Supported Equipment Manual

For the PTC-860IM Device Manufactured by Telxon Corporation

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Production

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Chapter 1 • Introduction

Description

The PTC-860IM is an industrial-strength mobile computer designed to capture, process, and communicate information from virtually anywhere in the mobile workplace. It can be used on the go, on a forklift, or as a fixed mount device.

This terminal is driven by the Microsoft® MS-DOS® operating system for ease of programming and application development. The 8-line vacuum fluorescent display ensures optimum readability in even the most difficult lighting conditions, and performs well at low temperatures.

Large, ergonomically-designed keys enable optimum productivity even while wearing gloves. The full alphanumeric keypad, 10-function keys and scroll keys make data entry more efficient. The PTC-860IM is compatible with Symbol's line of bar code reading devices providing "plug and scan" convenience for fast, accurate data input. An integrated direct sequence or frequency hopping spread spectrum 802.11 compliant radio enables wireless networking, and supports client/server or terminal emulation applications. The WLAN communications allow the user to access real-time information, like work-in-process. This real-time data allows you to make better-informed decisions.

A rugged, IP54 case protects critical components from harsh elements and everyday wear and tear. The wide temperature range makes it ideal for cold storage. A heavy-duty mounting bracket secures the PTC-860IM in a wide range of mobile and fixed workstation application environments.

For more information, contact www.symbol.com/about/telxon.

Picture

Requirements

Setup Requirements

Installation of PowerNet Twin Client requires, at a minimum, the following:

- A Pentium-class processor
- 32 MB of RAM
- 10 MB of free hard disk space available
- Microsoft Windows 95, 98, ME, XP, or NT/2000 operating system

Accessories

Accessories required for the PTC-860IM include:

- Radio antenna (if your terminal contains a radio) (p/n 12417-045)

- Fuse (p/n 12639-023)

- Mounting bracket (p/n 14110-000)

- 24-72 VDC power cable (p/n 10709-012)
  or
  10-16 VDC power cable (p/n 10709-212)

BIOS

Version of the BIOS

The version of BIOS on a Telxon PTC-860IM terminal is 2.7.

Finding the BIOS

The version of BIOS will appear on a terminal screen when the terminal is rebooted.
For rebooting instructions, see *Command Safe Boot* in the *Software Management* section.

Chapter 2 • Terminal Setup

Downloading From the WEB

The PowerNet Twin Client software package can be downloaded from the Connect web site at http://www.connectrf.com. Click on *Partner Services* and then click on *Software Downloads*. Select the file named *PowerNet Twin Client for Telxon*.

Running Setup from a Download File

The downloaded file is a compressed archive. After extraction using a utility such as *WinZip* or *PKWARE*, folders are created on the hard disk as shown in the following figure.

Name	Size	Type
Disk1		File Folder
disk2		File Folder
disk3		File Folder
disk4		File Folder

Click on the **Disk1** folder to view the files as shown in the following figure.
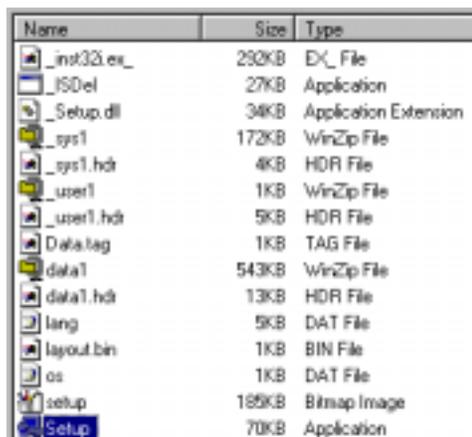
Name	Size	Type
inst32i.ex	292KB	EX_ File
_ISDel	27KB	Application
_Setup.dll	34KB	Application Extension
_sys1	172KB	WinZip File
_sys1.hdr	4KB	HDR File
_user1	1KB	WinZip File
_user1.hdr	5KB	HDR File
Data.tag	1KB	TAG File
data1	543KB	WinZip File
data1.hdr	13KB	HDR File
lang	5KB	DAT File
layout.bin	1KB	BIN File
os	1KB	DAT File
setup	185KB	Bitmap Image
Setup	70KB	Application

Click on the **Setup** application and proceed to the following section entitled *Installation* for further instructions.

Installation

The InstallShield wizard runs and presents the following screen.
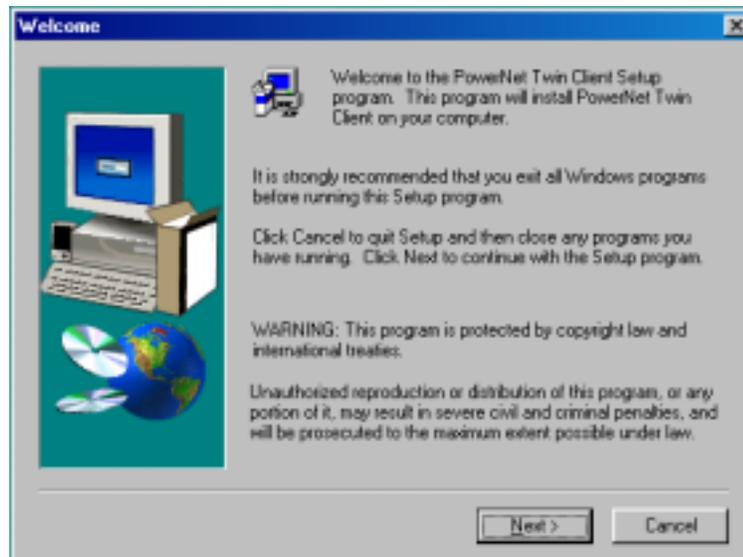
Click on **Next** to begin the installation process.

To change the default Destination Location, click on **Browse** and select a location. Then click on **Next**.

The default folder is **PowerNet**. This default may be changed either by selecting an existing program group or by typing in a new name at the prompt. Then click on **Next**.

The PowerNet Twin Client Manager and terminal files are then installed in the target folder.

When the installation is complete, reboot the system to initialize the Twin Client software.

    a.   To reboot the system immediately, click on **Finish**.

    b.   To reboot later, click on the option to restart the computer later, and click on **Finish**.

Running the Manager

The PowerNet Twin Client Manager is the utility that manages the terminal software and configurations.

Select **Start**, **Programs**, **PowerNet**, and **Twin Client Manager**. The PowerNet Twin Client Manager screen appears as shown in the following figure. This is the administrator's main screen, and all functions are accessed from its menu bar, tool bar, and tabs.

Menu Bar

The menu bar provides access to the functions used to configure the terminals and manage their software.

Toolbar

Under the menu bar, the tool bar provides shortcuts to major features. The toolbar can be turned on or off by changing the Toolbar parameter found on the **View** menu. The shortcuts available from the toolbar are as follows:

Create a new terminal configuration.

Open an existing terminal configuration.

Save the current terminal configuration.

Download the configuration to terminal.

Download software to terminal.

Automatically configure terminals over the wireless network.

PowerNet Twin Client Manager version.

The PowerNet Twin Client Manager is now successfully installed and ready for use. *Quick Start* provides detailed instructions for quickly configuring the terminal and starting a telnet session.

Quick Start

This section describes how to prepare the Twin Client Manager and the Telxon terminal for a Telnet session with the host. Following an initial serial download, the terminal software and configuration is managed automatically, over the wireless network.

Note: Telxon terminals are normally delivered with Telxon files pre-installed. However, if the terminal does not have those files installed refer to instructions in the *Software Management* section before proceeding.

Configuring the Manager

The first step is to configure the Twin Client Manager to meet site-specific requirements, and then prepare it for the automatic management of the terminal software and IP addresses. This simple procedure will require only a few minutes to complete.

Setting the Emulation

Click on **Start**, **Programs**, **PowerNet**, and **Twin Client Manager**. Select the **Settings** menu, as shown below.
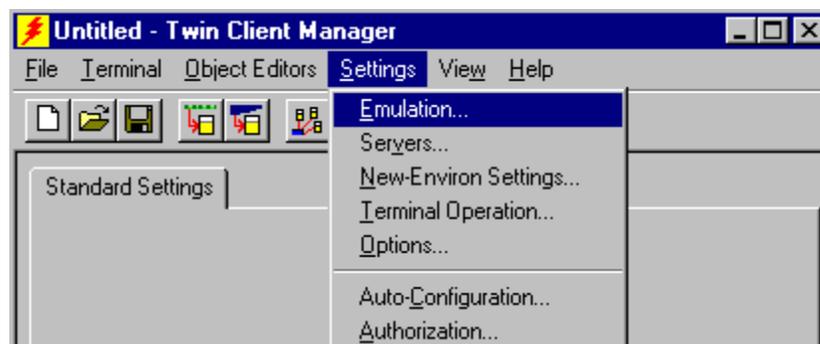
Click on **Emulation**, select the desired emulation, and click on **OK**.
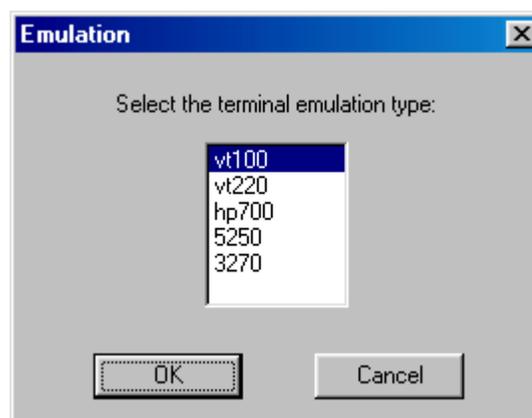
Setting the Servers

The Servers are the Telnet host systems the terminals will access.
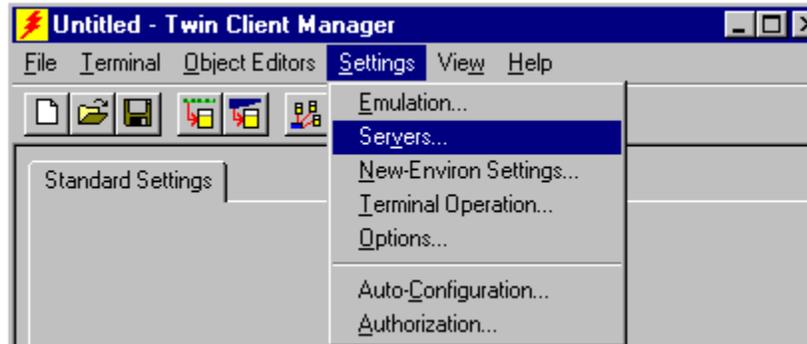
To set these addresses from the **Settings** menu, click on **Servers** and then click on **Add**. Enter the name of each server, its IP Address and IP port (normally 23 for Telnet servers), and emulation type. Then click on **OK**.
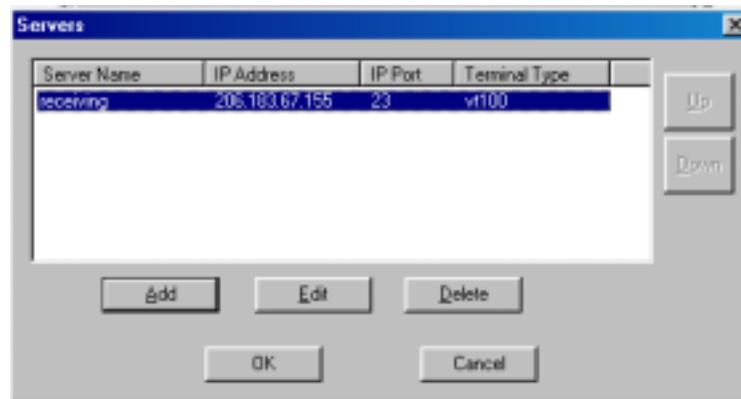
Repeat this step for each telnet server the terminals are required to access. If an error is made in the name, IP Address, IP Port number, or Terminal emulation type, click on the line that is in error and then click on the **Edit** button to make the corrections.

Setting Terminal Model and COM Port

The default terminal model is 4500, and the default serial connection to the Telxon terminal is through COM1. To select a specific Telxon terminal model, or to change the COM port assignment, click on the **Options** menu as shown.
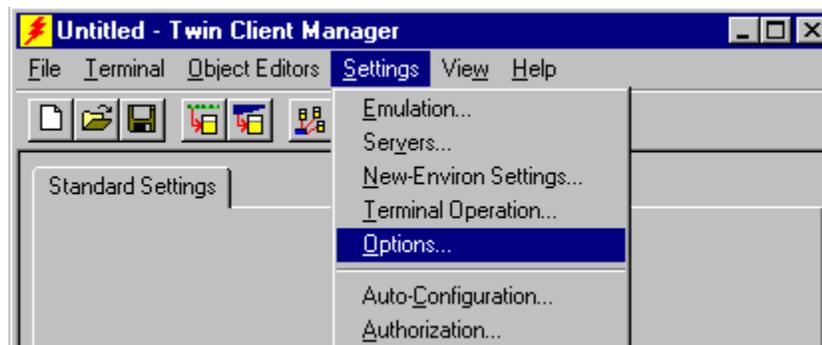
The default terminal model, 860-960, represents the default setup for all Telxon terminals under PowerNet.
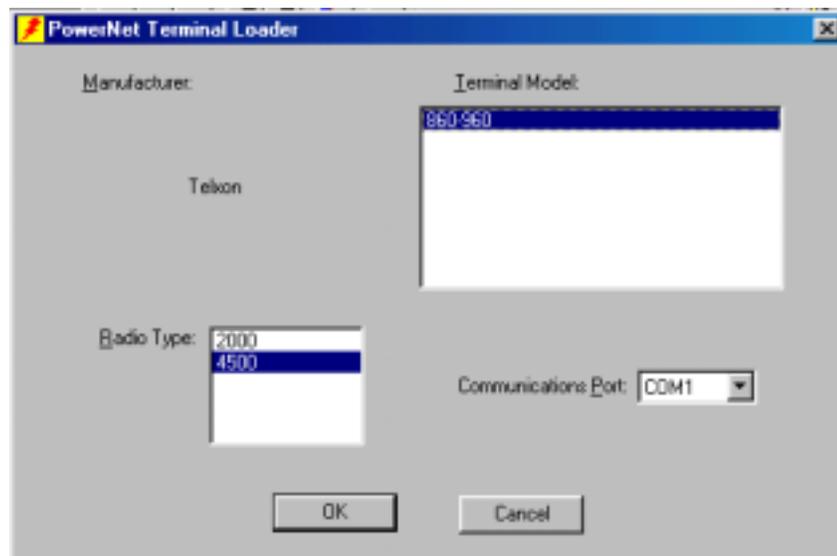
Saving the Configuration

Click on **File** and **Save As**. Enter a name for this configuration.

