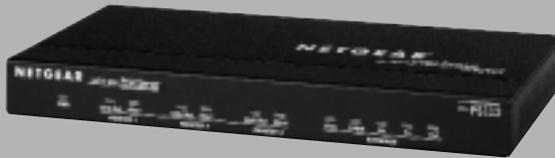




NETGEAR®

PS110 and PS113
10/100 Mbps Print Servers



Installation Guide

Technical Support

YOU MUST REGISTER TO OBTAIN TECHNICAL SUPPORT. PLEASE RETAIN PROOF OF PURCHASE AND THE WARRANTY INFORMATION.

To register your product, get product support or obtain product information and product documentation, go to <http://www.NETGEAR.com/register>.

You will find technical support information at <http://www.NETGEAR.com> through the Customer Support area. If you want to contact technical support by telephone, see the support information card for the correct telephone number for your country.

Technical support is available 24 hours a day, 7 days a week.

NETGEAR, INC.

E-mail: support@NETGEAR.com

www.NETGEAR.com

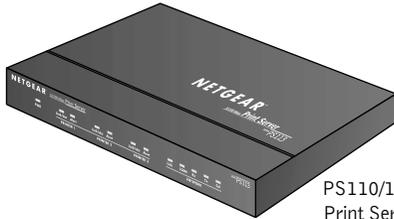
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Other brand and product names are trademarks or registered trademarks of their respective holders.

Information is subject to change without notice.

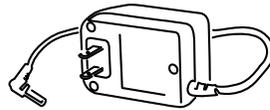
1 Unpack the Box and Verify the Contents



PS110/113
Print Server



PS110/113 Print Server Resource CD,
installation guide, support information
card & warranty/registration card



AC Power adapter

When you open the box, verify that you received everything.

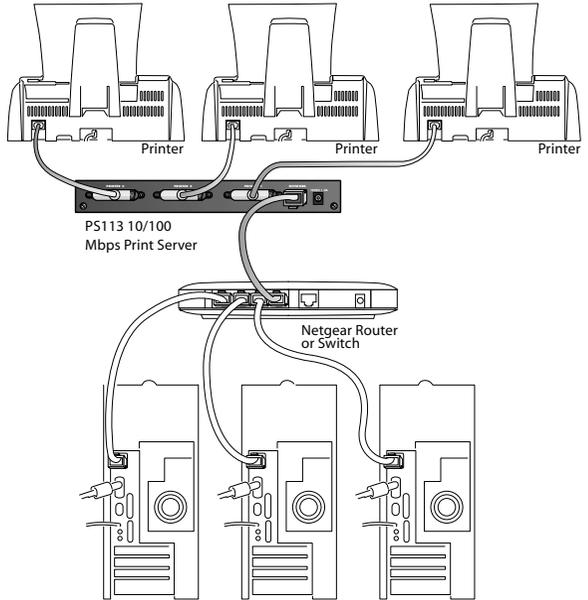
The package includes:

- PS110 or PS113 Print Server
- AC power adapter
- *PS110/PS113 Resource CD*, including a full *Reference Guide* and print server software
- *PS110/PS113 Installation Guide* (this document)
- Warranty and registration card
- Support information card

2 Connect the Print Server

The PS110 or PS113 Print Server connects to the parallel port on your printers. You may connect two printers to the PS110 or as many as three printers to the PS113. After connecting the print server to your printer, you then connect it to a network device (like a hub, router, or switch).

Before you share the printer with the NETGEAR PS110 or PS113 Print Server, you should have at least one computer connected to an Ethernet network and have one unused port on an Ethernet hub, switch, or router.



Note: The procedures described in this guide are for a TCP/IP-based network environment. For NetBEUI protocol printing, please see the *Reference Manual*.

1. Place the print server on a flat surface.

Note: You can mount the print server to the side of a printer using Velcro® strips to conserve space. NETGEAR recommends that you configure and test the print server before mounting the print server in a different configuration.

2. Insert one end of an Ethernet patch (or straight-through) cable into an open Ethernet port in the network device (hub, switch, or router) and insert the other end into the **Network** port on the print server.

