Nortel Networks NetVenue

Installation, maintenance and troubleshooting guide

Issue: 01.01

Status: Standard

Date: September 1999

Standard

NORTEL NETWORKS™

Nortel Networks NetVenue

Installation, maintenance, and troubleshooting guide

Issue: 01.01
Status: Standard
Date: September 1999

Printed in Canada

Publication history

September 1999

This is the standard release of the Nortel Networks NetVenue installation, maintenance and troubleshooting guide..

Table of Contents

1 About this guide

This guide is designed to guide you through the installation and maintenance of a NetVenue terminal, as well as replacement and troubleshooting procedures.

Scope of this document

This document covers the installation of the terminal, gives maintenance procedures, and describes the replacement procedure for each component of the NetVenue terminal.

Precautions

Before installing this equipment, ensure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection.

The telephony module must be connected using standard analogue POTS telephone circuit. (CS-03 CA11A/CA14A or CA11W/CA14W connection arrangement) or be connected to the ISDN router. The ISDN line must be connected according to CS-03 standard CA38A. Due to the line identification requirements of payphones ISDN cannot be used for pay telephony.

Repairs should be coordinated by a representative agreed upon by Nortel Networks. Any repairs or alterations made by the user to this equipment, may give any third-party telecommunications company cause to request the user to disconnect the equipment.

For their own protection, users must ensure that the electrical ground connections of the power utility, telephone lines and internal metallic water pipe system, if present, are connected together.

Users should not attempt to make such connections themselves, but should contact an electric inspection authority, or electrician, as appropriate.

CAUTION	Because the NetVenue terminal is a much heavier piece of equipment than Nortel Network's standard payphone, it requires two people to mount it on a wall. **Do not** attempt to mount it by yourself.

Regulatory notices

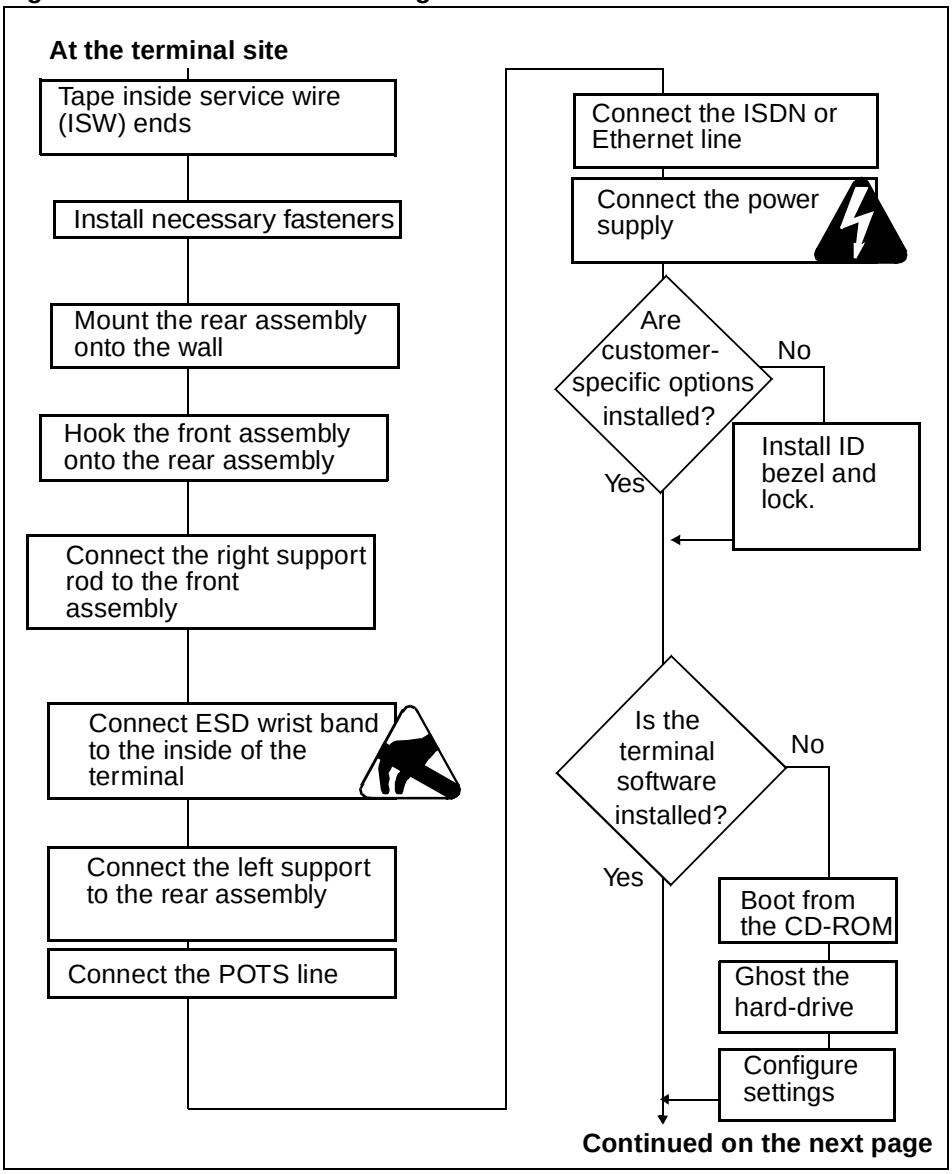
The Industry Canada label identifies certified equipment. This certification means that the equipment meets telecommunications network protective, operational and safety requirements as prescribed in the appropriate Terminal Equipment Technical Requirements document(s). Industry Canada does not guarantee the equipment will operate to the users' satisfaction.

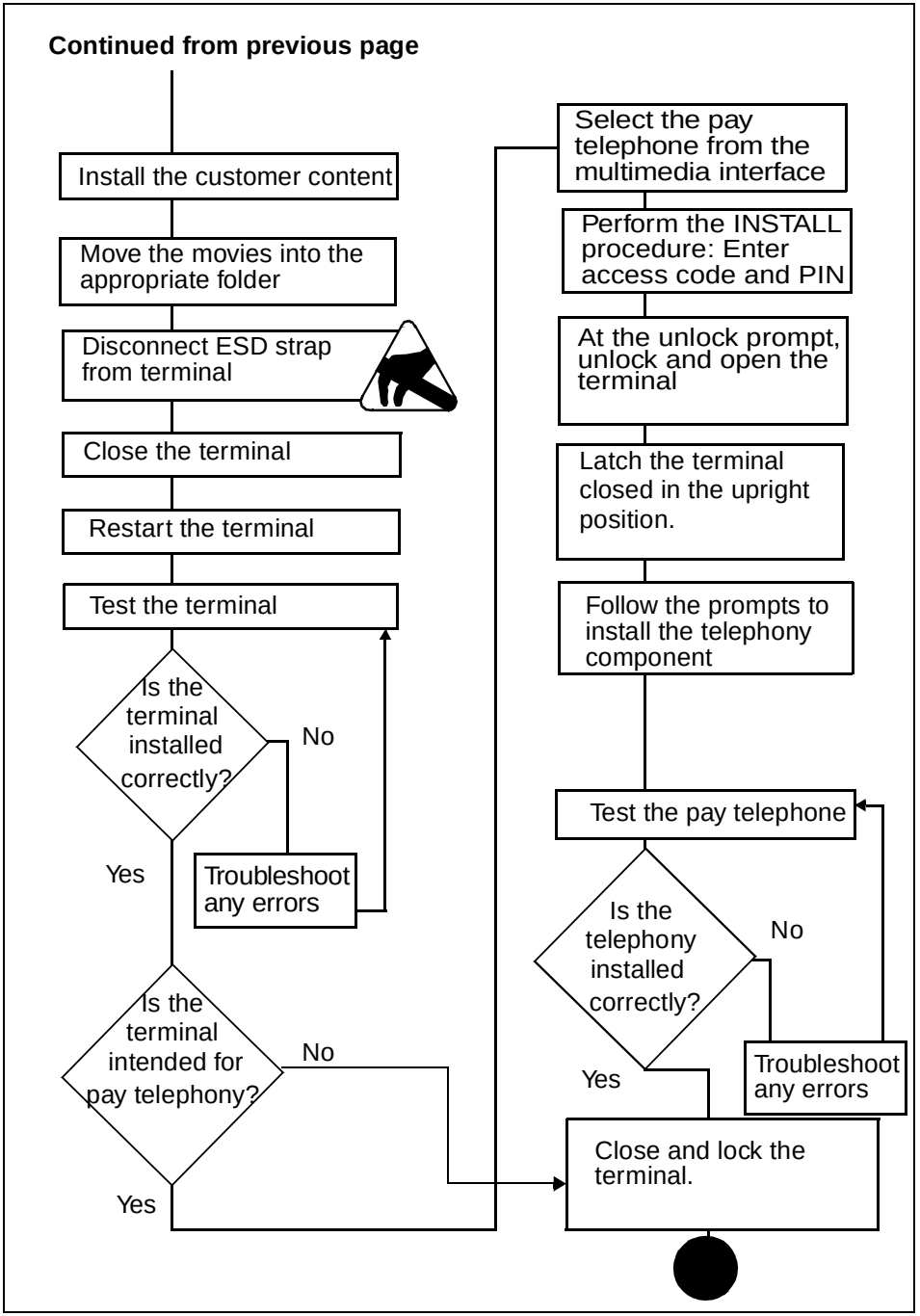
The **Ringer Equivalence Number** (REN) assigned to each terminal provides an indication of the maximum number of terminals allowed to be connected to a telephone interface. The termination on an interface may consist of any combination of devices subject only to the requirement that the sum of the Ringer Equivalence Number of all the devices does not exceed 5.

Outline of installation procedures

The flowchart of the procedure for installing a NetVenue terminal is as follows:

Figure 1-1: Flowchart — installing a terminal




Continued from previous page
Install the customer content
Move the movies into the appropriate folder
Disconnect ESD strap from terminal
Close the terminal
Restart the terminal
Test the terminal
Is the terminal installed correctly?
No
Yes
Troubleshoot any errors
Is the terminal intended for pay telephony?
No
Yes
Select the pay telephone from the multimedia interface
Perform the INSTALL procedure: Enter access code and PIN
At the unlock prompt, unlock and open the terminal
Latch the terminal closed in the upright position.
Follow the prompts to install the telephony component
Test the pay telephone
Is the telephony installed correctly?
No
Yes
Troubleshoot any errors
Close and lock the terminal.

2 Before installing

Several pre-installation preparations must be made before a NetVenue terminal can be installed.

- Arrangements should be made with telephony and network line providers to ensure that the necessary connections are available.
- The terminal must be configured on the Admin Tools.
- If using the pay telephony component, the terminal must be configured on the Millennium Manager.

Selecting a site

When selecting a site for installation of the NetVenue terminals, follow the standards and guidelines of the operating company. Consult the ***Provisioning guide*** for more information about choosing an appropriate site. In general, use the following as examples of items to be considered when selecting a site.

- The wall must be strong enough to support the terminal. The terminal must be mounted in wood, masonry, concrete, brick, cinderblock, or hollow tile. Do not mount the terminal in drywall. If the wall that you plan to mount the terminal on is not one of these surfaces, you must reinforce the wall.
- There is sufficient network connectivity. An IP connec-

tion (ISDN, Ethernet) and POTS line must be provided to the site.

- There is power dedicated to the NetVenue terminal.
- The site is accessible for public use.
- There is adequate lighting.
- There is sufficient privacy for the user.
- The location is not near excessive noise or vibration.
- The location is not near sources of grease, smoke or dust.
- The location is not near moving machinery, piled merchandise, narrow aisles or stairways.
- The NetVenue terminals and wiring will be at least 152 mm (6 inches) from neon light fixtures, transformers, or other equipment that could have inductive effects.
- If the terminal needs to be removed at a later date, the mounting surfaces will be inexpensive to repair.
- Any necessary furniture has been installed.
- The location cannot generate a lot of glare on the terminal screen.

Supplementary Power Requirements

You must consider the following issues relating to power requirements before installing a terminal.

- In current payphone installations, phone booths have supplementary power provided for the lighting. However, this power may or may not be available 24 hours a day. Some booths may obtain power from signs that are only turned on at night. This type of power source will not be adequate for the NetVenue terminals.
- To ensure that the terminal is completely installed and tested, the supplementary 120 volt power must be in place prior to the installation activities. The necessary lead period for the installation of the supplementary power must be taken into account in the installation

planning stage.

- Costs for wiring, conduits, service entrances, will have to be taken into account during the business analysis process.

The following is the detailed supplementary power requirement for the NetVenue terminal:

Power source: Local power using a wall plug-in (120VAC).

Tools and Equipment required

Before beginning installation, be sure that you have all parts of the NetVenue terminal, as well as the tools and equipment to install it, as described in Table 2-1.

Table 2-1: Tools and equipment required

Tool	Function
Voltmeter	Test voltage of supplementary power supply.
ESD wrist strap (NPS50332-01 L15)	Protect electronic components from electrostatic (ESD) damage.
Bootable CD with base software load	Used for installation or repair of PC and hard drive.
Butt-end test set	Test the CO line to the terminal and to use during fault resolution procedures.
Cleaning Card (PO713140 - dry type)	Clean card reader.
Cable Plug crimper	To add RJ11 or RJ45 jacks to required cables.
Crescent wrench	Miscellaneous functions.
Small slot-head screwdriver	Miscellaneous functions.
#1 Type 1A cross-recess screwdriver (such as a Phillips)	Miscellaneous functions.

Tool	Function
Valid Credit card/ Smart card	Required for testing card applications.
EIDE CD-ROM drive	Used to upload new information to the terminal.
Laptop PC with Soho Router program	To test and program the network router devices and to ping various devices, and to configure the router if ISDN is used.
CD with customer content	For ongoing maintenance of terminal once installed, unless customer content can be downloaded over the network.
5/32” Allen key	Installation of lock.

Other hand tools may be required for each installation site. In addition to the tools described above, it is recommended that during the initial implementation stages of the NetVenue terminals, the repair vehicles be provisioned with one complete set of field replaceable parts. As you gain experience with the terminals and with the management of the alarms, you can optimize the number of spare parts carried in the repair vehicles.

CAUTION	Because the NetVenue terminal is a much heavier piece of equipment than a standard payphone, it requires two people to mount it on a wall. **Do not** attempt to mount it by yourself.

Naming conventions

It is important to follow a meaningful naming convention for the terminals you will be installing. Each terminal is assigned a unique name that is used in various places including administration software, reports, network and monitoring.

This name is also used in various day-to-day communication between support groups, customers, maintenance technicians, etc.

You may use your own discretion when naming terminals, but the naming convention decided upon must be consistent. The names must be a minimum of eight characters in length.

Recording the terminal configuration

In addition to the name of the terminal, there are other configuration parameters which you must have before installing each NetVenue terminal. It is suggested that you make copies of Table 2-2 and fill one out for every terminal. This information will be available on the Help Desk administration application.

