

Exhibit A: User Manual

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Intermec



User's Manual

EasyLAN Wireless

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There are U.S. and foreign patents pending.

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Before You Begin

This section introduces you to standard warranty provisions, safety precautions, warnings and cautions, document formatting conventions, and sources of additional product information. A documentation roadmap is also provided to guide you in finding the appropriate information.

Warranty Information

To receive a copy of the standard warranty provision for this product, contact your local Intermec support services organization. In the U.S. call 1-800-755-5505, and in Canada call 1-800-668-7043. If you live outside of the U.S. or Canada, you can find your local Intermec support services organization on the Intermec Web site at www.intermec.com.

Safety Summary

Your safety is extremely important. Read and follow all warnings and cautions in this book before handling and operating Intermec equipment. You can be seriously injured, and equipment and data can be damaged if you do not follow the safety warnings and cautions.

Do not repair or adjust alone Do not repair or adjust energized equipment alone under any circumstances. Someone capable of providing first aid must always be present for your safety.

First aid Always obtain first aid or medical attention immediately after an injury. Never neglect an injury, no matter how slight it seems.

Resuscitation Begin resuscitation immediately if someone is injured and stops breathing. Any delay could result in death. To work on or near high voltage, you should be familiar with approved industrial first aid methods.

Energized equipment Never work on energized equipment unless authorized by a responsible authority. Energized electrical equipment is dangerous. Electrical shock from energized equipment can cause death. If you must perform authorized emergency work on energized equipment, be sure that you comply strictly with approved safety regulations.

Warnings, Cautions, and Notes

The warnings, cautions, and notes in this manual use this format.



Warning

A warning alerts you of an operating procedure, practice, condition, or statement that must be strictly observed to avoid death or serious injury to the persons working on the equipment.

Avertissement

Un avertissement vous avertit d'une procédure de fonctionnement, d'une méthode, d'un état ou d'un rapport qui doit être strictement respecté pour éviter l'occurrence de mort ou de blessures graves aux personnes manipulant l'équipement.



Caution

A caution alerts you to an operating procedure, practice, condition, or statement that must be strictly observed to prevent equipment damage or destruction, or corruption or loss of data.

Conseil

Une précaution vous avertit d'une procédure de fonctionnement, d'une méthode, d'un état ou d'un rapport qui doit être strictement respecté pour empêcher l'endommagement ou la destruction de l'équipement, ou l'altération ou la perte de données.



Note: Notes are statements that either provide extra information about a topic or contain special instructions for handling a particular condition or set of circumstances.



About This Manual

This manual contains all of the information necessary to install, configure, operate, maintain, and troubleshoot the EasyLAN Wireless.

This manual was written for users who want to know more about the EasyLAN Wireless. It was also written for installers, applications analysts, systems engineers, and programmers who will install, operate, program, and troubleshoot the EasyLAN Wireless in a network. A basic understanding of data communications and networks is necessary.

What You Will Find in This Manual

This table summarizes the information in each chapter of this manual:

| For Information On | Refer To |
|--------------------------------------|--|
| Installing the EasyLAN Wireless | Chapter 1, “Installing the EasyLAN Wireless.” Tells you how to install the EasyLAN Wireless in your network. |
| Configuring the EasyLAN Wireless | Chapter 2, “Configuring the EasyLAN Wireless.” Explains how to configure the EasyLAN Wireless. |
| Managing the EasyLAN Wireless | Chapter 3, “Managing the EasyLAN Wireless.” Explains how to reboot, set to factory defaults, and load firmware the EasyLAN Wireless. |
| Using the port monitor | Chapter 4, “Using the Port Monitor.” Explains how to install and use the port monitor. |
| Troubleshooting the EasyLAN Wireless | Chapter 5, “Troubleshooting the EasyLAN Wireless.” Provides general troubleshooting information. |
| Console commands | Appendix A, “Console Commands.” Explains how to send console commands to the EasyLAN Wireless, and lists the commands. |

Terminology

You should be aware of how these terms are being used in this manual:

| Term | Description |
|-----------------------------------|---|
| EasyLAN Wireless | The wireless server for Intermec printers. |
| 3400 | The EasyCoder 3400 printer. |
| 4420/4440 | The EasyCoder 4420/4440 printer. |
| EasyLAN Wireless software utility | The free utility for configuring the EasyLAN Wireless. |
| Web browser interface | The HTML pages that you can use to configure and manage the EasyLAN Wireless. |

Format Conventions for Input From a Keyboard or Keypad

This table describes the formatting conventions for input from PC or host computer keyboards and device keypads:

| Convention | Description |
|--------------------|--|
| Special text | Shows the command as you should enter it into the device. See “Format Conventions for Commands” later in this chapter. |
| <i>Italic text</i> | Indicates that you must replace the parameter with a value. See “Format Conventions for Commands” later in this chapter. |
| Bold text | Indicates the keys you must press on a PC or host computer keyboard. For example, “press Enter ” means you press the key labeled “Enter” on the PC or host computer keyboard. |

Format Conventions for Commands

This manual includes sample commands that are shown exactly as you should type them on your device. The manual also describes the syntax for many commands, defining each parameter in the command. This example illustrates the format conventions used for commands:

From the command line in HyperTerminal, type:

```
set en wep keyval value
```

where *value* is the hexadecimal value of the WEP encryption (10 hexadecimal values for 64-bit encryption or 26 hexadecimal values for 128-bit encryption)

This table defines the conventions used in this manual:

| Convention | Description |
|--------------------|--|
| Special font | Commands appear in this font. You enter the command exactly as it is shown. |
| <i>Italic text</i> | Italics indicate a variable, which you must replace with a real value, such as a number, filename, or keyword. |



Command Conventions (continued)

| Convention | Description |
|---------------------|---|
| [] | Brackets enclose a parameter that you may omit from the command. Do not include the brackets in the command. |
| Required parameters | If a parameter is not enclosed in brackets [], the parameter is required. You must include the parameter in the command; otherwise, the command will not execute correctly. |
| where | This word introduces a list of the command's parameters and explains the values you can specify for them. |

Other Intermec Manuals

You may need additional information when working with the EasyLAN Wireless with various printers in a data collection system. Please visit our Web site at www.intermec.com to download many of our current manuals in PDF format. To order printed versions of the Intermec manuals, contact your local Intermec representative or distributor.

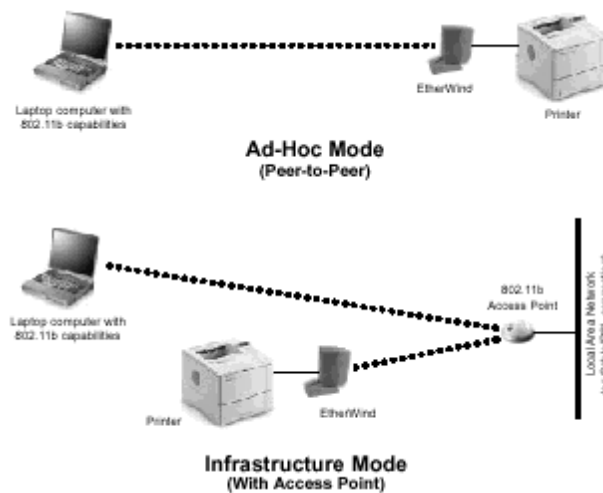
1

Installing the EasyLAN Wireless

This chapter provides an overview of the EasyLAN Wireless and explains how to install it in your network.

Introducing the EasyLAN Wireless

The Intermecc 802.11b EasyLAN Wireless lets you communicate with 3400e, 4420, and 4440 printers from anywhere on an 802.11b wireless network. You can use the EasyLAN Wireless in ad-hoc (peer-to-peer) or infrastructure (access point) mode, as shown below.



The wireless communication operates at speeds of up to 11 Mbps on any IEEE 802.11b wireless compatible network.

System Requirements

To print to the EasyLAN Wireless, you need an 802.11b wireless network. The wireless network must consist of one of the following:

- An 802.11b wireless enabled device printing straight to the printer (ad-hoc mode).
- An 802.11b wireless access point allowing wireless and wired Ethernet enabled devices to print to the printer.

To configure and print to the EasyLAN Wireless, you need the following information:

- The MAC address of the EasyLAN Wireless (for example, 004017023F96).
- The following information from your network administrator:
 - Wireless mode (infrastructure or ad-hoc)
 - The SSID (service set identifier) for your wireless network

- The radio frequency channel of the wireless network
- If you are using TCP/IP (recommended for Windows networks) and are not connected to a dynamic host configuration protocol (DHCP) server, you need a unique IP address for the EasyLAN Wireless (for example, 192. 168.1.14). If the EasyLAN Wireless is not on the same IP subnet as the devices you are printing from, you also need a subnet mask and a router (default gateway) address.


Supported Operating Systems and Network Protocols

- Windows 95, 98, ME, NT 4, 2000, XP
- TCP/IP
 - LPD/LPR
 - Raw TCP/IP (port 9100)
 - NetBIOS over IP (with SMB)
 - Multiple configurable TCP port numbers
- TELNET
- WINS
- DHCP
- IPX/SPX
 - NetWare RPrinter Bindery mode
 - NetWare PServer Bindery mode
 - NetWare NPrinter NDS mode with NDPS support
 - NetWare PServer NDS mode
 - Ethernet II, 802.3, 802.2, 802.2 SNAP Frame types
 - Compatible with PCONSOLE, NWADMIN, PRINTCON, and other Novell utilities
- NetBEUI
- Unix

Understanding the EasyLAN Wireless

Before you install the EasyLAN Wireless, you should identify the following components on the back of your printer:

picture of the back of the printer with the following components called out

| Component | Description |
|-------------------|--|
| Antenna connector | Attach the antenna to this connector. |
| Test switch | <p>Press down this switch for less than 5 seconds to print a test label on the printer. The test label shows the current wireless and network settings of the EasyLAN Wireless. Press the switch down for more than 5 seconds to reset the EasyLAN Wireless to its factory default parameters. If you hold the test switch down upon powering up, the wireless print option powers up in ad-hoc mode on RF channel 11 with the SSID of <code>printer</code>.</p> <p> Note: If you press the test switch for more than 5 seconds, only the EasyLAN Wireless is reset to the factory defaults. The rest of the printer settings remain unchanged.</p> |
| LEDs | The green LED comes on when the wireless print option is powered on and then goes out. The yellow LED comes on solid when a wireless network link is established. The green LED blinks during wireless network activity. |
| Serial port (DB9) | Use this port for connecting a serial device. You can also use this port to access the command line console of the EasyLAN Wireless for configuration and diagnostics. |

Installing the EasyLAN Wireless

Before you install the EasyLAN Wireless, make sure that you have properly installed the 802.11b wireless equipment and software you are using to communicate to the printer as described in the documentation that came with that equipment. Also make sure that you have loaded media and ribbon into the printer. For help, see the quick start guide for your printer.

Attaching the Antenna

- Screw the antenna onto the antenna connector, and bend the antenna so that it points up.

illustration of antenna being attached

For best performance, position the printer and antenna so that the antenna has a line-of-sight exposure to the access point or wireless device that it communicates with.

The following antennas and extension cable are also available:

| | |
|---------------------------------|---|
| illustration of antenna | 2.4GHz 5dBi dual flat patch, recommended for office corridors, hospital halls, and retail establishments. Part No. 067262 |
| illustration of antenna | 2.4GHz 5dBi omnidirectional, recommended for open areas, warehouses, and industrial sites. Designed for outdoor use. Part No. 063363 |
| illustration of extension cable | 12-foot long cable with magnetic base at the antenna connector. Use with the antenna that came with the EasyLAN Wireless. Part No. 060749 |

Starting and Testing the EasyLAN Wireless

When the EasyLAN Wireless is powered on, the option goes through the following startup sequence:

- The EasyLAN Wireless runs through a set of power-up diagnostics for a few seconds. If the EasyLAN Wireless is operating properly, the yellow and green LEDs blink momentarily and then go out. If the green LED blinks continuously in a regular pattern, there is a problem. Try unplugging the power to the printer and then plugging it in again. If the problem persists, contact your local Intermec representative.
- When a successful connection is made to the EasyLAN Wireless from another 802.11b wireless device like an access point or PC, the yellow LED stays lit. The green LED blinks whenever there is wireless networking activity.

After the green and yellow LEDs go out, print a test label to make sure that the wireless print option is working. The test label shows the current wireless and network settings of the EasyLAN Wireless.

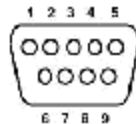
To print a test label

- Press and release the test switch. For help finding the test switch, see “Understanding the EasyLAN Wireless” earlier in this chapter.

If you cannot print a test page, see Chapter 5, “Troubleshooting.”

Connecting the EasyLAN Wireless to an RS-232 Serial Port

To initially configure the EasyLAN Wireless, you must connect it to your PC using the RS-232 serial port. The EasyLAN Wireless has one standard serial port. The serial port uses PC-compatible 9-pin male D-connectors. Note that the standard off-the-shelf 9-pin female to 25-pin male PC cables require a null modem in order to connect to most printers or terminals. The following illustration and table show the pin-outs for the serial port.



Pin-Out for Serial Port

| DB9 Pin | Input Signal | Output Signal | DTE Pin | DCE Pin |
|---------|---------------|---------------|---------|---------|
| 1 | Not used | Not used | - | - |
| 2 | Receive Data | Transmit Data | 2 | 3 |
| 3 | Transmit Data | Receive Data | 3 | 2 |
| 4 | DTR out | DSR in | 6 | 20 |
| 5 | Signal Ground | Signal Ground | 7 | 7 |
| 6 | DSR in | STR out | 20 | 7 |
| 7 | RTS out | CTS in | 5 | 4 |
| 8 | CTS in | RTS out | 4 | 5 |
| 9 | Not used | Not used | - | - |

Basically, the cable must connect input signals (such as Receive Data) on the EasyLAN Wireless to the equivalent output signals (such as Transmit Data) on the PC and vice-versa.

You can set the serial port to operate in console mode to allow you to configure and diagnose the EasyLAN Wireless via a PC running HyperTerminal. To enable the console mode manually, unplug the power supply from the EasyLAN Wireless, hold down the test switch, and simultaneously plug in the power supply.

The port remains in console mode until you power off the EasyLAN Wireless.

You may also enable console mode by connecting remotely to the EasyLAN Wireless via the Web browser interface, TELNET, NCP, or XConfig. For more information about using console mode, see Chapter 2, "Configuring the EasyLAN Wireless."