Note: You may use a Category 3 (or higher) Ethernet cable.

3. If the printer is currently connected to a computer, turn the printer off and remove the printer's parallel cable from the parallel port on the back of the computer and insert it into an available port on the print server. If the printer is not connected to a computer, insert the 25-pin D-sub male connector of the parallel printer cable into an available port on the print server and connect the other end into the parallel port on the printer.

Note: The parallel printer cable may be up to 10 ft. (3m) in length.

4. Turn on the printer.
5. Connect the power adapter's cord into the back of the print server and then plug the adapter into a power source (such as a wall socket or power strip).

The Power light (PWR) should light up.

The Printer 1 Link/Activity light should light up with the printer connected and powered on.

The Network Link light should light up and the activity lights (Rx, Tx, Col) flash when network activity occurs. If the network device is a 100 Mbps device, the 100 Mbps light should light up. The ALERT light (yellow) should be off.

Note: If any light does not operate as indicated, go to the Troubleshooting section on page 12.

3 Install Printer Server Software and Setup the Print Server

The PS110 or PS113 comes with several software components that allow you to set up the print server and use administrative tools. You should install all the software onto one Windows computer to act as the print server administrator. For the other Windows computers, only install the *NETGEAR Add Printer Wizard* as described in procedure 4.

Note: If you do not have a Windows computer in your network to act as an administrator, please see the section about your operating system in the *Reference Manual* on the *PS110/PS113 Resource CD*. Most Apple Macintosh users can skip this step and continue with procedure 4.

To install the *NETGEAR Print Server* software:

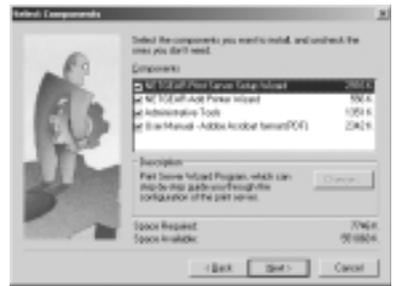
1. Insert the *PS110/PS113 Printer Server Resource CD* in the CD-ROM drive. *NETGEAR Print Server Software Installation* wizard starts up automatically. If it doesn't, double-click My Computer, double-click your CD-ROM drive, and double-click **Setup.exe**.
2. Follow the instructions in the installation wizard to install the software.
3. For the administrative computer, install all components.

Note: If this computer will just use the printer, only select the NETGEAR Add Printer Wizard. See procedure 4: Configure a Computer To Access the Print Server for details.

4. Click **Finish**.

To set up the print server:

1. Click **Start**. Point to **Programs** and click **NETGEAR Print Server>NETGEAR Print Server Setup Wizard**.
2. Follow the instructions in the installation wizard to set up the print server. If you have questions, click **Help** for information about a specific screen.



Note: The PS110/PS113 Print Server, by default, automatically obtains an IP address from the network. However, NETGEAR recommends you use a fixed IP address to be able to use a Web browser to print a test page or to make configuration changes later. For a home or small office, use IP address information compatible with your router setup. The IP address for the print server needs to be unique in the network. If you don't know what to use, you may click **Suggest New Values** to get a useable IP address. If you are using a NETGEAR router with default settings, the following settings should work: IP address: 192.168.0.150 (The first three numbers should match the numbers for the network device. Make sure the last 3 digits are unique on your network.)

Subnet mask: 255.255.255.0

Gateway IP address: 192.168.0.1 (the address of your router)

3. When complete, click **Finish**.
4. When asked if you want to set up a printer right away, click **Yes** and continue to procedure 4: *Configure a Computer To Access the Print Server*. You have already completed the software installation and are running the *NETGEAR Add Printer Wizard*.

Advanced Settings

Advanced users may want to change the default name of the Print Server or make other changes in the settings. There are 2 ways to administer your NETGEAR Print Server. The *Reference Manual* on the *Resource CD* has full instructions.

- a. Open a Web browser and go to the IP address for the print server. (For example, type `http://192.168.0.150` and click **Go**) or
- b. You can use the NETGEAR Print Server Administration program. Click **Start**. Point to **Programs** and click **NETGEAR Print Server>NETGEAR Print Server Administration**.