Table 2-2: Configuration Parameters

Item	Value	Notes
Terminal Name		A brief, unique name for this terminal. It will be used as the Computer and hard drive name. Please refer to the section Naming conventions on page 2-4 prior to choosing a name.
IP Address		This set of parameters is required for the networking configuration. You can obtain these parameters from your Network Administrator.
Subnet mask		
Default gateway		
DNS server (primary and secondary DNS)		
Database server IP address		This set of parameters is required to configure the database connection the terminal uses. You can obtain these parameters from your Terminal Administrator.
Database instance name		
Security database user ID		These parameters are required for accessing the security database.
Security database password		
Terminal access code		These parameters are only required if pay telephony is being installed on the terminal.
PIN Number		
Terminal ID		
Millennium Manager Phone number		

3 Hardware installation

This chapter contains instructions for installing the NetVenue terminal hardware.

Selecting the proper fasteners

Table 3-1 lists the recommended fasteners for common wall and furniture materials and the minimum number of fasteners recommended to be installed to ensure the terminal is secure.

CAUTION

- **Do not** install the terminal on drywall. The NetVenue terminal must be mounted on wood, masonry, concrete, brick, or a similar surface.
- **Do not** attempt to mount the terminal by yourself. It is a heavy piece of equipment and requires two people to mount it.

Table 3-1: Fasteners for the backboard

Surface	Hole size	Size and type of fastener	Bolts
Softwood	0.25 inch (1/4 inch)	3 inch lag bolt	4
Hardwood	0.25 inch (1/4 inch)	3 inch lag bolt	4

Table 3-1: Fasteners for the backboard (Continued)

Surface	Hole size	Size and type of fastener	Bolts
Masonry, concrete, brick	0.25 inch (1/4 inch)	3 inch lag bolt	4
Cinder block, hollow tile	0.75 inch (3/4 inch)	1-1/4-inch X 4-inch RH toggle bolt	4

Preparing the mounting surface

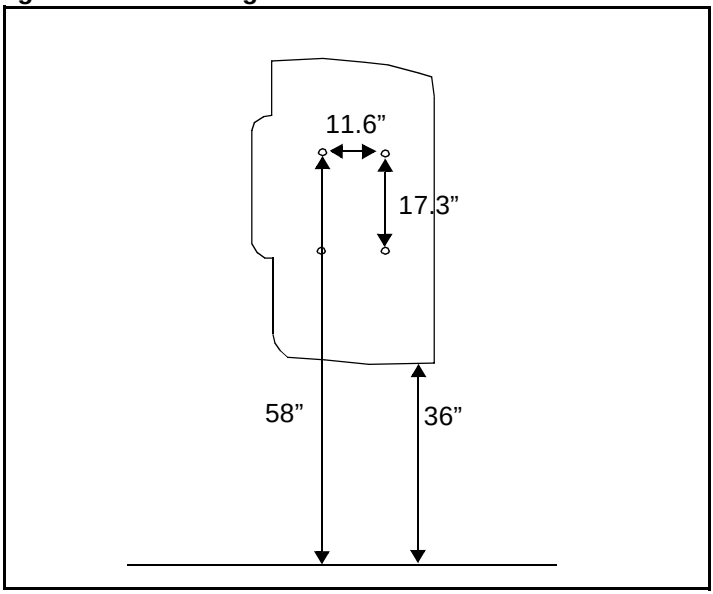
The mounting position of terminal depends upon the standards of the operating company. The following example shows a possible mounting configuration. For American Disabilities Act compliance information, consult the Product guide.

In this example, the NetVenue terminal is mounted with the bottom at 36 inches from the floor. This means that the inside service wires must be 50 inches from the floor.

Two 3-inch lag bolts must be on the wall prior to installation. These must be 58 inches from the floor, and 11.6 inches from each other from each other.

Another two lag bolts will secure the terminal wall during installation. These lag bolts will be mounted 17.3 inches below the first two lag bolts. Be sure that this space will accomodate lag bolts. Figure 3-1 shows these locations.

Figure 3-1: mounting location



Testing the lines to the terminal

Before you install the terminal, you need to make sure that you have a working POTS line, network connection, and the proper level of supplementary power. If any of these tests fail, the terminal will not function. It can still be mounted on the wall, but it will not be functional until the telephone line, the network connection and the supplementary power supply are functioning properly.

- Use your butt-end set to test the telephone line.
- Use your laptop computer to test the ISDN connection, using Ping software.

  1. Ping the server.

  2. Ping the Default Gateway.

3. If either of the first two steps are unsuccessful, ping a local IP address. If all of the steps fail, there is a problem with the laptop computer or the local connection. If steps one or two fail, there is a problem on the network, but the local network is working properly.

- Use a multimeter to test the voltage power supply.

DANGER 	**Do not** install a terminal during a lightning storm **Do not** install telephone jacks in wet locations, unless they are designed for wet locations **Do not** touch uninsulated wires or terminals unless the line has been disconnected at the network interface

Mounting and connecting the terminal

The following procedures describe how to install a NetVenue terminal and how to power it up. This procedure assumes that you have already prepared the location for installation and have tested the service wires.

CAUTION 	• Be sure when you are unpacking the terminal that you remove the safety latch located at the top of the terminal before lifting the rear assembly. • The NetVenue terminal must be mounted on a vertical surface.

Positioning the terminal

The following steps describe the procedure for mounting the NetVenue terminal to the wall.

1. Prepare the ISW by cutting off the exposed ends and wrapping them with electrical tape.

   The tape ensures that the bare wires will not touch the internal components when you insert the wires into the terminal.

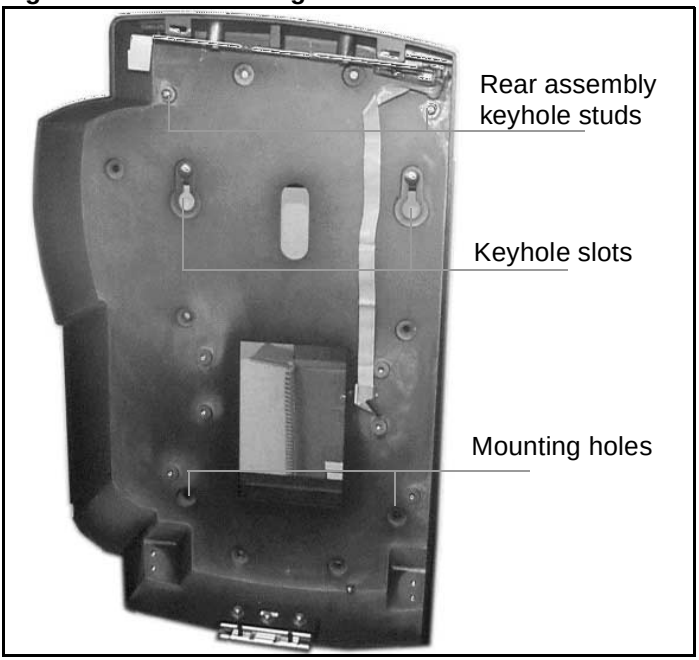
CAUTION 	• Observe normal electrical wiring precautions when handling the wires. • **Do not** attempt to mount the terminal by yourself. It is a heavy piece of equipment and requires two people to mount it.

2. Lift the rear terminal assembly and line up the ISW with the wiring access hole in the back of the terminal as you move the rear housing towards the wall.

3. Line up the keyhole slots in the rear housing with the lag bolts mounted on the wall.

4. Let the rear housing slide down into place, as shown in Figure 3-2.

Figure 3-2: rear housing



5. Use the lag bolts to secure the rear housing to the wall using the mounting holes indicated in Figure 3-2.

6. On the rear hinge, pull the black tabs inward as far as they will go, then push them down. They will lock in the down position.

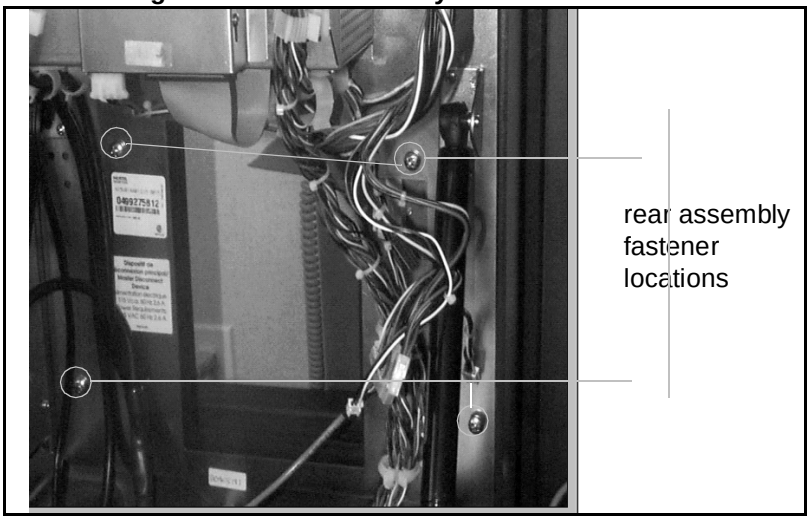
7. Remove the rear assembly from the box.

8. Line the rear assembly up with the rear assembly keyhole studs shown in Figure 3-2.

9. Hook the keyhole slots onto the keyhole studs, and let the rear assembly slide down into position.

10. Use the four screws supplied with the terminal to secure the rear assembly to the rear housing. Mount these screws in the four locations around the rear terminal access hole, shown in Figure 3-3.

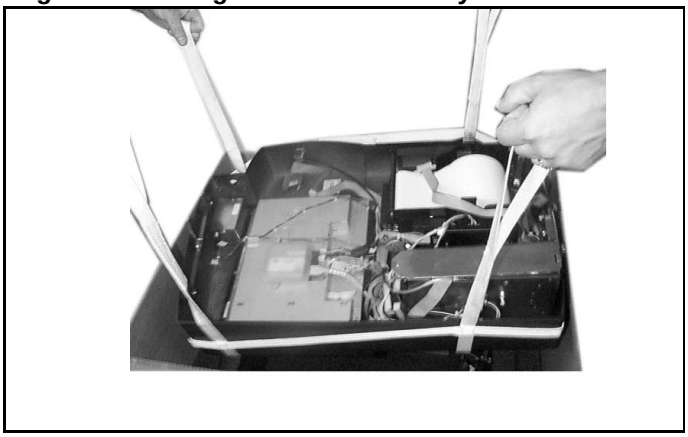
Figure 3-3: rear assembly fasteners



11. Make sure that the black tabs on the rear housing are set to the inward position.

12. **Do not** remove the ESD protection shield from the front assembly. Grip the harness straps and lift the front assembly, with one technician lifting on either side of the terminal,as shown in Figure 3-4.

Figure 3-4: lifting the front assembly



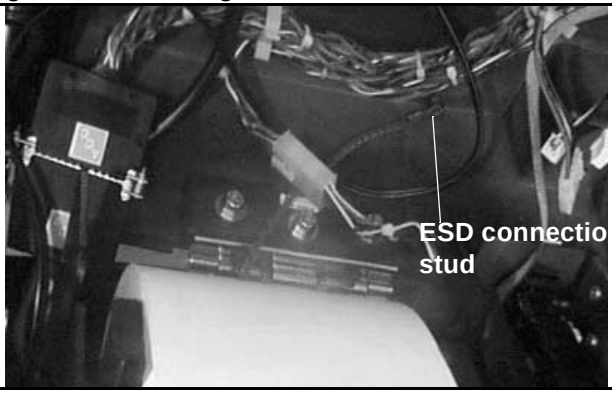
13. Holding the front assembly horizontal, line up the hinges at the bottom of the assemblies.

14. When the hinges are lined up, release the black tabs on the rear hinge. This will lock the front assembly into place. **Do not let go of the front assembly.**

15. Locate the right-hand support rod on the rear assembly. Snap it onto the side of the telephony unit. Cover the ball joint with the plastic snap-on cap provided.

16. Locate the protective earthing conductor near the hinge on the front assembly. Attach it to the connection stud on the rear terminal, as shown in Figure 3-5.

Figure 3-5: Earthing connector



Warning	Ground the terminal during installation. Compliance with UL and CSA specifications are met only with a protective earthing ground.

17. Remove the ESD shield and the harness.

CAUTION 	Do not proceed without connecting the protective earthing conductor to the ground terminal on the bottom of the rear housing. Connect the safety ground from the main wiring coming through the mounting wall to the same dedicated grounding stud on the rear housing.

18. Connect the left support arm. Cover the ball joint with the protective plastic cap provided.

19. Use the T-tool to make sure that the terminal is in the open position. Close the terminal by swinging the front assembly up. If the terminal does not fit together, make sure that the T-tool closure is in the open position, and the key lock is open. Apply pressure to the top corners of the terminal, rather than pushing in the middle.

CAUTION 	When closing the terminal, always lift the terminal evenly by holding the top corners of the front assembly. Do not let the front assembly tilt to the side when you are closing it. Do not slam the terminal. When closing the terminal, close it gently. Make sure the locking bar is in the open position.

20. When the terminal fits together, lock it by turning the T-tool. Then use the key to lock the terminal.

Unlocking and opening the terminal

To access the interior of the terminal, you need to use both the key and a locking tool, either an L- or T-tool.

1. Put the key in the lock on the upper terminal housing.

2. Turn the key clockwise to unlock the lock.

See this 	If it is difficult to turn the key, insert the T- or L-tool into the hole below the key lock hole and apply a slight force counterclockwise to relieve the pressure on the key. At the same time, turn the key clockwise.

3. Release the housing mechanism.
   Insert the T- or L-tool into the hole on the top of the terminal, and rotate the tool clockwise until it cannot be turned further.

4. Remove the handset from its cradle and let it hang by the cord.

5. Grasp the front housing assembly firmly by both sides and tip it forward until it clears the rear housing.

   Allow the front housing to hang.

   In the fully opened position, the weight of the front housing is supported by the link assembly, which is a removable tie-rod attached to the front and rear housing.

6. Attach your ESD strap to a connection point inside the terminal. This can be any metal, non-painted surface.

7. Pull the ISWs all the way into the terminal and position them so they are not touching any of the boards.

See this 	**Serial number** The serial number of the terminal is located on the product ID label on the rear housing. This number is required for the software INSTALL routine.

Connecting wiring

There are several wires within the terminal which you must connect. In addition, you must connect the outside service wires.

Connecting the main power

This procedure explains how to connect the main power to the terminal.

Since you are working with electrical components, take the proper safety precautions.

ESD precautions 	• To prevent damage to the electrostatic-sensitive devices in the terminal, wear your ESD wrist strap. • Connect your wrist strap lead to an ESD connection point inside the terminal. Any non-painted metal surface, such as the top edge of the multimedia component will work. Once a lock is installed, you can attach your ESD strap to a key in the lock.

Plug the main power cable into the grounded power line from the wall.

Connecting telephony and network lines

There are many different ways that the terminal network and telephony options can be configured. This depends upon whether the telephony line requires IAS, or whether the network connection is Ethernet or ISDN.

If you are not sure if answer supervision is provided, you must test for it. The terminal cannot support pay telephony if the

Use Table 3-2 to determine which option is appropriate for each terminal. Select the column that describes the lines going into the terminal, then select the answer supervision setting from the row.

