to the information. Enter the keycodes.

- i Complete the software installation when prompted.

22 Wait for the software installation to finish.

CAUTION

If for any reason you must terminate the upgrade and revert back to the original Option 11E, terminate now (see Procedure 8 on page 111). The remaining steps of this procedure require major equipment changes, making it difficult to revert back.

23 If you installed it, remove the Database Upgrade Tool from the PCMCIA socket on the faceplate of the SSC card.

24 Load overlay program 43 (LD 43) and perform a data dump.

25 Disconnect the power connection from under the NTAK04, NTAK05, NTDK72, or NTDK78 power supply unit in each expansion cabinet.

26 Tag and disconnect all cables from connectors J11 through J20 in the first expansion cabinet. If there is a second expansion cabinet, do the same for that cabinet.

Tag the cables J11, J12, J13, . . . , J20 for the first expansion cabinet and J21, J22, . . . , J30 for the second cabinet.

27 Disconnect the NTBK78 (A0618443 or A0632902) fiber-optic cable from EFI units in the expansion cabinets.

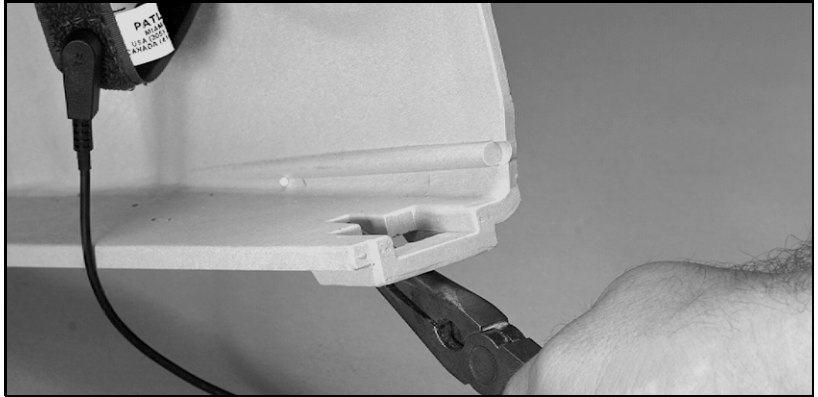
28 Remove the expansion cabinets from the wall (or pedestal).

Put the cabinets to the side.

29 Install the new NTAK11 cabinets on the wall (or pedestal).

If you plan to install the cabinet on a pedestal, first remove the door hinge opening tabs on each side of the cabinet. Use a pair of pliers, as shown in Figure 42 on page 103.

Figure 42
Door hinge opening



- 30 Install a fiber routing guide in each expansion cabinet under slot 0 (Fbr Rx), as shown in Figure 43 on page 107.
- 31 Connect all the cables that you labeled and disconnected from the old cabinets in Step 26 on page 102.

Note: The connectors in the main and expansion cabinets for cables going to the cross-connect terminal have numbers J1 to J10 (instead of J11 to J20 in the old expansion cabinets).

When upgrading a system with two expansion cabinets (three-cabinet system) make sure of the following:

- If you use a **single port expansion daughterboard**, connect existing expansion cabinet 1 to the daughterboard in connector “Fiber 1” and cabinet 2 to the daughterboard in connector “Fiber 2.” Make sure you have labeled and connected the cables, as shown in Table 3.
- If you use **two dual port expansion daughterboards**, connect the first expansion cabinet 1 to the top connection on the daughterboard in connector “Fiber 1.” Connect cabinet 2 to the top connection on the daughterboard in connector “Fiber 2.” Make sure you have labeled and connected the cables from the expansion cabinets as shown in Table 3 on page 104
- If you use **one dual port expansion daughterboard**, connect the first expansion cabinet 1 to the top connection on the daughterboard in connector “Fiber 1.” Connect cabinet 2 (the existing expansion cabinet) to the bottom connection on the

daughterboard in connector “Fiber 2.” The existing cabinet 2 becomes cabinet 3.

Table 3
Labeled cable connections — main and expansion cabinet 2

| Expansion Cabinet 1 | | Expansion Cabinet 2 | |
|---------------------|----------------------|---------------------|----------------------|
| Label on cable | Connect to connector | Label on cable | Connect to connector |
| J11 | J1 | J21 | J1 |
| J12 | J2 | J22 | J2 |
| J13 | J3 | J23 | J3 |
| J14 | J4 | J24 | J4 |
| J15 | J5 | J25 | J5 |
| J16 | J6 | J26 | J6 |
| J17 | J7 | J27 | J7 |
| J18 | J8 | J28 | J8 |
| J19 | J9 | J29 | J9 |
| J20 | J10 | J30 | J10 |

Label and connect the cables as shown in Table 4

Table 4
Labeled cable connections — Cabinet 2 assigned as Cabinet 3

| Expansion Cabinet 2 assigned as Cabinet 3 | | |
|--|---------------------------------|-------------------------------|
| Current label on cable | Connect to connector | New label on cable |
| J21 | J1 | J31 |
| J22 | J2 | J32 |
| J23 | J3 | J33 |
| J24 | J4 | J34 |
| J25 | J5 | J35 |
| J26 | J6 | J36 |
| J27 | J7 | J37 |
| J28 | J8 | J38 |
| J29 | J9 | J39 |
| J30 | J10 | J40 |

32 Put on the antistatic wrist strap located in the expansion cabinet.

33 Locate the fiber receiver card.

- Is the expansion cabinet within 10 m (33 ft) of the main cabinet and connected with NTBK78 (A0618443 or A0632902) plastic fiber-optic cable? If so, use an NTDK23 Fiber Receiver card.
- Do you want to move up to 3 km (1.8 mi) from the main cabinet? If so, use an NTDK25 (Multimode) or NTDK89 (Single Mode) Fiber Receiver card.

- 34 In each expansion cabinet, connect the fiber-optic cable to the fiber receiver card, as shown in Figure 43 on page 107.**

WARNING

Use of the fiber-optic interface product in Option 11C is considered safe. However, as a precaution, do not look directly at the optical port or the end of fiber-optic cable. The optical port can cause eye exposure beyond the limits of Maximum Permissible Exposure recommended in some areas. For example, this condition can occur during cable testing or under light magnification. Do not remove protective caps or plugs until you are ready to connect the cable.

Use one of the following methods:

- **If you are using the NTBK78 (A0618443 or A0632902) cable:**
 - a Remove the two protective plugs from the fiber receiver card.
 - b Connect the cable to the fiber receiver card. Make sure the V-shaped groove on the cable connector faces in and the connector seats tightly. See Figure 44 on page 108. The marking (if there is one) on the connector is not visible when you make the connection correctly.
- **If you are using glass fiber-optic cable:**
 - a Remove the protective plug from the fiber receiver card. Remove the protective cap from the corresponding plug (Tx or Rx) on the glass fiber-optic cable.
 - b Insert the plug in its assigned connector on the fiber receiver card.
 - c Lock the connector in position by turning it a half turn clockwise. See Figure 45 on page 109.
 - d Repeat steps a to c for the second fiber-optic connection

When connected, wind the excess fiber-optic cable around the spool on the fiber receiver card. Leave enough slack to insert and remove the fiber receiver card from its slot.

Figure 43
Receiver card and fiber connection

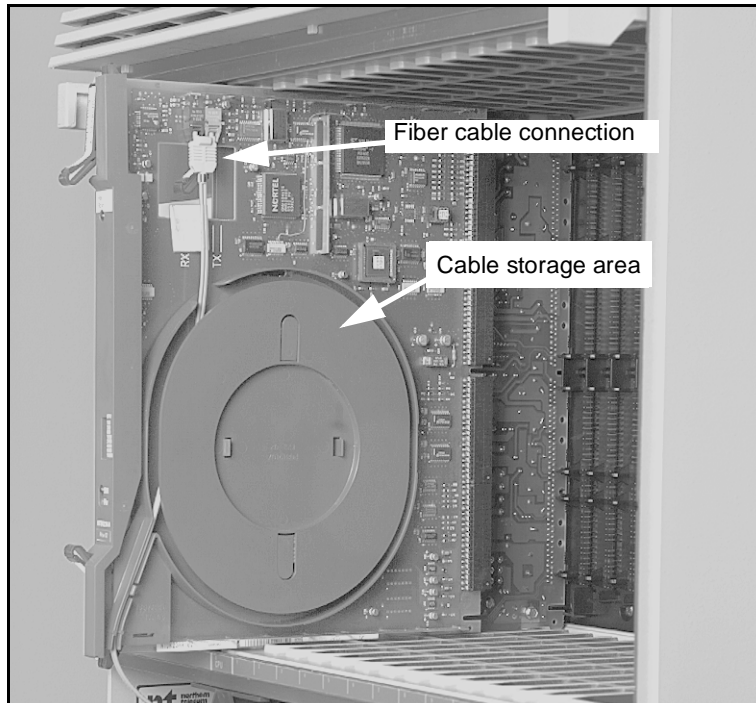


Figure 44
Plastic fiber-optic cable connection

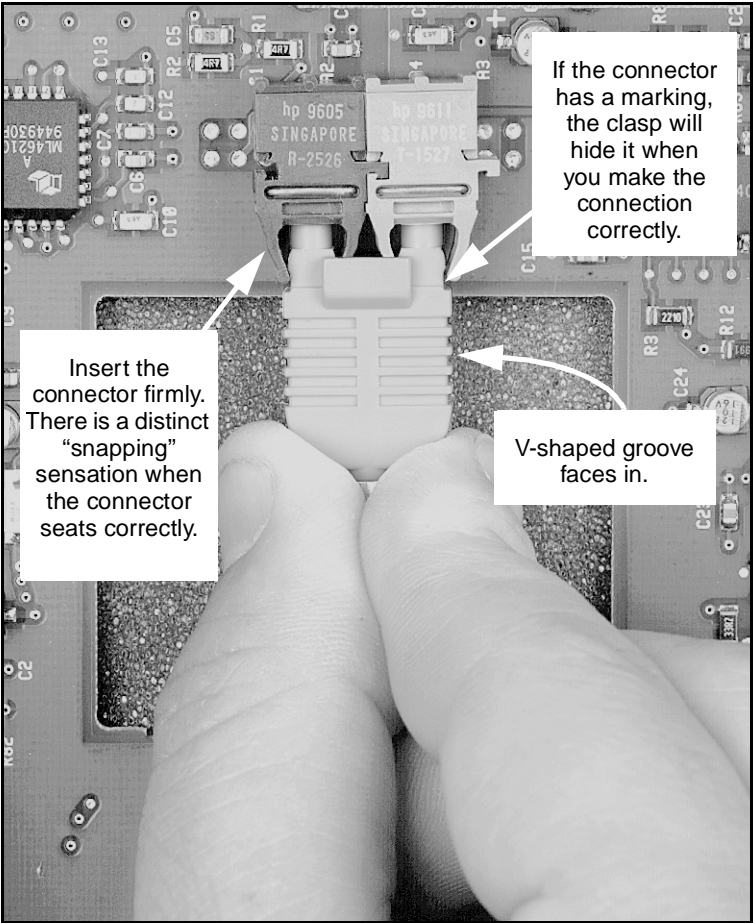
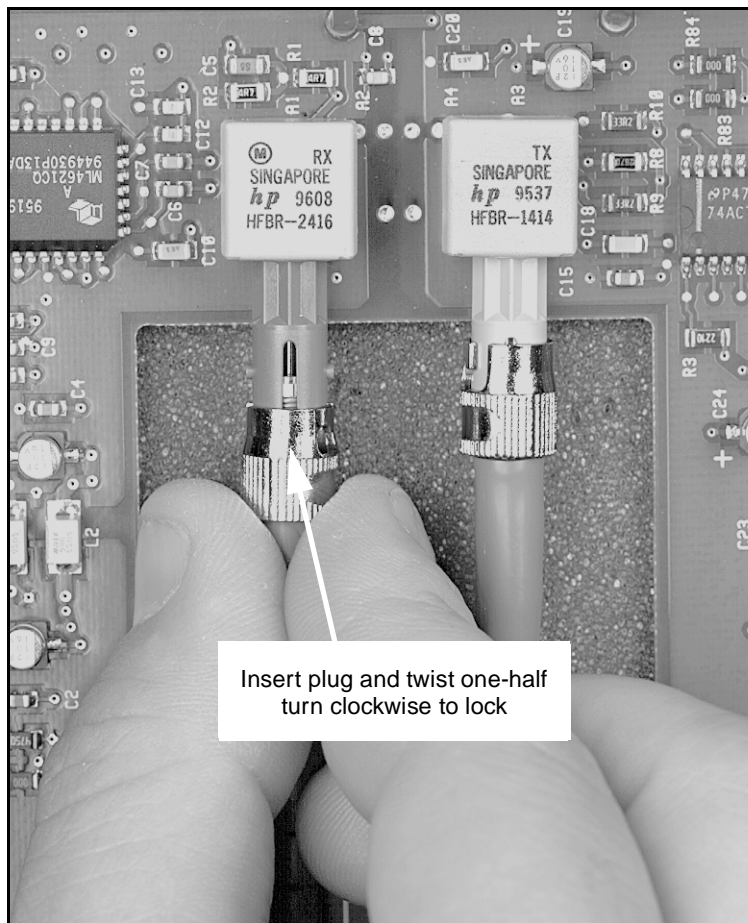


Figure 45
Glass fiber-optic cable connection



- 35** In each expansion cabinet, install the fiber receiver card in the slot labeled “Fbr Rcvr.”

Wind the slack fiber-optic cable around the fiber routing guide one time.

- 36** Remove the NTAK04, NTAK05, NTDK72, or NTDK78 power supply from the old expansion cabinets and install it in the new expansion cabinets.

Connect the power cord to the bottom of the power supply unit.

37 Remove any circuit cards you want to keep from the old expansion cabinets and install them in the corresponding slots in the new cabinets.

38 Connect the power to the expansion cabinets.

Set the circuit breaker switch on the front of the power supply unit in each cabinet to ON.

If equipped with reserve battery power, set the circuit breaker switch on the reserve battery power unit to ON.

39 Check the fiber-related LEDs on the SSC card.

— The LED for the equipped expansion daughterboard is green.

— If the LED is red (disabled indication):

a Load overlay program 135.

b Enter **ENL FL1** to enable expansion cabinet 1 (or **ENL FL2** for expansion cabinet 2, if equipped).

— If the LED is yellow (fault indication):

a Check all fiber-optic cable. Make sure you connected it correctly and it is not damaged.

b If the LED remains yellow, refer to the *Option 11C Fault Clearing Guide (553-3011-500)*.

40 Change the tone and SDI functions.

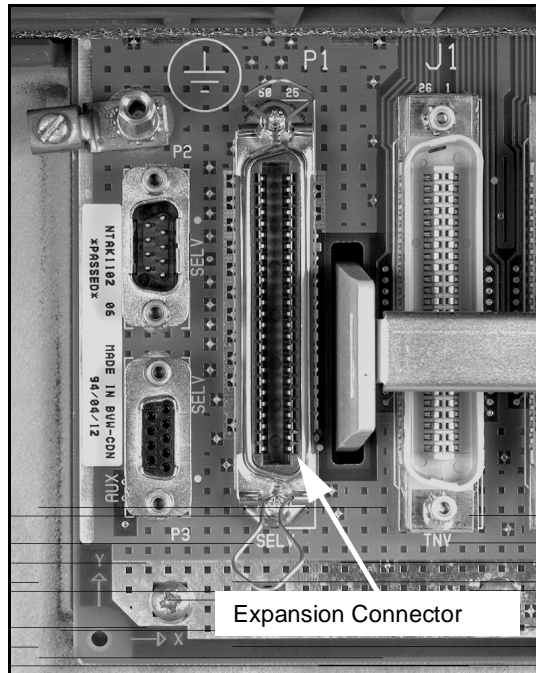
The NTDK20 SSC card joins together many tone functions. Refer to “Assign TDS/DTR, XTD, and SDI functions” on page 131 for more information.

41 Install the single port TTY cable in the expansion cabinet (See Figure 46 on page 111).

42 Connect the NTDK27 Ethernet cable to the expansion connector in the cabinet. See Figure 46 on page 111.)

————— *End of Procedure* —————

Figure 46
Cable connection



Restore data because of an upgrade failure

This section explains how to revert back to an Option 11E if the upgrade fails. To revert back, insert the following back into slot 0 of the main cabinet and reload the system:

- Option 11E NTBK45 System Core card and the software cartridge

Procedure 8

Revert back to Option 11E

- 1 Remove all power from the system.
- 2 Connect the NTBK78 cable.
- 3 Remove the NTDK20 SSC card from slot 0 in the main cabinet.
- 4 Attach the software cartridge to the NTBK45 System Core card.
- 5 Insert the NTBK45 System Core card in slot 0 and power up the system.

----- *End of Procedure* -----

Upgrade cabinet hardware

This chapter describes how to upgrade cabinets to hold dual port expansion daughterboards and 100 BaseT interconnections.

You must upgrade the cabinet when one or more of the following conditions apply:

- You are adding more expansion cabinets to a three cabinet system.
- You need additional space in the cabinet to hold circuit cards with faceplate cables.
- You want to provide the “new look” to an older cabinet.

Summary of items required

To perform this upgrade you need an NTDK18AA Cabinet Upgrade Kit and some tools, described in the following sections.

