

# LANpoint<sup>®</sup> XL

## Industrial/Vehicle Data Collection Terminal Utilities and Example Programs Guide For models with Windows CE.NET Operating System



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 INTELLIGENT  
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## European CE Certification

European CE certification is as described on the Declaration of Conformity that ships with each LANpoint XL terminal.

## Revision History for the LANpoint XL Utilities and Example Programs Guide

<u>Version</u>	<u>Date</u>	<u>Revision</u>
1.0	020106	Release

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# Chapter 1      Utility Programs

## 1.1    Input Panel

The terminal does not have an integral keyboard. For some functions in this manual, you may need the capability to type characters. For that purpose, you must either attach a PS/2 or USB keyboard. An alternative method is to use the touchscreen with the standard touchscreen input panel. For certain purposes, this input panel pops-up automatically. It can be launched on demand by double-clicking the input panel icon in the bottom right corner of the display.

## 1.2    Instructions to Create a Shortcut in Windows CE.NET

**Note:** You may have to use an external PS/2 or USB keyboard, or the touchscreen input panel, in order to perform some of the functions in this chapter.

1. Reference the Note above. Select (highlight) the executable program using Windows Explorer or *My Computer* that is shown on the desktop.
2. Copy the file using the *Edit* menu *Copy* item.
3. Go to the directory location where you want to place the shortcut and select *Edit* and select the *Paste Shortcut* item.

**Note:** To have an application automatically activate at startup on the LANpoint XL terminal, follow the instructions in section 1.3, *Launching programs at startup*.

4. To add parameters to the end of the shortcut command line, right click on the *shortcut* and select *Properties* (as mentioned in the note above, be aware that a shortcut is different than an *autostart* command).
5. Select the *Shortcut* tab. Fill-in the *Target* field with the path, and name of the program, followed by any command line *parameters*.
6. Click the *OK* button.

## 1.3    Launching programs at startup

To have an application automatically activate at boot-up of the LANpoint XL terminal:

1. Use the WordPad editor (`\Windows\pword.exe`) to modify the contents of `\CFCard\Autostart\start.bat`

2. In the WordPad *File* menu, select *Open*, and change *Type* to *All Documents (\*.\*)*. Open `\CFCard\Autostart\start.bat` and press the *OK* button. Add some command lines to start programs.
3. To start multiple programs, use the *start* command.

**Note:** To launch a program and continue to the next command in *start.bat* use the *start* command.  
To launch another .bat file and stop processing *start.bat* until the called file finishes and exits, use the *call* command.

4. Any command line parameters are simply added to the following the program name, such as the *COM2* command line parameter in

```
start "\CFCard\LANpoint\wedgece" COM2
```

5. An example of the contents of a *start.bat* file (with remarks) that launches the utilities time synchronization, wedgece and the remote manager is:

```
rem after you modify this, copy start.bat to start-default.bat so that
rem your changes are not written-over by the twinclient terminal emulation
rem installation process (install.exe)
rem next, startup time synchronization
start \CFCard\lanpoint\timesync.exe e=1h h=129.6.15.29
rem next, startup wedgece
start \cfcard\lanpoint\wedgece.exe
rem next, start remote manager
start \cfcard\lanpoint\rmgr\wdce.exe
```

**Note:** After successful modification of *start.bat* , make a copy called *start-default.bat* in the same folder so that changes are not lost should terminal emulation software be installed some time in the future.

## 1.4 Saving the Contents of the Windows CE.NET Registry

Changes that affect the registry (in dialogs, during some program installations, changes of TCP/IP addresses, and so forth) are held in the Windows CE.NET registry that is in *RAM memory*. As such, those changes are temporary and will not be in effect when the terminal is rebooted, unlike desktop Windows operating systems.

To make this kind of change permanent, the registry must be stored in (flushed to) non-volatile FLASH memory from which it can be loaded during startup.

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- *Regflush* is the program that is provided to write the registry to non-volatile memory. Find it in the `\CFCard` directory on the LANpoint XL.

**TIP:** There is no dialog or other indicator as to when *Regflush* completes. If you are going to cold-boot - recycle power - allow 10 seconds after launch to be safe.

If you are launching from Windows Explorer, you can press the down arrow and when the display changes to the new cursor location, *Regflush* has completed writing the registry file and you can safely cold-boot.

If you are going to warm-boot the terminal, you can do it at any time; *Regflush* is synchronized with the restart function when the terminal is warm-booted.