Setting Radio and Network Communications

Before you can set radio and network communications, you need to get the following information from your network administrator:

- Radio SSID
- Radio boot method (ad-hoc or infrastructure)
- Radio WEP (64-bit, 128-bit, or disabled)
- Radio WEP key number
- Radio WEP encryption value
- Static IP address for the printer
- Subnet mask
- Router

To set radio and network communications

1. Make sure that your PC's serial port is set to
 - 115200 baud.
 - 8 data bits.
 - No parity.
 - 1 stop bit.
2. Connect the serial port on the EasyLAN Wireless to the serial port of your PC.
3. Open a HyperTerminal session, and press **Enter** to get the `Local>` prompt.
4. To set the radio SSID, type `set en ssid mynetwork` where *mynetwork* is the SSID for the EasyLAN Wireless, and press **Enter**.
5. To set the radio boot method to ad-hoc or infrastructure, type `set en mo mode` where *mode* is `ad` for ad-hoc, `ps` for pseudo ad-hoc, or `in` for infrastructure, and press **Enter**.
6. To enable WEP 64 bit, type `set en wep 64`, and press **Enter**.
Or to enable WEP 128 bit, type `set en wep 128`, and press **Enter**.
7. To set the radio WEP key, type `set en key# n` where *n* is a number from 1 to 4, and press **Enter**.
8. To set the radio WEP encryption value, type `set en wep keyval value` where *value* is the hexadecimal value of the WEP encryption (10 hexadecimal values for 64-bit encryption or 26 hexadecimal values for 128-bit encryption), and press **Enter**.
9. To set the static IP address, type `set ip ad to n.n.n.n` where *n* is a number from 0 to 255, and press **Enter**.
10. To set the subnet mask, type `set ip su n.n.n.n` where *n* is a number from 0 to 255, and press **Enter**.
11. To set the router, type `set ip ro n.n.n.n` where *n* is a number from 0 to 255, and press **Enter**.
12. To set the boot method to static instead of DHCP, type `set ip me static`, and press **Enter**. If you are using a printer other than the 601XP, skip to Step 15.
13. (601XP only) To set the communications parameters to 57600 baud, type `set port s1 sp 57600`, and press **Enter**.
14. (601XP only) To disable console mode, type `set port s1 co dis`, and press **Enter**.
15. To save the changes, type `save`, press **Enter**, type `ini`, and press **Enter**.
16. Type `exit` and press **Enter**.

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You can now use the Web browser interface or the EasyLAN Wireless Admin utility to configure and manage the EasyLAN Wireless. For help, see Chapter 2, “Configuring the EasyLAN Wireless,” and Chapter 3, “Managing the EasyLAN Wireless.”

Configuring the EasyLAN Wireless

This chapter explains how to configure the EasyLAN Wireless for radio and network communications.

Before You Begin

This chapter explains how to configure the EasyLAN Wireless using the Web browser interface, EasyLAN Wireless Admin utility, and network specific utilities, such as Novell NWAdmin utility. For information on using console commands with HyperTerminal to configure the EasyLAN Wireless, see Appendix A, “Console Commands.”

Before you configure the EasyLAN Wireless, you need to:

- Make sure that you have properly configured your PC for communication on a wireless network. If you are connecting to the printer through an access point, make sure your PC is in infrastructure mode and that it is associated with the access point. If you are printing directly to the printer without an access point, you should be in ad-hoc mode. See the documentation for your PC's wireless adapter for instructions.



Note: If your PC's wireless adapter includes an option for 802.11 ad-hoc, you must select it if you want to use the printer in ad-hoc mode. If it does not include this option, select Ad-hoc Computer-to-Computer or whatever mode your adapter uses to communicate on a wireless network without an access point.

- If you are using WEP encryption on your wireless network, temporarily disable WEP on your PC in order to configure the EasyLAN Wireless using the EasyLAN Wireless Admin utility. If you are using an access point with WEP enabled and it does not allow non-WEP clients to communicate with other non-WEP clients, then you also need to temporarily change the wireless mode of your PC to ad-hoc.



Note: If no PCs on your network can be set to ad-hoc mode, you need to temporarily disable WEP on your access point. When you are done configuring the EasyLAN Wireless, you can re-enable WEP on your access point and change the wireless mode back if necessary.

- If you are using TCP/IP, note your PC's IP address. The EasyLAN Wireless needs to be on the same IP segment as the other nodes on your network in order to communicate.
- If you are using infrastructure mode, make sure you have a good signal between your computer and the access point. Most wireless adapters have a utility that shows the wireless signal strength. See your PC's wireless adapter's documentation for details.
- If you are using a home gateway or router, configure the EasyLAN Wireless from a PC on the same network segment that you want the EasyLAN Wireless to be on.

Configuring the TCP/IP Parameters

You can use the Web browser interface or the EasyLAN Wireless Admin utility to configure the following TCP/IP parameters:

- Enable or disable TCP/IP
- Enable port services
- IP address
- Subnet mask
- Gateway or router IP address
- Boot method



Note: If you are using DHCP on your network, the EasyLAN Wireless may have automatically acquired valid IP settings, and no further configuration is necessary. Using DHCP may work well if your DHCP server allows the EasyLAN Wireless to keep its IP address permanently, but in most cases, you want to use a static IP address outside the range reserved for DHCP (see your DHCP server manual for details). You want a static IP address for when you configure your printer port and to use the Web browser interface.

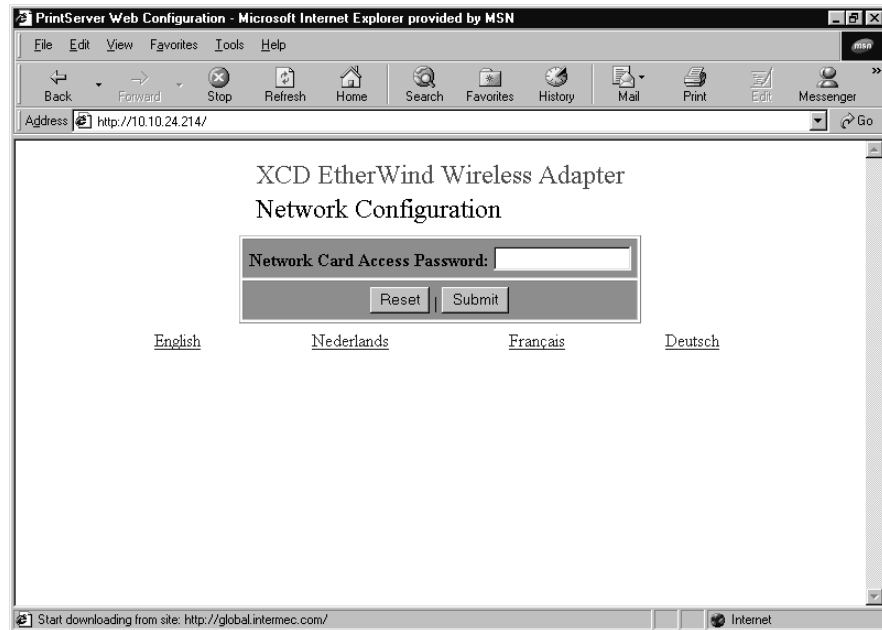
Using the Web Browser Interface

Before you can use the Web browser interface, you need to open it.

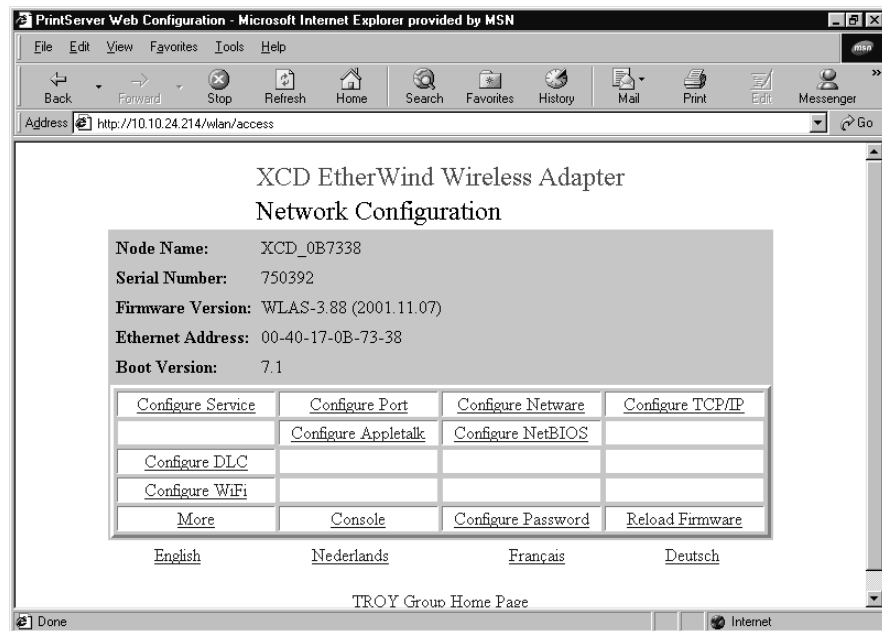
To open the Web browser interface

1. Start your Web browser.
2. In the Address (Internet Explorer) or Go to (Netscape) line, enter the IP address for the EasyLAN Wireless, and press **Enter**. The following page appears.

Access Password Page



3. In the Print Server Access Password field, enter the password. The default password is access.
4. Click Submit. The Configuration and Management page appears.



You are now ready to configure the TCP/IP parameters.

To configure the TCP/IP parameters using the Web browser interface

1. From the Configuration and Management page, click Configure TCP/IP. The Configure TCP/IP page appears. For help opening the Configuration and Management page, see “To open the Web browser interface” earlier in this section.

The screenshot shows a web browser window titled "PrintServer Web Configuration - Microsoft Internet Explorer provided by MSN". The address bar shows the URL: `http://10.10.24.214/wlan/tcpip.html?access=10364698FCD0B18F&password=&language=0`. The main content area is titled "XCD EtherWind Wireless Adapter Configure TCP/IP". It contains a table with the following rows:

| | |
|------------------|--|
| TCP/IP | <input checked="" type="radio"/> Enable <input type="radio"/> Disable |
| Enabled Services | XCD_0B7338_P1 BINARY_P1 TEXT_P1 POSTSCRIPT_P1 PCL_P1 |
| IP Address | IP Address: <input type="text" value="10.10.24.214"/> Subnet Mask: <input type="text" value="255.255.0.0"/> Gateway: <input type="text" value="10.10.0.1"/> Boot Method: <input type="text" value="STATIC"/> Boot Tries: <input type="text" value="3"/> <input type="checkbox"/> No Subnet Mask |

2. In the TCP/IP row, select Enable or Disable.
3. In the Enabled Services row, click the port you want to configure services for. For help, see “Configuring Port Services” later in this chapter.
4. In the IP Address field in the IP Address row, enter the IP address for the EasyLAN Wireless using the form *n.n.n.n* where *n* is from 0 to 255. After you click Submit, you will have to enter the new IP address in the Address/Go to line of your browser to get the Web browser interface back.
5. In the Subnet Mask field in the IP Address row, enter the subnet mask that the printer is communicating in using the form *n.n.n.n* where *n* is from 0 to 255.
6. In the Gateway field in the IP Address row, enter the IP address of the gateway or router your EasyLAN Wireless communicates with.

7. In the Boot Method dropdown list in the IP Address row, select the method for finding the EasyLAN Wireless IP address, subnet mask, and gateway address when the EasyLAN Wireless powers on or is reset:
 - Auto sets the EasyLAN Wireless to try to get an IP address using DHCP, BOOTP, and RARP. If it cannot get an IP address using these methods, Auto changes to Static.
 - DHCP sets the EasyLAN Wireless to use the dynamic host configuration protocol to get an IP address.
 - BOOTP sets the EasyLAN Wireless to use boot protocol to get an IP address.
 - RARP sets the EasyLAN Wireless to use reverse address resolution protocol to get an IP address.
 - Static sets the EasyLAN Wireless to use the IP address set in the IP Address field whenever it boots.
8. In the Boot Tries field in the IP Address row, enter the number of times the boot method tries to set the IP address, subnet mask, and gateway address before using the available values. This field is only used if the boot method is set to Auto, DHCP, BOOTP, or RARP. **What is the range of valid values for this field?**
9. In the RARP Boot Settings row, select whether RARP sets the subnet mask based on the EasyLAN Wireless IP address and sets the gateway IP address. To use these settings, set the boot method to RARP or Auto.
10. In the TCP Window row, enter the maximum TCP window for TCP communications. Normally this value is set automatically, but you may want to change it to optimize network performance. **What is the range of valid values for this field?**
11. In the TCP Timeout row, enter how many minutes or seconds a TCP job can be idle before the job is terminated. If you set the timeout to zero, the TCP job can be idle indefinitely. **What is the range of valid values for this field?**
12. In the LPD Banner Enable check box in the LPD Settings row, check the check box to have the EasyLAN Wireless print the banner page in an LPD control file.
13. In the LPD Retry Enable check box in the LPD Settings row, check the check box to have the EasyLAN Wireless wait for an LPD job that has been terminated before it was completed to be resent. If the LPD job is resent, the EasyLAN Wireless continues printing the job where it had stopped.
14. In the Keepalive Timer row, enter how often in minutes the EasyLAN Wireless sends an IP ping packet to the router to keep the router aware of the EasyLAN Wireless. Enter zero to disable this feature.
15. In the Probe Idle Connections row, select Enable to have the EasyLAN Wireless send a probe packet on TCP connections with no data traffic. If the EasyLAN Wireless does not receive an acknowledgement, it closes the connection.

16. In the TCP Receive Checksum row, select Enable to compute the TCP checksum on received packets. Disabling this feature can enhance performance, but data corruption will not be checked.
17. Click Submit. A page appears letting you know that your changes were successful.
18. Click OK to return to the Configuration and Management page.

Using the EasyLAN Wireless Admin Utility

Before you can use the WPAAdmin utility, you need to install it and then search for the EasyLAN Wireless.

To install the WPAAdmin utility

1. Place the printer CD-ROM in your PC's CD-ROM drive. The following screen appears.



2. Click Software in the left frame. The Software page appears.

Printer Companion CD Software Page



3. Scroll down to EasyLAN Wireless Admin utility, and then click the picture or the link for the EasyLAN Wireless Admin utility page.
4. Click Install EasyLAN Wireless Admin utility.
5. Follow the instructions for installing the EasyLAN Wireless Admin utility.
6. When the installation is complete, close the CD-ROM screen.

