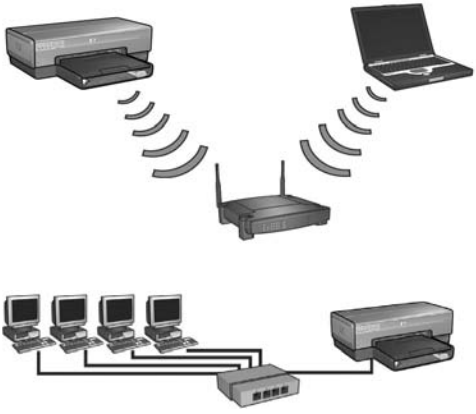
HP Deskjet 6800 series



Network Guide

invent

English

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English

Networking the HP Deskjet 6800 series printer

Thank you for buying the HP Deskjet 6800 series printer!

This guide contains the following information about networking your printer:

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Connecting the printer to a wireless network

Getting started

Has the printer hardware been set up?

Follow the instructions on the setup poster that came with the printer to set up the printer hardware before connecting the printer to the network.

Are computers on the network protected by a software firewall?

If the any of the computers on the network are protected by a software firewall, follow the instructions under "Configuring the printer for a software firewall" on page 52 before connecting the printer to the network.

Connecting to the printer

Step 1: Find the network basic wireless settings

You need to know the **network name (SSID)** and **communication mode** of the network. Consult the configuration utility for the network Wireless Access Point (WAP) or the computer network card for these settings.

For more information, see "Step 1: Find the network basic wireless settings" on page 5.

Step 2: Find the network wireless security settings

You need to know what type of security your network uses: WPA, WEP, or none.

For more information, see "Step 2: Find the network wireless security settings" on page 7.

Go to the next page...

Step 3: Install the printer software for a wireless connection

The steps for installing the printer software on your computer vary by operating system and communication mode.

For installation instructions, see “Step 3: Install the printer software for a wireless connection” on page 9.

Wireless Network Key? If you use a USB flash drive as a Wireless Network Key to configure devices for your wireless network, skip steps 1 and 2 and go to “Infrastructure network with a Wireless Network Key” on page 10.

Step 1: Find the network basic wireless settings

In order to install the printer on a wireless network, you need to know the **communication mode** and **network name (SSID)** of the network. To find these settings, consult the configuration utility for the computer network card or for the network Wireless Access Point (WAP).

Communication mode

There are two options for the network communication mode:

- Infrastructure
- Ad hoc

Infrastructure (recommended)

If you want to use a Wireless Access Point (WAP) to connect the printer to a network, then set the printer to the infrastructure communication mode. In the Infrastructure mode the printer communicates with other devices on the network, whether the devices are wired or wireless, through a WAP. WAPs commonly act as routers or gateways on small networks.

Ad hoc or computer-to-computer networks

If you do not want to use a WAP to connect the printer to a wireless network, then set the printer to the ad hoc, or "computer-to-computer," communication mode. In the ad hoc mode, the printer communicates directly with other wireless devices.

Network name (SSID)

A network name, or "Service Set Identifier (SSID)," identifies a particular wireless network. In order to operate on a network, a device must know the network name of the network.

More information

For more information about wireless networking concepts, see the online user's guide. The online user's guide is available after you install the printer software on your computer.

Step 2: Find the network wireless security settings

The printer **must** share the same network wireless security settings as the other devices on the network. If the printer does not have the correct wireless security settings, other devices on the network will not be able to use the printer.

To find the security settings for the wireless network, consult the configuration utility for the computer wireless network card or the network Wireless Access Point (WAP).

Types of wireless security

You can configure the printer to use the following wireless security options:

- Open system (no security)
- Wired Equivalent Privacy (WEP)
- Wi-Fi Protected Access (WPA)

Open system (no security)

On an open system, the network does not require authorization or encryption.

To configure the printer to operate on an open system, you need to know the network communication mode and network name (SSID). For help finding these items, see "Step 1: Find the network basic wireless settings" on page 5.

Wired Equivalent Privacy (WEP)

Wired Equivalent Privacy (WEP) provides security by encrypting data sent over radio waves from one wireless device to another wireless device. Devices on a WEP-enabled network use WEP keys to encode data.

To configure the printer to operate on a network that uses WEP, you must know the WEP key(s) that the network uses.

Wi-Fi Protected Access (WPA)

Wi-Fi Protected Access (WPA) provides security by doing the following:

- Encrypting data sent over radio waves from one wireless device to another wireless device
- Controlling access to network resources through authentication protocols

To configure the printer to operate on a network that uses WPA, you must know the passphrase and authentication protocol that the network uses.

Step 3: Install the printer software for a wireless connection

Software Firewall? If your computer is protected by a software firewall, follow the steps under "Configuring the printer for a software firewall" on page 52 before installing the printer software.

Windows

Wireless Network Key? If you use a USB flash drive as a Wireless Network Key to configure devices for your wireless network, see "Infrastructure network with a Wireless Network Key" on page 10.

Infrastructure network (recommended)

1. Use an Ethernet cable to connect the printer to an Ethernet port on the network, such as an available Ethernet port on a Wireless Access Point (WAP), router, hub, or wall socket.
2. Insert the printer software CD in the computer CD-ROM drive, and then follow the onscreen instructions.
3. On the **Connection Type** screen, select **Wireless**, and then click **Next**.
4. Follow the onscreen instructions to complete the software installation.

Additional computers

You must install the printer software on each computer that will use the printer. Follow steps 2 through 4 above to install the printer software on other network computers.

The Ethernet cable is only needed when installing the printer software and configuring its wireless settings during the first installation on the network. The Ethernet cable is not required for installing the printer on other computers on the network.

Infrastructure network with a Wireless Network Key

Getting ready

Using a USB flash drive as a Wireless Network Key is a fast and convenient way to configure a device to operate on a wireless network.

In order to use a USB flash drive as a Wireless Network Key to configure the printer, you must have a computer with Windows XP Service Pack 2 and a wireless network card installed. To obtain Windows XP Service Pack 2, visit the Microsoft Web site at this address: **www.microsoft.com**.

Using the Wireless Network Key

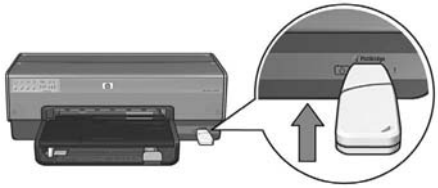
Follow these steps to use a Wireless Network Key to configure the printer for your wireless network:

1. On the Windows desktop, click **Start**, point to **Programs**, point to **Accessories**, point to **Communications**, and then click **Wireless Network Setup**.
2. On the wireless network setup wizard, enter the network name of the wireless network, then do one of the following tasks:
   - To let Windows create the Wireless Network Key, select the automatic option.
   - To create the Wireless Network Key yourself, select the manual option.

   Note: If the router on your network does not support the use of a Wireless Network Key, you must select the manual option. If you select the manual option, you must know the wireless network security settings.
3. Follow the onscreen instructions until you are prompted to remove the Wireless Network Key from the computer.