For the purposes of this example, the name is vt220.
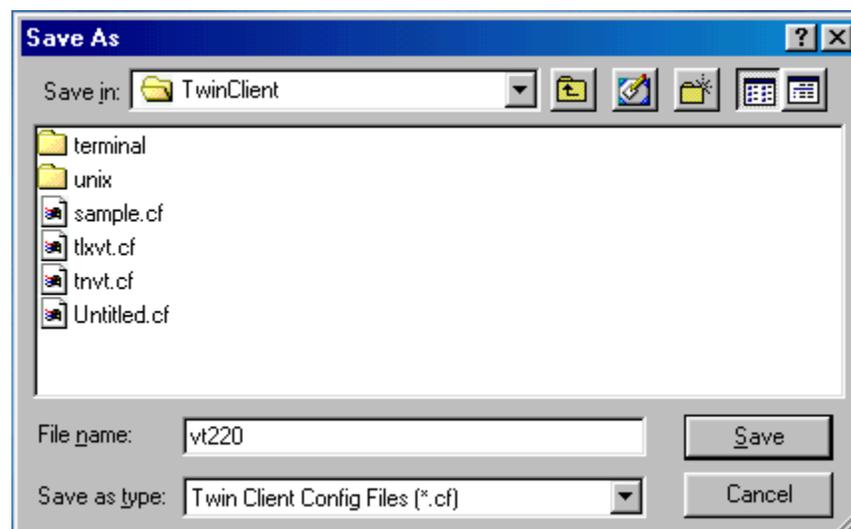
Setting Auto-Configuration

The configuration download and IP address assignment for each terminal will take place automatically by setting the Auto-Configuration options.

Click on the **Auto-Configuration** option in the **Settings** menu.

Note: If the Auto-Configuration window does not display the options, click on the **Advanced<<** button.

If multiple network adapters are installed on the PC, ensure that the desired network adapter is selected. Click the **Change** button to select the appropriate adapter.
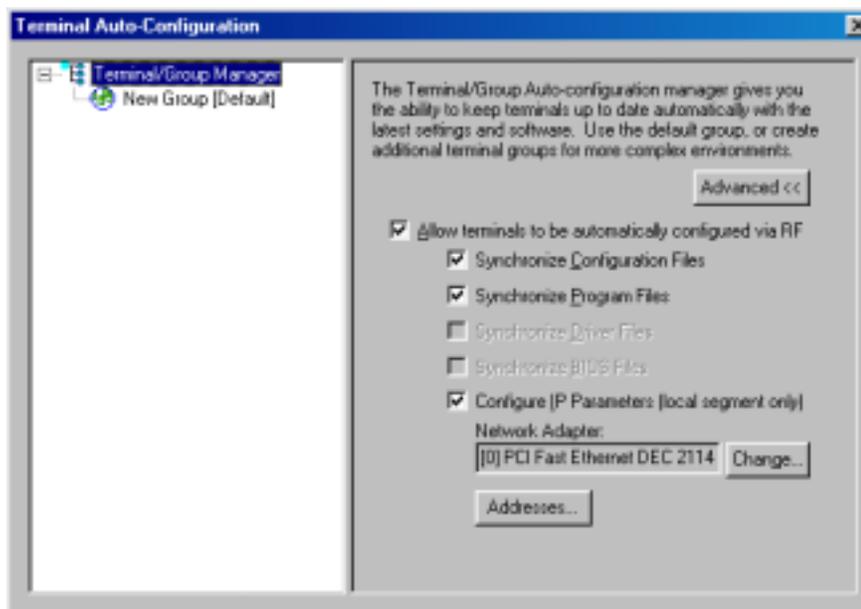
This powerful software management tool is described in detail in the section entitled *Software Management*. For now, it is sufficient simply to use it for assignment of the initial terminal configuration and IP address, all of which can be easily changed later. Ensure that all of the check boxes are checked as shown above.

Click on the **Addresses** button to assign user specific IP address range.
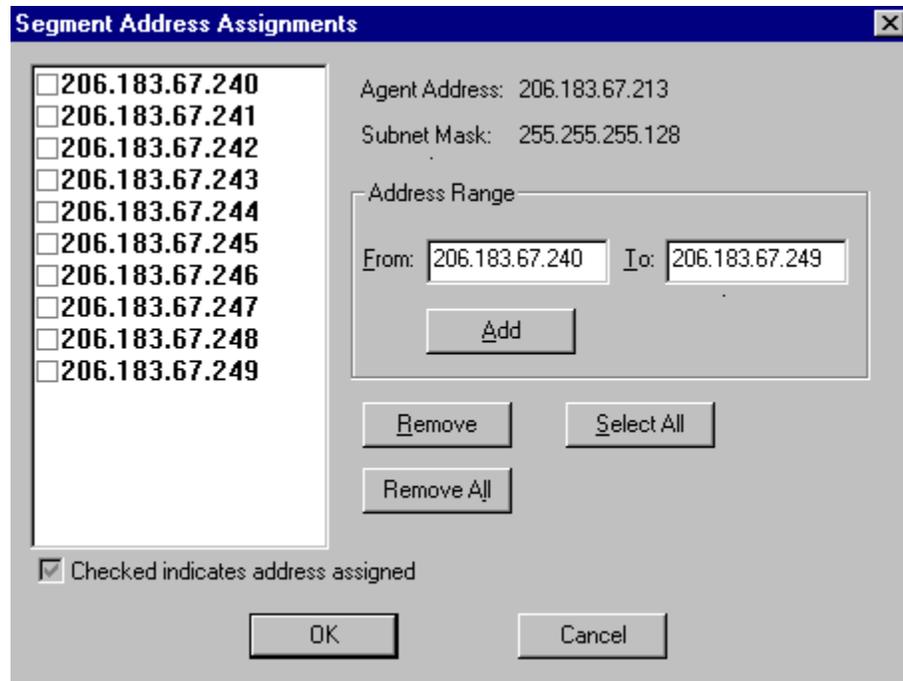
After setting the address range, click on **OK** to return to the Auto-Configuration screen and then click on the box next to the terminal group manager.
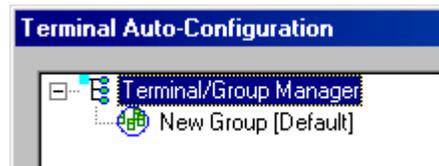
The display expands to include the default terminal Group. Next, click on the **New Group** icon and use the **Browse** button to select the configuration file saved earlier.
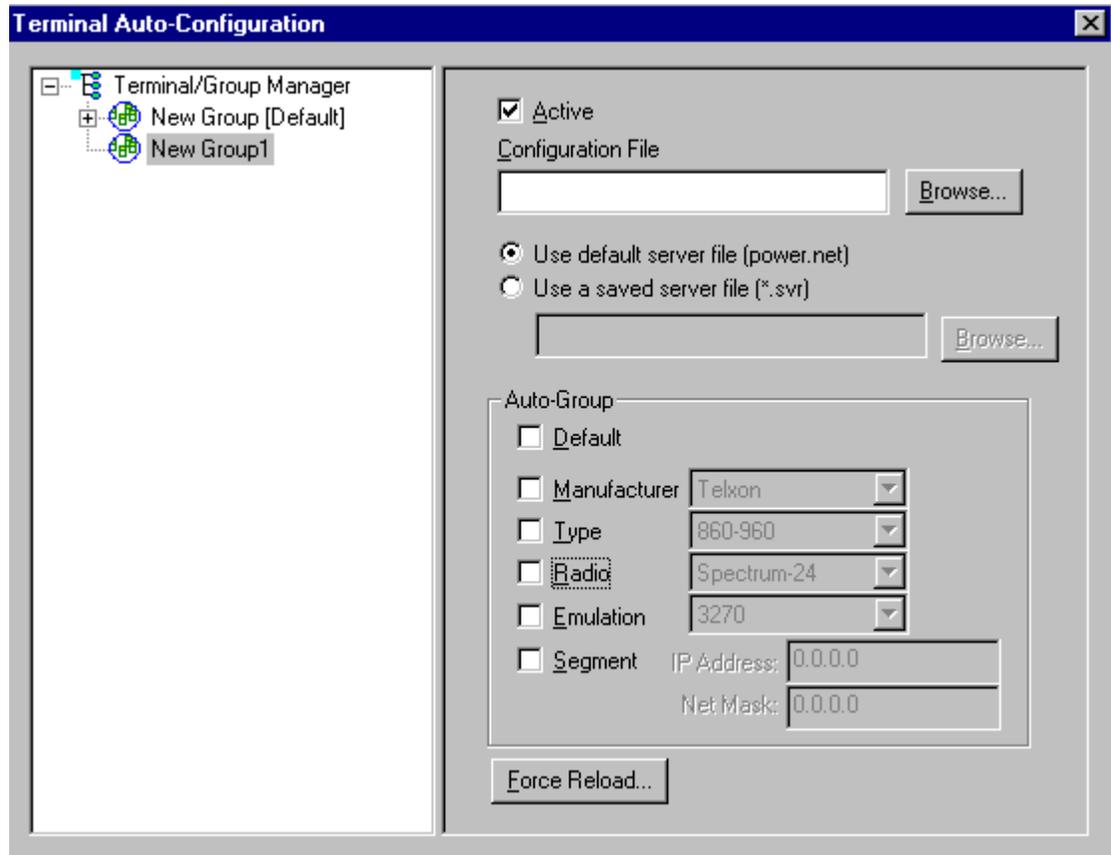
Check the **Active** box, and the system is now configured to automatically download IP addresses, software, and configuration files to the terminals. Click on the ⊠ box at upper right corner to return to the main menu.

Note: The software does not need to be authorized now. It can be authorized later, after a Telnet session has been established. The procedure is described in a section entitled *Authorizing PowerNet*.

Selecting the AirLoad File

For instructions on creating Airload files, see *Creating Telxon Arc Files* in the Telxon Twin Client reference manual.

The Airloader Arc file itself is downloaded through the serial connection as described in *Configuring the Terminal for Download*.

Configuring the Terminal for Download

Command Safe Boot

The Command Safe Boot bypasses all configuration files and places the terminal in DOS Mode. On the portable terminal, boot the terminal using the key sequence as shown in the following table.

Safe Boot Sequences	
Following Power OFF	
Terminal Model & Keypad	**Key Sequence**
VTerm (VT-100, VT-220, HP-700)	Press and hold the **V** and **ENTER** keys, Press and release **ON/OFF**. Release **V** and **ENTER** keys when cursor appears in the upper left corner of terminal screen.
TN3270 TN5250	Press and hold the **ENTER** and **TAB** keys, then Press and release **ON/OFF**. Release **ENTER** and **TAB** keys when cursor appears in the upper left corner of terminal screen.

Once the keys are released the terminal screen will scroll. The following should be displayed on the terminal screen.

```
Copr.  1990,  1995
Telxon Corp.
RAMSAVER   V6.2
(3.0/3.0)

Current Date is  (Example
Wed 08-08-00)

Enter new date
(mm-dd-yy): _

Current time is
(Example12:53:03.86p)
Enter new time: _
```

The terminal will display the current date and time. If the display is not accurate enter manually.

Press **ENTER** for (VT-100, VT-220, HP-700) and/or **TAB** for (TN3270, TN5250).

The terminal will scroll to a DOS prompt (C>), type **flashr** and press **ENTER**.

```
Microsoft ® MS-DOS ®
ROM Version 5.00
© copyright Microsoft
Corp  1981-1991, (3.0)

C> flashr
```

The next terminal screens appear as follows.

```
FLASH –VER 1.3
0: System ctrl
1: User ctrl
2: Exit
```

Press **0**, then **ENTER**.

```
Do you wish to
program the flash
now?
(Y/N): y
```

Press **Y**, then **ENTER**.

Downloading the ARC Image

The download requires approximately 5 minutes to complete, during which the following is displayed on the Twin Client Manager PC.

```
FLASH Program
Now operating
Please wait
```

Note: The file size may vary.

In the event of a failure, verify the following:

- The cable connection between terminal and PC and condition of all connectors.
- The specification of correct COM port.

Following a successful AirLoad ARC file download, the terminal should automatically reboot.

The terminal then associates with an access point, contacts the Twin Client Manager, and then downloads the program, configuration, and IP address of the terminal.

During the download, progress messages are displayed on the terminal. Pauses in activity of up to 10 seconds will be observed as the terminal writes to EEPROM. The download requires approximately 1 minute to complete.