## 1.5 WordPad Text Editor Utility

The LANpoint XL terminal includes a text editor application called WordPad. WordPad operates similarly to Windows Notepad, for editing text files on the terminal.

The WordPad selection in the *Start/Programs* menu and the shortcut `\Programs\Office\Wordpad.lnk` both run the WordPad program `\Windows\pword.exe`.

The basic *File* menu allows you to create a *New* file, *Open* an existing file, *Save* the file, use *Save As* to save an existing file with a new filename or extension (WordPad files have a `.pwd` extension by default), define a password to access a file, and *Exit* the application, among other functions.

## 1.6 Wedge Utility

The WedgeCE utility allows the wedging of COM port data into the keyboard input stream of the active application. This simplifies the process of writing an application that handles bar code input data, or data streams from RS-232 devices attached to the terminal, by making the data from those sources appear as though it was typed on the keyboard.

This application can wedge data from any or all of the terminal's serial ports to the keyboard input stream. It is located in the folder `\CFCard\LANpoint\WedgeCE.exe`.

### Running Multiple Instances of the Wedge Utility

When the WedgeCE application starts, the application's icon appears in the system tray. Multiple instances of the Wedge application may run simultaneously to handle data from multiple serial ports, displaying an icon for each serial port currently serviced by WedgeCE.



WedgeCE uses COM1 as its default COM port, and uses default communications parameters. To use other COM ports and/or other parameters, create a shortcut to WedgeCE and include the appropriate command line parameters (see section 1.2, *Instructions to Create a Shortcut in Windows CE.NET* or section 1.3, *Launching programs at startup*).

## 1.6.1 Configuring WedgeCE Parameters

### Application Command Line Format

The format of the application command line is:

```
\CFCard\LANpoint\WedgeCE <COMx> <baud> <parity> <data bits> <stop bits> <delay> <prefix>
```

where:

<COMx> indicates the *serial port* that WedgeCE will use for its input. The format is COMx, with no spaces, where *x* has a value of 1, 2 or 3. This parameter is not case-sensitive.

<baud> is the *baud rate* for the serial port.

<parity> indicates the *parity* for the serial port. Use **n** (no parity), **o** (odd parity) or **e** (even parity).

<data bits> is the number of *data bits* for serial communications. For eight data bits, use a value of 8.

<stop bits> is the number of *stop bits* for serial communications. Use 1, 2, or 15. A value of 15 indicates the use of 1.5 stop bits.

<delay> WedgeCE uses a *delay* parameter to determine when input from the serial port is complete and the data accumulated should be wedged into the keyboard input stream. A delay parameter of 50 ms is adequate for most bar code scanners. The amount of time required for serial input varies, depending on the type of device that is sending the serial data.

- If the value in the inter-character delay field is too small, data that should arrive in the keyboard buffer at one time may arrive in several packets containing a few characters.
- If the value in this field is too large, there may be an excessive delay after the end of the input before the wedging occurs.

<prefix> is a string which is prepended to the data each time a packet is wedged into the keyboard buffer. This parameter is useful in identifying the source of the input data when there are several data sources. The maximum length of the prefix is 32 characters. The special string %d is used once in the prefix string. When wedging occurs, this string is replaced by the COM port number (1, 2 or 3) that received the wedged data. To include a literal % symbol in the prefix, place %% in the prefix string. A single % character is not valid in the prefix string. Only one instance of %d is permitted.

### Example

For instance, to use WedgeCE with a serial device that is connected to COM port 3 and has its communications parameters set to 2400 baud, even parity, 7 data bits, 2 stop bits, you wish to

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delay a little longer than normal between characters being retrieved by the port, say 100ms, because it is a slow device, and you wish to have "AUTOID:" prepended to the data that is retrieved from the device connected to the COM port, use:

```
\CFCard\LANpoint\WedgeCE COM3 2400 e 7 2 100 AUTOID:
```

Input data will be wedged into the keyboard input stream as AUTOID:input data

If, instead, you wish to know which COM port from which the data is retrieved, use:

```
\CFCard\LANpoint\WedgeCE COM3 2400 e 7 2 100 COM%d:
```

Input data will be wedged into the keyboard input stream as COM3:input data

## 1.6.2 WedgeCE Default Parameters

Parameter	Default
COM Port	COM1
baud	9600
parity	n (none)
data bits	8
stop bits	1
inter-character delay	50 milliseconds (ms)
Prefix	None

## 1.7 Programmable Function Key Utility

The Programmable Function Key (PFK) utility allows soft keys to be configured to either translate keystrokes into text strings fed to the keyboard buffer or to launch programs. Function keys are usually used for this purpose. The LANpoint XL terminal has twelve physical function keys, F1 - F12, located in the bezel that surrounds the display. With an external keyboard or the on-screen input panel, combinations of the F key with alt-, or ctrl- keys (the bezel does not have these modifier keys) can produce up to 36 programmed functions with the 'F' keys.