NTDK18AA Cabinet Upgrade Kit

The NTDK18AA Cabinet Upgrade Kit contains all of the items needed to complete the cabinet upgrade. The kit contains one of each of the following items:

- cabinet door
- grill
- stiffener rail
- label for cabinet number identification
- multiple cable routing guide

- bag of screws
- upgrade instructions

Tools needed

You need the following tools to complete the cabinet upgrade:

- large slot screwdriver
- #2 Posidrive or Phillips screwdriver
- 1/4-inch nut driver

Upgrade the cabinet

The following procedure describes how to upgrade the cabinet.

Procedure 9

Upgrade cabinet hardware

1 Do one of the following:

- If the cabinet you are upgrading is in operation, log in to the system and perform a data dump.

Note: You must do this step to make sure that you back up any changes made after the last data dump.

- a** Load overlay program 43 (LD 43).
- b** Enter command **EDD**.
- c** After the data dump finishes, exit LD 43 by entering ********.

- If the cabinet you are upgrading is not in operation go to Step 2.

2 Remove the door from the cabinet.

3 Remove the drip tray.

4 Disconnect the power from the cabinet.

Set the circuit breaker switch on the front of the power supply unit in the cabinet to OFF.

If equipped with reserve battery power, set the circuit breaker switch inside the reserve battery power unit to OFF.

5 Wait at least five minutes.

WARNING

Wait at least five minutes before continuing with Step 6. Read the important **Caution** on the faceplate of the power supply unit.

6 Disconnect the AC power supply cord and, if equipped, disconnect the DC power supply cord from the power supply unit.

Note: The cords are at the bottom of the power supply unit, as shown in Figure 48 on page 116.

7 Attach the antistatic wrist strap, provided at the bottom of the cabinet, to your wrist.

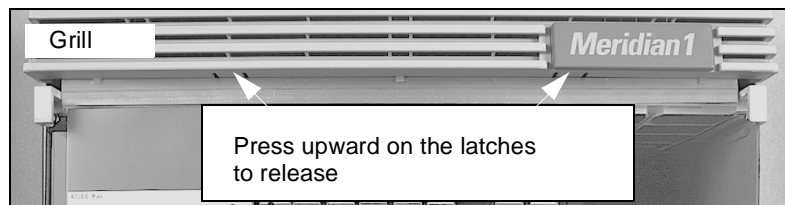
CAUTION

Static electricity can damage circuit cards. Wear an antistatic wrist strap when handling circuit cards or any of their components.

8 Remove the power supply unit from the cabinet.

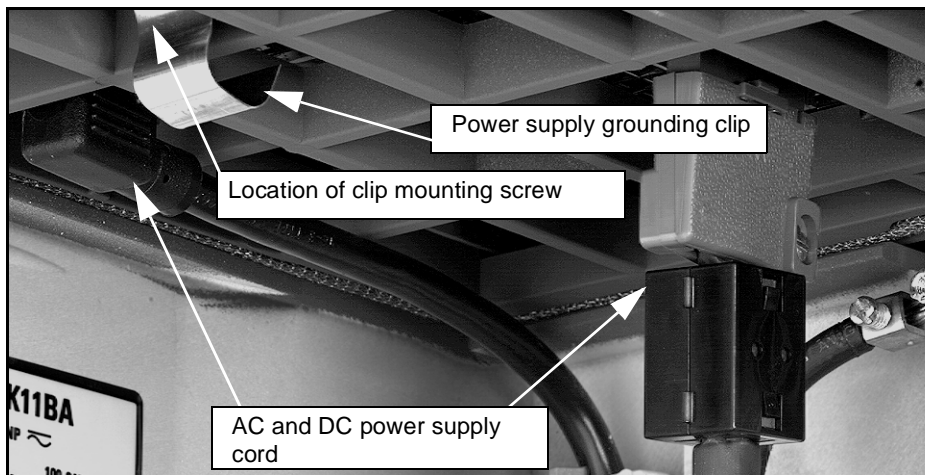
9 With a large slot screwdriver, carefully pry the latches on the grill at the top of the cabinet (Figure 47) until the latches release. Lift the grill up to remove it and replace with the new grill.

Figure 47
Location of latches on top grill



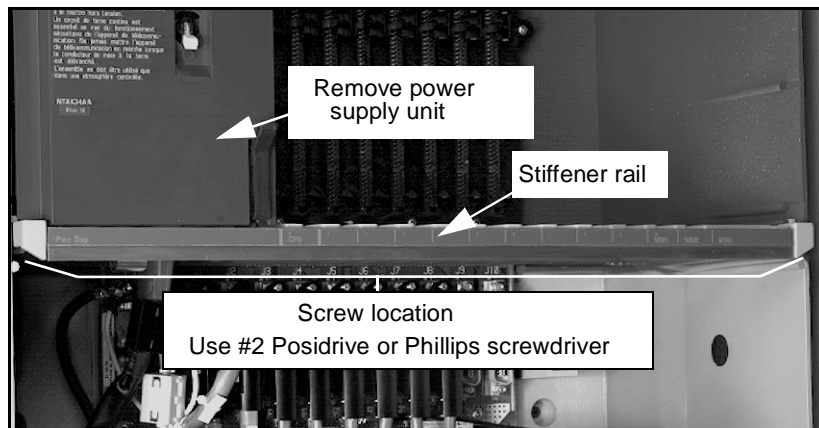
- 10 **Remove the grounding clip from the stiffener rail.**
 - a Note the location and placing of the power supply grounding clip located below the power supply unit (see Figure 48).
 - b With a 1/4-inch nut driver (or possibly a #2 Posidrive or Phillips screwdriver), remove the grounding clip from the stiffener rail (see Figure 48).

Figure 48
Location of power supply cords and grounding clip



- 11 **With the #2 Posidrive screwdriver (or #2 Phillips screwdriver), remove the remaining screws holding the stiffener rail to the shelf. Remove the rail (see Figure 49).**

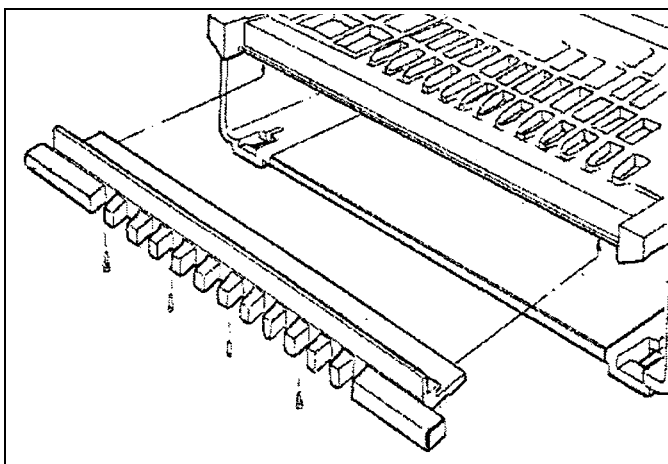
Figure 49
Location of Stiffener Rail



- 12** Install the new stiffener rail with the removed screws or with the screws supplied in the upgrade kit (see Figure 50).

Install the center screw first (the hole for the center screw is round, while the remaining screw holes are slots).

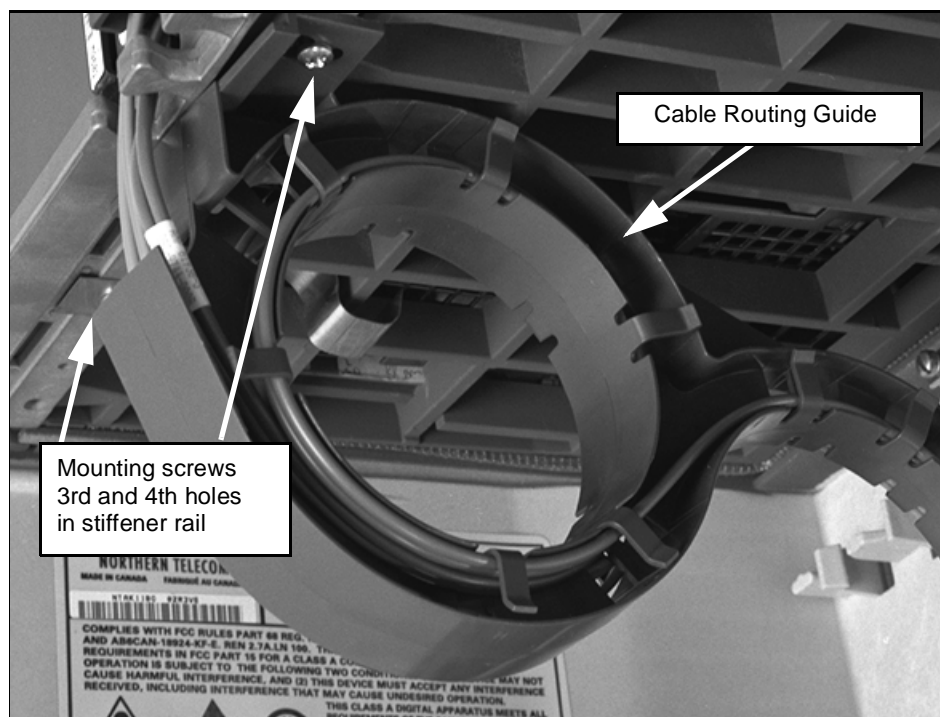
Figure 50
New Stiffener Rail



- Note:** Make sure you position the grounding clip so that it comes in contact with the bottom of the power supply unit.

- You install the routing guide with the third and fourth rail stiffener mounting screws (see Figure 51).

Figure 51
Cable Routing Guide (shown with cables)



- The upgrade kit provides additional screws.

18 Connect the power supply cords (Figure 48 on page 116).

19 Connect the power to the cabinet.

Set the circuit breaker switch on the front of the power supply unit in the cabinet to ON.

If equipped with reserve battery power, set the circuit breaker switch on the reserve battery power unit to ON.

The system will SYSLOAD and return to normal.

20 Install the new door on the cabinet.

————— *End of Procedure* —————

Upgrade the NTDK20AB SSC to NTDK20EA or later

Procedure 10 on page 123 describes how to upgrade an NTDK20AB SSC card to an NTDK20EA and later, using the NTDK19AA SSC Upgrade Kit. The NTDK20EA SSC card is required to hold dual port expansion daughterboards.

Note: The NTDK20EA and later SSC card supports both single port and dual port expansion daughterboards.

General information you need to know

This section covers general information you need to know for this upgrade.

How to identify an upgraded NTDK20 SSC

To identify if an SSC card is an upgraded card, look for the letters “EA” in the product code. These letters indicate that the SSC card is an upgraded card.

Example: An NTDK20AB SSC becomes an NTDK20EA after the upgrade process. The new equivalent is the NTDK20DA.

Boot Code

The updated boot code on the NTDK20EA SSC card can support single port and dual port expansion daughterboards and the NTDK21, NTDK81, and NTDK13 Software Flash Daughterboards.

Part of the procedure on page 123 is updating the boot code. Also, refer to “Use the flash boot ROM utility” on page 211.

Note: It is important that the boot code on the NTDK20EA SSC be at least NTDK34FA Release 01 or later. Check and update the boot code at the start of the procedure on page 123.

How to handle circuit cards

To prevent damaging circuit cards, always handle them as follows:

- Wear an antistatic wrist strap before handling circuit cards. The bottom of each Option 11C cabinet has an antistatic wrist strap.
- Put the card on an antistatic pad to perform the upgrade.
- Handle cards by the card stiffeners and edges only. Do not touch the contact points or components.
- Remove cards from the packaging or handle cards away from electric motors, transformers, or like equipment.
- Store cards in protective packing. Do not stack cards on top of each other, unless they are in packaging.
- Store cards in a dry area that is free of dust.

Summary of items required

You need an NTDK19AA SSC Upgrade Kit and some tools, listed in the following sections.

NTDK19AA SSC Upgrade Kit

The NTDK19AA SSC Upgrade Kit contains the items needed to complete the SSC upgrade. The kit contains the following items:

- one faceplate assembly
- one LED cable assembly
- three plastic rivets
- one 16 M SIMM
- one Label Kit, Upgrade Release Number
- one set of upgrade instructions

Tools needed

The only tool needed to complete the SSC upgrade is a pair of needle- or long-nosed pliers.

Upgrade the SSC

The following procedure describes how to upgrade the SSC to NTDK20EA.

Procedure 10

Upgrade an NTDK20AB SSC to an NTDK20EA

1 Do one of the following:

- If the NTDK20 SSC you are upgrading is in an operating Option 11C, start at Step 2.
- If the NTDK20 SSC you are upgrading is not in an operating Option 11C, do the following:
 - a** Make sure you update its boot code before continuing.

Normally, you need an operating system to check and update the boot code on an SSC card. For information about updating the boot code, refer to “Use the flash boot ROM utility” on page 211.
 - b** Attach an antistatic wrist strap to your wrist and go to Step 7.

CAUTION

Static electricity can damage circuit cards. Wear an antistatic wrist strap when handling circuit cards or any of their components. Be careful not to damage any components on the SSC while handling the card.

2 Log in to the system and perform a data dump.

Note: You must do this step to make sure you back up any changes made after the last data dump. This step is a precautionary measure.

- a** Load overlay program 43 (LD 43).
- b** Enter command **EDD**.
- c** Let the data dump finish, then exit LD 43 by entering “****”.

3 Check the boot code version on the NTDK20AB SSC.

The boot code must be at least an NTDK34FA Release 01 or later. If it is not, update it. Refer to “Use the flash boot ROM utility” on page 211 for information about checking and updating the boot code.

4 Disconnect the power from the cabinet.

Set the circuit breaker switch on the front of the power supply unit in the cabinet to OFF.

If equipped with reserve battery power, set the circuit breaker switch inside the reserve battery power unit to OFF.

5 Attach an antistatic wrist strap to your wrist.

An antistatic wrist strap is in the bottom of Option 11 cabinets.

CAUTION

Wear an antistatic wrist strap when handling circuit cards or any of its components. Be careful to not damage any components on the SSC while performing the following steps.

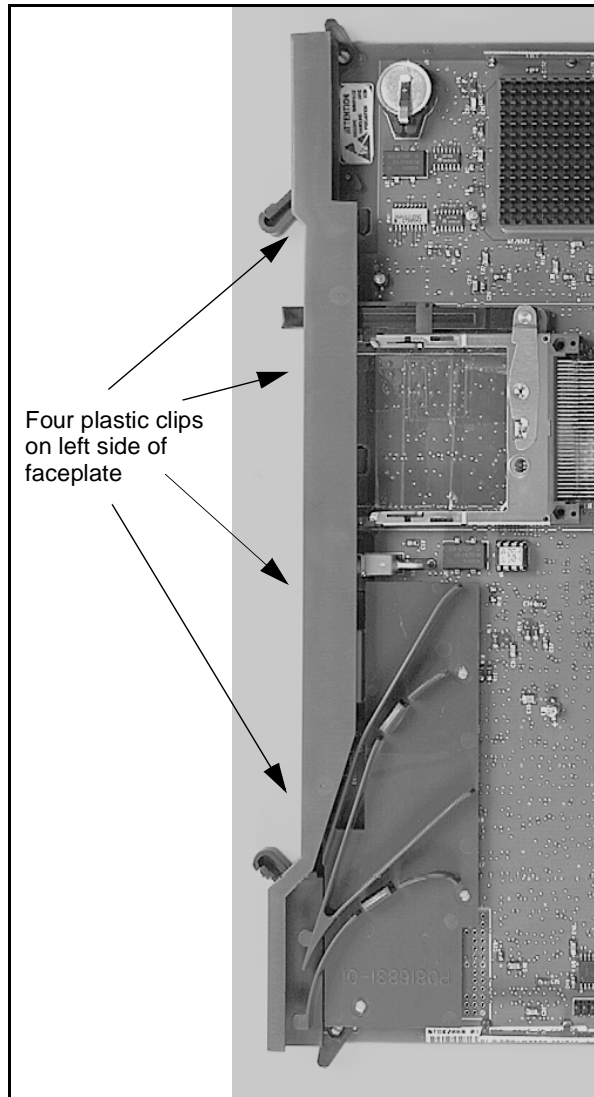
6 Remove the NTDK20 SSC card from the cabinet.

7 Remove any existing Fiber Expansion Daughterboards from the SSC card.

8 Remove the existing faceplate from the NTDK20 SSC.

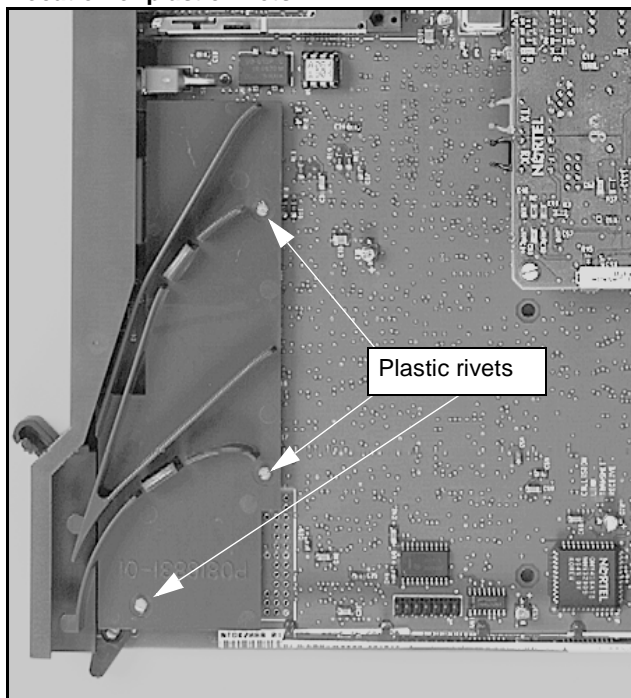
To remove the faceplate, release the four plastic clips fastening the faceplate to the circuit card (see Figure 52). Carefully pull the faceplate forward.

