



Commander®

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About this guide

How this guide is organised

This guide is designed to help you use Remote Tools software to configure, program, and maintain the Main Equipment (ME).

The *Remote Tools User Guide* is divided into the following sections:

About this guide

This section explains how the guide is organised.

Installation

This section explains how to install the software on your personal computer (PC).

Overview

This section gives you an overview of the application, and explains how to navigate the different windows and boxes, choose settings and actions, enter information, and use shortcuts when using Remote Tools.

Using the Remote Tools window

This section explains how you open the Remote Tools window and prepare to use the tools.

Making an online connection

This section explains the different ways to establish a communication link between your PC and an ME. It also discusses actions you can take when something goes wrong with the connection.

Using the Remote Set tool

This section explains how to use the telephone simulation window to program an ME.

Using the Backup and Restore tool

This section explains how to make a backup copy of the ME programming, and restore the programming for an ME using the backup copy.

Other documents

For information about configuring, administering and troubleshooting the different Commander NT systems, refer to *Commander NT Installation and Maintenance Guide* and *Commander NT System Administration Guide*.

Installation

Before you start

Remote Tools software is installed on the hard disk of your personal computer (PC). Before you install Remote Tools, make sure your computer and equipment complies with these minimum requirements:

- a 486 or higher microprocessor
- 16 megabytes (MB) of Random Access Memory (RAM)
- 400+ kilobytes of conventional memory available in Microsoft[®] Windows[®]
- 20 MB of virtual memory
- a hard disk (minimum 100 MB of free space)
- a 1.44 MB 3.5-inch floppy drive
- Microsoft Windows NT
- a VGA color monitor (640 X 480 pixels or higher resolution)

Note: For best results, use a 1024 X 768 pixel display size and 'Small Fonts' as the Windows font setting. Without this configuration, some information in the Remote Tools windows may not display as intended.

- a Windows-compatible mouse
- a Hayes[®]-compatible modem

Installing Remote Tools

Remote Tools is delivered through the Web only, however you can create individual disks to install the software.

The InstallShield® Wizard that appears when you follow the instructions below, guides you through the installation process. Follow the directions in each window to complete the installation. You can cancel the installation at any time and return to it later.

Note: If the installation fails for any reason, delete any files which were placed in the 'temp' folder in the Windows folder or in your defined 'temp' directory during the installation attempt. The next installation attempt will not work unless these files are removed. Do not delete the 'temp' folder.

To install Remote Tools

1. Acquire access to the Remote Tools Web Site at www.nortelnetworks.com/nru

Note: You will require a userid and Password

2. Copy all required files to a directory on your hard drive for example, aus203a.exe, aus203b.exe etc.
3. From the Windows START button select RUN
4. Browse to the disk file that you downloaded (i.e. aus203a.exe)
5. Select the file and click OPEN, the entire path will be displayed
6. At the end of the path string add a space and the characters - d (minus d).

Note: This is an important step - if the files are not expanded into their respective folders the install process may not work as expected.

7. Click OK. This will extract the files from the disk file into the directory of your hard drive
8. Repeat steps 2 through 7 for the remainder of the disk files you require
9. Click once on setup.exe. Click **Open**. Click **OK** to start the installation.

The Commander NT Remote Utilities installation banner appears, along with a Setup window. The window shows the

progress of the InstallShield Wizard set-up. When set-up is complete, the Welcome window appears.

10. Follow the directions given by the wizard.

During the installation process, you are asked to confirm the directory where you want the application installed. The default directory is c:\Icsrt. Choose **Browse** if you wish to select another directory.

When the installation is complete, the Commander NT Remote Utilities component folders appear, ready for use.

If any of the Commander NT Remote Utilities components you selected for installation fails to install, no folders (even the folders of the components which did install) appear when the install is complete. You can open the folders for the successfully installed components using the **Start** menu.

Installation creates a folder for Commander NT Remote Tools.

Now that Remote Tools is installed on the PC's hard drive, store the original software and backup disks in a safe location. Make sure all disks are write-protected so no one can accidentally replace or delete the information on them.

Note: If you need to uninstall Commander NT Remote Tools, use Add/Remove Programs in the **Control Panel** window. You have to manually remove a few files (such as NRU.ini) from the Windows folder after the uninstall. If you delete NRU.ini, you will remove preferences from previous installations. These remaining files are not useful without the rest of the program files.

Note: The uninstall process does not remove your preferences or backup files from a previous installation of Commander NT Remote Utilities. This is intentional.

Overview

System overview

Remote Tools connection software is installed on a personal computer (PC) located either at the same site as the Main Equipment (ME) or at a remote location. Remote Tools allows a PC to communicate with a Commander NT40 (for CICS) or Commander NT132 (for MICS) ME.

The purpose of Remote Tools is to provide Windows-based capabilities for programming and maintaining an ME and peripherals.

PC and ME communication occurs through a remote access device (RAD), which acts as a communication bridge between the ME and Remote Tools to exchange information. The external RAD (Commander NT FastRAD) is a peripheral device attached to an ME. The Commander NT ME can also have a RAD built into the ME (an internal RAD or I-RAD).

The Commander NT FastRAD gives you access to a system using either a remote or direct connection. The I-RAD is available only for remote system access.

Both RADs provide security against unauthorized remote access, and can also provide a means of calling a remote alarm device such as a printer or a console.

The information exchange between the PC and an ME can occur in one of four ways:

- An Commander NT FastRAD is connected directly to the PC using its RS-232 port. This is called direct connection.
- The PC uses a modem to make a remote connection with an Commander NT FastRAD or I-RAD. This connection is used when a PC is not located at the customer's site.
- The PC uses a modem to make a remote connection with an Commander NT FastRAD or I-RAD through an operator. This is called an operator-assisted connection.
- The PC uses a modem to make a connection to the I-RAD through the Auto Attendant, a feature available only for the Commander NT.

Conventions

The following conventions are used in this guide.

Pressing keys

As you work through this guide you will notice that some words appear in capital letters. These words represent keys found on a PC keyboard.

Examples: Press ENTER; Press the RIGHT ARROW key

Choosing command buttons

Words that appear in bold represent command buttons in the window. They perform the task they are labeled with or change the Remote Tools window.

For example: **Connect**.

Selecting text

Certain conventions are also used in the steps describing how you perform a task. When a step describes a field as selected, it means the text appears in a different color. When you move the cursor to a field, the color of the text and the background changes. The exact color depends on your Windows set-up.

Selecting items

Frequently, a step asks you to select an item. When you select an item, you are preparing it for some other task, such as editing. To select an item, use the mouse, cursor keys or the TAB key to place the selection cursor on the item. Selected items are either shown in a different color, surrounded by a dotted rectangle, or both.

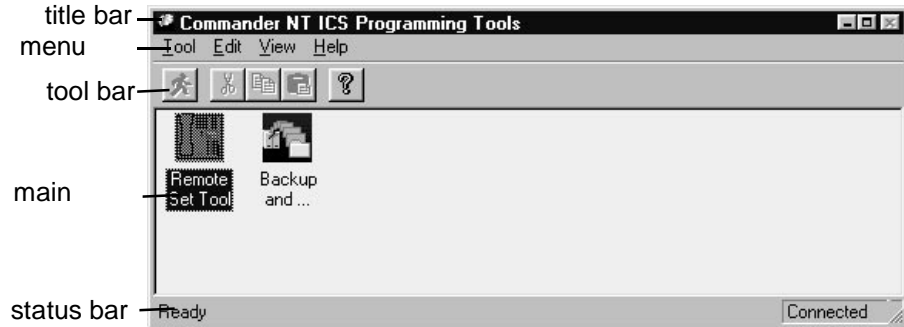
Choosing items

Choosing an item is different from selecting it. When you choose an item, you perform a task or pick a value or option. To choose an item, use the mouse or press the TAB key, then press ENTER or the SPACEBAR.

How Remote Tools works

Remote Tools uses a series of windows and menus that allow you to navigate through the different areas of the application and easily enter information and programming.

Window components



About the windows

The title bar is at the top of the window and contains the title of the window.

The menu bar is directly below the title bar and lists the menus available for the window.

The main body is the largest area of the window. This is where data is displayed and edited.

The status bar shows you the status of the operation currently being performed using a tool. Not all the tools have a status bar.

The toolbar contains buttons that are shortcuts to different operations for a window, such as Run, Cut and Paste. Not all the tools have a toolbar.

Dialog boxes

If Remote Tools needs more information on a specific field, or has a message for you, a dialog box appears.

For example, when you choose **Browse** when using the Backup and Restore tool, the Select Directory dialog box appears. This dialog box allows you to choose the path and name of the file you are using to backup or restore an ME.

Moving within a window

Moving within a window is easy. Use the mouse to move to any field or button shown in the window. If a mouse is not available, use the keyboard to move around the window.

Keys for navigating a window

Key	Function
ARROW keys	move within a field, or between fields in a list
TAB or DOWN ARROW	move from field to field
SHIFT, TAB, or UP ARROW	move back to the previous field
PAGE DOWN	move down a page in a list
PAGE UP	move up a page in a list
HOME	move to the top of a list or the beginning of a line in a scroll region
END	move to the bottom of a list or the end of a line in a scroll region

Selecting items

Before performing a function on an item, such as a text box or list box, the item must be selected. To select an item, use the mouse (or the keyboard) to place the selection cursor on the item. When an item is selected, that item will change appearance to indicate that it is selected.

- List boxes are shown in a different color or surrounded by a dotted rectangle.
- Text boxes are shown in a different color or have the insertion cursor within the box.

To select an item using the mouse, move the mouse pointer onto the item and click the left mouse button.

To select an item using the keyboard, press the TAB key until the desired item is shown in a different color or surrounded by a dotted rectangle.

After you select an item, you can choose one of the options or edit the field.

Choosing tasks

There are four ways to choose tasks and navigate through Remote Tools:

- using command buttons
- using access keys
- using shortcut keys
- using menus

Command buttons

Command buttons appear in windows and are labeled with the task they perform. For example, **Cancel** is a command button that lets you cancel the task associated with the dialog box or window currently displayed.