To search for the EasyLAN Wireless

1. Open the WPAdmin utility by selecting it from the Start menu (under Programs, Intermec then WPAdmin) or by double-clicking a short cut on your desktop. The Search dialog box appears.



2. In the Server Search box, click Start. The name of the EasyLAN Wireless, MAC address, IP address, and signal appear for all of the EasyLAN Wireless found.

If the WPAdmin utility does not find your EasyLAN Wireless right away, click Stop and make sure that the EasyLAN Wireless is on and configured properly. For help with initially configuring the EasyLAN Wireless, see “Setting Radio and Network Communications” in Chapter 1.

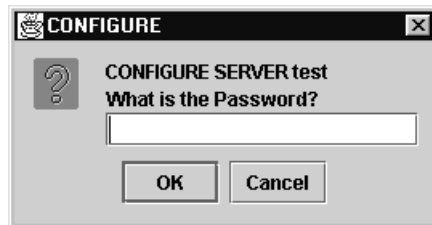


Note: If the wireless signal is less than 50% on the Search screen, printing performance could be affected. To improve the signal strength, try moving the EasyLAN Wireless closer to the computer or access point and away from other radio devices, such as Bluetooth™ wireless devices, microwave ovens, or cordless phones.

You are now ready to configure the EasyLAN Wireless.

To configure the TCP/IP parameters using the EasyLAN Wireless Admin utility

1. Open the WPAdmin utility and search for the EasyLAN Wireless on your network. For help, see the previous procedure, “To search for the EasyLAN Wireless.”
2. Select an EasyLAN Wireless and click Configure. The Configure Password dialog box appears.



3. Enter the password for the EasyLAN Wireless. The default password is access. The Configuration dialog box appears.

Configuration Dialog Box

WP-Admin

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- Welcome
- Wireless Serve
- Wireless Serve

ETHERWIND™ **HELP CONTENTS**

ETHERWIND™ **Wireless Server Configuration**

| | | | |
|--------------|-------------------|------------------|------------------|
| Server Name | XCD_08B2C7 | Serial Number | 570055 |
| Password | ***** | Firmware Rev. | 3.87H |
| IP Address | 192.0.0.192 | Workgroup/Domain | WORKGROUP |
| Subnet Mask | 0.0.0.0 | Boot Method | AUTO ▼ |
| Gateway | 0.0.0.0 | RF Channel | 11 ▼ |
| MAC Address | 00.40.17.08.B2.C7 | Data Rate | 11 Mb ▼ |
| SSID | ENGR | Wireless Mode | Infrastructure ▼ |
| WEP Key | Disabled ▼ | WEP Key Index | 1 ▼ |
| 128Bit Key 1 | ***** | 64Bit Key 1 | ***** |
| 128Bit Key 2 | ***** | 64Bit Key 2 | ***** |
| 128Bit Key 3 | ***** | 64Bit Key 3 | ***** |

OK



Note: The Serial Number field, Firmware Rev. field, and MAC Address field are read only fields. You cannot change the values of these fields.

- In the Server Name field, enter the name for the EasyLAN Wireless. The default name is XCD_XXXXXX where XXXXX is the last six digits of the MAC address.
- In the Password field, enter the password that you use to access this Configuration dialog box.
- In the IP Address field, enter the IP address for the EasyLAN Wireless in the form *n.n.n.n* where *n* is a number from 0 to 255.
- In the Workgroup/Domain field, enter the Microsoft Workgroup or Domain that prints to this printer. If your network uses NetBIOS or NetBEUI, enter the name of the PC that prints to this printer.
- In the Subnet Mask field, enter the subnet mask that the EasyLAN Wireless communicates in using the form *n.n.n.n* where *n* is a number from 0 to 255.
- From the Boot Method dropdown list, select one of the following options:
 - Auto sets the EasyLAN Wireless to try to get an IP address using DHCP, BOOTP, and RARP. If it cannot get an IP address using these methods, Auto changes to Static.
 - DHCP sets the EasyLAN Wireless to use the dynamic host configuration protocol to get an IP address.

- BOOTP sets the EasyLAN Wireless to use boot protocol to get an IP address.
 - RARP sets the EasyLAN Wireless to use reverse address resolution protocol to get an IP address.
 - Static sets the EasyLAN Wireless to use the IP address set in the IP Address field whenever it boots.
10. In the Gateway field, enter the address for the gateway or router that the EasyLAN Wireless communicates through to other subnets using the form *n.n.n.n* where *n* is a number from 0 to 255.
 11. From the Data Rate dropdown list, select the throughput speed for the Ethernet connection (1, 2, 5.5, or 11 Mbps).
 12. Click OK to accept your changes and return to the Search screen.
Click Cancel to reject your changes and return to the Search screen.



Note: If you are having trouble configuring an EasyLAN Wireless, click Cancel in the Configuration screen. In the Search screen, click Clear to clear the list of print servers, and start a new search. For help searching for the EasyLAN Wireless, see “To search for the EasyLAN Wireless” earlier in this chapter.

For configuring the rest of the parameters in the Configuration screen, see “Using the EasyLAN Wireless Admin Utility” in the next section.

Configuring the Radio Parameters

You can use the Web browser interface or the EasyLAN Wireless Admin utility to configure the following radio parameters:

- Channel
- SSID
- Mode
- Speed
- WEP

Using the Web Browser Interface

You need to open the Web browser interface before you can use it. For help, see “To open the Web browser interface” earlier in this chapter.

To configure the radio parameters using the Web browser interface

1. From the Configuration and Management page, click Configure Radio. The Configure Radio page appears. For help opening the Configuration and Management page, see “To open the Web browser interface” earlier in this chapter.



2. In the Channel field, enter a channel number from 1 to 11, or enter 0 to have the system automatically select the proper channel.
3. In the SSID field, enter the SSID for the EasyLAN Wireless.
4. In the Mode field, select the mode your network is using to communicate:
 - Choose Auto mode to have the EasyLAN Wireless select the appropriate mode based on what network activity is happening at the time.
 - Choose Pseudo Ad-hoc mode when your network has some stations without access points.
 - Choose Ad-hoc (802.11) mode when all of the stations on the network are IEEE 802.11 compliant.
 - Choose Infrastructure mode when all data is being passed through a central access point.

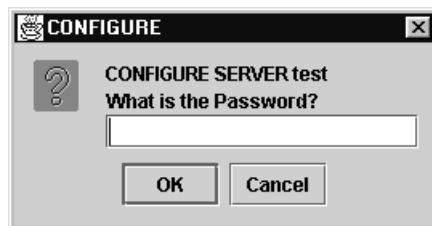
5. In the Speed field, select the speed of your network: 1, 2, 5.5, or 11 Mbps.
6. In the WEP field, select the WEP security your network is using: disabled, 64-bit encryption, or 128-bit encryption.
7. In the Key Selection field, select the WEP key your network is using: 1, 2, 3, or 4.
8. In the 64 Bit WEP Key fields or the 128 Bit WEP Key fields, enter the hexadecimal digits for each key: 10 digits for 64-bit encryption and 26 digits for 128-bit encryption.
9. Click Submit. A page appears letting you know that your changes were successful.
10. Click OK to return to the Configuration and Management page.

Using the EasyLAN Wireless Admin Utility

Before you can configure the radio parameters using the EasyLAN Wireless Admin utility, you need to install the utility and search for the EasyLAN Wireless. For help, see “To install the EasyLAN Wireless Admin Utility” and “To search for the EasyLAN Wireless” earlier in this chapter.

To configure the radio parameters using the EasyLAN Wireless Admin utility

1. Open the WPAAdmin utility and search for the EasyLAN Wireless on your network. For help, see “To search for the EasyLAN Wireless” earlier in this chapter.
2. Select an EasyLAN Wireless and click Configure. The Configure Server Password dialog box appears.



3. Enter the password for the EasyLAN Wireless. The default password is access. The Configuration dialog box appears.

Configuration Dialog Box

WP-Admin

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- Welcome
- Wireless Serve
- Wireless Serve

ETHERWIND™ Wireless Server Configuration

| | | | |
|--------------|-------------------|------------------|----------------|
| Server Name | XCD_08B2C7 | Serial Number | 570055 |
| Password | ***** | Firmware Rev. | 3.87H |
| IP Address | 192.0.0.192 | Workgroup/Domain | WORKGROUP |
| Subnet Mask | 0.0.0.0 | Boot Method | AUTO |
| Gateway | 0.0.0.0 | RF Channel | 11 |
| MAC Address | 00.40.17.08.B2.C7 | Data Rate | 11 Mb |
| SSID | ENGR | Wireless Mode | Infrastructure |
| WEP Key | Disabled | WEP Key Index | 1 |
| 128Bit Key 1 | ***** | 64Bit Key 1 | ***** |
| 128Bit Key 2 | ***** | 64Bit Key 2 | ***** |
| 128Bit Key 3 | ***** | 64Bit Key 3 | ***** |

OK



Note: The Serial Number field, Firmware Rev. field, and MAC Address field are read only fields. You cannot change the values of these fields.

- In the Server Name field, enter the name for the EasyLAN Wireless. The default name is XCD_XXXXXX where XXXXXX is the last six digits of the MAC address.
- In the Password field, enter the password that you use to access this Configuration dialog box.
- From the RF Channel dropdown list, select the wireless channel (0 to 11) the EasyLAN Wireless uses to communicate.
- In the SSID field, enter the service set identifier for the subnetwork.
- From the Wireless Mode dropdown list, select one of the following options:
 - Auto. Select this mode to have the EasyLAN Wireless select the appropriate mode based on what network activity is happening at the time.
 - Pseudo Ad-hoc. Select this mode when your network has some stations without access points.
 - Ad-hoc. Select this mode when all of the stations on the network are IEEE 802.11 compliant.
 - Infrastructure. Select this mode when all data is being passed through a central access point.

9. From the WEP Key dropdown list, select either disabled, 64-bit, or 128-bit wired equivalent privacy. If you selected disabled, skip to Step 12.
10. From the WEP Key Index dropdown list, select the 64-bit or 128-bit key you are using.
11. In the 64 Bit Key fields or the 128 Bit Key fields, enter the hexadecimal digits for each key: 10 digits for 64-bit encryption and 26 digits for 128-bit encryption.
12. Click OK to accept your changes and return to the Search screen.

Click Cancel to reject your changes and return to the Search screen.



Note: If you are having trouble configuring an EasyLAN Wireless, click Cancel in the Configuration screen. In the Search screen, click Clear to clear the list of print servers, and start a new search. For help searching for the EasyLAN Wireless, see “To search for the EasyLAN Wireless” earlier in this chapter.

To configure the other parameters in the Configuration screen, see “Using the EasyLAN Wireless Admin Utility” in the previous section.

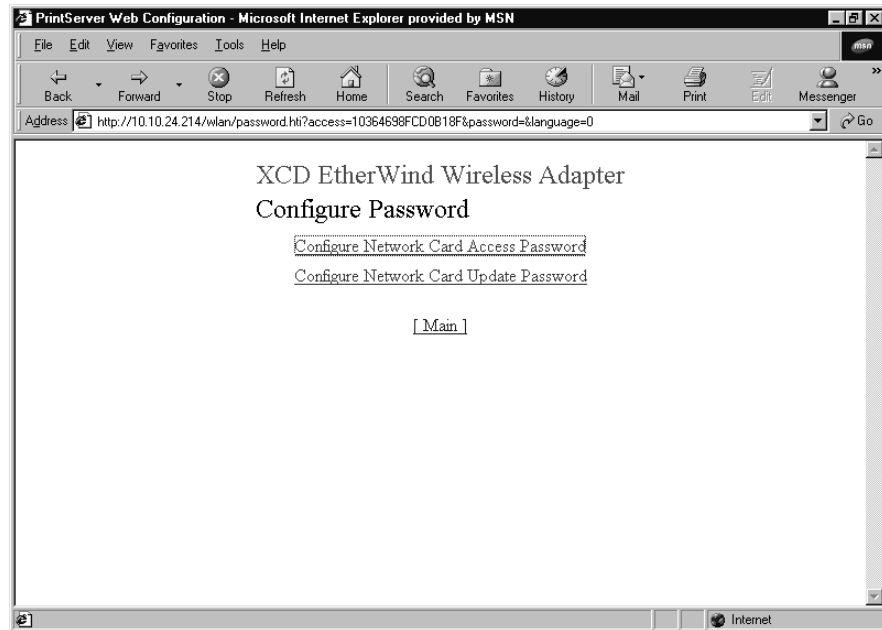
Configuring the Access and Update Passwords

Use the Web browser interface to configure the access and update passwords. The default passwords are access. The access password is the password you use to get to the Configuration page of the Web browser interface. The update password is the password you use to reload the firmware.

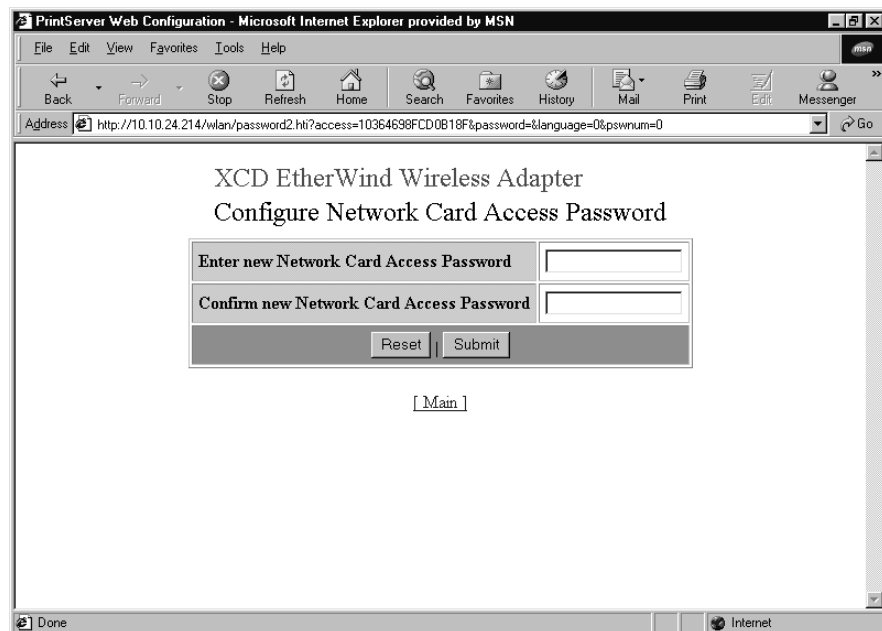
To configure the access and update passwords

1. From the Configuration and Management page, click Configure Password. The Configure Password page appears. For help opening the Configuration and Management page, see “To open the Web browser interface” earlier in this chapter.