Figure 52
Location of plastic retaining clips



- 9 Remove the three rivets and remove the routing guide (see Figure 53).**
- a** Note the location of the three plastic rivets that hold the on-board fiber routing guide to the circuit card. One end of each rivet has a slot.
 - b** Use needle- or long-nosed pliers to squeeze the end that has a slot. Carefully push the rivet through the hole in the circuit card until it releases.

Figure 53
Location of plastic rivets

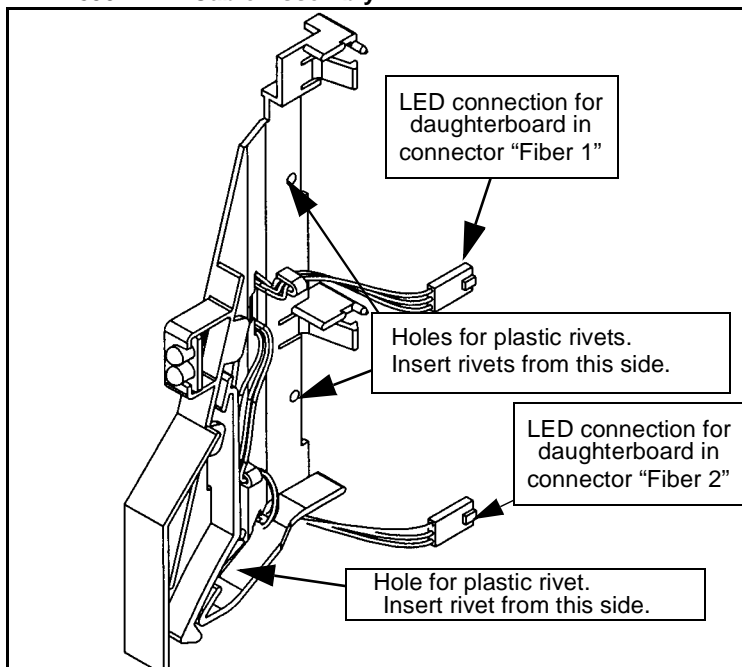


10 Attach the NTDK8302 LED Cable Assembly (Figure 54) in the location left empty by the fiber router.

Use the three plastic rivets supplied with the LED cable assembly.

- a** Install the rivets in the holes in the circuit card you made note of in Step 9. See Figure 54 for the correct location.
- b** Fasten the new router to the circuit card.

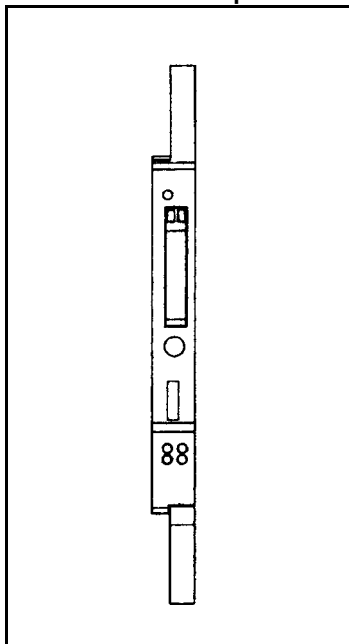
Figure 54
NTDK8302 LED Cable Assembly



11 Install the new faceplate (Figure 55) on the front of the SSC card.

The faceplate snaps into place when it seats correctly. It fastens to the circuit card with four plastic clips like those on the old faceplate.

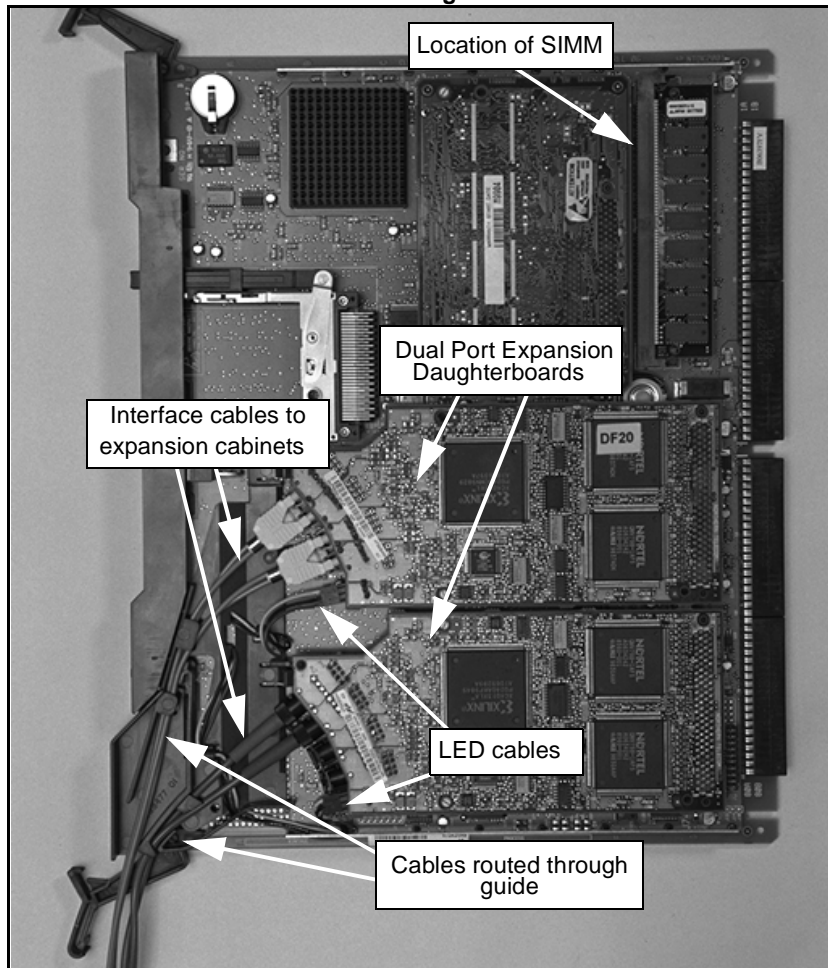
Figure 55
P0891070 SSC Faceplate



- 12 Remove the existing SIMM (see Figure 56 for location of SIMM). Replace it with the 16 M SIMM provided with the upgrade kit.
- 13 Install the expansion daughterboards in their assigned fiber connector on the SSC card. Then connect LED cables see (Figure 54) and interface cables see (Figure 56).

Note: You do not use the LED cables with single port daughterboards.

Figure 56
SSC with cables connected to the daughterboards



- 14 **Attach the appropriate upgrade release label from the Label Kit provided with the Upgrade Kit to the faceplate of the SSC in the space provided.**

Attach the same release number label as the original SSC. For example, if the original SSC was NTDK20AB Release 9, the upgraded SSC becomes NTDK20EA Release 9.
- 15 **Insert the SSC card in its assigned slot in the cabinet and restore power to the system.**

————— *End of Procedure* —————

Assign TDS/DTR, XTD, and SDI functions

This chapter describes how to assign the TDS/DTR, XTD, and SDI functions to the NTDK20 Small System Controller (SSC) card.

Note: This chapter applies when there are tone-related circuit cards remaining in the system.

The NTDK20 SSC card replaces the following cards:

- NTAK01 CPU/Conf card (used in Option 11)
- NTBK45 System Core card (used in Option 11E)

The NTDK20 SSC card can provide the same tone functions as the following cards:

- NTAK03 TDS/DTR
- NT5K20 XTD
- NTAG26 XMFR
- NT5K48 XTD

The NTDK20 SSC card also includes the SDI function.

After you upgrade the system to Option 11C, you can change the functions of any remaining TDS/DTR and XTD cards as follows:

- Remove any remaining NTAK03 TDS/DTR, NT5K20 XTD, NT5K21, NTAG26 XMFR, NT5K48 XTD cards and assign their functions to the NTDK20 SSC card.

Note: Minimum version must be NTAK03DA.

- Move some of their functions to the NTDK20 SSC card.
- Assign additional functions to the NTDK20 SSC card.

Summary of procedures

The following procedures are in this chapter. These procedures describe how to change the tone and SDI functions to meet the different requirements of the Option 11C.

- Procedure 11 “Remove the NTAK03 TDS/DTR card” on page 132
- Procedure 12 “Remove the NT5K20/48 XTD card” on page 136
- Procedure 13 “Move TDS/DTR while keeping SDI ports” on page 138
- Procedure 14 “Move SDI ports while keeping TDS/DTR” on page 140
- Procedure 15 “Define TDS/DTR/XTD on the NTDK20 SSC” on page 141
- Procedure 16 “Define SDI ports 1 and 2” on page 143

Remove the NTAK03 TDS/DTR card

Perform this procedure to remove the NTAK03 TDS/DTR card and use the NTDK20 SSC card instead. Changing to the NTDK20 SSC card frees one card slot in the main cabinet.

Note: Perform the steps below in the order indicated. The TDS must be assigned to the SSC card in slot 0 before the DTR units are programmed. In addition, the TDS/DTR card must be disabled before removing the TDS from its card slot.

Procedure 11

Remove the NTAK03 TDS/DTR card

- 1 Print the existing SDI configuration in LD 22.**
Use the PRT request and ADAN or PRT type (depending on software release) to get a printout.
- 2 Disable the TDS/DTR card in LD 34.**
Use the DISX N command where N is the card slot number of the TDS/DTR card.
- 3 Disable SDI ports 1 and 2 in LD 37.**
Use the DIS TTY N command, where N is 1 and 2 (the SDI port number).

4 Configure TDS on the SSC card using LD 17 (shown in Table 5).**Table 5****LD 17 - Configure TDS on SSC card.**

| Prompt | Response | Comments |
|--------|----------|--|
| REQ | CHG | Change. |
| TYPE | CFN | Configuration data block. |
| CEQU | YES | For changes to common equipment |
| TDS | 0 | Tone and Digit switch for the NTDK20 SSC card. |

5 Remove the eight DTR units on the TDS/DTR card using LD 13 (shown in Table 6).

Make sure you remove all eight units.

Table 6**LD 13 - Remove DTR units on the TDS/DTR card.**

| Prompt | Response | Comments |
|--------|----------|--|
| REQ | OUT | Remove information |
| TYPE | DTR | Digitone receivers data block |
| TN | c u | c = card slot of the TDS/DTR card u = 0 to 7 (Repeat until you remove all eight units.) |

6 Configure the eight DTR units on the SSC card using LD 13 (shown in Table 7).

Make sure you configure all eight units.

Table 7**LD 13 - Configure DTR units on the SSC card.**

| Prompt | Response | Comments |
|--------|----------|---|
| REQ | NEW | Add information |
| TYPE | DTR | Digitone Receivers data block |
| TN | c u | c = 0 u = 0 to 7 (Repeat until you configure all eight units.) |

7 Remove the TDS function using LD 17.

To remove the TDS function, follow the instructions in Table 8.

Note: If you do not first disable the TDS in LD 34 (see Step 2 on page 132), this step will fail. This step will also fail if you do not first remove the DTRs from the TDS/DTR slot.

Table 8

LD 17 - Remove TDS.

| Prompt | Response | Comments |
|--------|----------|---|
| REQ | CHG | Change. |
| TYPE | CFN | Configuration data block. |
| CEQU | YES | For changes to common equipment |
| TDS | Xn | n = 1 to 9 (TDS card slot location). Put an X before to remove. |

8 Remove the SDI ports using LD 17 (shown in Table 9).

To remove TTY ports 1 and 2, do the following for each port:

Table 9

LD 17 - Remove SDI ports 1 and 2.

| Prompt | Response | Comments |
|--------|-----------|-------------------|
| REQ | CHG | Change. |
| TYPE | ADAN | Change I/O device |
| ADAN | OUT TTY X | X = 1 X = 2 |

9 Remove the NTAK03 TDS/DTR card from the cabinet.

10 Configure SDI ports 1 and 2 on the SSC card using LD 17 (shown in Table 10).

Refer to the SDI printout you got in Step 1 on page 132.

Table 10**LD 17 - Configure SDI ports 1 and 2.**

| Prompt | Response | Comments |
|--------|--|---|
| REQ | CHG | Change. |
| TYPE | CFN | Configuration data block. |
| ADAN | NEW TTY X | X = 1 X = 2 |
| CDNO | 0 | Card number 0 |
| PORT | X | X = 1 X = 2 |
| DES | aaa...a | AML port identification (can be up to 16 alphanumeric characters) |
| BPS | 150, 300, 600, 1200, 2400, (4800), 9600, 19200 | Bits per second data rate |
| BITL | 5, 6, 7, (8) | Data bit length |
| STOP | (1), 1.5, 2 | Number of stop bits |
| PARY | ODD, EVEN, (NONE) | Parity |
| ENL | (YES), NO | Auto enable SDI port |
| USER | BUG, SCH, MTC | |
| ... | | |

11 Enable the SDI ports in LD 37.

Use the commands "ENL TTY 1" and "ENL TTY 2."

12 Enable the TDS/DTRs on the SSC card using LD 34.

Use the "ENLX 0" command.

13 Perform an EDD backup in LD 43.

Use the “EDD” command.

————— *End of Procedure* —————

Remove the NT5K20/48 XTD card

Perform this procedure to remove the NT5K20 XTD or NT5K48 XTD card and assign its functions to the NTDK20 SSC card instead. This procedure frees one card slot in the main cabinet.

Note: Perform the steps below in the order indicated. You must assign the TDS to the SSC card in slot 0 before you program the XTD units.

Procedure 12**Remove the NT5K20/48 XTD card****1 Remove the eight XTD units on the NT5K20/48 card using LD 13 (see Table 11).**

Make sure you remove all eight units.

Table 11**LD 13 - Remove XTD units on NT5K20/48 card.**

| Prompt | Response | Comments |
|--------|----------|---|
| REQ | OUT | Remove information |
| TYPE | XTD | Extended Dial Tone Detector and Digitone Receiver data block |
| TN | c u | c = card slot of the XTD card u = 0 to 7 (Repeat until you remove all eight units) |

2 Configure TDS on the SSC card using LD 17 (see Table 12).**Table 12****LD 17 - Configure TDS on the SSC card.**

| Prompt | Response | Comments |
|--------|----------|--|
| REQ | CHG | Change. |
| TYPE | CFN | Configuration data block. |
| CEQU | YES | For changes to common equipment |
| TDS | 0 | Tone and Digit switch for the NTDK20 SSC card. |

3 Configure the eight XTD units on the SSC card using LD 13 (see Table 13).

Make sure you configure all eight units.

Note: You must configure the TDS loop in LD 17 before you can do this step.

Table 13**LD 13 - Configure XTD units on SSC card.**

| Prompt | Response | Comments |
|--------|-----------|---|
| REQ | NEW | Add information |
| TYPE | XTD | Extended Dial Tone Detector and Digitone Receiver data block |
| TN | c u | c = 0 u = 0 to 7 (Repeat until you configure all eight units.) |
| XTDT | (0)-7 | Extended Tone Detector Table Number. If you enter a table that is not 0, it must be in LD 97. |
| _DTO | (NO), YES | Dial Tone Detection only. (NO) = Do not disable DTR detection YES = Disable DTR detection, only perform dial tone detection |

4 Remove the NT5K20 or NT5K48 XTD card from the cabinet.**5 Perform an EDD backup in LD 43.**

Use the "EDD" command.

————— *End of Procedure* —————

Keep the TDS/DTR card while moving functions to the SSC card

Perform the procedure described in this section if you plan the following upgrade conditions:

- You plan to keep the NTAK03DA (minimum version) TDS/DTR card in the system.
- You plan to move one of the its TDS/DTR or SDI port functions to the NTDK20 SSC card.

Move TDS/DTR and keep SDI ports

To move TDS/DTR, you must remove the TDS/DTR function from the NTA03 TDS/DTR card and then assign it to slot 0.

Note: Perform the steps below in the order indicated. You must assign the TDS to the SSC card in slot 0 before you program the DTR units. You must disable the TDS/DTR card before removing the TDS from that card slot.

Procedure 13

Move TDS/DTR while keeping SDI ports

1 Disable the NTA03 TDS/DTR card in LD 34.

Use the DISX N command where N is the card slot number of the TDS/DTR card.

2 Configure TDS on the SSC card using LD 17 (see Table 14).

Table 14

LD 17 - Configure TDS on SSC card

| Prompt | Response | Comments |
|--------|----------|--|
| REQ | CHG | Change. |
| TYPE | CFN | Configuration data block. |
| CEQU | YES | For changes to common equipment |
| TDS | 0 | Tone and Digit switch for the NTDK20 SSC card. |

3 Remove the eight DTR units on the TDS/DTR card using LD 13 (see Table 15).

Make sure you remove all eight units.