Table 3-2: network and telephony connections

	Ethernet and phone	**ISDN and phone**	**ISDN**
line has answer supervision or does not require pay telephony	1. Connect the Ethernet line to the network port. 2. Connect the phone-line to the rear terminal board.	1. Install the router 2. Connect the ISDN line to the router. 3. Connect the phoneline to the rear terminal board.	1. Install the router. 2. Connect the ISDN line to the router. 3. Connect the phoneline from the router to the rear terminal board.
line does not have answer supervision and requires pay telephony	1. Install the IAS module. 2. Connect the Ethernet line to the network port. 3. Connect the phone-line to the IAS module.	1. Install the router 2. Install the IAS module. 3. Connect the ISDN line to the router. 4. Connect the phone-line to the IAS module.	The ISDN line cannot support pay telephony.

Connecting internal wiring

There are a few cables between terminal components that must be connected. Figure 3-6 and Figure 3-7 show the location of these connections. Figure 3-7 shows a close-up of the hinge area, where most of these connections are.

Figure 3-6 internal connection #1

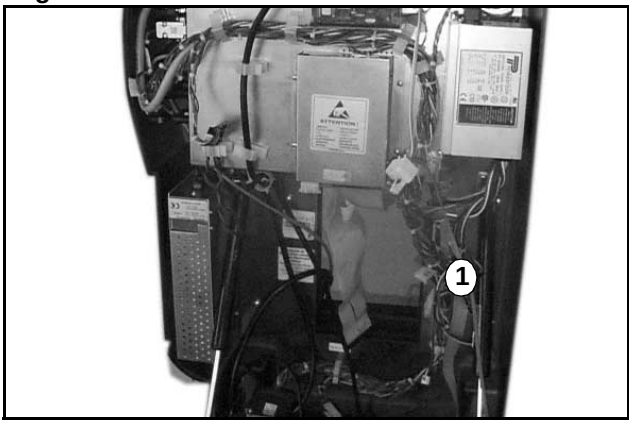
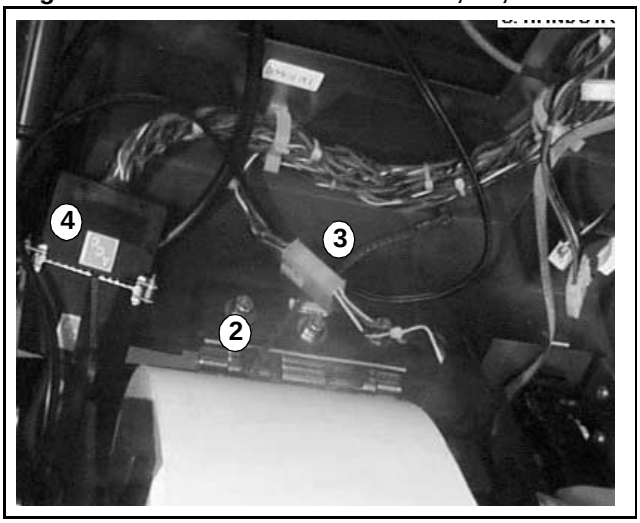


Figure 3-7: internal connections #2, #3, #4



1. Connect the rear terminal board ribbon cable with the telephony ribbon cable. The rear terminal board ribbon cable runs behind the rear assembly and ends to the left of the rear terminal access hole. The telephony ribbon cable is located on the rear assembly.

2. Connect the LCD power cable with the LCD power supply. The LCD power cable is a small, black cable on the rear assembly. The connection on the end resembles the number “8”. It plugs into the left side of the LCD power supply, which is between the receipt printer and the hinge. You may want to remove the paper from the receipt printer to do this.

3. Connect the printer control cable with the printer control panel. The printer control cable is located at the bottom of the rear assembly and ends in a white plastic connector. The printer control panel cable is located at the rear of the printer control panel, and has a matching white plastic connector.

4. Connect the rear assembly main wiring with the front assembly main wiring. The rear assembly main wiring is a thick collection of cables at the bottom of the rear assembly. It ends in a large black connector. The front assembly main wiring is located on the front assembly, and has a matching black connector.

4 Installing hardware kits

Generally, the NetVenue terminal will arrive without some options installed. There are currently four kits which must be installed on the terminal. They are:

- ID bezel
- lock
- router
- IAS module
- keyboard

After the terminal is mounted on the wall, you can install these devices.

Installing the ID bezel

The following procedure assumes that the terminal is already mounted. It is possible, however, to replace the ID bezel before the terminal is mounted. In addition to a NetVenue terminal and ID bezel, you will also need a cross-recess screwdriver.

1. Place the new ID bezel in the ID bezel space from below.

2. Tighten the three ID bezel screws to secure the ID bezel.

Installing the lock

The following procedure assumes that the terminal is already mounted. it is possible, however, to install a lock before the terminal is mounted. You will need a 5/32 allen key or similar screwdriver.

1. Place the customer specific lock in place.
2. Using the screws provided, screw the lock into place with the allen key.

Installing the router

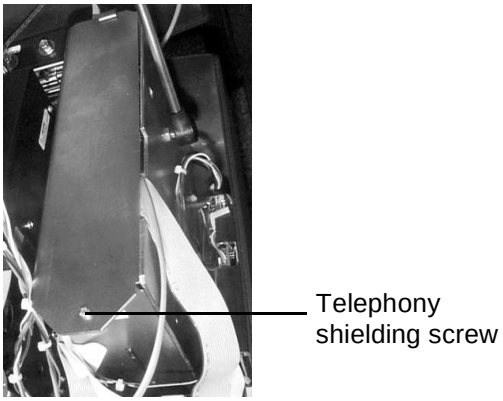
The router installation procedure is different, depending on the type of router that you are using. Please refer to Appendix B: Configuring a SoHo router for information on installing supported routers.

Installing the keyboard

The following procedure explains how to install a keyboard on the NetVenue terminal. This will require you to remove the LCD power supply and the telephony boards.

1. Remove the receipt printer paper.
2. Use a screwdriver to remove the cover from the LCD power supply, located between the receipt printer and the hinge. You do not need to disconnect the power supply.
3. Remove the screw on top of the telephony component. Figure 4-1 shows the location of this screw.

Figure 4-1: telephony component shielding



4. Remove the telephony component shielding.

5. Remove the telephony boards. This requires you to pull outward on the shielding at either end the telephony boards as shown in Figure 4-2, then pull up on the boards.

Figure 4-2: removing telephony boards

6. Slide the bottom keyboard bezel component (the one without the actual keyboard) into the slots on the front of the rear terminal. Use the screws provided to fasten the keyboard bezel to the terminal.

7. Run the keyboard wire and the glidepad cables out through the keyboard access hole.

8. Connect the glidepad cables.

9. Connect the keyboard cable to the keyboard firmware connection. The grooved side of the connection should be facing down.

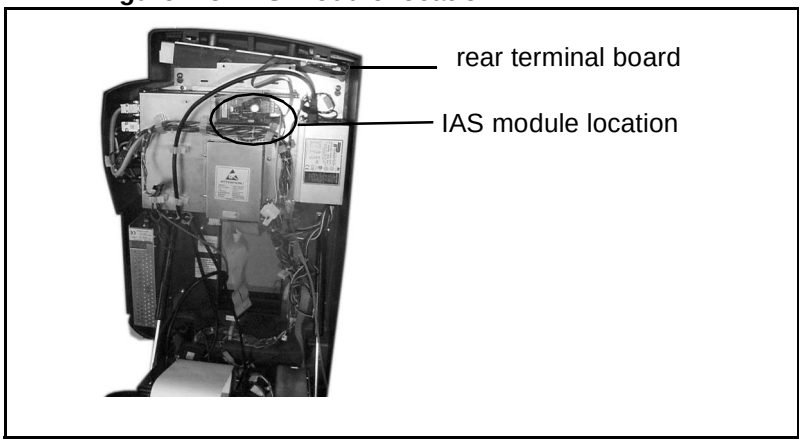
10. Use the screws provided to attach the upper keyboard bezel to the terminal front.

Installing the IAS module

The IAS module must be installed if the analog line does not have answer supervision. If an analog line is not being used, pay telephony cannot be supported.

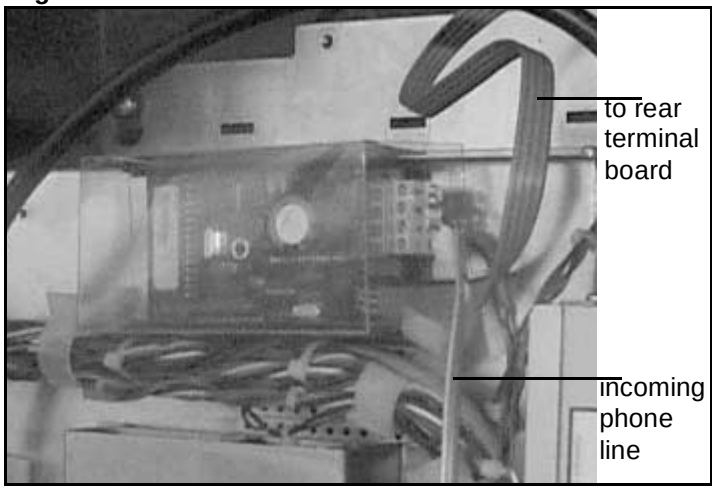
Attach the adhesive surface of the IAS to the rear assembly, in the location indicated in Figure 4-3.

Figure 4-3: IAS module location



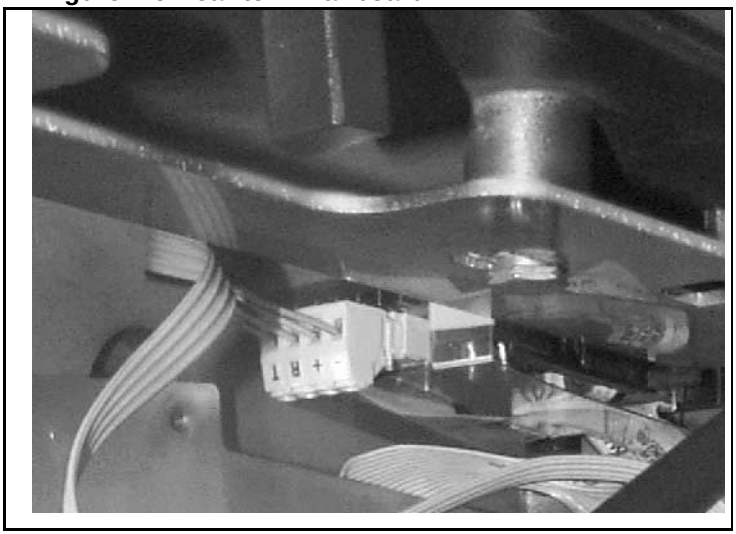
Connect the incoming phone line to the IAS module, as shown in Figure 4-4.

Figure 4-4: IAS module



Connect the IAS ribbon cable to the rear terminal board, as shown in Figure 4-5.

Figure 4-5: rear terminal board



5 Software installation

Software installation for the NetVenue terminal invloves

- partitioning the hard drive,
- installing the image of the operating system, Nortel Networks software, customer content,
- configuring settings.

Generally, the terminal will arrive with the hard drive partitioned and the OS image installed.

Make sure the terminal contains the basic software and the customer content by booting it up. If it goes into the appropriate service and operates properly, the software is already installed.

To install the software, use the following procedure. If the software is already installed, skip to Configuring network settings on page 5-11.

Connecting an external CD-ROM

Use the following procedure to connect an external CD-ROM drive.

1. Open the terminal and let the front assembly hang. Ensure that the power to the terminal is off.

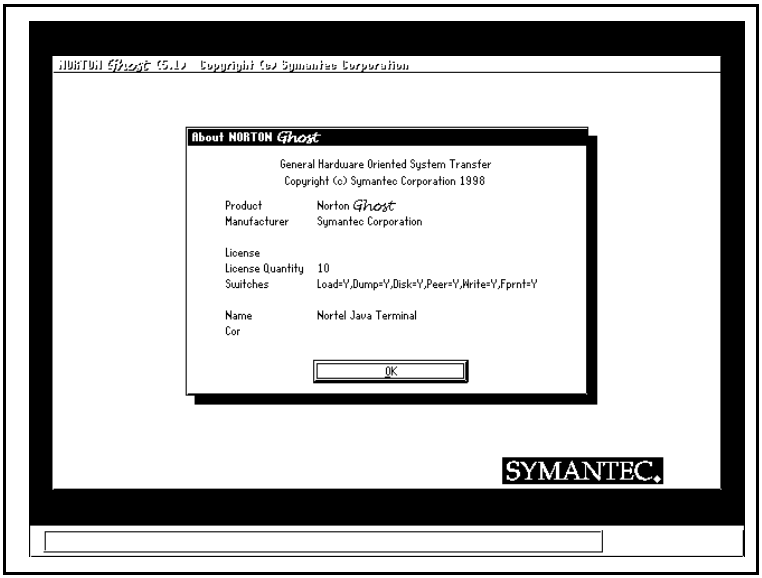
2. Connect the external CD-ROM drive to the EIDE port.
3. Power-up the CD-ROM.
4. Set the external CD-ROM drive on top of the terminal.
5. Close the terminal enough so that the security latch hooks onto the rear assembly. Let go of the front assembly slowly, to be sure that the latch is in place.

Ghosting the hard drive

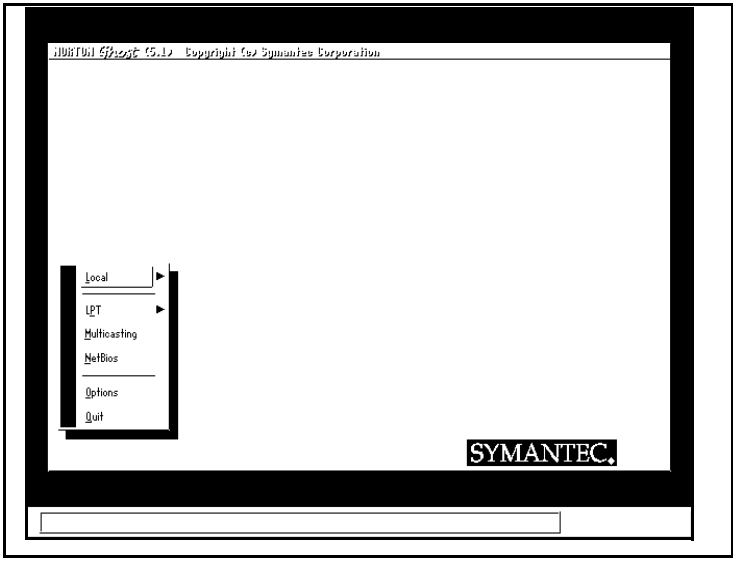
This procedure copies all of the necessary files on to the NetVenue. This does not have to be performed unless the software has to be re-installed. The terminal will arrive from the factory with the hard-drive already partitioned and ghosted. Before ghosting the hard-drive, you must connect the CD-ROM drive, as explained in the previous procedure. Once the CD-ROM drive is connected:

1. Insert the Net Venue CD in the CD-ROM drive.
2. Restart the terminal. The terminal boots up to the DOS prompt. If the terminal boots up into a service, the BIOS is configured incorrectly. See the trouble-shooting section of this document for information on configuring the BIOS.
3. If the DOS prompt does not say `D:\>`, type `D:` and press enter.