To choose a command button using the mouse, click the command button.

To choose a command button using the cursor keys:

1. Press the TAB key until the desired action button is selected.

Note: When a button is selected, the border around the button changes colour.

2. Press ENTER or SPACEBAR when the button is selected.

Sometimes command buttons appear with the label shown a lighter-coloured type. When this occurs, the button is not active.

Access keys

Access keys let you use the keyboard to choose action buttons and menu items. The access keys appear underlined in a menu or on an action button, and is used with ALT.

For example: **Tool**.

When you press ALT+T, you have chosen the **Tool** menu.

Shortcut keys

Shortcut keys allow you to choose commands quickly. To use a shortcut key, type the key combination that is shown with the command. For example, on the **Tool** menu, you will see CTRL+R displayed beside the **Run** command. Pressing CTRL+R on your keyboard has the same result as selecting **Run** from the **Tool** menu. You can use shortcut keys without first selecting the menu that displays the shortcut key.

Menus

Menus are lists of options that are available for a field or window. There are two types of menus: window menus and cascade menus.

Window menus provide you with options for accessing different programming, communication, and maintenance task windows. To open a window menu, select the name of the menu from the menu bar using the mouse or the shortcut key.

For example, menus in the **Remote Tools** window include the **Tool** and **Edit** menus. The **Tool** menu includes **Run**, **Connection**, and **Exit** commands.

Once a menu is open, choose the desired command using either the mouse or the arrow keys, then press ENTER.

Window menus often show different symbols beside the commands. These symbols represent more options.

Menu symbols

Symbol	Meaning
◦	If you choose this option, a cascade menu appears.
...	If you choose this option, a dialog box appears.

A cascade menu is part of a window menu, and provides an additional set of options. A cascade menu appears when you choose a command that has a ◦ beside it.

Entering information

Information and programming is entered into Remote Tools through the **Remote Tools** windows. Before you enter ME information and programming, you should know:



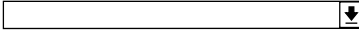
- what the different types of fields are
- how to use check boxes
- how to use keyboard entry

Different types of fields

The kind of information you enter into a field, and how you enter it, is determined by the type of box that surrounds the field. These boxes determine whether the data is entered directly or by choosing an item from a list.

When the cursor is positioned on a field and is flashing, you can type information directly from the keyboard. See the first Field appearance in the following table. When the cursor is not visible, as in the second and third examples shown, you must select a value from a list.

Types of fields and entries

Field appearance	Type of entry allowed
 text box	the cursor indicates direct entry from the keyboard
 list box	choose one or more of the options shown use the arrows to see other options
 drop-down list	choose one of the options shown when you click the drop-down arrow

When you are typing information into a field, you can move around within the field and make corrections, or change the information you have entered. You can move around in these fields using a mouse, or you can use keys. “Key commands for editing fields” on page 14 shows the different key commands you can use to move within a field.


Check boxes

Check boxes let you select parameters. All, several, or none of the boxes on a window can be chosen. For example, when you are choosing RAD Admin abilities, you may want to choose one feature but not the other.

RAD Admin abilities:

4 Automatic Answer of Incoming Calls

1 Automatic Reporting of Alarms

When you choose one of the boxes in the group, the symbol  appears in the box. This indicates that the feature beside this box is on or active.

To select or de-select a box:

Click the box.

or

Press the TAB key to move to the desired check box, then press SPACEBAR.

Keyboard entry

When you are typing information in a field, you can move around within the field and make corrections, or change the information you have entered. You can move around in these fields using the mouse, or you can use keys.

Key commands for editing fields

Key	Function
ARROW keys	move within a field
DELETE or BACKSPACE	delete data
HOME	move to the beginning of a field
END	move to the end of a field

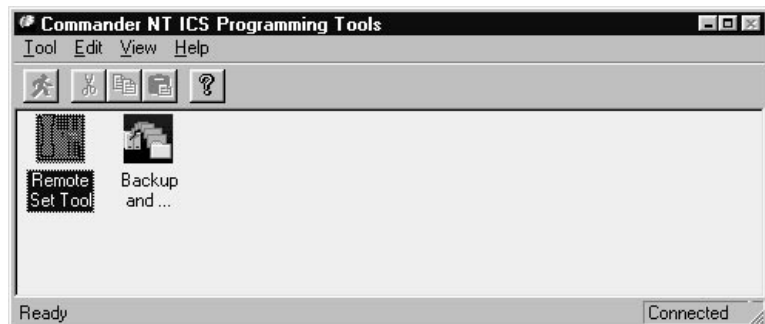
Using the Remote Tools window

Opening the Remote Tools window

Once you have installed the software, you can use the Remote Tools window.

1. Click the Start button, then point to Programs.
2. Point to Commander NT Remote Tools.
3. Point to Commander NT Remote Tools with the shell icon.

Commander NT ICS Programming Tools



Running a tool

There are three ways to run a tool:

- double-click the tool icon in the **Remote Tools** window
- select the tool icon and choose **Run** from the **Tool** menu
- select the tool icon, then select the Run icon from the menu bar

Only one tool can be run at a time.

Connecting to an ME

Remote Tools does not establish a connection to an ME until you run a tool or perform an action that requires a connection. You can exit one tool and run a different one without re-connecting to the ME.

The connection is dropped after a pre-set time limit (default time is 3 minutes) if the Remote Tools window is open, but no tool is active.

Closing the Remote Tools window drops the connection.

For more information, see 'Making an online connection'.

Working with map files

A tool may use a file called a map file to work with the programming for a particular ME. The name of the map file appears in some of the tool windows, or the file name may appear in an error message. Remote Tools is installed with map files for every ME which currently can be used with the tools. You may need to install updated map files for a new ME before you use all the tools with it. Contact Nortel Networks technical assistance to get new map files.

Depending on the type of ME, more than one map file may work for a given combination of tool and ME. Remote Tools looks for the newest version of a map file, but can often work with a less recent version. This is why the map file appearing in tool windows and messages can be different, even if you are connecting to the same ME.

Making an online connection

About the online connection

An online connection is required to run Commander NT Remote Utilities. A Remote Access Device (RAD) acts as a communication bridge between the Main Equipment (ME) and the Commander NT Remote Utilities software running on your personal computer (PC).

This section explains how to configure an Commander NT FastRAD (external) or I-RAD (internal), and make an online connection between the PC and an ME. The Commander NT FastRAD requires external power whereas the I-RAD does not.

Note: The connection between the PC and the ME may demand a large amount of your PC's processing resources. If you work with Windows or other applications while connected to ME, the connection may be interrupted or broken. Avoid doing additional work on the PC when you are connected to an ME.

Connecting an external RAD

1. Plug the Commander NT FastRAD power supply into the power socket of the RAD, then into the wall socket. The socket should be installed near the equipment and must be easily accessible. When the power LED is continuously lit, the RAD is powered up.
2. Connect the TCM cable from the TCM port on the Commander NT FastRAD to one of the station ports of the ME. The LED blinks off periodically to indicate TCM traffic.

3. The initial programming of the RAD depends on whether it is a direct or remote connection. To complete the RAD installation procedure, you must set the following fields: **Automatic Answer of Incoming Calls**, **Seconds to wait before answering**, and **Answer on line number**.

Note: For more information, refer to the RAD Installation Guide. You can make a connection using Commander NT Remote Utilities with the global RAD, I-RAD, or FastRAD which are both E-RADs. The global RAD and FastRAD are easily identified by the RS-232 port nine-pin connector.



RS-232 port nine-pin connector

Choosing the line used by the RAD

Unless your PC is connected directly to the RAD, Commander NT Remote Utilities needs an incoming line to connect to a RAD (including I-RAD). You select this incoming line when you program the RAD to answer an incoming call, choose which number to call the site in order to be transferred to the RAD, or program the Auto Attendant to answer a line so you can access the RAD (Commander NT40 only).

If you use a private network line, the compression on the line may interfere with your connection. To prevent this problem, arrange in advance to have an uncompressed line with 64 kbps available.

Different types of online connections

When you make an online connection between the Commander NT Remote Utilities PC and an ME, you can choose one of these methods of making a connection:

- Direct
- Remote
- Operator Assisted
- Auto-Attendant (Commander NT40 only)

The type of RAD you are using determines which of the connection methods is available to you. See table below.

The “old” external RAD, which is not equipped with an RS-232 nine-pin connector, cannot be used to connect an ME with Commander NT Remote Utilities.

RAD type	Direct	Remote	Operator Assisted	Auto-Attendant
Global RAD (uses RS-232 port nine-pin connector)	yes	yes	yes	no
FastRAD (uses RS-232 port nine-pin connector)	yes	yes	yes	no

RAD connection availability

Direct connection

A direct connection is used when you are running Commander NT Remote Utilities on a PC at the same physical location as the ME. An RS-232 cable connects a serial port on the PC to the serial port on the RAD.

Caution: The RAD’s baud rate must always match the baud rate chosen for the direct connection in Commander NT Remote Utilities. The local baud rate can be changed in **RADMIN** from the keystation. For more information about **RADMIN**, refer to the Commander NT Installation and Maintenance Manual.

Remote connection

A remote connection means the PC communicates with the RAD at a remote site using a modem and a telephone line. Before you can make a remote connection, the external or I-RAD must be programmed to answer your call on a predetermined line. See the RAD Installation Guide and Commander NT Installer Guide (for the Commander NT40 2.0 I-RAD) for more information.

When you are using an external RAD, Commander NT Remote Utilities uses the modem to dial an ME line using the telephone number you specify in the **Connection Properties** window. This ME line must be set to be answered after the delay programmed using the **Seconds to wait before answering** setting in RAD programming. Once the RAD answers, Commander NT Remote Utilities transmits the RAD password to connect with the Commander NT ME.