Go to the next page...

4. With the printer powered on, plug the Wireless Network Key into the PictBridge USB port on the front of the printer.



5. Wait for the printer lights to flash simultaneously three times.
6. Plug the Wireless Network Key into the computer, and then follow the onscreen instructions to complete the wireless network setup wizard.
7. Insert the printer software CD in the computer CD-ROM drive, and then follow the onscreen instructions.
8. On the **Connection Type** screen, select **Wireless**, and then click **Next**.
9. Follow the onscreen instructions to complete the software installation.

Additional computers

You must install the printer software on each computer that will use the printer. Follow steps 7 through 9 above to install the printer software on other network computers.

Ad hoc

Devices on the ad hoc network must:

- Be 802.11b compatible
- Have **ad hoc** as the communication mode
- Have the same network name (SSID)
- Be on the same subnet
- Be on the same channel
- Have the same wireless security settings

Follow these steps to connect to the printer using the factory default ad hoc network settings:

1. Open the configuration utility for the computer wireless network card, and then do the following tasks:
   a. Create a new wireless profile with the following values:
      - Communication mode: **ad hoc**
      - Network Name (SSID): **hpsetup**
      - Security (encryption): **disabled**
   b. Activate the profile.
2. Wait two minutes for the printer to obtain an IP address, and then press the **Report Page** button to print an HP Report page.

3. On the HP Report page, verify the following settings:
   - The network name (SSID) is **hpsetup**
   - The communication mode is **ad hoc**
   - The subnet mask and channel match those of your wireless network
   - The IP address is *something other than* **0.0.0.0**

   If one of the above is not true, delete the wireless profile created in step 1, and then repeat steps 1 through 3.

Go to the next page...

4. Insert the printer software CD in the computer CD-ROM drive, and then follow the onscreen instructions.
5. On the **Connection Type** screen, select **Wireless**, and then click **Next**.
6. Follow the onscreen instructions to complete the software installation.

Additional computers

You must install the printer software on each computer that will use the printer. Follow steps 4 through 6 above to install the printer software on other network computers.

Advanced setup

For instructions on configuring the printer to operate on ad hoc networks other than the **hpsetup** factory default, visit the HP Web site at **www.hp.com/support**.

802.11g

The printer defaults to 802.11b in ad hoc mode in order to be compatible with the widest assortment of 802.11 devices. If your network is made up of only 802.11g devices, then you might want to configure the printer to operate in 802.11g mode in order to optimize network performance.

Follow these steps to configure the printer to operate in 802.11g mode while connected to an ad hoc network:

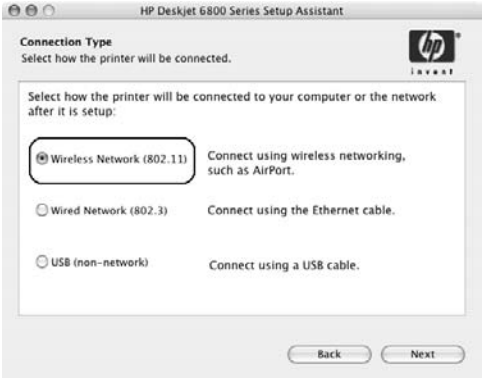
1. Open the printer embedded Web server (EWS). For help opening the EWS, see page 50.
2. Click the **Networking** tab.
3. Under the **Connections** heading, click **Wireless (802.11)**.
4. Click the **Advanced** tab.
5. Scroll to the bottom of the Web page, and clear the **In an ad hoc network use 802.11b behavior** check box.
6. Click the **Apply** button, and then close the EWS.

Macintosh

Mac OS X

Infrastructure network (recommended)

1. Use an Ethernet cable to connect the printer to an Ethernet port on the network, such as an available Ethernet port on a Wireless Access Point (WAP), router, hub, or wall socket.
2. Insert the printer software CD in the computer CD-ROM drive, and then double-click the CD desktop icon.
3. Double-click the **HP Deskjet 6800 installer** icon, and then follow the onscreen instructions.
4. On the **Connection Type** screen, select **Wireless Network (802.11)**, and then click **Next**.



5. Proceed through the next several screens to find the printer on the network.

Go to the next page...

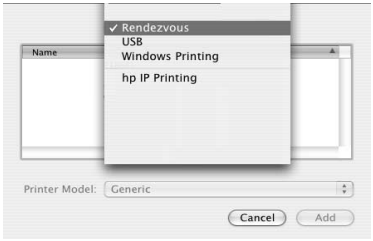
6. On the **Confirm or Change Settings** screen, click the **Change Settings** button.

7. On the **Change Settings** screen, click the **Change Settings** button.
   The printer embedded Web server (EWS) opens.
8. On the EWS, click the **Networking** tab.
9. Under the **Connections** heading, click **Wireless (802.11)**.
10. On the **Wireless (802.11) Interface** screen, click the **Start Wizard** button to start the Wireless Configuration Wizard.

Go to the next page...

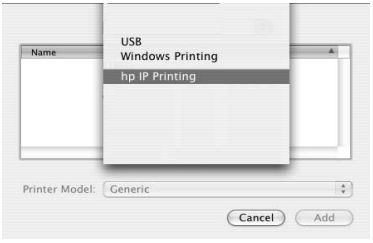
11. Follow the onscreen instructions to configure the printer settings.
12. After the **Wireless Configuration Wizard** is finished, close the EWS.
13. On the **Confirm or Change Settings** screen, click **Next**.
14. Follow the onscreen instructions to complete the printer software installation.
15. On the **Add Printer** screen, click **Open Print Center**.
16. Click **Add Printer**.
17. Do one of the following depending on the version of Mac OS X you are using:

Mac OS X v 10.2.3 and later



Select **Rendezvous**.

Mac OS X v 10.2.2 and earlier



Select **HP IP Printing**, then click the **Discover** button.

18. Select the printer, and then click the **Add** button.
19. Close **Print Center**.

Additional computers

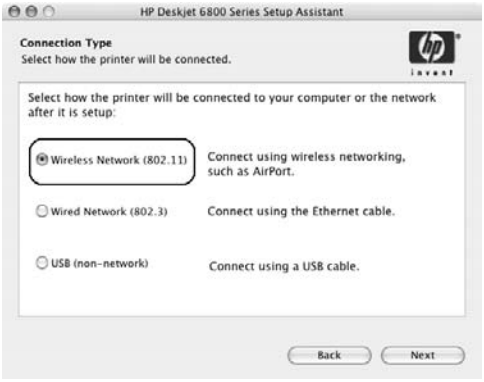
Follow these steps to install the printer software on each computer that will use the printer.

1. Insert the printer software CD in the computer CD-ROM drive, and then double-click the CD desktop icon.
2. Double-click the **HP Deskjet 6800 installer** icon, and then follow the onscreen instructions.
3. Close the **HP Deskjet 6800 series printer Setup Assistant** when it appears.

   Since the printer is already configured for the network, you do not need to use the setup assistant.
4. Open **Print Center**, and then follow steps 15 through 19 above.