Note: To change emulations with Airload:
1. Go to the DOS prompt at the a:/ drive.
2. Delete the current emulation executable and the run.bat file.
3. Set up Airload for the new emulation (example: C:\PowerNet\TwinClient\3270.cf) in the configuration file box of the auto-configuration screen.
4. Reboot the terminal (see Configuring the Terminal for Download).

The following table describes the error messages that will be displayed on the terminal in the event of a download failure, and can be used as a guide to correcting the problem.

Error Indication	Possible Cause	Corrective Action
NOT Associated	Invalid NETID or ESSID	Run CFGRF radio setup program.
No AirLoad Manager Found	AirLoad Manager not active, or not installed on the LAN segment	Ensure that the PC with Twin Client Manager is on the same segment and that the PC is operating. If the PC is not on the same segment, enter the address of the PC in response to the terminal prompt.
Manager not Active	Previously identified AirLoad Manager is no longer found.	Same as above
Unable to open connection	IP stack on terminal failed to load	Reload Telxon driver files.
Timeout waiting for data	Transient communications failure	Reboot terminal. If problem persists, check the RFSYNC.log in the PowerNetTN directory.
Download aborted	Socket closed during download	Ensure PC is operating. Reboot terminal and retry.
Manager inactive	PC not operating	Restart the PC.
Transfer successful, 2 second download, terminal still in **flashr** program screen	Memory too small in terminal to load custom ARC	Use AirLoad ARC image.
Transfer successful, terminal displays **bad command or file name**, and you are at a DOS prompt	Incorrect radio type selected under **Settings**, **Options** for the terminal	Correct radio setting and download again.

A successful wireless connection and download is indicated by the display of the Twin Client main menu shown below.

```
Twin Client
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Keypress to Continue…
```

The terminal is now ready to establish a Telnet session with the host system.

Starting a Telnet Session

At the Twin Client main menu on the terminal, press any key to establish the connection. Until the terminal has been authorized, the following screen is displayed.

```
RECOVERABLE ERROR
Terminal not
Authorized for
Twin Client

Keypress to Continue…
```

It is not necessary to authorize the terminal at this time, so press any key to continue. The terminal will establish a connection with the host system and start emulation. If the terminal fails to connect to the host, refer to the following table for the possible causes and the related corrective actions.

Failure Cause	Corrective Action
Incorrect Host IP address	Correct the Host List address on the terminal. Refer to *Terminal Setup Using Twin Client Menus* under *Standard Setup* for instructions.
Incorrect netmask value	Access Radio Setup menu and correct the netmask value. Refer to *Terminal Setup Using Twin Client Menus* under *Standard Setup* for instructions.

After a Telnet session has been successfully established, the terminal will remain in session for a maximum of 30 minutes at a time until it has been authorized. Once authorized, there is no software restriction the session time. The instructions for authorizing the terminal are presented in *Standard Setup*.

Standard Setup

The default terminal setup is sufficient for most installations. However, to meet site-specific requirements it may be necessary to customize terminal operation. The standard setup options simplify this process and can be modified using any one of the following methods:

- Using the Twin Client Manager.
- Using the Twin Client terminal menu system.

To simplify the installation of Telxon terminals at existing sites using Telxon terminals running Telxon TN Client software, the customized Telxon configuration files can be imported and automatically converted to Twin Client.

Standard Setup describes how to use the Twin Client Manager and also describes the methods for authorizing the terminal software.

Setup Using Twin Client Manager

The Twin Client Manager provides a **Standard Settings** tab for automatic setup of the terminals. The options within this tab vary according to the emulation selected, each of which is described in the following sections.

VT and HP Settings

Select the VT and HP emulation setup by clicking on the **Settings** menu and then the **Emulation** menu, as shown below.
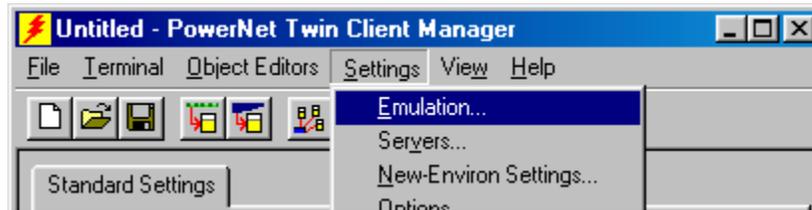
Then click on the **VT100**, **VT220**, or **HP700** selection, as shown on the following page.
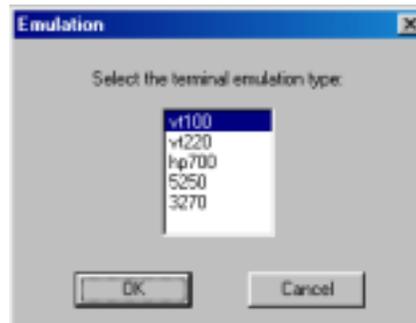
Click on **OK** after the selection is made, and return to the main Twin Client Manager menu. The standard settings tab will now reflect the settings for VT/HP emulation.

Quadrant Mode

This scrolling list option defines the rules by which the terminal display is positioned in the larger host display. As defined by Twin Client, quadrants are fixed position "windows" in the host display, and the terminal display is located on whatever quadrant contains the current cursor position.

Font Size

These check boxes enable (checked) or disable (unchecked) the display of characters in double high and double wide font.

Key Click

This check box enables (checked) or disables (unchecked) audible key clicks from the terminal, provided that the manufacturer supports the control of terminal key click sound. Default is on (checked).

Printer Type

This scrolling list selects the attached printer type. The default value is **none**, indicating no printer is attached.

5250 Settings

Select the 5250 emulation setup by clicking on the **Settings** menu and then the **Emulation** menu, as shown below.

Then click on the **5250** selection, as shown below.
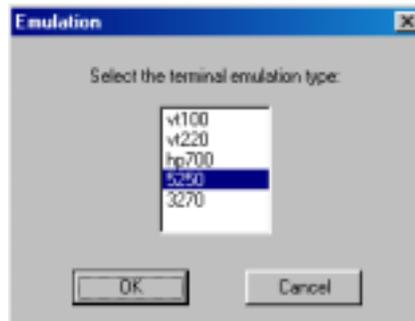
Click on **OK** after the selection is made, and return to the main Twin Client Manager menu. The standard settings tab will now reflect the settings for 5250 emulation.

Quadrant Mode

This scrolling list option defines the rules by which the terminal display is positioned in the larger host display. As defined by Twin Client, quadrants are fixed position "windows" in the host display, and the terminal display is located on whatever quadrant contains the current cursor position.

Font Size

These check boxes enable (checked) or disable (unchecked) the display of characters in double high and double wide font.

Key Click

This check box enables (checked) or disables (unchecked) audible key clicks from the terminal, provided that the manufacturer supports the control of terminal key click sound. Default is on (checked).

Printer Type

This scrolling list selects the attached printer type. The default value is **none**, indicating no printer is attached.

3270 Settings

Select the 3270 emulation setup by clicking on the **Settings** menu and then the **Emulation** menu, as shown below.
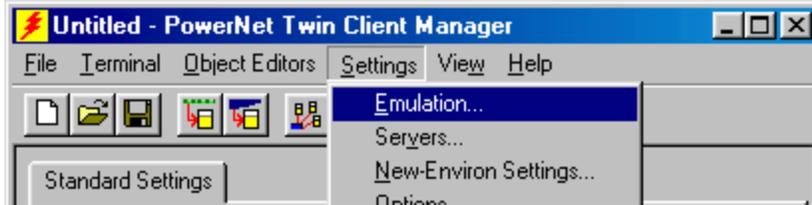
Then click on the **3270** selection, as shown below.
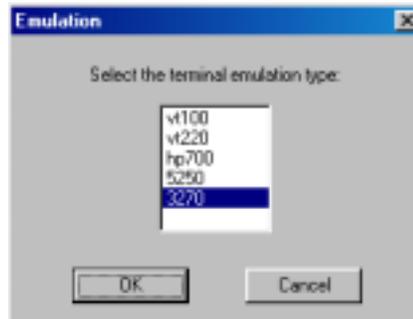
Click on **OK** after the selection is made, and return to the main Twin Client Manager menu. The standard settings tab will now reflect the settings for 3270 emulation.
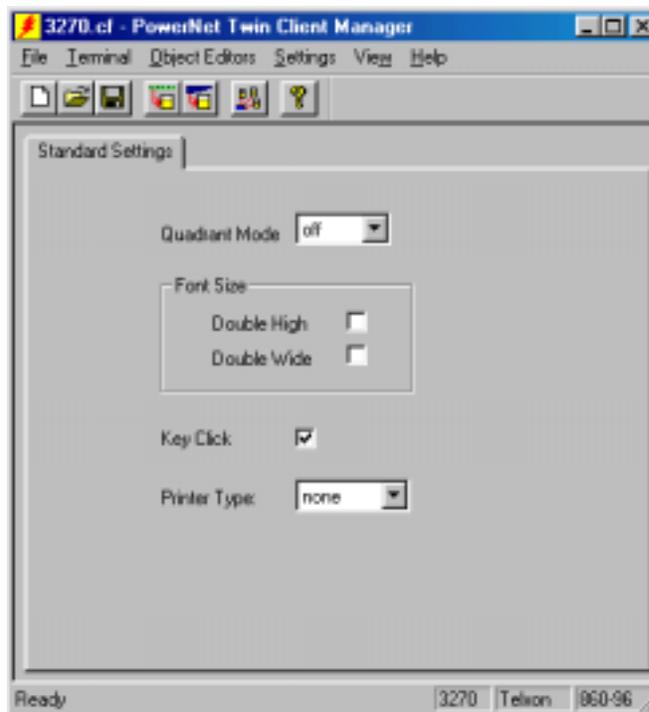
Quadrant Mode

This scrolling list option defines the rules by which the terminal display is positioned in the larger host display. As defined by Twin Client, quadrants are fixed position "windows" in the host display, and the terminal display is located on whatever quadrant contains the current cursor position.

Double High and Double Wide Font

These check boxes enable (checked) or disable (unchecked) the display of characters in the double-high and double-wide fonts.

Key Click

This check box enables (checked) or disables (unchecked) audible key clicks from the terminal, provided that the manufacturer supports the control of terminal key click sound. Default is on (checked).

Printer Type

This scrolling list selects the attached printer type. The default value is **none**, indicating no printer is attached.

Terminal Setup Using Twin Client Menus

The Twin Client terminal software provides an internal menu system for configuring certain parameters on the terminal and for switching between "server" and "telnet" mode of operation. To access this menu system, press uppercase **C** at the startup screen as shown in the following figure.

```
Twin Client
© 1991-2003, Connect, Inc.

Keypress to Continue…
```

The next screen displays the edit functions. Cursor to the appropriate Edit Function and press **Enter**.

```
Edit Functions

▮▮▮▮▮▮
Edit Host List
Edit Radio
Edit Authorization
Switch Modes
Run Emulator
Exit
```

Use the **Up-Arrow** and **Down-Arrow** keys to navigate the menu, and press **Enter** to select the highlighted option. Each menu option is described in the following sections.

Editing the IP

The IP list contains the terminal IP address, the Subnet Mask and the Router IP address. Enter the appropriate address and select **<F3>** to save and/or **<F7>** to Quit.

```
IP  206.232.71.38
SN  255.255.255.0
RT  206.232.71.1
<F3> Save  <F7>  Quit
```

Editing the Host List

If the host IP address or addresses were not pre-configured as described earlier in the section *Setting the Servers*, or if you wish to change those settings using the terminal menus, select **Edit Host List** and enter up to four Host IP addresses as required.

```
    Host 0
IP 206.183.67.155
Port 23__

<F3> Save <F7> Quit
```

Press **FNC** and **3** to save the configurations.

Edit Radio

This function acts as a password to join the radio network. Terminals associating with an Access Point must supply a matching value, determined by their configurations, or their association requests will be ignored.

```
ID  tsunami_____


<F3> Save    <F7> Quit
```

Editing the Authorization

The client software can be authorized automatically, as described in the next section. This menu option permits authorization of each terminal manually. Select **Edit Authorization** to obtain the terminal's *Identification Code*, which is then used to obtain the Authorization code from the Connect web site as described in the next section.

The 12-digit hexadecimal value displayed at the top of the terminal screen is the Identification Code for the terminal.

```
00A0F826E614
Authorization

   _____

not authorized

<F3> Save <F7> Quit
```

Type the authorization code into the field as it appears on the WEB site. Punctuation characters, such as the hyphen (-), are required. Press **FNC** and **3** to save the authorization code.

Switching Modes

The PowerNet Twin Client normally operates in "telnet" mode, which provides direct connection to Telnet hosts. It can also operate in "server" mode, through a PowerNet OpenAir server. Select the **Switch Modes** menu option to switch between server and telnet modes of operation. Note that the host socket address for the PowerNet OpenAir servers is 1800, which must also be changed in the **Edit Host List** menu described at the beginning of this section.

Running the Emulator

After all desired changes have been made, select the **Run Emulator** option to return to the Twin Client main menu. Then press any key to establish the Telnet session and begin emulation. Refer to *Starting a Telnet Session* under *Quick Start* for further instructions.

Exit

After all changes have been made, scroll to exit. Selecting exit will exit you from the Emulator mode and bring you to the A:> prompt.

Authorizing PowerNet

Each PowerNet Twin Client will run for 30 minutes at a time without authorization. Uninterrupted operation for a production environment is the result of authorizing the software. Authorization codes are obtained from the Connect web site at http://www.connectrf.com on the **Partner Services** page. Click on the **Generate Authorization** icon at the top of the page. A **PowerNet Key** is required and can be obtained by contacting Connect Tech Support at 630.353.1800.

