



i n v e n t

hp jetdirect
610n/600n (EIO)

**hardware
installation
guide**

Hardware Installation Guide

**HP Jetdirect 610N/600N
Print Server**

©Copyright Hewlett-Packard Company 2001. All rights reserved.

Reproduction, adaptation or translation without prior written permission is prohibited, except as allowed under the copyright laws.

Publication number

5969-8504

First Edition February 2001

Applicable Products:

- J3110A (600N)
- J3111A (600N)
- J4167A (610N)
- J4169A (610N)

Trademark Credits

Microsoft®, MS-DOS®, Windows®, Microsoft Windows NT® are trademarks or U.S. registered trademarks of Microsoft Corporation. NetWare® and Novell® are registered trademarks of Novell Corporation. IBM®, AIX® are registered trademarks of International Business Machines Corp. Ethernet is a registered trademark of Xerox Corporation. PostScript® is a trademark of Adobe Systems, Incorporated. UNIX® is a registered trademark of the Open Group.

Disclaimer

The information contained in this document is subject to change without notice.

HEWLETT-PACKARD COMPANY MAKES NO WARRANTY OF ANY KIND WITH REGARD TO THIS MATERIAL, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

Hewlett-Packard shall not be liable for errors contained herein or for incidental or consequential damages in connection with the furnishing, performance or use of this material.

Customer Support

For assistance, visit HP Customer Care Online at:

http://www.hp.com/support/net_printing

or refer to HP Customer Care By Phone described in the *Quick Start Guide* supplied with this product.

Warranty and Service

For product warranty and service information, refer to the Quick Start Guide supplied with this product.

A copy of the specific warranty terms applicable to your HP product and replacement parts can be obtained from your HP Sales and Service Office or Authorized dealer.

Safety Considerations

Prior to the installation and use of this product, review all safety markings and instructions.

	Instruction Manual Symbol. If the product is marked with this symbol, refer to the product manuals to protect the product from damage.
WARNING	Denotes a hazard that can cause injury
CAUTION	Denotes a hazard that can damage equipment or data.

Do not proceed beyond a WARNING or Caution notice until you have understood the hazard and have taken appropriate steps.

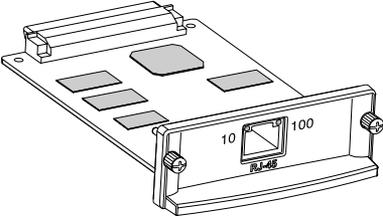
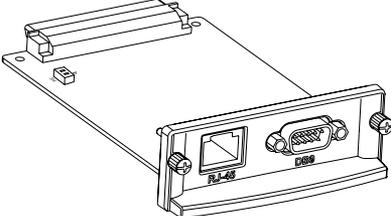
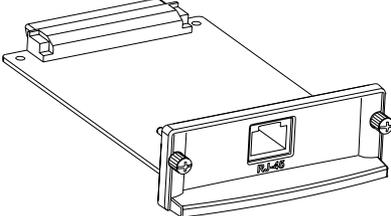
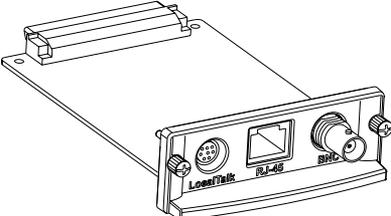
Grounding. This product is installed in a safety class 1 product that has a protective earthing terminal. There must be an uninterrupted safety earth ground from the main power source to the product's input wiring terminals, power cord or supplied power cord set. Whenever it is likely that the protection has been impaired, disconnect the power cord until the ground has been restored.

Hewlett-Packard Company
8000 Foothills Boulevard
Roseville, California 95747-6588

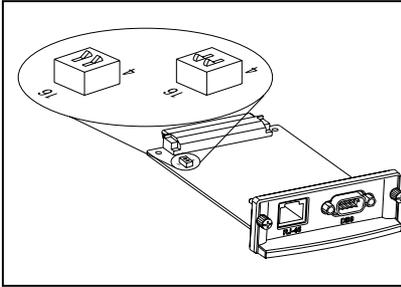
Quick Installation

Note See [Chapter 2](#) for detailed information.

1. Identify Your HP Jetdirect 610N/600N Internal Print Server

 <p>A line drawing of an HP J4169A network interface card. It features a long multi-pin connector on the left side. The front panel has an RJ-45 port labeled 'RJ-45' with '10' and '100' markings on either side, and a small circular LED indicator on the right.</p>	<p>HP J4169A (610N) for Fast Ethernet (10/100Base-TX) networks Provides an RJ-45 connector (unshielded twisted-pair cable). For 100Base-TX, use Category 5 cable.</p>
 <p>A line drawing of an HP J4167A network interface card. It has a multi-pin connector on the left. The front panel includes an RJ-45 port labeled 'RJ-45' and a DB-9 connector labeled 'DB9'.</p>	<p>HP J4167A (610N) for Token Ring (IEEE 802.5) networks Provides an RJ-45 connector (unshielded twisted-pair cable) and DB-9 connector (type 1, 2, or 6 shielded twisted-pair cable)</p>
 <p>A line drawing of an HP J3110A network interface card. It features a multi-pin connector on the left. The front panel has an RJ-45 port labeled 'RJ-45' and a small circular LED indicator on the right.</p>	<p>HP J3110A (600N) for Ethernet (10Base-T) networks Provides an RJ-45 connector (unshielded twisted-pair cable)</p>
 <p>A line drawing of an HP J3111A network interface card. It has a multi-pin connector on the left. The front panel includes an RJ-45 port labeled 'RJ-45', a BNC connector labeled 'BNC', and a Mini-DIN 8 connector labeled 'LocalTalk'.</p>	<p>HP J3111A (600N) for Ethernet (10Base-T, 10Base-2) and LocalTalk networks Provides an RJ-45 connector (unshielded twisted-pair cable), a BNC connector (coaxial ThinLAN cable) and Mini-DIN 8 connector (LocalTalk connector box)</p>

2. (J4167A Only) If Necessary, Set the Token Ring Data Rate Switch



Token Ring networks operate at 4 Mbps or 16 Mbps. You must set the Data Rate switch on the J4167A card to either 4 or 16, depending on your network. If you don't know, ask your network administrator. The factory default is 16 Mbps.

3. Before Installing the Card, Verify That Your Printer Works.

HP LaserJet 4000 series printers **HEWLETT®
PACKARD**

Configuration Page 1

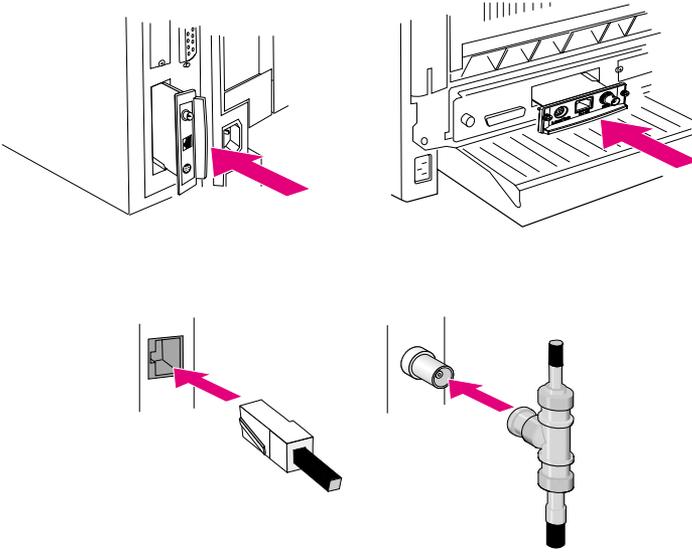
Printer Information Product Name: HP LaserJet Printer Name: HP LaserJet 5 Product Number: 7 Forwarding Number: 000000000 Printer Serial Number: 000000000 Firmware: 00000000 00000000 Last Firmware: 00 000000 Page Count: 1 Pages Since Last Print/Reprint: 0	Memory Total Memory: 4 Mbytes RAM: 2.40 128 Bytes/Line 30K bytes Allocated of 300K bytes Available Reserved: 200K Additional Memory needed to Expand: 4 Mbytes
Installed Personalities and Options PCL (LPSL325) PCL6 (LPSL325) PS (LPSL325) Color Slot 1: 8 Mbytes ROM DIMM Color Slot 2: Empty Color Slot 3: DIMM EIO 1: Empty EIO 2: Unpopulated (Class Code PFB0C)	Security Control Panel Lock: NONE Control Panel Password: 00540000
Event Log Number of Entries in Log: 0 Maximum Number of Entries: 30 Event Log is Empty	Paper Trays and Options Default Paper Size: LETTER Tray 2 (LETTER)

Print a Printer Configuration Page.

For instructions, see [Chapter 2](#) or refer to your printer manuals.