Configure Password Page

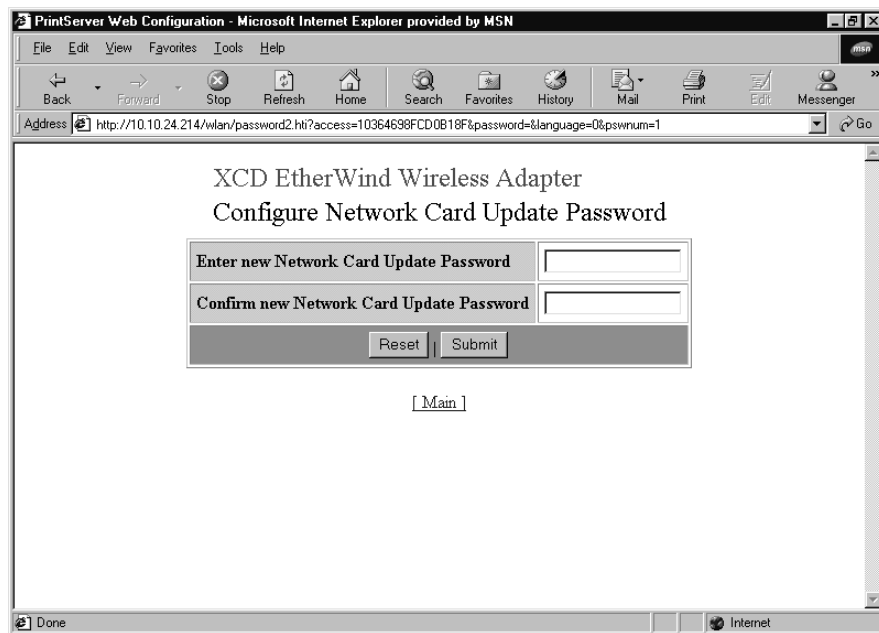


- Click Configure Access Password. The Configure Access Password page appears.



- Enter the access password in both fields.

4. Click Submit. A page appears letting you know that your changes were successful.
5. Click OK to return to the Configuration and Management page.
6. Repeat Steps 1 through 5 for the update password. The Configure Update Password page is shown next.



Configuring the Ports

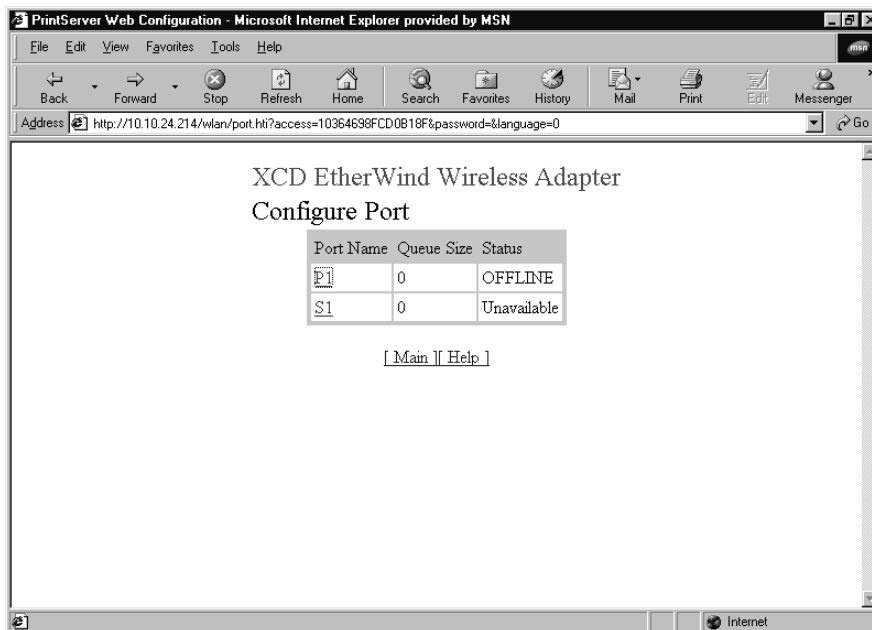
Use the Web browser interface to configure the following port parameters:

- Output mode
- Bidirectional communication
- ECP
- Software I/O

To configure the ports

1. From the Configuration and Management page, click Configure Port. The Configure Port page appears. For help opening the Configuration and Management page, see "To open the Web browser interface" earlier in this chapter.

Configure Port Page



- Click the port name for the port you want to configure. The following page appears.



- Read the first three rows to find out what jobs are in the port, the status of the port, and the port name.

4. In the Port Type row, select Console to send console commands to the EasyLAN Wireless through the serial port, or select Print Server to print to the EasyLAN Wireless.
5. In the Baud Rate row, select the baud rate for the port.
6. In the Bits per character row, select 7 or 8 bits.
7. In the Stop Bits row, select 1 or 2 stop bits.
8. In the Parity row, select None, Odd, Even, Mark, or Space.
9. In the Flow Control row, select None, XON/XOFF, or RTS/CTS.
10. Click Submit. A page appears letting you know that your changes were successful.
11. Click OK to return to the Configuration and Management page.

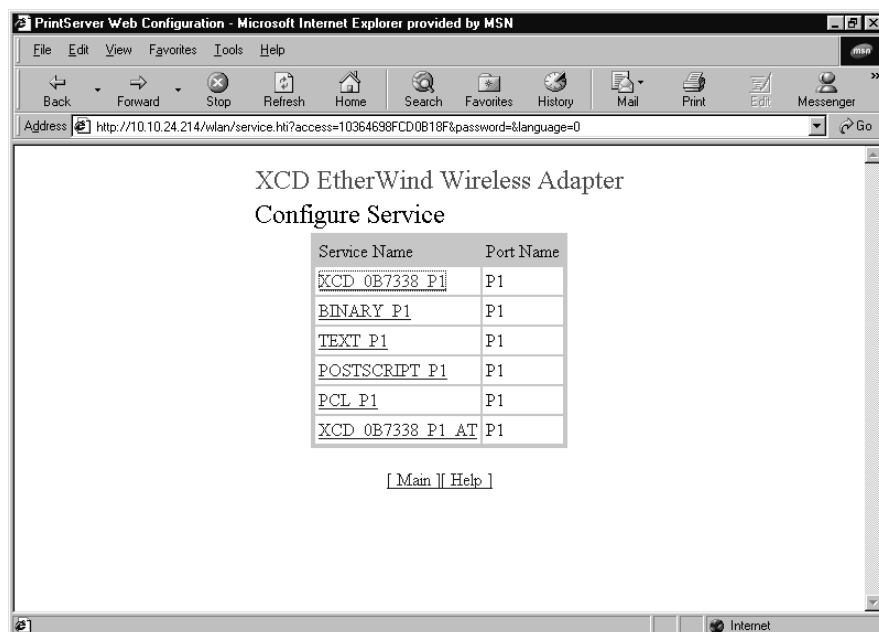
Configuring the Port Services

Use the Web browser interface to configure port services.

If you clicked on a service name in a network parameter page, such as Configure Netware, go to Step 3.

To configure the port services

1. From the Configuration and Management page, click Configure Services. The Configure Service screen appears. For help opening the Configuration and Management page, see “To open the Web browser interface” earlier in this chapter.



2. Click the service name for the service you want to configure. The following page appears.

The screenshot shows a web browser window titled 'PrintServer Web Configuration - Microsoft Internet Explorer provided by MSN'. The address bar shows a URL: 'http://10.10.24.214/wlan/service2.htm?access=10364698FCD0B18F&password=&language=0&servicenum=2'. The main content area is titled 'XCD EtherWind Wireless Adapter Configure Service'. Below the title is a form with the following fields:

| | |
|-----------------|--|
| Service Name | TEXT_P1 |
| Service Port | P1 |
| Protocols | <input checked="" type="checkbox"/> TCP/IP <input type="checkbox"/> Netware <input type="checkbox"/> AppleTalk <input type="checkbox"/> DLC <input type="checkbox"/> NetBIOS |
| Filter | 1) Text Substitution |
| Priority | 10 |
| Control Strings | Beginning of Job: 1) End of Job: 11)\0C |

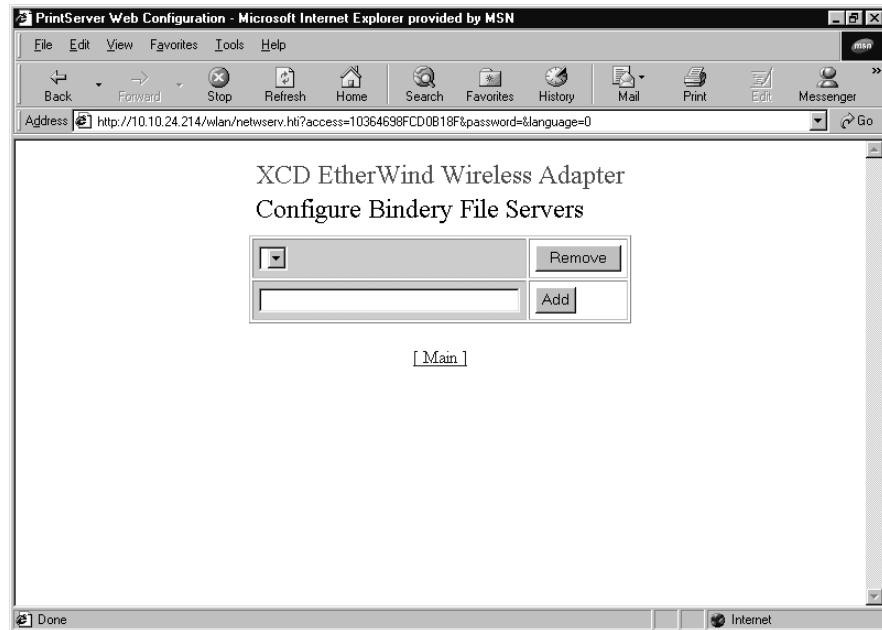
3. In the Service Name row, enter the name for the service.
4. In the Service Port row, select the port the service runs on.
5. In the Protocols row, choose the protocols the service uses to communicate.
6. In the Filter row, select the data filter the service uses:
 - 0, no filter: data passes unmodified
 - 1, text substitution: default is CRLF for LF
 - 2, not used
 - 3, converts normal text to PostScript
 - 4, converts output data to PostScript Tagged Binary
7. In the Priority row, enter the priority. **What is the range of valid values for this field?**
8. In the Control Strings row, select the data strings for the beginning of a job and end of a job.
9. In the NetWare row, check the Queue Server radio button to configure the EasyLAN Wireless to fetch print jobs directly from the Netware print queues

10. In the NetWare row in the NDS Tree field, enter the name of the organizational tree and enter the context for your NetWare network. To configure the EasyLAN Wireless for Netware Directory Services, check the Queue Server radio button and enter an NDS tree name and context for the EasyLAN Wireless. To disable NDS support, leave the NDS Tree field and the NDS Context field blank.
11. In the NetWare row in the NDS Context field, enter the organizational unit(s) that you configured for the EasyLAN Wireless using NWAdmin or PCONSOLE. To disable NDS support, leave the NDS Tree field and the NDS Context field blank.
12. To configure either bindery file servers or service bindery file servers, click either Configure Bindery File Servers or Configure Service Bindery File Servers. For help, see the next procedure, "To configure bindery file servers and service bindery file servers."
13. In the NetWare row, check the Remote Printer radio button if you have a NetWare print server loaded on the file server or workstation.
14. In the NetWare row in the Printer Number field, enter the number for the printer.
What is the range of valid values for this field? And what does this number mean?
15. In the NetWare row in the Printer Server field, enter the name of the NetWare print server. **Do you need to add path information or other context?**
16. In the Raw TCP Port row, enter the TCP port to be used with this service. **What is the range of valid values for this field?**
17. In the Service Options row, check the Bi-Directional radio button to have the service send data back from the printer to the network. Normally you should not need to change this.
18. In the Service Options row, check the Queued (TCP) radio button with the Raw TCP Port defined to have the EasyLAN Wireless queue jobs sent to that port. If not checked, the EasyLAN Wireless rejects jobs if the EasyLAN Wireless is currently busy with another job
19. Click Submit. A page appears letting you know that your changes were successful.
20. Click OK to return to the Configuration and Management page.

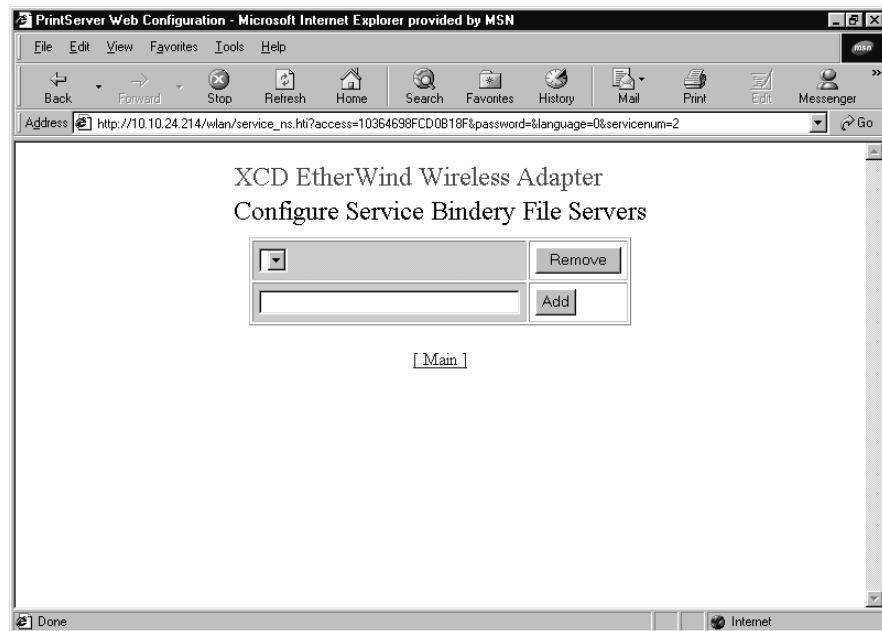
To configure bindery file servers service bindery file servers

1. In the Active Servers and Queues row of the Configure NetWare page or the NetWare row of the Configure Services page, click Configure Bindery File Servers or click Configure Service Bindery File Servers. The Configure Bindery File Servers page or Configure Service Bindery File Servers page appears.

Configure Bindery File Servers Page



Configure Service Bindery File Servers Page



2. If you want to remove a server, select a server from the dropdown list and click Remove.
3. If you want to add a server, enter a server number in the field and click Add.
4. Click Back in your browser toolbar to return to the previous page.
Or click Main to return to the Configuration and Management page.