4 Configure a Computer To Access the Print Server

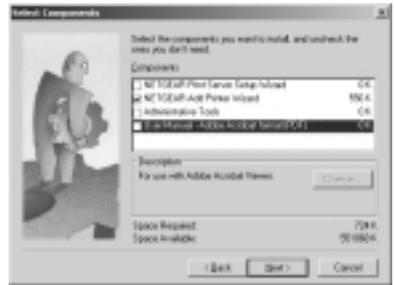
Before using the PS110/PS113 on your network, each computer that needs to access the print server must have:

- A connection to the network.
- If a Windows computer, the printer added using the *NETGEAR Add Printer Wizard*.
- Either the printer driver software already installed or, if this is a new printer, access to the printer driver software (either on a CD or downloaded to a disk).

To install the Add Printer Wizard (for a non-administrative computer):

Note: You can skip ahead “To configure computers...” if you have already installed the NETGEAR software on this computer. You do not need to install the Add Printer Wizard on any Macintosh computer.

1. Insert the *PS110/PS113 Printer Server Resource* CD in the CD-ROM drive. *NETGEAR Print Server Software Installation* wizard starts up automatically. If it doesn't, double-click **My Computer**, double-click your CD-ROM drive, and double-click **Setup.exe**.
2. Follow the instructions in the installation wizard to install the software.
3. When asked, select only the **NETGEAR Add Printer Wizard**.
4. Click **Finish**.



To configure computers running Windows NT, 2000, and XP:

1. Click **Start**, point to **Programs**> **NETGEAR Print Server** and click **NETGEAR Add Printer Wizard**.
2. Read, follow the instructions, and click **OK** in the *Setup* message window.
3. In the list, select the print server port with the printer you want to add to this computer and click **Add**. When you see the *AddPort* screen, write down the port name (such as, PS329047_P1).

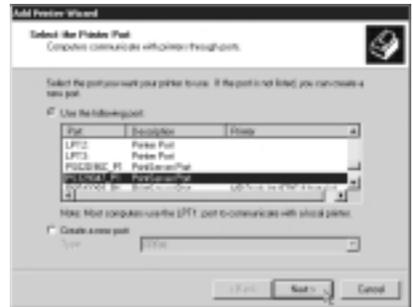
Printer port name: _____.

4. Scroll down in *Add Printer Wizard* screen. Select the Print Server port with port name as written above. Click **Next**.



Note: Do NOT select the default port “LPT1.”

5. Select the printer manufacturer on the left and the model on the right or if you need to install the printer driver, click **Have Disk** and follow the instructions.
6. If you have installed the printer driver for this printer, you will be asked to keep the existing driver or replace it. Select either one and click **Next**. Follow the instruction on screen, if any.
7. Type a name for this printer and determine whether you want this as the default printer. Click **Next**.
8. Select **No** when asked about sharing the printer and click **Next**.



Note: The print server will perform this function.

9. Select **Yes** when asked about printing a test page and click **Next**.
10. Click **Finish**.

If you cannot print the test page, go to Troubleshooting on page 12.

If you successfully printed the test page, you can configure other computers to access this printer by repeating procedure 4 on each computer.

To configure computers running Windows 95, 98, and Me:

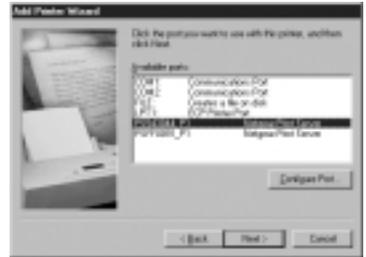
1. Click **Start**, point to **Programs**> **NETGEAR Print Server** and click **NETGEAR Add Printer Wizard**.
2. Read, follow the instructions, and click **OK** in the **Setup** message window.
3. Select the port with the printer you connect and click **Add** in the **Printer Select** screen. When the **AddPort** screen shows, write down the port name (such as, PS543044_P1).

Printer port name: _____.