4. Turn Off Your Printer and Insert the Card. Then connect the network cables.

Some printers have multiple EIO (Enhanced I/O) slots. *You can install the HP Jetdirect card into any EIO slot.*



Note

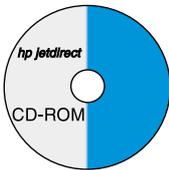
If other messages appear, see the troubleshooting sections in the appropriate HP Jetdirect administrator's guide provided on the HP Jetdirect CD-ROM.

For HP J4169A 10/100Base-TX cards, see [Chapter 3](#) in this manual for 10/100 link configuration and troubleshooting information.

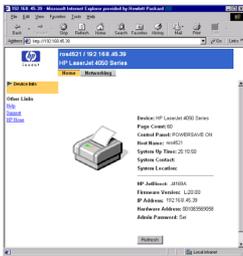
6. Configure the Card with Network Parameters Required for Your Network.

Choose a method to configure the card:

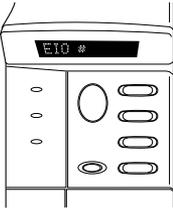
- Use installation and configuration software on the HP Jetdirect CD-ROM, or downloaded from HP Customer Care Online at www.hp.com/support/net_printing (IP or IPX networks)
- Use a Web Browser (IP networks)
- Use your printer's control panel (if available)
- Use advanced methods, such as a BootP or DHCP Server (IP networks)



HP Jetdirect CD-ROM Software
(IP or IPX networks) Use the installation and configuration software to configure the card *and* to install the printer on your computer system.



Web Browser
(IP networks) Configure networking parameters by browsing to the embedded web server on the HP Jetdirect card.
See [Chapter 4](#) for basic procedures. For more information, see the applicable Jetdirect Administrator's guide on the HP Jetdirect CD-ROM.

	<p>Printer's Control Panel</p> <p>For many HP printers, you can use the printer's control panel to configure basic network parameters. Refer to Chapter 3 in this guide.</p>
<p>Telnet BootP DHCP arp -s</p>	<p>Advanced Methods</p> <p>(IP networks) For other methods to configure the card, see the applicable Jetdirect Administrator's guide supplied on the HP Jetdirect CD-ROM.</p>

7. Install the printer on your computer system (if not already installed)

After the Jetdirect card is configured with the required network parameters for your network, use the software on the HP Jetdirect CD-ROM or your network system utilities to install the printer.

Table of Contents

Quick Installation	5
------------------------------	---

1. Introduction

Supported Network Protocols	1-14
Supported Printers	1-15

2. Installing the Print Server

What You Need for Installation	2-17
<i>Step 1.</i> Identify Your HP Jetdirect 610N/600N Internal Print Server	2-18
<i>Step 2.</i> (J4167A Only) If Necessary, Set the Token Ring Data Rate Switch	2-20
<i>Step 3.</i> Before Installing the Card, Verify That Your Printer Works	2-21
<i>Step 4.</i> Turn Off Your Printer and Insert the Card.	2-23
<i>Step 5.</i> Verify That the HP Jetdirect Card is Operating Properly	2-25
<i>Step 6.</i> Configure the Card with Network Parameters Required for Your Network	2-28
<i>Step 7.</i> Install the Printer On Your System (If Not Already Installed)	2-29

3. Control Panel Configuration

Introduction	3-31
To Restore Configuration Default Values	3-32
To Enable or Disable Network Protocols	3-33
To enable or disable network protocols	3-33
Configuring IPX Frame Types	3-35
IPX Frame Types on an HP Jetdirect Ethernet Card	3-35
IPX Frame Types on an HP Jetdirect Token Ring Card	3-35
To configure an IPX frame type	3-36

Configuring IPX Source Routing (Token Ring Cards Only)	3-37
To configure IPX source routing.	3-38
Configuring TCP/IP Parameters	3-39
To configure TCP/IP parameters	3-41
Configuring Apple EtherTalk Phase Parameters (600N Ethernet Cards Only).	3-44
To configure EtherTalk parameters.	3-44
Configuring the 10/100TX Link	3-46
Link-Speed LEDs	3-47
Link Troubleshooting	3-48

4. Using the Embedded Web Server

Compatible Web Browsers.	4-51
HP Jetdirect 610N Print Servers.	4-51
HP Jetdirect 600N Print Servers.	4-52
HP Web JetAdmin Compatibility	4-52
Viewing the Embedded Web Server	4-53
Operating Notes	4-54

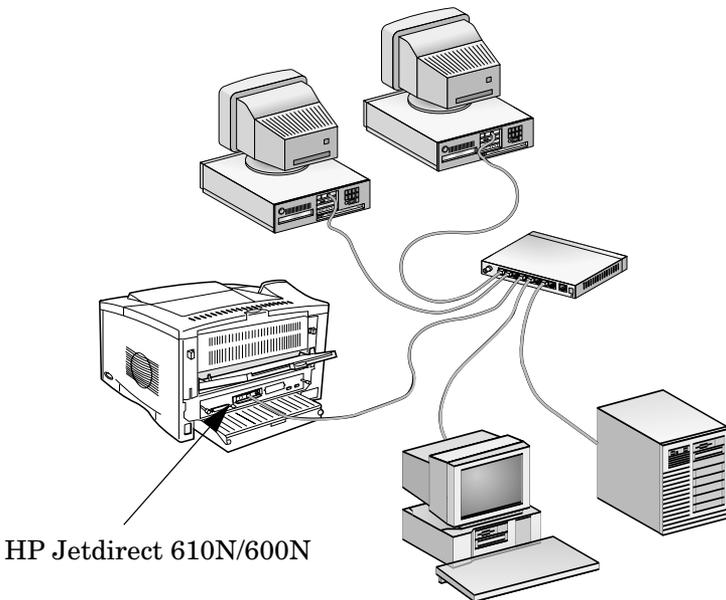
A. Specifications and Regulatory Statements

Specifications	A-55
Regulatory Statements	A-56

Introduction

The HP Jetdirect 610N/600N family of internal print servers are network interface cards for HP Enhanced I/O (EIO) printers and MFP (multifunction peripheral) products. With an HP Jetdirect print server, you can connect and share your printer anywhere on your network and print at network speeds.

A typical network using an HP Jetdirect 610N/600N print server is illustrated below. The card must first be installed into the printer and connected to the network. Then, you must configure the card for network operation.



- To configure the card, you can use the HP Jetdirect printer installation and setup software. Refer to the HP Jetdirect software installation instructions included with this product.
- Alternatively, for printers equipped with a control panel, you can use the *printer's control panel* to configure basic network parameters. See [Chapter 3](#).

Supported Network Protocols

Supported Network Protocols	Network Printing Environments*	HP Jetdirect 610N/600N Product
TCP/IP	Microsoft Windows 95/98/Me/NT4.0/2000 Novell NetWare 5 via NDPS UNIX and Linux, including: Hewlett-Packard HP-UX, Sun Microsystems Solaris (Sun SPARCsystems only), IBM AIX**, HP MPE-iX**, RedHat Linux, SuSE Linux LPD (line printer daemon) IPP (Internet Printing Protocol)	J3110A J3111A J4167A J4169A
IPX/SPX and compatible	Novell NetWare Microsoft Windows 95/98/Me/NT4.0/2000	J3110A J3111A J4167A J4169A
EtherTalk	Mac OS	J3110A J3111A J4169A
LocalTalk	Mac OS	J3111A
DLC/LLC	Microsoft Windows NT** Artisoft LANtastic**	J3110A J3111A J4167A J4169A
<p>* Refer to the current HP Jetdirect product data sheets for supported network versions. For other networks, consult your system vendor or authorized HP dealer.</p> <p>**Contact your network system vendor for software, documentation, and support.</p>		

Supported Printers

The HP Jetdirect 610N/600N print servers are supported in all HP printers and multifunction peripheral devices (MFPs) with Enhanced Input/Output (EIO) slots, such as:

- HP LaserJet EIO printers and MFPs
- HP Color LaserJet EIO printers and MFPs
- HP DesignJet EIO large format printers
- HP Business InkJet EIO printers

For most of these printers, you can use the printer's control panel to configure basic network parameters on the HP Jetdirect 610N/600N internal print server. Refer to [Chapter 3](#).

Note

For installation procedures or limitations in peripheral devices not covered in this guide, refer to the manuals supplied with the peripheral device.

Installing the Print Server

What You Need for Installation

- The proper HP Jetdirect print server, documentation, and software for your network.
- The proper network cables and connectors for connecting the card and printer to your network.
- A static-safe environment for handling the card.