Configuring for the NetWare Network

This section explains how to use the Web browser interface to configure NetWare parameters and how to configure additional queues using the Novell NWAdmin utility.



Note: Intermec recommends you use the Novell 32-bit client on your Windows PC instead of the Microsoft NetWare client because it allows direct configuration of print queues without the need for a Novell utility like NWAdmin or PCONSOLE.

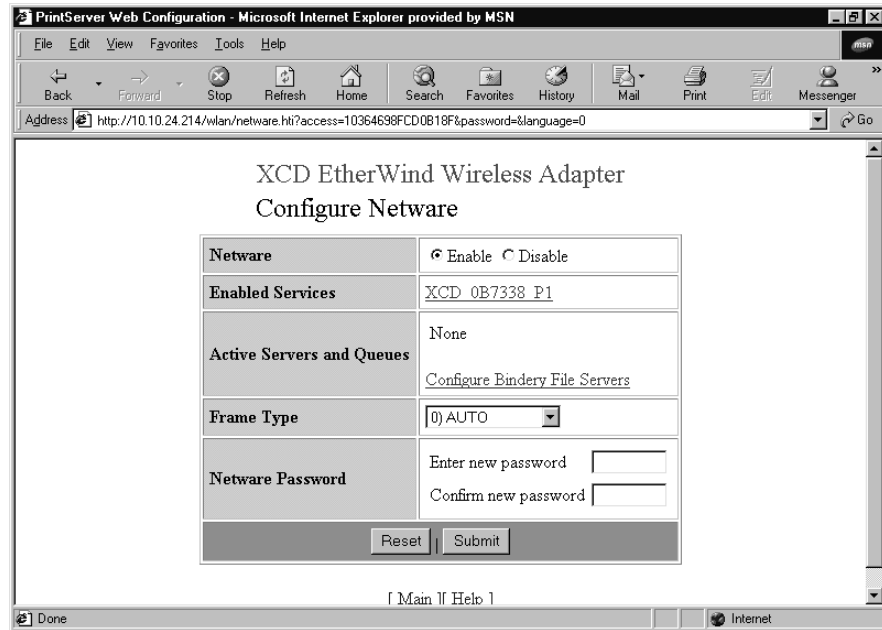
The EasyLAN Wireless automatically makes itself known on a NetWare network. The default NetWare Print Server name is XCD_XXXXXX_P1 where XXXXXX is the last six digits of the MAC address. Note that the NetWare Print Server name is used for either NDS or bindery mode configuration.

If you are configuring the first port with the Web browser interface, the NDS Printer Name for this port is automatically assigned as XCD_XXXXXX_P1 where XXXXXX is the last six digits of the MAC address. If you are using an alternate configuration method like NWAdmin, you may assign any unique name for the printer. For help configuring the first port, see “Configuring the Ports” earlier in this chapter.

You extensively use the Print Server and Printer names while configuring. Note that these names are actually the names of the EasyLAN Wireless NetWare services. If desired, you can change the default names using the Web browser interface. For help, see “Configuring the Port Services” earlier in this chapter.

Configuring the NetWare Parameters

1. From the Configuration and Management page, click Configure NetWare. The Configure NetWare screen appears. For help opening the Configuration and Management page, see “To open the Web browser interface” earlier in this section.



2. In the Netware row, select Enable or Disable.
3. To configure services for the port shown in the Enabled Services row, click the link for the port. For help, see “Configuring Port Services” later in this chapter.
4. Read the information in the Active Servers and Queues row to find out what servers and queues are enabled.
5. To configure bindery file servers, click Configure Bindery File Servers. For help, see “To configure bindery file servers and service bindery file servers” in the previous section.
6. In the Frame Type field, select the frame type: Auto, 802.3, Ethernet II, 802.2, or SNAP.
7. In the Netware Password row, enter the password the EasyLAN Wireless uses to communicate with the file server in the Enter new password field and Confirm new password field. To disable the password, enter a single space.
8. Click Submit. A page appears letting you know that your changes were successful.
9. Click OK to return to the Configuration and Management page.

Configuring Additional Queues

If you want to configure additional queues, you must use the Novell NWAdmin utility (this program is usually found in the Public directory on the NetWare file server).

To configure additional queues and ports

1. Start the NWAdmin utility and make sure you are in the right context. (If not, select NDS Browser from the Tools menu and then browse for the desired context.)
2. Select the container where you want the print queue to reside.
3. From the Tools menu, select Print Services Quick Setup.
4. Browse for the NetWare Print Server by clicking on the button next to the Print Server Name window.
5. Enter the name of the NDS Printer for the desired port in the Name box (for example, XCD_04ECBA_P1).
6. Leave the Type box at the default Parallel setting.
7. Select the desired banner type.
8. Enter any desired name for the print queue.
9. If necessary, browse for the volume.
10. Click Create to create the print queue. You are now ready to use the queue from a NetWare workstation.

Configuring for NetBIOS

Use the Web browser interface to configure for NetBIOS.

To configure for NetBIOS

1. From the Configuration and Management page, click Configure NetBIOS. The Configure NetBIOS page appears. For help opening the Configuration and Management page, see “To open the Web browser interface” earlier in this chapter.

Configure NetBIOS Page

| XCD EtherWind Wireless Adapter Configure NetBIOS | |
|--|---|
| NETBEUI | <input checked="" type="radio"/> Enable <input type="radio"/> Disable |
| NETBIOS/IP | <input checked="" type="radio"/> Enable <input type="radio"/> Disable |
| Enabled Services | BINARY P1 |
| Computer Name | XCD_0B7338 |
| Domain Name | INTERMEC |
| WINS Server Method | AUTO |
| Primary WINS Server IP Address | 10.10.1.5 |
| Secondary WINS Server IP Address | 0.0.0.0 |
| <input type="button" value="Reset"/> <input type="button" value="Submit"/> | |

2. In the NETBEUI row, select Enable to enable communication over the LLC protocol.
3. In the NETBIOS/IP row, select Enable to enable communication over the Internet protocol.
4. In the Enabled Services row, click the displayed port to configure the services for that port. For help, see “Configuring Port Services” later in this chapter.
5. Read the name of the EasyLAN Wireless from the Computer Name row.
6. In the Domain Name row, enter the name of the domain that contains the PCs that will print to this printer.
7. In the WINS Server Method row, select the server method:
 - Set to Auto to use DHCP to set the primary and secondary WINS server IP addresses. To use DHCP, you must set the boot method in the Configure TCP/IP page to either Auto or DHCP.
 - Set to Static to always use the values you enter in the Primary WINS Server IP Address row and Secondary WINS Server IP Address row. To disable WINS registration, select Static and set the primary and secondary WINS server IP addresses to 0.0.0.0.
8. In the Primary WINS Server IP Address row, enter the IP address for the primary WINS server.

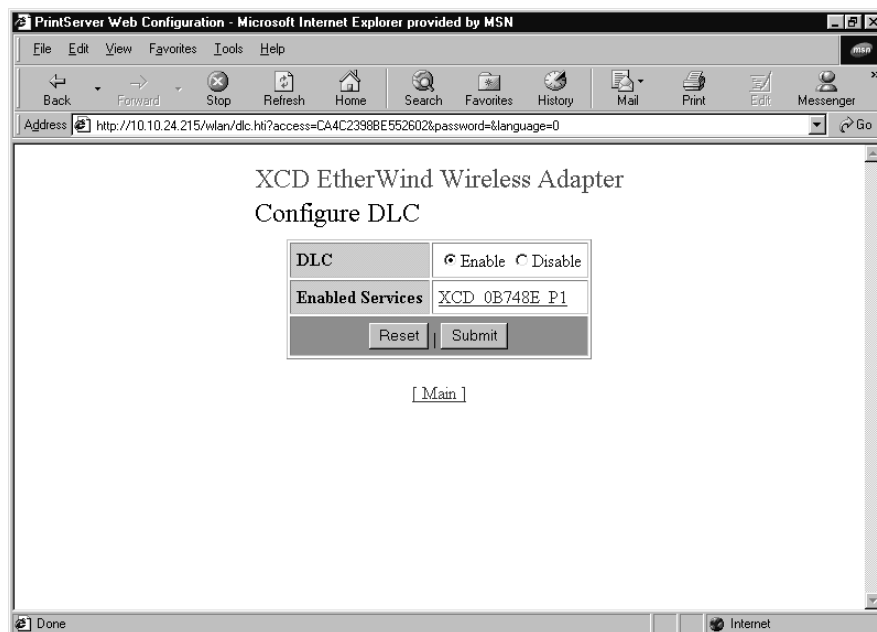
9. In the Secondary WINS Server IP Address row, enter the IP address for the optional secondary WINS server.
10. Click Submit. A page appears letting you know that your changes were successful.
11. Click OK to return to the Configuration and Management page.

Configuring the DLC Parameters

Use the Web browser interface to configure the DLC parameters.

To configure the DLC parameters

1. From the Configuration and Management page, click Configure DLC. The Configure DLC page appears. For help opening the Configuration and Management page, see “To open the Web browser interface” earlier in this chapter.



2. In the DLC row, select Enable or Disable.
3. In the Enabled Services row, click the port you want to configure services for. For help, see “Configuring Port Services” earlier in this chapter.
4. Click Submit. A page appears letting you know that your changes were successful.
5. Click OK to return to the Configuration and Management page.

Configuring for UNIX

The EasyLAN Wireless appears to the network as a UNIX host computer with a unique IP address running the line printer daemon (lpd) protocol. As a result, any host computer that supports the Berkeley remote-LPR command can spool jobs to the EasyLAN Wireless without the need for any special software on the host computer.



Note: Before you configure a UNIX print queue, the EasyLAN Wireless must have a valid IP address.

Configuring for a Berkeley UNIX Host

Berkeley UNIX host computers include Linux, Digital Equipment Corporation Digital UNIX, OSF/1, and ULTRIX; Compaq Tru64 UNIX; SunOS (not Solaris), SCO UNIX; and many others. Sun Solaris, HP/UX, and IBM AIX users should skip to the appropriate sections later in this chapter.



Note: Do not use the Linux X-Windows graphical user interface printer configuration utility because it does not work with the EasyLAN Wireless. Instead, Linux users should follow the configuration steps listed in this section.



Note: SCO UNIX users should use the `ripconf` command to create a printer and automatically configure the `/etc/printcap` file (you still need to edit the `/etc/hosts` file). Enter the EasyLAN Wireless service name (`XCD_XXXXXX_P1` where `XXXXXX` is the last six digits of the MAC address) as the name of the printer (refer to the EasyLAN Wireless test label for the exact name of this service), and enter the name of the EasyLAN Wireless that you assigned in the `/etc/hosts` file as the remote host name. Note that because this name must be unique for each printer, we recommend using the `XCD_XXXXXX_P1` service instead of the normal `BINARY_P1` service.

To configure for a Berkeley UNIX host

1. Edit the `/etc/hosts` file (or equivalent local host table). For example:

```
192.189.207.33  xcdprinter
```

2. Edit the `printcap` file. For example:

```
LabelPrinter:\
:lp=\
:rm=XCD:\
:rp=BINARY_P1:\
:sd=/usr/spool/LabelPrinter:
```

where:

LabelPrinter is the queue name.

XCD matches the name in the hosts file.

BINARY_P1 is the EasyLAN Wireless service name. Use TEXT_P1 instead of BINARY_P1 for text files.

sd is the spool directory.

3. Create the spool directory. The lpd spool directory is usually located in the /usr/spool directory. To create a new spool directory, use the mkdir command. For example:

```
mkdir /usr/spool/lpd/LabelPrinter
```

4. Print using the standard lpr command:

```
lpr -PLabelPrinter filename
```

5. For AT&T based UNIX systems, such as SCO, use the standard lp command:

```
lp -dLabelPrinter filename
```

Configuring for Sun Solaris

To use an EasyLAN Wireless with Sun Solaris, first use the Host Manager in the Admintool utility to add the EasyLAN Wireless IP address and name to the /etc/hosts file.

To use the Host Manager to add the EasyLAN Wireless IP address

1. Open Host Manager in the Admintool utility. For help, see the documentation for your Sun Solaris system.
2. Click None – Use /etc files on host.
3. Click Apply.
4. Click Edit, and then click Add Host.
5. Enter the EasyLAN Wireless name as the Host Name (this name is anything you want, but should not have an underscore (_) character in it).
6. Enter the IP address and MAC address of the EasyLAN Wireless (the MAC address has the format aa:bb:cc:dd:ee:ff).
7. Click Add.
8. Close the Host Manager windows. Now you are ready to use the Printer Manager in the Admintool utility.

To use the Printer Manager

1. Open the Printer Manager under Open Windows in the Admintool utility. For help, see the documentation for your Sun Solaris system.
2. Select Edit.
3. Select Add.
4. Select Add Access to Remote Printer.
5. At the PrinterName prompt, type any desired name for the print queue.
6. At the Printer Server prompt, type
`name\!servicename`
 where:
`name` matches the EasyLAN Wireless name as entered in the hosts table.
`servicename` is the print service name. For binary graphics files, use the service BINARY_P1; for text files, use the service TEXT_P1.
7. Make sure that the Print Server OS is set to BSD (this is the default setting).
8. Select Add.
9. To print, use the standard lp command:
`lp -dLabelPrinter filename`



Note: We recommend using the /etc/hosts file for the printer name rather than NIS or other name services.

Due to a bug in the Sun lpd implementation on Solaris 2.4 and earlier releases, you may encounter problems printing very long print jobs. The workaround is to configure the EasyLAN Wireless as an HP JetDirect card using the HP JetAdmin for UNIX software.

Solaris print queues can also be configured from the UNIX shell using the lpadmin command.

Configuring for HP/UX

1. For HP/UX 10.x, open the sam program to configure the EasyLAN Wireless.
2. When you get a list of options, select Printers and Plotters.
3. Select LP Spooler.
4. Select Printers and Plotters.
5. Select Actions, and then select Add Remote Printer/Plotter.
6. Enter any name as the Printer Name (the Printer Name is the name of the print queue).

7. Enter the IP address of the EasyLAN Wireless as the Remote System Name.
8. Enter the desired EasyLAN Wireless service name (BINARY_P1 for binary files or TEXT_P1 for text files) as the Remote Printer Name.
9. Check the box next to Remote Printer is on BSD System.
10. If you choose to, accept the default values for the remaining items.
11. Click OK to configure the printer.
12. Print using the `lp -d` command with the EasyLAN Wireless name.