Automatic Authorization

The Twin Client Manager can automatically authorize the terminal over the wireless network if the following requirements are met:

- A PC running Twin Client Manager is connected to the wire LAN segment with at least one access point within range of the terminal.
- The AirLoad ARC file is installed on the terminal as described earlier in this section.
- The **System ID** of the PC on which Twin Client Manager is installed has been used to obtain a site license Authorization code from the Connect web site.

To obtain the System ID of the Twin Client Manager, click on the **Authorization** option in the **Settings** menu, as shown below.

The Authorization window is displayed as shown below.
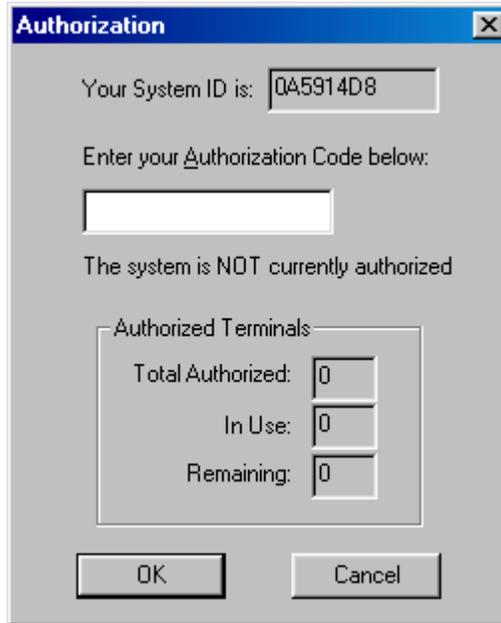
The **System ID** (in this case, 0A5914D8) is the value that is entered as the **Identification Code** on the Connect WEB site authorization page.

Manual Authorization

The procedure for manually setting the Authorization code on the terminal is described in the previous section entitled *Editing the Authorization*.

Adding Licenses

The Add Licenses feature is used when adding additional licenses to an already site licensed Twin Client manager. (i.e. Twin Client manager is licensed for 10, and the customer purchases another 10 licenses to make a total of 20.)

From Twin Client manager, choose **Authorization** from under the **Settings** menu. Click on the **Add Licenses** button.
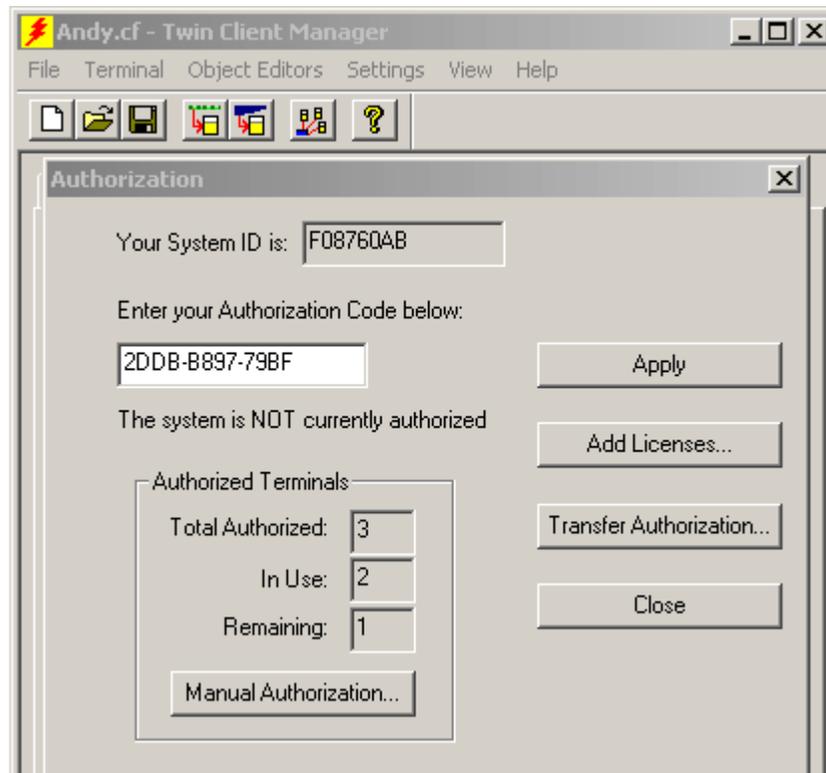
A pop-up box appears with the machine ID and a space for the additional licenses authorization code.
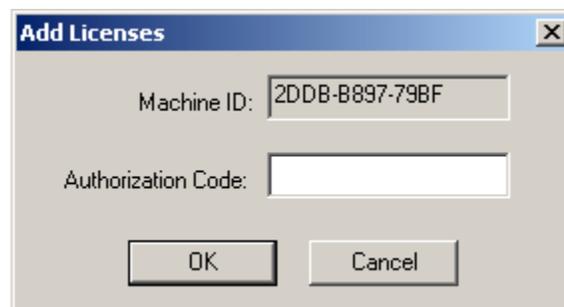
Use the machine ID in the pop-up box instead of the original machine ID to get your authorization code.

If adding users, click on the **Add Licenses** button before generating the authorization code to get the most current machine ID.

Transferring Licenses

The Transfer Licenses feature is used when moving a site license from one PC to another. After Twin Client manager is installed on a new PC, you will need the system/machine ID for it.

From Twin Client manager, select **Authorization** from under the **Settings** menu.

Click on the **Transfer Authorization** button on the old PC. You will be asked for the new system ID. Enter this new system ID. It will generate an authorization code for the new PC's Twin Client manager.
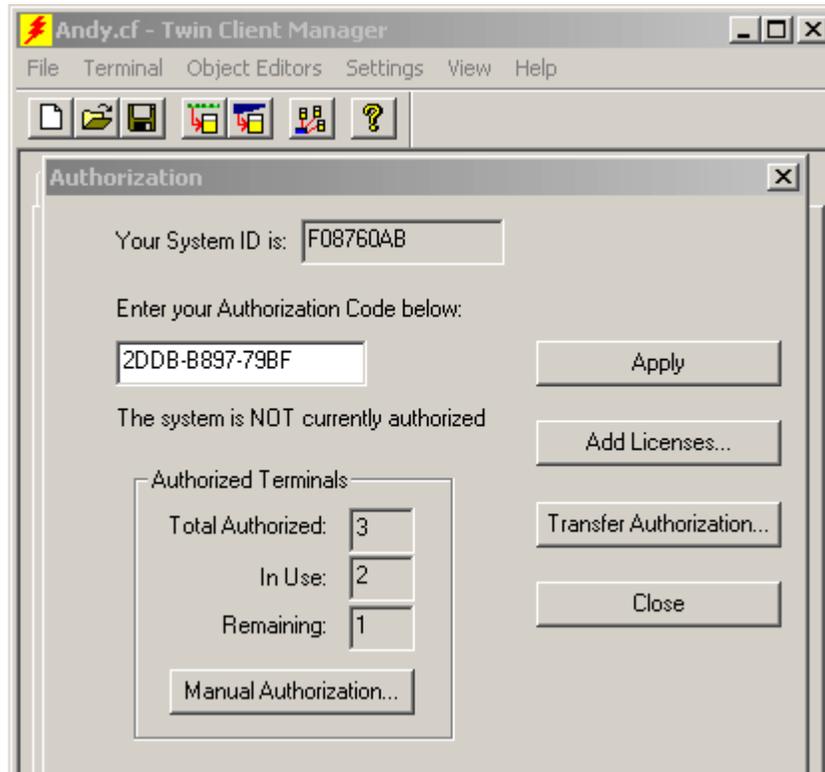
Note: This feature only works if there are licenses remaining on the old PC.

Software Management

In addition to providing functions for the download of files to the terminal via the traditional serial connection, the Twin Client Manager also provides for the management of terminal software and configurations automatically, over the wireless network.

Software Management describes the automated capability in detail. Additional manual operations involving serial download options are described at the end of this section.

Auto-Configuration

The software and supporting configuration files for all Twin Client terminals can be configured for automated management after installing the Twin Client AirLoad ARC file in the terminals, as described in *Quick Start*. The Auto-Configuration form is accessed from the Twin Client Manager **Settings** menu.
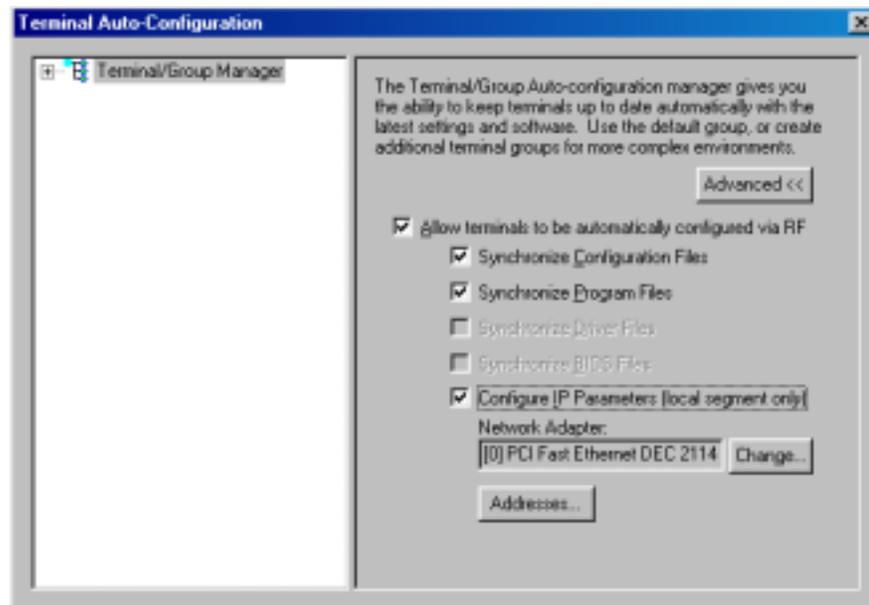
Note: If no options are displayed, click the Advanced<< button.

Enabling Automatic Downloads

Click to put a check in the box that allows terminals to be automatically configured via RF to enable automatic downloading. In the event another PC on the network is already configured and active, the following warning message is displayed.
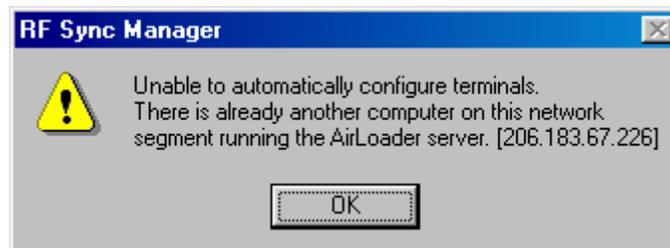
Synchronizing Configuration Files

Click to put a check in the Synchronize Configuration Files box to enable automatic synchronization of configuration files on the terminal. When the terminal is warm booted, its configuration files will be compared with the most recent on the PC. The terminal is updated automatically if it does not have the latest revision.

Synchronizing Program Files

Click to put a check in the Synchronize Program Files box to enable automatic synchronization of program files on the terminal. When the terminal is warm booted, its program files will be compared with the most recent on the PC. The terminal is updated automatically if it does not have the latest revision.

Automatic IP Address Assignment

New terminals will be assigned IP addresses automatically if the following box is checked.
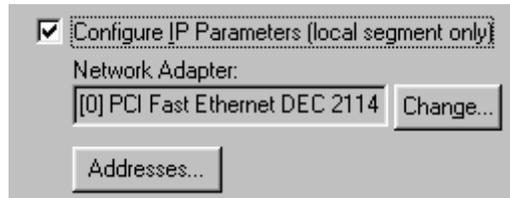
Note: Do not check this option if a DHCP server is configured to manage address assignments.

To set the addresses, click on the **Addresses** button to access the Segment Address Assignments dialog box, as shown in the following figure.
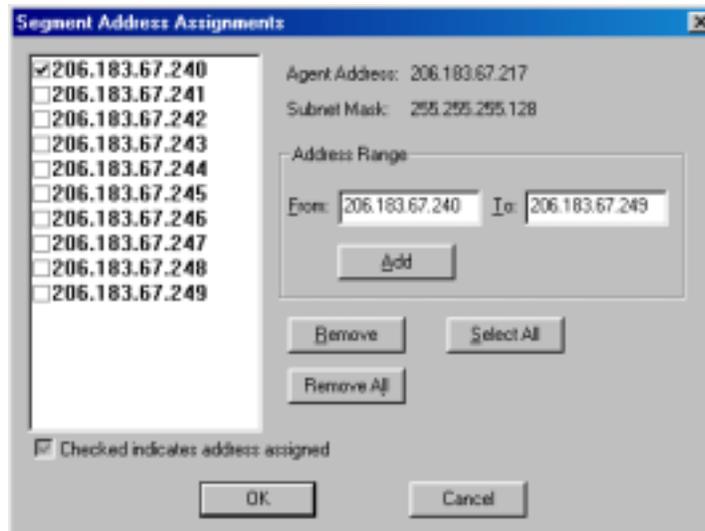
Enter the desired range in the **From** and **To** boxes as shown above, and click on **Add**.