Table 15

LD 13 - Remove DTR units on TDS/DTR card.

| Prompt | Response | Comments |
|--------|----------|--|
| REQ | OUT | Remove information |
| TYPE | DTR | Digitone receivers data block |
| TN | c u | c = card slot of the TDS/DTR card u = 0 to 7 (Repeat until you remove all eight units.) |

4 Configure the eight DTR units on the SSC card using LD 13 (see Table 16).

Make sure you configure all eight units.

Note: You must configure the TDS loop in LD 17 before performing this step.

Table 16**LD 13 - Configure DTR units on SSC card.**

| Prompt | Response | Comments |
|--------|----------|---|
| REQ | NEW | Add information. |
| TYPE | DTR | Digitone receivers data block. |
| TN | c u | c = 0 u = 0 to 7 (Repeat until you configure all eight units.) |

5 Remove the TDS function using LD 17.

To remove the TDS function, follow the instructions in Table 17.

Note: This step fails if you do not first disable the TDS in LD 34 (see Step 1 on page 138). This step also fails if you do not first remove DTRs from the TDS/DTR slot.

Table 17**LD 17 - Remove TDS.**

| Prompt | Response | Comments |
|--------|----------|--|
| REQ | CHG | Change. |
| TYPE | CFN | Configuration data block. |
| CEQU | YES | For changes to common equipment |
| TDS | Xn | n = 1 to 9 (TDS card slot location) Put an X before to remove |

6 Enable the NTA03 TDS/DTR to use the SDI port.**7 Enable the TDS/DTRs on the SSC card in LD 34. Use the “ENLX 0” command.****8 Perform an EDD backup in LD 43.**

————— *End of Procedure* —————

Procedure 14

Move SDI ports while keeping TDS/DTR

1 Disable SDI ports 1 and 2 in LD 37.

Use the DIS TTY N command, where N is the SDI port number.

2 Remove the SDI ports using LD 17.

To remove TTY ports 1 and 2, follow the instructions in Table 18 for each port:

Table 18

LD 17 - Remove SDI ports 1 and 2.

| Prompt | Response | Comments |
|--------|-----------|--------------------|
| REQ | CHG | Change. |
| TYPE | ADAN | Change I/O device. |
| ADAN | OUT TTY X | X=1 X=2 |

3 Configure SDI ports on the SSC card using LD 17 (see Table 19).

Table 19

LD 17 - Configure SDI ports on SSC card.

| Prompt | Response | Comments |
|--------|--|--|
| REQ | CHG | Change. |
| TYPE | CFN | Configuration data block. |
| ADAN | NEW TTY X | X=1 X=2 |
| CDNO | 0 | Card number 0. |
| PORT | X | X=1 X=2 |
| DES | aaa...a | AML port identification (can be up to 16 alphanumeric characters). |
| BPS | 150, 300, 600, 1200, 2400, (4800), 9600, 19200 | Bits per second data rate. |
| BITL | 5, 6, 7, (8) | Data bit length. |
| STOP | (1), 1.5, 2 | Number of stop bits. |
| PARY | ODD, EVEN, (NONE) | Parity. |

Table 19**LD 17 - Configure SDI ports on SSC card. (Continued)**

| | | |
|------|---------------|-----------------------|
| ENL | (YES), NO | Auto enable SDI port. |
| USER | BUG, SCH, MTC | |
| ... | | |

----- *End of Procedure* -----

Keep the TDS/DTR card while configuring additional units or ports on the SSC card

Follow this procedure to do all of the following:

- keep the NTAK03 TDS/DTR card
- keep the NT5K48 XTD card
- take advantage of additional units or ports

Because these cards are already programmed, you must move their functions to the NTDK20 SSC card.

Procedure 15**Define TDS/DTR/XTD on the NTDK20 SSC**

- 1** **Configure TDS by entering 0 at the TDS prompt in LD 17 (see Table 20).**

Table 20**LD 17 - Configure TDS.**

| Prompt | Response | Comments |
|--------|----------|--|
| REQ | CHG | Change. |
| TYPE | CFN | Configuration data block. |
| CEQU | YES | For changes to common equipment. |
| TDS | 0 | Tone and Digit switch for the NTDK20 SSC card. |

- 2** **Configure the DTR units on card 0, units 0 through 7 in LD 13 (see Table 21).**

This step only applies if you use DTR. If you use XTD instead, skip this step and go to Step 3 on page 142.

Note: Systems in North America normally use DTRs and allow the card to operate as a standard DTMF receiver. This step only applies if you are using a DTR. If you use an XTD instead, skip this step and continue to Step 3 on page 142.

Table 21
LD 13 - Configure DTR units on card 0.

| Prompt | Response | Comments |
|--------|----------|----------------------------|
| REQ | NEW | Add. |
| TYPE | DTR | Define Digitone receivers. |
| TN | 0 u | Card 0, u = 0-7 |

- 3** Configure the XTD units on card 0, units 0 through 7 in LD 13 (see Table 22). Make sure you configure all eight units. (Do not perform this step if you are using DTR instead of XTD—you completed the procedure in Step 2).

Note: Systems outside North America normally use XTDs. Do not perform this step if you use a DTR instead of an XTD (see Step 2 on page 141).

Table 22
LD 13 - Configure XTD units on card 0.

| Prompt | Response | Comments |
|--------|-----------|---|
| REQ | NEW | Add information. |
| TYPE | XTD | Extended Dial Tone Detector and Digitone Receiver data block. |
| TN | c u | c = 0 u = 0 to 7 (Repeat until you configure all eight units.) |
| XTDT | (0)-7 | Extended Tone Detector Table Number. If you enter a table that is not 0, it must exist in LD 97. |
| _DTO | (NO), YES | Dial Tone Detection only. (NO) = Do not disable DTR detection YES = Disable DTR detection, only perform dial tone detection |

————— *End of Procedure* —————

Procedure 16**Define SDI ports 1 and 2**

1 Load overlay program 17 (LD 17).

2 Configure SDI ports 1 and 2 as shown in Table 23.

Table 23**LD 17 - Configure SDI ports 1 and 2.**

| Prompt | Response | Comments |
|--------|--|--|
| REQ | CHG | Change. |
| TYPE | CFN | Configuration data block. |
| ADAN | NEW TTY X | X=1 X=2 |
| CDNO | 0 | Card number 0. |
| PORT | X | X=1 X=2 |
| DES | aaa...a | AML port identification (can be up to 16 alphanumeric characters). |
| BPS | 150, 300, 600, 1200, 2400, (4800), 9600, 19200 | Bits per second data rate. |
| BITL | 5, 6, 7, (8) | Data bit length. |
| STOP | (1), 1.5, 2 | Number of stop bits. |
| PARY | ODD, EVEN, (NONE) | Parity. |
| ENL | (YES), NO | Auto-enable SDI port. |
| USER | BUG, SCH, MTC | |
| ... | | |

————— *End of Procedure* —————

Option 11/11E upgrade from Software Daughterboard or PCMCIA

This chapter describes how to upgrade an existing Option 11 or 11E to Option 11C using the Software Daughterboard.

Manufacturers and distributors ship the Software Daughterboard to the customer site already programmed. This is the method used in most cases.

CAUTION

You need a Software Daughterboard, Security Device, and Keycode Data Sheet to correctly install the software. You need a Keycode Data Sheet to complete the installation. Refer to the Keycode Data Sheet when entering the ISM parameters, adding packages, or changing the AUX ID.

Summary of steps

The following list reviews the software installation steps:

- 1 Install the Software Daughterboard and Security Device.
- 2 Set the system time and date.
- 3 Select the System Upgrade function.
- 4 Select the feature set and packages.
- 5 Select a database.
- 6 Select Incremental Software Management (ISM) parameters.

- 7 Validate keycodes.
- 8 Load the software.

CAUTION

Put on the antistatic wrist strap provided in the bottom of the cabinet before handling circuit cards. Static electricity can damage the components of power supplies and circuit cards.

Upgrade the software

The following procedure describes how to upgrade to Option 11C software system.

Procedure 17

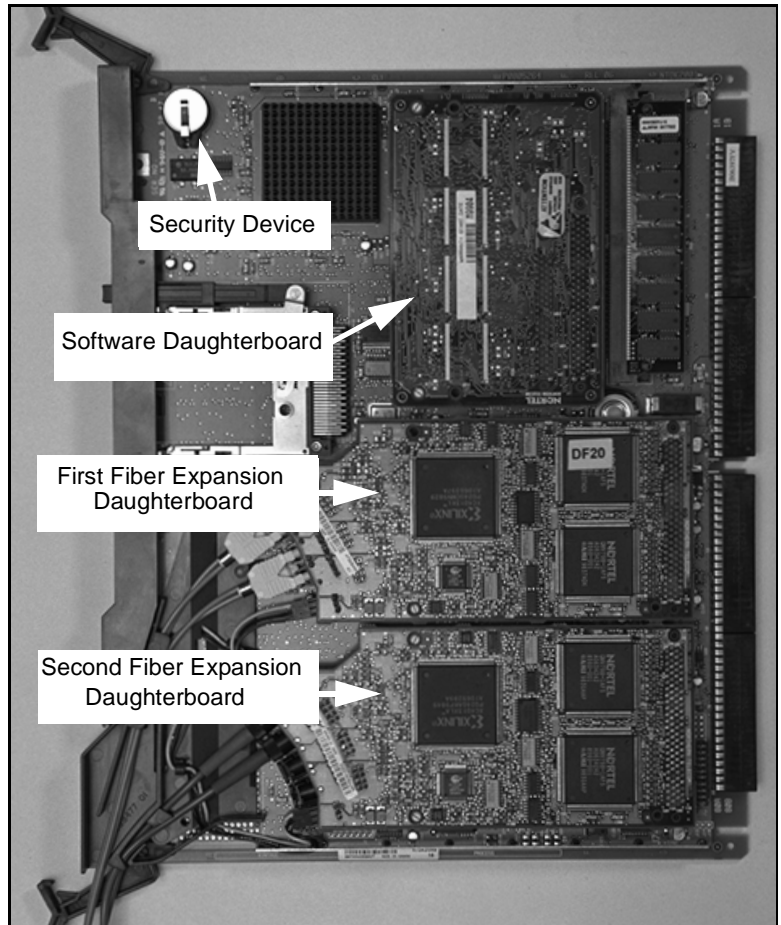
Upgrade Option 11C software

- 1 Install the Software Daughterboard and Security Device on the NTDK20 Small System Controller (SSC) card.**

To install the Software Daughterboard and Security Device, refer to Figure 57 on page 147 and to the following steps:

- a** Put on the antistatic wrist strap and insert the Software Daughterboard in the connector on the component side of the SSC card.
- b** Install any required expansion daughterboards.
- c** Insert the Security Device in the socket on the component side of the SSC card.

Figure 57
Fiber Expansion Daughterboards on the NTDK20 SSC card



- 2 **Install the NTDK20 Small System Controller (SSC) card in its slot (slot 0) of the main cabinet.**

Note: If a fiber-optic cable is present, place it in the fiber routing guide.

- 3 **Power up the system.**

To power up the system:

- a Connect the power to the cabinet.
- b Set the circuit breaker on the front of the power supply unit to ON.

4 Observe the terminal screen.

One of the following two messages appears and the software installation continues as indicated.

- If the message is
 INSERT SOFTWARE DELIVERY CARD
 continue with Step 5 on page 148.
- If the message is
 INSTALL SETUP PROGRAM
 go to Step 6 on page 149.

5 If you need to, install the software delivery card in the socket in the faceplate of the SSC card.

Note: Skip this step unless you are using the software delivery (PCMCIA) card to install the software.

To install the software delivery card:

- a** Insert the card in slot A in the PCMCIA socket located in the faceplate of the NTDK20 Small System Controller (SSC) card.
- b** Carefully press on the software delivery card until it seats tightly. Refer to Figure on page 149 for the correct position of the SSC card.

Figure 58
PCMCIA card slot location



6 Observe the terminal screen and do one of the following:

- If the screen displays the following message:
Current system time and date: 00:00:00 -- 00/00/00
continue with Step 7 on page 149.
- If the screen displays the following message, go to Step 8 on page 150:
Software Installation Main Menu

7 Set the system Time and Date.

The Time and Date prompt appears when the Install Setup Program detects a system Year Date that is not in the range of 1995 to 2095.

The following responses are examples of how to enter the system time and date:

Enter new time (hh/mm/ss)

08:00:00 <CR>

Enter new date (yy/mm/dd)

95/05/01 <CR>

08:00:00 -- 95/05/01 is the new system time and date

y <CR>

8 Select item 1 or 2 from the Main Menu.

Main Menu display is as follows:

Software Installation Main Menu

1. New System Installation or Option 11/11E Upgrade - From Software Daughterboard
2. System Upgrade
3. Utilities
4. New System Installation - From Software Delivery Card

[q]uit, [h]elp or [?], <cr> - redisplay

— To select Option 11/11E upgrade from Software Daughterboard:

- a** Type **1** and press <CR>.
- b** Go to Step 10 on page 151.

— To select System Upgrade:

- a** Type **2** and press <CR>.
- b** Go to Step 9 on page 151.

9 Select type of upgrade to perform.

The screen display is as follows:

Meridian 1 Software will be installed.

Select type of upgrade to be performed:

1. Option 11/11E to Option 11C
2. Option 11C New Software Upgrade
3. Option 11C Feature/parameter upgrade

[q]uit, <cr> current menu, [m]ain menu, [h]elp or [?], [p]revious menu

To select Option 11/11E to Option 11C:

- a** Type **1** and press <CR>.
- b** Continue with the next step, Step 10 on page 151.

10 Select the feature set to be enabled.

Note: The feature set you select must match the one provided with keycodes. The following feature set names are examples only.

Example of screen display for feature sets:

Select Feature Set You Wish to Enable:

1. General Business (NTSKxxxx)
2. Enhanced Business (NTSKxxxx)
3. Enterprise (NTSKxxxx)
4. NAS/VNS (NTSKxxxx)

[q]uit, [p]revious, [m]ain menu, [h]elp or [?], <cr> redisplay

Enter Selection:

To select Enhanced Business, for example, type **2** and press <CR>.

11 Indicate if you are adding packages or not.

The screen display shows, for example, feature set Enhanced Business:

Feature Set Selection: Enhanced Business

Do you wish to add packages?

Select no, yes or abort:

Do one of the following:

- Type **n** (for no), press <CR>, and go to Step 13 on page 152
- Type **y** (for yes), press <CR>, and continue with the next step, Step 12 on page 152
- Type **a** (for abort) and press <CR>. Abort returns you to the Main Menu.

12 Select the Feature packages to add.

Summary of packages selected is, for example:

0-2 4-5 7-14 16-25 28-29 32-64 67 70-77 79-83 86-93 95 98-104 107-111
113-116 118-120 122-125 127-129 131-133 135 137-141

Enter the package(s) you want to add, and then press <CR>.

Type, for example, **215-235** and press <CR>.

Note: Press <CR> to end selection entry or if you are not adding any packages.

13 Confirm feature set and packages.

Sample screen display:

Your Feature Set Selection is "Enhanced Business":

Additional Packages selected: 215-235

Summary of Packages selected is:

0-2 4-5 7-14 16-25 28-29 32-64 67 70-77 79-83 86-93 95 100-104 107-111
113-116 118-120 122-125 127-129 131-133 135 137-141

...

...

200-208 215-235

Is this selection correct?

Do one of the following:

- Type **n** (for no), press <CR>, and go to Step 10 on page 151.
- Type **y** (for yes), press <CR>, and continue with the next step, Step 14 on page 153.
- Type **a** (for abort, return to Main Menu).

14 Select a database.

Do one of the following:

- If you are installing from a software delivery (PCMCIA) card, go to Step 18 on page 156.
- If you are installing from a Software Daughterboard continue here:

The screen displays:

Select database to Install:

1. Pre-Configured database - Enhanced Business
2. Basic Configuration
3. CCBR Restore File
4. Option 11/11E Software Cartridge

[q]uit, [p]revious, [m]ain menu, [h]elp or [?], <cr> redisplay

Enter Selection: **3 or 4 <cr>**

Select option 3 or 4 and press <CR>:

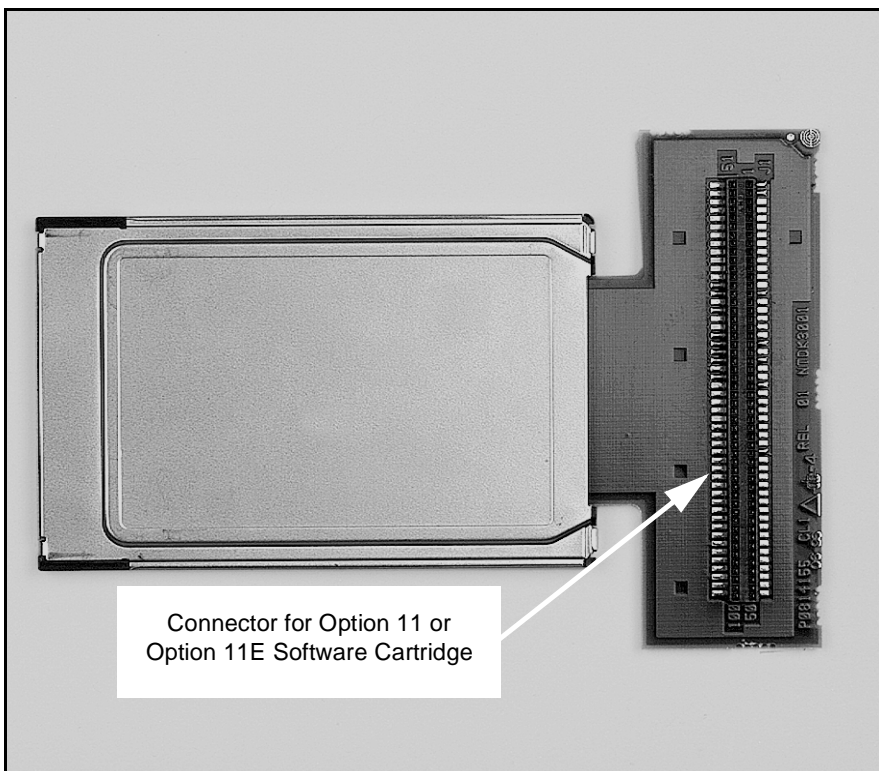
- If your selection was CCBR Restore File, go to Step 19 on page 156.
- If your selection was Option 11/11E Software Cartridge continue with the next step, Step 15 on page 154.