Ad hoc or computer-to-computer

1. Use an Ethernet cable to connect the printer to the computer.
2. Insert the printer software CD in the computer CD-ROM drive, and then double-click the CD desktop icon.
3. Double-click the **HP Deskjet 6800 installer** icon, and then follow the onscreen instructions.
4. On the **Connection Type** screen, select **Wireless Network (802.11)**, and then click **Next**.



5. Proceed through the next several screens to find the printer on the network.

Go to the next page...

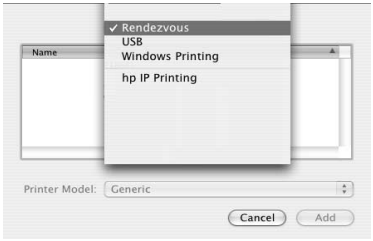
6. On the **Confirm or Change Settings** screen, click the **Change Settings** button.

7. On the **Change Settings** screen, click the **Change Settings** button.
   The printer embedded Web server (EWS) opens.
8. On the EWS, click the **Networking** tab.
9. Under the **Connections** heading, click **Wireless (802.11)**.
10. On the **Wireless (802.11) Interface** screen, click the **Advanced** tab.
11. Enter the wireless network settings for the wireless network to which you want to connect the printer:
    - Under the **Network Name** heading, enter the network name (such as "MyNetwork") in the **SSID** box.
    - Under the **Network Settings** heading:
      - Select **Ad Hoc**.
      - Select the channel from the **Channel** drop-down list.
      - Enter the network wireless security settings.
12. After entering the wireless network settings, click the **Apply** button, and then close the EWS.
13. On the **Add Printer** screen, click **Open Print Center**.
14. Click **Add Printer**.

Go to the next page...

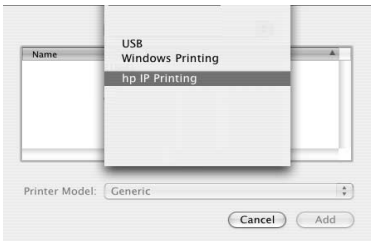
15. Do one of the following depending on the version of Mac OS X you are using:

Mac OS X v 10.2.3 and later



Select **Rendezvous**.

Mac OS X v 10.2.2 and earlier



Select **HP IP Printing**, then click the **Discover** button.

16. Select the printer, and then click the **Add** button.

17. Close **Print Center**.

Additional computers

Follow these steps to install the printer software on each computer that will use the printer.

1. Insert the printer software CD in the computer CD-ROM drive, and then double-click the CD desktop icon.
2. Double-click the **HP Deskjet 6800 installer** icon, and then follow the onscreen instructions.
3. Close the **HP Deskjet 6800 series printer Setup Assistant** when it appears.

   Since the printer is already configured for the network, you do not need to use the setup assistant.
4. Open **Print Center**, and then follow steps 13 through 17 above.

802.11g

The printer defaults to 802.11b in ad hoc mode in order to be compatible with the widest assortment of 802.11 devices. If your network is made up of only 802.11g devices, then you might want to configure the printer to operate in 802.11g mode in order to optimize network performance.

To configure the printer to operate in 802.11g mode while connected to an ad hoc network, follow the steps under "802.11g" on page 13.

Mac OS X Classic

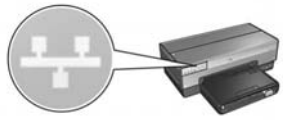
1. Follow the steps on page 14 to install the printer software on a Mac OS X computer.
2. Open **Chooser**, and then select the **HP Inkjet 6.x** icon.

   Note: If you do not see the **HP Inkjet 6.x** icon, then insert the printer software CD into the computer CD-ROM drive and follow the onscreen instructions to install the Mac OS 9 printer driver. Then repeat step 1.
3. When asked if you want the computer to scan for TCP/IP network printers, click **Yes**.
4. Select the printer, and then close **Chooser**.

Mac OS 9

Infrastructure network without encryption

1. Use an Ethernet cable to connect the printer to an Ethernet port on the network, such as an available Ethernet port on a Wireless Access Point (WAP), router, hub, or wall socket.
2. Verify that the Network light is illuminated. If not, check the cable connections.



3. Press the printer **Report Page** button to print an HP Report page.

4. Launch the computer Internet browser, and then enter the printer URL listed on the HP Report page in the address box to open the printer embedded Web server (EWS).
5. On the EWS, click the **Networking** tab.
6. Under the **Connections** heading, click **Wireless (802.11)**.
7. On the **Wireless (802.11) Interface** screen, click the **Start Wizard** button to start the Wireless Configuration Wizard.

Go to the next page...

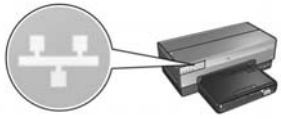
8. Follow the onscreen instructions to configure the printer settings.
9. After the **Wireless Configuration Wizard** is finished, close the EWS.
10. Unplug the Ethernet cable from the printer to enable wireless communication.
11. Insert the printer software CD in the computer CD-ROM drive, and then double-click the CD desktop icon.
12. Double-click the **HP Deskjet 6800 installer** icon, and then restart the computer when prompted.
13. Open **Chooser**, and then select the **HP Inkjet 6.x** icon.
14. When asked if you want the computer to scan for TCP/IP network printers, click **Yes**.
15. Select the printer, and then close **Chooser**.

Additional computers

You must install the printer software on each computer that will use the printer. Follow steps 11 through 15 above to install the printer software on other network computers.

Infrastructure network with encryption

1. Open the **AirPort Admin Utility**, then do the following:
   a. Click **Base Station**, and then select **Equivalent Network Password**.
   b. Write down the WEP key on a piece of paper.
   c. Close the **AirPort Admin Utility**.
2. Use an Ethernet cable to connect the printer to an Ethernet port on the network, such as an available Ethernet port on a Wireless Access Point (WAP), router, hub, or wall socket.
3. Verify that the Network light is illuminated. If not, check the cable connections.



4. Press the printer **Report Page** button to print an HP Report page.

5. Launch the computer Internet browser, and then enter the printer URL listed on the HP Report page in the address box to open the printer embedded Web server (EWS).
6. On the EWS, click the **Networking** tab.
7. Under the **Connections** heading, click **Wireless (802.11)**.

Go to the next page...

8. On the **Wireless (802.11) Interface** screen, click the **Start Wizard** button to start the Wireless Configuration Wizard.

9. Follow the onscreen instructions to configure the printer settings, including the WEP key you wrote down in step 1.
10. After the **Wireless Configuration Wizard** is finished, close the EWS.
11. Unplug the Ethernet cable from the printer to enable wireless communication.
12. Insert the printer software CD in the computer CD-ROM drive, and then double-click the CD desktop icon.
13. Double-click the **HP Deskjet 6800 installer** icon, and then restart the computer when prompted.
14. Open **Chooser**, and then select the **HP Inkjet 6.x** icon.
15. When asked if you want the computer to scan for TCP/IP network printers, click **Yes**.
16. Select the printer, and then close **Chooser**.