Creating New Groups

Click on **Terminal Group Manager**, right click the mouse button, click on **New Group**.
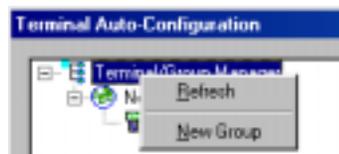
Click on **Browse**, to find the appropriate configuration file. In the Auto-Group box, check the item to be changed. Click on the pull-down menu for options.
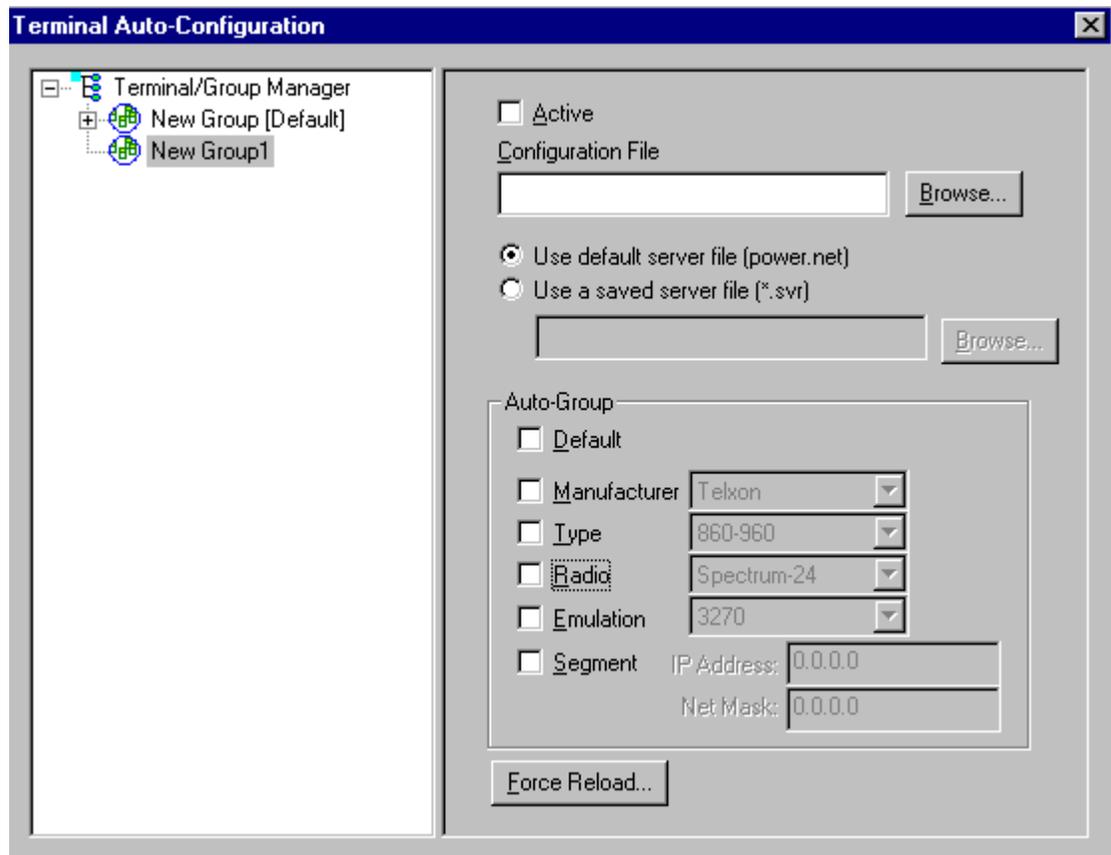
Click on the **Active** check box after the configuration file and all of the other parameters have been set.

Note: A setting under the Group allows you to associate a saved server file (.svr file) with a particular group. This means that the .svr file will get sent to the terminal in place of the default power.net file. The .svr files are created in Twin Client Manager under Tools/Servers.
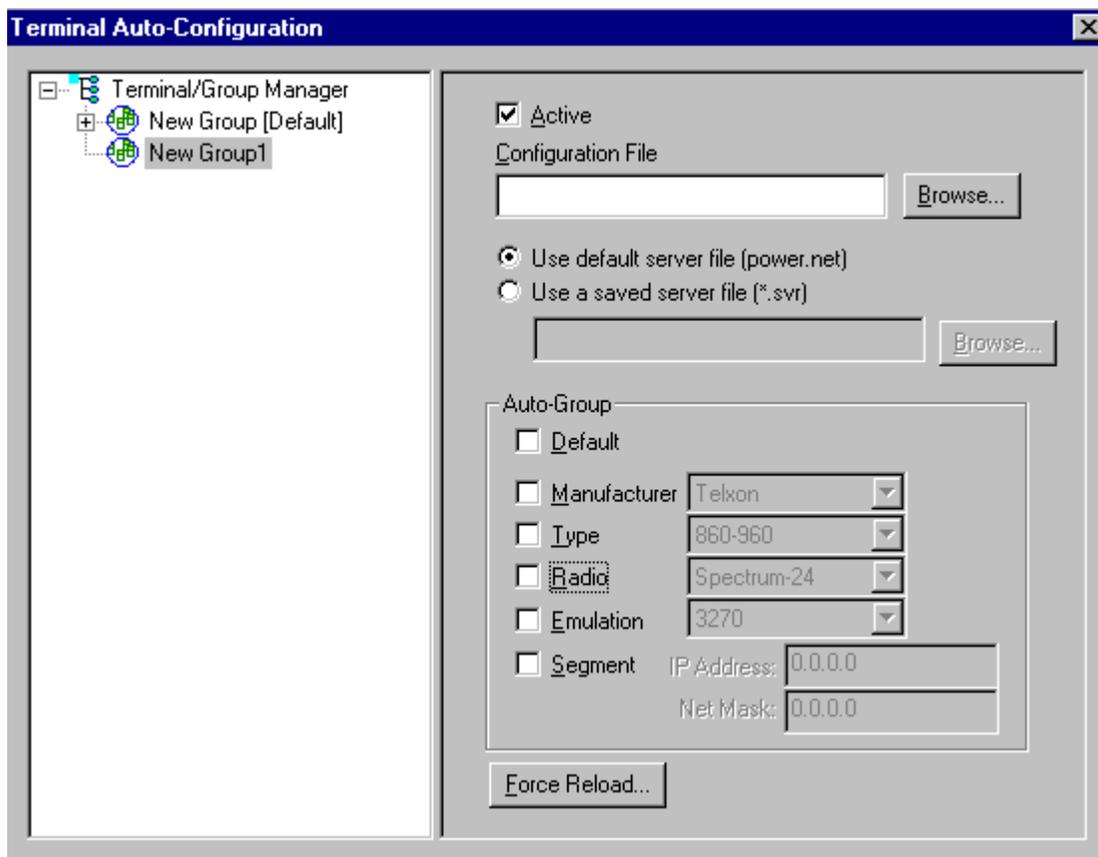
Setting the Segment

The **Segment** button restricts a terminal group to a range of IP addresses. The IP Address can be any valid address on the segment as it is used only to identify the segment. The setting of the Net Mask can be used to restrict the range. This feature is useful for segregating terminal groups by location.

Setting Force Reload

The **Force Reload** button forces all terminals within a group to be automatically updated. The following warning message appears.
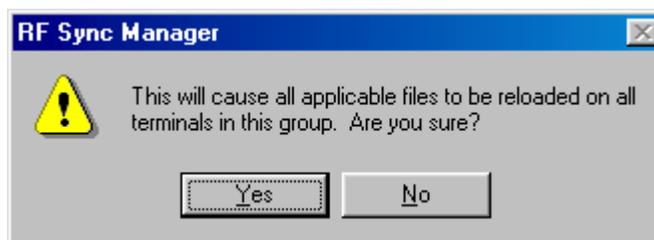
Click on the **Yes** button to force the reload.

Setting the Default Terminal Group

New terminals that have not yet been assigned to any group are initially assigned to the default group in effect when they are cold-booted.
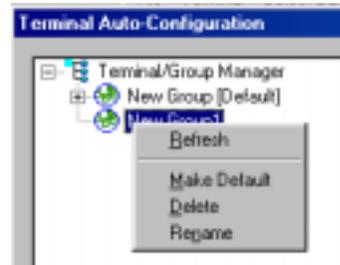
Any group can be made the default group by clicking on the group, and then clicking on the right mouse button. Then click on the **Make Default** option.

Reassigning Terminals

After a terminal has been configured and assigned to the default group, it can be reassigned to a new group by clicking on the terminal icon as shown below.
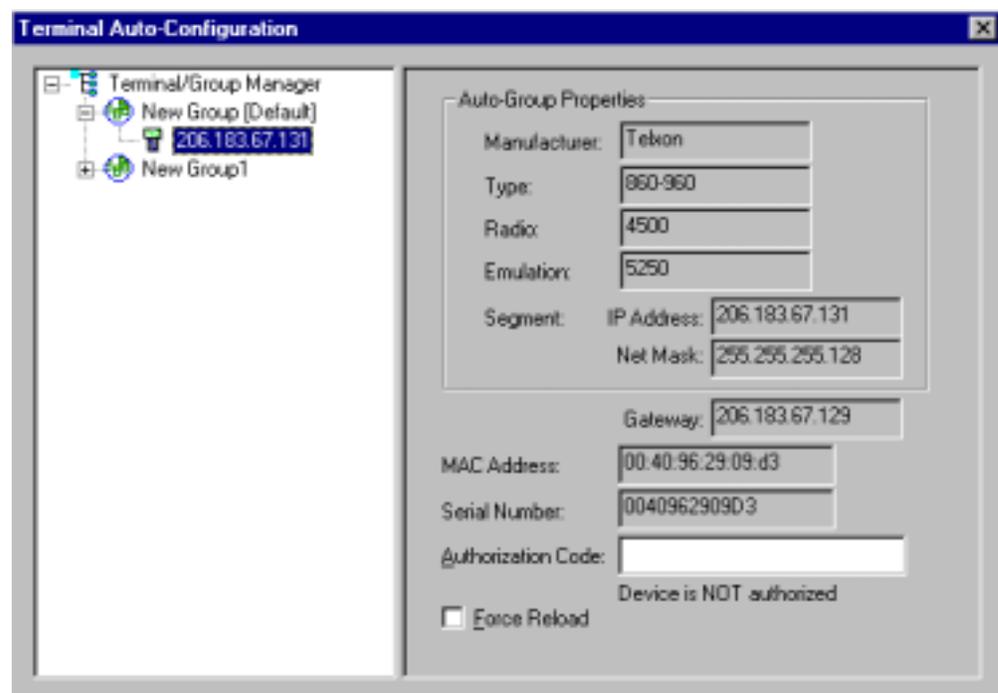
Then, holding the mouse button down, drag the terminal icon to the desired group as shown next.

Release the mouse button, which reassigns the terminal.
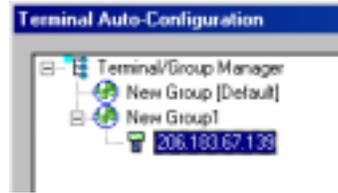
The next time the terminal is rebooted, it will be reconfigured as defined in the group specification.

Serial Download of Setup Files

The automated configuration management provided by the Twin Client Manager eliminates the need for a serial download of the terminal configuration. However, this function can be accomplished manually by clicking on **Send Setup Files to Terminal**.

Note: This procedure assumes that the Telxon PTC and PowerNet Twin Client were previously installed.
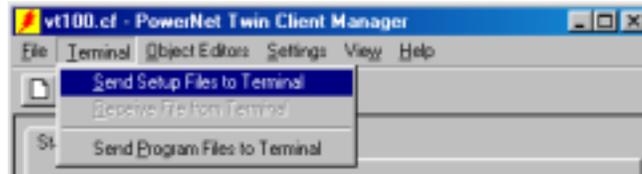
The following figure is displayed.

The procedure for running the LD.BAT utility on the terminal is described in the following sub-sections.

Warm Boot the Terminal

On the portable terminal, reboot using the key sequence as shown in the following table.

Warm Boot Sequences	
Terminal Model & Keypad	**Key Sequence**
VTerm (VT-100, VT-220, HP-700)	Press and release **CTRL**. Press and release **ALT**. Press and release **DELETE**.
TN3270 TN5250	Press and release **FUNC**. Press and release **PG UP**. Press and release **PG DN**.

If a configuration has already been downloaded to the terminal, or this is not the first time the terminal has been rebooted, skip the next section and proceed to the section entitled *Reloading the Configuration.*

First-time Download of Setup Files

Click **OK** on the PC to begin the download. After the download, warm boot the terminal, after which the following is displayed on the terminal.

```
Twin Client
© 1991-2003, Connect, Inc.

Keypress to Continue…
```

The terminal is now ready to begin a Telnet session using the setup files just downloaded.

Reloading the Setup Files

Reloading the setup files through the serial port requires that LD.BAT be executed manually, before the radio driver is installed. This is accomplished by interrupting the normal Twin Client startup process using the following technique.

Press **SHIFT + C** on the terminal to Edit Function Menu. Scroll to the Exit using the **FUNC** + **Down-Arrow**, press **ENTER**.

```
Edit Functions
Edit IP
Edit Host List
Edit Radio
Edit Authorization
Switch Modes
Run Emulation
E  it
```

Press the **ON/OFF** button on the terminal, shutting down the terminal.

Command Safe Boot

The Command Safe Boot bypasses all configuration files and places the terminal in DOS Mode. On the portable terminal, boot the terminal using the key sequence as shown in the following table.

Safe Boot Sequences	
Following Power OFF	
Terminal Model & Keypad	**Key Sequence**
VTerm (VT-100, VT-220, HP-700)	Press and hold the **V** and **ENTER** keys, Press and release **ON/OFF**. Release **V** and **ENTER** keys when cursor appears in the upper left corner of terminal screen.
TN3270	Press and hold the **ENTER** and **TAB**

TN5250	keys, Press and release **ON/OFF**. Release **ENTER** and **TAB** keys when cursor appears in the upper left corner of terminal screen.

Once the keys are released the terminal screen will scroll. The following should be displayed on the terminal screen.

```
Current Date is  (Example
Wed 08-08-00)

Enter new date
(mm-dd-yy): _

Current time is
(Example 12:53:03.86p)
Enter new time: _
```

The terminal will display the current date and time. If the display is not accurate, enter manually.