4. Select the printer manufacturer on the left and the model on the right or if you need to install the printer driver, click **Have Disk** and follow the instructions.
5. Click **Next** and select the print server in the **Available ports** list. This should match the port name from step 3. Then click **Next**.

Note: Do NOT select the default port "LPT1."

6. Type a name for this printer and determine whether you want this as the default printer.
7. Select **Yes** when asked about printing a test page.
8. Click **Finish**.



If you cannot print the test page, go to **Troubleshooting** on page 12.

If you successfully printed the test page, you can configure other computers to access this printer by repeating procedure 4 on each computer.

To configure computers running Macintosh OS 8.6 or 9.x:

The PS110/PS113 print servers only work with Macintosh computers for PostScript printers.

1. Open the **Apple** menu and click **Chooser**.
2. Select the LaserWriter driver on the left. The print server ports appear on the right.
3. Select the print server port with the printer you want to use and click **Create**.



4. Click **Select PPD**.
5. Select the specific printer on the list and click **Select**.
6. Close the **Chooser** and click **OK** when notified that you've changed the settings.

If you cannot print, go to Troubleshooting on page 12.

You can configure other computers to access this printer by repeating procedure 4 on each computer.



To configure computers running Macintosh OS X:

The PS110/PS113 print servers only work with Macintosh computers for PostScript printers.

1. Open the Print Center.
2. In the *Printer List* window, click **Add Printer**.
3. Select the print server port with the printer you want to use.
4. Select the printer on the Printer Model list.
5. Click **Add**.
6. Close the *Printer List* window.

If you cannot print, go to Troubleshooting on page 12.

You can configure other computers to access this printer by repeating procedure 4 on each computer.



Troubleshooting

No lights are lit on the print server

The print server has no power.

- Make sure the power adapter is properly connected to the print server.
- Make sure the power adapter is properly connected to a functioning power outlet. If it is in a power strip, make sure the power strip is turned on. If it is plugged directly into the wall, verify that it is not a switched outlet.
- Make sure you are using the correct NETGEAR power adapter supplied with your print server.

The Printer Link light is not lit

There is a connection problem.

- Make sure the cable connectors are securely plugged in at the print server and the printer.

The Network Link light is not lit and the activity lights are not flashing

There is a hardware connection problem.

- Make sure the cable connectors are securely plugged in at the print server and the network device (hub, switch, or router).
- Make sure the network device is turned on.
- Be sure the correct cable is used. In most instances, use a Category 3 (or higher) Ethernet patch cable. If the network device has Auto Uplink™ (MDI/MDIX) ports, you may use a cross-over cable.

The ALERT light is lit

The printer is not powered up.

- Turn the printer off and unplug the print server's power adapter. Turn the printer on and then plug in the print server's power adapter.
- Contact NETGEAR if turning the printer server off and on doesn't solve the problem.

I can not print from my computer

- You may not have selected the correct printer in the Print dialog box.
- You may not have configured the computer to work with the print server. Go through procedure 4 on page 7 for each computer that will use the print server.
- The computer may not be communicating to the print server. To test for printing directly from the print server:
 1. Open a browser and go to the IP address for the print server. (For example, type <http://192.168.0.150> and click Go.)

Note: If you do not know the IP address and the computer is a Windows computer, you can use the NETGEAR Print Server Administration program. Click **Start**. Point to **Programs** and click **NETGEAR Print Server>NETGEAR Print Server Administration**. The *Reference Manual on the Resource CD* has full instructions.

2. Click **Printer Ports** on the left.
3. Click **Print Test Page**.
4. After the test page prints, click **Logout**.
5. Click **Yes** (or **OK**) if asked about closing the browser window.

Could print previously but can no longer print from my computer

- If the print server is set up to 'obtain IP address automatically', the IP address may have changed. Restart your computer. You may also use the IP Setup program on the administrative computer to assign a fixed IP address to the print server. Click **Start**. Point to **Programs** and click **NETGEAR Print Server>IPSetup**.
- The print server may be overheated. Unplug the power adapter and then plug it in again. Remove any paper or other material that may be restricting ventilation. Lower the temperature in the surrounding environment.