Most of the other, standard, keys can also be assigned different definitions using the PFK utility.

There are two PFK programs that perform two different tasks:

- The *PFKConfig.exe* program is used to create new PFK definitions, edit existing PFK definitions, and delete PFK definitions.
- The PFK program executes the PFK definitions.

### 1.7.1 Creating a New Programmable Function Key File

The terminal may have one PFK definition file with one or more definitions in it, or multiple definition files with one or more definitions in them, at the discretion of the developer. The PFKConfig dialog is used to create the PFK definition file.

To create a new PFK definition file:

1. Launch the PFKConfigCE.exe application. The default location for this file is \CFCard\LANpoint\.
2. In the *PfkConfig - Untitled* dialog, click the *New* button.
3. The New Function key dialog opens.

In the *Function* field, press the key or the key combination for the new PFK. A key combination consists of one or more modifier keys (Control, Alt, and Shift) in combination with almost any other key.

**Note:** The Caps Lock, Print Screen, and Pause keys may not be used. There are some reserved function keys that cannot be used in a PFK file: Ctrl+Alt+Shift+X (which is used to abort PFK) and Ctrl+Alt+Shift+D (which is used to disable/enable PFK).

The key or key combination appears in the Function field.

4. To have the PFK *launch an application*, select the *Launch application* radio button and specify the application path and name in the *Output* field. Command line arguments can be added after inserting a semi-colon - like *wedgece; COM2* where *COM2* is the command line parameter.
5. Otherwise, if the PFK hot key is to wedge a string into the keyboard stream, select the *Wedge into keyboard stream* radio button and type the text string (up to 256 characters long) into the *Output* field.

**Note:** To include a literal \ character in the text, type \\ in the string. For example, to launch \CFCard\Any File.exe when the hot key is pressed, type the text string \\CFCard\Any File.exe. Failure to do so may result in apparently erroneous messages, such as "unknown key" when trying to edit the .pfk file at a later date, or the graying-out of the "save" button when trying to save the .pfk file. You could alternately use the forward slash (/) character instead of \\ in path definitions.

6. Click the *OK* button. The New Function Key dialog closes and the new function key appears in the list in the *PfkConfig-Untitled* dialog.
7. To create another PFK, repeat steps 2 through 6.
8. Save the new PFK file by clicking the *Save As* button. Save under \CFCard\... for permanent storage.

- 
9. Click the *Exit* button.
  10. Test the operation of the PFKs, using the instructions in section 1.7.3, *Testing a Programmed Function Key*.

## 1.7.2 Editing a Programmable Function Key File

1. Run the `\CFCard\LANpoint\PFKConfigCE` program.
2. In the *PFKConfigCE-Untitled* dialog, click the *Open* button and locate the PFK file to edit.
3. Select the desired function key file from the list of functions shown and click the *Edit* button. The *New Function Key* dialog opens, displaying the contents of the selected PFK file.
4. Make the desired changes to the PFK file and click the *OK* button to close the *New Function Key* dialog.
5. Click the *Save* button in the *PfkConfigCE* dialog to save the changes.
6. Click the *Exit* button to close *PFKConfigCE*.
7. Test the changes.

## 1.7.3 Testing a Programmed Function Key

<p><b>Note:</b> If the PFK program is running when you edit a PFK file, the changes will not be exhibited immediately because PFK.exe reads the file only on initiation. Stop/restart PFK.exe in this case.</p>
---

To test programmed key(s):

1. Create a shortcut (see section 1.2, *Instructions to Create a Shortcut in Windows CE.NET*) to `\CFCard\LANpoint\PFK.exe` and right-click on it.
2. Select *Properties* from the menu.
3. In the Properties dialog, select the *Shortcut* tab.
4. In the *Target* field, include the path and filename of the function key file to be tested.  
For example:  
"`\CFCard\LANpoint\PFK.EXE`" "`\CFCard\Folder containing your PFK file\Filename.pfk`"
5. Click the *OK* button to exit the dialog.
6. Double-click the *shortcut*. The PFK icon appears in the system tray. If you do not see this icon in the system tray, repeat steps 2-5 and verify the path is correct.
7. To see which PFKs are currently running on the PFK program, double-click the icon in the system tray. The *Programmable Function Keys* dialog opens, displaying a list of the PFKs in the file specified in the path in step 4.  
To close this dialog and have the program continue running, click the *Hide* button.  
To close the dialog and shut down this program, click the *Exit* button.