CAUTION

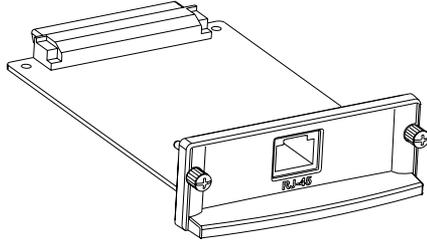
HP Jetdirect cards contain electronic components that can be damaged by static electricity through electrostatic discharge (ESD). To prevent ESD damage, maintain frequent contact with any bare sheet metal surface on the printer. A grounding wrist strap (or similar device) is useful for this purpose. Handle the card carefully at all times. Avoid touching electronic components or circuit paths.

Step 1. Identify Your HP Jetdirect 610N/600N Internal Print Server

Remove the HP Jetdirect card from its packaging and verify that you have the correct card for your network.

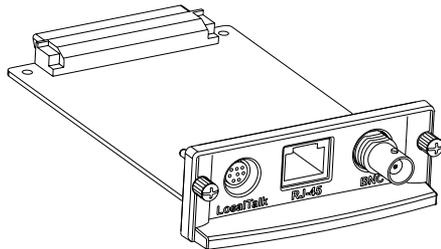
HP J3110A (600N) for Ethernet and IEEE 802.3 Type 10Base-T networks (10 Mbps).

This card provides a single RJ-45 connector for networks that use unshielded twisted-pair cables.



HP J3111A (600N) for Ethernet, IEEE 802.3 Type 10Base-T/10Base-2 networks (10 Mbps), and LocalTalk networks.

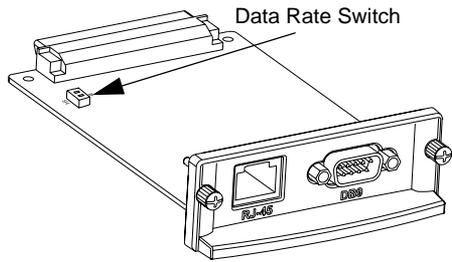
This card provides an RJ-45 connector for networks that use unshielded twisted-pair cables, a BNC connector for ThinLAN coaxial cables, and a Mini-DIN 8 connector for a LocalTalk connector box.



You can use the LocalTalk port and only one Ethernet port: RJ-45 or BNC.

HP J4167A (610N) for Token Ring (IEEE 802.5) networks. A Data Rate switch selects operation for 4-Mbps or 16-Mbps Token Ring networks.

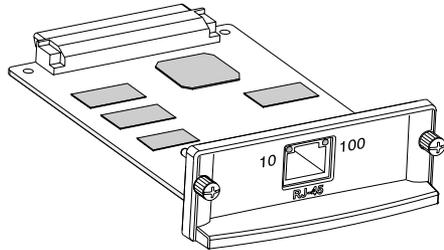
This card provides an RJ-45 connector for networks that use unshielded twisted-pair cables, and a DB 9 connector for Type 1, 2 or 6 shielded twisted-pair cables.



You can use only one Token Ring port: RJ-45 or DB 9.

HP J4169A (610N) for Ethernet, IEEE 802.3 Type 10Base-T or IEEE 802.3u Type 100Base-TX networks. The card autonegotiates operation at 10 or 100 Mbps, full- or half-duplex mode, but can be manually set through the printers control panel.

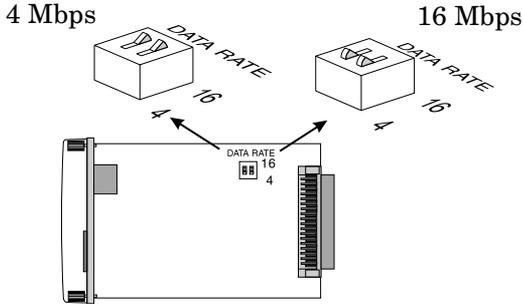
This card provides a single RJ-45 connector for networks that use unshielded twisted-pair cables.



To manually set link operation, see [Chapter 3](#).

Step 2. (J4167A Only) If Necessary, Set the Token Ring Data Rate Switch

- **If you have an HP J4167A 610N Token Ring print server,** you must set the Data Rate switches on the card to either 4 Mbps or 16 Mbps. The selection depends on the data rate of your Token Ring network.



- a. Locate the Token Ring card Data Rate switches.
- b. Set the switches to 4 or 16 Mbps. The default is 16 Mbps.

Step 3. Before Installing the Card, Verify That Your Printer Works

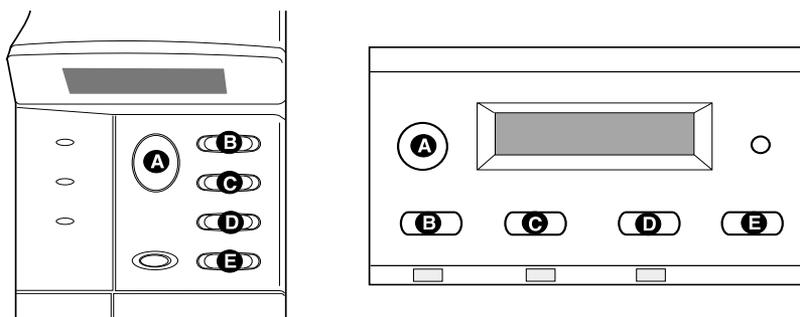
To verify that your printer is working properly, print a Printer Configuration page. Instructions for printing a configuration page on selected printers are provided below. (For other printers, refer to the manuals supplied with the printer.) If a Printer Configuration page will not print, refer to your printer manuals for troubleshooting instructions.

HP LaserJet Printers/MFPs, Business InkJet Printers

Perform the following steps using the printer control panel:

1. Make sure the printer is on and the `READY` message is displayed.
2. Press **Menu** until the display reads `INFORMATION MENU`.
3. Press **Item** until the display reads `PRINT CONFIGURATION` (or `PRINT CONFIG PAGE`).
4. Press **Select** (or **Resume**) to print. If necessary, press **Go** to bypass additional messages.
5. The Printer Configuration page(s) show how the printer is configured.

Figure 2-1 Typical HP LaserJet Printer Control Panels



A Go
B Menu
C Item
D Value
E Select

HP DesignJet Printers

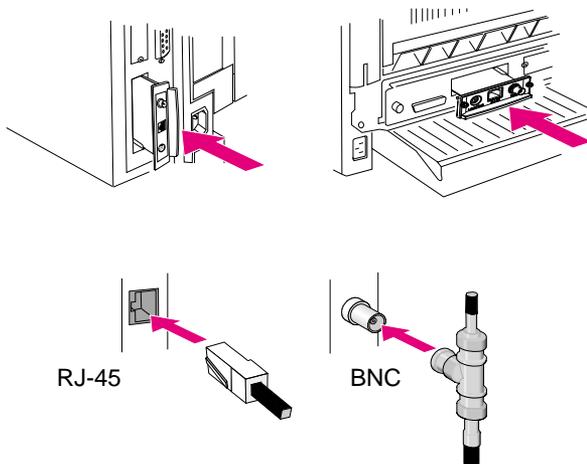
Note Refer to your HP DesignJet printer documentation for instructions on navigating through the printer's Front Panel menus.

1. With the printer status `Ready`, press **Enter** to use the printer setup menus.
2. To ensure that all Front Panel menu items are accessible, verify the Menu Mode is set to Full (for example, `Utilities -> Menu Mode -> Full`✓).
3. Print a Service Configuration print. On some printers, press the up and down arrow keys (↑↓) simultaneously. On other printers, you must use the printer setup menus (for example, `Utilities -> Test prints -> Service Config`).

Note When an HP Jetdirect print server is installed in the printer, HP Jetdirect configuration information will be included with the printer's Service Configuration print.

Step 4. Turn Off Your Printer and Insert the Card

Figure 2-2 Typical Card Installation and Network Connection



1. Turn off the printer.
2. Identify an available HP Enhanced I/O (EIO) slot (typically, in the back of the printer).

Note You can install the card into any EIO slot in the HP printer.

3. If the slot has a cover plate, remove it.
4. Insert the card. Align the card with the guide rails in the slot.
5. Press the card into the slot until firmly seated and tighten each retaining screw a little at a time until both screws are secure.
6. Connect the network cable to the card.

Note

For the HP J3111A 600N Ethernet card, you can connect to the LocalTalk port and to only one of the Ethernet ports (RJ-45 or BNC).

For the HP J4167A 610N Token Ring card, you can connect to only one of the Token Ring ports (RJ-45 or DB 9).

7. Turn on the printer.

Step 5. Verify That the HP Jetdirect Card is Operating Properly

1. Print another Printer Configuration Page (or Service Configuration print) as described previously in [Step 3](#) and verify that Jetdirect Configuration Page information also prints.

In HP LaserJet printers, a Jetdirect Configuration Page will print for each EIO slot that contains an HP Jetdirect card.