Press **ENTER** for (VT-100, VT-220, HP-700) and/or **TAB** for (TN3270, TN5250).

The terminal will scroll to a DOS prompt (C>), type **ld** and press **ENTER**.

```
Microsoft ® MS-DOS ®
ROM Version 5.00
© copyright Microsoft
Corp  1981-1991, (3.0)

C> ld
```

Press **OK** on PowerNet Twin Client Manager.
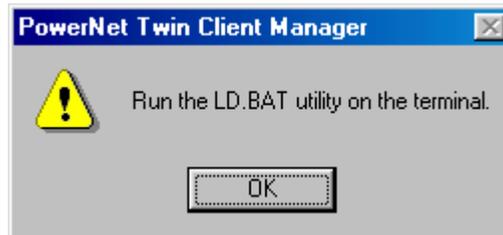
The Terminal is downloading is setup files from the PC. When the download is completed the DOS prompt will appear on the terminal screen.

Next, warm boot the terminal as explained previously.

The next terminal screens appear as follows.

```
Twin Client
© 1991-2003, Connect, Inc.

Keypress to Continue…
```

The terminal is now ready to begin a Telnet session with the new setup files.

Creating Custom Arc Images

A custom Arc can be created for serial download to the terminal. The custom Arc file can be built with the currently opened Twin Client configuration information, and is useful if the automatic configuration management capabilities are not used.

For instructions on creating the Arc file, see *Creating Telxon Arc Files* in the Telxon Twin Client reference manual.

Refer to *Configuring the Terminal for Download* for the detailed instructions to complete the download.

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Chapter 3 • Keypad Configuration

Keypad Figures

F1	F2	F3	F4	FUNC	ALT	DEL	◄	►	ESC	ON/OFF

| A
a | B
b | \
C
c | \|
D
d | -
E
e | _
F
f | =
G
g | ▲ | F7
&
7
F17 | F8
*
8
F18 | F9
(
9
F19 |

| +
H
h | [
I
i | {
J
j |]
K
k | }
L
l | `
M
m | :
N
n | ▼ | F4
$
4
F14 | F5
%
5
F15 | F6
^
6
F16 |

| ;
O
o | '
P
p | "
Q
q | "
R
r | <
S
s | >
T
t | ,
U
u | Cap Lk
SHIFT | F1
!
1
F11 | F2
@
2
F12 | F3
#
3
F13 |

| >
V
v | .
W
w | ?
X
x | /
Y
y | ~
Z
z | **SP** | **CTRL** | **BKSP** | F10
0
F20 | **ENTER** | |

PTC-860IM VT Keyboard

FUNC
SHIFT
KEYTOP
SHIFT+FUNC   ALT

						Insert				
F1	**F2**	**F3**	**F4**	**FUNC**	**ALT**	**DEL**	**◄**	**►**	**ESC**	**ON/OFF**

		\	|	-	_	=		F7	F8	F9
A **a** Attn	B **b**	C **c** Clear	D **d** Dup	E **e** Erinp	F **f**	G **g**	Roll ↑ **▲**	& **7** F17	* **8** F18	(**9** F19

+	[	{	]	}	`	:		F4	F5	F6
H **h** Home	I **i** Info	J **j**	K **k**	L **l**	M **m**	N **n**	Roll ↓ **▼**	$ **4** F24 F14	% **5** F15	^ **6** F16

;	‘	“		<	,			F1	F2	F3
O **o**	P **p** Print	Q **q**	R **r** Reset	S **s** Sreq	T **t**	U **u**	Cap Lk **SHIFT**	! **1** F21 F11	@ **2** F22 F12	# **3** F23 F13

>	.	?	/	~				F10		
V **v**	W **w**	X **x**	Y **y**	Z **z**	**SP**	**CTRL**	**BKSP**	**0** F20	**ENTER**	

PTC-860IM 3270 Keyboard

FUNC	
SHIFT	
KEYTOP	
SHIFT+FUNC	ALT

sc pg	sc pg	sc pg	sc pg					ins del			
◄	▲	▼	►	Pg Lt	Pg Up	Pg Dn	Pg Rt	Del	Bksp		On/Off

attn	rl	rl clear	| dup	~ einp	`	' caps		help			
a	b	c	d	e	f	g	Enter	F7 F17	F8 F18	F9 F19	
A	B	C	D	E	F	G		7	8	9	

\ home	:	; lcd	? altcr	light	exit	{		&	*	(	
h	i	j	k	l	m	n	Shift	F4 F14	F5 F15	F6 F16	
H	I	J	K	L	M	N		4	5	6	

,	+ print	[	] reset	} sreq	<	> stat		$	%	^	
o	p	q	r	s	t	u	F21 F22	F1 F11	F2 F12	F3 F13	
O	P	Q	R	S	T	U	—	1	2	3	

=		/ fldex	bktab	tab				!	@	#	
v	w	x	y	z	Func	Func	F23 F24 Space	F10 F20 0	Tab		
V	W	X	Y	Z			.	)	bktab		

PTC-860IM 5250 Keyboard

Left Func   Right Func

Keytop

Shift

Keypad Table

KEY	5250	3270	VT/HP
a	<a>	<a>	<a>
b	<b>	<b>	<b>
c	<c>	<c>	<c>
d	<d>	<d>	<d>
e	<e>	<e>	<e>
f	<f>	<f>	<f>
g	<g>	<g>	<g>
h	<h>	<h>	<h>
i	<i>	<i>	<i>
j	<j>	<j>	<j>
k	<k>	<k>	<k>
l	<l>	<l>	<l>
m	<m>	<m>	<m>
n	<n>	<n>	<n>
o	<o>	<o>	<o>
p	<p>	<p>	<p>
q	<q>	<q>	<q>
r	<r>	<r>	<r>
s	<s>	<s>	<s>
t	<t>	<t>	<t>
u	<u>	<u>	<u>
v	<v>	<v>	<v>
w	<w>	<w>	<w>
x	<x>	<x>	<x>
y	<y>	<y>	<y>
z	<z>	<z>	<z>
A	<SHF><a>	<SHF><a>	<SHF><a>
B	<SHF><b>	<SHF><b>	<SHF><b>
C	<SHF><c>	<SHF><c>	<SHF><c>
D	<SHF><d>	<SHF><d>	<SHF><d>
E	<SHF><e>	<SHF><e>	<SHF><e>
F	<SHF><f>	<SHF><f>	<SHF><f>
G	<SHF><g>	<SHF><g>	<SHF><g>
H	<SHF><h>	<SHF><h>	<SHF><h>
I	<SHF><i>	<SHF><i>	<SHF><i>
J	<SHF><j>	<SHF><j>	<SHF><j>
K	<SHF><k>	<SHF><k>	<SHF><k>
L	<SHF><l>	<SHF><l>	<SHF><l>
M	<SHF><m>	<SHF><m>	<SHF><m>
N	<SHF><n>	<SHF><n>	<SHF><n>
O	<SHF><o>	<SHF><o>	<SHF><o>
P	<SHF><p>	<SHF><p>	<SHF><p>
Q	<SHF><q>	<SHF><q>	<SHF><q>
R	<SHF><r>	<SHF><r>	<SHF><r>
S	<SHF><s>	<SHF><s>	<SHF><s>
T	<SHF><t>	<SHF><t>	<SHF><t>
U	<SHF><u>	<SHF><u>	<SHF><u>
V	<SHF><v>	<SHF><v>	<SHF><v>
W	<SHF><w>	<SHF><w>	<SHF><w>
X	<SHF><x>	<SHF><x>	<SHF><x>
Y	<SHF><y>	<SHF><y>	<SHF><y>
Z	<SHF><z>	<SHF><z>	<SHF><z>
ALT	---	<ALT>	<ALT>
Altcr	<Right Func><k>	---	---
Attention	<Right Func><a>>	<ALT><A>	---
Back Tab	<Shift><Tab>		<FUNC><A>

Backspace	<BKSP>	<BKSP>	<BKSP>
Break	---	<FUNC><ESC>	<FUNC><ESC>
Caps	<Right Func><g>	<FUNC><SHF>	<FUNC><SHF>
Clear	<Right Func><c>	<ALT><C>	---
CTRL	---	<CTRL>	<CTRL>
Cursor Down	<▼>	<▼>	<▼>
Cursor Left	<◄>	<◄>	<◄>
Cursor Right	<►>	<►>	<►>
Cursor Up	<▲>	<▲>	<▲>
Delete	<DEL>	<DEL>	<DEL>
Dup	<Right Func><d>	<ALT><D>	---
End	---	<FUNC><►>	<FUNC><►>
Enter	<ENTER>	<ENTER>	<ENTER>
Erinp	<Right Func><e>	<ALT><E>	---
Escape	---	<ESC>	<ESC>
Exit	<Right Func><m>	---	---
Field Exit	<Right Func><x>	---	---
Func	---	<FUNC>	<FUNC>
Left Func	<Left Func>	---	---
Right Func	<Right Func>	---	---
LCD	<Right Func><j>	---	---
Light	<Right Func><l>	---	---
Help	<Shift><Bksp>	---	---
Home	<Right Func><h>	<ALT><H>	---
Info	---	<ALT><I>	---
Insert	<Left Func><DEL>	<FUNC><DEL>	---
Page Down	<Right Func><▼>	<FUNC><▼>	<FUNC><▼>
Page Up	<Right Func><▲>	<FUNC><▲>	<FUNC><▲>
Page Left	<Right Func><◄>	---	---
Page Right	<Right Func><►>	---	---
Print	<Right Func><p>	<ALT><P>	---
Reset	<Right Func><r>	<ALT><R>	---
Roll Up	<Shift><▲>	---	---
Roll Down	<Shift><▼>	---	---
Scroll Lock	---	<FUNC><S>	<FUNC><S>
Scroll Down	<Left Func><▼>	---	---
Scroll Left	<Left Func><◄>	---	---
Scroll Right	<Left Func><►>	---	---
Scroll Up	<Left Func><▲>	---	---
Shift	<SHIFT>	<SHIFT>	<SHIFT>
Space	<SPACE>	<SPACE>	<SPACE>
Stat	<Right Func><u>	---	---
Sys Req	<Right Func><s>	<ALT><S>	---
Tab	<TAB>		<FUNC><B>
View Down	---	<CTRL><▼>	---
View Left	---	<CTRL><◄>	---
View Right	---	<CTRL><►>	---
View Up	---	<CTRL><▲>	---
F1	<Left Func><1>	<FUNC><1>	<FUNC><1>
F2	<Left Func><2>	<FUNC><2>	<FUNC><2>
F3	<Left Func><3>	<FUNC><3>	<FUNC><3>
F4	<Left Func><4>	<FUNC><4>	<FUNC><4>
F5	<Left Func><5>	<FUNC><5>	<FUNC><5>
F6	<Left Func><6>	<FUNC><6>	<FUNC><6>
F7	<Left Func><7>	<FUNC><7>	<FUNC><7>
F8	<Left Func><8>	<FUNC><8>	<FUNC><8>
F9	<Left Func><9>	<FUNC><9>	<FUNC><9>
F10	<Left Func><0>	<FUNC><0>	<FUNC><0>
F11	<Right Func><1>	<ALT><1>	<SHF><FUNC><1>
F12	<Right Func><2>	<ALT><2>	<SHF><FUNC><2>
F13	<Right Func><3>	<ALT><3>	<SHF><FUNC><3>
F14	<Right Func><4>	<ALT><4>	<SHF><FUNC><4>
F15	<Right Func><5>	<ALT><5>	<SHF><FUNC><5>
F16	<Right Func><6>	<ALT><6>	<SHF><FUNC><6>
F17	<Right Func><7>	<ALT><7>	<SHF><FUNC><7>