Note: The configuration for HP Distributed Print Services and for earlier versions of HP/UX is slightly different.

You can also configure the EasyLAN Wireless as a JetDirect card using HP/UX. To do this, you need the HP UNIX Host Printing Software (part of HP's JetAdmin for UNIX).

Configuring for IBM AIX

1. Using the SMIT program, enter `smit` and select Devices.
2. Select Printer/plotter.
3. Select Manage remote printer subsystem.
4. Select Client services.
5. Select Remote printer queues.
6. Select Add a remote queue.
7. Enter the following remote queue settings:
 - Name of queue to add (user selectable)
 - Activate the queue (Yes)
 - Destination host (EasyLAN Wireless IP address; or if you have configured the `/etc/hosts` file, use the name of the EasyLAN Wireless that you specified in that file)
 - Name of queue on remote printer (BINARY_P1 for binary files or TEXT_P1 for text files)
 - Name of device to add (user selectable; for example, `lp0`)
8. Print using the `lp -d` command.



Note: The configuration for earlier versions of AIX is slightly different.

You can also configure the EasyLAN Wireless as a JetDirect card using AIX. To do this, refer to your AIX documentation.

Configuring for Other Systems

You can use the EasyLAN Wireless with any computer system that supports either the lpr/lpd protocol or the HP JetDirect card (the EasyLAN Wireless parallel port is port 9100 while the serial port is port 9101). Refer to your system's documentation for information on configuring lpr/lpd or JetDirect print queues.

Managing the EasyLAN Wireless

This chapter explains how to manage the EasyLAN Wireless using the Web browser interface and EasyLAN Wireless Admin utility.

Rebooting the EasyLAN Wireless

Use either the Web browser interface or the EasyLAN Wireless Admin utility to reboot the EasyLAN Wireless.



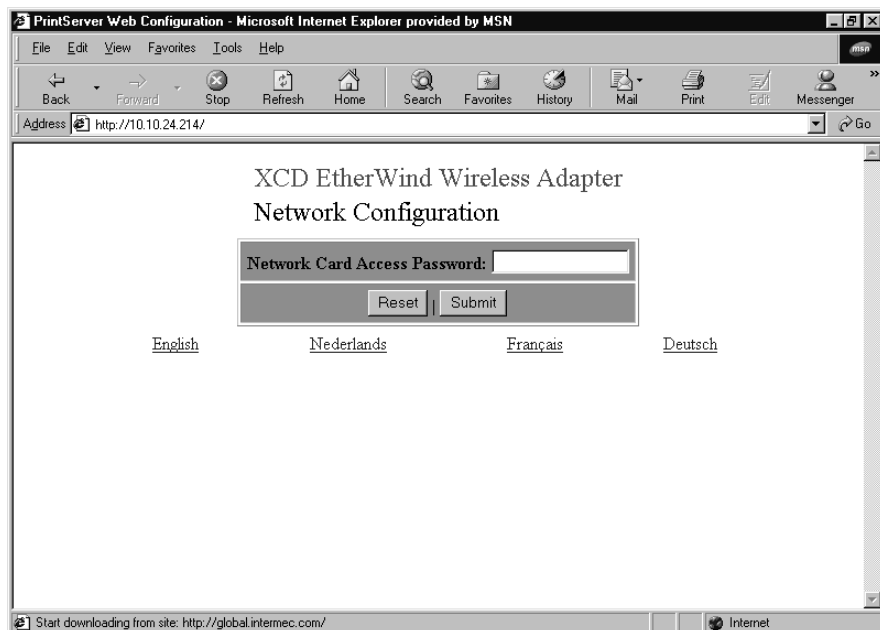
Note: Only the EasyLAN Wireless reboots, not the entire printer.

Using the Web Browser Interface

Before you can use the Web browser interface, you need to open it.

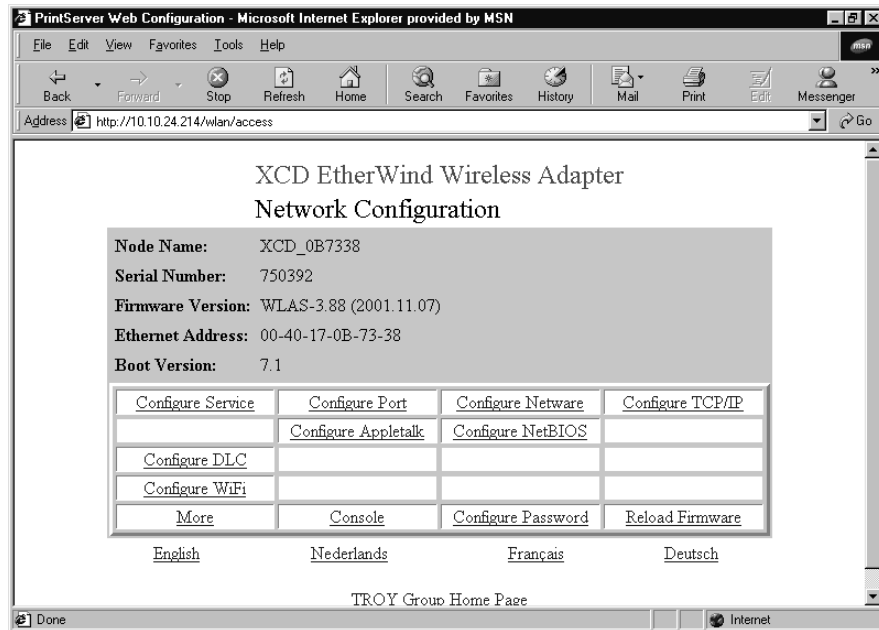
To open the Web browser interface

1. Start your Web browser.
2. In the Address (Internet Explorer) or Go to (Netscape) line, enter the IP address for the EasyLAN Wireless, and press **Enter**. The following page appears.



3. In the Print Server Access Password field, enter the password. The default password is access.
4. Click Submit. The Configuration and Management page appears.

Configuration and Management Page



You are now ready to manage the EasyLAN Wireless.

To reboot the EasyLAN Wireless

1. From the Configuration and Management page, click Reset Server. The Reset Server page appears. For help opening the Configuration and Management page, see "To open the Web browser interface" earlier in this section.

Reset Server Page



2. Click Submit. A screen appears telling you that the EasyLAN Wireless has been reset.
3. Click OK to return to the Configuration and Management screen.

Using the EasyLAN Wireless Admin Utility

Before you can use the EasyLAN Wireless Admin utility, you need to install it and then search for the EasyLAN Wireless.

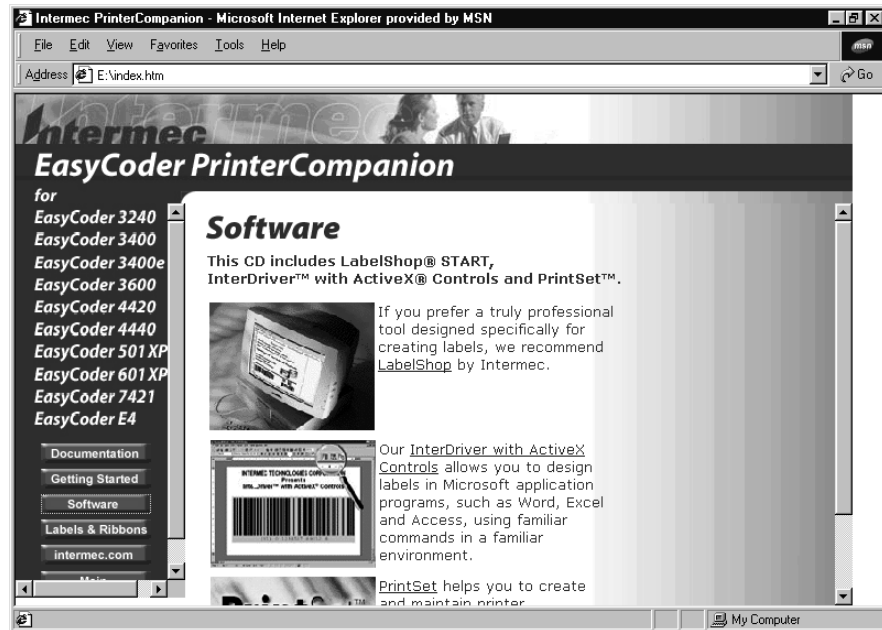
To install the WPAAdmin utility

1. Place the printer CD-ROM in your PC's CD-ROM drive. The following page appears.



2. Click Software in the left frame. The Software page appears.

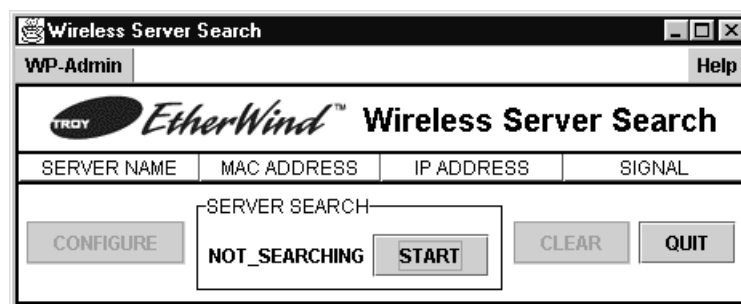
Printer Companion CD Software Page



3. Scroll down to EasyLAN Wireless Admin utility, and then click the picture or the link for the EasyLAN Wireless Admin utility page.
4. Click Install EasyLAN Wireless Admin utility.
5. Follow the instructions for installing the EasyLAN Wireless Admin utility.
6. When the installation is complete, close the CD-ROM screen.

To search for the EasyLAN Wireless

1. Open the EasyLAN Wireless Admin utility by selecting it from the Start menu (under Programs, Intermec then EasyLAN Wireless Admin) or by double-clicking a short cut on your desktop. The Search dialog box appears.



2. In the Server Search box, click Start. The name of the EasyLAN Wireless, MAC address, IP address, and signal appear for all of the EasyLAN Wireless found.

If the EasyLAN Wireless Admin utility does not find your EasyLAN Wireless right away, click Stop and make sure that the EasyLAN Wireless is on and configured properly. For help with initially configuring the EasyLAN Wireless, see “Setting Radio and Network Communications” in Chapter 1.



Note: If the wireless signal is less than 50% on the Search screen, printing performance could be affected. To improve the signal strength, try moving the EasyLAN Wireless closer to the computer or access point and away from other radio devices, such as Bluetooth™ wireless devices, microwave ovens, or cordless phones.

You are now ready to manage the EasyLAN Wireless.

To reboot the EasyLAN Wireless

1. Open the EasyLAN Wireless Admin utility and search for the EasyLAN Wireless on your network. For help, see the previous section, “Searching for EasyLAN Wireless on Your Network.”
2. Select an EasyLAN Wireless, open the Set Up menu, and select Reboot. The Reboot Server Password dialog box appears.



3. Enter the password for the EasyLAN Wireless and click OK. A message box appears telling you that the EasyLAN Wireless is rebooting. When the EasyLAN Wireless has finished rebooting, the Search screen appears. **Is any information lost or settings changed when option reboots?**

Setting the EasyLAN Wireless to Factory Defaults

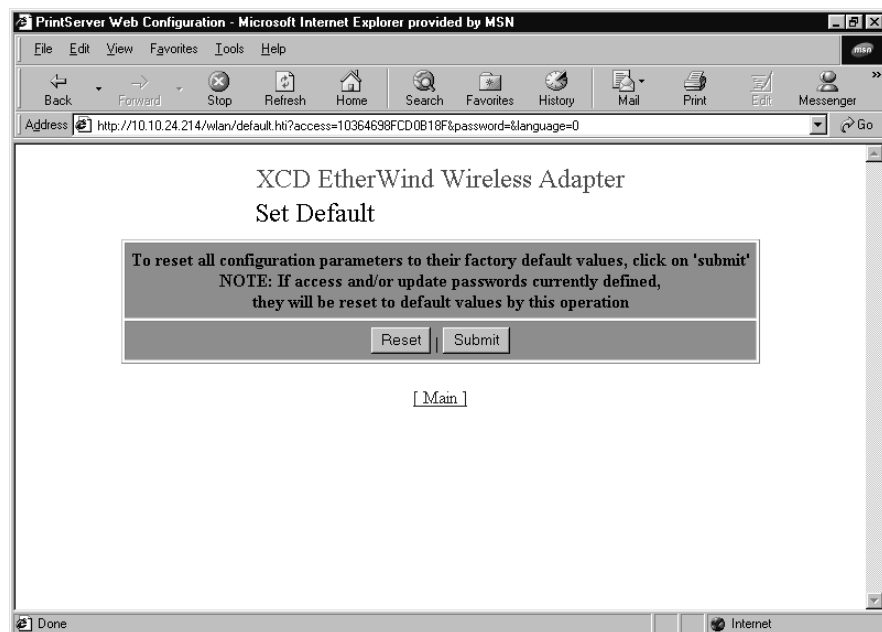
Use the Web browser interface, the EasyLAN Wireless Admin utility, or the test switch to set the EasyLAN Wireless to factory defaults. This section explains how to use the Web browser interface and the EasyLAN Wireless Admin utility. For help using the test switch, see “Understanding the EasyLAN Wireless” in Chapter 1.



Note: Only the EasyLAN Wireless is set to factory defaults, not the entire printer.

Using the Web Browser Interface

1. From the Configuration and Management page, click Set Default. The Set Default page appears. For help opening the Configuration and Management page, see “To open the Web browser interface” earlier in this chapter.



2. Click Submit. A screen appears telling you that the EasyLAN Wireless is set to factory defaults.



Note: The access and update passwords have been set to the factory default of access.

3. Click Main to return to the Configuration and Management screen.

Using the EasyLAN Wireless Admin Utility



Note: The password for the EasyLAN Wireless is set to access when the EasyLAN Wireless is set to factory defaults.

1. Open the EasyLAN Wireless Admin utility and search for the EasyLAN Wireless on your network. For help, see “To search for the EasyLAN Wireless” earlier in this chapter.
2. Select an EasyLAN Wireless, open the Set Up menu, and select Reset. The Reset Defaults Password dialog box appears.



3. Enter the password for the EasyLAN Wireless and click OK. A message box appears telling you that the EasyLAN Wireless is being set to factory defaults. When the EasyLAN Wireless is set to factory defaults, the Search screen appears.

Printing a Test Label

Use the Web browser interface, the EasyLAN Wireless Admin utility, or the test switch to print a test label. This section explains how to use the Web browser interface and the EasyLAN Wireless Admin utility. For help using the test switch, see “Understanding the EasyLAN Wireless” in Chapter 1.