For the Commander NT40 2.0 I-RAD, Commander NT Remote Utilities uses the modem to dial the ME using the telephone number you specify in the **Connection Properties** window. The line and delay for answering with the I-RAD must be programmed in Commander NT40 programming using the I-RAD settings found under the Remote access sub-heading. Once

the RAD answers, Commander NT Remote Utilities transmits the RAD password to connect with the Commander NT ME. See the Commander NT Installation and Maintenance Manual for detailed information.

Operator-assisted connection

Like the remote connection, an operator-assisted connection uses a modem to link your PC to the RAD. The difference is that you must get assistance from the customer site before Commander NT Remote Utilities can make a connection.

To make an operator-assisted connection, use the telephone connected to your PC's modem to call the operator and have your call transferred to the RAD. With an external RAD, the operator can transfer the call to the RAD by pressing . If you are connecting with a Commander NT40, the operator can transfer the call to the I-RAD by pressing . After you hear the high pitched tone, which tells you the transfer is completed, click as quickly as possible, then hang up the telephone. Commander NT Remote Utilities completes the connection to the RAD.

An operator-assisted connection is used when

- the ME is located at a remote site and Commander NT Remote Utilities cannot access the RAD directly
- you wish to talk to someone on site before you make the online connection
- the RAD is not set up to automatically answer calls
- the ME has undergone a cold start (all system programming is lost) and the programming for automatic answering is lost

Auto-Attendant connection

An Auto-Attendant connection is used only when a Commander NT40 is located at a remote site. The Auto-Attendant, if available, is an alternative to having the I-RAD answer a line (remote connection) or to programming an ME for remote access.

To make an Auto-Attendant connection, use the telephone connected to your PC's modem to call the Auto-Attendant. After the Auto-Attendant answers, enter the Auto DN (station number), or DISA DN (direct inward service access station number) and the Privilege password. Then enter ***RAD (***723) to transfer the call to the I-RAD.

Configuring a modem for operator-assisted and Auto-Attendant connections

For an operator-assisted or Auto-Attendant connection, you must have access to a separate line port and phone port on the modem.


These two ports are either part of the modem or created by inserting a commercially available dual phone port device into the modem phone port. Connect one port to a public network line and the other to an analog telephone that you use to make the call.


Caution: Modems that require a dual phone port device to perform operator-assisted or Auto-Attendant calls are susceptible to noise generated when you hang up your telephone. For operator-assisted or Auto-Attendant calls, it is highly recommended that you use a modem that has a separate line port and phone port instead of one that requires a dual phone port device.

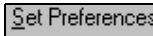
Setting the connection properties


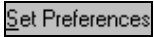
The **Connection Properties** window allows you to configure your connection to an ME.

There are three action buttons used to modify the settings in the Connection Properties window.

 changes the values of all the settings back to the original defaults. The figure below shows the window with the default values.

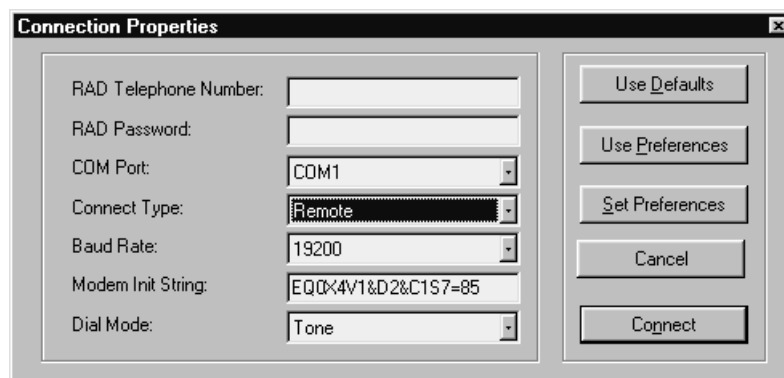
If you have opened Commander NT Remote Utilities from Commander NT Manager, the values you see in the **Connection Properties** window are the Commander NT Manager defaults. You can click  to bring up the defaults that are used when you open Commander NT Remote Utilities independently.

 stores the values for each of the settings as they are currently shown on the window as your preferences. These settings will be used every time the **Connection Properties** window appears, unless you open Commander NT Remote Utilities from Commander NT Manager.

 changes the values of all the settings to the preferences you have saved using .

Once you have configured the connection settings as they apply to your PC, you can save the settings as your preferred configuration for connecting from your PC. In most cases, only the RAD telephone number and password will have to be reentered to make a successful connection.

Note: If you lose the connection to the ME, the **RAD Phone Number** and **RAD Password** information cannot be changed when you attempt to re-establish the connection right away. If you wish to change these settings, exit and restart the tool, then enter the new information.



The Connection Properties window with default settings (remote connection)

Choosing the connection settings

Listed below is a description of the fields and settings on the **Connection Properties** window that you can change before the connection. Instructions on how to change settings for each type of connection follows the list.

RAD Phone Number: For remote connections you must specify the RAD telephone number. To accommodate the use of different telephone number formats, any combination of up to 32 numbers or characters is allowed. Commander NT Remote Utilities does not verify that the dialling sequence is valid.

RAD Password: The ability to administer an ME remotely is protected by a password. The RAD does not allow access to the system until it receives a valid password, which can be up to 10 digits long. To help keep the password secure, only asterisks (*) appear in the field.

COM Port: This is the communication port on the PC that Commander NT Remote Utilities uses to communicate with an ME. You can select COM1 through COM9. The default is COM1.

Connect Type: Commander NT Remote Utilities can connect to an ME in several different ways: Direct, Remote, Operator Assisted, or Auto-Attendant. The connection type used depends on whether the PC running Commander NT Remote Utilities is directly or remotely connected to the RAD, the capabilities of an ME, and the remote access programming for an ME. See “Different types of online connections” on page 18 for detailed information. The default is Remote.

Baud Rate: This is the communication rate used by Commander NT Remote Utilities to communicate with an ME in an online session. The default is 19200. If you are using a direct connection, the local baud rate at the RAD must match the baud

rate chosen for the direct connection in Commander NT Remote Utilities. If you are using a remote type of connection, 1200, 2400, 4800, 9600 or 19200 baud can be used. If you choose a baud rate for a remote connection that is higher than the rate supported by the RAD, your modem will “auto-baud down” to the modem speed of the RAD.

If you have problems connecting with an ME because of a noisy line, try choosing a lower baud rate for the connection.

The Commander NT40 2.0 I-RAD can be programmed to use a Fast or Slow baud rate using the Intrl modem setting. See the Commander NT40 Installer Guide for more information.

Modem Init String: The default value or existing internal string for the Commander NT Remote Utilities modem init string is **EQ0X4V1&D2&C1S7=85**.

E Do not echo local commands.

Q0 Return response codes.

X4 Return modem responses for ring, busy, no carrier, and connect speeds.

V1 Return verbal response codes.

&D2 Accept commands only when data transfer ready (DTR) is high and drop the call when DTR is low.

&C1 Set the carrier detect (CD) high when the remote carrier is detected and drop the CD when the remote carrier is lost.

S7=85 Wait up to 85 seconds for the remote carrier to be detected.

Commander NT Remote Utilities always resets the modem first by sending an ATZ code.

Additional modem init strings are included in the Commander NT Remote Utilities Help file which is included in the Commander NT Remote Utilities program folder.

If your modem cannot connect to a RAD, you may use the modem init string field to include additional commands at the beginning or end of the string, or to edit the existing string to be sent to your modem. Refer to the user manual for your modem for information on what codes must be included in the modem init string, and where in the string you should add the codes.

Note for US Robotics modem users: Be sure to add **&I0** (software flow control is disabled) and **&B1** (fixed serial port rate) to your modem init strings, and change **X4** to **X1** (modem responses).

Note: In general, you should not delete or alter any of the commands in the default string. However, the modem wait for carrier delay (S7) must be set to include both the delay before the RAD auto-answers and the time for the call to be and connected.

Some modems have a maximum wait of 60 seconds. If this is the case, you may set *S7* in the modem init string to a lower value. If you lower the *S7* value and also wish the RAD to auto-answer before the modem times out, you must ensure that the seconds to wait before answering at the RAD is less than the *S7* value.

Refer to the documentation that comes with your modem for the maximum carrier delay time. The recommended *S7* setting is 85 seconds if the RAD is set to answer automatically after 60 seconds.

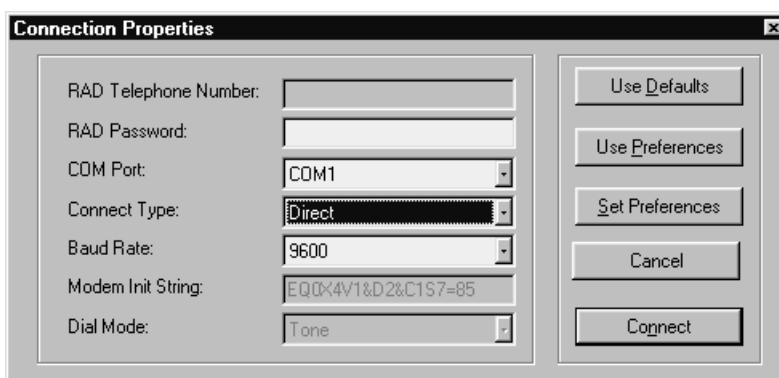
If you have erased the default commands in the modem init string, you can choose to change the **Connection Properties** settings to the default values.

Dial Mode: The dial mode used by Commander NT Remote Utilities can be either pulse or tone, depending on the type of CO line (the line supplied by your telephone service provider) the modem is using. The default is Tone.

Connecting to ME with a remote or direct connection

1. Double-click the **Commander NT Remote Utilities** icon.
2. Double-click the icon of a tool that requires an online connection (such as Remote Set). The **Connection Properties** window appears.

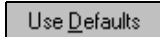
Click in the **Connection Progress** dialog box at any time if you wish to cancel the connection or dismiss the dialog box.




Connection Properties window (settings for a direct connection)

3. Click the drop-down arrow beside the **Connect Type** field and then choose either **Direct** or **Remote** connection.
4. If this is a remote connection, select the **RAD Phone Number** text box and type the telephone number of the RAD.
5. Select the **RAD Password** text box and type the RAD password.