Additional computers

You must install the printer software on each computer that will use the printer. Follow steps 12 through 16 above to install the printer software on other network computers.

Ad hoc or computer-to-computer

1. Press the printer **Report Page** button to print an HP Report page.

2. Open the **AirPort Setup Assistant**, and then follow the onscreen instructions for joining an existing wireless network. Use **hpsetup** as the existing network to join.
3. Find the **URL** listed on the HP Report page.
4. Launch the computer Internet browser, and then enter the printer URL listed on the HP Report page in the address box to open the printer embedded Web server (EWS).
5. On the EWS, click the **Networking** tab.
6. Under the **Connections** heading, click **Wireless (802.11)**.
7. On the **Wireless (802.11) Interface** screen, click the **Advanced** tab.
8. Enter the wireless network settings for the wireless network to which you want to connect the printer:
   - Under the **Network Name** heading, enter the network name (such as "MyNetwork") in the **SSID** box.
   - Under the **Network Settings** heading:
     - Select **Ad Hoc**.
     - Select the channel from the **Channel** drop-down list.
     - Enter the network wireless security settings.
9. After entering the wireless network settings, click the **Apply** button, and then close the EWS.
10. Open the **AirPort Setup Assistant**, and then reset the computer to the original AirPort configuration.

Go to the next page...

11. Insert the printer software CD in the computer CD-ROM drive, and then double-click the CD desktop icon.
12. Double-click the **HP Deskjet 6800 installer** icon, and then restart the computer when prompted.
13. Open **Chooser**, and then select the **HP Inkjet 6.x** icon.
14. When asked if you want the computer to scan for TCP/IP network printers, click **Yes**.
15. Select the printer, and then close **Chooser**.

Additional computers

You must install the printer software on each computer that will use the printer. Follow steps 11 through 15 above to install the printer software on other network computers.

802.11g

The printer defaults to 802.11b in ad hoc mode in order to be compatible with the widest assortment of 802.11 devices. If your network is made up of only 802.11g devices, then you might want to configure the printer to operate in 802.11g mode in order to optimize network performance.

To configure the printer to operate in 802.11g mode while connected to an ad hoc network, follow the steps under “802.11g” on page 13.

Troubleshooting a wireless connection

During software installation

During the software installation process, the setup wizard searches for the printer twice, once when the Ethernet cable is connected to the printer, and then after the Ethernet cable has been removed.

The computer cannot find the printer when the Ethernet cable is connected

If the computer cannot find the printer when the Ethernet cable is connected, verify the following before investigating any of the topics in this section:

- All cable connections to the computer and the printer are secure.
- The network is operational and the network hub, switch, router, or Wireless Access Point (WAP) is powered on.
- The printer is powered on, paper is loaded in the In tray, and the print cartridges are correctly installed.
- All applications, including virus protection programs and personal firewalls, are closed or disabled.

If you corrected any of the above, try running the installation wizard again.

Connect the Ethernet cable if it is not connected

Connecting the Ethernet cable to the printer is crucial to successfully configuring the printer to operate on a wireless network.

Use an Ethernet cable to connect the printer to an Ethernet port on the network, such as an available Ethernet port on a Wireless Access Point (WAP), router, hub, or wall socket.

After connecting the cable, rerun the installation wizard. When prompted during the installation, remove the Ethernet cable.

Check the Network light

Check the Network light on the front of the printer. If the Network light is not illuminated, then the printer is not connected to the network.

Verify that the cable connections are secure. If the cable connections are secure, press the **Report Page** button on the front of the printer to print an HP Report page.

Then try one of the following solutions to connect the printer to the network.

- **Disable any software firewall running on the computer**

  A software firewall can prevent the computer from finding the printer on the network during the printer software installation process. If the computer cannot discover the printer, then the printer software cannot be installed on the computer.

  If the computer has a software firewall other than the firewall included with Windows XP installed (such as, BlackICE®, ZoneAlarm®, or Brickhouse®), consult the documentation that came with the firewall for help in disabling the firewall.

  Note: The software firewall included with Windows XP does not interfere with the connection to the printer. If the computer is only running the Windows XP software firewall, then you do not need to disable the firewall during software installation or assign the printer a static IP address.

  Before installing the printer software on a computer, temporarily disable the software firewall on the computer, and then assign the printer a static IP address. After the printer software is installed on the computer, re-enable the firewall.

  For instructions about connecting the printer to a network on which computers are protected by a software firewall, go to "Configuring the printer for a software firewall" on page 52.

- **Place the printer and the computer on the same subnet**

  A subnet is a small network that is part of a larger network. If the computer is on a different subnet than the printer, the software installation can be problematic.

  Compare the printer IP address listed on the HP Report page with the IP address for the computer. If the first set of digits in the IP addresses are not identical, then the printer and the computer are not on the same subnet. For example, if the computer IP address begins with 169 and the printer IP address begins with 10, then the printer and the computer are not on the same subnet.

  To find the IP address on a Windows computer:

  1. Click **Start**, click **Run**, and then enter **Command**.
  2. Type **ipconfig** at the command prompt, and then press **Enter**.

  To find the IP address on a Macintosh OS X computer:

  1. Open the **Network** control panel.
  2. Select **Airport** in the **Show** drop-down list, and then click **TCP/IP**.

  To find the IP address on a Macintosh OS 9 computer, select **TCP/IP** from the **Apple** menu.

  If the computer and the printer are not on the same subnet, move the printer to the same subnet as the computer, and then run the setup wizard again.

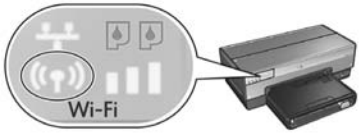
The computer and the printer are on different subnets.

The computer and the printer are on the same subnet.

- **Verify that the computer is connected to the network**
  Verify that the computer is connected to the network and the computer LAN or network card is operating correctly.

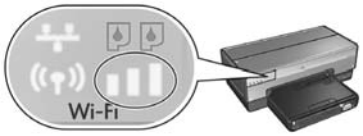
The computer cannot find the printer after you remove the network cable

Check the Wireless Status light on the front of the printer. If the Wireless Status light is not illuminated, then the printer wireless radio is not active.



Verify that the network cable has been removed from the printer. The printer cannot communicate over a wireless connection if the network cable is connected to the printer Ethernet port.

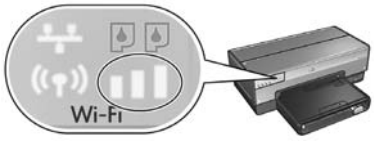
Check the Network light
Check the Network light on the front of the printer. If the Network light is not illuminated, then the printer is not connected to the network.



Try the following solutions:

- **Check the Signal Strength indicator**

  Check the Signal Strength indicator on the front of the printer. If all three bars are illuminated, then the printer is receiving a strong radio signal.



  If none or only one of the bars on the Signal Strength indicator is illuminated, then verify the following conditions:

  - No large objects are obstructing the path between the printer and the WAP or the printer and the computer.
  - The printer is within range of the WAP or computer.
  - A cordless phone or microwave oven is not operating near the wireless network.