Using the Web Browser Interface

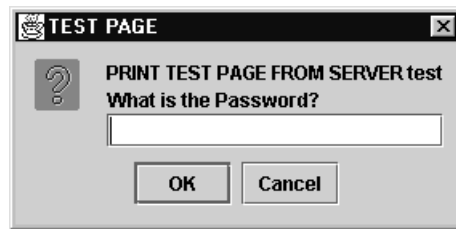


Note: The test label is sent to the printer when you click Print Test Label.

1. From the Configuration and Management page, click Print Test Label. A screen appears telling you that the test label has been sent to the printer. For help opening the Configuration and Management page, see “To open the Web browser interface” earlier in this chapter.
2. Click Main to return to the Configuration and Management screen.

Using the EasyLAN Wireless Admin Utility

1. Open the EasyLAN Wireless Admin utility and search for the EasyLAN Wireless on your network. For help, see “To search for the EasyLAN Wireless” earlier in this chapter.
2. Select an EasyLAN Wireless, open the Set Up menu, and select Test Page. The Print Test Page Password dialog box appears.



3. Enter the password for the EasyLAN Wireless and click OK. A message box appears telling you that the test label has been printed.
4. Click OK. The Search screen appears.

Reloading Firmware

Use the Web browser interface to reload firmware.

To reload firmware

1. From the Configuration and Management page, click Reload Firmware. The Reload Firmware page appears. For help opening the Configuration and Management page, see “To open the Web browser interface” earlier in this chapter.

Reload Firmware Page

The screenshot shows a web browser window titled "PrintServer Web Configuration - Microsoft Internet Explorer provided by MSN". The address bar shows the URL "http://10.10.24.214/wlan/reload.htm?access=10364698FCD0B18F&password=&language=0". The main content area is titled "XCD EtherWind Wireless Adapter Reload Firmware". It contains a form with the following fields:

| | |
|---------------------|---|
| Reload on submit | <input type="radio"/> Enable <input checked="" type="radio"/> Disable |
| Firmware File Name | <input type="text" value="WLAS.bin"/> |
| TFTP Server Address | <input type="text" value="0.0.0.0"/> |
| Netware Server Name | <input type="text" value="Tahoe"/> |

Below the form are two buttons: "Reset" and "Submit". At the bottom of the form area, there are links: "[Main | Help]".

2. In the Reload on submit row, choose Enable to reload the firmware when you click submit. If you choose Disable, the firmware is reloaded when you reboot the EasyLAN Wireless (**Guess on my part**). For help, see "Rebooting the EasyLAN Wireless" earlier in this chapter.
3. In the Firmware File Name row, enter the file name for the firmware. **Do you need to enter path information?**
4. In the TFTP Server Address row, enter the IP address for the TFTP server in the form *n.n.n.n* where *n* is from 0 to 255. **Is the firmware supposed to be on the TFTP server?**
5. In the Netware Server Name row, enter the name of the Netware server. **Why is this information needed?**
6. Click Submit. If you enabled reload on submit, the firmware is sent to the EasyLAN Wireless, and a message page appears letting you know the reload was successful.

If you disabled reload on submit, a message page appears letting you know that the firmware is ready to load.
7. Click OK to return to the Configuration and Management page. If you need to reset the EasyLAN Wireless, see "Resetting the EasyLAN Wireless" later in this chapter.

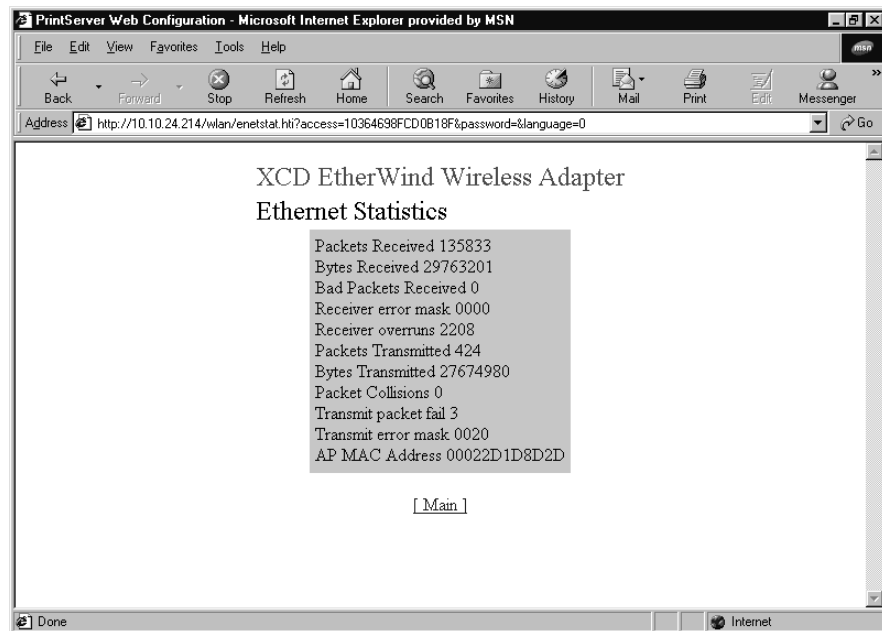
Viewing Ethernet Statistics

This Web browser interface page provides the following information:

- Packets received
- Bytes received
- Bad Packets received
- Receiver overruns
- Packets transmitted
- Bytes transmitted
- Packet collisions
- Transmit packet fail
- Transmit error mask
- AP MAC address

To view Ethernet statistics

1. From the Configuration and Management page, click Ethernet Statistics. The Ethernet Statistics page appears. For help opening the Configuration and Management page, see “To open the Web browser interface” earlier in this chapter.



2. Click Main to return to the Configuration and Management screen.

Other EasyLAN Wireless Admin Utility Functions

You can also use the EasyLAN Wireless Admin tool to

- configure IP subnets.
- add servers.
- load files.
- save files.

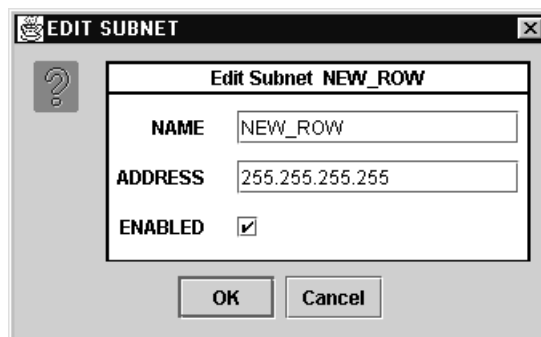
Configuring IP Subnets

1. Open the EasyLAN Wireless Admin utility and search for the EasyLAN Wireless on your network. For help, see “To search for the EasyLAN Wireless” earlier in this chapter.
2. Open the Set Up menu and select IP Subnet. The IP Subnets dialog box appears.



3. To change a subnet, select the subnet and click Edit. The Edit Subnet dialog box appears.

To add a subnet, click New. The Edit Subnet dialog box appears.



4. In the Name field, enter the name of the subnet.

5. In the Address field, enter the IP address of the subnet in the form *n.n.n.n* where *n* is from 0 to 255.
6. Check or clear the Enabled check box.
7. Click OK to accept your changes and return to the IP Subnet dialog box. Or click Cancel to reject your changes and return to the IP Subnet dialog box.
8. To delete a subnet, select the subnet and click Delete. The subnet disappears from the IP Subnet dialog box.
9. To print a list of subnets, click Print, select the print options you want, and click OK.
10. When you have finished configuring the subnets, click Done. The Search screen appears.

Adding an EasyLAN Wireless

If you know you will be bringing an EasyLAN Wireless online, you may want to add it to the EasyLAN Wireless Admin utility to help the utility find it when it comes online. You need the following information to add an EasyLAN Wireless:

- The name of the EasyLAN Wireless. The default name is XCD_XXXXXX where XXXXXX is the last six digits of the MAC address.
- The MAC address of the EasyLAN Wireless.
- The IP address of the EasyLAN Wireless.
- The subnet that the EasyLAN Wireless communicates in.

To add an EasyLAN Wireless to the EasyLAN Wireless Admin utility

1. Open the EasyLAN Wireless Admin utility.
2. Open the Set Up menu and select Add. The Add Server dialog box appears.

Add Server

WP-Admin

EtherWind™ Add Server

REQUIRED FIELD: MAC ADDRESS

SERVER NAME

MAC ADDRESS

IP ADDRESS

SUBNET

OK CANCEL APPLY

3. In the Server Name field, enter the name of the EasyLAN Wireless.
4. In the MAC Address field, enter the MAC address of the EasyLAN Wireless in the form of six hexadecimal values separated by periods.
5. In the IP Address field, enter the IP address of the EasyLAN Wireless in the form $n.n.n.n$ where n is from 0 to 255.
6. In the Subnet field, enter the subnet that the EasyLAN Wireless communicates in.
7. Click OK to accept your changes and return to the Search screen. The EasyLAN Wireless information appears in the Search screen.

Click Cancel to reject your changes, not add a server, and return to the Search screen.

Loading Files

You can load DAT files to somewhere for some reason that isn't clear to me.

To load files

1. Open the EasyLAN Wireless Admin utility.
2. Open the Set Up menu and select Load. The Load File dialog box appears.



3. Enter the name of the file you want to load and click OK. When the file is finished loading, the Search screen appears. **Do you need to put in path information?**

Saving Files

You can save DAT files for some reason that isn't clear to me.

To save files

1. Open the EasyLAN Wireless Admin utility.
2. Open the Set Up menu and select Save. The Save File dialog box appears.

Save File Dialog Box



3. Enter the name of the file you want to save and click OK. When the file is finished saving, the Search screen appears. **Do you need to put in path information?**

4

Using the Port Monitor

This chapter explains how to use the XXX port monitor with the EasyLAN Wireless.

Installing the Port Monitor

The port monitor monitors Windows OS ports

Waiting for information from Lars Enoksson and Göran Reineholm. Sent them email the morning of 3/22/02.

Troubleshooting the EasyLAN Wireless

This chapter describes how to troubleshoot the EasyLAN Wireless.

Troubleshooting Printing Problems

First, check the printer to make sure it is online and has media and ribbon.

If the printer is working fine, test the connection between the printer and the EasyLAN Wireless by pushing the test switch on the back of the printer for less than 5 seconds.



Note: Remember, if a test label does not print, the printer may still be able to print through the EasyLAN Wireless. Set up the printer as you normally would and try printing from an application.

If the test label does not print, try resetting the EasyLAN Wireless to factory defaults by holding the test switch for more than 5 seconds.

Troubleshooting Wireless Configuration Problems

Make sure your computer's wireless adapter or access point is configured properly and note the settings paying special attention to the wireless mode, SSID or network name, WEP or security, and IP address settings so you can configure your EasyLAN Wireless to the same wireless settings.

Make sure you have a good wireless signal from your PC and from the EasyLAN Wireless. Make sure that the EasyLAN Wireless is within range (90 meters or 300 feet), and that it is away from metal objects and other devices with radio signals (such as Bluetooth radios, cordless phones, and microwave ovens).

Make sure your computer is set to infrastructure mode if you are connecting through an access point or ad-hoc (802.11) if you are connecting to the EasyLAN Wireless without an access point. See the documentation for your wireless adapter for details.

If you are using WEP (Wired Equivalent Privacy) encryption or security on your wireless network, you need to temporarily disable WEP on your PC in order to configure the EasyLAN Wireless. If you are using an access point with WEP enabled and it does not allow non-WEP clients to communicate with other non-WEP clients, then you need to temporarily change the wireless mode of your computer to ad-hoc (802.11) mode.



Note: If no computers on your network can be set to ad-hoc mode, you need to temporarily disable WEP on your access point. When you are done configuring the EasyLAN Wireless, you can re-enable WEP on your computer and change the wireless mode back if necessary.

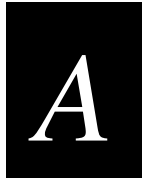
If you want to use WEP encryption or password protect your wireless network, and your wireless adapter or access point normally uses a password or passphrase instead of WEP, it should allow you to enter 0x followed by a 10 digit (for 40-bit or 64-bit WEP) or 26 digit (for 128-bit WEP) key in hexadecimal format (0 to 9 or A to F).

If you are experiencing slow performance or are having intermittent problems connecting, try changing the RF channel of your wireless network. For help configuring the RF channel using the Web browser interface or the EasyLAN Wireless Admin utility, see Chapter 2, "Configuring the EasyLAN Wireless." For help changing the RF channel on your wireless adapter or access point, see the documentation for those products. You should change it to at least three channels lower or higher than any other wireless networks within range.

Troubleshooting Network Configuration

If you are using TCP/IP, make sure that your computer and the EasyLAN Wireless are on the same IP segment or can reach each other with a PING command from the host. The IP address you assign to the EasyLAN Wireless must be on the same logical network as your host computers (for example, if your computer has an IP address of 192.189.207.3, the EasyLAN Wireless should have an IP address of 192.189.207.x where x is an integer between 1 and 254), or you must properly configure your router address to work with the EasyLAN Wireless.

If your EasyLAN Wireless is set to Auto or DHCP for obtaining an IP address, it is possible the EasyLAN Wireless IP address can change. Either configure your DHCP server to give the EasyLAN Wireless a permanent lease or configure the EasyLAN Wireless to be on a Static address outside the scope of DHCP addresses.



Console Commands

This appendix explains how to send the console commands and list the commands.

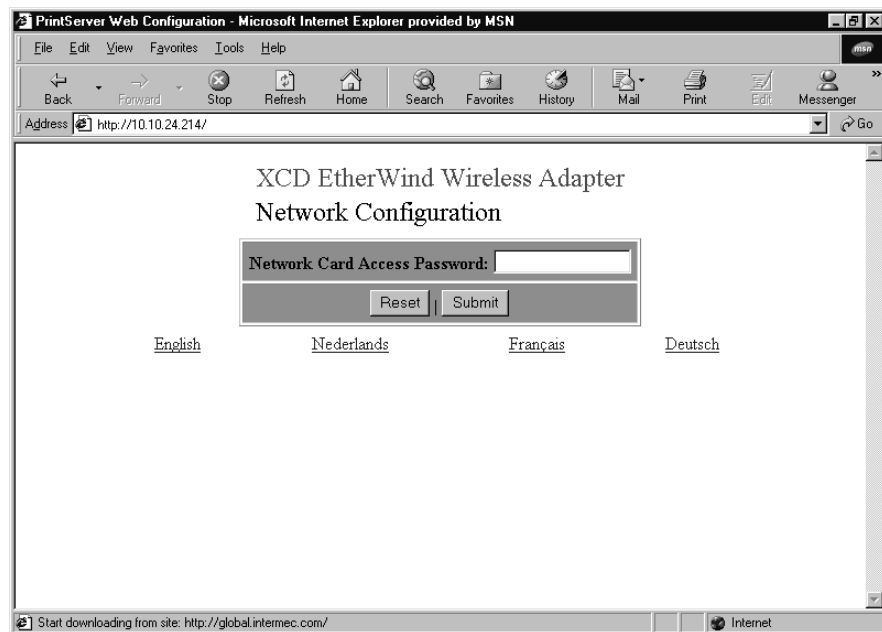
Sending the Console Commands

Use either HyperTerminal or the Web browser interface to send the console commands to the EasyLAN Wireless. The following procedure explains how to use the Web browser interface. For help using HyperTerminal, see the documentation for HyperTerminal.