6. Click the drop-down arrow beside the **COM Port** field and choose the PC communication port Commander NT Remote Utilities will be using.
7. Click the drop-down arrow beside the **Baud Rate** field and then choose the appropriate baud rate.
8. Use the **Modem Init String** text box when your modem requires different initialization string commands than those in the default internal string. Select the **Modem Init String** text box and type the commands.

Note: If you have erased the default commands in the modem init string, you can click  to change the **Connection Properties** settings to the default values.

9. Click the drop-down arrow beside the **Dial Mode** field and then choose **Pulse** or **Tone**.
10. Click . The **Connection Progress** dialog box appears.

When the PC to ME connection is established, the window for the tool you have selected appears.

If you have problems making a direct connection, use the RADMIN telephone-based interface to check that the local baud rate of the RAD is set to match the Baud Rate setting for the connection. For more information, refer to the RAD Installation Guide.

The local baud rate (to be distinguished from the Alarm Baud Rate on the **RAD Administration** window used with the Remote Set tool) can be adjusted only through the RADMIN feature on a telephone, and not through the **RAD Administration** window in the Remote Set tool.

Connecting to ME with an operator-assisted connection

If an ME is at a remote site and can only be reached through the operator, you must select the Operator Assisted option. With the Operator Assisted option you must phone the operator at the remote site and ask them to transfer the call to the RAD.

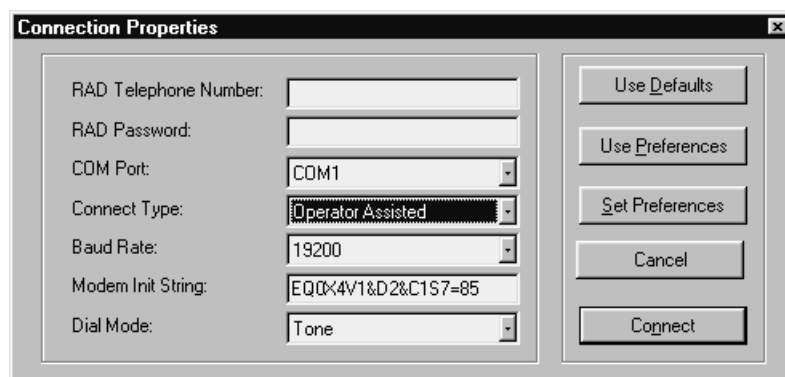
For an operator-assisted connection, you must have access to a separate line port and phone port on the modem. These two ports are either part of the modem, or created by inserting a commercially available dual phone port device into the modem phone port. Connect one port to a public network line and the other to an analog telephone that you use to make the call.

Caution: For operator-assisted calls, it is highly recommended that you use a modem that has a separate line port and phone port instead of one that requires a dual phone port device.

To make an online connection with an ME using an operator-assisted connection

1. Double-click the **Commander NT Remote Utilities** icon.
2. Double-click the icon of a tool that requires an online connection (such as Remote Set). The **Connection Properties** window appears.

Click in the **Connection Progress** dialog box at any time if you wish to cancel the connection or dismiss the dialog box.



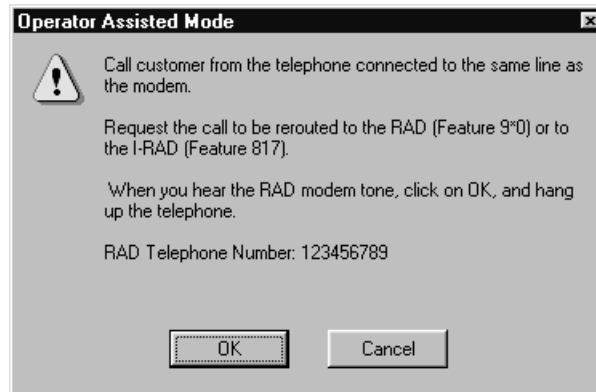
Connection Properties window for operator-assisted connection

3. Select the **RAD Phone Number** text box and type the telephone number of the RAD.
4. Select the **RAD Password** text box and type the RAD password.
5. Click the drop-down arrow beside the **COM Port** field and choose the PC communication port Commander NT Remote Utilities will be using.
6. Click the drop-down arrow beside the **Connect Type** field and then choose **Operator Assisted**.
7. Click the drop-down arrow beside the **Baud Rate** field and then choose the appropriate baud rate.
8. Use the **Modem Init String** text box when your modem requires different initialization string commands than those in the default internal string. Select the **Modem Init String** text box and type the commands.

Note: If you have erased the default commands in the modem init string, you can choose to change the **Connection Properties** settings to the default values.

9. Click the drop-down arrow beside the **Dial Mode** field and then choose **Pulse** or **Tone**.

10. Click . The **Operator Assisted Mode** dialog box appears.



The Commander NT Remote Utilities Operator Assisted Mode dialog box

11. Use the telephone attached to the modem to dial the telephone number of the remote Commander NT system.
12. If you are connecting to a Commander NT40, when your call is answered, ask the operator to transfer the call to the I-RAD by pressing .

If you are connecting to a Commander NT132 or Commander NT40 with an external RAD connected, when your call is answered, ask the operator to transfer the call to the RAD by pressing

.

Note: You must place the customer call from the telephone connected to the same line as the modem.

13. When you hear the carrier signal (the high-pitched modem tone), choose as quickly as possible to ensure a successful connection, and hang up the phone.

Note: When connecting to a FastRAD using Operator Assisted mode you must press before the high pitched tone for the call to be successful.

When the PC to ME connection is established, the window for the tool you have selected appears.

Connecting to a Commander NT40 using the Auto-Attendant

If the Commander NT40 is at a remote site and can only be reached through the Auto-Attendant, you must select the Auto-Attendant option. With the Auto-Attendant option you must phone the remote site and transfer the call to the I-RAD.

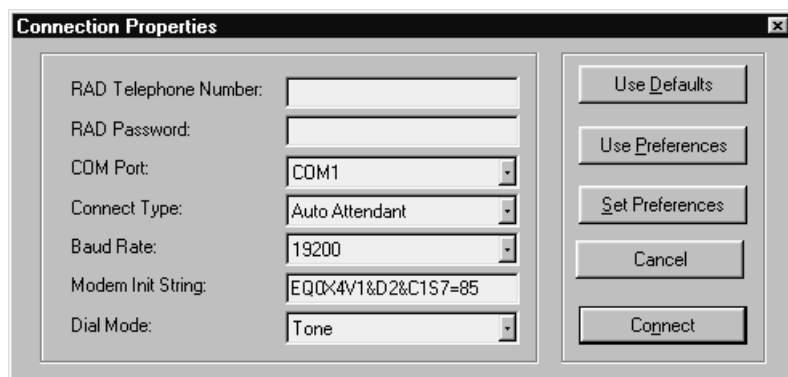
For an Auto-Attendant connection, you must have access to a separate line port and phone port on the modem. These two ports are either part of the modem, or created by inserting a commercially available dual phone port device into the modem phone port. Connect one port to a public network line, and the other to an analog telephone that you use to make the call.

Caution: For Auto-Attendant calls, it is highly recommended that you use a modem that has a separate line port and phone port instead of one that requires a dual phone port device.

To make an online connection with a Commander NT40 using an Auto-Attendant connection

1. Double-click the **Commander NT Remote Utilities** icon.
2. Double-click the icon of a tool that requires an online connection (such as Remote Set). The **Connection Properties** window appears.

Click in the **Connection Progress** dialog box at any time if you wish to cancel the connection or dismiss the dialog box.



Connection Properties window for Auto-Attendant connection

3. Select the **RAD Phone Number** text box and type the RAD's telephone number.
4. Select the **RAD Password** text box and type the RAD password.
5. Click the drop-down arrow beside the **COM Port** field and choose the PC communication port Commander NT Remote Utilities will be using.
6. Click the drop-down arrow beside the **Connect Type** field and then choose **Auto-Attendant** connection.
7. Click the drop-down arrow beside the **Baud rate** field and then choose the appropriate baud rate.

8. Use the **Modem Init String** text box if the documentation for your modem indicates that initialization string commands are required in addition to or different than those in the default internal string. Select the **Modem Init String** text box and type the commands.

Note: If you have erased the default commands in the modem init string, you can click to change the **Connection Properties** settings to the default values.

9. Click the drop-down arrow beside the **Dial Mode** field and then choose **Pulse** or **Tone**.
10. Click . The **Auto Attendant Mode** dialog box appears.



Commander NT Remote Utilities Auto Attendant dialog box

11. Use the telephone attached to the modem to dial the Auto-Attendant. When you hear the Auto-Attendant greeting, dial the DISA DN (direct inward service access station number) or Auto DN (station number).
12. If you have entered a DISA DN (direct inward service access station number), wait to hear a stuttered dial tone, then enter a Privilege password.
13. Before you hear a steady dial tone, enter ***RAD (**723).
14. When you hear the carrier signal (the high-pitched modem tone), click as quickly as possible to ensure a successful connection, and hang up.

When the PC to ME connection is established, the window for the tool you have selected appears.

Exiting from an online session using Commander NT Remote Utilities

When you exit from an online session, you are breaking the connection between your computer and the RAD.

To exit from an online session

1. Exit from the tool you are running, if any.
2. Close the **Commander NT Remote Utilities** window, or choose **Exit** from the **Tool** menu.

Exiting a tool does not drop the connection to an ME. You can exit a tool and run another tool without interrupting the connection.

Commander NT Remote Utilities drops the connection after 3 minutes if there is no active tool.

You cannot close the Commander NT Remote Utilities window while you are running a tool.

To end a connection to the ME

On the **Tool** menu, click **Terminate Connection**, or press CTRL+T. This allows you to end the connection right away.

Working with the Connection Progress dialog box

When you go ahead with a connection, the **Connection Progress** dialog box appears.