15 Connect the Option 11/11E Software Cartridge to the Database Upgrade Tool.

Do one of the following:

- If you are using the CCBR Restore file as a database source, complete Step 19 on page 156, then do Step 20 on page 157.
- If you are using the Option 11/11E software cartridge as a database source, refer to Figure 59. The figure shows the correct connection of the software cartridge to the Database Upgrade Tool.

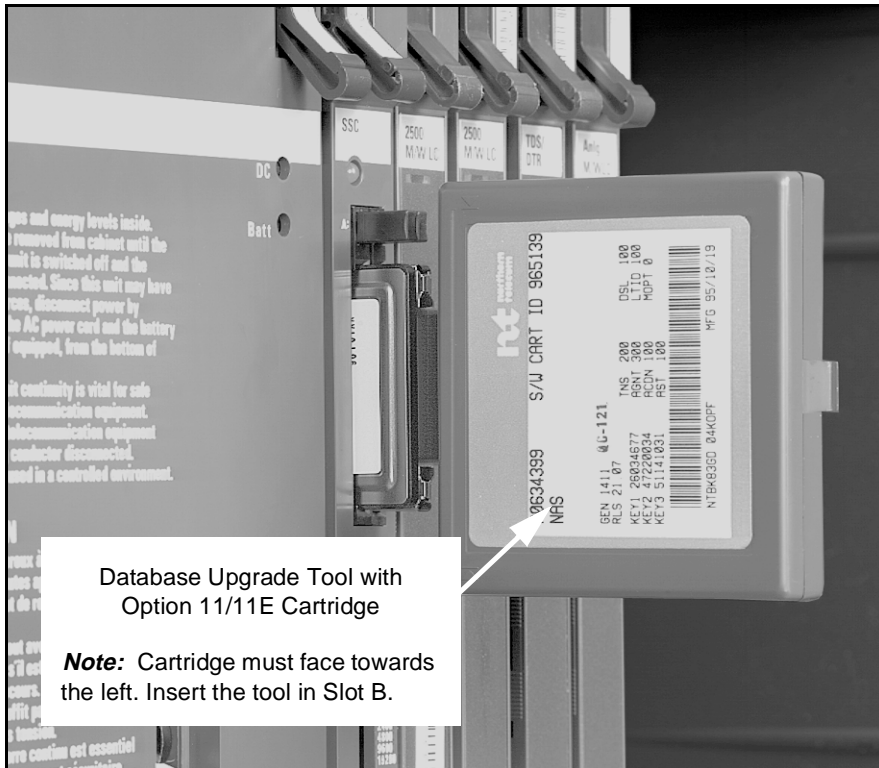
Figure 59
Database Upgrade Tool NTDK30AA



16 Install the Database Upgrade Tool and cartridge. See Figure 60.

The following text appears on the terminal:

Insert the Database Upgrade Tool with the attached Option 11/11E cartridge into Slot B. Press Enter, <CR>, to continue.

17 After you press <CR>, go to Step 19 on page 156.**Figure 60****Database Upgrade Tool inserted with cartridge**

18 Select a database using the PCMCIA card.

Do one of the following:

- If you are installing from a Software Daughterboard, go to Step 14 on page 153.
- If you are installing from a Software Delivery (PCMCIA) card, continue here:

Screen displays:

Select Option 11/11E Database Source:

1. CCBR Restore file
 2. Option 11/11E Software Cartridge
- [q]uit, [m]ain, [[p]revious menu, <cr> - redisplay

Enter Selection:

Select 1 or 2, and press <CR>.

- If you select **1 <CR>** (CCBR Restore file), continue with the next step, Step 19 on page 156.
- If you select **2 <CR>** (Option 11/11E Software Cartridge), go to Step 15 on page 154.

19 Confirm database selection.

Screen displays:

Warning: you must have an Option 11/11E database.

Do you wish to continue?

Do one of the following:

- Type **n** (for no), press <CR>, and go to Step 14 on page 153.
- Type **y** <CR> (for yes), press <CR>, and go to Step 20 on page 157.
- Type **a** <CR> (abort, return to Main Menu).

20 Review ISM parameters.

Note: On a new installation, the ISM parameters displayed on the terminal screen are the default settings related to the Feature Set selection. You can accept these settings without changes or change the settings to meet the requirements of the new system.

Current ISM Parameters:

TNS (32000) (**maximum number of terminal numbers**)

ACDN (300) (**maximum number of ACD DN's**)

AST (5000) (**maximum number of associate Sets**)

LTID (64) (**maximum number of Logical Terminal IDs**)

RAN_CON (0) (**default RAN connection**)

RAN_RTE (128) (**default RAN routes**)

MUS_CON (0) (**default MUS connection**)

BRAND (0) (**brandline**)

ACD AGENTS (0) (**maximum number of ACD agents**)

ANALOGUE TELEPHONES (0) (**maximum number of analogue sets**)

ATTENDANT CONSOLES (9999) (**maximum number of attendant sets**)

BRI DSL (64) (**maximum number of Digital Subscriber Loops**)

CLASS TELEPHONES (0) (**maximum number of class sets**)

DATA PORTS (9999) (**maximum number of data ports**)

DIGITAL TELEPHONES (0) (**maximum number digital sets**)

PHANTOM PORTS (9999) (**maximum number of phantom ports**)

WIRELESS TELEPHONES (0) (**maximum number Wireless sets**)

ITG ISDN TRUNKS (9999) (**maximum number of ISDN trunks**)

TMDI D-CHANNELS (64) (**maximum number of channels**)

INTERNET TELEPHONES (9999) (**maximum number of internet sets**)

Note: The above underscores represent a space.

Do you wish to change ISM parameters?

n <cr> (no change)

y <cr> (change)

a <cr> (abort, return to main menu)

If the response was **YES** go to Step 21 on page 158.

If the response was **NO** go to Step 23 on page 160.

21 Select ISM parameters.

Enter new ISM parameters, <cr> to leave as is:

TNS (32000)

ACDN (300)

AST (5000)

LTID (64)

RAN_CON (0)

RAN_RTE (128)

MUS_CON (0)

BRAND (0)

ACD AGENTS (0)

ANALOGUE TELEPHONES (0)

ATTENDANT CONSOLES (9999)

BRI DSL (64)

CLASS TELEPHONES (0)

DATA PORTS (9999)

DIGITAL TELEPHONES (0)

PHANTOM PORTS (9999)

WIRELESS TELEPHONES (0)

ITG ISDN TRUNKS (9999)

TMDI D-CHANNELS (64)

INTERNET TELEPHONES (9999)

22 Confirm ISM parameters.

New ISM parameters are:

TNS (32000)

ACDN (300)

AST (5000)

LTID (64)

RAN_CON (0)

RAN_RTE (128)

MUS_CON (0)

BRAND (0)

ACD AGENTS (0)

ANALOGUE TELEPHONES (0)

ATTENDANT CONSOLES (9999)

BRI DSL (64)

CLASS TELEPHONES (0)

DATA PORTS (9999)

DIGITAL TELEPHONES (0)

PHANTOM PORTS (9999)

WIRELESS TELEPHONES (0)

ITG ISDN TRUNKS (9999)

TMDI D-CHANNELS (64)

INTERNET TELEPHONES (9999)

Is this correct?

n <cr> (no)

y <cr> (yes)

a <cr> (abort, return to main menu)

If the response was **NO** go to Step 20 on page 157.

If the response was **YES** go to Step 23 on page 160.

23 Define the AUX ID.

Note: The default AUX ID is the security ID provided with the Option 11C. You must replace it with the previous Option 11 or Option 11E site ID.

Example screen display:

Security ID: 20000326

Current AUX ID: 20000326

Do you wish to change the AUX ID?

Do one of the following:

- Enter **y <CR>** (yes) and continue to Step 24 on page 160.
- Enter **n <CR>** (no) and go to Step 25 on page 160.
- Enter **a <CR>** (abort, return to main menu).

24 Enter the AUX ID.

Enter the Option 11/11E Security ID for the new AUX ID,
<cr> to maintain

12121212 <CR>

New AUX ID: 12121212

Is this correct?

Do one of the following:

- Enter **y <CR>** (yes) and continue with Step 25 on page 160.
- Enter **n <CR>** (no) and go to Step 23 on page 160.
- Enter **a <CR>** (abort, return to main menu).

25 Review and confirm information entered.

The screen displays either the Software Upgrade Summary or the software release information to allow you to review and confirm data entered.

Example Software Upgrade Summary display:

Software Upgrade Summary:

Security ID:20000326

Aux ID:12121212

Added Pkgs:215-235

Feature Set:Enhanced Business

Database:Company.ABC

Example software release information display.

Note: The screen displays both the old and the new parameters.

S/W Release: 2304C

ISM Parameters

TNS (32000)

ACDN (300)

AST (5000)

LTID (64)

RAN_CON (0)

RAN_RTE (128)

MUS_CON (0)

BRAND (0)

ACD AGENTS (0)

ANALOGUE TELEPHONES (0)

ATTENDANT CONSOLES (9999)

BRI DSL (64)

CLASS TELEPHONES (0)

DATA PORTS (9999)

DIGITAL TELEPHONES (0)

PHANTOM PORTS (9999)

WIRELESS TELEPHONES (0)

ITG ISDN TRUNKS (9999)

TMDI D-CHANNELS (64)

INTERNET TELEPHONES (9999)

Is this correct?

Do one of the following:

- Enter **y <CR>** (yes) and continue to Step 26 on page 162.
- Enter **n <CR>** (no) and go to Step 10 on page 151.
- Enter **a <CR>** (abort, return to main menu).

26 Enter the keycodes.

- a** Enter keycodes instead of **x, y, z** shown in the following example.

Enter new Keycodes:

Key 1:xxxxxxx <CR>

Key 2:yyyyyyy <CR>

Key 3:zzzzzzz <CR>

- b** Look for the keycode validation message.

After you enter the last keycode, the system displays a message indicating if the keycodes are successful or not. See the following message examples.

- Example successful screen message:

Keycode validation successful

WARNING A system restart will be invoked as part of the software installation process”.

- Example unsuccessful screen message:

Keycode validation unsuccessful

c Do one of the following:

- If the **successful** message appears, go to Step 27 on page 163.
- If the **unsuccessful** message appears, repeat this step, Step 26 on page 162.

After three unsuccessful keycode validation attempts, the following message appears:

Keycode validation unsuccessful.

Installation aborted...returning to main menu.

27 Complete the software installation.

Example screen display:

Are you sure you wish to perform the installation?

Do one of the following:

- Enter **y <CR>** (yes). The Software Installation Program finishes.
- Enter **n <CR>** (no) and go to Step 8 on page 150.
- Enter **a <CR>** (abort, return to Main Menu).

————— *End of Procedure* —————

Upgrade Option 11C/11C Mini software to a new release

This chapter describes how to upgrade software on the Option 11C and the Option 11C Mini to another release using the Software Installation Program. This program is menu-driven. It is clear and direct and includes a Help facility to help you make correct selections.

Note: Information about Software Daughterboards does not apply to the Option 11C Mini.

This chapter contains the following procedures:

- For Option 11C, see Procedure 18 on page 170. This procedure describes
 - how to check the existing program store
 - how to upgrade the software of an existing Option 11C to Release 24 using the Software Delivery (PCMCIA) card or a Software Daughterboard
 - how to replace an existing NTDK21 Software Daughterboard with an NTDK81 or NTTK13 Daughterboard.
- For the Option 11C and Option 11C Mini, see Procedure 19 on page 174. This procedure describes how to upgrade the software on an existing Option 11C or Option 11C Mini to a new release using the Software Delivery (PCMCIA) card.

Note: For Option 11C Mini systems, check the existing program store, see “Reason for checking the Mini System Controller capacity” on page 169.

- For the Option 11C and Option 11C Mini, Procedure 20 on page 186 describes how to revert to the previous software version.

CAUTION

To complete the upgrade, you must have a new Keycode Data Sheet and one of the following:

- Software Delivery (PCMCIA) card
- Software Daughterboard programmed with the new software release.

Refer to the Keycode Data Sheet when entering the ISM parameters, adding packages, or changing the AUX ID.

Summary of items required

You need the following items to perform software upgrades:

- Software Delivery (PCMCIA) card containing the new software, or a Software Daughterboard programmed in advance.
- Keycode Data Sheet
- TTY terminal connected to port 0

Upgrade the software

This section gives a summary of steps and the upgrade procedures.

Summary of steps

The following list reviews the steps you need to follow to upgrade from one software release to another:

- 1 Check and, if necessary, update the boot ROM code (see “Reason for updating the boot code” on page 167).
- 2 Check the capacity of the installed daughterboard or installed Mini System Controller (MSC) card.
- 3 Install the Software Delivery card.
- 4 Call up the Software Installation Program.
- 5 Make changes to the feature set, if you need to.
- 6 Select a database.

- 7 Make changes to the ISM parameters, if you need to.
- 8 Validate keycodes.
- 9 Load the software.

CAUTION

Please read this important message on upgrades

When you upgrade from Release 22 to 23, 22 to 24, or 23 to 24, you must use the SYSLOAD upgrade method.

SYSLOAD method

Toggle the power supply to OFF and then to ON. During the reboot, press Ctrl+I to access the Installation Program.

You cannot use the UPGRADE command to upgrade correctly from Release 22 to 23, 22 to 24, or 23 to 24.

If you try the UPGRADE method, an invalid keycode message displays. If you get this message, restart using the SYSLOAD method.

UPGRADE method

Log in to the system and select LD 143. Type **UPGRADE** to access the Installation Program.

Reason for updating the boot code

The boot code on the existing Option 11C SSC card must be NTDK34AA Release 09 or later to support the NTDK81 or NTKK13 Flash Daughterboards.

The minimum release of boot code for the Option 11C Mini MSC card is NTDK34FA Release 03. NTDK34FA Release 03 also supports the NTDK21, NTDK81, and NTKK13 Flash Daughterboards on the SSC card.

Note: Nortel Networks recommends that you upgrade the boot code to the latest release when you upgrade the software. The boot code is on the programmed PCMCIA card.

See Table 24 for the required software releases and the minimum releases of boot code.

Table 24
Required software releases and minimum releases of boot code

| Daughterboard/ Controller card | Software release | System | Minimum release of boot code |
|--|----------------------------|--------------------|--|
| NTDK21AA | Release 22-23 | Option 11C | Any |
| NTDK81AA | Release 23-24 | Option 11C | NTDK34AA Rel 09 or higher (See note) |
| NTTK13AA | Release 25- | Option 11C | NTDK34AA Rel 09 or higher (See note) |
| NTDK97AA | Release 24 only | Option 11C Mini | NTDK34FA Rel 03 |
| NTDK97AB | Release 24-25 and later | Option 11C Mini | NTDK34FA Rel 03 |
| Note: NTDK34FA also supports the NTDK81AA and the NTTK13AA. | | | |

Note: The NTTK13 daughterboard is backward compatible for use as a replacement for the NTDK81AA daughterboard.

Reason for checking daughterboard capacity

With Release 25, your system must have a 40 Mb configuration for the program store and 16 Mb of C: drive flash. You must upgrade Option 11C systems that have the original NTDK21 or NTDK81 software daughterboard to the NTTK13AA daughterboard. The NTDK21 and NTDK81 were delivered on systems with Release 24 or earlier software.

When you upgrade to a new software daughterboard (NTTK13), follow Procedure 18 on page 170. If you are not changing daughterboards, follow Procedure 19 on page 174. Release 24 must have a 32 Mb configuration for the program store. You must upgrade Option 11C systems that have the original NTDK21AA Software Daughterboard to the NTDK81 Software Daughterboard. The NTDK21 daughterboards come with Release 22.08 to 23.18.

Before loading Release 24 on to the Option 11C, check to see which daughterboard is on the system. See Procedure 18 on page 170. Procedure 18 describes how to upgrade software to Release 24 or later on a system equipped with an NTDK21-based Software Daughterboard. In all other cases, see Procedure 19 on page 174.

Reason for checking the Mini System Controller capacity

With Release 25, your system must have a 32 Mb configuration for the program store and 16 Mb of C: drive flash. Therefore, you must install an NTDK97AB MSC card in slot 0 of the Main Chassis. If you need to check a remote system to determine which version of MSC is installed, perform the following:

- 1** Log into the system.
- 2** Go into LD 135.
- 3** Enter **STAT MEM**.