Before you can use the Web browser interface, you must open it.

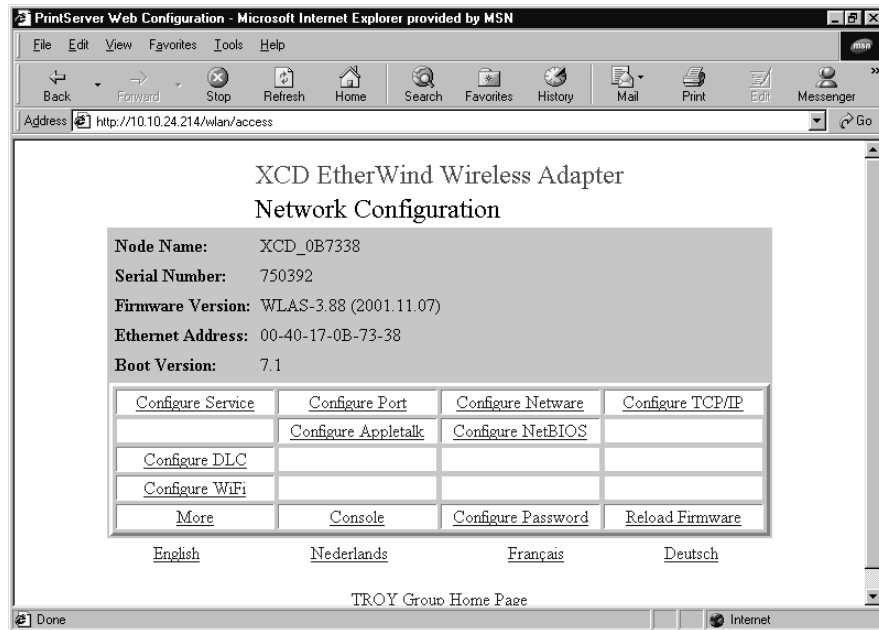
To open the Web browser interface

1. Start your Web browser.
2. In the Address (Internet Explorer) or Go to (Netscape) line, enter the IP address for the EasyLAN Wireless, and press **Enter**. The following page appears.



3. In the Print Server Access Password field, enter the password. The default password is access.
4. Click Submit. The Configuration and Management page appears.

Configuration and Management Page

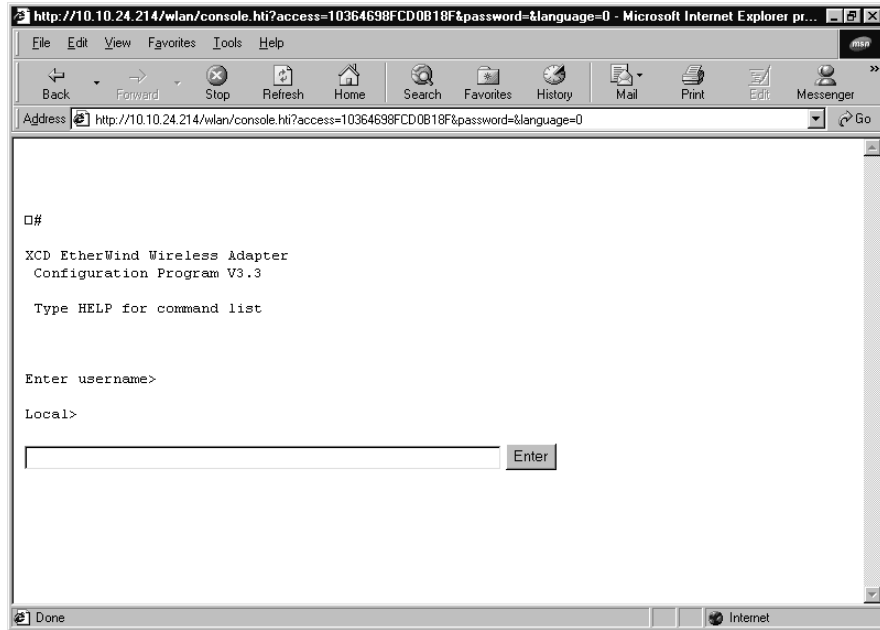


You are now ready to send console commands.

To send the console commands

1. Make sure port S1 is set to Console mode:
 - a. From the Configuration and Management page, click **Configure Port**. The **Configure Port** page appears. For help opening the Configuration and Management page, see "To open the Web browser interface" earlier in this section.
 - b. In the **Mode** row, select **Console**.
 - c. Click **Submit**.
 - d. Return to the Configuration and Management page.
2. From the Configuration and Management page, click **Console**. The **Console** page appears.

Console Page



3. Enter the commands you want to send in the field, and then click Enter.
4. **How do you get out of this screen?**

General Commands

This table lists general commands for configuring and managing the EasyLAN Wireless.

| Command | Description |
|---------------------------------|--|
| cl serve st <i>stringnumber</i> | Removes the specified string number. |
| cl fa | Deletes the fatal error log. |
| cl po p1 job | Clears the current entry in the EasyLAN Wireless internal queue for the parallel port. |
| exit/^d | Exits EasyLAN Wireless console. |
| he | Provides information on available commands |
| in | Resets the EasyLAN Wireless. |
| set default | Sets the EasyLAN Wireless parameters to factory defaults. |
| set port s1 co dis | Disables console mode on port S1. |
| set load dis | Disables the firmware reload after exit. |

General Commands (continued)

| Command | Description |
|--|---|
| set load en | Enables the firmware reload after exit. |
| set load ho <i>name</i> | Sets the node name of the boot host for NetWare firmware load. |
| set load ip <i>n.n.n.n</i> | Sets the IP address of the load host (TCP/IP firmware load). |
| set load so <i>filename</i> | Sets the host filename of the firmware to load. |
| set pa <i>password</i> | Sets the console password. The default password is access. |
| set port p1 ackh <i>status</i> | Enables or disables pACKH on parallel port (for older printers). Where status equals en for enabled or dis for disabled. |
| set port p1 bid <i>status</i> | Enables or disables bidirectional mode on the parallel port. Where status equals en for enabled or dis for disabled. |
| set port p1 dvid <i>status</i> | Enables or disables 1284 device ID queries on the parallel port. Where status equals en for enabled or dis for disabled. |
| set port p1 ecp <i>status</i> | Enables or disables 1284 ECP mode on the parallel port. Where status equals en for enabled or dis for disabled. |
| set port p1 fstb <i>status</i> | Enables or disables fast strobe mode on the parallel port. Where status equals en for enabled or dis for disabled. |
| set port p1 nbuf <i>status</i> | Enables or disables no buffering on parallel port. Where status equals en for enabled or dis for disabled. |
| set pro <i>password</i> | Sets the console protection password to prevent access to set commands. (Use unprotect command to access set commands.) |
| set serve de | Sets the node description string displayed with the show server command. |
| set serve str <i>n "..."</i> | Defines the EasyLAN Wireless BOT/EOT string. |
| set servi <i>servicename protocol status</i> | Enables or disables specified protocol on the specified service. Where status equals en for enabled or dis for disabled. |
| set servi <i>servicename bot nn</i> | Sets the service BOT string to <i>nn</i> . |
| set servi <i>servicename eot nn</i> | Sets the service EOT string to <i>nn</i> . |
| set servi <i>servicename fi nn</i> | Sets the service filter to <i>nn</i> . |
| set servi <i>servicename fms matchnumber</i> | Sets the service with the specified match string number. |
| set servi <i>servicename frs replacenumber</i> | Sets the service with the specified replacement string number. |
| set servi ip <i>servicename status</i> | Enables or disables IP jobs. Where <i>servicename</i> equals the name of the service and <i>status</i> equals en for enabled or dis for disabled. |

General Commands (continued)

| Command | Description |
|---|---|
| set servi <i>servicename</i> na <i>newname</i> | Changes the service name. |
| set servi <i>servicename</i> rec <i>status</i> | Enables or disable receive only mode on the specified service. Where <i>servicename</i> equals the name of the service and <i>status</i> equals en for enabled or dis for disabled. |
| sh fa | Shows the fatal error log. |
| sh fr | Shows the memory available. |
| sh loa | Shows the firmware update parameters. |
| sh po | Shows the port parameters. |
| sh po pl sta | Shows the current port status. |
| sh serve co | Shows the EasyLAN Wireless statistics. |
| sh servi | Shows the service parameters. |
| sh te | Prints the test label. |
| sh ve | Shows the EasyLAN Wireless firmware version. |
| unpro | Allows the system manager to temporarily access set commands when the remote console is in protected mode. The set default command can be used to permanently disable the protected mode. |
| ze | Zeroes statistical counts. |

TCP/IP Commands

Use these commands to configure and manage TCP/IP parameters.

| Command | Description |
|--|--|
| set ip ac <i>status</i> <i>n.n.n.n</i> | Enables or disables specified IP address from accessing the EasyLAN Wireless. Where <i>status</i> equals en for enabled, dis for disabled, or all for enabling all IP addresses and <i>n.n.n.n</i> equals the specific IP address. |
| set ip ad <i>n.n.n.n</i> | Sets the IP address of the EasyLAN Wireless. |
| set ip bo <i>n</i> | Sets the number of BOOTP/RARP tries. |
| set ip <i>status</i> | Enables or disables IP processing. Where <i>status</i> equals en for enabled or dis for disabled. |
| set ip meth stat | Sets IP to static address so that the EasyLAN Wireless will not look for a DHCP address. |

TCP/IP Commands (continued)

| Command | Description |
|---|--|
| set ip ra <i>nn</i> | Sets the procedure used by the EasyLAN Wireless when obtaining its IP address. By default the IP address is set along with a default subnet mask and a router address that is the same as the address of the load host. By setting <i>nn</i> to 1, the subnet mask is not set. If <i>nn</i> is set to 2, the router address is not set. If <i>nn</i> is set to 3, neither the subnet mask nor the router address is set. |
| set ip ro <i>n.n.n.n</i> | Sets the default router address. |
| set ip su <i>n.n.n.n</i> | Sets the subnet mask. |
| set ip ti <i>n</i> | Sets the inactivity timeout in minutes. |
| set servi <i>servicename</i> ip <i>status</i> | Enables or disables TCP/IP jobs on specified EasyLAN Wireless. Where <i>servicename</i> equals the name of the service and <i>status</i> equals en for enabled or dis for disabled. |
| set servi <i>servicename</i> tcp <i>nn</i> | Sets the TCP port number (>1023) on the specified service. |
| sh ip | Shows LPD/TCP/TELNET parameters. |
| sh ip ac | Shows IP addresses that are allowed to access the EasyLAN Wireless. |

NetWare Commands

Use these commands to configure and manage NetWare parameters.

| Command | Description |
|--|--|
| cl netw se <i>server</i> | Removes the specified NetWare file server from the EasyLAN Wireless access list. |
| set netw ad <i>n</i> | Sets the advertising frequency of the EasyLAN Wireless. |
| set netw <i>status</i> | Enables or disables the NetWare protocol on the EasyLAN Wireless. Where <i>status</i> equals en for enabled or dis for disabled. |
| set netw fr <i>type</i> | Sets the NetWare frame type. Where <i>type</i> equals 802.2, 802.3, eth for Ethernet II, al for all, au for auto, or sna for SNAP. |
| set netw ne <i>n</i> | Sets the NetWare internal network number. |
| set netw np <i>pserver n</i> on <i>service</i> | Set NPrinter mode on the specified service. |
| set netw pa <i>password</i> | Sets the EasyLAN Wireless login password for the file server. |
| set netw po <i>n</i> | Sets the queue polling time in seconds. |

NetWare Commands (continued)

| Command | Description |
|---|---|
| set netw qs <i>fileservice</i> on <i>service</i> | Sets queue server mode on the specified service. |
| set netw re | Rescans the file servers for new queues. |
| set netw <i>name</i> se <i>status</i> | Enables or disables the file server. Where <i>name</i> equals the name of the file server and <i>status</i> equals en for enabled or dis for disabled. |
| set servi <i>servicename</i> net <i>status</i> | Enables or disables NetWare jobs on the specified service. Where <i>servicename</i> equals the name of the service and <i>status</i> equals en for enabled or dis for disabled. |
| sh netw | Shows the NetWare parameters. |
| set servi <i>servicename</i> con <i>string</i> | Sets NDS context. |
| set servi <i>servicename</i> tree <i>string</i> | Sets NDS TREE. |

Radio Commands

Use these commands to configure and manage radio parameters.

| Command | Description |
|------------------------------|---|
| set en mo <i>mode</i> | Sets the 802.11b wireless mode. Where <i>mode</i> equals in for infrastructure, ad for ad-hoc, or ps for pseudo ad-hoc. |
| set en ssid <i>mynetwork</i> | Sets the 802.11b wireless SSID, sometimes referred to as network name. Use double-quotes if you are using a space character in the SSID. |
| set en wep <i>encryption</i> | Sets the wired equivalent privacy encryption level. Where <i>encryption</i> equals dis for disabled, 64 for 64-bit encryption, or 128 for 128-bit encryption. |
| set en key# <i>number</i> | Sets which WEP key number is to be used. Where <i>number</i> is a value from 1 to 4. The default value is 1. |
| set en keyval <i>wepkey</i> | Set the 10-digit (for 64-bit encryption) or 26-digit (for 128-bit encryption) WEP key value. This key must be hexadecimal values. |
| set en ch <i>nn</i> | Sets the 802.11b wireless channel to be used. |
| set en sp <i>speed</i> | Sets the 802.11b wireless speed in Mbps. Where <i>speed</i> equals 1, 2, 5 for 5.5, or 11. |