Connection Progress dialog box


Choose at any time to stop the connection. The Connection Progress dialog box disappears.

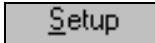
Recovering from a failed connection attempt

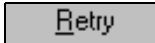
When a connection attempt fails, a message giving the reason for the failure appears in the **Connection Progress** dialog box. In some cases, Commander NT Remote Utilities is not able to determine why the connection failed. Possible causes are:

- an incompatible baud rate at the RAD
- a disconnected serial cable
- no RAD installed at the ME

Three options are available in the **Connection Progress** box after a connection fails.

 ends the connection attempt without changing the connection options or retrying the connection.

 opens the **Connection Properties** window, which allows you to make changes to the connection settings before trying the connection again.

 tries the connection again with the same connection settings.

Recovering from a lost connection

If the serial cable connecting the PC to the RAD becomes disconnected, or if the connection is lost for any other reason, a warning dialog box appears.

The options available to you when a connection is lost depends on the tool. For example, the Backup and Restore tool allows you to retry the connection or close the tool window. See the sections for each tool for more information.

Using the Remote Set tool

About Remote Set

The Remote Set tool lets you connect to the ME using Windows-based simulations of Commander NT Economy, Standard, Advantage and Principal keystations. The Advantage and Principal simulations let you configure, administer and maintain the Commander NT ME and peripherals.

Using the Remote Set tool when connected to the ME lets you read and modify ME data. When your PC has an online connection with the ME, any programming changes you make are immediate, or take effect when you end the programming session.

The Remote Set tool can be used to program any Commander NT system.

Other uses of the Remote Set tool

- provide access to and remotely program voice messaging features, except those requiring voice capability
- remotely program Station Message Detail Recording (SMDR), Door Phone and other peripherals that use the telephone for programming
- remotely administer an Commander NT FastRAD
- program an ME using the Advantage and Principal simulations
- deal with direct queries of device status
- access Feature **DEBUG sessions

- copy keystation numbers and lines within a system

Using the simulated telephone windows

The simulated telephone windows contain the following navigation buttons:

Economy, Standard, Advantage or Principal: These buttons allow you to change the telephone type that the RAD is emulating without having to disconnect and reconnect to the RAD.

RAD Administration: This button brings up the **RAD Administration** window, from which you can configure the Commander NT FastRAD.

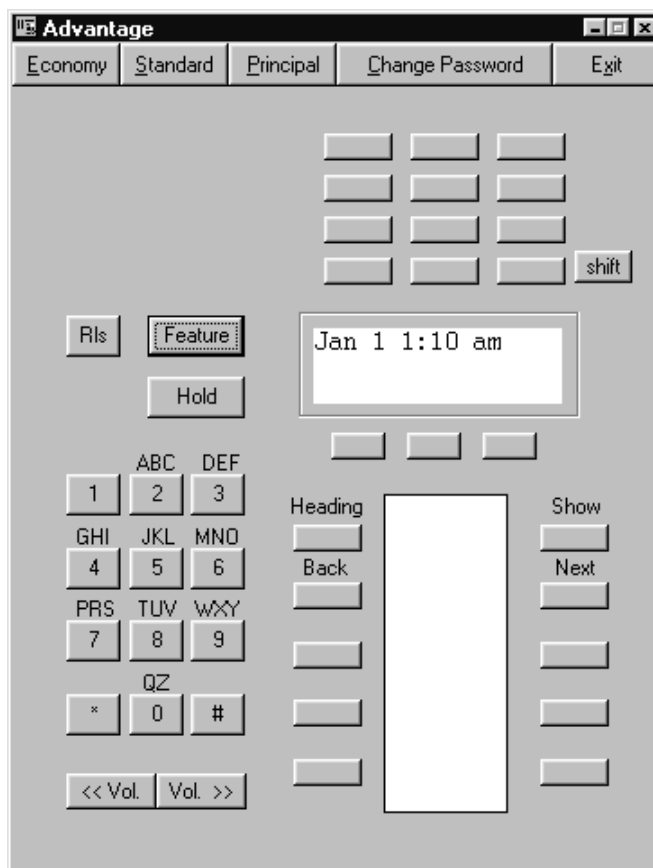
To configure an I-RAD and FastRAD, use

Feature * * 2 6 6 3 4 4 . See Commander NT Installation and Maintenance Manual for more information.

When you are using recent versions of the Commander NT FastRAD and I-RAD, the RAD Administration button changes to a Change Password button. You get an error message if you try to use the RAD Administration button with older versions of Commander NT FastRAD and I-RAD.

Exit: This button takes you back to the **Remote Tools** window but retains the existing RAD connection.

Advantage telephone simulation window (default)



On the following pages, you will learn how to configure the RAD with the RAD Administration window, use the telephone simulations for ME programming, and start a programming session for an ME. For detailed information on programming a Commander NT ME, see your installation and system administrator guides.

Programming the RAD

The **RAD Administration** window allows you to configure the RAD. To access the **RAD Administration** window, click the **RAD Administration** button from the top of the simulated telephone window.

Note: These features and procedures do not apply to the Commander NT FastRAD or the I-RAD. Use Feature 9** on one of the Remote Set telephone simulation windows to change the settings for an Commander NT FastRAD remotely. Use ME programming to change the settings for an I-RAD.

Caution: To access the RAD without operator assistance, ensure the **Automatic Answer of Incoming Calls** option is selected.

The RAD requires a password before Remote or Direct access is allowed. At the time of installation, you must program the RAD using a two-line display telephone. See *RAD Installation Guide*.

Note: On some older versions of the RAD, password programming is not required.

You can change the RAD remaining default values in one of three ways:

- At installation time, use the telephone RADMIN feature. See *RAD Installation Guide* for details.
- By direct connection, use the RAD Administration feature of the Remote Set tool.
- By remote operator assisted connection, use the RAD administration feature of the Remote Set tool.

RAD Administration window attributes

Default values may vary depending on the type of RAD being used.

Note: To program the FastRAD use .

The following attributes may be configured from the RAD Administration window:

System ID: The 10-digit system identification number identifies the RAD for alarm reporting.

System Name: The system name identifies the RAD for alarm reporting and has up to 16 ASCII characters.

Password: The password can be changed through a telephone on site as well as through the Remote Set tool. This password is a combination of letters and numbers up to 10 characters long.

Automatic Answer of Incoming Calls: This option allows the RAD to automatically answer all incoming calls on the specified line.

Note: If the RAD has been programmed in a previous session to cancel the **Automatic Answer of Incoming Calls** option, you can connect with assistance from an operator when you require a remote connection.

Note: When this option is disabled, automatic answering settings appear grey and cannot be changed.

Answer On Line Number: In this field you can type the line number from 001 to 999 that the RAD is to answer.

Seconds to Wait Before Answering: In this field you can choose the number of seconds from 6 to 60 that the RAD waits before automatically answering.

Automatic Reporting of Alarms: If this option is enabled when an alarm occurs, the RAD sends an alarm indication message containing the time and date of the alarm, the system name, and the system ID to the alarm monitoring centre. The message will be sent in the form of an ASCII character stream and will conform to standards specified for TTY interfaces.

Note: When this option is disabled, auto-alarm related options appear grey and cannot be changed.

Report Alarms On Line Number: In this field you can type the line from 001 to 999 used by the RAD to report alarms.

Note: The RAD allows separate line numbers for auto-answering and alarm reporting, which can be either physical lines or target lines. However, if a target line is used for alarm reporting, alarm reports will not be generated.

Alarm Monitoring Number 1: This is the first telephone number the RAD calls to report alarms. It has a limit of 16 digits.

Note: Only numbers, * and # can be entered in this field.

Alarm Monitoring Number 2: This is the second or alternate telephone number the RAD calls to report alarms. It also has a limit of 16 digits.

Note: Only numbers, * and # can be entered in this field.

Number of Retries: This indicates how many times (from 0 to 9) the RAD tries to send an alarm after a failed attempt to report an alarm.

Minutes to Wait Before Retrying: This field indicates how many minutes from 1 to 99 the RAD waits before it tries again to report an alarm.

Alarm Baud Rate: The RAD internal modem baud rate specifies which baud rate (300, 1200, 2400) the RAD uses for alarm reporting.

Note: Local baud rate is different than the alarm baud rate.

Alarm Parity: This specifies what parity setting the RAD uses for alarm reporting: none, odd or even.

Default RAD attribute values

Attribute	Default for the Global RAD
System ID	no default
System Name	no default
Password	467825
Automatic Answer of Incoming Calls	Off
Answer On Line Number	Line 001
Seconds to Wait Before Answering	18
Automatic Reporting of Alarms	Off
Report Alarms On Line Number	Line 001
Alarm Monitoring Number 1	no default
Alarm Monitoring Number 2	no default
Number of Retries	5 times
Minutes to Wait Before Retrying	15
Alarm Baud Rate	300
Alarm Parity	None

Configuring the RAD

From the **RAD Administration** window:

1. Select the **System ID** text box and type the system ID number.
2. Select the **System Name** text box and type the system name.
3. Select the **Password** text box and type the password.

The RAD password is concealed with asterisks (*).

To change the password, click **Change** and enter the old and new passwords in the appropriate fields in the **Change Password** box.

4. Click **Automatic Answer of Incoming Calls** to enable or disable the option.
5. Select the **Answer On Line Number** text box and type the system line number the RAD is to use for auto answering.
6. Select the **Seconds to Wait Before Answering** field and choose the number of seconds to wait before automatic answering.
7. Click **Automatic Reporting of Alarms** if you wish to enable or disable this feature. If this is not enabled, go to step 15.
8. Click the **Report Alarms On Line Number** text box and type the line number the RAD is to use for alarm reporting.
9. Select the **Alarm Monitoring Number 1** text box and type the alarm monitoring telephone number.
10. Select the **Alarm Monitoring Number 2** text box and type the alternate alarm monitoring telephone number.
11. Select the **Number of retries** field and choose the number of times the RAD tries to send an alarm after a failed alarm reporting attempt.
12. Select the **Minutes to Wait Before Retrying** text box and type the number of minutes the RAD should wait before retrying.
13. Select the **Alarm Baud Rate** field and choose which baud rate (300, 1200, 2400) the RAD uses for alarm reporting.
14. Select the **Alarm Parity** field and choose the parity setting the RAD uses for alarm reporting, either none, odd, or even.
15. Click **OK** to download the settings to the RAD. To prevent the changes from being sent to the RAD, click **Cancel**. Choosing either **OK** or **Cancel** ends the RAD Administration session. The **RAD Administration** window is replaced by the simulated telephone window.