8. Press the key(s) to be tested. Verify that the key functions correctly by noting that the correct program was launched or that text shows in an active text window (to test the keys that output text, open a text editor such as *CEPad.exe* before pressing the key).

### 1.7.4 Using a Programmed Function Key

PFKs are only functional when PFK.exe is running. To use a PFK, follow the instructions in section 1.7.3, *Testing a Programmed Function Key*. In step 7, click the *Hide* button. The icon for the PFK.exe shortcut resides in the system tray when the window is hidden.

To always activate the PF key definitions, modify start.bat as described in section 1.3, *Launching programs at startup*.

### 1.7.5 Deleting a Function Key Definition

1. To delete a function key definition, run `\CFCard\LANpoint\PfkConfigCE.exe`.
2. In the *PfkConfigCE* dialog, click the *Open* button and select the .pfk configuration file.
3. Select the function key definition from the list and click the *Delete* button. The listed entry disappears.

**Note:** If you select the wrong function to delete and have not clicked the *Save* button, you can recover the configuration. Click the *Exit* button and a warning pop-up dialog opens asking *Save changes to YourFileName.pfk?* Click the *No* button to retain the previous settings and close the application.

4. Double-check before clicking the *Save* button.
5. Click the *Exit* button, then stop/restart PFK.exe if it is running.

## 1.8 Time Synchronization

The synchronization of the LANpoint XL's clock with an external time standard is useful for all types of applications, especially labor tracking and time-and-attendance applications. The terminal supports clock synchronization through the Internet Standard specification RFC 868, also known as the NTP (Network Time Protocol) protocol.

**Note:** You can find a list of U.S. Government and other time servers at <http://www.boulder.nist.gov/timefreq/service/time-servers.html>

### 1.8.1 Executing the Time Synchronization Program

The TimeSync program is located in `\CFCard\lanpoint\TimeSync.exe`.

1. Run `\CFCard\LANpoint\TimeSync` to open the *TimeSyncCE* dialog.

- 
2. Click *Settings* to open the *Settings* dialog.
  3. Click the *Time Server* tab.
  4. In the *Identity* field, enter the *time server IP address* or *name*.
  5. In the *Connection* field, click the desired radio button setting:
    - TCP: Transmission Control Protocol (default setting)
    - UDP: Universal Data Packet
  6. For UDP only: In the *UDP Timeout in Seconds* field, click the *up-* or *down-arrow keys* to obtain the desired setting. The default setting is 5 seconds.
  7. Click the *Autorun* tab and select one of the radio buttons:
    - Don't run in background (default)
    - Run every (select values from 0 - 59) Hours (radio button) or Minutes (radio button)
    - Run every day at:
      - To use this selection, click inside of the box twice, when 12:00:00 appears, enter the desired time using the military time format: Hours(0-23):Minutes(0-59):Seconds(0-59).
      - To add another time setting, click inside of the box. When more than three time settings are present, scroll bars appear in the box enabling access to a maximum of 32 time settings that can be created.
  8. Click the *OK* button to save the settings and exit the dialog.
  9. In the main application window, click the *Hide* button. This triggers time synchronization and the timesync icon appears in the system tray.

**Note:** The system clock will be synchronized on the basis of your settings. The time displayed in the system tray may lag system time synchronization but will display the synchronized time within a few minutes at most.

## 1.8.2 Handling Synchronization Failures

Check/adjust the configuration parameters:

1. Double-click the TimeSync icon in the system tray.
2. Click the *Retry* button. Using military time, set the time to retry every:
  - Hours (select values from 0 - 23)
  - Minutes (select values from 0 - 59)
  - Seconds (select values from 0 - 59)
3. Click the *OK* button to save the settings and exit the dialog.
4. In the main application window, click the *Hide* button. The time synchronization icon appears in the system tray.