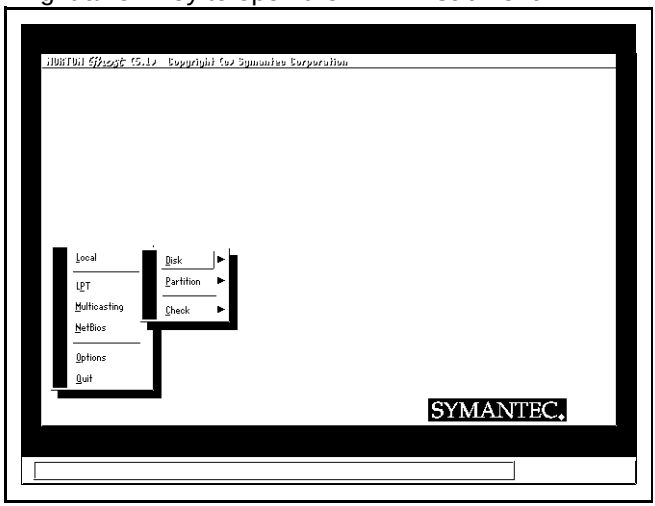
4. Type **`Ghost`** and press enter. The Ghost software starts.



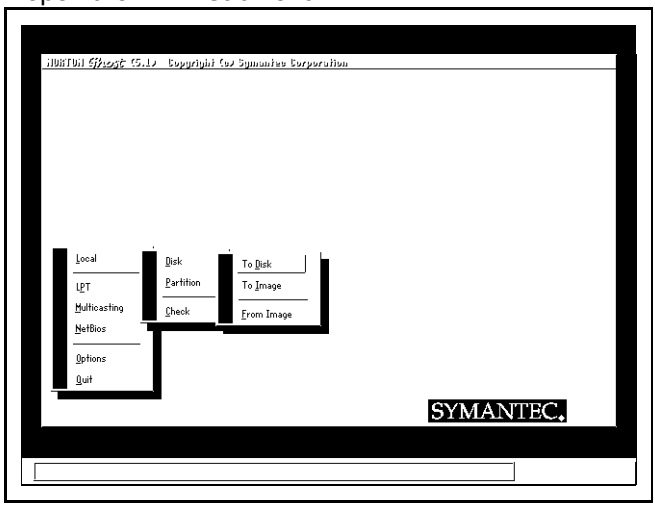
5. Press **`Enter`**. The Main menu appears in the bottom left corner of the screen.



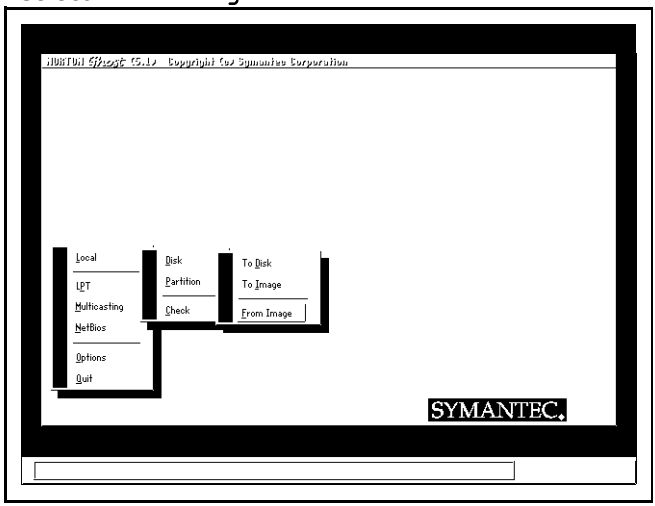
6. The **`Local`** option is selected be default. Press the right arrow key to open the **`Local`** submenu.



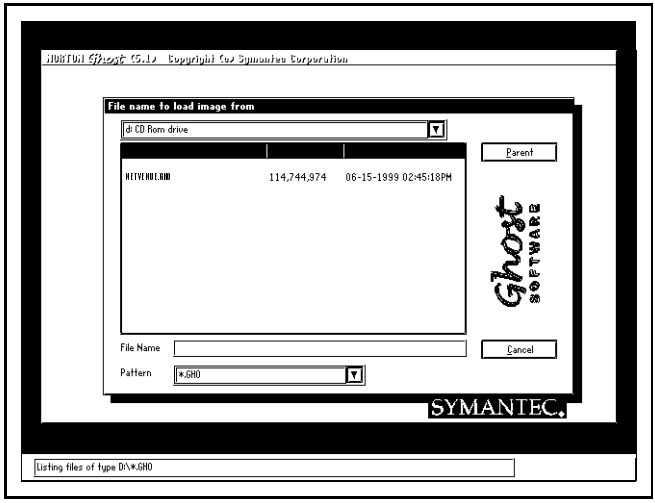
7. From the **`Local`** submenu, select **`Disk`**, which should be selected by default. Press the right arrow key to open the **`Disk`** submenu.



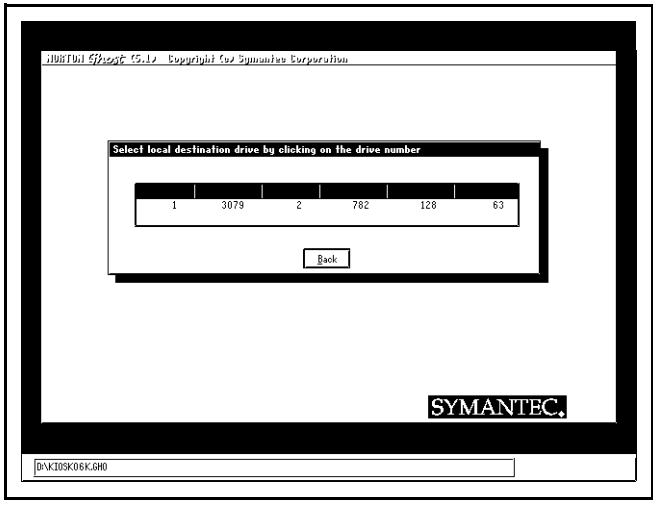
8. In the **Disk** menu, press the down arrow key twice to select **From Image**.



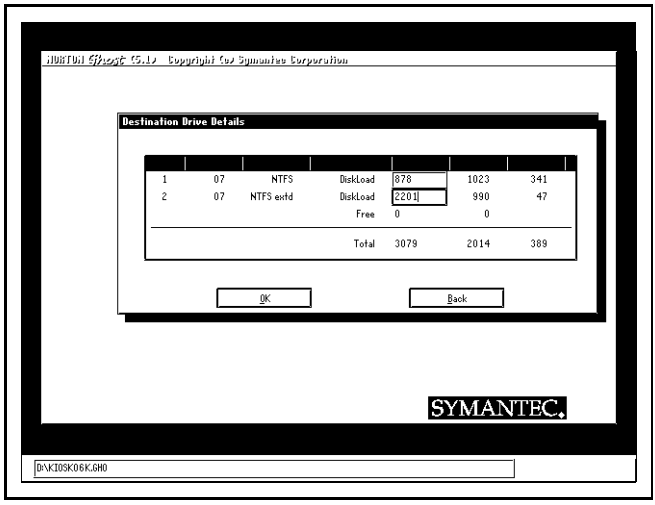
9. Press **Enter**. Ghost displays the **NETVENUE.GHO** file found on the CD-ROM drive.



10. Press **Enter**. Ghost displays the **Destination Drive** window.

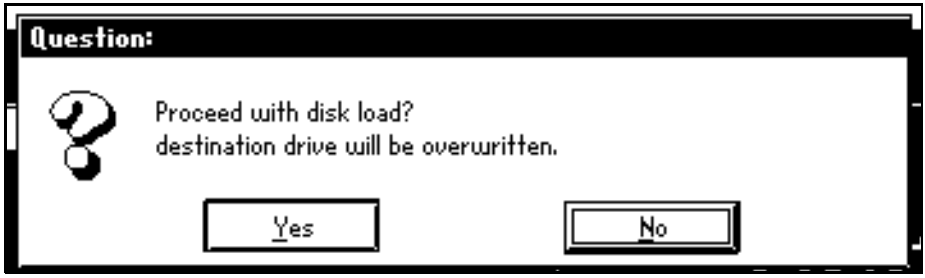


11. Press **Enter** to accept the default destination drive. Ghost displays the **Destination Drive Details** window.

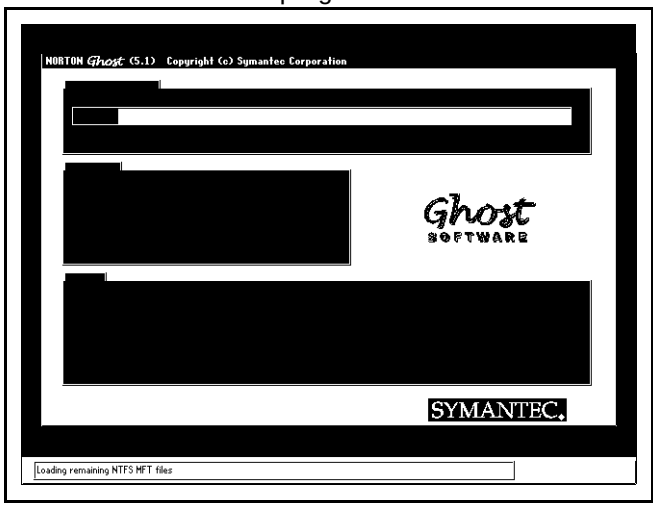


12. Make sure the value for the first partition is **1000**.

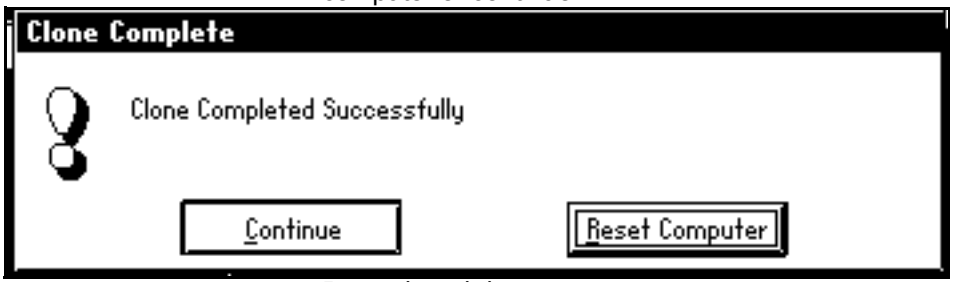
13. Press the **Tab** key to move to highlight the **OK** button, then press **Enter**. Ghost asks whether to proceed with the disk load.



14. Press the **Tab** key to get to the **Yes** button, then press **Enter**. Ghost now installs the software This process can take several minutes. The status bar at the top of the screen shows the progress of the installation.

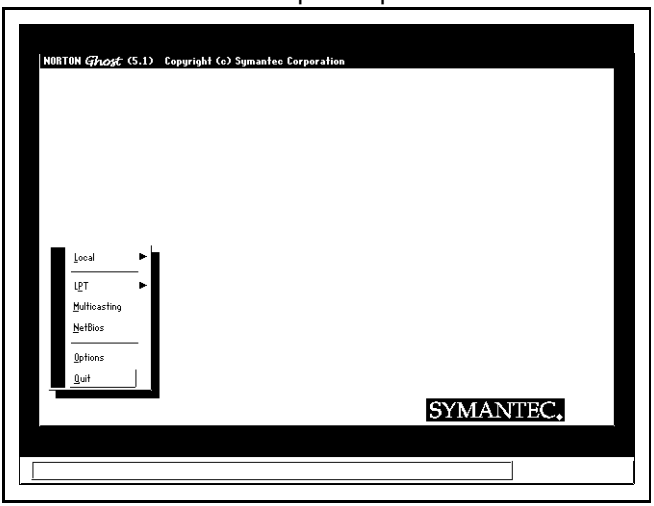


15. When it is complete, Ghost asks whether to restart the computer or continue.



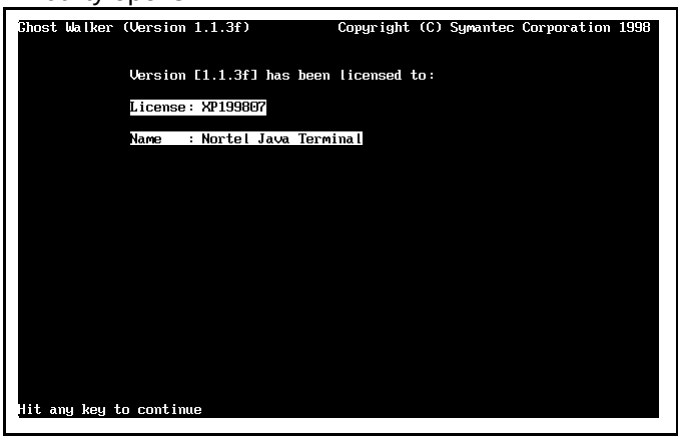
Press the tab key to get to **`Continue`**.

16. Press **`Enter`**. The computer opens the main menu.

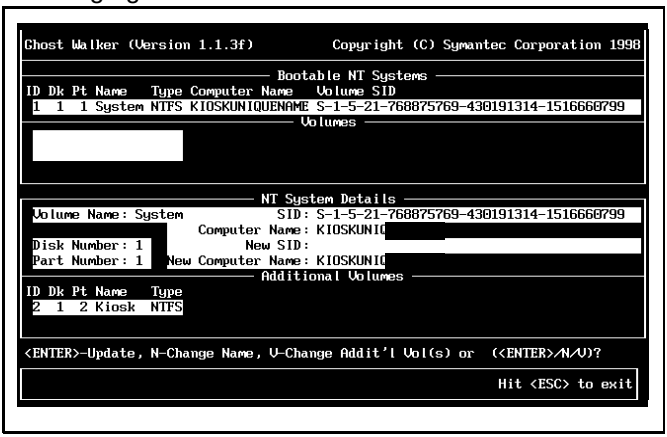


17. From the main menu, select **`Quit`**, then press **`Enter`**. The program exits to the **`D:\>`** prompt.

18. Type **GHSTWALK**, then press Enter. The Ghost Walker utility opens.

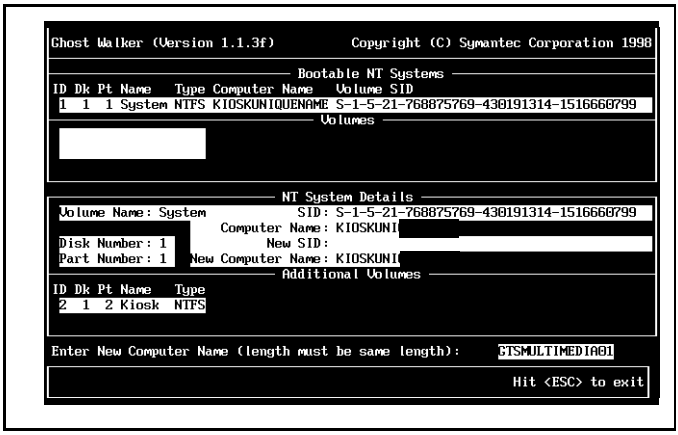


19. Press any key. Ghostwalker detects the Windows NT installation and displays the system details. The prompt line is near the bottom of the screen, and offers you the choices of updating, changing the name, or changing additional volumes.