F18		\<Right Func\>\<8\>	\<ALT\>\<8\>	\<SHF\>\<FUNC\>\<8\>
F19		\<Right Func\>\<9\>	\<ALT\>\<9\>	\<SHF\>\<FUNC\>\<9\>
F20		\<Right Func\>\<0\>	\<ALT\>\<0\>	\<SHF\>\<FUNC\>\<0\>
F21		\<Left Func\>\<-\>	\<SHF\>\<FUNC\>\<1\>	---
F22		\<Right Func\>\<-\>	\<SHF\>\<FUNC\>\<2\>	---
F23		\<Left Func\>\<Space\>	\<SHF\>\<FUNC\>\<3\>	---
F24		\<Right Func\>\<Space\>	\<SHF\>\<FUNC\>\<4\>	---
1		\<1\>	\<1\>	\<1\>
2		\<2\>	\<2\>	\<2\>
3		\<3\>	\<3\>	\<3\>
4		\<4\>	\<4\>	\<4\>
5		\<5\>	\<5\>	\<5\>
6		\<6\>	\<6\>	\<6\>
7		\<7\>	\<7\>	\<7\>
8		\<8\>	\<8\>	\<8\>
9		\<9\>	\<9\>	\<9\>
0		\<0\>	\<0\>	\<0\>
!	**exclamation**	\<SHF\>\<1\>	\<SHF\>\<1\>	\<SHF\>\<1\>
@	**at sign**	\<SHF\>\<2\>	\<SHF\>\<2\>	\<SHF\>\<2\>
#	**pound**	\<SHF\>\<3\>	\<SHF\>\<3\>	\<SHF\>\<3\>
$	**dollar**	\<SHF\>\<4\>	\<SHF\>\<4\>	\<SHF\>\<4\>
%	**percent**	\<SHF\>\<5\>	\<SHF\>\<5\>	\<SHF\>\<5\>
^	**carat**	\<SHF\>\<6\>	\<SHF\>\<6\>	\<SHF\>\<6\>
&	**ampersand**	\<SHF\>\<7\>	\<SHF\>\<7\>	\<SHF\>\<7\>
(	**left parenthesis**	\<SHF\>\<9\>	\<SHF\>\<9\>	\<SHF\>\<9\>
)	**right parenthesis**	\<SHF\>\<0\>	\<SHF\>\<0\>	\<SHF\>\<0\>
-	**dash**	\<-\>	\<FUNC\>\<E\>	\<FUNC\>\<E\>
+	**plus**	\<Left Func\>\<p\>	\<FUNC\>\<H\>	\<FUNC\>\<H\>
'	**apostrophe**	\<Left Func\>\<g\>	\<FUNC\>\<Q\>	\<FUNC\>\<Q\>
"	**quote**	---	\<FUNC\>\<R\>	\<FUNC\>\<R\>
*	**asterisk**	\<SHF\>\<8\>	\<SHF\>\<8\>	\<SHF\>\<8\>
,	**comma**	\<Left Func\>\<o\>	\<FUNC\>\<U\>	\<FUNC\>\<U\>
.	**period**	\<Shift\>\<Space\>	\<FUNC\>\<W\>	\<FUNC\>\<W\>
/	**forward slash**	\<Left Func\>\<x\>	\<FUNC\>\<Y\>	\<FUNC\>\<Y\>
[	**left bracket**	\<Left Func\>\<q\>	\<FUNC\>\<I\>	\<FUNC\>\<I\>
****	**back slash**	\<Left Func\>\<h\>	\<FUNC\>\<C\>	\<FUNC\>\<C\>
]	**right bracket**	\<Left Func\>\<r\>	\<FUNC\>\<K\>	\<FUNC\>\<K\>
_	**underline**	\<Shift\>\<-\>	\<FUNC\>\<F\>	\<FUNC\>\<F\>
`	**grave accent**	\<Left Func\>\<f\>	\<FUNC\>\<M\>	\<FUNC\>\<M\>
:	**colon**	\<Left Func\>\<i\>	\<FUNC\>\<N\>	\<FUNC\>\<N\>
;	**semi-colon**	\<Left Func\>\<j\>	\<FUNC\>\<O\>	\<FUNC\>\<O\>
\<	**less than**	\<Left Func\>\<t\>	\<FUNC\>\<T\>	\<FUNC\>\<T\>
=	**equal**	\<Left Func\>\<v\>	\<FUNC\>\<G\>	\<FUNC\>\<G\>
\>	**greater than**	\<Left Func\>\<u\>	\<FUNC\>\<V\>	\<FUNC\>\<V\>
?	**question**	\<Left Func\>\<k\>	\<FUNC\>\<X\>	\<FUNC\>\<X\>
{	**left brace**	\<Left Func\>\<n\>	\<FUNC\>\<J\>	\<FUNC\>\<J\>
|	**vertical bar**	\<Left Func\>\<d\>	\<FUNC\>\<D\>	\<FUNC\>\<D\>
}	**right brace**	\<Left Func\>\<s\>	\<FUNC\>\<L\>	\<FUNC\>\<L\>
~	**tilde**	\<Left Func\>\<e\>	\<FUNC\>\<Z\>	\<FUNC\>\<Z\>

Note: Full 8859 character set not supported.

Chapter 4 • Error Message Resolution Guide

Twin Client Error Message Resolution Guide

Message	Reason	Solution	Reference Tech Note
ENTRY TOO LONG;	Trying to key beyond the field size.	Ensure you are entering input into the correct field.	---
ALPHABETIC ONLY;	Trying to key a character that is not alphabetic.	Ensure you are entering input into the correct field.	---
MINUS NOT VALID;	Trying to key a Minus sign.	Ensure you are entering input into the correct field.	---
DECIMAL NOT VALID;	Trying to key a Decimal (period).	Ensure you are entering input into the correct field.	---
ALPHANUMERIC ONLY;	Trying to key characters other than Alphabetic and numeric.	Ensure you are entering input into the correct field.	---
NUMERIC ONLY;	Trying to key characters other than numeric.	Ensure you are entering input into the correct field.	---
ENTRY TOO SHORT;	Trying to exit the field before it is filled.	Ensure you are entering input into the correct field.	---
INVALID KEY;	The key pressed is not valid.	Ensure you are entering input into the correct field.	---

Message	Reason	Solution	Reference Tech Note
MUST CLEAR FIELD;	Trying to enter data in a field that must be cleared first.	Ensure you are entering input into the correct field.	---
SCAN NOT ALLOWED;	Trying to scan into a key only field.	Ensure you are entering input into the correct field.	---
KEY NOT ALLOWED;	Trying to key into a scan only field.	Ensure you are entering input into the correct field.	---
ENTRY TOO SHORT;	Trying to exit the field before it is filled.	Ensure you are entering input into the correct field.	---
RECOVERABLE ERROR;	Encountered and error which you can continue from.	Verify your configuration settings for the hardware being used, usually a printer and cable issue.	---
UNRECOVERABLE ERROR;	Encountered and error which you can NOT continue.	Verify your Network settings are correct and you are in the correct mode using the correct Port.	T1113, T1114, T1161, T1171, T1187 and T1194
FUNCTION: \n\nFILE: \nLINE: \nCODE;	Encountered and error which you can NOT continue.	Notify Connect over the WEB incident reporting system.	---
Press any key\nFor More Details...;	Press Enter for more information.	Advisory message.	---
Press any key;	Press a key to continue.	Advisory message.	---
Connection ERROR.\nREBOOT MOBILE UNIT;	Could not Connect.	Verify your Network settings are correct and you are in the correct mode using the correct Port.	T1113, T1114, T1161, T1171, T1187 and T1194

Message	Reason	Solution	Reference Tech Note
Disconnect ERROR.\nREBOOT MOBILE UNIT;	Could not Disconnect.	Verify your Network settings are correct and you are in the correct mode using the correct Port.	T1113, T1114, T1161, T1171, T1187 and T1194
RF Send ERROR.\nREBOOT MOBILE UNIT;	Could not Send.	Most likely range, access point, radio, host or network issue. Troubleshoot the customers' environment.	T1113, T1114, T1161, T1171, T1187 and T1194
RF Receive ERROR.\nREBOOT MOBILE UNIT;	Could not Receive.	Most likely range, access point, radio, host or network issue. Troubleshoot the customers' environment.	T1113, T1114, T1161, T1171, T1187 and T1194
RF Check ERROR.\nREBOOT MOBILE UNIT;	Could not run the RF Survey.	Most likely range, access point, radio, host or network issue. Troubleshoot the customers' environment.	T1113, T1114, T1161, T1171, T1187 and T1194
RF Timeout ERROR.\nREBOOT MOBILE UNIT;	Have been trying to contact the host for the radio timeout period (2 minutes default).	Most likely range, access point, radio, host or network issue. Troubleshoot the customers' environment.	T1113, T1114, T1161, T1171, T1187 and T1194
REBOOT MOBILE UNIT;	Reboot the Mobile Unit do to loss of connection.	Most likely range, access point, radio, host or network issue. Troubleshoot the customers' environment.	T1113, T1114, T1161, T1171, T1187 and T1194
Retry (Y/N)?;	Try again.	Try to send or receive again, or perhaps ensuring the printer is cabled to the Mobile Unit and is on.	---
TIMEOUT\n\nSending Data;	Mobile Unit out of the coverage area.	Most likely range, access point, radio, host or network issue. Troubleshoot the customers' environment.	T1113, T1114, T1161, T1171, T1187 and T1194

Message	Reason	Solution	Reference Tech Note
TIMEOUT\n\nReceiving Data;	Mobile Unit out of the coverage area.	Most likely range, access point, radio, host or network issue. Troubleshoot the customers' environment.	T1113, T1114, T1161, T1171, T1187 and T1194
Host Received Data\nAwaiting App Reply!;	Mobile Unit has sent and received an acknowledgement form the IP stack and is waiting for the application to return data.	Most likely host or network issue. Troubleshoot the customers' environment. Probable causes are Database record locking, application program failure, Host failure or network failure.	T1113, T1114, T1161, T1171, T1187 and T1194
* WAITING TO SEND *;	Mobile Unit out of the coverage area.	Most likely range, access point, radio, host or network issue. Troubleshoot the customer's environment.	T1113, T1114, T1161, T1171, T1187 and T1194
TCP Error Reading\nMAC Address.\nREBOOT MOBILE UNIT;	Could not obtain the Mac Address form the Mobile Unit.	Possible hardware, driver or stack problem Contact the Mobile Unit manufacturer.	---
Invalid TIP Command;	Bad internal protocol.	Notify Connect over the WEB incident reporting system.	---
Session Ended\nBy User or Host;	User, Host, application or network has ended the session.	If the user did not end the session, most likely host or network issues. Troubleshoot the customer's environment.	T1113, T1114, T1161, T1171, T1187 and T1194
Server Packet Error;	Bad Protocol detected.	Usually a result of bad cabling, power or faulty transceiver. Also, will receive this if the Mobile Unit is in the wrong mode for server operation.	---
Error receiving host\nlist from Server;	Bad Protocol detected.	Usually a result of bad cabling, power or faulty transceiver. Also, will receive this if the Mobile Unit is in the wrong mode for server operation.	---

Message	Reason	Solution	Reference Tech Note
Unexpected Server\ndata received;	Bad Protocol detected.	Usually a result of bad cabling, power or faulty transceiver. Also, will receive this if the Mobile Unit is in the wrong mode for server operation.	---
Error starting\nhost application;	Connected to the server but can not connect to the distant end.	Configure the server handler to access the host application.	---
Select Host or App;	Chose your Host/application destination.	User selection required.	---
Connecting...;	Attempting to connect to the Host/application.	Advisory message.	---
TCP Error\nReading IP Address\nREBOOT MOBILE UNIT;	Mobile Unit missing Network IP information.	Configure the Mobile Unit with the correct network IP information.	---
Printer start error;	Could not initialize the printer.	Cable or power issue with the printer.	---
Battery too low\nto print;	Not enough power to print.	Replace the battery with a fully recharged battery.	---
Paper Feed Error\nFix Then Hit Enter;	Paper in the printer is not ready.	Replace the paper or rethread the paper in the printer.	---
Printer Error\nPrint Ended;	Can not print.	Check cable, battery, communication settings and paper in the printer.	---
User Count Exceeded.\n Session Ended;	Possible authorization issue.	Verify that you have the correct number of licenses for the number of Mobile Units you are using.	---

Message	Reason	Solution	Reference Tech Note
Primary Unavailable\nTrying Alternate;	First Host IP address not available trying the remaining addresses in the Host list.	Verify the host address.	---
APMAC.DAT Error\nSession Ended;	Access point Media Access Control error.	Most likely range, access point, radio, host or network issue. Troubleshoot the customers' environment.	T1113, T1114, T1161, T1171, T1187 and T1194
MUIP.DAT Error\nSession Ended;	Mobile Unit IP Error.	Most likely a Mobile Unit network setting issue. Troubleshoot the customers' environment.	T1113, T1114, T1161, T1171, T1187 and T1194
Missing Subnet IP\nSession Ended;	Mobile Unit IP Netmask Error.	Most likely a Mobile Unit network setting issue. Troubleshoot the customers' environment.	T1113, T1114, T1161, T1171, T1187 and T1194
Error Opening File;	File is missing.	Verify the configuration files are on the Mobile Unit. Or perhaps there is a hardware failure.	---
Telnet API\nnot found;	Program files are missing.	Reload program files.	---
Battery Low Warning\n\nReplace Battery Soon;	Not enough power to operate the Mobile Unit.	Replace the battery with a fully recharged battery.	---
No Host List.\nPress any key\nTo Edit Host IP's;	Have not configured your target hosts.	Configure the target host IP addresses.	---
Unable to Allocate\nFont Memory;	Mobile unit does not have enough memory to load the fonts.	Reduce the fonts in use or expand the memory in the mobile unit.	---
Font Loading Error;	Could not load the font.	Ensure the font is available to load.	---

Message	Reason	Solution	Reference Tech Note
Printer Not Ready\nPress R to Retry\nC to Cancel Print;	Can not print.	Check cable, battery, communication settings and paper in the printer.	---
Mobile Unit in\nDemonstration Mode\nfor TwinClient;	Running in demo mode.	Purchase a license from Connect.	---
Connected to Host;	Successful connection to the target Host.	Advisory message.	---
Telnet Mode not\nsupported on\nthis Mobile Unit;	This Mobile Unit must be used with a Connect Server.	Order a Connect Server.	---
Telnet Setup files\nnot found. Reload\nfiles then switch;	Customer specific configuration files are missing.	Load the configuration files into the Mobile Unit from Twin Client Manager.	---
Switched Client to\nTelnet Direct Mode;	Mobile Unit running in Telnet mode direct to the target Host.	Advisory message.	---
Switched Client to\nServer Based Mode;	Mobile Unit running through a Connect server in server mode usually at port 1800.	Advisory message.	---
Port 23 is only\nallowed in Telnet Mode;	Can not set the port to 23 in server mode. Port 23 is the standard Telnet port.	Advisory message.	---
Not Enough Memory\nTo Run;	Mobile Unit does not have the capacity to run the program do to memory restrictions.	Expand the Mobile Unit memory.	---
Press any key;	Press a key to continue.	Advisory message.	---
TwinClient Telnet;	Prompt.	Advisory message.	---