Glossary of Terms

Category 3 (CAT3): A twisted pair cable that meets specified requirements for 10 Mbps networking up to 328 ft. (100m).

Category 5 (CAT5): A shielded twisted pair cable that meets requirements for 10 and 100 Mbps networking up to 328 ft. (100m).

Local Area Network (LAN): A communications network within a limited area, such as one building.

TCP/IP: Transfer Control Protocol (TCP) with Internet Protocol (IP). The main internetworking protocol used in the Internet.

Print Server System Requirements

- Windows 95 OSR2, 98, Me, NT 4.x, 2000, XP or Macintosh OS 8.6, 9.x, or X
- A printer with a parallel port. For Macintosh computers, a PostScript printer with a parallel port
- Network software

Print Server Specifications

Network Protocols: IEEE 802.3u, 100BASE-TX, Fast Ethernet; IEEE 802.3i 10BASE-T CSMA/CD, TCP/IP and NetBEUI

Electromagnetic Emissions: CE mark, commercial; FCC Part 15, Class B; EN 55 022 (CISPR 22), Class B; VCCI Class B ITE; EN50082-1, C-Tick N10947

Safety Agency Approvals: CE mark, commercial, UL listed, CSA certified, TUV licensed, T-Mark

PS110

Dimensions

Length: 7.4 in. (18.9 cm)

Width: 4.8 in. (4.0 cm)

Height: 1.2 in. (3.0 cm)

Weight: 1.61 lbs. (0.73 kg)

PS113

Dimensions

Length: 9.3 in. (23.5 cm)

Width: 1.0 in. (2.6 cm)

Height: 4.0 in. (10.1 cm)

Weight: 1.3 lb. (0.50 kg)

Status LEDs

Power, Printer Link/Activity, Network Link/Act and Speed

Power Adapter

12 V DC, 0.58A (customized power plug for individual countries)

Environmental Specifications

Operating temperature 32° to 104° F (0° to 40° C)

Operating humidity 10 to 90%, noncondensing

Warranty Limited 2-year warranty

Statement of Conditions

In the interest of improving internal design, operational function, and/or reliability, NETGEAR reserves the right to make changes to the products described in this document without notice. NETGEAR does not assume any liability that may occur due to the use or application of the product(s) or circuit layout(s) described herein.

Certificate of the Manufacturer/Importer

It is hereby certified that the Model PS110/PS113 Print Server has been suppressed in accordance with the conditions set out in the BMPT-AmtsblVfg 243/1991 and Vfg 46/1992. The operation of some equipment (for example, test transmitters) in accordance with the regulations may, however, be subject to certain restrictions. Please refer to the notes in the operating instructions. Federal Office for Telecommunications Approvals has been notified of the placing of this equipment on the market and has been granted the right to test the series for compliance with the regulations.

VCCI Statement

This equipment is in the Class B category (information equipment to be used in a residential area or an adjacent area thereto) and conforms to the standards set by the Voluntary Control Council for Interference by Data Processing Equipment and Electronic Office Machines aimed at preventing radio interference in such residential areas. When used near a radio or TV receiver, it may become the cause of radio interference. Read instructions for correct handling.

Federal Communications Commission (FCC) Compliance Notice: Radio Frequency Notice

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

Note: 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 harmful 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 harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful 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.

EN 55 022 Statement

This is to certify that the Model PS110/PS113 Print Server is shielded against the generation of radio interference in accordance with the application of Council Directive 89/336/EEC, Article 4a. Conformity is declared by the application of EN 55 022 Class B (CISPR 22). Compliance is dependent upon the use of shielded data cables.

Canadian Department of Communications Radio Interference Regulations

This digital apparatus (Model PS110/PS113 Print Server) does not exceed the Class B limits for radio-noise emissions from digital apparatus as set out in the Radio Interference Regulations of the Canadian Department of Communications.

n sur le brouillage radioélectrique du ministère des Communications

Cet appareil numérique (Model PS110/PS113 Print Server) respecte les limites de bruits radioélectriques visant les appareils numériques de classe B prescrites dans le Règlement sur le brouillage radioélectrique du ministère des Communications du Canada.

April 2002