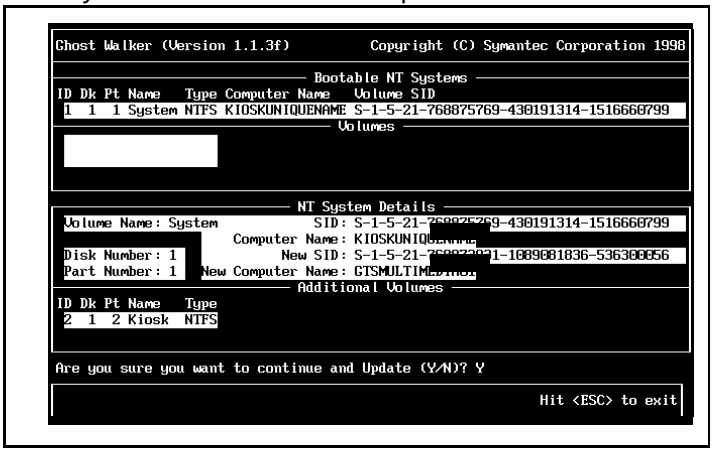
20. Press **N** to change the computer's name.

21. Enter the computer's name. It must be eight characters. You can change this to any length of name later. It can contain letters and numbers, but no spaces or special characters. It should be unique for each terminal.

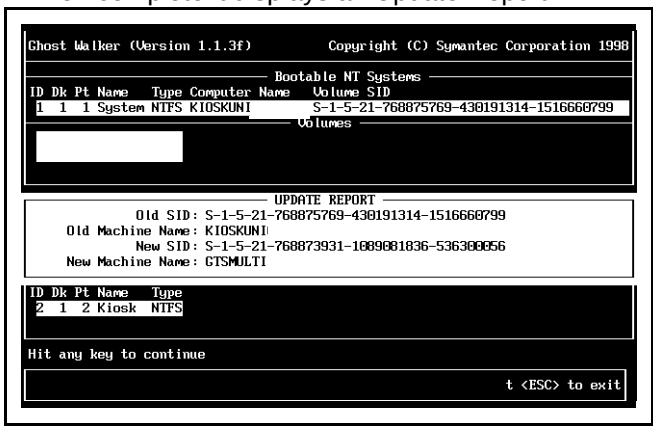


22. Press **Enter** when you have entered the new name.

23. Press **Enter** again. Ghostwalker asks if you are sure you want to continue and update.



24. Press **Enter**. Ghostwalker updates the registry. When complete it displays an Update Report.



25. Press any key to continue. The `D:\>` prompt appears.

26. Remove the CD from the CD-ROM drive and restart the computer by opening the terminal and pressing the restart button.

Configuring network settings

This procedure establishes the settings for the NetVenue terminal. Before configuring the settings, the operating system must be ghosted onto the hard-drive, if not installed, as explained in the previous procedure.

1. When the operating system boots for the first time, it performs a sanity check and takes a long time before displaying the Nortel Networks screen. The terminal will reboot once automatically during the sanity check. Do not interrupt this.

2. When Windows NT has booted to the **Nortel Networks** logon screen, press the Tab key to interrupt the auto-logon.
   If you do not press the Tab key while the logon screen is visible, it will automatically start the terminal services. Press the shift, control, and backspace keys simultaneously to log out. The control key is the one depicting the Nortel Networks logo.

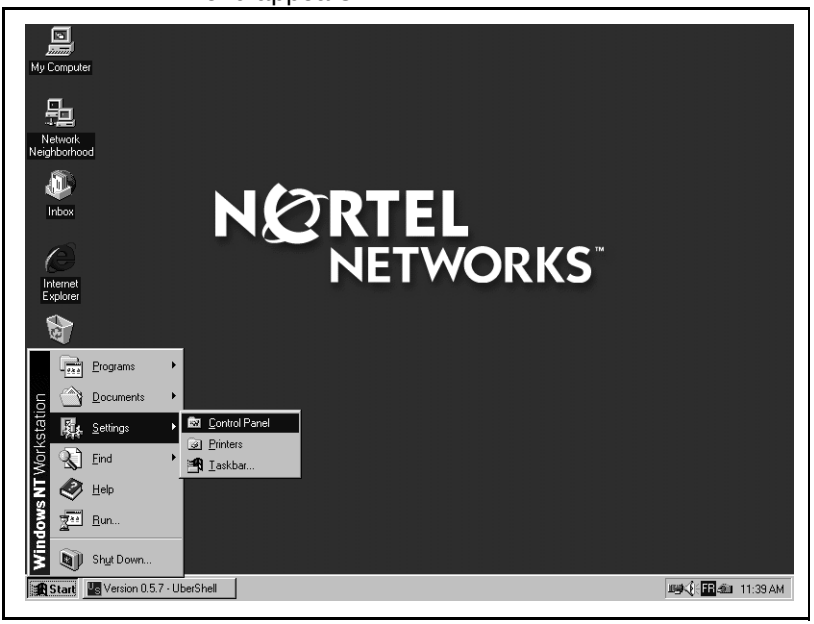
3. Enter **kioskadmin** as your user name.

4. Enter **kioskadmin** as your password. The terminal boots up to the desktop.

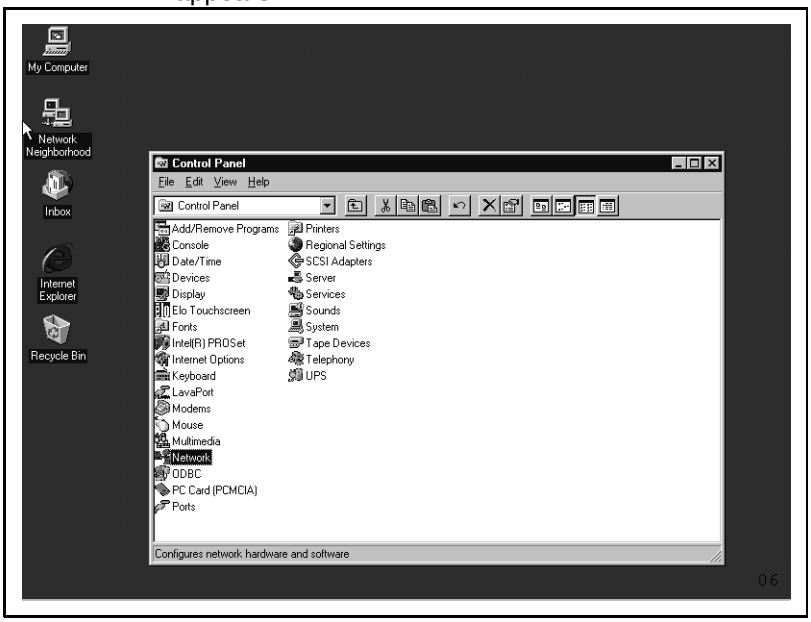
5. Click **OK** in the information window that appears. A Client alert window appears. Click **No**.

6. Close any windows on the screen.

7. In the **Start** menu, click on **Settings**. The settings menu appears.

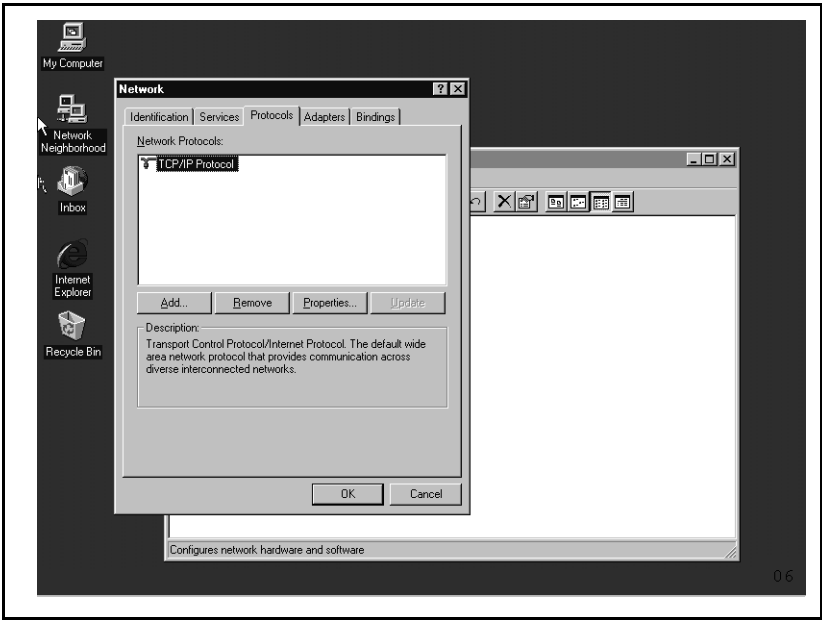


8. Double-click on **`Control Panel`**. The Control Panel appears.



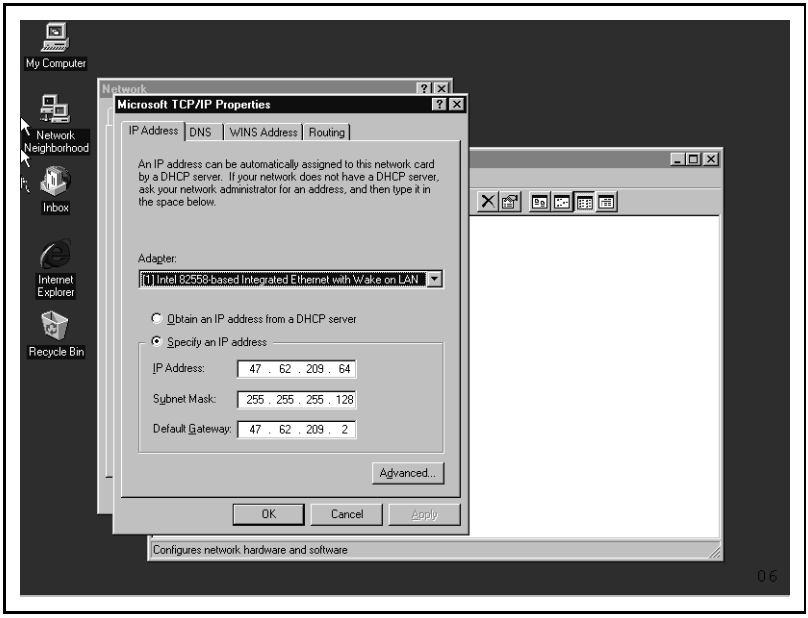
9. Click on **`Network`**. The Network Control Panel appears.

10. Click on the **`Protocol`** tab.



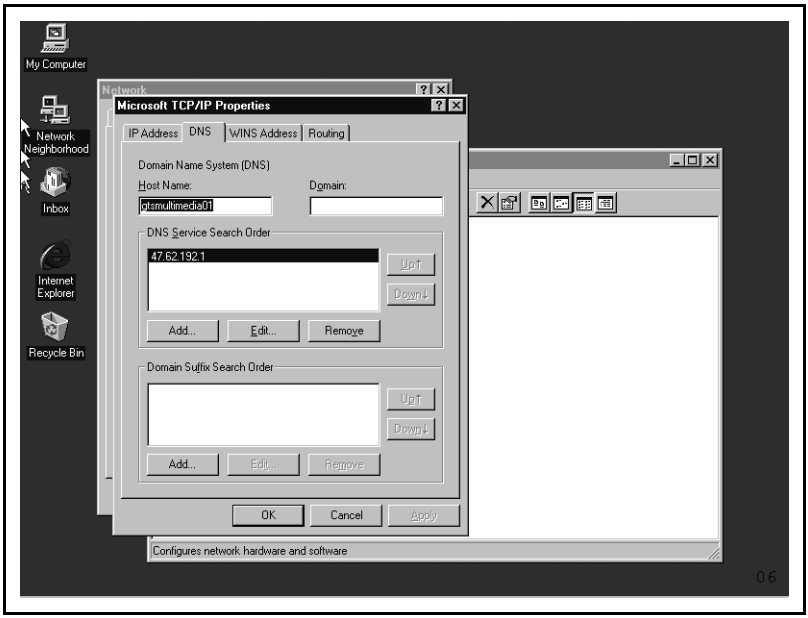
11. Make sure that **`TCP/IP Protocol`** is highlighted, and click **`Properties`**.

12. Enter the appropriate values in the **`IP Address`**, **`Subnet Mask`**, and **`Default Gateway`** fields. These values can be obtained from the network administrator.

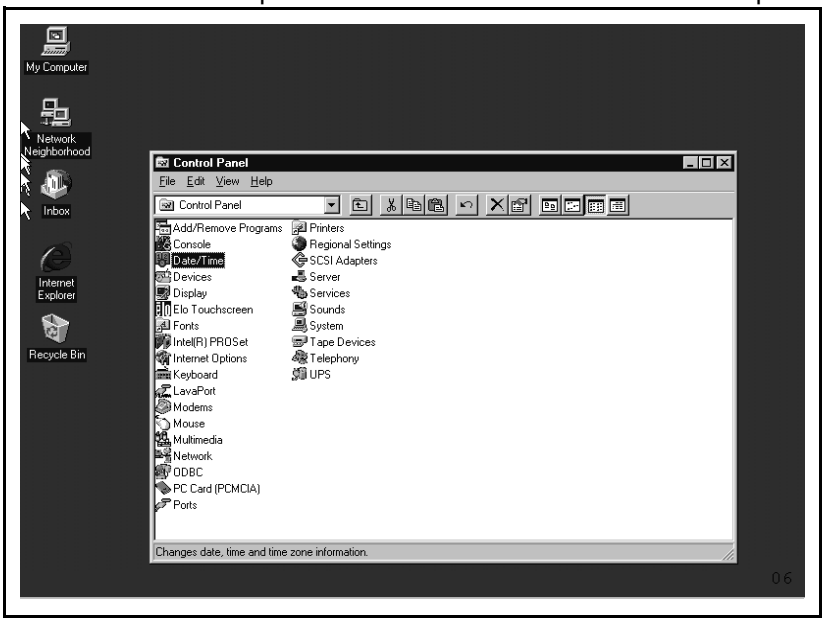


13. Click on the DNS tab.

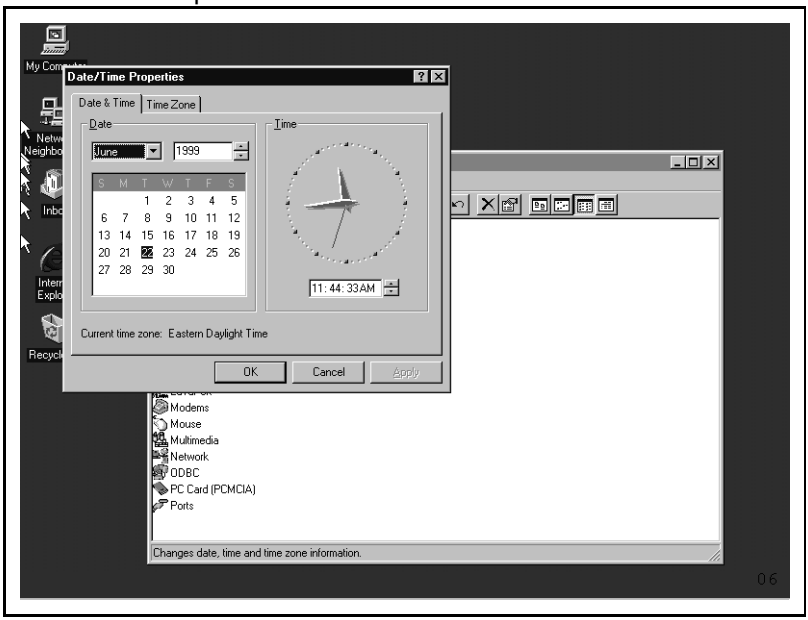
14. Enter the **`Host name`** and **`DNS server`**. These values can be obtained from the network administrator.