- **Compare the printer wireless settings to the network wireless settings**

  Press the **Report Page** button on the front of the printer to print an HP Report page.

  Check the settings displayed on the HP Report page against the wireless settings for the network. Find the settings that do not match. Use the Ethernet cable to connect the printer to the network, rerun the setup wizard, and then enter the correct network wireless settings to configure the printer for the network.

- **The Wireless Access Point (WAP) filters by MAC address**

  If the network WAP or router filters network devices by MAC address, then follow these steps:

  1. Find the printer hardware address (MAC address) on the HP Report page.
  2. Open the configuration utility for the WAP or router.
  3. Enter the printer MAC address for the printer.

  For help using the configuration utility for the WAP or router, consult the documentation that came with the WAP or router.

After software installation

Printer does not print

If the printer does not print, then verify the following:

- The printer is loaded with paper.
- The printer is not experiencing a paper jam.
- The Print Cartridge Status lights on the front of the printer are not illuminated or flashing.
- The printer is selected in the application from which you are attempting to print.
- The network is operational and the network hub, switch, router, or Wireless Access Point (WAP) is powered on.
- The printer is powered on.

For further troubleshooting information, see the printer online user's guide installed on the computer.

If each of the above conditions is true, then follow the steps to check the Network light as shown under "Check the Network light" on page 30.

Network settings are wrong or have changed

If any of the settings displayed on the HP Report page do not match the network settings, or if the network wireless security settings have changed, follow these steps:

1. Connect the Ethernet cable to the printer Ethernet port, and then do one of the following tasks:
   - For an ad hoc network: connect the Ethernet cable to your computer.
   - For an infrastructure network: connect the Ethernet cable to the Wireless Access Point or router.
2. Open the printer embedded Web server (EWS). For help opening the EWS, see page 50.
3. On the EWS, click the **Networking** tab.
4. Under the **Connections** heading click **Wireless (802.11)**.
5. On the **Wireless Setup** tab, click the Start Wizard button.
6. After the wireless setup wizard has finished, close the EWS, and then disconnect the Ethernet cable.

If the printer still does not print, try the following solutions:

- **Network authentication protocol is not supported by the printer**

  If you changed the network authentication protocols on your wireless network after connecting the printer to the network, you might have selected a protocol that is not supported by the printer.

  The printer can support WEP authentication, WPA-AES, and WPA-TKIP. The network to which the printer is connected must use one of these authentication protocols or no authentication at all.

- **Software firewall is blocking access to the printer**

  If your network uses DHCP or AutoIP to assign IP addresses to network devices, then a software firewall installed on your computer might block access to the printer after the printer is connected to the network and the printer software is installed on the computer.

  Note: The software firewall included with Windows XP does not interfere with the connection to the printer. If the computer is only running the Windows XP software firewall, then you do not need to disable the firewall during software installation or assign the printer a static IP address.

  To fix this problem, follow the steps under "Configuring the printer for a software firewall" on page 52.

- **The printer and the computer are not on the same subnet**

  A subnet is a small network that is part of a larger network. If the computer is on a different subnet than the printer, the computer and the printer might not be able to communicate.

  Compare the printer IP address listed on the HP Report page with the IP address for the computer. If the first set of digits in the IP addresses are not identical, then the printer and the computer are not on the same subnet. For example, if the computer IP address begins with 169 and the printer IP address begins with 10, then the printer and the computer are not on the same subnet.

  To find the IP address on a Windows computer:

  1. Click **Start**, click **Run**, and then enter **Command**.
  2. Type **ipconfig** at the command prompt, and then press **Enter**.

  To find the IP address on a Macintosh OS X computer:

  1. Open the **Network** control panel.
  2. Select **Airport** in the **Show** drop-down list, and then click **TCP/IP**.

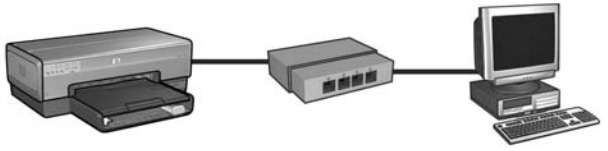
  To find the IP address on a Macintosh OS 9 computer, select **TCP/IP** from the **Apple** menu.

  If the computer and the printer are not on the same subnet, move the printer to the same subnet as the computer.

The computer and the printer are on different subnets.

The computer and the printer are on the same subnet.

Connecting the printer to a wired Ethernet network



Getting started

Has the printer hardware been set up?

Follow the instructions on the setup poster that came with the printer to set up the printer hardware before connecting the printer to the network.

Are computers on the network protected by a software firewall?

If any of the computers on the network are protected by a software firewall follow the instructions under "Configuring the printer for a software firewall" on page 52 before connecting the printer to the network.

Connecting to the printer

Step 1: Connect the printer to the network

Use an Ethernet cable to connect the printer to the network hub, switch, or router.

For instructions on connecting the printer to a network, see "Step 1: Connect the printer to the network" on page 37.

Step 2: Install the printer software over a wired Ethernet connection

The steps for installing the printer software on your computer vary by operating system: Windows, Mac OS9, and Mac OSX.

For installation instructions, see "Step 2: Install the printer software over a wired Ethernet connection" on page 39.

Step 1: Connect the printer to the network

Follow these steps to connect the printer to an Ethernet network:

1. Verify that the printer is powered on.
2. Connect the Ethernet cable to the network hub, switch, or router.

Note: Do not plug the Ethernet cable into a port labeled **Internet**, **WAN**, or **Uplink**.

3. Connect the Ethernet cable to the Ethernet port on the back of the printer.
4. Do one of the following:

State of the Link light	Task
On	Go to step 5.
Off	Repeat steps 2 through 4. If the Link light is still off, then verify the following: • The printer is powered on. • The network hub, switch, or router is powered on. • All cable connections are secure. • You are using an Ethernet cable.

Go to the next page...

5. Press the printer **Report Page** button to print an HP Report page.

6. Install the printer software on each computer that will use the printer (see "Step 2: Install the printer software over a wired Ethernet connection" on page 39).

   Note: It is recommended that the printer and the computers that use the printer be on the same subnet.

Step 2: Install the printer software over a wired Ethernet connection

Software Firewall? If your computer is protected by a software firewall follow the steps under "Configuring the printer for a software firewall" on page 52 before installing the printer software.

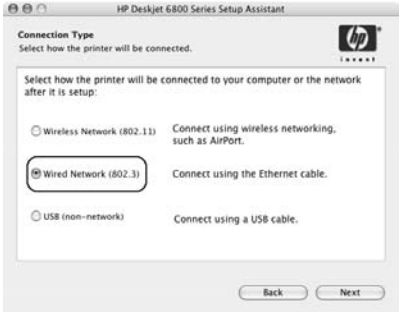
Windows

1. Insert the printer software CD in the computer CD-ROM drive, and then follow the onscreen instructions.
2. On the **Connection Type** screen, select **Wired Network**, and then click **Next**.
3. Follow the onscreen instructions to complete the software installation.