If the output indicates that the flash drive is 8 Mb, the system has an NTDK97AA MSC card. If the output indicates that the flash drive is 16 Mb, the system has an NTDK97AB card.

If your system has an NTDK97AB, go to Procedure 19 on page 174. If your system has an NTDK97AA, replace this version with an NTDK97AB. To do this, refer to the *Option 11C and 11C Mini Fault Clearing Guide*.

Upgrade procedures

The following procedures describe how to upgrade and install the software using a Software Daughterboard or a Software Delivery (PCMCIA) card.

Procedure 18

Upgrade software and change the Software Daughterboard to an NTDK81 or NTTK13

1 Check the existing program store.

- a Log in to the switch and access overlay program 135 (LD 135).
- b Type the following at the prompt:

stat mem

The output indicates the amount of program store available on the system.

- If the output indicates that the program store size is 24 Mb, the system has an NTDK21. You must upgrade the system's daughterboard before continuing.
- If the output indicates that the program store size is 32 Mb, the system has an NTDK81. You can continue with Procedure 19 on page 174.
- If the output indicates that the program store size is 32 Mb and the C: drive flash is 16 Mb, the system has an NTTK13. Continue with Procedure 19 on page 174.
- If the output indicates that the program store size is 40 Mb, the system has an NTTK13.

2 Perform a data dump (EDD).

- a Load overlay program 43 (LD 43 or 143).
- b Enter command **EDD**.

3 Disable all DCHs using LD 60.

4 Disable all AML links using LD 48.

5 Check the release number on the faceplate of the NTDK20 SSC.

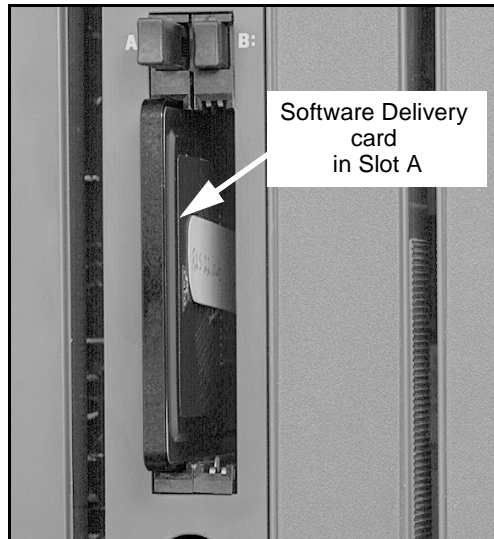
If the release number is 11 or higher, or if you have upgraded the boot ROM release to 09 or higher, go to Step 9.

6 Insert the Software Delivery card for the required release of software in slot A in the PCMCIA socket located in the NTDK20 SSC faceplate. See Table 25 on page 172 for the required release of software.

See Figure 61 on page 171 for the correct position.

Note: Carefully press on the PCMCIA card until it seats tightly.

Figure 61
Software Delivery Card



- 7 Call up the Software Installation Program using Overlay 143 (LD 143).**
- 8 Check the boot code version as described in “Use the flash boot ROM utility” on page 211.**

The following list is a summary of the steps you follow to check the boot code:

- a** Select Utilities from the Main menu.
- b** Select “7-Flash Boot ROM Utilities” from the Utilities menu.

- c Select "1-List Flash Boot ROM" from the Flash Boot ROM menu.
The screen displays the Active, Backup, and Software Delivery Card Boot Code versions display.
- d Use Table 25 to determine if you need to update the boot code.

Table 25
Minimum boot code requirements for the Software Daughterboard

| Software you are loading | Minimum boot code required |
|--------------------------|----------------------------|
| Pre-Release 23 | Any |
| Release 23 | NTDK34AA Release 09 |
| Release 24 | NTDK34FA Release 03 |

Note: For Release 23 and later software, it is recommended that you update the boot code to the version on the PCMCIA card. All versions of boot code are backwards-compatible.

- e Select "2- Upgrade Flash Boot ROM."
- f Enter **Yes** at the prompt asking if you are to update the Flash Boot ROM.
- g Return to the Main Menu.

Note: It is possible that there is nothing in the Backup boot ROM. However, the Software Delivery card shows the version that Table 25 gives or a higher release number. If the release number is lower, you cannot upgrade. Check the Software Delivery card for authenticity.

9 Change the Software Daughterboard.

- a Power down the system.
- b Remove the NTDK20 SSC card.
- c Remove the NTDK21 from the SSC card and replace it with the NTKK13.
- d Install the NTDK20 SSC card in slot 0 of the main cabinet.
- e Power up the system.

10 If the card appears in the Install menu, do the following:

- a** From the Main Menu, select “New System Installation - From Software Daughterboard” (item 1).
- b** Go to Step 13 on page 173

The card appears on the Install menu if the target software came programmed in advance on a new Software Daughterboard (NTSKxxAJ or higher).

11 If the system has an NTDK81 Blank Daughterboard, insert the Software Delivery card with Release 24 software into slot A of the SSC card. Then log on to the system.

If the system has an NTTK13 blank daughterboard, insert the Software Delivery card with Release 25 software into slot A of the SSC card. Then log on to the system.

12 From the Main Menu, select “New System Installation - From Software Delivery Card” (item 4).**13 Continue with the Installation menu selections as described for a new system installation in Chapter 18 of the *Option 11C Planning and Installation Guide (553-3021-210)*. When prompted for the selection of database, select “Basic Configuration” (item 2).****CAUTION**

It is important that you select “Basic Configuration” at this point. If you do not, the system can start an EDD after loading the new software and overwrite the customer data stored on the CPU.

14 After you install the software and reboot the system, you must restore the customer's backup configuration files.

- a** Log in and load LD 143 to access the Main Menu.
- b** Select “Utilities” (Item 3).
- c** Select “Restore” (Item 1).
- d** Select “Backup Flash Drive” (Item 1).
- e** Confirm Restore Database from the Backup Flash Drive.
- f** Reboot system by powering down and up.

————— *End of Procedure* —————

Procedure 19

Upgrade the software using a PCMCIA card

Note: For Option 11C systems, this procedure requires that the NTDK81 or NTKK13 Software Daughterboard be on the SSC card. To check that you have installed the NTDK81 or NTKK13, see Procedure 18 on page 170.

- 1 **Perform a data dump (EDD).**
 - a Load overlay program 43 (LD 43 or 143).
 - b Enter command **EDD**.
- 2 **Disable all DCHs using LD 60.**
- 3 **Disable any AML links using LD 48.**
- 4 **Insert the Software Delivery card in slot A in the PCMCIA socket. Locate the PCMCIA socket in the faceplate of the Option 11C NTDK20 SSC or the Option 11C Mini NTDK97 MSC card.**

See Figure 61 on page 171 for the correct position.

Note: Carefully press on the PCMCIA card until it seats tightly.

5 Select the method of starting the Software Installation Program.

CAUTION

Please read this important message on upgrades

There are two methods of starting the Software Installation Program.

When you upgrade from Release 22 to 23, 22 to 24, or 23 to 24, you must use the SYSLOAD method of upgrading.

SYSLOAD method

Toggle power supply to OFF and then to ON. During the reboot, press Ctrl+I to access the Installation Program.

You cannot use the UPGRADE command to correctly upgrade from Release 22 to 23, 22 to 24, or 23 to 24.

If you try the UPGRADE method, an invalid keycode message displays. If you get this message, restart using the SYSLOAD method.

UPGRADE method

Log in to the system and select LD 143. Type **UPGRADE** to access the Installation Program.

There are two methods of starting the Software Installation Program:

- Use the UPGRADE command in Overlay 143. Continue to next step.
- Press Ctrl+I when prompted during a SYSLOAD (go to Step 7 on page 171).

6 Log in to the system.

- a** Type **LOGI** and press <CR>.

PASS? displays.

- b** Respond to prompt.

Note: The response to PASS? is distinct in each system. The following response is an example only.

PASS?

0000 <CR>

LD 143 <CR>

UPGRADE <CR>

- c** Look for the following message:

SOFTWARE INSTALLATION PROGRAM

- If the message displays, go to Step 7 on page 176.
- If the message does not display, repeat Step 6 on page 176 (this step) and make sure you enter the correct information.

7 Call up the Software Installation Program during a SYSLOAD.

Note: Perform this step when starting the Software Installation Program during a **SYSLOAD**. To start the program using Overlay 143, ignore this step and do Step 6 on page 176 instead.

Start a system reload (SYSLOAD) by setting the circuit breaker on the front of the power supply to OFF then to ON.

Note: A SYSLOAD can take from 20 to 30 minutes.

During SYSLOAD, the following prompt appears:

FIVE SECONDS TO ENTER CONTROL-I TO INVOKE SOFTWARE
INSTALLATION PROGRAM

Press and hold 'control' key and press 'I'.

8 Update the boot code.

Check the boot code version as described in “Use the flash boot ROM utility” on page 211.

The following list reviews the steps to follow to check the boot code:

- a** Select “Utilities” from the Main menu.
- b** Select “7-Flash Boot ROM Utilities” from the Utilities menu.
- c** Select “1-List Flash Boot ROM” from the Flash Boot ROM menu.

The screen displays the Active, Backup, and Software Delivery card boot code versions display.

Use Table 26 to determine if you need to update the boot code.

Table 26
Minimum boot code requirements for Software Delivery card

| Software to load | Minimum boot code required |
|------------------|----------------------------|
| Pre-Release 23 | Any |
| Release 23 | NTDK34AA Release 09 |
| Release 24 | NTDK34FA Release 03 |

Note: For Release 23 and later software, you must update the boot code to the version on the PCMCIA card. All versions of boot code are backwards-compatible.

- d** Select “2- Upgrade Flash Boot ROM”
- e** When the prompt asks if you want to update the flash boot ROM, enter **Yes**.
- f** Return to the Main Menu.

Note: It is possible that there is nothing in the Backup boot ROM. However, the Software Delivery card shows the version that Table 26 gives or a higher release number. If the release number is lower, you cannot upgrade. Check the Software Delivery card for authenticity.

9 Select item 2 (Option 11C New Software Upgrade) from the “Select Type of Upgrade to be Performed” menu.

Type **2** and press <CR>.

Note: In the software menu, Option 11C appears for both Option 11C and Option 11C Mini.

The "Select the Feature Set You Wish to Enable" menu displays.

- 10** Select the feature set to enable *from the list displayed*. The feature set selected must match that provided with keycodes.

Note 1: The following questions require information from the Keycode Data Sheet. Please have it available.

Note 2: If you are using an External Data Card for this system, please insert it into drive b: now.

- 11** **Select the packages you want to add, if any.**

Screen display for feature set Selection: Enhanced Business:

Do you wish to add packages?

Enter one of the following:

- **n <CR>** (no) and go to Step 13 on page 179.
- **y <CR>** (yes) and continue to Step 12 on page 178.
- **a <CR>** (abort, return to Main Menu).

Note: Press <CR> either to end selection entry or to add no packages.

- 12** **Confirm feature set and added packages.**

The screen displays the feature set and any packages that you added. Review and confirm that you entered the information correctly.

Note: The selections below are examples only.

Summary of Packages selected is:

0-2 4-5 7-14 16-25 28-29 32-64 67 70-77 79-83 86-93 95 100-104 107-111
113-116 118-120 122-125 127-129 131-133 135 137-141...

...

200-208 215-235

Is this correct?

Do one of the following:

- Enter **n <CR>** (no) and go to Step 10 on page 178.
- Enter **y <CR>** (yes) and continue with the next step, Step 13 on page 179.

13 Review ISM parameters.

The ISM parameters displayed on the terminal screen are the default settings connected with the feature set selection. You can accept these settings without changes or change them to meet the requirements of the system.

Example screen display for ISM parameters:

Current ISM Parameters:

TNS (1000) (**maximum number of terminal numbers**)

ACDN (0300) (**maximum number of ACD DN's**)

AST (0100) (**maximum number of associate Sets**)

LTID (0100) (**maximum number of Logical Terminal IDs**)

RAN_CON (0012) (**default RAN connection**)

RAN_RTE (9999) (**default RAN routes**)

MUS_CON (0100) (**default MUS connection**)

BRAND (0) (**brandline**)

ACD AGENTS (1000) (**maximum number of ACD agents**)

ANALOGUE TELEPHONES (0100) (**maximum number of analogue sets**)

BRI DSL (0100) (**maximum number of Digital Subscriber Loops**)

DIGITAL TELEPHONES (0100) (**maximum number Digital sets**)

WIRELESS TELEPHONES (0) (**maximum number Wireless sets**)

TMDI D-CHANNELS (0) (**maximum number of channels**)

MOPT (0000) (**Meridian Mail option**)

Do you wish to change ISM parameters?

Do one of the following:

- Enter **n <CR>** (no change) and go to Step 16 on page 181.
- Enter **y <CR>** (change) and continue with the next step, Step 14 on page 180.

14 Select ISM parameters.

Example screen display:

Enter new ISM parameters, <cr> to leave as is:

TNS (1000)

ACDN (0300)

AST (0100)

LTID (0100)

RAN_CON (0012)

RAN_RTE (9999)

MUS_CON (0100)

BRAND (0)

ACD AGENTS (1000)

ANALOGUE TELEPHONES (0100)

BRI DSL (0100)

DIGITAL TELEPHONES (0100)

WIRELESS TELEPHONES (0)

TMDI D-CHANNELS (0)

MOPT (0000)

Note: The only value that changes is for **AST**. Enter **100 <CR>** to change this value.

15 Confirm the ISM parameters.

Example screen display:

New ISM parameters are:

TNS (1000)

ACDN (0300)

AST (0100)

LTID (0100)

RAN_CON (0012)

RAN_RTE (9999)

MUS_CON (0100)

BRAND (0)

ACD AGENTS (1000)

ANALOGUE TELEPHONES (0100)

BRI DSL (0100)

DIGITAL TELEPHONES (0100)

WIRELESS TELEPHONES (0)

TMDI D-CHANNELS (0)

MOPT (0000)

Is this correct?

Do one of the following:

- Enter **n <CR>** (no) and go to Step 13 on page 179.
- Enter **y <CR>** (yes) and continue with Step 16 on page 181.
- Enter **a <CR>** (abort, return to Main Menu).

16 Define the AUX ID.

The default AUX ID is either the security ID provided with the Option 11C or Option 11C Mini, or the original 11/11E site ID.

Note 1: The AUX ID is on your Keycode Data Sheet. The AUX ID must match either the security ID (11C or 11C Mini) or the original site ID (11, 11E).

Note 2: For the Option 11C Mini, the Security ID and the Current AUX ID numbers are always the same.

Example screen display:

Security ID: 20000326

Current AUX ID: 20000326

Do you wish to change the AUX ID?

Do one of the following:

- Enter **y <CR>** (yes) and continue with Step 17 on page 182.
- Enter **n <CR>** (no) and go to Step 18 on page 183.
- Enter **a <CR>** (abort, return to Main Menu).

17 Enter the AUX ID.

Example screen:

Enter the Option 11/11E Security ID for the new AUX ID, <cr> to maintain.

New AUX ID: 12121212

Is this correct?

Do one of the following:

- Enter **y <CR>** (yes) and continue with Step 18 on page 183.
- Enter **n <CR>** (no) and go to Step 16 on page 181.
- Enter **a <CR>** (abort, return to Main Menu).

18 Review and confirm the information you entered.

Example screen display:

Software Upgrade Summary:

Security ID: 20000326

Aux ID: 12121212

Database: Pre-Configured Database - Enhanced Business

S/S Release: 2202b2308b

Feature Set: Enhanced Business

Added Pkgs: none

ISM Parameters:

TSN: 1000 1000

ACDN: 0300 0300

AST: 0100 0100

LTID: 0100 0100

RAN_CON (0012)

RAN_RTE (9999)

MUS_CON (0100)

BRAND (0)

ACD AGENTS (1000)

ANALOGUE TELEPHONES (0100)

BRI DSL (0100)

DIGITAL TELEPHONES (0100)

WIRELESS TELEPHONES (0)

TMDI D-CHANNELS (0)

MOPT: 0000 0000

Is this correct?

Do one of the following:

- Enter **y <CR>** (yes) and continue with Step 20 on page 184.
- Enter **n <CR>** (no) and go to Step on page 178.
- Enter **a <CR>** (abort, return to Main Menu)

19 Enter the keycodes.

- a** Enter keycodes instead of **x, y, z** in the following example.

Enter new Keycodes:

Key 1:xxxxxxx <cr>

Key 2:yyyyyyy <cr>

Key 3:zzzzzzz <cr>

- b** Look for the keycode validation message.

After you enter the last keycode, the system displays a message indicating if the keycodes are successful or not. See the following message examples.

- Example successful screen message:

Keycode validation successful

WARNING A system restart will be invoked as part of the software installation process”.

- Example unsuccessful screen message:

Keycode validation unsuccessful

- c** Do one of the following:

- If the **successful** message appears, continue with the next step, Step 20 on page 184.
- If the **unsuccessful** message appears, repeat this step, Step 19 on page 184.

After three unsuccessful keycode validation attempts, the following message appears:

Keycode validation unsuccessful.