2. In the General Information section of the Jetdirect Configuration Page, locate the message “I/O CARD READY”.

This section of the configuration page also contains product-specific information, such as:

- HP Jetdirect product number
- Firmware revision number
- LAN Hardware (MAC) address
- Manufacturing identification number

Note

For a description of other messages that may appear on the Jetdirect Configuration Page, refer to the applicable HP Jetdirect administrator’s guide located on the HP Jetdirect CD-ROM.

Figure 2-3 Example of HP Jetdirect Configuration Page

(600N)
I/O CARD READY

HP LaserJet 4000 series printers 

EIO 1 - JETDIRECT PAGE 1

JetDirect Configuration Page

GENERAL INFORMATION

HP JETDIRECT	J3111A	NETWORK STATISTICS	
FIRMWARE REVISION	V.15.11	UNICAST PACKETS RCV'D:	6741039
LAN HW ADDRESS:	080006E50E0E	TOTAL PACKETS RCV'D:	6776774
PORT SELECT:	10BASE-T (RJ45)	BAD PACKETS RCV'D:	0
MAC ID:	31163716F0LS10	FRAMING ERRORS RCV'D:	0
		PACKETS TRANSMITTED:	4823905
		UNSENDABLE PACKETS:	179
		MHT COLLISIONS:	581094
		MHT LATE COLLISIONS:	0

PROTOCOL INFORMATION

TCP/IP STATUS:	READY	APPLETALK STATUS:	READY
		ETAK NET: 6528:	MODE: 128 P2
		TALK NET: 0:	MODE: 182
		APPLETALK NAME:	HP LaserJet 400
		0 SERVICES:	

(610N)
I/O CARD READY

HP LaserJet 4000 series printers 

EIO 2 - JetDirect Page 1

HP JetDirect Configuration

Status:	I/O Card Ready	Port Config:	100TX HALF
Model Number:	41155A	Auto Negotiation:	On
Hardware Address:	0060B0C1C69	Manufacturing ID:	4019401800060
Firmware Version:	v.2.0.0.0	Date Manufactured:	05/2000
Port Select:	RJ45	SMP Set Only Name:	Not Specified

Network Statistics

Total Packets Received:	60691	Total Packets Transmitted:	3626
Unicast Packets Received:	32	Unsendable Packets:	0
Bad Packets Received:	0	Transmit Collisions:	2
Framing Errors Received:	0	Transmit Late Collisions:	0

Protocol Information

TCP/IP		Novell/NetWare	
Status:	Ready	Status:	16
Host Name:	ndh.herc	NOT CONFIGURED	
IP Address:	13.22.2.2	Node Name:	NP1C61C69
Subnet Mask:	255.0.0.0	NetWare Mode:	Queue Server
Default Gateway:	13.22.2.2	NDS Tree Name:	
Config By:	BOOTIP	NDS Context:	
BOOTIP Server:	13.29.42.17	Attached Server:	
FTP Server:	Not Specified	Queue Poll Interval:	2 sec
Config File:	Not Specified	Sw Interval:	60 sec
Domain Name:	Not Specified		
DNS Server:	Not Specified		
WINS Server:	Not Specified		
Symlnk Server:	Not Specified		
Idle Timeout:	90 sec		
SUP:	Enabled		
Access List:	Not Specified		
Web JsdAdmin URL:	Not Specified		

TPX/SPX		Appletalk	
Status:	Ready	Status:	Ready
Name:	HP LaserJet 4000 Series	Name:	
Zone:		Zone:	

3. If I/O CARD READY appears, the card has been installed successfully. Proceed to [“Step 6. Configure the Card with Network Parameters Required for Your Network.”](#)
4. If I/O CARD READY does not appear, check that you have:
 - Installed the card correctly and properly connected the card to the network
 - Verified that the network is operating properly
 - Turned the printer off and then on again

Note

For HP J4169A 610N 10/100Base-TX cards: See [Chapter 3](#) in this guide for link configuration and troubleshooting information.

For LocalTalk-Only Customers: If you are not connected to an Ethernet network, “I/O CARD NOT READY” and “LAN ERROR - EXTERNAL LOOPBACK” messages may appear. These messages should stop appearing after three minutes. To eliminate the messages, attach an Ethernet loopback connector to one of the Ethernet ports.

For persistent problems, refer to the troubleshooting sections in the applicable HP Jetdirect administrator’s guide supplied electronically on the HP Jetdirect CD-ROM.

Step 6. Configure the Card with Network Parameters Required for Your Network

If the card has been successfully installed and is operating correctly, you are now ready to configure the card for network operation. You can configure the card using the following methods:

- Use the installation and configuration software on the HP Jetdirect CD-ROM. On Microsoft Windows 95/98/Me/NT/2000 systems (Microsoft or Novell NetWare networks), the installation utility on the CD-ROM will guide you through the entire printer setup process. The utility will allow you to configure the required network parameters on the print server, and will also install the printer on your system.
- Use a web browser to access the embedded web server on the HP Jetdirect print server. The web pages on the print server allow you to configure network parameters. See [Chapter 4](#) for basic procedures. For more information, see the applicable Jetdirect administrator's guide on the HP Jetdirect CD-ROM
- Use the printer's control panel (for printers with a supported control panel) to configure basic network parameters on the card. See [Chapter 3](#) in this guide.
- Once the HP Jetdirect card has been configured for TCP/IP operation, use an advanced configuration method (such as BootP, DHCP, Telnet, or the "arp" and "ping" commands). See the applicable HP Jetdirect administrator's guide supplied electronically on the CD-ROM.
- Use HP printer management software (such as *HP Web JetAdmin*) or other network utilities to configure network parameters. HP printer management software can be downloaded from HP's Customer Care Online at:

http://www.hp.com/support/net_printing

Step 7. Install the Printer On Your System (If Not Already Installed)

Depending on the method you use to configure the HP Jetdirect card for network operation, you may still need to set up your computer system for printing.

To add the printer and enable printing on your system, do one of the following:

- Use the HP Jetdirect printer installation software supplied on the HP Jetdirect CD-ROM (you will need your printer driver if it is not already installed), or
- Use your HP printing system installation software that came with your printer.

For optional printer installation methods, refer to the applicable *HP Jetdirect Administrator's Guide* supplied on the HP Jetdirect CD-ROM.

Control Panel Configuration

Introduction

In most cases, you will use HP software tools to configure your network printer. However, if your HP printer or multifunction peripheral (MFP) device has a control panel, you can configure basic network parameters through the printer's control panel. Printers with control panel support include:

- HP LaserJet 4000, 4050, 5000, 8000, 8100, 8150 Series EIO printers and MFPs
- HP Color LaserJet 4500, 4550, 8500, 8550 Series EIO printers and MFPs
- HP Business InkJet 2200/2250 Series EIO printers
- HP DesignJet EIO printers

Note

To configure HP Jetdirect parameters on HP DesignJet printers through the printer's front control panel, see your HP DesignJet setup guide.

For printers without control panels (for example, HP LaserJet 2100 Series EIO printers), you must use HP software tools for configuration.

You can use the printer control panel to do the following:

- Enable or disable network protocols (TCP/IP, IPX/SPX, DLC/LLC, AppleTalk)
- Configure TCP/IP parameters
- Configure IPX frame types
- Configure IPX source routing for Token Ring networks
- Configure Apple EtherTalk Phase parameters for Ethernet networks (600N only)
- Configure 10/100Base-TX link operation

After you have configured the HP Jetdirect card through the control panel, you may still need to complete the configuration of your computer and network operating system for printing. For more information, see the HP Jetdirect software installation instructions included with this product.

If you reconfigure the card—for example, you disable a network protocol—your configuration is saved on the card and is maintained even after the printer is turned off and back on again.

To Restore Configuration Default Values

You can restore default values by performing a cold reset on your printer. *See your printer documentation for instructions.* (Note: To perform a cold reset on some HP LaserJet printers, turn off the printer and then hold down **Go** as you turn the printer back on.)

CAUTION

Resetting your printer may restore both your printer and Jetdirect card to their factory default values. (For Jetdirect factory default values, see the applicable HP Jetdirect administrator's guide supplied electronically on the HP Jetdirect CD-ROM.)

To verify HP Jetdirect default values have been reset, print a Jetdirect configuration page (see [Chapter 2](#)).

To Enable or Disable Network Protocols

When you first install the card from the factory, all supported network protocols are enabled (or turned on) when you turn the printer on. If a network protocol is enabled, the card may actively transmit on the network even when the protocol is not in use. This may increase network traffic slightly. To eliminate unnecessary traffic, you can disable unused protocols. Disabling unused protocols lets you:

- reduce network traffic by eliminating broadcast messages from unused protocols (for example, IPX/SPX and TCP/IP).
- provide better control over who prints to the printer by eliminating users from other networks who might accidentally route print jobs to this printer.
- eliminate unnecessary information on the Jetdirect Configuration Page, which displays status information for all enabled protocols.
- display protocol-specific error conditions on the printer's control panel. These warning messages are displayed only if all enabled protocols are unable to print.