### 1.8.3 Command Line Arguments

The `\CFCard\LANpoint\TimeSync` program can be launched as a shortcut (see section 1.2, *Instructions to Create a Shortcut in Windows CE.NET*), or every time the terminal reboots (see section 1.3, *Launching programs at startup*), or from the command line. The command line will look something like:

```
\CFCard\lanpoint\timesync.exe e=1h h=129.6.15.29 -m
```

Use one of the two formats for the following command line arguments.

```
option argument
```

or

```
option = argument
```

The option may be abbreviated as described in the table below. For example,

```
e45
```

or

```
e = 45
```

or

```
every = 45
```

The host may be specified as

```
host 198.182.119.56
```

or

```
host = 198.182.119.56
```

<b>Note:</b> Spaces around the equal sign are ignored. Command line arguments <i>once</i> , <i>every</i> , and <i>at</i> cannot be used together.
---

Timesync.exe Command Line Argument	Description
a[t] <time_string>	Configures TimeSync to run every day at a specific time of day. The <i>time_string</i> field uses a 24-hour format (hh:mm:ss), where h = hour, m = minute, and s = second. Up to 32 "at time" arguments can be entered.

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Timesync.exe Command Line Argument	Description
e[very] <interval>m h	Specifies the <i>interval</i> and time units. Use the prefix <i>m</i> for minutes or <i>h</i> for hours. Do not use spaces between the <i>interval</i> and time units.
h[ost] <hostname>	Sets the time-server host. For <i>hostname</i> , use either a valid IP address or host name.
l[og] <logfile_path_name>	Each time the system clock is synchronized, TimeSync prints a line in the \path\ file <i>logfile_path_name</i> .
o[nce]	Synchronizes the system clock once and exits.
p[rotocol] TCP UDP	Sets the protocol to TCP or UDP. Use only TCP or UDP.
r[etry] <interval>s m h	Sets the retry wait <i>interval</i> and time units. Use prefix <i>s</i> for seconds, <i>m</i> for minutes, <i>h</i> for hours. Do not include spaces between the interval and the time units.
t[imeout] <seconds>	Sets the UDP timeout to <i>seconds</i> .
-m	suppress the display of the TimeSync dialog window.

### 1.8.4 AutoStart Timesynch at reboot

To have the \CFCard\LANpoint\TimeSync.exe program start automatically when the terminal is powered-up, edit the \CFCard\Autostart\Start.bat file to add a line such as:

```
start \CFCard\LANpoint\TimeSync.exe host 198.182.119.56 e 30 -m
```

and, as noted in section 1.3, *Launching programs at startup*, do not forget to copy *start.bat* to *start-default.bat* so that the changes are not lost if someone installs terminal emulation software (see manual 855M540 - *Terminal Emulation Software QuickStart Guide*, downloadable at [www.lanpoint.com](http://www.lanpoint.com)).

## 1.9 Remote Manager Utility

The Remote Manager utility provides basic terminal management functionality, including access to the file system, application management, remote reboot capability, and security settings. The Remote Manager is a set of Web pages served-up by a Web server on the terminal,

called WebDevice, to a browser on a remote computer attached to the network. WebDevice has server-side scripting capability that presents the content of the Remote Manager pages.

**Note:** WebDevice consumes resources and may affect the response time of other applications running on the terminal.

**Note:** The terminal's IP address must be set before you can use Remote Manager.

A terminal administrator who knows the user names and passwords for the LANpoint XL terminals can perform the following tasks remotely through a Web browser:

- Assigning the terminal a unique name, a description, and location.
- Performing file management on the terminal: uploading, downloading, copying, and deleting files, creating new directories and deleting existing ones.
- Managing applications running on the terminal, including viewing a list of applications currently executing, launching applications, and terminating applications.
- Rebooting the terminal.
- Controlling the security settings, user name and password, for the above capabilities.

### 1.9.1 Enabling WebDevice for Remote Management

If WebDevice is running on the terminal, you will see the WebDevice icon in the system tray. If not, run \CFCard\LANpoint\rmgr\WDCE.exe.



**Note:** Each time WebDevice launches, it creates a text file named *IPaddr.txt* for reference. This file contains the terminal's IP address and is located in the root directory.

Double-clicking on the WebDevice icon in the system tray causes the WebDevice window to open. The window contains four buttons that perform the following tasks:

- |         |   |
|---------|---|
| Hide    | Closes the dialog window, leaving WebDevice running.  |
| Options | Opens a dialog displaying the port setting. The default port number is 80. Only one session of WebDevice can run on any given port. |
| Close   | Closes WebDevice and removes the WebDevice icon from the system tray, disabling Remote Manager capabilities.                        |
| Clear   | Clears the text in the WebDevice message window.  |

---

## Password Protection

Two sections of the Remote Manager are not password protected: the *Home page* and *Help*. All of the other sections of the Remote Manager are password protected. Attempting to access any of the password-protected sections causes the browser to open a pop-up dialog asking for a user name and password. See section 1.9.2.2, *Security Manager: Allowing Access to Folders* for more information.