Installation aborted...returning to main menu.

20 Complete the software installation.

Example screen display:

Are you sure you wish to perform the installation?

Do one of the following:

- Enter **y <CR>** (yes). This procedure is at an end.
- Enter **n <CR>** (no) and go to Step on page 177.
- Enter **a <CR>** (abort)

————— *End of Procedure* —————

Revert to the previous release of software

The following procedures describe how to revert to the previous release of software, feature set, customer data, and ISM Parameters using the Undo Installation option.

For an upgrade that was done using a PCMCIA card

You can revert an Option 11C/Option 11C Mini to its previous database. You must install and use the same Software Delivery (PCMCIA) card that you used to upgrade the Option 11C/Option 11C Mini.

You cannot use a Software Delivery (PCMCIA) card used to upgrade a later Option 11C/Option 11C Mini. The Security ID no longer matches the original system.

Note: When you upgrade a system, it saves (backs up) the existing Option 11C/Option 11C Mini database on the Software Delivery (PCMCIA) card. The card contains only the backed-up database and Security ID of the last Option 11C/Option 11C Mini you used it with.

Summary of steps

This list reviews the steps you follow to revert to the previous database:

- 1** Make sure you install the correct Software Delivery (PCMCIA) card.
- 2** Select the Utilities menu.
- 3** Select Undo Installation option.
- 4** Revert to the previous database.

Revert to a previous release of software

The following procedure describes how to revert to the previous release of software using the PCMCIA card.

Procedure 20

Revert to previous software procedure

1 If you need to, install the Software Delivery (PCMCIA) card.

- a Locate slot A in the PCMCIA socket in the faceplate of the Option 11C NTDK20 SSC or the Option 11C Mini NTDK97 MSC card.
- b Carefully press on the PCMCIA card until it seats tightly.

Note: This Software Delivery card must be the same one that you used to upgrade this Option 11C/Option 11C Mini. You cannot use a Software Delivery (PCMCIA) card used to upgrade a later Option 11C/Option 11C Mini. The Security ID no longer matches the original system and the “undo” function cannot work.

2 Select the method of starting the Software Installation Program.

There are two methods of starting the Software Installation Program:

- Use the UPGRADE command in Overlay 143. Continue to Step 3 on page 186.
- Press Ctrl+I when prompted during a SYSLOAD (go to Step 4 on page 189).

3 Log in to the system.

- a Type **LOGI** and press <CR>.

PASS? displays.

- b Respond to prompt.

Note: The response to PASS? is distinct in each system. The response shown below is an example only.

PASS?

0000 <CR>

LD 143 <CR>

UPGRADE <CR>

- c Look for the following message:

SOFTWARE INSTALLATION PROGRAM

- If the message displays, go to Step 5 on page 187.
- If the message does not display, repeat Step 3 on page 186 (this step) and make sure you enter correct information.

4 Start system reload (SYSLOAD).

For Option 11C systems, set the circuit breaker on the front of the power supply to OFF and then to ON. For Option 11C Mini systems, turn the power switch located on the inside front panel to OFF and then to ON.

The following prompt appears:

FIVE SECONDS TO ENTER CONTROL-I TO INVOKE SOFTWARE
INSTALLATION PROGRAM

Press and hold 'control' key and press 'I'.

5 Select Utilities from the Main Menu.

Screen display:

SOFTWARE INSTALLATION PROGRAM

Verify Security ID: 12345678

Software Installation Main Menu

1. New System Installation or Option 11/11E Upgrade - From Software
Daughterboard

2. System Upgrade

3. Utilities

4. New System Installation - From Software Delivery

Card

[q]uit, [h]elp or [?], <cr> redisplay

Enter Selection:

Sample selection:

3 <CR> (Utilities)

6 Select item 6 from the Utilities Menu.

Screen display:

Utilities Menu:

1. Restore backed Up database
2. Archive Database Utilities
3. Install Archived database
4. Review Upgrade Information
5. Clear Upgrade Information
6. Undo Installation
7. Flash Boot ROM Utilities
8. Current Installation Summary
9. Change 3900 series set languages.

[q]uit, [p]revious, [m]ain, [h]elp [?], <cr> redisplay

Enter Selection:

Sample selection:

6 <CR> (Undo Installation)

7 Complete the software installation.

8 Screen display:

*** WARNING *** A system restart will be invoked as part of the Undo Installation process.

Are you sure you wish to undo the installation?

Do one of the following:

- Enter **y** <CR> (yes). Procedure is at an end.
- Enter **n** <CR> (no) and go to Step 6 on page 188.
- Enter **a** <CR> (abort)

————— *End of Procedure* —————

For an upgrade done using a programmed Software Daughterboard (Option 11C)

The following list reviews the steps you follow to revert to the previous database:

- 1** Shut down the system.
- 2** Install the old daughterboard.
- 3** Power up the system.

The following procedure describes how to revert to the previous release of software if you used a programmed Software Daughterboard to perform the upgrade.

Procedure 21

Revert to previous software procedure

- 1** Disable all DCHs using overlay program 60 (LD 60).
- 2** Disable all AML links using LD 48.
- 3** Power down the system.
- 4** Change the Software Daughterboard, replacing the one used to deliver the upgrade with the original one.
- 5** Power up the system.

————— *End of Procedure* —————

Feature set and ISM parameters upgrade

This chapter describes how to upgrade the feature set and ISM parameters on an Option 11C/Option 11C Mini. This procedure applies when you are not upgrading to a new release (same release upgrade). You do not need the Software Delivery (PCMCIA) card to perform this type of upgrade. This upgrade uses the Software Installation Program (LD 143) and is menu-driven. The program is clear and direct and includes a Help facility to help you make correct selections.

Note: If you need more detailed information, refer to “Upgrade Option 11C/11C Mini software to a new release” on page 165. This chapter contains complete details of the Software Installation Program (LD 143).

Summary of steps

The following list reviews the steps you follow to upgrade and install the feature set and ISM parameter:

- 1 Start the Software Installation Program.
- 2 Select the System Upgrade function.
- 3 Select feature set and packages (optional).
- 4 Select Incremental Software Management (ISM) parameters (optional).
- 5 Validate keycodes.
- 6 Load the software.

Upgrade the feature set and ISM parameters

The following procedure describes how to upgrade the feature set and ISM parameters without upgrading the software release.

Note: To answer the following questions, you need information about the Keycode Data Sheet. Please have it available.

Procedure 22

Upgrade feature set and ISM parameters

1 Start the Software Installation Program using overlay program 143.

a Type **LOGI** and press <CR> to log in to the system.

 The prompt PASS? displays.

b Enter the system password in response to the prompt.

2 Select “System Upgrade” (item 2) from the Software Installation Main Menu.

 The “Select Type of Upgrade to be Performed” menu displays.

3 Select “Option 11C Feature/Parameter Upgrade” (item 3) from the “Select Type of Upgrade to be Performed” menu.

Note: In the software menu, Option 11C appears for both Option 11C and Option 11C Mini.

4 Indicate if you want to change the current feature set.

Note: The feature set selected must match that provided with the keycodes.

— If you want to change the current feature set, enter **y** (for yes). The system prompts you to select the new feature set.

— If you want to keep the current feature set, enter **n** (for no).

5 Indicate if there are packages to add.

6 Review and make changes to the ISM parameters, if you need to.

Note: The ISM parameters displayed on the terminal screen are the default settings connected with the feature set selection. If you do not change the feature set, the parameters displayed remain as the current ISM parameters. You can accept these settings without changes or you can change the settings to meet the requirements of the system.

7 Define the AUX ID.

The default AUX ID is either the security ID provided with the Option 11C or the Option 11C Mini, or the original 11/11E site ID.

Note: The AUX ID is on your Keycode Data Sheet and must match either the security ID (11C or 11C Mini) or the original site ID (11, 11E).

8 Review and confirm the information entered.

The screen displays Same Release Upgrade Summary. Review and confirm the information displayed.

9 Enter the keycodes when prompted.

After the system confirms and accepts the keycodes, the following prompt appears:

Are you sure you wish to perform the installation?

10 Enter y in response to the prompt.

If the only change is an increase in ISM parameter values, a screen message states that you do not need a sysload. The system has put into operation changes to the ISM values.

If there must be a system reload (SYSLOAD), it does not need to occur immediately. The Option 11C or the Option 11C Mini stores the information until you perform the SYSLOAD. Because a SYSLOAD interrupts service on the system, it is better to start it later when a service interruption is less inconvenient.

----- *End of Procedure* -----

Restore a backed up database

This chapter describes how to use the Restore Backed Up database utility to restore a database from any of the following sources:

- the backup flash drive (using LD 43)
- a software delivery (PCMCIA) card (using LD 43)
- a Customer Configuration Backup and Restore (CCBR) file (using LD 143)

Summary of steps

The following list reviews the steps you follow to restore a backed up database:

- 1 Select the Utilities function.
- 2 Select the database source.
- 3 Restore the database.

Restore the database

The following procedure describes how to restore the database.

Procedure 23 **Restore database**

- 1 **Use Overlay 143 to start the Install Setup Program.**
 - a Type **LOGI** and press <CR> to log in to the system.
The screen displays the PASS? prompt.
 - b Enter the system password in response to the prompt.
- 2 **Select Utilities (item 3) from the Main Menu.**

3 Select “Restore Backed Up Database” (item 1) from the Utilities Menu.

4 Select source of database.

The selections screen display:

Select Restore Database Source:

1. Backup Flash Drive
2. External Drive
3. Option 11C CCBR Restore file
4. Option 11/11E CCBR File
5. Option 11/11E Software Cartridge.

Enter your selection and continue.

Note 1: In the Software menu, Option 11C appears for both Option 11C and Option 11C Mini.

Note 2: Selections 4 and 5 do not apply to the Option 11C Mini.

5 Confirm restore database from the backup flash drive.

The screen displays the date of the backed up database and the following prompt displays:

Are you sure you wish to perform the Restore?

Do one of the following:

- To return to the main menu, type **a** (for abort) and press <CR>.
- If you do not want to restore the database, type **n** (for no), press <CR>, and return to Step 3 on page 196.
- If you want to restore the database, type **y** (for yes) and press <CR>.

The system restores the backed up database selected and a message displays indicating if the restoration succeeded or failed.

- If the restoration is successful, the screen displays the following message:

`Restore successful`

Continue with the next step, Step 6 on page 197.

- If the restoration is not successful, return to Step 2 on page 195.

6 Confirm restore database from the external drive (PCMCIA card)

The following message displays:

Restoring primary drive from External Drive.
(Date and time)

System Restart required to activate restored
database

Are you sure you wish to perform the Restore?

Confirm that you want to continue with the restoration.

7 Restore the database from the CCBR Restore file.

The screen displays the following message:

WARNING: You must have an Option 11C CCBR file backed up.

WARNING: Your internal backup will be erased.

Are you sure you wish to Restore?

As the restoration progresses the following displays:

Entering receive mode for data transfer...

Escape back to host machine and commence upload...

Database transfer complete...

Restoring Primary drive from CCBR file...

Restore successful.

System Restart required to activate restored
database.

Do one of the following:

- If the restoration is successful, continue with the next step, Step 8 on page 198.

- If the restoration is not successful and the BKP011 message displays, go to Step 1 on page 195.
- If the restoration is not successful and any message that is not the BKP011 message displays, go to Step 2 on page 195.

Note: The BKP011 message indicates that the restored database is of a system with a different site ID. The content of the BKP011 message is as follows:

Restore successful but site ID in backup image differs from that of the switch.

8 Start a system restart (SYSLOAD).

Set the circuit breaker on the front of the power supply in the main cabinet to OFF then to ON.

- If the SYSLOAD is successful, this procedure is at an end.
- If the SYSLOAD is not successful, go to Step 1 on page 195.

————— *End of Procedure* —————

Configure 3900 series language

This chapter describes how to configure 3900 series set languages in an identified Option 11C or Option 11C Mini system using the Software Delivery (PCMCIA) card.

Summary of steps

The following list reviews the steps to follow to install 3900 series set language for the system:

- 1 Make sure you have installed the Software Delivery card.
- 2 Select the Utilities menu.
- 3 Select the Change 3900 series set languages option.
- 4 Load the 3900 series set language.

Install the 3900 series language set

Configure 3900 series set language using a Software Delivery card.

Procedure 24

Configure 3900 series set language

- 1 **Install the Software Delivery card in slot A of the PCMCIA socket in the faceplate of the SSC or MSC card.**

Note: For complete instructions for the installation of the Software Delivery (PCMCIA) card, see Procedure 19 on page 174.

- 2 **Select the method of starting the Software Installation Program.**

Note: For more detailed instructions for this and the following steps, refer to Procedure 19 on page 174.

- 3 **Use Overlay 143 to start the Software Installation Program.**

4 Select Utilities from the Main Menu.

The Utilities menu displays:

Utilities Menu:

1. Restore Backed Up database
2. Archive Customer defined databases
3. Install Archived database
4. Review Upgrade Information
5. Clear Upgrade Information
6. Undo Installation
7. Flash Boot ROM Utilities
8. Current Installation Summary
9. Change 3900 series set languages.

[q]uit, <cr>current menu, [m]ain, [p]revious menu

Select item 9 (Change 3900 series set languages.).

5 Print the currently installed 3900 series language sets.

The 3900 series set language menu displays:

Change 3900 series set language menu:

1. List 3900 series languages sets.
2. Change current 3900 series language set.
3. Restore 3900 series language set.

[q]uit, [r]estore, [m]ain menu, [h] help or [?], <cr> - redisplay

Select item 1 (List 3900 series language sets.).

The system displays:

3900 language set currently installed on the switch:

Release and Issue x1125071

VERSION 7.0

2. Nordic Europe:

Enter <CR> to continue ->

6 Change the 3900 series language set.

The Change 3900 series language set menu displays:

Change 3900 series set language menu:

1. List 3900 series language sets.
2. Change current 3900 series language set.
3. Restore 3900 series language set.

[q]uit, [r]estore, [m]ain menu, [h] help or [?],<cr> - redisplay

Select item 2 (Change current 3900 series language set.).

The system displays:

Specify drive name for 3900 series language set files in PCMCIA
Enter selection: A

WARNING: Following selection will overwrite the existing psdl.rec file
WARNING: Need to perform sysload after psdl file is changed.

1. Global version. (default)
2. Nordic Europe.
3. Western/Southern Europe
4. Eastern Europe 1.
5. Eastern Europe 2.
6. Asia Pacific

[q]uit, [h] help or [?],<cr> - redisplay
Enter selection: 3

Backing up the current psdl.rec file... [wait} 3630080 bytes copied.

Copying current psdl.rec file... [wait] 3630080 bytes copied.

3900 series language set file successfully installed. 67 bytes copied.

7 Perform a sysload to enable new 3900 series set language.

————— *End of Procedure* —————

Archive and remove databases

This chapter describes how to use the archive feature to do the following:

- archive a new customer database
- list the archived databases
- remove existing archived databases

You can define the database in an off-site lab environment and save (archive) it on a Software Delivery (PCMCIA) card until you need it. Then you can load it in the customer's system using the Software Delivery card.

To archive a database on the Software Delivery card, you must first define it and load it into the flash ROM on one of the following cards. Which card you load it on depends on your system type.

- NTDK20 Small System Controller (SSC)
- NTDK97 Mini System Controller (MSC)

Make sure you define and load the required database before trying to archive it. Previous chapters describe the methods used to define and load customer databases. This chapter does not repeat this information.

You can list and remove archived databases directly from the Software Delivery card without first loading them on the SSC or MSC card.

Summary of steps

The following list reviews the steps you must follow to archive a customer database:

- 1 Check to make sure you have the correct Software Delivery card installed.
- 2 Select the Utilities function.
- 3 Select the Archive option.

Use the archive feature

The following procedure describes how to use the archive feature to list, add, and remove customer databases.

Procedure 25

Use the archive feature

- 1 **If you need to, install the Software Delivery card in slot A of the PCMCIA socket in the faceplate of the SSC or MSC card.**

When you add a customer database to the archive, you must first load it on the SSC card or the MSC card of this system.

Note: For complete instructions for the installation of the Software Delivery (PCMCIA) card, refer to Procedure 19 on page 174.

- 2 **Select the method of starting the Software Installation Program.**

Note: For more detailed instructions for this and the following steps, refer to Procedure 19 on page 174.

- 3 **Start the Software Installation Program using Overlay 143.**
- 4 **Select Utilities from the Main Menu.**
- 5 **Select item 2 from the Utilities Menu.**

6 Select the archive function.

Screen display:

Customer Database Archives:

1. List customer databases
2. Remove customer database
3. Archive a customer database

[q]uit, [p]revious, [m]ain, [h]elp or [?]

<cr> - redisplay

Enter Selection:

Do one of the following:

- Enter **1 <CR>** (List Customer databases), and continue with the next step, Step 7 on page 205.
- Enter **2 <CR>** (Remove Customer database), and go to Step 8 on page 205.
- Enter **3 <CR>** (Archive a Customer database), and go to Step 9 on page 206.

7 Review the list of archived databases.

Look at the displayed list of archived customer databases and the Customer Database Archives menu.

- If you want to remove a database from the archive, continue with the next step, Step 8 on page 205.
- If you want to add a database to the archive, go to Step 9 on page 206.
- If you want to end the activity here, enter **q <CR>**.