Conventions for using the telephone simulations

When you program the ME using the simulated telephone, you can use the PC's keyboard to enter information. Keyboard entry is significantly faster than 'pressing' the simulated telephone keys in the window, and is more like using a real telephone.

Note: The **F1** key is not mapped to a telephone key. Pressing **F1** displays a list of the keyboard entry mappings.

Keyboard entry guidelines

- All letters, all numbers including those on the numeric keypad on your PC, some or all function keys, and the symbols * and # are recognised and translated to the equivalent key presses on the simulated telephone appearing in the window.
- Keyboard entry keys are not case-sensitive. No distinction is made between upper and lower case.
- Keys that are required to program the ME but do not have direct keyboard equivalents are mapped to function keys.
- Common key press sequences such as **Feature **266344** (CONFIG) and **Feature **23646** (ADMIN) are mapped to function keys.
- When entering telephone and line names, letter keys on your PC keyboard are interpreted as numbers. On the telephone keypad, notice that the 2 key, for example, lists the letters A, B, and C above it, and that all the number keys except 0 have letters listed above them. Pressing A on your PC keyboard is interpreted as a 2. Pressing B is interpreted as two 2s. Pressing C is interpreted as three 2s, and so on.
- Use number keys for entering sequences such as ****266344** (CONFIG).
- When doing tasks such as name administration, advance or back up the cursor by pressing a softkey after pressing each letter. (Softkeys are located directly below the display screen in the telephone simulation window. They are also called display keys.) After you press a letter, you will see an arrow symbol on the telephone display. This is your prompt to press the softkey located beneath the arrow.

To enter Ann, for example, you press **A, softkey, N, softkey, N,** and **softkey.**

If you make a mistake press the softkey to go backward. This highlights the incorrect letter. Now you can press the backspace softkey to delete the letter, or you can type over it. Then press the softkey to go forward to reposition the cursor. Moving the cursor backward or forward by using softkey in this way was designed to simulate an actual telephone.

- You can use the TAB key to navigate through a window. The following table shows the tab order of the keys when navigating through a window.

For example, to enter Feature*3 you would press:

- TAB until Feature is highlighted and press ENTER.
- TAB until * is highlighted and press ENTER.
- TAB until 3 is highlighted and press ENTER.

Note: You can also use directional arrows to navigate through a window.

Telephone simulation window tab order

Advantage	Principal
Feature	Feature
dial pad – from left to right – keys 1 through #	dial pad – from left to right – keys 1 through #
Hold	Hold
Rls	Rls
3 softkeys – left to right	3 softkeys – left to right
Shift	not applicable
12 dual programmable keys without indicators – begin with upper left and go down, center and down, right and down	not applicable
10 programmable keys with indicators – left and down, right and down	24 programmable keys with indicators – begin with upper left 6 and go down, upper right 6 and go down, lower left 6 and lower right 6
Volume – left to right	Volume – left to right
Principal...	Advantage...
Change Password (RAD Administration)	Change Password (RAD Administration)
Exit	Exit

Programming the ME

From the Advantage Keystation or Principal Keystation windows you can perform any type of programming that can be done from a normal telephone (except programming that requires voice capability). This includes Feature **CONFIG, Feature **ADMIN, and peripheral programming such as Station Message Detail Recording (SMDR), or voice messaging programming.

For example, to enter programming on an Modular Plus system:

1. Using the keyboard or the mouse, enter * * C O N F I G and the password on the simulated telephone dial pad.
2. The display appears: Terminals&Extns~.
3. Use the **Heading**, **Show**, **Back** and **Next** navigation prompts to enter programming. Navigation prompts vary with other types of programming.

Recovering from a lost connection

If the serial cable connecting the PC to the Commander NT FastRAD becomes disconnected, or if the connection is lost for some other reason to either an Commander NT FastRAD or I-RAD, a warning box appears and the Remote Set tool disconnects from the RAD. To continue programming the system, re-connect the serial cable, adjust the connection settings (if necessary), and click **Connect**.

Special considerations

When a connection is made to the ME, the Remote Set tool window simulates a telephone attached to the system (but does not have all the telephone capabilities of an actual telephone). With this in mind, it is important to note the following:

- Do *not* disable the port/keystation or the B2 channel for either the RAD or the RAD line. The only method of recovery is to enable the port/keystation B2 channel locally with a telephone.
- Do *not* make calls with a simulated telephone using the RAD because there is no voice channel. In addition, you cannot do any voice messaging programming that requires voice recording.
- Use caution when clicking key representations in the window because doing so affects system operation. For example, clicking a line key answers the line if it is ringing or occupies the line if it is idle. Clicking the **Divert** key allows the telephone to forward the call when ringing lines appear.
- Telephone simulations do not simulate tones, ringing or LCD brightness. They are unable to generate long tones using f°, \circ . Although you can enter 8 0 8 using the Remote Set tool, the tone will sound only for the duration of one mouse click.
- When entering data using a mouse, LCD display updates may take a fraction of a second. You should click slowly with the mouse and check that the number or letter is updated before clicking the next number or letter on the set. This delay does not occur when you use the keyboard to enter information.

Using the Backup and Restore tool

About Backup and Restore

Commander NT programming is protected when you back it up frequently. If data is lost, backed up programming can be restored to the Main Equipment (ME).

The Backup and Restore tool can be used with the Compact Plus ME and the Modular Plus ME only.

The Backup and Restore tool retrieves a complete copy of all or selected programming information from the ME and stores it, usually on your PC's hard disk.

You use the Backup and Restore tool when you

- install a new Commander NT system
- are offering to backup customer programming as a service
- make significant changes to the programming of an ME

When you restore a customer's programming, a copy of their ME programming, stored on your PC hard drive or other data storage medium, is sent to the customer's ME.

You use the Restore feature when the ME has lost all its programming, to overwrite existing programming, or to upgrade the system.

When you restore programming, the ME is put into maintenance mode for the duration of the restore process.

How backup storage works

The Backup and Restore tool stores up to two different copies of ME programming: a current copy and an archive copy.

Backups are treated like an assembly line. When a successful backup is performed, the information stored in the current version is moved to the archive version.

You cannot change the file names of the programming backup. If you need to create alternate versions of the files, create additional folders to keep the like-named files separate.

Current copy

This version contains the ME programming at the time of the last backup.

The current files are named

- Fnvram.NEW (current copy of ME programming)
- Aattend.NEW (current copy of Compact Plus ME Auto Attendant greetings)

Archive copy

This version contains the ME programming at the time of the second to last backup. It was the current copy until it was replaced by the most recent backup.

The archive files are named

- Fnvram.OLD (archive copy of ME programming)
- Aattend.OLD (archive copy of Compact Plus ME Auto Attendant greetings)

If one of the files stored on your PC becomes corrupted, you will not be able to successfully restore the programming to the ME. You should equip your PC with an application that protects files from computer viruses and performs file backup and encryption.

Performing a backup or restore

When you perform a backup, the customer's Commander NT system slows down, but remains completely operational. However, when you perform a restore, the customer's Commander NT system is non-operational and call processing is suspended during the restore process.

We suggest you perform restores during non-business hours, and warn the customer that the Commander NT system will be out of service. Because the backup or restore process keeps your PC working for a period of time, you may want to schedule backup or restore operations for a time when you don't need your PC for other tasks. The amount of time it takes for a backup or restore to

complete depends on the backup or restore options you have chosen and the baud rate your PC is using.

Note: For backup and restore operations, your connection to the ME should be made using public network (uncompressed) lines.

Cautions when performing a restore

When you run a restore, all of the sets are put in maintenance mode. Programming data from your PC hard disk or other data storage medium is then loaded into the ME memory. After the data is loaded, the Backup and Restore tool takes the sets out of maintenance mode by initiating a warm start. A warm start restarts the ME with all its programming intact, including any changes you have made.

If a restore fails to complete due to an error, the system will initiate a cold start. This means that all programming will be lost, and all programming settings will be returned to the factory defaults. After a cold start, you can only connect to an ME by using an operator-assisted connection.

If an ME with only ISDN lines undergoes a cold start, there will be no lines available to make an operator-assisted connection. Programming will have to be done on-site to make incoming lines available.

A restore replaces all existing programming for an ME. A failed restore can shut down an ME and telephone service to a site, so it is important to ensure the restore is completed successfully.

To ensure a successful restore

- Make sure you are connecting to the proper ME.
- Verify that you are using the correct backup file for the ME to which you are connected. If you attempt to use an incompatible file for a restore, it will cause a warm start of the ME (a restart where no programming is lost).
- Verify the system is working properly once the restore is complete.

A restore can also fail because of conditions outside of your Remote Tools set-up and attributes, including:

- excessive noise on the line or network failure
- a mains failure or hardware error at the ME or Commander NT FastRAD

You cannot recover ME programming that has been overwritten.

Connecting to the ME

Like the other Remote Tools, Backup and Restore connects to an ME using an Commander NT FastRAD or I-RAD (Commander NT40 (for CICS) or Commander NT132 for (MICS) ME only).

The connection settings are controlled by the **Connection Properties** window. It appears when you start the Backup and Restore tool. If you have already connected to an ME using one of the other tools, Backup and Restore uses the existing connection. See '**Making an online connection**' for more information.