## Help Links

The Remote Manager web site contains context-sensitive help. The help link is located in the upper right-hand corner of every page.

General information about the Remote Manager is presented in this manual. For specifics and additional information, refer to the Remote Manager Help pages.

## 1.9.2 Using the Remote Manager

To use the Remote Manager, run a Web browser on a computer and point the browser to the desired terminal by entering the terminal's IP address in the browser's URL window.

The home page shown in FIGURE 3.1, *LANpoint XL Remote Manager Home Page*, is the first page shown. All other remote management function pages can be accessed from the home page.

**LANpoint XL Remote Manager**

The remote manager can be used to perform basic device management. [? Help](#) [Home](#)

LANpoint XL Information	
<b>IP Address:</b>	172.16.0.215
<b>Name:</b>	LANpoint XL
<b>Location:</b>	New Install
<b>Description:</b>	LANpoint XL -- Full Screen Data Collection Terminal
<b>Power:</b>	

Management	
<b>Application Manager</b>	View Running Programs, Launch a program, Terminate a program
<b>File Manager</b>	View files & folders, upload, download, and delete files.
<b>System Manager</b>	Reboot the terminal.
<b>Security Manager</b>	Allows you to modify security access.

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FIGURE 3.1 LANpoint XL Remote Manager Home Page

**Troubleshooting Tips**

If a *404 page not found* or a timeout error occurs:

1. Enter `http://nnn.nnn.nnn.nnn` in the URL window, where *nnn.nnn.nnn.nnn* is the terminal's *IP address*.  
Some browsers require the leading `http://` in the URL window.
2. Verify the WebDevice program is running by looking for the WebDevice icon in the system tray.
3. Verify the network connectivity by pinging the terminal from the browser computer.
  - a. If the computer is running Windows, open a DOS or Command line window.
  - b. Type `ping nnn.nnn.nnn.nnn` where *nnn.nnn.nnn.nnn* is the *IP address* of the terminal.

If a time-out occurs, this indicates a network problem with the PC, the terminal, or the network connecting them.

**1.9.2.1 Management**

The terminal information portion of the home page displays the terminal's IP address, name, location, and description. The management portion provides links to four management pages: File Manager, Application Manager, System Manager, and Security Manager. Viewing or modifying any of these items requires a user name and password. Factory default user names and passwords are shown in the table below.

Section	User Name	Password
Terminal Information (view)	none (home page)	none (home page)
Terminal Information (modify)	admin	admin
File Manager (view)	user	user
File Manager (modify)	admin	admin
Application Manager	admin	admin
System Manager	admin	admin
Security Manager	admin	admin

**TABLE 3.1 Default User Names and Passwords**

---

**Note:** It is highly recommended that the default user name and passwords be changed with the *Security Manager* as soon as possible.

Most of the pages are self-explanatory. Context-sensitive help is available on each page. The Security Manager pages require additional descriptions as described below.

### 1.9.2.2 Security Manager: Allowing Access to Folders

The Security Manager provides a means for setting user names and passwords to allow access to various folders that contain the the Remote Manager Web pages. Password protection applies at the folder level, not the individual Web page (file) level. Different user names and passwords can be assigned for each folder, restricting access to the web pages within.

To access the *Security Manager*:

1. Select *Security Manager* on the *Remote Manager Home Page*. A *Password* dialog will open.



FIGURE 3.2 Network User Name and Password dialog

2. Enter the user name *admin*, password *admin*, and click the *OK* button. The *Security Manager* main page will open..