15. Close the TCP/IP properties panel and the network panel. Leave the Control Panels window open.



16. Open the Date & Time Control Panel.



17. Set the Timezone to the Timezone of the NetVenue Manager. Do not set to adjust automatically for DST.

18. Close the windows.

Changing the configuration file

The **`kiosk.cfg`** file contains all the information the terminal needs to contact the NetVenue Manager. Before the terminal uses this file, however, you must open it and change some values.

1. From the Windows NT start menu, select Run. The Run dialog appears.

2. Type D:\JavaKiosk\kiosk.cfg and press Enter. The contents of the kiosk.cfg file are displayed in Notepad.

The following fields must be changed:

- DB_SERVER=

- USER_NAME=
- PASSWORD=
- KIOSK_NAME=

Calibrating the touch screen

Before you can use the touch screen, you must calibrate it through the touch screen contol panel.

1. From the Start Menu, select **`Settings`**
2. In the settings submenu, select **`Control Panel`**
3. Double-click on **`ELO Touchscreen`**
4. Choose **`Calibrate`**
5. Follow the instructions
6. Close the control panel window

Configuring a laser printer

If you are using an extended NetVenue terminal that contains a laser printer, you will need to configure additional software on the terminal. See the appendices for information on configuring the model of laser printer you are using.

Installing the pay telephony component

The payphone component of the NetVenue terminal is operated through a soft payphone application, which appears on the touchscreen monitor. This interface is also used for telephony maintenance and repair. The following section prepares you to run the INSTALL routine, which must be performed to make the payphone operable.

Installing the soft payphone

If the NetVenue terminal has been set up to use pay telephony, the soft payphone application installs automatically. If the terminal is intended for pay telephony but the soft payphone application will not start, contact your Nortel Networks representative.

Entering the craft interface

This procedure is similar to the craft installation procedure for traditional Millennium terminals. All operations that are normally performed on the vacuum fluorescent display (VFD) are instead shown on the liquid crystal display (LCD), using the multimedia craft interface installed in the previous procedure. The touchscreen, keyboard, and glidepad must be used instead of the keypad.

Getting into the craft interface requires an access code and a PIN (personal identification number). These codes serve as security gates and as notifiers to the Millennium Manager of activity at the terminal.

Configure the access code and PIN in the Millennium Manager, based on the decisions of the operating company.

The Millennium manager dowloads the seven-digit **access code** is downloaded to the terminal when the terminal is installed. There is also a default access code resident in the terminal firmware.

Use the default access code if the assigned code will not work, such as when:

- a prolonged power failure has caused the terminal to lose its memory
- the control PCP or the firmware was replaced
- the INSTALL is being run for the first time. When the craft interface appears, this message appears on the screen:

About the INSTALL routine

The INSTALL first asks for the information to set up the initial call to the Millennium Manager. It then leads you through a series of terminal function tests.

The steps of the INSTALL routine include:

- testing the central-office (CO) line
- entering the telephone number of the terminal
- entering the serial number of the terminal
- entering the telephone number of the Millennium Manager, including any pre-dial strings.
- doing the answer supervision test
- downloading required information from the Millennium Manager to the terminal
- testing the buttons of the terminal
- testing the card reader — mag stripe cards

Note: To end the routine at any time, close and lock the terminal.

See this 	If you do not close and lock the terminal (with the T-tool) at the end of the INSTALL routine, it will not complete.

Preparing for an INSTALL session

To prepare for an INSTALL procedure, ensure that

- the terminal is properly mounted, if this is a first-time install
- the telephony boards are properly seated and the cables are connected, if either have been replaced
- the terminal has been closed and locked with the T-tool

With the terminal locked, this message appears on the LCD:

```
* out of service *
```

or this message appears on the LCD:

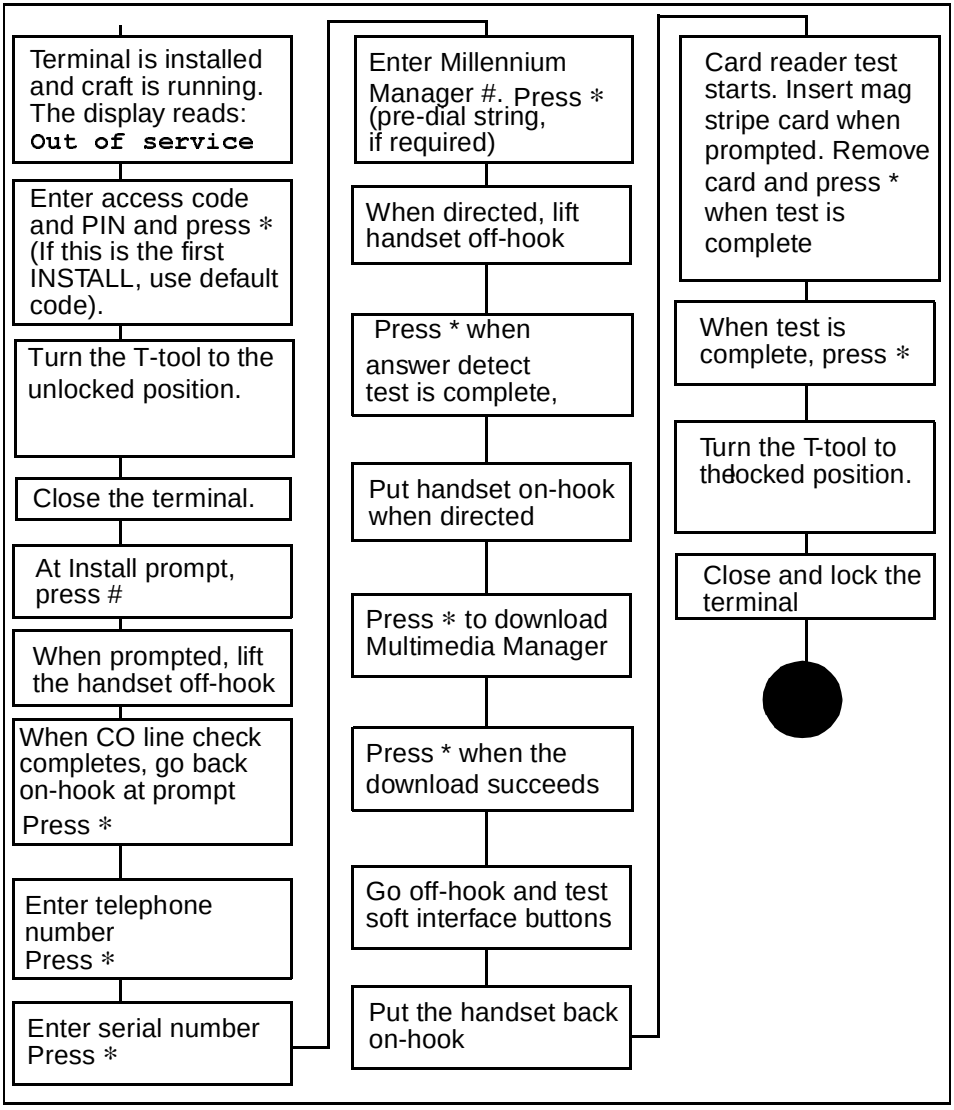
```
  (Date: YYYY/MM/DD)
* out of service *
```

With the terminal locked, you will either get the messages shown above, or you will still be in the craft interface and you will be able to continue with the procedure. If any other message appears on the display, troubleshoot the problem until the **`Out of Service`** prompt appears.

Flowchart — INSTALL

Figure 5-6 gives an overview of the INSTALL procedure. for NetVenue terminals.

Figure 5-6: Flowchart — INSTALL overview



Accessing the INSTALL prompt

When the terminal is ready to continue with the INSTALL procedure, as described in the previous section, follow these steps to enter the craft interface and perform the INSTALL routine.

- If this is the initial INSTALL for a terminal, use the default access code.
- If you make a mistake, press ♦ to clear the display, and enter the correct number.
- This message appears on the LCD:

```
Enter PIN: * * * * *
♦=Fix,*=Save, #=STOP
```

1. Enter your five-digit personal identification number (PIN) code

   As you enter the digits, they appear on the LCD.

   If you make a mistake, press ♦ and enter the correct number.

2. Press *.

See this 	If you unlock the terminal without pressing *, the terminal will send an alarm to the Millennium Manager indicating an illegal entry. Close and lock the terminal and re-enter the interface.

3. An unlock prompt appears on the LCD.

```
Please use key now
& open the terminal
```

4. Rotate the tool counterclockwise to release the housing locking mechanism.

5. If the terminal was not in operation before the installation procedure began, this message appears on the LCD:

```
Not installed
Use # to INSTALL
```

   Otherwise, this message appears on the LCD:

```
Use *=MENU, #=INSTALL
or dial item number
```

See this 	**Previously-installed terminal:** If you did not uninstall the terminal, ensure that you have completed a CDR upload before you press # to start the INSTALL

6. Press # in either case.

   Note: If the terminal is busy, another type of prompt may appear. Refer to the *Craft interface guide* for more information.

Performing the INSTALL routine

To run the INSTALL routine, proceed as follows:

1. Access the INSTALL prompt as described in the previous section.

2. Press #.

   The INSTALL routine first checks the central office (CO) line.

   This message appears on the LCD:

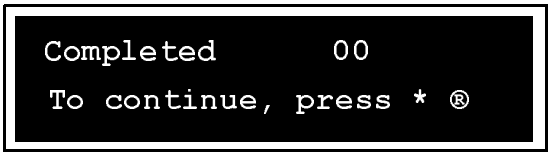
   

3. Lift the handset off-hook.

   This message appears on the LCD:

   When the routine detects both voltage and dial tone, this message appears on the LCD:

4. Press *.

   This message appears on the LCD:

Failed test: If the routine does not detect voltage or dial tone, this message appears on the LCD:

Refer to the appropriate error code in Appendix B of the craft interface guide to troubleshoot the problem. The INSTALL routine will not proceed until the CO connection passes the test.

5. Place the handset back on-hook.

   This message appears on the LCD:

6. Enter the telephone number of the terminal.

   As you enter the number, this message appears on the LCD:

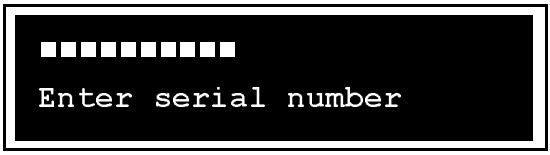
   

   If you make a mistake, press # to correct it.

   Be careful to enter the correct number. This is what the Millennium Manager uses to download the correct tables.

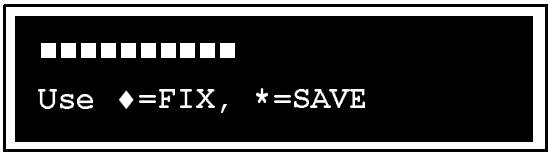
7. Press *.

   This message appears on the LCD:

8. Enter the ten-digit serial number of the terminal.

   As you enter the digits, this message appears:

   The operating company uses the serial number for tracking. If you make a mistake, press u and correct it.

9. Press *.

   This message appears on the LCD:

10. Enter the telephone number of the Millennium Manager. This may be a 7- , 10-, or 11-digit number.

    If you enter a wrong number, press # and correct it.

    As you enter the number, this message appears:

    ```
    ■■■■■■■■■■
    Use ♦=FIX, *=SAVE
    ```

See this  **Pre-dial string**	If a **pre-dial string** is required, enter the number before the Millennium Manager number. For example: @@@XXXXXXXXXX, where @@@ is the pre-dial string, and XXXXXXXXXX is the telephone number. The pre-dial string can be from one to eight digits long and is assigned by the operating company.

11. Press *.

    This message appears on the LCD:

    ```
    Answer detect check
    Go offhook
    ```

12. To initiate the answer supervision test, lift the handset off-hook.

    This message appears on the LCD:

    ```
    Checking answer
    detection
    ```

If the terminal detects answer supervision, this message appears on the LCD:

```
Completed:       00
To continue, press *
```

13. Press *.

14. Go to **Step 15** after this message appears on the LCD:

```
Go back onhook
```

Failed test: If the terminal does not detect answer supervision, this message appears on the LCD:

```
Failed:          51
```

CAUTION	**Failed answer supervision**
	If there is no answer supervision, do not cut the power to the terminal or abort the INSTALL process by closing the housing. Either action would require you to restart the INSTALL routine from the beginning.

If the answer supervision test fails:

- Attach your butt-end test set to the line and make a call.
- When the call connects, listen for a click in the handset or monitor the line with your multi-meter and watch for polarity reversal.
- If answer supervision is not being supplied from the CO, ask the CO personnel to verify that the line has been set up properly.

  Note: If the operating company cannot supply CO for a line, an inferred answer supervision (IAS) module must be installed in the terminal. Refer to *NetVenue: Replacing parts* for detailed instructions.
- When the line is set up properly, press * to retry the answer supervision test, then carry out the remaining steps of the INSTALL routine.

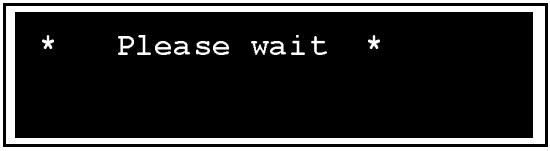
If the problem is not with the line, you may have entered an incorrect Millennium Manager modem number. Close and lock the terminal and retry the INSTALL from the beginning.

Note: The INSTALL routine will not continue until the answer supervision test completes or times out.

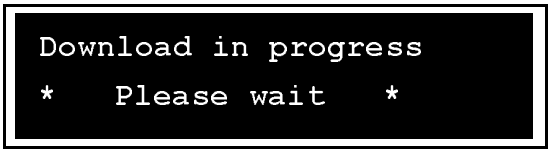
15. Hang up the receiver. This message appears on the LCD:

16. Press * to download information from the Millennium Manager to the terminal.

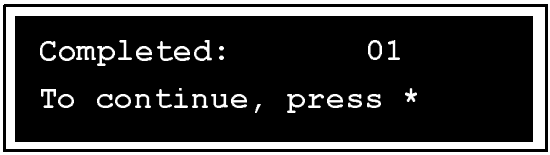
    This message appears on the LCD:

    Then this message appears on the LCD:

    When the download succeeds, this message appears on the LCD:

When the download completed message appears, continue with Step 1.

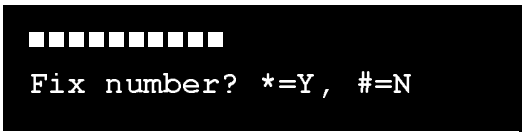
Stopping the download

If you want to stop a download after it is initiated, press #.