To enable or disable network protocols

1. To access the Jetdirect menu on some printers, you must take the printer offline (for example, by pressing **Go** to turn the "Ready" LED off).
2. Press **Menu** repeatedly until EIO MENU or EIO # JETDIRECT MENU is displayed (# identifies the EIO slot number of the card).
3. Press **Item** until CFG NETWORK=NO* appears.
NO* indicates that access to the EIO Jetdirect network menus will be bypassed. You must change this to CFG NETWORK=YES* to access the EIO Jetdirect menus:
 - a. Press **Value** . CFG NETWORK=YES appears.
 - b. Press **Select** or **Resume** . CFG NETWORK=YES* appears (* indicates the active value on some printers).

4. Press **Item** to scroll through each network protocol until the one you want to change is displayed.

IPX/SPX=ON*	<ul style="list-style-type: none">● To change the protocol status, press Value and then press Select or Resume.● Press Item to continue to the next protocol.
DLC/LLC=ON*	
TCP/IP=ON*	
ATALK/ETALK=ON*	
Note: ON* indicates the protocol is enabled. OFF* indicates the protocol is disabled. “ATALK/ETALK” refers to the AppleTalk/EtherTalk protocol (not available on Token Ring cards)	

5. To activate the printer and save your changes, press **Go** or **Menu**.

Configuring IPX Frame Types

On IPX/SPX protocol networks (for example, Novell NetWare), the format of network communication frames must be specified on the card. In most cases, you can keep the default Frame Type setting, which is AUTO (“Automatic”). However, you can manually set the frame type format if required.

Note that the IPX/SPX protocol must be enabled (IPX/SPX=ON*) before you can configure frame types.

IPX Frame Types on an HP Jetdirect Ethernet Card

Frame Type	Description
AUTO (default)	Automatically senses and limits the frame type to the first one detected.
EN_8023	Limits the frame type to IPX over IEEE 802.3 frames. All others will be counted and discarded.
EN_II	Limits the frame type to IPX over Ethernet Frames. All others will be counted and discarded.
EN_8022	Limits the frame type to IPX over IEEE 802.2 with IEEE 802.3 frames. All others will be counted and discarded.
EN_SNAP	Limits the frame type to IPX over SNAP with IEEE 802.3 frames. All others will be counted and discarded.

IPX Frame Types on an HP Jetdirect Token Ring Card

Frame Type	Description
AUTO (default)	Automatically senses and limits the frame type to the first one detected.
TR_8022	Limits the frame type to IPX over IEEE 802.2 LLC with IEEE 802.5 frames. All others will be counted and discarded.
TR_SNAP	Limits the frame type to IPX over SNAP with IEEE 802.5 frames. All others will be counted and discarded.

To configure an IPX frame type

If you have not already done so, enable the IPX/SPX protocol (IPX/SPX=ON*) by following the instructions described in [“To enable or disable network protocols”](#) in this chapter.

1. To access the Jetdirect menu on some printers, you must take the printer offline (for example, by pressing **Go** to turn the “Ready” LED off).
2. Press **Menu** repeatedly until EIO MENU or EIO # JETDIRECT MENU is displayed (# identifies the EIO slot number of the card).
3. Press **Item** until CFG NETWORK=NO* appears.

NO* indicates that access to the EIO Jetdirect network menus will be bypassed. You must change this to CFG NETWORK=YES* to access the EIO Jetdirect menus:

- a. Press **Value**. CFG NETWORK=YES appears.
 - b. Press **Select** or **Resume**. CFG NETWORK=YES* appears (* indicates the active value on some printers).
4. Press **Item** to scroll through each network protocol until CFG IPX/SPX=NO* is displayed.

To access the IPX/SPX configuration menu, press **Value** and then press **Select** or **Resume** to display CFG IPX/SPX=YES*.

5. Press **Item** until FRAME=<Frame Type>* appears.

AUTO EN_8023 EN_II EN_8022 EN_SNAP TR_8022 TR_SNAP	<ul style="list-style-type: none">● To change the frame type, press Value until the desired option appears, and then press Select or Resume.● Press Item to continue to the next parameter.
Note: An asterisk (*) indicates the active frame type selected. The available frame type options depend on whether you have an Ethernet or Token Ring card installed.	

6. To activate the printer and save your changes, press **Go** or **Menu**.

Configuring IPX Source Routing (Token Ring Cards Only)

On an IPX/SPX network, the HP Jetdirect Token Ring print server must be configured with the type of Token Ring source routing used on the network. In most cases, you can keep the default setting, which is AUTO (“Automatic”). However, you can manually set source routing if required.

Note that the IPX/SPX protocol must be enabled (IPX/SPX=ON*) before you can configure source routing.

The possible routing selections are:

Source Routing	Description
AUTO (default)	The type of source routing required by the network environment will be automatically sensed.
OFF	All packets are sent without source routing. The Jetdirect card will only respond to stations that are on the same ring.
SINGLE R	All packets are sent with source routing. The <i>Single Route</i> method is used for broadcasts and when the route is unknown.
ALL RT	All packets are sent with source routing. The <i>All Routes</i> method is used for broadcasts and when the route is unknown.

To configure IPX source routing

1. To access the Jetdirect menu on some printers, you must take the printer offline (for example, by pressing **Go** to turn the “Ready” LED off).
2. Press **Menu** repeatedly until EIO MENU or EIO # JETDIRECT MENU is displayed (# identifies the EIO slot number of the card).
3. Press **Item** until CFG NETWORK=NO* appears.

NO* indicates that access to the EIO Jetdirect network menus will be bypassed. You must change this to CFG NETWORK=YES* to access the EIO Jetdirect menus:

- a. Press **Value**. CFG NETWORK=YES appears.
 - b. Press **Select** or **Resume**. CFG NETWORK=YES* appears (* indicates the active value on some printers).
4. Press **Item** to scroll through each network protocol until CFG IPX/SPX=NO* is displayed.

To access the IPX/SPX configuration menu, press **Value** and then press **Select** or **Resume** to display CFG IPX/SPX=YES*.

5. Press **Item** until SRC RC=<Source Routing>* appears.

AUTO OFF SINGLE R ALL RT	<ul style="list-style-type: none">● To change the selection, press Value until the desired option appears, and then press Select or Resume.● Press Item to continue to the next parameter.
Note: An asterisk (*) indicates the active source-routing selection.	

6. To activate the printer and save your changes, press **Go** or **Menu**.

Configuring TCP/IP Parameters

Using the control panel of your printer, you can manually configure these TCP/IP parameters:

Parameter	Description
BOOTP DHCP	<p>610N: If BOOTP=YES* (default) or DHCP=YES*, the print server will attempt to automatically obtain its TCP/IP configuration from a BootP server only, or a DHCP server only, each time the print server is powered on. If BOOTP=NO* and DHCP=NO*, you can manually configure the required TCP/IP parameters described below.</p> <p>600N: If BOOTP=YES* (default), the print server will attempt to automatically obtain its TCP/IP configuration from a BootP or DHCP server when it is initially powered on. Once configured by either BootP or DHCP and then power cycled, it will attempt to reconfigure itself using the same method. If BOOTP=NO*, you can manually configure the required TCP/IP parameters described below.</p>
IP Address	<p>The Jetdirect card's unique TCP/IP network address, consisting of 4 bytes: IP BYTE1.IP BYTE2.IP BYTE3.IP BYTE4 (example: 015.024.227.113).</p>
Subnet Mask	<p>A bit mask filter used to identify the subnet of the Jetdirect card if subnetting is used, consisting of 4 bytes: SM BYTE1.SM BYTE2.SM BYTE3.SM BYTE4 (example: 255.255.248.0)</p>
Syslog Server IP Address	<p>The IP address of the log server to be used by the Jetdirect card consisting of 4 bytes: LG BYTE1.LG BYTE2. LG BYTE3.LG BYTE4</p>
Default Gateway	<p>The IP address of the gateway used to communicate with stations outside the local subnet consisting of 4 bytes: GW BYTE1.GW BYTE2.GW BYTE3.GW BYTE4</p>
Timeout	<p>The TCP/IP idle time-out period (in seconds). The value can range from 0 to 3600. The default is 90.</p> <p>If set to "0", the timeout feature of the HP Jetdirect card is disabled—TCP/IP connections will remain open until closed by the server.</p>

Note

The card must be configured with a valid IP address to operate on a TCP/IP network. If not configured, a default value 192.0.0.192 will be automatically assigned two minutes after the card is turned on.

BOOTP (Bootstrap Protocol) or DHCP (Dynamic Host Configuration Protocol) operation depends on the print server model:

- 610N: BOOTP=YES* results in BOOTP-only operation, while BOOTP=NO and DHCP=YES* results in DHCP-only operation.
- 600N: BOOTP=YES* allows BOOTP or DHCP operation.