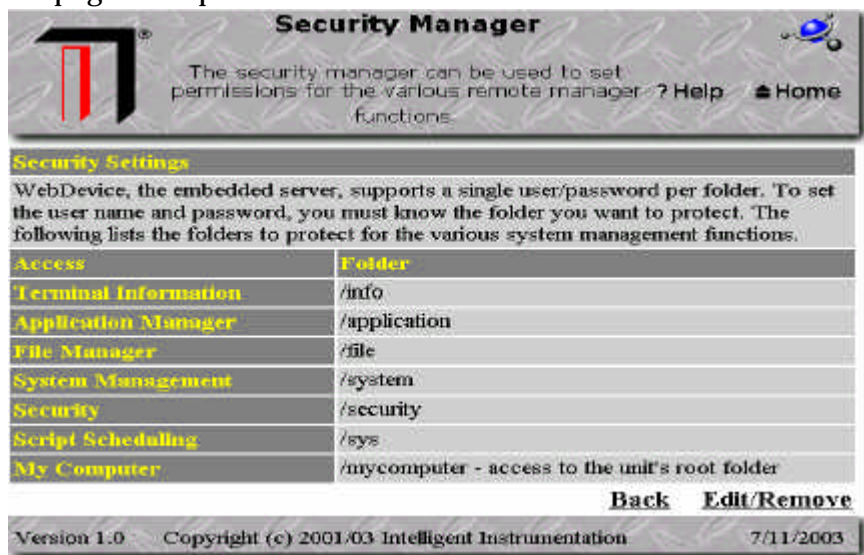


FIGURE 3.3 Security Manager main page

To modify security, click on the Edit/Remove link which opens the web page shown in FIGURE 3.4, *WebDevice Server System Configuration page*.

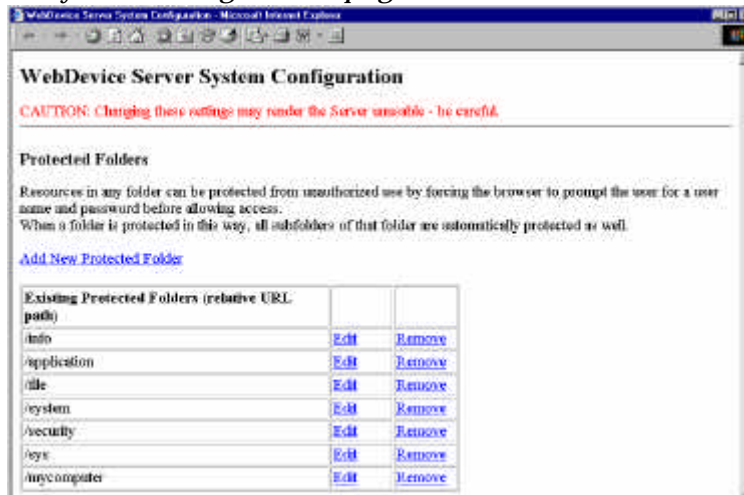


FIGURE 3.4 WebDevice Server System Configuration page

If you no longer want a folder to be password protected, click *Remove* on the appropriate folder line. The line item is deleted from the list of protected folders. The folder remains on the terminal, though not protected.

When you click the links *Add New Protected Folder* or *Edit*, the pop-up dialog shown in FIGURE 3.5, *WebDevice Server Protected Folder* opens.



FIGURE 3.5 WebDevice Server Protected Folder

### 3.9.2.2.1 Editing the User Name or Password for a Protected Folder

If you are editing an existing security setting of a folder, the *Folder to Protect* field contains the path to the protected folder.

---

From the page shown in FIGURE 3.5, *WebDevice Server Protected Folder*, change the *user name* and/or *password* for the folder, then click the *Save Settings* button to save the settings and exit this page.

**Note:** Do not change the folder name in the *Folder to Protect* field.

### 3.9.2.2.2 Adding a New Password Protected Folder

When adding new security to a folder, enter the path to the folder, relative to the terminal's \CFCard\lanpoint\rmgr\htroot folder, in the *Folder to Protect* field. For instance, to add security to a folder \CFCard\lanpoint\rmgr\htroot\newfolder, type \newfolder in the field. Then enter a *user name* and a *password*. Click the *Save Settings* button to save the settings. Close this page.

The security manager does not create, delete, rename, or move folders; it sets access restrictions on existing folders only.

## 1.10 Thin Client: Terminal Emulation

The LANpoint XL terminal can be run as a thin client or standalone with custom application software. Thin client architectures allow the same applications to run on diverse types of hardware, regardless of the operating system and processor selection. For organizations wanting more flexible deployment of applications and to more easily control management costs, thin client architecture offers an important enhancement to the traditional client-server architecture that is based on PC's, servers and mainframe computers.

LANpoint XL thin-client software includes several text based thin clients.

Text based clients include VT/ANSI/HP terminal emulation, IBM5250 terminal emulation, and IBM3270 terminal emulation and are produced by Connect, Inc.

### 1.10.1 Text-based Terminal Emulation

With the Connect text-based thin client running, the LANpoint XL terminal appears to the server as a dumb terminal. All application execution, processing, and data storage occur on the server, midrange-computer, or mainframe computer as it would with a native "dumb" terminal. Any version is easily installed, to emulate ASCII terminals such as VT100, VT220, and HP92 terminals, IBM 5250 terminals, or IBM3270 terminals.