Message	Reason	Solution	Reference Tech Note
TwinClient Server;	Prompt.	Advisory message.	---
TwinClient TN3270;	Prompt.	Advisory message.	---
TwinClient TN5250;	Prompt.	Advisory message.	---
TwinClient TNVT/HP;	Prompt.	Advisory message.	---
(c) 1991-2003 Connect;	Prompt.	Advisory message.	---
Edit Menu Options;	Menu Title.	Advisory message.	---
Edit Mobile Unit IP;	Menu Option.	Advisory message.	---
Edit Server/Host IPs;	Menu Option.	Advisory message.	---
Edit Radio Option;	Menu Option.	Advisory message.	---
Edit License Key;	Menu Option.	Advisory message.	---

Message	Reason	Solution	Reference Tech Note
Run Site Survey;	Menu Option.	Advisory message.	---
Switch Client Modes;	Menu Option.	Advisory message.	---
Run TwinClient;	Menu Option.	Advisory message.	---
Exit to OS;	Menu Option.	Advisory message.	---
Printer may not be\nplugged in or\nturned on!;	Can not print.	Check cable, battery, communication settings and paper in the printer.	---
OUT OF RANGE OF BASE;	Mobile Unit out of the coverage area.	Most likely range, access point, radio, host or network issue. Troubleshoot the customers' environment.	T1113, T1114, T1161, T1171, T1187 and T1194
CONNECT SERIAL CABLE;	Serial cable not connected to the Mobile Unit.	Check cable, battery and communication settings for the Mobile Unit.	---
REMOVE SERIAL CABLE;	Remove serial cable from to the Mobile Unit.	Check cable, battery and communication settings for the Mobile Unit.	---
PLACE IN CRADLE;	Place the Mobile Unit in the cradle.	Advisory message.	---
REMOVE FROM CRADLE;	Remove Mobile Unit from the cradle.	Advisory message.	---

Message	Reason	Solution	Reference Tech Note
ACQUIRING CRADLE BUS;	Attempting to access the cradle through the serial port you have configured.	Advisory message.	---
Printer Out\nOf Range;	Printer out of the coverage area.	Most likely range, access point or radio issue. Troubleshoot the customers' environment.	T1113, T1114, T1161, T1171, T1187 and T1194
Connection Refused\nBy Host;	You connected to the target host but the host disconnected you.	Verify the configuration file has the correct Mobile Unit type and New environment variable set. Fallback to the Connect Default to verify the connection.	---
Connection Timed Out;	You connected to the host but did not logon in the appropriate time so the host disconnects you.	Modify the Host parameters for login on.	---
Connection Failed\nHost Not Responding;	Could not connect to the Host.	Most likely range, access point, radio, host or network issue. Troubleshoot the customers' environment.	T1113, T1114, T1161, T1171, T1187 and T1194
Connection Failed\nHost Unreachable;	Could not connect to the Host.	Most likely range, access point, radio, host or network issue. Troubleshoot the customers' environment.	T1113, T1114, T1161, T1171, T1187 and T1194
Mobile Unit Out\nOf Range, Unable\nTo Transmit;	Mobile Unit out of the coverage area.	Most likely range, access point, radio, host or network issue. Troubleshoot the customers' environment.	T1113, T1114, T1161, T1171, T1187 and T1194
Mobile Unit Out\nOf Range, Unable\nTo Receive;	Mobile Unit out of the coverage area.	Most likely range, access point, radio, host or network issue. Troubleshoot the customers' environment.	---

Message	Reason	Solution	Reference Tech Note
Printer Not\nResponding;	Can not print.	Check cable, battery, communication settings and paper in the printer.	---
Printer Out\nOf Range;	Printer out of the coverage area.	Most likely range, access point or radio issue. Troubleshoot the customers' environment.	T1113, T1114, T1161, T1171, T1187 and T1194
Print Complete;	Prompt.	Advisory message.	---
Reprint (Y/N)?;	Yes or No prompt for a reprint.	Advisory message.	---
WARNING;	Prompt.	Advisory message.	---
Turning power off\nduring a session\nwill cause the\nprogram to restart;	This Mobile Unit will disconnect the session if powered off.	Mobile Unit manufacturer limitation. Advisory message.	---
Are you sure (y/n)?;	Yes or No prompt for a confirmation.	Advisory message.	---
You Sure? (YyNn);	Yes or No prompt for a confirmation.	Advisory message.	---
Domain Name Server\nNot Set;	DOMAIN NAME SERVER not configured.	Configure the Mobile Unit with the correct network IP information.	---
Domain Name Server\nQuery Memory Error;	Memory error on the Mobile Unit	Expand the Mobile Unit memory or return the Mobile Unit for repair.	---

Message	Reason	Solution	Reference Tech Note
Domain Name Server\nQuery Sending Error;	Mobile Unit out of the coverage area.	Most likely range, access point, radio, host or network issue. Troubleshoot the customers' environment.	T1113, T1114, T1161, T1171, T1187 and T1194
Domain Name Server\nQuery Receive Error;	Mobile Unit out of the coverage area.	Most likely range, access point, radio, host or network issue. Troubleshoot the customers' environment.	T1113, T1114, T1161, T1171, T1187 and T1194
Domain Name Server\nUnavailable;	Could not connect to the DOMAIN NAME SERVER.	Most likely range, access point, radio, host or network issue. Troubleshoot the customers' environment.	T1113, T1114, T1161, T1171, T1187 and T1194
Error loading\nparameter file;	Could not load the parameter file.	Reload the correct configuration files.	---
Could not open\ntelnet interface;	Could not telnet.	Reload the program files.	---
Could not set\mtelnet options;	Could not use the telnet configuration.	Reload the correct configuration files.	---
Setup file\nsetting mismatch\nReload Setup;	Emulation program selected is not compatible with the configuration file on the Mobile Unit.	Remove the emulation and configuration files. Run clear Telnet on the Mobile Unit then reload the Mobile Unit with the proper emulation and configuration files.	---
Display formatting\ntoo large for\ncurrent screen;	Mobile Unit does not have enough memory to run your configured reformatted screens.	Expand the Mobile Unit memory or order a server from Connect.	---
Mobile Unit\ninitialization error;	Mobile Unit problem.	Return the Mobile Unit to the manufacturer for repair.	---

Message	Reason	Solution	Reference Tech Note
Host/App/Network\nclosed the session;	Customers' environment disconnected the Mobile Unit session.	Most likely range, access point, radio, host or network issue. Troubleshoot the customers' environment.	T1113, T1114, T1161, T1171, T1187 and T1194
Disconnecting...;	Prompt.	Advisory message.	---
Scan Barcode;	Bar code scanning test.	Advisory message.	---
Enter Setup\nPassword;	Prompt.	Advisory message.	---
Enter Profile \nPassword;	Prompt.	Advisory message.	---
Host IP;	Host IP address prompt.	Enter target host IP address.	---
Host Name;	Host name prompt.	Enter target host Name.	---
Port;	Host IP port required.	Enter 23 for telnet or 1800 for a Connect server. Could also be a different number depending on the customers' environment.	T1113, T1114, T1161, T1171, T1187 and T1194
Mobile Unit Type;	Prompt.	Advisory message.	---
WARNING: This will \nend any\ncurrent session;	Prompt.	Advisory message.	---

Message	Reason	Solution	Reference Tech Note
Continue (Y/N)?;	Prompt.	Advisory message.	---
HOST ENTRY;	Prompt.	Advisory message.	---
VT(100/220)/HP Setup;	Prompt.	Advisory message.	---
Mobile Unit Info;	Prompt.	Advisory message.	---
Emulation Setup;	Prompt.	Advisory message.	---
ANSI Setup;	Prompt.	Advisory message.	---
Miscellaneous Setup;	Prompt.	Advisory message.	---
Mobile Unit Type;	Prompt.	Advisory message.	---
Control Codes;	Prompt.	Advisory message.	---
Local Echo;	Prompt.	Advisory message.	---

Message	Reason	Solution	Reference Tech Note
<BK SP> Sends;	Prompt.	Advisory message.	---
New Line Mode;	Prompt.	Advisory message.	---
Insert Mode;	Prompt.	Advisory message.	---
Autowrap Mode;	Prompt.	Advisory message.	---
Cursor;	Prompt.	Advisory message.	---
EMULATION SETUP;	Prompt.	Advisory message.	---
Mobile Unit Type;	Prompt.	Advisory message.	---
Local Echo;	Prompt.	Advisory message.	---
Map Underline;	Prompt.	Advisory message.	---
Break Key;	Prompt.	Advisory message.	---

Message	Reason	Solution	Reference Tech Note
ANSI Setup;	Prompt.	Advisory message.	---
Control Codes;	Prompt.	Advisory message.	---
Backspace Key;	Prompt.	Advisory message.	---
MISCELLANEOUS SETUP;	Prompt.	Advisory message.	---
Test Options;	Prompt.	Advisory message.	---
Login Options;	Prompt.	Advisory message.	---
TEST OPTIONS;	Prompt.	Advisory message.	---
Printer Test;	Prompt.	Advisory message.	---
Scan Code Test;	Prompt.	Advisory message.	---
LOGIN OPTIONS;	Prompt.	Advisory message.	---

Message	Reason	Solution	Reference Tech Note
User Name;	Prompt.	Advisory message.	---
User Password;	Prompt.	Advisory message.	---
ON;	Prompt.	Advisory message.	---
OFF;	Prompt.	Advisory message.	---
Map;	Prompt.	Advisory message.	---
Don't Map;	Prompt.	Advisory message.	---
Enable Break;	Prompt.	Advisory message.	---
Disable Break;	Prompt.	Advisory message.	---
7 bit;	Prompt.	Advisory message.	---
8 bit;	Prompt.	Advisory message.	---

Message	Reason	Solution	Reference Tech Note
Send Delete;	Prompt.	Advisory message.	---
Send Backspace;	Prompt.	Advisory message.	---
Mobile Unit Setup;	Prompt.	Advisory message.	---
Scanner Options;	Prompt.	Advisory message.	---
Program Options;	Prompt.	Advisory message.	---
Special Options;	Prompt.	Advisory message.	---
Beeper Options;	Prompt.	Advisory message.	---
Exit to DOS;	Prompt.	Advisory message.	---
Backlight Time;	Prompt.	Advisory message.	---
Enter Key Action;	Prompt.	Advisory message.	---

Message	Reason	Solution	Reference Tech Note
Reset Options;	Prompt.	Advisory message.	---
Font Size;	Prompt.	Advisory message.	---
Portable Printer;	Prompt.	Advisory message.	---
Reprint Option;	Prompt.	Advisory message.	---
Data IDs;	Prompt.	Advisory message.	---
Internal/External;	Prompt.	Advisory message.	---
Modify Beeps;	Prompt.	Advisory message.	---
Message Beeps;	Prompt.	Advisory message.	---
Scan Identifier;	Prompt.	Advisory message.	---
AID Scan Setup;	Prompt.	Advisory message.	---

Message	Reason	Solution	Reference Tech Note
Long Scans;	Prompt.	Advisory message.	---
Scan Send;	Prompt.	Advisory message.	---
Yes;	Prompt.	Advisory message.	---
No;	Prompt.	Advisory message.	---
Normal;	Prompt.	Advisory message.	---
Double Wide;	Prompt.	Advisory message.	---
Double High;	Prompt.	Advisory message.	---
Double High and Wide;	Prompt.	Advisory message.	---
Errors Only;	Prompt.	Advisory message.	---
Automatic;	Prompt.	Advisory message.	---

Message	Reason	Solution	Reference Tech Note
All Messages;	Prompt.	Advisory message.	---
Reject;	Prompt.	Advisory message.	---
Truncate;	Prompt.	Advisory message.	---
Split;	Prompt.	Advisory message.	---
Do Not Send;	Prompt.	Advisory message.	---
Always Send;	Prompt.	Advisory message.	---
Last Field Only;	Prompt.	Advisory message.	---
Internal;	Prompt.	Advisory message.	---
External;	Prompt.	Advisory message.	---
none;	Prompt.	Advisory message.	---

Message	Reason	Solution	Reference Tech Note
monarch;	Prompt.	Advisory message.	---
pddumb;	Prompt.	Advisory message.	---
comtec;	Prompt.	Advisory message.	---
rascal;	Prompt.	Advisory message.	---
codewriter;	Prompt.	Advisory message.	---
comtec(S);	Prompt.	Advisory message.	---
User Name;	Prompt.	Advisory message.	---
Password;	Prompt.	Advisory message.	---
Frequency: Hz;	Prompt.	Advisory message.	---
Duration: ms;	Prompt.	Advisory message.	---

Message	Reason	Solution	Reference Tech Note
Delay: ms;	Prompt.	Advisory message.	---
Select Scanner;	Prompt.	Advisory message.	---
Setup Scanner;	Prompt.	Advisory message.	---
Scan Test;	Prompt.	Advisory message.	---
Scan Operation;	Prompt.	Advisory message.	---
Laser;	Prompt.	Advisory message.	---
Contact/Pulse;	Prompt.	Advisory message.	---
Contact/No Pulse;	Prompt.	Advisory message.	---
Auto/Pulse;	Prompt.	Advisory message.	---
Auto/No Pulse;	Prompt.	Advisory message.	---

Message	Reason	Solution	Reference Tech Note
Wand Simulation;	Prompt.	Advisory message.	---
VT100;	Prompt.	Advisory message.	---
VT220;	Prompt.	Advisory message.	---
HP700;	Prompt.	Advisory message.	---
SETUP;	Prompt.	Advisory message.	---
Mobile Unit IP/Radio;	Prompt.	Advisory message.	---
Host List;	Prompt.	Advisory message.	---
NULL;	Prompt.	Advisory message.	---