Starting Backup and Restore

Start the Backup and Restore tool from the **Remote Tools** window using one of the following methods:

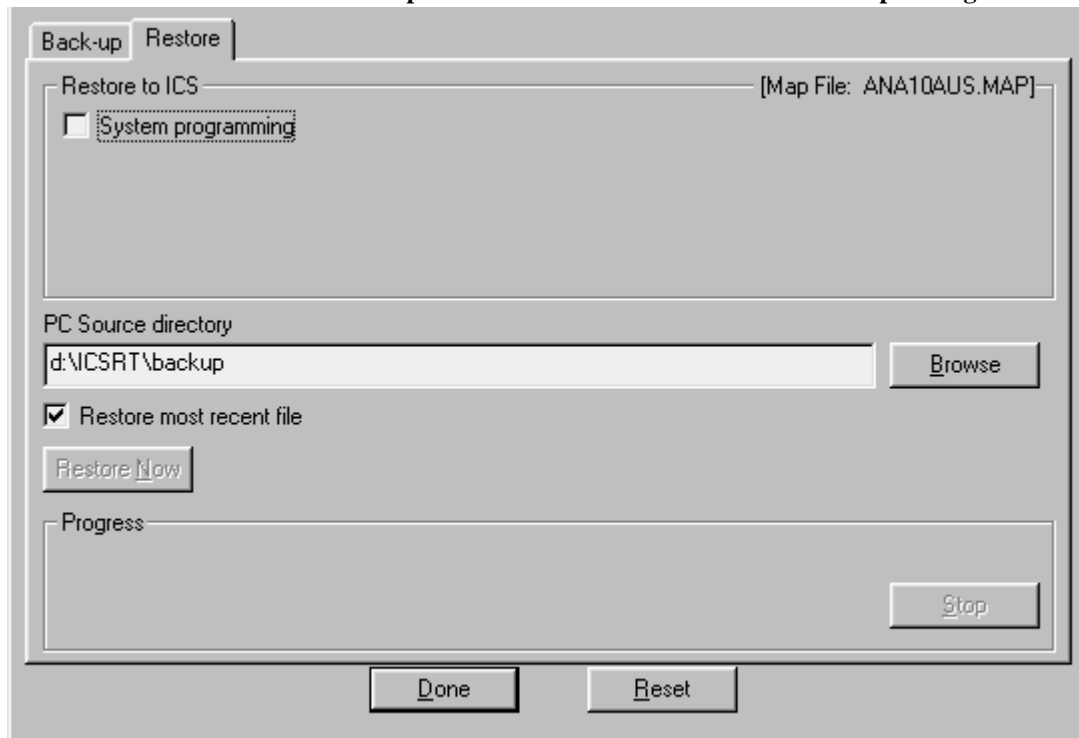
- Double-click the Backup and Restore icon in the **Remote Tools** window.
- Click the Backup and Restore icon and select **Run** from the **Tool** menu.
- Choose the Backup and Restore icon and click the Run icon in the menu bar.

Choosing Backup or Restore

The tabs labeled Backup and Restore move you between the backup settings and the restore settings. Click the tab of the procedure you wish to perform.

You cannot change the settings while a backup or restore is in progress.

Backup and Restore window with default backup settings



Selecting the programming to backup or restore

There are two choices for the type of information you can backup to the PC or restore to an ME.

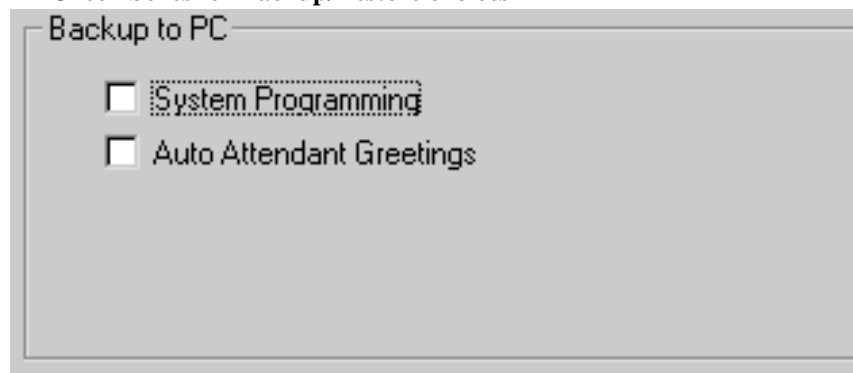
System Programming: All programming for an ME that is done using the programming feature code

(Feature * * C N F G) is part of System programming. This includes trunk and line configuration, system-wide settings, and customised telephone programming.

Auto-Attendant Greetings: The messages recorded for System Answer and Custom Call Routing (CCR) using

Feature * * 8 3 3 . These features are available for the Compact Plus ME only.

Check boxes for Backup/Restore choices



Select which programming you will backup or restore by selecting or de-selecting the check box.

You must choose at least one option to go ahead with a backup or restore.

No options are selected by default.

You cannot backup the programming for a DSS (direct station select) console.

Choosing the destination or source directory

In the Backup settings, the PC Destination directory field contains the name of the directory where the backup files are stored. In the Restore settings, the PC Source directory field contains the name of the directory where the backup programming files that are transmitted to the ME are found.

If you enter a directory for backup file storage that does not exist, the **Create Directory** dialog box appears. See [Creating a new directory](#) for more information.

You must use an existing directory when choosing a directory as a source for a restore.

Click **Browse** to select a different destination or source directory using the **Select Directory** dialog box. See [Using the Select Directory dialog box](#) for more information.

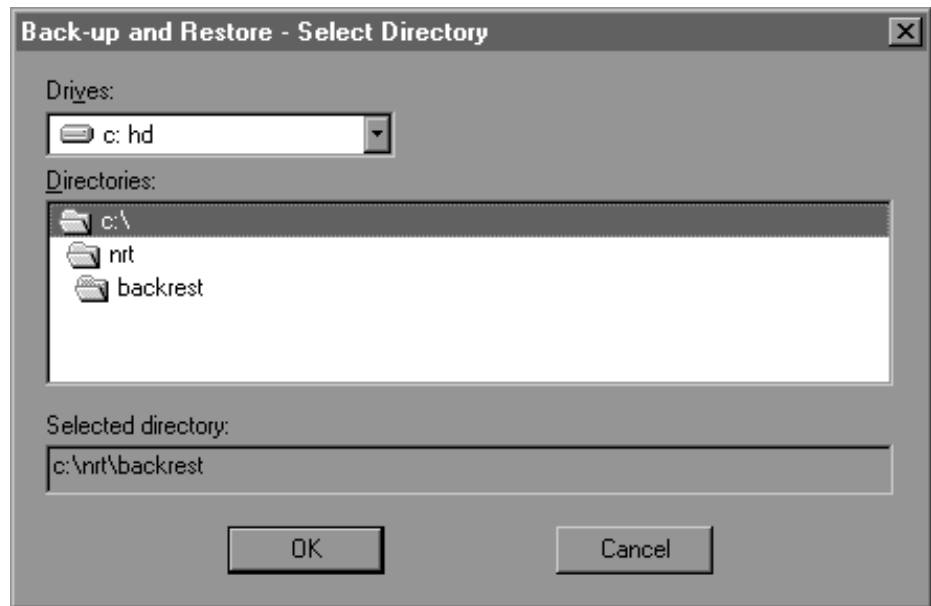
You must have a valid entry in this field to be able to perform a backup or restore.

The Restore settings include an additional check box below the PC Source directory field. By selecting the box, you will use the most recent backup file to restore programming to the system.

The **Restore Most Recent File** check box is selected by default.

Using the Select Directory dialog box

The **Select Directory** dialog box is used to supply an entry for the PC Destination/Source directory.

Select Directory dialog box

You select a directory by browsing the different drives and directories on the PC.

1. Click **Browse** in the **Backup and Restore** window. The **Select Directory** dialog box appears.
2. Click the drop-down arrow beside the **Drives** field to select the drive on the PC where the directory you will select is found.
3. Click a directory in the **Directories** list box, or double-click an item to see any directories within it. The directory you select will appear in the **Selected Directory** field.
4. Click **OK** to close the dialog box and enter the directory you have selected in the PC Destination/Source text field of the **Backup and Restore** window.

Click **Cancel** to close the **Select Directory** dialog box without using any of the selections you have made in the box.

Creating a new directory

The **Create Directory** dialog box appears if you enter the name of a directory that does not exist in the PC Destination directory field (in the **Backup and Restore** window).

Create Directory dialog box



Click **Yes** to create a new directory. A directory with the name you entered in the PC Destination directory field is added to the drive and directory in the PC Destination directory field.

Click **No** to return to the original field. The unknown directory name you entered appears in the field. Enter a new name to replace the unknown name.

Resetting the values

Click **Reset** to change the Backup or Restore options and the PC Destination/Source directory field to default values. You cannot reset when a backup or restore is in progress.

The Backup or Restore options are not selected by default. If reset, the PC Destination/Source directory field returns to the directory associated with the ME to which you are connected, or to the default name.

Backing up programming for an ME

1. Select at least one of the Backup options and make a valid entry in the PC Destination directory field.
2. Click **Backup Now**.
If you are not already connected to an ME, the program starts a connection.

Restoring programming for an ME

1. Select at least one of the Restore options and make a valid entry in the PC Source directory field.
2. Click **Restore Now**.
If you are not already connected to an ME, the program starts a connection.

Viewing the progress of a backup or restore

There are three parts in the Progress area of the **Backup and Restore** window.

Progress text: When a backup or restore is in progress, the text shows the current action and the file name. For example, “Backing up System Programming into file Fnvram.new.” You also see what percentage of programming has been backed up or restored.