This client-side software can be installed and run in evaluation mode at any time - it will have an extra "nuisance" message and will time-out every 30 minutes, but it is a full-featured install in every other respect. The assignment of an authorization number, keyed to the terminal's Ethernet Address, removes these limitations for production use.

#### 1.10.1.1 Text-Based Terminal Emulation Installation Instructions

Before starting, it may be expeditious to note the terminal's hardware address (MAC) address and contact [apps\\_eng@lanpoint.com](mailto:apps_eng@lanpoint.com), or call Intelligent Instrumentation's Application

Engineering Department for an authorization code. The Sales Order number from the purchase of the terminal emulation software, or the terminal emulation software serial number that is shown on the *QuickStart Guide* received with each license purchase, is required.

General installation steps:

1. Set terminal's IP address and install the Terminal Emulation Software

- set the terminal's IP address
- run `\CFCard\LANpoint\twinclient\install.exe`. An install window with several buttons will be displayed. Click on the button to install the terminal emulation type of your choice, or press the corresponding Function key (F1 = VT/HP; F2 = 3270; F3 = 5250, F4 = remove emulation software, etc). A verification message will be displayed, followed by a command window showing the appropriate files being copied. When done, a success message will be displayed in the install window (i.e. "5250 Emulation software installed").
- reboot the terminal by re-powering or pressing the F6 (or clicking the *Reboot* button on the install screen) - you will see a screen that shows "TwinClient TN xx". This is the initial terminal emulation screen.

**Note: see section 1.10.1.2, *Text-Based Terminal Emulation Un-Install Instructions* for exiting the Terminal Emulation software**

2. Terminal Emulation Configuration - assign Host Computer IP addresses

- at the *TwinClient TN xx* screen, press shift-C on an external keyboard or the on-screen keypad (to get the on-screen keypad, click the pad/pencil icon in lower right corner of screen - at the right end of the toolbar - then pick "Large KB". You must use an external keyboard if you cannot see the toolbar). This takes you into the emulator's *Edit Functions* configuration menu.
- Using the arrow keys (this menu is not responsive to mouse clicks), highlight *Edit Host List* and hit *enter*. A default host address (this is a valid host belonging to the emulation software's manufacturer, Connect, Inc. It can be used for demos if desired - contact Intelligent Instrumentation's Technical Support for a valid user ID and password) and the cursor will be positioned for you to enter your host computer's IP address. Backspace over the default address, enter the desired host address, and hit *enter*.
- At the prompt for Port (number), enter the port number (usually 23 for Telnet sessions) and press *F3* to save the changes.
- arrow down to the *Run Emulator* selection and hit *enter* to exit the configuration menu.
- reboot the terminal for the IP addresses and other menu configuration items to take effect.

- 
- When the *TwinClient TNxx* screen is shown, simply press the *enter* key to attach to the host.

**Note:** These are minimal instructions. Full instructions can be found in the downloadable manual *855M540, LANpoint XL Terminal Emulation QuickStart Guide* at [www.lanpoint.com/manuals.asp](http://www.lanpoint.com/manuals.asp). That manual goes into much more detail with instructions to use DNS, DHCP, multiple (failover) hosts, and advanced configuration utilities.

### 1.10.1.2 Text-Based Terminal Emulation Un-Install Instructions

Run `\CFCard\lanpoint\twinclient\install.exe`. An install window with several buttons will be displayed.

Choose the *Remove Terminal Emulation* button (or *F4* key) selection. When done, reboot the terminal.

## Chapter 2 Example Programs

### 2.1 Client-Server communication using socket connections

This is a 2-part (client, server) example application, demonstrating networked communication between a client (in this case, the LANpoint XL) and a server (in this case, a Windows PC).

`\CFCard\LANpoint\xl_client_survey.exe` is the client portion that runs on the LANpoint XL.

`ce_server_survey.exe` is the host portion. It does NOT/cannot run on the LANpoint XL. Copy this onto a PC from `\CFCard\LANpoint\ce_server_survey.exe` or from the SDK CD. Launch this on the PC to get the Host IP address. Then launch

`\CFCard\LANpoint\xl_client_survey.exe` on the LANpoint XL, enter the Host IP address and connect to the network. Any data that is entered on the LANpoint XL is displayed on the PC.

The source code for this program, as well as code that shows other LANpoint XL functionality can be downloaded at [www.lanpoint.com](http://www.lanpoint.com).

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