8 Remove the required customer database from the archive.

The screen displays the archived databases and the following prompt:

q]uit, <cr>current menu, [m]ain, [p]revious menu

Enter selection:

Remove database

'*Name of archived database*'
database?

Enter your selection and respond to the confirm removal prompt.

9 Add the customer database to the archive.

When you choose to add a customer database to the archive, the screen displays the following prompt:

Enter a Customer name for your customized data:

- a** Type in the name for this archived database.

The system displays the name for confirmation.

- b** Confirm the name.

The screen displays the following message:

Copying database from primary drive to '*Name of archived database*'.

————— *End of Procedure* —————

Install an archived database

This chapter describes how to install an archived customer database in an identified Option 11C or Option 11C Mini system using the Software Delivery (PCMCIA) card.

Summary of steps

The following list reviews the steps to follow to install an archived customer database:

- 1 Make sure you have installed the Software Delivery card.
- 2 Select the Utilities menu.
- 3 Select the Install Archived database option.
- 4 Load the database.

Install the database

Install an archived database using a Software Delivery card.

Procedure 26

Install an archived database

- 1 **Install the Software Delivery card in slot A of the PCMCIA socket in the faceplate of the SSC or MSC card.**

Note: For complete instructions for the installation of the Software Delivery (PCMCIA) card, see Procedure 19 on page 174.

- 2 **Select the method of starting the Software Installation Program.**

Note: For more detailed instructions for this and the following steps, refer to Procedure 19 on page 174.

- 3 **Use Overlay 143 to start the Software Installation Program.**

4 Select Utilities from the Main Menu.

The Utilities menu displays:

Utilities Menu:

1. Restore Backed Up database
2. Archive Customer defined databases
3. Install Archived database
4. Review Upgrade Information
5. Clear Upgrade Information
6. Undo Installation
7. Flash Boot ROM Utilities
8. Current Installation Summary
9. Change 3900 series set languages.

[q]uit, <cr>current menu, [m]ain, [p]revious menu

Select item 3 (Install Archived Database).

The system displays the list of archived customer databases.

5 Select the Customer Database.

Type the name of the database you want to restore.

The system prompts you to confirm the name of the database.

6 Confirm the database selection.

If you respond **yes**, continue with the next step, Step 7 on page 208.

If you respond **no**, go to Step 5 on page 208.

7 Restore the archived database.

- If the restore is successful, the screen displays the following:
Restoring Archived database to Primary drive...
Restore successful.
System Restart required to activate database.
This procedure is at an end.
- If the restore is not successful, go to Step 4 on page 208.

————— *End of Procedure* —————

Review and clear upgrade information

This chapter describes how to use the Review Upgrade Information and Clear Upgrade Information options.

These options allow you to

- review entered upgrade information
- clear the upgrade information from the Software Installation Program if you need to

Summary of steps

The following list is a summary of steps to review and clear upgrade information:

- Make sure you have installed the Software Delivery (PCMCIA) card.
- Select the Utilities menu.
- Select Review Upgrade Information option.
- Select Clear Upgrade Information option (if you need to).

Review and clear upgrade information

The following procedure describes how to review and, if required, clear the upgrade information.

Procedure 27

Review and clear the upgrade information

- 1 **Install the Software Delivery card in slot A of the PCMCIA socket in the faceplate of the SSC or MSC card.**

Note: For complete instructions for the installation of the Software Delivery (PCMCIA) card, refer to Procedure 19 on page 174.

2 Select the method of starting the Software Installation Program.

Note: For more detailed instructions for this and the following steps, see Procedure 19 on page 174.

3 Use Overlay 143 to start the Software Installation Program.

4 Select Utilities from the Main Menu.

5 Select the Review (item 4) or Clear (item 5) option from the Utilities menu.

— If you select **4**, continue to Step 6 on page 210.

— If you select **5**, go to Step 7 on page 210.

6 Review the summary of the upgrade information.

The screen displays the upgrade information for your review. When finished, go to Step 5 on page 210.

7 Review and clear or keep upgrade information.

The screen displays the selected upgrade information and the following prompt:

Do you wish to clear the Upgrade information?

Do one of the following:

— Enter **y <CR>** (yes). The procedure is at an end.

— Enter **n <CR>** (no) and go to Step 4 on page 210.

— Enter **a <CR>** (abort, return to Main Menu).

————— *End of Procedure* —————

Use the flash boot ROM utility

For the Option 11C or Option 11C Mini, this chapter describes how to use the Flash Boot ROM utility to

- display the status and version of the Flash Boot ROMs installed in the system and on the Software Delivery (PCMCIA) card (if it is present)
- upgrade the Flash Boot ROM (the Flash Boot ROM does not automatically upgrade when you upgrade the software)

For the Option 11C, this chapter describes how to use the Flash Boot ROM utility to

- update the boot code on the SSC card at the same time you change from an NTDK21 Software Daughterboard to an NTDK81 or an NTTK13 Software Daughterboard

Note: The updated boot code supports the NTDK21, NTDK81, and NTTK13 Software Daughterboards. Nortel Networks recommends that you update the boot code when you upgrade software whether or not you are replacing the existing NTDK21 Software Daughterboard with the NTDK81 or NTTK13. If you update the boot code at these times, you simplify future daughterboard replacement.

- restore a Flash Boot ROM

Summary of steps

The following list reviews the steps to follow to perform the Flash Boot ROM functions:

- 1 Make sure you have installed the Software Delivery (PCMCIA) card, if there is one.
- 2 Start the Software Installation Program.

- 3 Select the Utilities function.
- 4 Select the Flash Boot ROM utility.
- 5 Select the Flash Boot ROM option you want.
- 6 Start the selected Flash Boot ROM function.

Use the Flash Boot ROM utility

The following procedure describes how to use the Flash Boot ROM utility.

Procedure 28

Use the Flash Boot ROM utility

- 1 **If the Software Delivery card is not installed, install it in the socket in the faceplate of the Option 11C SSC or the Option 11C Mini MSC card.**

Carefully press on the PCMCIA card until it seats tightly.

- 2 **Use Overlay 143 to start the Software Installation Program.**

Note: The response to `PASS?` is different for each system. The following response is an example only:

`LOGI`

`PASS?`

`0000 <CR>`

`LD 143 <CR>`

`UPGRADE CR>`

- a Look for the following screen message:

`SOFTWARE INSTALLATION PROGRAM`

- b Do one of the following:

- If the screen displays the message, go to Step 3.
- If the screen does not display the message, repeat Step 2 (this step), and make sure you enter the correct information.

- 3 **Select Utilities (item 3) from the Main Menu.**
- 4 **Select Flash Boot ROM Utilities (item 7) from the Utilities menu.**

5 Select an option from the Flash Boot ROM Utilities menu.

The screen displays the options:

Flash Boot ROM Utilities Menu:

1. List Flash Boot ROM
2. Upgrade Flash Boot ROM
3. Restore Flash Boot ROM

[q]uit, <cr>current menu, [m]ain, [p]revious menu

Enter Selection:

Do one of the following:

- Enter **1 <CR>** (List Flash Boot ROM), and go to Step 6 on page 213.
- Enter **2 <CR>** (Upgrade Flash Boot ROM), and go to Step 7 on page 216.
- Enter **3 <CR>** (Restore Flash Boot ROM), and go to Step 8 on page 216.

6 Review the Flash Boot ROM summary.

The screen displays the following information:

- the version of the active Flash Boot ROM

- the version of the backup Flash Boot ROM (if it exists)
- the version of the Flash Boot ROM on the Software Delivery (PCMCIA) card (if it exists).

The following are four examples of possible screen displays and what you must do in each situation. These are examples. The information they display is exact. What you see on your screen depends on your system.

Example 1:

The Software Delivery Card (PCMCIA) contains a new version of the Flash Boot ROM. There is also an older backed-up version of the Flash Boot ROM.

Flash Boot ROM Summary:

Active -- NTDK34AA REL 02

(the version which is active)

Backup -- NTDK34AA REL 01

(the previous active version)

Software Delivery Card -- NTDK34AA REL 03

(a newer version)

If you see a display like Example 1, return to Step 5 on page 213.

Example 2:

There is no Software Delivery card (PCMCIA) installed.

Flash Boot ROM Summary:

Active -- NTDK34AA REL 02

(the version which is active)

Backup -- NTDK34AA REL 01

(the previous active version)

Software Delivery Card -- card not installed

If you see a display like Example 2, you must install the Software Delivery card. Return to Step 5 on page 213.

Example 3:

There is no Flash Boot ROM on the Software Delivery card (PCMCIA).

Flash Boot ROM Summary:

Active -- NTDK34AA REL 02

(the version which is active)

Backup -- NTDK34AA REL 01

(the previous active version)

Software Delivery Card -- no Flash Boot ROM on card

(no Flash Boot ROM on Software Delivery card).

If you see a display like Example 3, return to Step 5 on page 213.

Example 4:

The Software Delivery Card (PCMCIA) has the same version as the current active Flash Boot ROM.

Flash Boot ROM Summary:

Active -- NTDK34AA REL 03

(the version which is active)

Backup -- NTDK34AA REL 02

(the previous active version)

Software Delivery Card -- NTDK34AA REL 03

(same version as on Software Delivery)

If you see a display like Example 4, return to Step 5 on page 213.

7 Perform or terminate Flash Boot ROM upgrade.

The following message displays:

Upgrading Active Boot ROM to NTDK34AA REL 03

System Restart required to activate Flash Boot ROM upgrade.

*** WARNING *** A system restart will be invoked as part of the Flash Boot ROM Upgrade.

The system prompts you to perform the Flash Boot ROM upgrade.

- If you respond **no**, go to Step 3 on page 212.
- If you respond **yes**, the procedure is at an end.

8 Perform or terminate Flash Boot ROM restore.

The following message displays:

Restoring Flash Boot ROM to NTDK34AA REL 01

System Restart required to activate restored Flash Boot ROM.

*** WARNING *** A system restart will be invoked as part of the Flash Boot ROM Restore.

The system prompts you to perform the Flash Boot ROM Restore.

- If you respond **yes**, the procedure is at an end.
- If you respond **no**, go to Step 3 on page 212.

————— *End of Procedure* —————

Update the boot code

This section describes how to upgrade the boot code to support the Option 11C NTDK81 or NTKK13 Software Daughterboards, or the Option 11C Mini NTDK97 Mini System Controller (MSC) card.

The boot code on the existing Option 11C SSC card must be NTDK34AA Release 09 or later to support the NTDK81 or NTKK13 Flash Daughterboards.

The minimum release of boot code for the Option 11C Mini MSC card is NTDK34FA Release 03. NTDK34FA Release 03 also supports the NTDK21, NTDK81, and NTKK13 Flash Daughterboards on the SSC card.

Note: Nortel Networks recommends that you upgrade the boot code to the latest release when you upgrade the software. The boot code is on the programmed PCMCIA card.

See Table 28 for the required software releases and minimum releases of boot code.

Table 27
Required software releases and minimum releases of boot code

| Daughterboard/ Controller card | Software release | System | Minimum release of boot code |
|--|----------------------------|--------------------|--|
| NTDK21AA | Release 22-23 | Option 11C | Any |
| NTDK81AA | Release 23-24 | Option 11C | NTDK34AA Rel 09 or higher (See note) |
| NTTK13AA | Release 25- | Option 11C | NTDK34AA Rel 09 or higher (See note) |
| NTDK97AA | Release 24 only | Option 11C Mini | NTDK34FA Rel 01 |
| NTDK97AB | Release 24-25 and later | Option 11C Mini | NTDK34FA Rel 03 |
| Note: NTDK34FA also supports the NTDK81AA and the NTTK13AA. | | | |

Procedure 29 on page 218 describes the steps to follow when updating the boot code to support the NTDK81 or NTTK13 Software Daughterboard.

Procedure 30 on page 219 describes the steps to follow when updating the boot code and installing an NTDK81 or NTTK13 as part of upgrading the system software.

Procedure 29
Update the boot code

Note: You will not interrupt service on the system while performing this procedure.

- 1 Insert the Software Delivery card in slot A of the PCMCIA socket located in the faceplate of the Option 11C NTDK20 SSC card or the Option 11C Mini MSC card.**

Carefully press on the PCMCIA card until it seats tightly.

- 2 Log in and load overlay program 143 (LD 143).**

- a Enter LOGI.**

The screen displays the PASS? prompt.

- b Respond to the PASS? prompt.**

Note: The response to `PASS?` is different for each system. The response shown below is an *example* only.

LOGI

PASS?

0000 <CR>

LD 143 <CR>

UPGRADE <CR>

- c Look for the following message:**

SOFTWARE INSTALLATION PROGRAM

- If the screen displays the message, continue to Step 3.
- If the screen does not display the message, repeat Step 2 (this step) and make sure you enter the correct information.

- 3 Select Utilities (item 3) from the Main Menu.**
- 4 Select Flash Boot ROM Utilities (item 7) from the Utilities menu.**

5 Select Flash Boot ROM Summary (item 1) from the Flash Boot ROM Utilities menu. Determine the Release (REL) number of the active boot code.

You will see a response like the following:

Active -- NTDK34AA REL 05 (REL number will vary)

Backup -- NTDK34AA REL 02 (REL number, if one is listed, will vary)

Software Delivery Card -- NTDK34AA REL 09

Look at the release number of the active boot code:

- If the active boot code release is REL 09 or later, the procedure is at an end. Go to Step 8.
- If the active boot code release is REL 08 or earlier, go to Step 6.

Note: The backup Boot ROM can be empty. The Software Delivery (PCMCIA) card must indicate REL 09 or later to enable you to upgrade. If you cannot upgrade, check the version of PCMCIA card.

6 Select “Upgrade the Boot Flash ROM” (item 2) from the Flash Boot ROM Utilities menu.

7 Confirm that you want to update the Boot ROM.

Respond **yes** at the prompt asking you to confirm that you want to update the Boot ROM.

8 Exit Overlay 143 and log off.

If you plan to upgrade the system software, go to “Upgrade Option 11C/11C Mini software to a new release” on page 165.

————— *End of Procedure* —————

Procedure 30

Update the boot code and install an NTDK81 or NTKK13 Software Daughterboard as part of the upgrade

1 Perform a data dump (EDD).

- a** Load overlay program 43 (LD 43 or 143)
- b** Enter command **EDD**.

2 Disable all DCHs using LD 60.

3 Disable any AML links using LD 48.

- 4 **Insert the Software Delivery card in slot A in the PCMCIA socket. Locate slot A in the faceplate of the NTDK20 Small System Controller (SSC) card.**
- 5 **Load the Software Installation Program (LD 143).**
- 6 **Select Utilities (item 3) from the Main Menu.**
- 7 **Select Flash Boot ROM Utilities (item 7) from the Utilities menu.**
- 8 **Select Flash Boot ROM Summary (item 1) from the Flash Boot ROM Utilities menu. Determine the Release (REL) number of the current active boot code.**

You will see a response like the following:

Active -- NTDK34AA REL 05 (REL number will vary)

Backup -- NTDK34AA REL 02 (REL number, if one is listed, will vary)

Software Delivery Card -- NTDK34AA REL 09

Look at the release number of the active boot code.

- If the active boot code release number is 09 or higher, this procedure is at an end. Go to Step 11.
- If the active boot code release number is 08 or lower, go to Step 9.

Note: The backup Boot ROM can be empty. The Software Delivery (PCMCIA) card must indicate REL 09 or later to enable you to upgrade. If you cannot upgrade, check the version of PCMCIA card.

- 9 **Select Upgrade the Boot Flash ROM (item 2) from the Flash Boot ROM Utilities menu.**
- 10 **Confirm that you want to update the Boot ROM.**
Respond **yes** to the prompt asking you to confirm that you want to update the Boot ROM.
- 11 **Set the circuit breaker switch on the power supply to OFF.**
- 12 **Change the Flash Daughterboard.**

Do one of the following:

- Is the Release 23 software programmed in advance on the new Flash Daughterboard? If so, restore service on the system by setting the circuit breaker switch on the power supply to ON.

- Is the daughterboard blank? If so, you can load the Release 23 software following the instructions found in the starting up and testing the system chapter of *Option 11C Planning and Installation Guide (553-3021-210)*.
- Does the daughterboard have an earlier release of software? If so, load Release 23.30 as described in "Upgrade Option 11C/11C Mini software to a new release" on page 165.

----- *End of Procedure* -----

Installation summary

This chapter describes how to get an installation summary for the Option 11C or Option 11C Mini using the Utilities menu.

Summary of steps

The following steps review how to get an installation summary:

- 1 Select the Utilities function.
- 2 Select Current Installation Summary utility.

Use the Installation Summary utility

The following procedure describes how to get an installation summary using the Current Installation Summary utility.

Procedure 31

Current installation summary utility

Note: For more detailed instructions for this and the following steps, see Procedure 19 on page 174.

- 1 **Use Overlay 143 to start the Software Installation Program.**
- 2 **Start the Software Installation Program when prompted.**
- 3 **Select Utilities from the Main Menu.**
- 4 **Select Current Installation Summary (item 8) from the Utilities menu.**
- 5 **Review the installation summary.**

The installation summary displays on the screen for your review.

————— *End of Procedure* —————

Meridian 1

Option 11C and 11C Mini

Upgrade Procedures Guide

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