Macintosh

Mac OS X

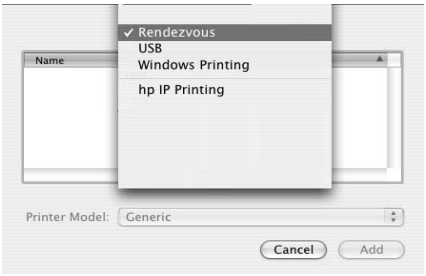
1. Insert the printer software CD in the computer CD-ROM drive, and then double-click the CD desktop icon.
2. Double-click the **HP Deskjet 6800 installer** icon, and then follow the onscreen instructions.
3. On the **Connection Type** screen, select **Wired Network (802.3)**, and then click **Next**.



Go to the next page...

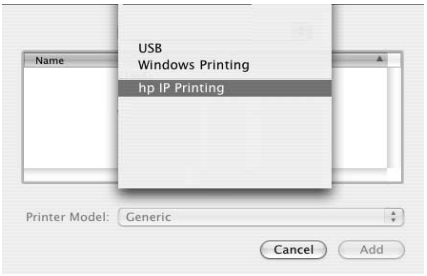
4. Follow the onscreen instructions to complete the software installation.
5. On the **Add Printer** screen, click **Open Print Center**.
6. Click **Add Printer**.
7. Do one of the following depending on the version of Mac OS X you are using:

Mac OS x v 10.2.3



Select **Rendezvous**.

Mac OS x v 10.2.2 and lower



Select **HP IP Printing**, and then click the **Discover** button.

8. Select the printer, and then click the **Add** button.
9. Close **Print Center**.

Mac OS 9

1. Insert the printer software CD in the computer CD-ROM drive, and then double-click the CD desktop icon.
2. Double-click the **HP Deskjet 6800 installer** icon, and then restart the computer when prompted.
3. Open **Chooser**, and then select the **HP Inkjet 6.x** icon.
4. When asked if you want the computer to scan for TCP/IP network printers, click **Yes**.
5. Select the printer, and then close **Chooser**.

Troubleshooting a wired Ethernet connection

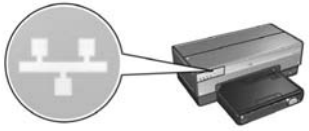
During installation

The computer cannot find the printer

If you are unable to install the printer software on the computer or discover the printer, verify the following before investigating any of the topics in this section:

- All cable connections to the computer and the printer are secure.
- The network is operational and the network hub, switch, or router is powered on.
- The printer is powered on.
- All applications, including virus protection programs and personal firewalls, are closed or disabled.

Check the Network light on the front of the printer. If the Network light is not illuminated, then the printer is not connected to the network.



Verify that the cable connections are secure. If the cable connections are secure, press the **Report Page** button on the front of the printer to print an HP Report page.

Then try one of the following solutions to connect the printer to the network.

- **Printer and computer are on different subnets**

  A subnet is a small network that is part of a larger network. If the computer is on a different subnet than the printer, the software installation can be problematic.

  Compare the printer IP address listed on the HP Report page with the IP address for the computer. If the first set of digits in the IP addresses are not identical, then the printer and the computer are not on the same subnet. For example, if the computer IP address begins with 169 and the printer IP address begins with 10, then the printer and the computer are not on the same subnet.

  To find the IP address on a Windows computer:

  1. Click **Start**, click **Run**, and then enter **Command**.
  2. Type **ipconfig** at the command prompt, and then press **Enter**.

  To find the IP address on a Macintosh OS X computer:

  1. Open the **Network** control panel.
  2. Select **Airport** in the **Show** drop-down list, and then click **TCP/IP**.

  To find the IP address on a Macintosh OS 9 computer, select **TCP/IP** from the **Apple** menu.

  If the printer and the computer are not on the same subnet, move the printer to the same subnet as the computer and then run the installation wizard again.

The computer and the printer are on different subnets.

The computer and the printer are on the same subnet.

- **Disable any firewall running on the computer**

  A software firewall can prevent the computer from finding the printer on the network during the printer software installation process. If the computer cannot discover the printer, then the printer software cannot be installed on the computer.

  If the computer has a software firewall other than the firewall included with Windows XP installed (such as BlackICE®, ZoneAlarm®, or Brickhouse®), consult the documentation that came with the firewall for help in disabling the firewall.

  Note: The software firewall included with Windows XP does not interfere with the connection to the printer. If the computer is only running the Windows XP software firewall, then you do not need to disable the firewall during software installation or assign the printer a static IP address.

  Before installing the printer software on a computer, temporarily disable the software firewall on the computer, and then assign the printer a static IP address. After the printer software is installed on the computer, re-enable the firewall.

  For instructions about connecting the printer to a network on which computers are protected by a software firewall, go to "Configuring the printer for a software firewall" on page 52.

After installation

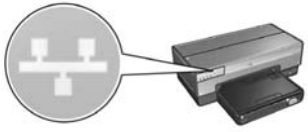
Printer does not print

If the printer does not print, then verify the following:

- The printer is loaded with paper.
- The printer is not experiencing a paper jam.
- The Print Cartridge Status lights on the front of the printer are not illuminated or flashing.
- The printer is selected in the application from which you are attempting to print.
- The network is operational and the network hub, switch, or router is powered on.
- The printer is powered on.
- All cable connections to the computer and the printer are secure.

For further troubleshooting information, see the printer online user guide installed on the computer.

Check the Network light on the front of the printer. If the Network light is not illuminated, then the printer is not connected to the network.



Verify that the cable connections are secure. If the cable connections are secure, press the **Report Page** button on the front of the printer to print an HP Report page.

Then try one of the following solutions to connect the printer to the network.

- **Printer and computer are on different subnets**

  A subnet is a small network that is part of a larger network. If the computer is on a different subnet than the printer, the computer and the printer might not be able to communicate.

  Compare the printer IP address listed on the HP Report page with the IP address for the computer. If the first set of digits in the IP addresses are not identical, then the printer and the computer are not on the same subnet. For example, if the computer IP address begins with 169 and the printer IP address begins with 10, then the printer and the computer are not on the same subnet.

  To find the IP address on a Windows computer:

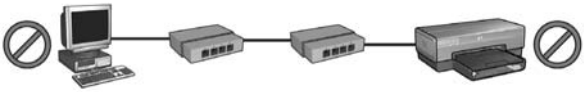
  1. Click **Start**, click **Run**, and then enter **Command**.
  2. Type **ipconfig** at the command prompt, and then press **Enter**.

  To find the IP address on a Macintosh OS X computer:

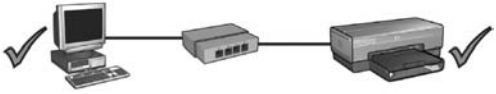
  1. Open the **Network** control panel.
  2. Select **Airport** in the **Show** drop-down list, and then click **TCP/IP**.

  To find the IP address on a Macintosh OS 9 computer, select **TCP/IP** from the **Apple** menu.