Note: You must stop the download before the terminal connects to the modem pool. This includes the time the **`Please wait`** prompt displays on the LCD.

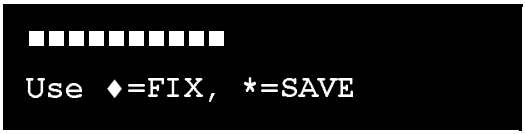
After the terminal connects, the soft interface is disabled.

When you press # to stop the download, this screen appears:



- If you want to exit the program, press #. This takes you back to the download prompt.

- If you want to correct the number, press *.
- The following prompt appears:



- Press u to clear the number.
- Enter the correct Millennium Manager modem pool number.
- Press *. This takes you back to the download prompt.
- Continue with the download.
  If you do not continue, the INSTALL terminates.

See this 	The terminal timeout provision does not apply during the downloading procedure.

Problems with the download

During the download, the following errors may occur.

- When the modem tries to contact the Millennium Manager, there may be no response. (Error code 24)
- The line to the Millennium Manager may be busy. (Error code 22)
- No ringback signal is detected by the terminal (Error code 26)
- A pre-dial string may be required or may have been entered incorrectly. (Error code 24)
- A necessary table was not downloaded (Error code 34)
- The terminal ID has not been added to the Millennium Manager

If the download fails, this message appears:

```
Failed:       XX
Press * to try again
```

Refer to the appropriate error code in Appendix B to troubleshoot the problem.

If the Millennium Manager does not respond, this message appears on the LCD:

```
■■■■■■■■
Fix string? *=Y, #=N
```

Continued on the next page

Problems with the download (Con-

If the pre-dial string is correct, press #.

This message appears on the LCD

```
■■■■■■■■■■
Fix number? *=Y, #=N
```

Note: For terminals not based on MTR 1.9 software, this will be the first prompt to appear.

- If the number displayed is correct, press #.
- If the number displayed is **not** the correct telephone number for the Millennium Manager modem pool, press *.
- This message appears on the LCD.

```
♦
Use ♦=FIX, *=SAVE
```

- Press u to clear the number.
- Enter the Millennium Manager number, which can be from seven to 10 digits long.
- Press *.
- Continue with the download. Go to step 17.
  If you do not continue, the INSTALL terminates.

1. Press *.

   This message appears on the LCD:

```
Go offhook, press all
buttons, then onhook
```

2. Lift the handset off-hook.

3. Press each soft interface button.

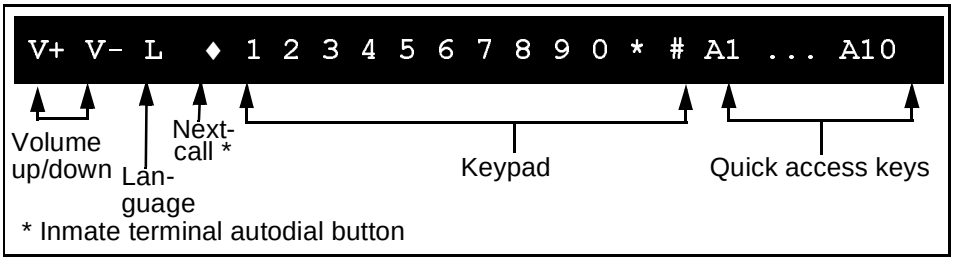
Listen for the DTMF tones for the dialpad buttons. There are no DTMF tones for the special keys or quick access keys.

This message appears on the LCD:

```
(keypad character)
Go on hook when done
```

Note: If a soft interface digit appears on the display but the corresponding DTMF tone does not sound, the problem may be in the handset or the telephony PCP. Replace these units as necessary.

As you press each button, the character appears on the LCD, as shown below:



4. Put the handset on-hook.

5. The INSTALL routine now prompts for the card reader test.
   Otherwise, this section is skipped.

   The test checks the two sensors of the card reader, the card-present sensor and the card-fully-seated sensor, then prompts you to insert a card.

Failed test: If either sensor reports a blockage, this message appears on the LCD:

```
Card reader problem
Check for blockage
```

If there is no blockage, this message appears on the LCD:

```
Please insert and
remove your card
```

6. Insert your test card, a valid mag-stripe card.

   Note: If you hesitate to put your card in, this message appears on the LCD:

   ```
   Insert card in slot
   black strip to left
   ```

   After a successful card reader test, this message appears on the LCD:

   ```
   *  Please remove  *
      your card
   ```

   Note: This test checks mag stripe cards only. The only way to check the smart card part of the reader is to make a call.

7. Remove the card.

This message appears on the LCD:

```
(the card mag stripe no.)
To continue, press *
```

The number on the LCD is the number from the mag stripe of the card. The number of digits will vary according to card type.

Note: If you leave the card in the terminal too long, this message appears on the LCD:

```
*  Please remove
     your card *
```

Failed test: If the test fails, try a different card. If that still does not work, enter the terminal and check the connection to the control PCP. If the connection appears to be okay and the test still does not work, replace the card reader.

8. This message appears on the LCD:

```
Install is complete
Close terminal now
```

Note: The message displays for ten seconds.

If the terminal remains open beyond that time, the initial maintenance prompt appears on the LCD.

9. Complete the INSTALL by closing and locking the terminal.
   a) Turn the T-tool clockwise to lock it.
   b) Lock the key-lock.

See this 	You must at least lock the terminal with the T-tool to complete the INSTALL. If you are going to do more maintenance procedures: lock the terminal with the T-tool, then re-enter the craft interface.

6 Testing terminal features

This section explains how to test the terminal and make sure that all elements of it are working properly. If any parts are not, refer to the troubleshooting guide.

Testing the terminal

Test the terminal before it is used by the public. Follow this checklist after installing the software. This test can be done in the standard mode. The only other test to be done involves the telephony device and card reader. See the craft installation procedure for information on testing telephony components.

Keyboard

Start the email service and open a new, blank letter. In the message text, press every key, to make sure none are jammed or malfunctioning.

Glidepad

Scroll with the glidepad in various directions. Click on the glidepad to see that it works properly.

Touchscreen

Use the touchscreen while looking at the monitor from above, below, and slightly to each side. This ensures that the touchscreen can be used by people of various heights. A slight parallax effect will be noticeable for angles other than straight on.

Receipt printer

Perform a task that issues a receipt. Check that the characters print out legibly, without being faded or crooked.

Changing from standard mode to maintanence mode

If you wish to return to the desktop to make changes to the configuration of the NetVenue terminal, you need to change to maintenance mode.

To return to the desktop, press the Control (Nortel logo) shift and backspace keys to initiate the login process. Press the tab key to log on. Enter the maintenance password when prompted.

While the terminal is logging on, press the tab key. When the password box appears, enter **`kioskadmin`** and the maintenance password.

7 Maintenance

This section covers the general maintenance of the NetVenue terminal. Maintenance includes cleaning the NetVenue terminal, checking the paper level, and performing a quick test of the multimedia system.

Maintaining and testing the telephony system is not covered in this module. It is covered in the ***Craft interface guide***. This module may be changed at a later date to incorporate it.

Opening the terminal

Whenever you open the terminal and the terminal is powered up, you must first enter the craft interface. Failure to do so will cause an alarm. If the unit does not have pay telephony, it is not necessary to enter the craft interface.

Cleaning schedule

This terminal should be cleaned at least every six months. A regular cleaning routine will reduce the deterioration of terminal equipment. It will also give you a chance to check the terminals for external wear or damage.

Cleaning external components

The polymer powder coat on some exterior parts is a high quality, durable finish. However, these parts are subject to abuse.

These are the cleaning and repair procedures to be used on polymer-painted parts.

Ink stains: Alcohol-based solvents can be used, such as isopropanol.

Scratches: Scratches less than one-quarter inch wide can be repaired by brush touch up or spray painting. If the scratches are wider than one-quarter inch, remove the terminal and send it to an authorized repair location.

Spray paint graffiti: Remove the terminal and send it to an authorized repair location.

Some components of the exterior of the terminal require different cleaning methods from those described above. These are covered below.

CAUTION	Do not: • use excessive amounts of water or other liquids; if they enter the terminal, damage may occur. • use solvents as cleaners, except where noted. • use chlorinated hydrocarbon-based solvents.

Keyboard

Brush between the keys to remove any debris. If debris is lodged between or beneath keys, remove the keyboard bezel, turn it upside down, and shake it. If this does not loosen the debris, replace the keyboard bezel and send it to an authorized repair location.

Touchpad

Use a dry cloth to brush the touchpad. Do not use excessive pressure.

LCD display

Use full strength Windex, Glass Plus, isopropanol, or Fantastik at 20% by volume, or any window cleaner that contains no ketones, halogenated hydrocarbons, strong alkalies, concentrated hydrocarbons, concentrated ammonia solutions, or amines.

Card reader

There are two aspects of the card reader and bezel which need maintenance attention:

- the read head for the mag stripe cards
- the card slot from the bezel to the reader

Cleaning the read head

Under normal conditions, clean the magnetic read head of the card reader every 1,000 reads or after whatever interval the operating company determines.

To clean the head, insert and remove the cleaning card with the magnetic stripe up and to the left.

- Do not swipe the cleaning card more than twice through the card reader, as excessive swiping could result in head damage.
- Discard the card after 100 cleaning operations.

The only way to test the performance of a smart card reader is to make a call. If the reader will not read a valid smart card, replace the card reader.

Clearing the card slot

The card slot is designed to allow debris inserted into it to fall to the bottom of the terminal, out of the way. However, some debris may become trapped in the slot.

If this occurs:

1. If possible, remove the debris through the entry slot.
2. Otherwise, open the terminal and remove the debris from the inside.

   Note: Do not probe the card reader with a screwdriver or other sharp instrument. If the debris is not easily moved, replace the card reader.

Replacing the printer paper

To change the paper in the printer, perform the following operation.

1. Open the NetVenue terminal.
2. If there is still a small amount of paper in the printer, remove it. Slide the paper carriage latch on the left side of the printer to the unlocked position.
3. Roll up the remaining paper by turning the roll counter-clockwise.
4. Pull the paper holder to the forward position and hold it there.
5. Lift the roll out.
6. Put the new roll of paper on the roll.
7. Pull the paper holder forward again. Slide the roll into its slots.
8. Make sure the printer carriage latch is in the unlocked position.

9. Lift the green tab at the front of the printer, so that the printer carriage is tilted up.

10. Slide the paper into the printer carriage, until it comes out the bottom of the carriage.

11. Switch the printer carriage latch to the locked position.

12. Lower the green tab, allowing the printer carrier to fit back in its normal position.

13. Feed the paper forward using the green form-feed button, located on the right side of the printer. If it jams while you are loading it, release the printer carriage latch to pull the paper back.

14. Complete all other internal maintenance procedures, close the terminal, and test the receipt printer.

8 Troubleshooting

This section of the guide covers troubleshooting strategies for the NetVenue terminal. The NetVenue terminal can recover from some failures unassisted. Other failures require the assistance of a remote technician, while a few failures require on-site maintenance.

This guide deals with on-site maintenance only. On-site maintenance is required in the event of hardware failures, which can be discovered either through alarms or through standard maintenance checks, or if the terminal fails to respond to a heartbeat request.

Returning to the maintenance mode

In order return to maintenance mode from the content screen, follow this procedure:

1. Return to the desktop, by pressing the Control (Nortel logo) shift and backspace keys to initiate the login process.
2. Enter the maintenance password when prompted.
3. Press the tab key while the terminal is logging on.
4. Enter **`kioskadmin`** and the maintenance password when the password box appears.

Booting from a CD-ROM drive

When using a CD-ROM drive, the terminal should automatically boot to the CD-ROM. If it does not, you need to change the BIOS. To do this, you must first install an external keyboard.

1. Open the terminal and disconnect the keyboard cable on the left side of the upper-rear terminal.
2. Plug a standard PC keyboard into this port.
3. Restart the terminal.

Changing the BIOS

1. Press the F2 key to enter the SETUP utility when booting the machine.
2. Press the F9 key to load setup defaults. Press ENTER when asked to confirm.
3. Use the right-arrow key to move to the "Advanced" menu.

Changing the Boot settings configuration

1. Press ENTER to select "Boot Settings Configuration".
2. Use the down-arrow key to get to "Reset Config Data", then press ENTER,
3. Use down-arrow key to select "Yes", then press ENTER again.
4. Press ESCAPE to go back to the "Advanced" menu.

Changing the peripheral configuration

1. Use the down-arrow key to select "Peripheral Configuration". Press Enter.

2. Use the down-arrow key to get to "Legacy USB Support", then press ENTER.

3. Use the up-arrow key to select "Disabled", then press ENTER again.

4. Press ESCAPE to go back to the "Advanced" menu.

Changing the Event Log Configuration

1. Use the down-arrow key to select "Event Log Configuration".

2. Use the down-arrow key to get to "Clear All Event Logs", then press ENTER

3. Use the down-arrow key to select "Yes", then press ENTER again.

4. Press ESCAPE to go back to the "Advanced" menu.

Changing the Power Configuration

1. Use the right-arrow key to move to the "Power" menu.

2. Press ENTER to select "Power Management", then use the up-arrow key to select "Disabled".

3. Press ENTER again.

4. Use the right-arrow key to move to the "Boot" menu.

5. Press ENTER to select "Quiet Boot", then use the up-arrow key to select "Disabled", then press ENTER again.

6. Use the down-arrow key to select "After Power Failure", then press ENTER, then use the down-arrow key to select "Power On", then press ENTER.

7. Use the down-arrow key to select "First Boot Device", then press ENTER, then use the down-arrow key to select "ATAPI CDROM", then press ENTER.

8. Use the down-arrow key to select "Second Boot Device", then press ENTER, then use the up-arrow key to select "1st IDE-HDD", then press ENTER.

9. Use the right-arrow key to move to the "Exit" menu.

10. Press ENTER to select "Exit Saving Changes". Press ENTER again to confirm.

Display

There are many things that can go wrong with a display, but most of these problems require the display to be replaced and sent to an authorized repair location.

The monitor appears blank

It is possible that an internal component in the display is not working. It is also possible that the power supply or data connection is not working properly. Go through these steps to identify the source of the problem.

1. Check that the power is connected.

2. Check that the display is turned on. An LED light visible when the terminal is in the open position indicates the status of the display. If there is no light, the LCD is turned off or without power. If the green LED is lit, a video signal is present. If the yellow LED is lit, no signal is being received by the LCD.

3. Check that the VGA cable is connected to the motherboard.

4. Connect the monitor to your laptop using an alternate data cable and turn the laptop on. If the display remains blank, replace it and send it to an authorized service location. If it does work properly, reconnect it to the NetVenue terminal with an alternate data cable.

5. If power is not being supplied to the display, use your voltmeter to trace where the break in the power supply exists.

6. Replace the part or cable which is defective.

The touchscreen will not respond

If images appear normally on the monitor, but the touchscreen is not responding, it is most-likely a hardware problem.