If an IP address is configured through DHCP and is subsequently changed through the control panel, the DHCP assigned address is released. In this case, you should also manually configure other TCP/IP parameters as well (such the subnet mask, default gateway and idle timeout) to ensure a proper configuration.

To configure TCP/IP parameters

If you have not already done so, enable TCP/IP (TCP/IP=ON*) by following the instructions described in [“To enable or disable network protocols”](#) earlier in this chapter.

Note Enter data carefully. If you make an incorrect entry, you cannot change it without starting again from step 1.

1. To access the Jetdirect menu on some printers, you must take the printer offline (for example, by pressing **Go** to turn the “Ready” LED off).
2. Press **Menu** repeatedly until EIO Menu or EIO # JETDIRECT MENU is displayed (# identifies the EIO slot number of the card).
3. Press **Item** until CFG NETWORK=NO* appears.

NO* indicates that access to the EIO Jetdirect network menus will be bypassed. You must change this to CFG NETWORK=YES* to access the EIO Jetdirect menus:

- a. Press **Value**. CFG NETWORK=YES appears.
- b. Press **Select** or **Resume**. CFG NETWORK=YES* appears (* indicates the active value on some printers).

- Press **Item** to scroll through each network protocol until CFG TCP/IP=NO* is displayed.

To access the TCP/IP configuration menu, press **Value** and then press **Select** or **Resume** to display CFG TCP/IP=YES*.

- Press **Item** until one of the following appears:

610N	BOOTP=YES	TCP/IP parameters will be automatically retrieved from a BootP server only, or a DHCP server only. No other TCP/IP parameters will be configurable through the printer's control panel. Configure your BootP or DHCP server using instructions provided with your system documentation.
	BOOTP=NO DHCP=YES	
	BOOTP=NO DHCP=NO	Continue with manual configuration of TCP/IP parameters. To continue with your printer's control panel, go to step 6 .
600N	BOOTP=YES	TCP/IP parameters will be automatically retrieved from a BootP or DHCP server. No other TCP/IP parameters will be configurable through the printer's control panel. Configure your BootP or DHCP server using instructions provided with your system documentation.
	BOOTP=NO	Continue with manual configuration of TCP/IP parameters. To continue with your printer's control panel, go to step 6 .

On many printers, an asterisk (*) indicates the active selection.

To change the setting, press **Value**. Then press **Select** or **Resume**.

To activate the printer and save your changes, press **Go** or **Menu**.

6. Press **Item** to configure each TCP/IP parameter.
 - a. IP BYTE 1=<value>* should appear on the control panel first. To enter the first byte of the IP address, press **Value** until the desired value appears. (If you press and hold **Value**, the values scroll rapidly.)
 - b. To save the value, press **Select** or **Resume**. Press **Item** to continue.
 - c. Configure the remaining bytes of the IP address in the same manner.
7. You can configure the subnet mask bytes (SM), syslog server IP address (LG), default gateway (GW), and timeout (TIMEOUT) in the same manner.
8. To activate the printer and save your changes, press **Go** or **Menu**.

Configuring Apple EtherTalk Phase Parameters (600N Ethernet Cards Only)

Note For HP J4169A 610N print servers, AppleTalk phase parameter is set to phase 2, and is not configurable.

You can configure Apple EtherTalk parameters if the Apple EtherTalk protocol is enabled (ETALK=ON*), and the PostScript printer language is enabled.

To ensure the PostScript printer language is enabled, check the printer's CONFIGURATION MENU. PERSONALTY=PS* or PERSONALTY=AUTO* should be set.

To configure EtherTalk parameters

If you haven't already done so, enable EtherTalk by following the instructions described in [“To enable or disable network protocols”](#) in this chapter.

1. To access the Jetdirect menu on some printers, you must take the printer offline (for example, by pressing **Go** to turn the “Ready” LED off).
2. Press **Menu** repeatedly until EIO Menu or EIO # JETDIRECT MENU is displayed (# identifies the EIO slot number of the card).
3. Press **Item** until CFG NETWORK=NO* appears.

NO* indicates that access to the EIO Jetdirect network menus will be bypassed. You must change this to CFG NETWORK=YES* to access the EIO Jetdirect menus:

- a. Press **Value**. CFG NETWORK=YES appears.
 - b. Press **Select** or **Resume**. CFG NETWORK=YES* appears (* indicates the active value on some printers).
4. Press **Item** to scroll through each network protocol until CFG ETALK=NO* is displayed.

To access the EtherTalk configuration menu, press **Value** and then press **Select** or **Resume** to display CFG ETALK=YES*.

5. Press **Item**. ETALK PHASE=1* or ETALK PHASE=2* appears.
 - The asterisk (*) indicates the active phase setting.
 - To change the phase setting, press **Value** until the phase setting that you desire appears, then press **Select** or **Resume**. For applicable printers, be sure "*" appears alongside your selection.
6. To activate the printer and save your changes, press **Go** or **Menu**.

Configuring the 10/100TX Link

HP J4169A (610N) 10/100Base-TX print servers support 10 or 100 Mbps operation using full-duplex or half-duplex transmission channels. By default, the print server will attempt to autonegotiate its link operation.

When connecting to network hubs and switches that do not support autonegotiation, the print server will configure itself for *10-Mbps* or *100-Mbps half-duplex* operation. For example, when connected to a non-negotiating 10 Mbps hub, the print server card will automatically set itself to operate at *10-Mbps half-duplex*.

If the card is not able to connect to the network through autonegotiation, you can manually set the link operating mode through the printer's control panel, as follows:

1. To access the Jetdirect menu on some printers, you must take the printer offline (for example, by pressing **Go** to turn the "Ready" LED off).
2. Press **Menu** repeatedly until EIO MENU or EIO # JETDIRECT MENU is displayed (# identifies the EIO slot number of the card).
3. Press **Item** until CFG NETWORK=NO* appears.

NO* indicates that access to the EIO Jetdirect network menus will be bypassed. You must change this to CFG NETWORK=YES* to access the EIO Jetdirect menus:

- a. Press **Value**. CFG NETWORK=YES appears.
 - b. Press **Select** or **Resume**. CFG NETWORK=YES* appears (where * indicates the active value on some printers).
4. Press **Item** to scroll through each network protocol until CFG LINK=NO* is displayed.

To access the link configuration menu, press **Value** and then press **Select** or **Resume** to display CFG LINK=YES*.

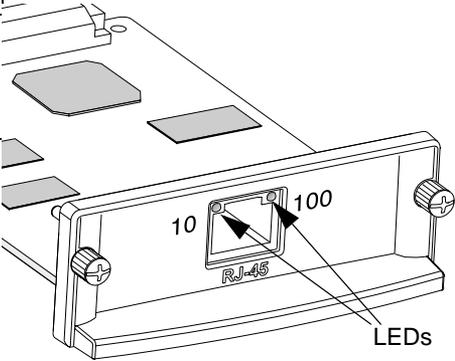
5. Press **Item** until LINK=AUTO* appears.

AUTO 10T HALF 10T FULL 100TX HALF 100TX FULL	<ul style="list-style-type: none"> ● To change the link configuration, press Value until the desired option appears, and then press Select or Resume. ● Press Item to continue to the next parameter. <p>An asterisk (*) indicates the selected setting.</p>
--	--

6. To activate the printer and save your changes, press **Go** or **Menu**.

Link-Speed LEDs

The HP J4169A print server provides 2 light-emitting diodes (LEDs) near the RJ-45 connector. These LEDs indicate the operating link speed of the print server.

LED State	Description	
Off	Not linked	 <p>The diagram shows a perspective view of the control panel. On the right side, there is an RJ-45 port. To its left are two small square LEDs. The left LED is labeled '10' and the right LED is labeled '100'. A label 'RJ-45' is positioned below the port. A label 'LEDs' with two arrows points to the two LEDs. The panel has two screws on the left side.</p>
On	Link established at either 10 Mbps or 100 Mbps	

Link Troubleshooting

If the HP J4169A print server does not successfully connect to the network:

- both link speed LEDs (10 and 100) will be off
- a “LOSS OF CARRIER ERROR” will be indicated on the Jetdirect Configuration Page.

Note The HP J4169A 10/100Base-TX print server may require up to *10 seconds* to establish a connection on the network.

Try the following troubleshooting procedures:

- Verify cabling connections.
- Access the HP Jetdirect EIO menu through the printer’s control panel to manually configure the print server. Verify that the configuration of the connecting network device (such as a network switch) matches. For example, if you set the print server for 100Base-TX Full-Duplex operation, the port on the network switch must also be set to 100Base-TX Full-Duplex operation. Power-cycle the printer to reinitialize the setting.
- On the Jetdirect Configuration Page, compare your configuration for the following parameters:

Parameter	Expected Messages for 10/100TX Cards
PORT SELECT:	RJ-45
PORT CONFIG:	100TX HALF, 100TX FULL, 10BASE-T HALF, 10BASE-T FULL
AUTONEGOTIATION:	ON (Autonegotiation is enabled), or OFF (Autonegotiation is disabled, 10/100TX configuration has been manually set)

For other configuration parameters and messages on the Jetdirect Configuration Page, refer to the HP Jetdirect administrator’s guide provided on the HP Jetdirect CD-ROM.