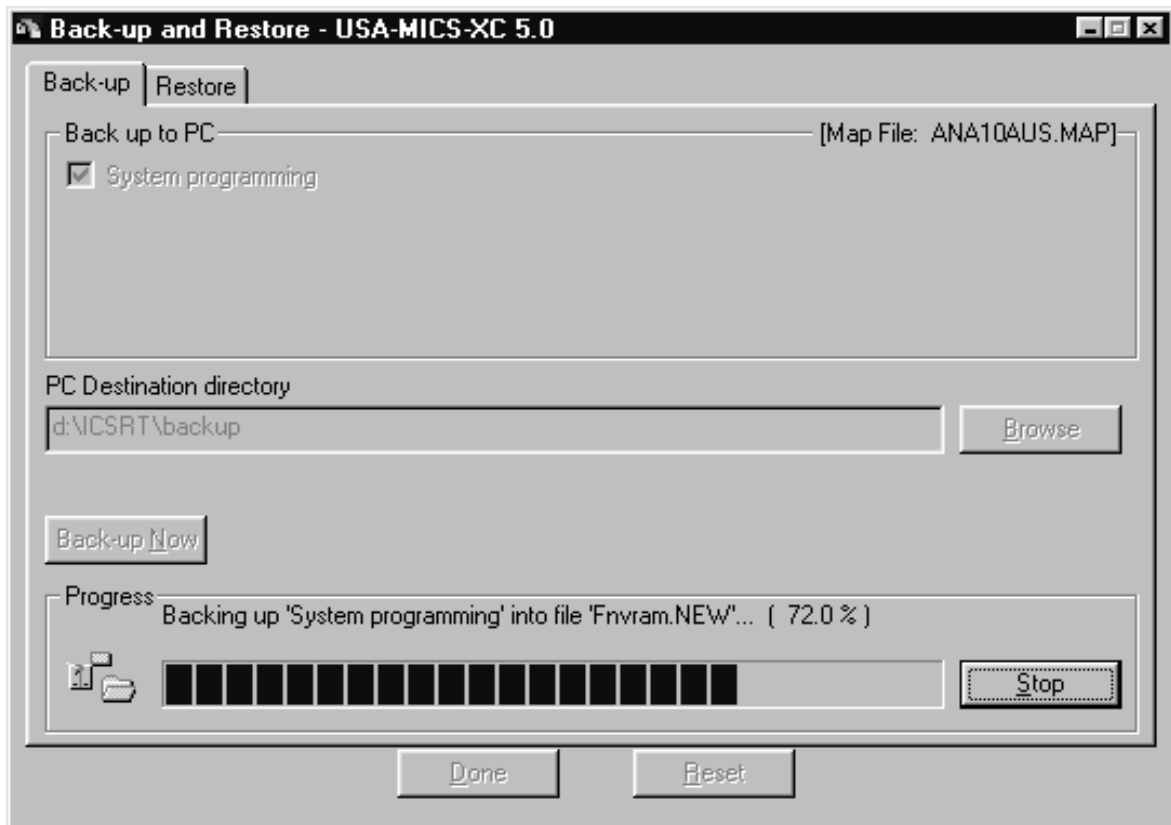
There is no progress text if a backup or restore is not in progress.

When you go ahead with a restore, there is a period of a minute or longer while the restore action is initiated.

Progress indicator: When a backup or restore is in progress, a bar graph shows the rough percentage of the action that is complete. It does not appear unless a backup or restore is occurring.

Stop: When a backup or restore is in progress, you can click **Stop** to discontinue the operation. See Stopping a restore and Stopping a backup for more information.

Progress indicator (Backup in Progress)



Stopping a backup

Click **Stop** to discontinue a backup.

The **Close Application** dialog box appears if you try to close the Backup and Restore tool while a backup is in progress. The backup continues behind the dialog box until you respond.

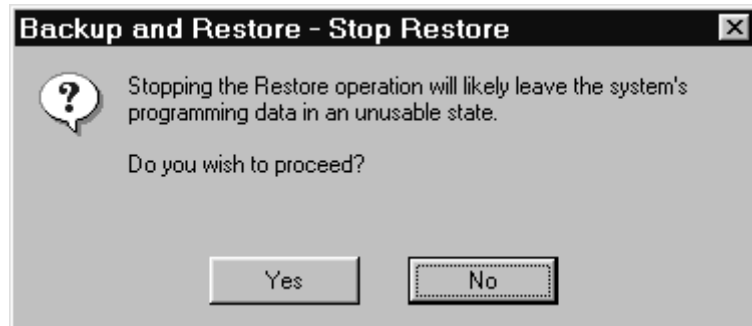
Click **Yes** to stop the backup.

If you click **No**, the backup will continue.

Stopping a restore

Click **Stop** to discontinue a restore. If you click **Stop** while a restore is in progress, the **Stop Restore** dialog box appears.

Stop Restore dialog box



The **Close Application** dialog box appears if you try to close the **Backup and Restore** window while a restore is in progress.

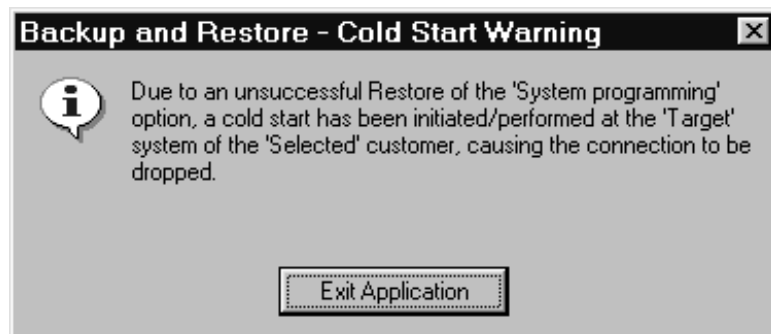
If you stop a restore, you must perform another, successful restore or the system will initiate a cold start. This means all programming will be lost and all settings will return to the factory defaults. The system will also initiate a cold start if you select the Backup tab, or close the **Backup and Restore** window after stopping a restore.

Click **Yes** to stop the restore action.

If you click **No**, the restore action continues.

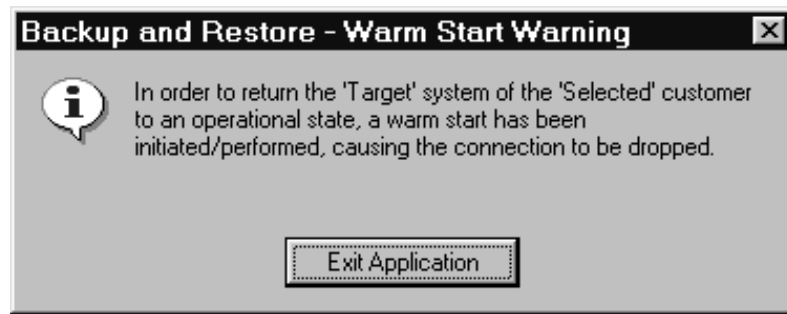
If you go ahead without completing the restore action, the **Cold Start Warning** dialog box appears. It tells you that the system will initiate a cold start. You can only click **Exit Application**.

Cold Start Warning dialog box



Completing a restore action

When the restore is complete, the **Warm Start Warning** dialog box appears. A warm start (a restart of the system where no programming is lost) is needed for the restored programming to take effect. The restart will end your connection with the ME.

Warm Start Warning dialog box

1. Click **Exit Application**.
2. Close the **Backup and Restore** window. The ME is restarted and your connection to the ME is dropped.

Note: The ME remains in maintenance mode and will not cold start or warm start until the **Backup and Restore** window is closed or after 30 minutes.

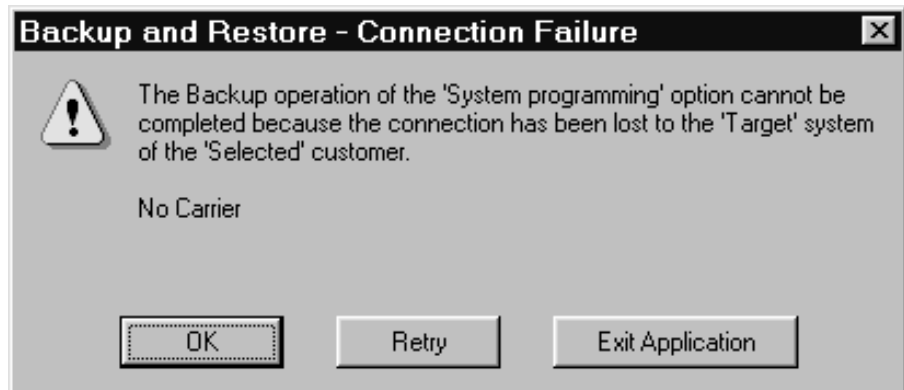
Closing the Backup and Restore tool

Click **Done**.

Note: You cannot click **Done** if a backup or restore is in progress.

Recovering from a lost connection

If the serial cable connecting the PC to the Commander NT FastRAD becomes disconnected, or if the connection is lost for some other reason to the Commander NT FastRAD or I-RAD, a warning box appears.

Connection Failure dialog box

OK closes the dialog box and returns you to the **Backup and Restore** window. The destination of the connection settings (the ME you were connected to) remains the same.

Retry closes the dialog box, starts another attempt to connect with the ME (if required), and then retries the current backup or restore action.

The application only retries the operations that are not complete when the connection is lost. For example, if you have selected both the System Programming and Auto-Attendant Greetings options for backup, and the connection fails while the Auto-Attendant Greetings are being backed up, only the backup of Auto-Attendant Greetings is retried.

Exit Application closes the dialog box and the Backup and Restore tool.

To connect to a different ME, or to change the settings used for the connection, click **Exit Application** to close the tool window. You can then restart the tool and make changes to the **Connection Properties** window.

Error messages

When a backup or restore cannot be completed, a **Backup or Restore** dialog box appears. The message in the box will describe why the action couldn't be completed.

There are one or more action buttons in an error message dialog box.

OK : Closes the dialog box and allows you to continue working in the **Backup and Restore** window.

Cancel : Closes the dialog box and stops the attempt to connect, or the backup or restore action. You can continue to work in the **Backup and Restore** window.

Retry : Closes the dialog box and starts another attempt to connect with the ME (if required) and retries the current backup or restore action.

Continue : Closes the dialog box and proceeds with any other backup or restore options. The backup or restore option that can't be completed is cancelled.

Exit Application : Closes the dialog box and the **Backup and Restore** window.