  If the printer and the computer are not on the same subnet, move the printer to the same subnet as the computer.



The computer and the printer are on different subnets.



The computer and the printer are on the same subnet.

- **Software firewall is blocking access to the printer**

  If your network uses DHCP or AutoIP to assign IP addresses to network devices, then a software firewall installed on your computer might block access to the printer after the printer is connected to the network and the printer software is installed on the computer.

  Note: The software firewall included with Windows XP does not interfere with the connection to the printer. If the computer is only running the Windows XP software firewall, then you do not need to disable the firewall during software installation or assign the printer a static IP address.

  To fix this problem, follow the steps under "Configuring the printer for a software firewall" on page 52.

Network settings have changed

Follow these steps to check the printer network settings listed on the HP Report page against the actual settings for the network:

1. Open the configuration utility for the network hub, switch, or router and find the network settings.

   For help using the configuration utility for the network hub, switch, or router, consult the documentation that came with the hub, switch, or router.
2. Open the printer embedded Web server (EWS). For help opening the EWS, see page 50.
3. On the EWS, click the **Networking** tab.
4. Under the **Connections** heading, click **Wired (802.3)**.
5. Click the **IP Configuration** tab.
6. Enter the correct settings for network, and then click the **Apply** button.
7. Close the EWS.
8. Press the printer **Report Page** button to print an HP Report page.

9. Compare the printer network settings to the actual setting for the network. If the settings do not match, repeat steps 2 through 9.

Managing the printer on a network

The printer offers several tools to help you manage the printer on a network.

HP Report page 49

Embedded Web server (EWS). 50

Changing wireless security settings 51

Configuring the printer for a software firewall 52

Resetting the printer to factory default settings. 57

HP Report page

Press the **Report Page** button to print an HP Report page.

The HP Report page supplies useful information about the printer wireless, wired, and PictBridge connections, such as the following items:

- URL: The address of the printer embedded Web server.
- Hardware address (MAC): The printer media access control (MAC) address.
- IP address: The IP address of the printer.
- Subnet mask: The subnet mask of the network to which the printer is connected.
- Default gateway: The IP address of the gateway.
- Communication mode: The wireless communication mode to which the printer is set.
- Network name (SSID): The network name of the wireless network to which the printer is connected.
- Channel: The number of the channel on which the printer wireless radio is broadcasting.
- Authentication type: The authentication protocol that the printer is using.
- Encryption: The wireless encryption strategy that the printer is using.

Embedded Web server (EWS)

The printer has an internal Web page, called the embedded Web server (EWS). You can access the EWS with an Internet browser.

To use the EWS, the printer must have a valid IP address and be on the same subnet as the computer you are using.

Follow these steps to open the EWS:

1. Press the printer **Report Page** button to print an HP Report page.

2. Find the printer URL on the HP Report page.

   Note: Verify the printer URL is *something other than* **http://0.0.0.0** and that the subnet mask matches that of your computer. If either of these conditions is not true, connect an Ethernet cable to the printer and the network router, and then repeat steps 1 and 2.

3. Launch the Web browser (use either Internet Explorer 5 and higher, Netscape 4.75 and higher, or Safari).
4. Enter the printer URL in the browser address box, and then press **Enter**.

Changing wireless security settings

If you change the wireless security settings for your wireless network, you must reconfigure the printer with the new settings.

Getting started

Before reconfiguring the printer, you must find the following settings:

- Network name (SSID)
- The new wireless security settings:
  - WEP: Find the WEP key(s)
  - WPA: Find the passphrase and authentication protocol

Consult the configuration utility for the network Wireless Access Point (WAP) to find the wireless security settings.

Configuring the printer

Follow these steps to reconfigure the printer with new wireless security settings:

1. Use an Ethernet cable to connect the printer to an Ethernet port on the network, such as an available Ethernet port on a Wireless Access Point (WAP), router, hub, or wall socket.
2. Open the printer embedded Web server (EWS). For help opening the EWS, see page 50.
3. On the EWS, click the **Networking** tab.
4. Under the **Connections** heading, click **Wireless (802.11)**.
5. On the **Wireless Setup** tab, click the **Start Wizard** button.
6. Follow the onscreen instructions to enter the new settings and finish the configuration.

Configuring the printer for a software firewall

A software firewall protects a computer from unauthorized access when a computer is connected to the Internet.

Popular software firewalls include: BlackICE®, ZoneAlarm®, and Brickhouse®.

> **Note:** Windows XP has a software firewall included. If your computer uses only the Windows XP firewall, then you do not need to follow the instructions contained in this section.

Problem

Unfortunately, a software firewall can cause two problems when using the printer on a wired or wireless network.

- **Failed installation**: A software firewall can prevent the computer from finding the printer on the network during the printer software installation process. If the computer cannot discover the printer, then the printer software cannot be installed on the computer.
- **Lost connection**: If the printer is connected to a wired or wireless network that uses DHCP or AutoIP to assign IP addresses, then if the printer IP address changes, a software firewall can prevent the computer from finding the printer on the network even if the printer software has been successfully installed on the computer.

Solution

In order for the printer to be usable on a network on which computers are protected by a software firewall, you must do the following:

1. Temporarily disable the software firewall before installing the printer software on a computer.
2. Assign the printer a static IP address.

Temporarily disabling the software firewall before installation

Before assigning the printer a static IP address and then installing the printer software on a computer, temporarily disable the software firewall on the computer. For instructions about disabling the software firewall, see the documentation that came with the software firewall.

Whenever the software firewall is disabled, HP strongly recommends that the following items be installed on the computer:

- A hardware device, such as a gateway, that provides firewall protection between the computer and the Internet
- An up-to-date anti-virus software program

For maximum virus protection while the firewall is disabled, disconnect the computer or router from the Internet while you install the printer software on the computer. After the printer software is installed, you can reconnect the computer or router to the Internet.

After disabling the software firewall, follow the steps for assigning the printer a static IP address.

Assigning the printer a static IP address

Getting ready

Before assigning the printer a static IP address, you must find the following information about your network:

- The IP address range of the network DHCP server
- Subnet mask
- Gateway

To find this information, see the configuration utility for the network router or switch. Otherwise, see the documentation that came with the network router or switch.

The static IP address must be outside the range of IP addresses that your network assigns to devices on the network.

For example, a network might use DHCP to assign IP addresses that range from 1.1.1.1 to 1.1.1.100. In this case, 1.1.1.25 would not be a good static IP address to assign to the printer since it falls in the range of IP addresses assigned by the network. However, 1.1.1.101 would be a good static IP address because it falls outside the range of IP addresses assigned by the network.

Assigning the static IP address

Follow these steps to assign the printer a static IP address:

1. Use an Ethernet cable to connect the printer to an Ethernet port on the network, such as an available Ethernet port on a Wireless Access Point (WAP), router, hub, or wall socket.
2. When the Network light on the front of the printer is turned on and solid, press the **Report Page** button to print an HP Report page.