Using the Embedded Web Server

Each HP Jetdirect 610N/600N print server contains an embedded web server that can be accessed through a compatible web browser on an intranet. The embedded web server provides access to configuration and management pages for the HP Jetdirect print server and the attached peripheral device.

When accessing the Jetdirect embedded web pages, the view displayed depends on the particular print server (610N or 600N) and its firmware version. Examples of embedded web pages are illustrated in [Figure 4-1](#) and [Figure 4-2](#).

Figure 4-1 Web pages on HP Jetdirect 610N print servers

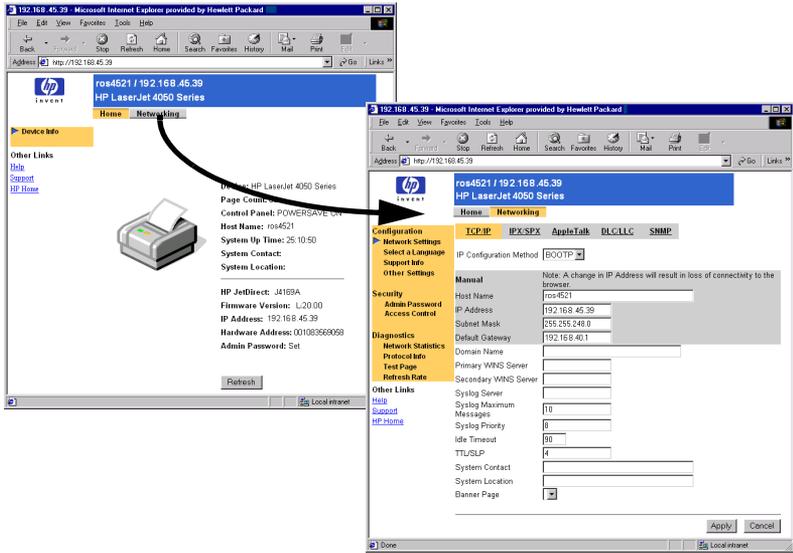
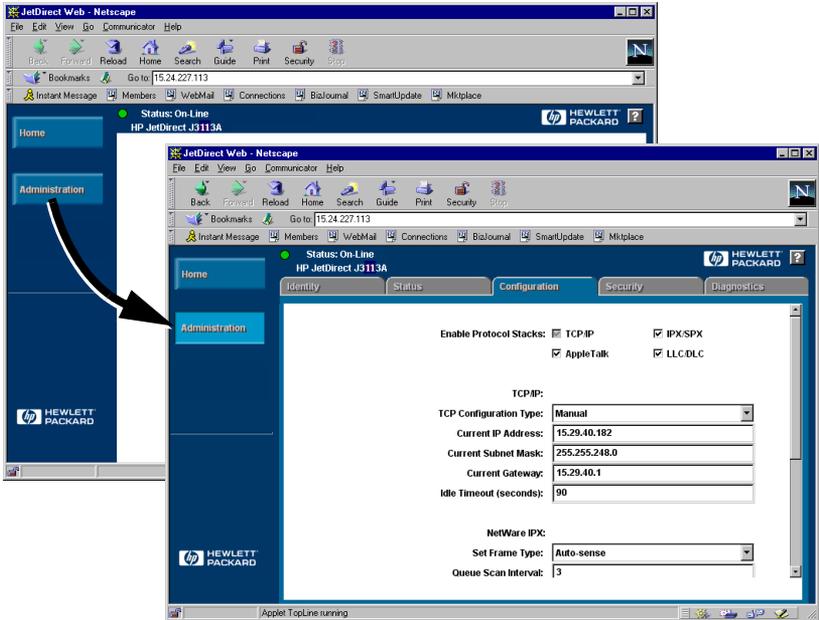


Figure 4-2 Web pages on HP Jetdirect 600N print servers



Compatible Web Browsers

Note For the latest information, visit our HP Customer Care Center web site (www.hp.com/go/support).

HP Jetdirect 610N Print Servers

The following web browsers have been tested for compatibility with the embedded web server on 610N print servers:

- Windows 95/98 and NT 4.0:
 - Netscape Navigator 4.6x, 4.7x, 6.0
 - Microsoft Internet Explorer 5.0, 5.01, 5.5
- Windows Me
 - Netscape Navigator 4.6x, 4.7x, 6.0
 - Microsoft Internet Explorer 5.0, 5.5
- Windows 2000:
 - Netscape Navigator 4.6x, 4.7x, 6.0
 - Microsoft Internet Explorer 5.0, 5.5
- Mac OS 8, 9
 - Netscape Navigator 4.6x, 4.7x, 6.0
- HP-UX 10.20 and Solaris 2.5x, 2.6, 7, 8
 - Netscape Navigator 4.7x, 6.0
- HP-UX 11.0
 - Netscape Navigator 4.72 - 4.75, 6.0
- Linux System
 - Netscape Navigator 4.6x, 4.7x, 6.0

HP Jetdirect 600N Print Servers

The following web browsers have been tested for compatibility with the embedded web server on 600N print servers:

- Windows 95/98 and NT 4.0:
 - Netscape Navigator 4.01, 4.02, 4.03, and 4.05
 - Microsoft Internet Explorer 4.0 with update version SP1
- Windows 2000:
 - Microsoft Internet Explorer 5.0
- HP-UX and Solaris
 - Netscape Navigator 4.01, 4.02, 4.03, and 4.05
- Linux
 - Netscape Navigator 4.03, 4.05

HP Web JetAdmin Compatibility

HP Web JetAdmin is a printer installation and management application for intranets and is available from the HP Customer Care Online web site (www.hp.com/support/net_printing).

HP Web JetAdmin version 6.2 or later is recommended for operation with the HP Jetdirect embedded web server.

If your printer has been discovered through HP Web JetAdmin, the embedded web server on the Jetdirect print server will provide a link to HP Web JetAdmin for management of this and other Jetdirect devices on the network.

Viewing the Embedded Web Server

Before you can use the embedded web server, the HP Jetdirect print server must be configured with an IP address.

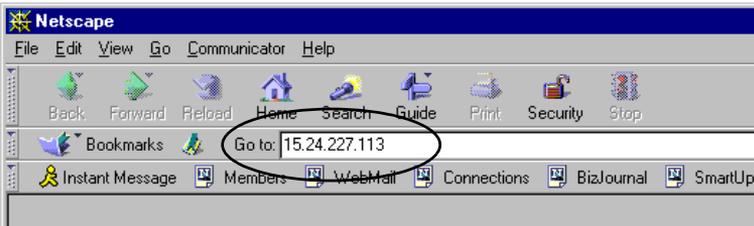
There are many ways to configure an IP address on the print server. For example, you can *automatically* configure IP parameters over the network using BootP (Bootstrap Protocol) or DHCP (Dynamic Host Configuration Protocol) each time the printer is turned on. Or, you can *manually* configure IP parameters using one of the following methods:

- the *Install Network Printer* wizard on the HP Jetdirect CD-ROM (Windows 95, 98, Me, NT 4.0, 2000)
- the printer’s control panel (see [Chapter 3](#)),
- advanced methods, such as Telnet or the “arp -s” command (see the applicable HP Jetdirect administrator’s guide supplied electronically on the HP Jetdirect CD-ROM),
- HP Web JetAdmin or other management software.

If the HP Jetdirect print server does not receive its IP configuration within two minutes after power up, a default IP address is automatically assigned: 192.0.0.192. This address is not a valid IP address for your network but can be used to initially access the Jetdirect print server. However, to use the default IP address, you must temporarily set up your system with the same IP *network number* or establish a route to it.

After an IP address is established on the print server, perform the following steps:

1. Run a compatible version of your web browser.
2. Enter the IP address of the print server as the URL.



The HP Jetdirect main web page will be displayed.

Click the “?” icon or the Help link on the web page for more information.

Operating Notes

- Changes to the IP address and other parameters will close the connection to the embedded web server. To re-establish a connection, use the new IP address.

CAUTION Changes to the IP address on the HP Jetdirect print server will result in printing failures for clients that have been configured to print through this print server.

Note For detailed operating notes, see the applicable HP Jetdirect administrator's guide supplied electronically on the HP Jetdirect CD-ROM.