1. Look at the ELO controller board. There should be a green flashing LED (Light Emitting Diode).

2. Touch the touchscreen. The LED should remain lit until you remove your finger.

3. If the LED is not lit at all, then check to make sure power is being supplied to the touchscreen.

4. Make sure that all three touchscreen connectors are configured correctly.

5. If the LED is continuously lit, look for some foreign object on the surface of the screen.

6. Enter the maintenance mode.

7. Enter the touchscreen configuration utility from the control panel.

8. Go through the touchscreen installation procedure, as described in the installation portion of this guide.

9. If the touchscreen is still not responding, replace the touchscreen and send it to an authorized repair location.

The keyboard bezel

If the keyboard bezel is not operating properly:

1. open up the NetVenue terminal and check the keyboard connection.

2. Restart the machine.

If it is still not operating properly, the keyboard bezel must be sent to an authorized repair location for repair.

Keyboard key is jammed

If a key is jammed:

1. Look around the edges of the key for any object that might be causing the jam.

2. Brush it away any debris or remove it with a pair of tweezers.

3. Wiggle the key gently to try to dislodge whatever is jamming it.

4. If the key is still jammed, remove the keyboard bezel. Turn the bezel upside down, and tap it. If the key is still jammed, replace the bezel and send it to an authorized repair location.

The glidepad is not responding

If the glidepad is not responding properly:

1. Check the wiring to ensure that the glidepad is connected properly.

2. Restart the machine.

If glidepad is still not responding, replace it and send it to an authorized repair location.

The card reader malfunctions

If the card reader is jammed, see **clearing the card reader** in the maintenance section of this guide.

If the card reader is not jammed but is not responding properly, replace the card reader and send it to an authorized repair location.

The telephony component malfunctions

If the telephony component is not working properly, consult the *Craft interface guide*, using the multimedia payphone interface.

Appendix A: Wiring guidelines

Millennium Multimedia terminals can operate on various connections through the network of the local Telcos. Maximum cable lengths (the distance from terminal to Telco tip and ring) are standard to any other type of telephony device.

Maximum cable length specifications

Note: Irregular performance could result if cables are too long, causing increased voltage drop. In this instance, some terminal functions may still work; however, when increased power is required, such as for a modem call, the terminal will terminate the transaction and power down and up.

Currently a 56k or 128K ISDN line is used to connect to the remote terminal. An Ethernet connection to the terminal also works.

Appendix B: Laser printer configuration

This procedure is for extended terminals which contain a laser printer. Currently, the only laser printer supported is the Lexmark Optra S. The terminal arrives configured for this printer. However, you can use this procedure to change the printer settings.

Accessing the printer control panel

1. Log into maintenance mode.
2. Select **Settings** from the **Start menu**.
3. Select **Control panel** from the **settings** menu.
4. Double-click on **Printers**.
5. Click **Add printers**.
6. Select **My computer**, then press **Next**.

Configuring the printer

1. Select **Add port**.
2. Enter the IP address of the laser printer in the **Name or address of server prividing LPD** field.
3. Enter a brief name for the printer in the **Name of printer or print queue on that server** field.
4. Select **Close.**

Installing the printer driver

1. Select **Have disk** then click **Browse.**
2. Navigate to **C:\lexmark driver for winnt** and double-click on this folder.
3. Select **Lexpsnt.inf** and then click on **Open**.
4. Click **OK.**
5. Choose **Lexmark Optra S 1855 PS2**.
6. Select **Keep existing driver** then click **Next.**
7. Name the printer according to the terminal name or printer location.
8. Select **Yes.**
9. Click **Next.**
10. Click **Not Shared.**
11. Click **Next.**
12. Select **Not shared** then click **Next.**
13. Select **No** when asked if you want to print a test page.
14. Select **Finish.**

Glossary

The following terms and abbreviations appear in this document or documents mentioned in this document.

AC

See alternating current

alternating current

A flow of electricity that changes its polarity on a regular basis.

API

See application programming interface.

application programming interface

(API) Software that an application program uses to request services. For the NetVenue terminal, API can be written into the HTML code, to activate the printer, card reader, or payphone.

attachment

A file that is sent along with an e-mail.

attract loop video

A video that is repeatedly displayed by the NetVenue terminal to attract potential users.

billing validation

The verification and authorization of the legitimacy of calls billed to alternate sources such as collect calls, third number calls and credit card calls.

call detail recording

(CDR) A feature that provides information such as calling and called numbers, date, time of connection and call duration for calls originated from, and sometimes completed to, the stations of a business communication system, allowing communication costs to be allocated to individual users or departments and station activity to be measured for system management purposes. Fot NetVenue NetVenue, this information is collected by the Millennium Manager.

call rating

Checking a call against a database to see what the charges for that call are. The NetVenue can use the CGI or Morris databases to rate calls in Canada and the US. Local calls and 1-800 numbers can be rated internally.

calling-card validation

(CCV) A Common Channel Signaling 7 (CCS7) service that allows operators to validate card numbers in the network service database system.

card clearing

Making sure a card is valid, or that enough funds exist in the card.

card reader

A device that reads information off of stripe or chip cards, such as smart cards or credit cards.

CCITT

International Telegraph and Telephone Consultative Committee

CDR

See call detail recording

central processing unit

(CPU) The portion of a computer that executes programmed instructions, perform arithmetic and logical functions on data, and controls input/output functions.

content server

A computer which stores NetVenue content, usually HTML API content.

CPU

See central processing unit

craft interface

Part of the maintenance level of the NetVenue terminals. It is used by technicians to maintain, install, and operate the telephony component of the NetVenue terminals. It appears on the soft-payphone interface.

credit card

Users can pay for services by charging them to a card, and then paying the credit card company at a later date.

database

(DB) A set of data, part or the whole of another set of data and consisting of at least one file, that is sufficient for a given purpose or for a given data processing system.

DB

See database.

DC

See direct current.

decal

An adhesive image that is applied to the surface of a terminal. It often contains company logos.

direct current (DC)

An almost nonpulsating unidirectional current in which the changes in value are either zero or so small that they can be ignored.

E-commerce

Electronic commerce. Financial transactions for a commercial business are done through an electronic medium, such as the Internet.

E-mail

See electronic mail.

E-mail server

A database which stores the E-mail accounts of users.

electronic mail (E-mail)

A form of communication, developed as an alternative to the exchange of physical documents by traditional postal or courier services, that allows users to send messages by electronic means and to consult received messages at their convenience. Electronic mail services are generally considered to include telex, teletex, facsimile, and electronic messaging.

electrostatic discharge (ESD)

A transfer of electrostatic charge either caused by direct contact between two bodies that have a different electrostatic potential, or induced by an electrostatic field. It is important to protect against ESD as sensitive components in the terminal can be damaged.

embedded Web browser

A software application for Web navigation that runs inside another program.

encryption

A security function that allows information to be put into a code before it is sent. It is unlocked when it reaches its destination. The NetVenue system supports a key depth of 128 bits, which is the highest level of encryption currently available for Internet use in North America.

ESD

See electrostatic discharge.

Ethernet

A communications network standard that (a) is for a10-Mbps (megabit per second) baseband local area network (LAN) bus using carrier sense multiple access with collision detection (CSMA/CD) as the access method, (b) is implemented at the Physical Layer in the International Organization for Standardization (ISO) Open Systems Interconnection -- Reference Model (OSI-RM), and (c) establishes (i) the physical characteristics of the network and (ii) the use of various cabling technologies, such as thick or thin coaxial cable, unshielded twisted pair cables, and fiber optic cables.

FCC

Federal Communications Commission. The US government body which regulates the American telecommunications industry.

file transfer protocol

(FTP) The Transmission Control Protocol/Internet Protocol (TCP/IP) protocol that is (a) a standard high-level protocol for transferring files from one computer to another, (b) usually implemented as an application level program, and (c) uses the TCP protocol.

firmware

An ordered set of instructions and data stored in a way that is functionally independent of main storage. The term "firmware" describes microcode in read-only memory (ROM). At the time they are coded, microinstructions are software. When they are put into ROM they become part of the hardware (microcode), or a combination of hardware and software (microprograms). Usually, microcode is permanent and cannot be modified by the user but there are exceptions.

frame relay

A statistically multiplexed interface protocol for packet-switched data communications. Characteristics of frame relay include fast data transmission speeds, and neither flow control nor error correction.

front-end navigation menus

A series of user friendly screens that help the user find information.

glidepad

A pointing device that is activated when a user touches a small surface on the keyboard bezel. It activates an on-screen cursor.

hard drive

A stand-alone disk drive that reads and writes data on rigid disks and can be attached to a port on the system unit.

hardware

Any part of a computer that physically exists. The monitor, hard-drive, and printer are all examples of hardware.

HTML

See hypertext markup language.

hypertext markup language

(HTML) An application of SGML (Standard Generalized Markup Language [ISO 8879]) implemented in conjunction with the World Wide Web to facilitate the electronic exchange and display of simple documents using the Internet.

IAS

See inferred answer supervision

integrated services digital network

(ISDN) A set of standards proposed by the CCITT to establish compatibility between the telephone network and various data terminals and devices. ISDN is a fully digital network, in general evolving from a telephone integrated digital network. It provides end-to-end connectivity to support a wide range of services, including circuit-switched voice, circuit-switched data, and packet-switched data over the same local facility.

Industry Canada Label

The certification process that ensures that equipment meets certain telecommunications network protective, operational, and safety requirements. This certification does not guarantee the equipment will operate to the satisfaction of the user.

inferred answer supervision

The process of determining when a call has been connected by mechanical means when answer supervision is not available on the telephone line.

Internet

A worldwide interconnection of individual networks operated by government, industry, academia, and private parties.The Internet originally served to interconnect laboratories engaged in government research, and has now been expanded to serve millions of users and a multitude of purposes.

Internet protocol address

(IP address) A unique 32-bit number for a specific TCP/IP host on the Internet. IP addresses are normally printed in dotted decimal form such as 128.127.50.224.

Intranet

A private network that uses Internet software and Internet standards. It is generally reserved for use by people who have been given the authority and passwords necessary to use that network.

IP address

See Internet protocol address.

ISDN

See integrated services digital network

ISDN router

Connects an ISDN line to an Ethernet line.

Java

An object oriented programming language. Popular on the Internet, because it runs on any system.

Java Applets

Small programs written in the Java programming language that run inside an applet viewer.

loyalty card

A card provided by an institution or business. It can allow users to charge transactions to the card, or give users discounts on transactions.

memory

See random access memory

menu

A list of choices that a user can select from.

merchant agreement

An agreement between a card-issuing institution and a merchant who wishes to accept that card as a method of payment. In the case of the NetVenue system, the operating company is that merchant.

Millennium Manager

The control centre of the telephony portion of the NetVenue network.

Millennium Maximizer

A Windows-based application that works with a PC and a Tandem mainframe in client-server architecture. It provides a graphical user interface into the Millennium Manager.

motherboard

The main circuit board within a computer, bearing the primary components of a computer system, including the procedssor, main storage, support circuitry, bus controller and bus connector.

multimedia

The combination of multiple elements of communication, such as sound, text, graphics, and animation.

operating system

(OS) The software that interprets instructions given by applications software programs and causes a computer's or telephone system's components (CPU, peripherals) to perform actions as per those instructions.

OS

See operating system.

packet-switched network

(PSN) A specialized communication system designed to carry digital data. Streams of data are divided into packets or units of standard size and sent along the netowrk. each packet has an address and system for checking the accuracy of the original data.

Pay-Per-Use

When users pay for a product based on how much they use it.

PCP

See printed circuit pack

Pixel

Abbreviation for picture element. The smallest unit of area of a video screen image. The single point on a CRT display. The single point in a facsimile transmission.

plug-and-play

(PnP) A technology consisting of hardware andsoftware components that card, PC and operating system manufacturers incorporate into their products in order to make an add-in card capable of identifying itself and the resources it requires.

POTS

Plain Ordinary Telephone Service or Plain Old Telephone Service. In reference to the NetVenue terminals, this is the line that connects the telephony component of the NetVenue terminal to the end office.

PPU

See Pay-Per-Use.

Pre-paid integrated circuit card

Also known as a smart card, telecard, or chip card. Users buy the cards and use them to pay for telephone calls by inserting them into the card reader. They contain an electrially erasable programmable read-only memory chip that records the value of the card. This value decreases as the card is used.

printed circuit pack

A series of circuits that are manufactured as a card. The control PCP contains the integrated circuits that control all the functions of the terminal except those available in the power-fail mode. The telephony PCP contains the circuits that interface with the telephone line.

PSN

See packet-switched network.

PSTN

See public switched telephone network.

public-switched telephone network

(PSTN) The worldwide voice telephone network accessible to all those with telephones and access privileges.

QuickTime

A format for displaying videos.

RAM

See random access memory

random access memory

(RAM) Memory into which data can be written and from which data can be read. A solid state memory device used for transient memory stores. Information can be entered and retrieved from any storage position.

remote database

A database that replicates the central database, and acts as a database to a smaller number of terminals.

server

A network device that provides service to the network users by managing shared resources.

silk-screen

A method of painting the company logos or other images onto a terminal.

smart card

See pre-paid integrated circuit card.

software

Programs, applications, and utilities that exist as binary code. They can be run, edited, and erased.

Tandem

A computer with two processors that run simultaneously. If one processor breaks down, the other carries on.

TCP/IP

See transmission control protocol/Internet protocol.

Telco Maximizer

See Millennium Maximizer.

terminal emulation package

Software that allows a user at one computer interface to display output from and submit input to a dissimilar computer platform.

tip and ring

An old fashioned way of saying "plus" and "minus", or ground and positive in electrical circuits.

touch force

The amount of pressure required to operate a button or key.

touch screen

A transparent screen which fits over the monitor. Users can touch the screen to activate on-screen buttons, in the same way that clicking with a mouse would activate them.

transmission control protocol/Internet protocol

(TCP/IP) A protocol stack, designed to connect different networks, on which the Internet is based. It was designed to withstand a partial deterioration of the network.

uniform resource locator

(URL) A standardized way of representing different documents, media and network services on the World Wide Web.

Uninterruptible power supply

(UPS) A device that is inserted between a primary power source, such as a commercial utility, and the primary power input of equipment to be protected, e.g., a computer system, for the purpose of eliminating the effects of transient anomalies or temporary outages.

UPS

See uninterruptible power supply.

URL

See uniform resource locator.

vacuum fluorescent display

The dot matrix display which traditional payphones use to display visual prompts, the craft interface, and advertising. On the NetVenue terminals, the VFD is replaced by the soft-payphone interface which appears on the monitor.

validation

See card validiation.

value-added network

(VAN) A network using the communication services of other commercial carriers, using hardware and software that permit enhanced telecommunication services to be offered.

VAN

See value added network.

VFD

See vacuum fluorescent display.

watchdog

A device which restarts a NetVenue terminal if it is not responding.

workstation

A computer that allows technicians and administrators to interact with a database, server, terminal, or other computer.

x.25 network

A CCITT-defined network layer protocol that is used in packet switching to establish, maintain, and clear virtual circuit connections between an ISDN terminal and a destination in the packet switching network.

Index

P

S

T

U

W

Symbols

Nortel Networks NetVenue

Installation, maintenance and troubleshooting guide

Issue: 01.01
Status: Standard
Date: September 1999

Printed in Canada