3. Find the printer URL on the HP Report page.
4. Launch the computer Internet browser, and then enter the printer URL listed on the HP Report page in the address box to open the printer embedded Web server (EWS).
5. On the EWS, click the **Networking** tab.
6. Under the **Connections** heading, click one of the following options:
   - If you are connecting the printer to a wired Ethernet network, click **Wired (802.3).**
   - If you are connecting the printer to a wireless network, click **Wireless (802.11)**, and then click the **IP Configuration** tab.
7. Under the **IP Address Configuration** heading, select **Manual IP**, and then enter the static IP address you want to assign to the printer, the subnet mask, and default gateway.

   Note: Remember, the static IP address must be outside the range of IP addresses assigned by the network. Also, if you do not have a subnet mask or default gateway to enter, then enter 0.0.0.0 for each item.

Go to the next page...

8. Under the **DNS Address Configuration** heading, enter the preferred and alternate DNS servers.

   Note: If your do not have preferred and alternate DNS servers to enter, then enter 0.0.0.0 for each item.

9. After entering all of the information, click the **Apply** button, and then close the EWS.
10. Open the configuration utility for the software firewall, and then enter the IP address that you assigned to the printer in the list of accepted IP addresses.

    For help with the software firewall configuration utility, see the documentation that came with the software firewall.

After assigning the printer a static IP address, follow the printer software installation instructions appropriate for how you want to connect the printer to the network:

- Wireless connection: go to page 9.
- Wired Ethernet connection: go to page 37.

Note: After installing the printer software, re-enable the software firewall on the computer.

Resetting the printer to factory default settings

Resetting the printer to the factory default settings clears all the settings from the printer memory for your network. This should only be done as a last resort when troubleshooting the printer.

Resetting the printer to the factory default settings may require you to reinstall the printer software. Additionally, you will also have to reconfigure the printer security settings.

The printer default settings are:

Option	**Default setting**
Communication mode	Ad hoc
Network name (SSID)	hpsetup
Encryption	None
IP address	Automatic
Wireless radio	On
EWS administrator password	[blank]

Follow these steps to reset the printer to the factory default settings:

1. Verify that the printer is powered on.
2. Press and hold down the **Report Page** button.
3. While holding down the **Report Page** button, press the **Cancel** button three times.
4. Release the **Report Page** button.

Glossary

802.11g and b: 802.11g and 802.11b are wireless standards that communicate in the 2.4 GHz band. 802.11g provides speeds up to 54 Mbps. 802.11b provides speeds up to 11 Mbps.

Ad hoc network: A type of wireless network in which devices directly communicate with each other rather than through a Wireless Access Point (WAP). Ad hoc networks are typically small and simple (for example, two wireless PCs or a wireless PC and a wireless printer). Performance on these types of networks can degrade if more than six devices are on the network. Ad hoc networks are also known as "computer-to-computer networks," "peer-to-peer networks," "independent basic service stations (IBSS)," or "direct-connect wireless networks."

Authentication: Authentication is a wireless network security strategy. On a network with authentication, devices use a shared key as a password and communicate only with devices that know the key. Unlike WEP, authentication does not encrypt the data sent between wireless devices. However, authentication can be used in conjunction with WEP. Authentication keys and WEP keys can be identical.

Channel: One of several pre-set frequencies at which 802.11-enabled devices communicate in order to reduce interference. The number of channels available varies by country/region.

Embedded Web server (EWS): The printer embedded Web server is a networking configuration utility that is accessed through an Internet browser. For more information, see "Embedded Web server (EWS)" on page 50.

Encryption: A network security strategy that encodes the data sent across a wireless network making the data unintelligible to eavesdroppers. The printer supports WEP and WPA.

Encryption keys: A sequence of characters or digits that a wireless device uses to encode data. Encryption keys can be static (as they are in WEP) or dynamic (as they are in WPA).

Ethernet: A popular form of wired computer networking for Local Area Networks.

Ethernet cable: There are two types of Ethernet cables. A straight-through cable is the most common and is used to connect devices on a network to a hub or router. A crossover cable is used to connect two devices that have Ethernet ports but that are not hubs or routers.

Firewall: A combination of hardware and software tools that protect a network from unwanted entry.

Gateway: A dedicated device (router or computer) that connects two different networks. For example, a computer on an Ethernet network may act as a gateway between the network and the Internet.

Hub: A simple device that acts as the center of an Ethernet network. Other devices on the network are connected to the hub.

IP address (Internet Protocol address): A unique number that identifies a device on a network. The IP address is often automatically assigned by DHCP or AutoIP. However, a device can be manually assigned a static IP address.

Infrastructure network: A type of wireless network in which devices communicate with each other through a Wireless Access Point (WAP), such as a wireless network hub, router, or gateway.

Network card: A network card enables a computer to communicate on a wired or wireless network.

Network name: A network name is an alphanumeric, case-sensitive character string that provides basic access control to a wireless network. A network name is also known as a "Service Set Identifier (SSID)."

Subnet: A small network that acts as part of a large network. It is recommended that the printer and the computers that use the printer all be on the same subnet.

Subnet mask: A number that identifies the IP addresses that belong to a subnet.

Switch: A network device that manages network traffic in order to minimize collisions and maximize speed.

USB flash drive: A USB flash drive is a portable storage device that plugs into a USB port. USB flash drives are sometimes called "thumbdrives" or "jumpdrives."

WEP: Wired Equivalent Privacy (WEP) provides security by encrypting data sent over radio waves from one wireless device to another wireless device. WEP encodes the data sent across the network making the data unintelligible to eavesdroppers. Only devices that share the same WEP settings as the printer will be able to communicate with the printer. WEP depends on encryption keys that are static and provides less security than WPA.

WEP key: A WEP key, or encryption key, is a sequence of alphanumeric characters or hexadecimal digits. After creating a WEP key, you must remember it or store it in a secure location. You may not be able to retrieve the WEP key if you lose it. A WEP key is either 64- or 128-bits long. The first 24 bits of the key are provided automatically. When creating the WEP key, the person creating the key provides the remaining bits (40 bits in the case of a 64-bit key, or 104 bits in the case of a 128-bit key).

Wireless Access Point (WAP): A Wireless Access Point (WAP) is a device through which devices (for example, computers and printers) on an infrastructure wireless network communicate with one another. A WAP is also called a "base station."

Wireless Network Key: On a computer that is running Windows XP service pack 2, you can use a USB flash drive to create a Wireless Network Key. A Wireless Network Key allows you to easily configure wireless devices for a wireless network. For more information, see "Infrastructure network with a Wireless Network Key" on page 10.

Wireless profile: A wireless profile is a collection of wireless network settings that applies to a particular wireless network. For example, a wireless LAN card can have one profile for a home network and another profile for an office network. When installing a device on a network, be sure to select the appropriate profile.

WPA: Wi-Fi Protected Access (WPA) provides security by encrypting data sent over radio waves from one wireless device to another wireless device and by controlling access to network resources through authentication protocols. Only devices that share the same WPA settings as the printer will be able to communicate with the printer. WPA uses encryption keys that change frequently. WPA provides better security than WEP.

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