Specifications and Regulatory Statements

Specifications

HP Jetdirect 610N/600N Internal Print Server

- HP J3110A (600N) Ethernet, IEEE 802.3 Type 10Base-T (RJ-45)
- HP J3111A (600N) Ethernet, IEEE 802.3 Type 10Base-T (RJ-45), Type 10Base2 (BNC), and LocalTalk (Mini-DIN 8)
- HP J4167A (610N) Token Ring/IEEE 802.5 (RJ-45 or DB-9)
- HP J4169A (610N) Ethernet, IEEE 802.3 and IEEE 802.3u 10/100Base-TX (RJ-45)

Electrical

1.25 A maximum @ 3.3 V nominal

Environmental

	Operating	Non-Operating
Temperature	0°C to 55°C (32°F to 131°F)	-40°C to 70°C (-40°F to 158°F)
Relative Humidity (non-condensing)	15% to 95% at 40°C (104°F)	15% to 90% at 65°C (149°F)
Maximum altitude	4.6 km (15,000 ft.)	4.6 km (15,000 ft.)

Electromagnetic

- FCC Title 47 CFR Part 15 Class A for Ethernet (Class B if LocalTalk only) (USA)
- ICES-003 Class A (Canada)
- VCCI Class A (Japan)
- AS/NZS3548 Class A (Australia, New Zealand)
- CISPR-22 Class A (1993)* for Ethernet (Class B if LocalTalk only) (International, Europe)
- CNS 13438 Class A (Taiwan)
- Korean EMI Law, No. 1996-98 Class A (Korea)

(*For EU immunity compliance, see the Declaration of Conformity on page [A-57](#).)

HP Jetdirect J4167A Token Ring Print Server: a DB-9 connector for Type 1, 2, or 6 shielded twisted-pair cables is provided. Use shielded cable for compliance with electromagnetic emission standards when operating at 16 Mbps.

Regulatory Statements

FCC Statements

General Information. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Pursuant to Part 15.21 of the FCC Rules, any changes or modifications to this equipment not expressly approved by the Hewlett-Packard Company may cause interference and void the FCC authorization to operate this equipment.

The Federal Communications Commission has prepared a booklet titled *Interference Handbook* (1986), which may be helpful to you. This booklet (stock number 004-000-004505-7) may be purchased from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

FCC Class A for HP J4167A Token Ring, and HP J3110A, J3111A, J4169A Ethernet or IEEE 802.3/802.3u. This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against interference in a *commercial* environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause interference to radio communications.

Installing this equipment in an FCC Level B product results in an FCC Level A Composite System (as defined in the FCC Rules and Regulations) when attached to an Ethernet (IEEE 802.3/802.3u) or Token Ring (IEEE 802.5) network.

FCC Class B for HP J3111A with LocalTalk Only. This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against interference in a *residential* installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

1. Reorient or relocate the receiving antenna.
2. Increase the separation between the equipment and receiver.
3. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
4. Consult the dealer or an experienced radio/TV technician for help.

European Community

When used with Ethernet, IEEE 802.3/802.3u 10/100Base-TX, or Token Ring configurations, this equipment complies with EN55022 Class A.

This is a class A product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

Declaration of Conformity. The following Declarations of Conformity comply with ISO/IEC Guide 22 and EN45014. They identify the products, the manufacturer's name and address, and the applicable specifications that are recognized in the European community.

HP Jetdirect 610N Print Servers (J4167A, J4169A)

DECLARATION OF CONFORMITY

according to ISO/IEC Guide 22 and EN45014

Manufacturer's Name: Hewlett-Packard Company

Manufacturer's Address: 8000 Foothills Blvd.
Roseville, CA 95747-5677
U.S.A.

declares that the product:

Product Name: HP Jetdirect 610N

Model Number: J4169A, J4167A

conforms to the following Product Specifications:

Safety: EN60950 (1992) +A1,A2,A3,A4,AII / IEC 950 (1991) +A1,A2,A3,A4
EN60825-1 (1994) / IEC 825-1 (1993), Class 1
GB 4943 (1995)

EMC: EN 55022 (1998) / CISPR-22 (1997) Class A
GB 9254 (1988)
EN 55024 (1998)
IEC 61000-4-2 (1995); EN 61000-4-2 (1995)
IEC 61000-4-3 (1995); EN 61000-4-3 (1996)
IEC 61000-4-4 (1995); EN 61000-4-4 (1995)
IEC 61000-4-5 (1995); EN 61000-4-5 (1995)
IEC 61000-4-6 (1996); EN 61000-4-6 (1996)
IEC 61000-4-8 (1993); EN 61000-4-8 (1993)
IEC 61000-4-11 (1994); EN 61000-4-11 (1994)
EN61000-3-2 (1995)
EN61000-3-3 (1995)
FCC Title 47 CFR, Part 15 Class A

Supplementary Information:

The product herewith complies with the requirements of the Low Voltage Directive 73/23/EEC and the EMC Directive 89/336/EEC and carries the CE marking accordingly.

This product was tested in a typical configurations with Hewlett-Packard Co. products.

Roseville, December 20, 2000



Mark Vigeant, Product Regulations Manager

European Contact: Your local Hewlett-Packard Sales and Service Office or Hewlett-Packard GmbH,
Department TRE, Herrenberger Strasse 130, D-71034 Böblingen (FAX:+49-7031-14-3143).

HP Jetdirect 600N Print Servers (J3110A, J3111A)

DECLARATION OF CONFORMITY

according to ISO/IEC Guide 22 and EN45014

Manufacturer's Name: Hewlett-Packard Company

Manufacturer's Address: 8000 Foothills Blvd.
Roseville, CA 95747
U.S.A.

declares that the product:

Product Name: HP JetDirect 600N Print Servers

Model Number: HP J3110A, J3111A

conforms to the following Product Specifications:

Safety: IEC 950:1991+A1,A2 / EN60950 (1992)+A1,A2

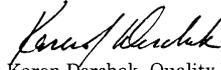
EMC: EN 55022 (1994) / CISPR-22 (1993) class B
EN 55022 (1994) / CISPR-22 (1993) class A *
EN50082-1 (1992)
prEN 55024-2 (1992) / IEC 801-2 (1991) 4 kV CD, 8 kV AD
prEN 55024-3 (1991) / IEC 801-3 (1984), 3 V/m
prEN 55024-4 (1992) / IEC 801-4 (1988): 1 kV-(power line)
0.5 kV-(signal line)

Supplementary Information:

The product herewith complies with the requirements of the Low Voltage Directive 73/23/EEC and the EMC Directive 89/336/EEC and carries the CE marking accordingly.

* The J3110A, J3111A with Ethernet/IEEE 802.3 cables attached are Class-A

Roseville, May 9 , 1997


Karen Dorchak, Quality Manager

European Contact: Your local Hewlett-Packard Sales and Service Office or Hewlett-Packard GmbH, Department TRE, Herrenberger Strasse 130, D-71034 Boblingen (FAX:+49-7031-14-3143)

Australia



This equipment complies with Australian EMC requirements.

Canada

This equipment complies with Canadian EMC Class-A requirements.

VCCI Class A (Japan)

この装置は、情報処理装置等電波障害自主規制協議会（VCCI）の基準に基づくクラスA情報技術装置です。この装置を家庭環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。

RRL Statement (Korea)

사용자 안내문 : A 급기기

이 기기는 업무용으로 전자파 적합등록을 받은 기기 이오니, 판매자 또는 사용자는 이점을 주의하시기 바라며, 만약 잘못 구입하셨을 때에는 구입한 곳에서 비업무용으로 교환하시기 바랍니다.

Taiwan Class A.

警告使用者：這是甲類的資訊產品，在居住的環境中使用時，可能會造成射頻干擾，在這種情況下，使用者會被要求採取某些適當的對策。

HP 网络产品使用安全手册

使用须知

欢迎使用惠普网络产品，为了您及仪器的安全，请您务必注意如下事项：

1. 仪器要和地线相接，要使用有正确接地插头的电源线，使用中国国家规定的220V电源。
2. 避免高温和尘土多的地方，否则易引起仪器内部部件的损坏。
3. 避免接近高温，避免接近直接热源，如直射太阳光、暖气等其它发热体。
4. 不要有异物或液体落入机内，以免部件短路。
5. 不要将磁体放置于仪器附近。

警告

为防止火灾或触电事故，请不要将该机放置于淋雨或潮湿处。

安装

安装辅助管理模块，请参看安装指南。

保修及技术支持

如果您按照以上步骤操作时遇到了困难，或想了解其它产品性能，请按以下方式与我们联系。

如是硬件故障：

1. 与售出单位或当地维修机构联系。
2. 中国惠普有限公司维修中心地址：
北京市海淀区知春路49号希格玛大厦
联系电话：010-62623888 转 6101
邮政编码：100080

如是软件问题：

1. 惠普用户响应中心热线电话：010-65645959
2. 传真自动回复系统：010-65645735



i n v e n t

Copyright © 2001
Hewlett-Packard Company

English

5969-8504