Multi-Protocol On-board Print/Scan Server

NETWORK USER'S GUIDE

MFC-7225N
MFC-7820N

Please read this manual thoroughly before using this device on your network. You can print or view this manual from the CD-ROM at any time, please keep the CD-ROM in a convenient place for quick and easy reference at all times.

The Brother Solutions Center (http://solutions.brother.com) is your one stop resource for all your printing needs. Download the latest drivers and utilities for your machine, read the FAQs and troubleshooting tips or learn about special printing solutions in the **Solutions** and **Customer Education** sections.

Version 0

Definitions of warnings, cautions, and notes

We use the following icon throughout this User's Guide:

> Notes tell you how you should respond to a situation that may arise or give tips about how the operation works with other features.

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In Europe Visit ***http://www.brother.com*** for contact information on your local Brother office.

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Brother has set up an easy-to-use fax-back system so you can get instant answers to common technical questions and information about all our products. This is available 24 hours a day, seven days a week. You can use the system to send the information to any fax machine.

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1 Introduction

Overview

The Brother print/scan server allows your Brother machine to be shared on a 10/100MB Ethernet Network and provides printing services for Windows® 98/98SE/Me, Windows NT® 4.0, Windows® 2000/XP supporting the TCP/IP protocols and Mac OS® 9.1-9.2 / Mac OS X® 10.2.4 or greater supporting TCP/IP.

To use the Brother machine through a network, you need to configure the print/scan server, and set up the computers you use.

In this chapter, you will learn the basic concept of the network connection and protocols, and in Chapter 2 and 3, you will read information on network configuration. Chapter 4 through Chapter 6 describes how to configure your print/scan server along with your operating system as follows:

Chapter 4: Network printing from Windows®: basic TCP/IP Peer-to-Peer printing

Chapter 5: Internet printing for Windows®

Chapter 6: Network printing from Macintosh®

Types of network connection

Generally speaking, there are two types of network connection: Peer-to-Peer environment and a Network Shared environment.

Network connection example

Peer-to-Peer printing using TCP/IP

In a Peer-to-Peer environment, each computer directly sends and receives data to and from the Brother machine.
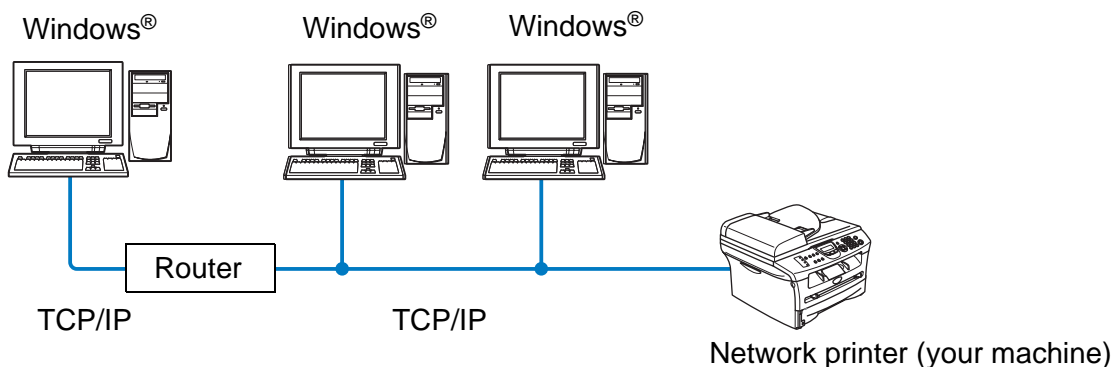
■ In a smaller network of 2 or 3 computers, we recommend the Peer-to-Peer printing method as it is easier to configure than the Network Shared Printing method described on the following page. See *Network shared printing* on page 1-3.

■ Each computer must use the TCP/IP Protocol.

■ The Brother machine needs to have an appropriate IP address configuration.

■ If you are using routers, computers can access the Brother machine through the routers. (In this case, the Gateway address must be configured to both computers and the Brother machine.)

Network shared printing

In a Network Shared environment, each computer sends and receives data to and from the Brother machine via a centrally controlled computer. This type of computer is often called a "Server" or a "Print Server". Its job is to access print jobs from other computers and then control the printing of these jobs.
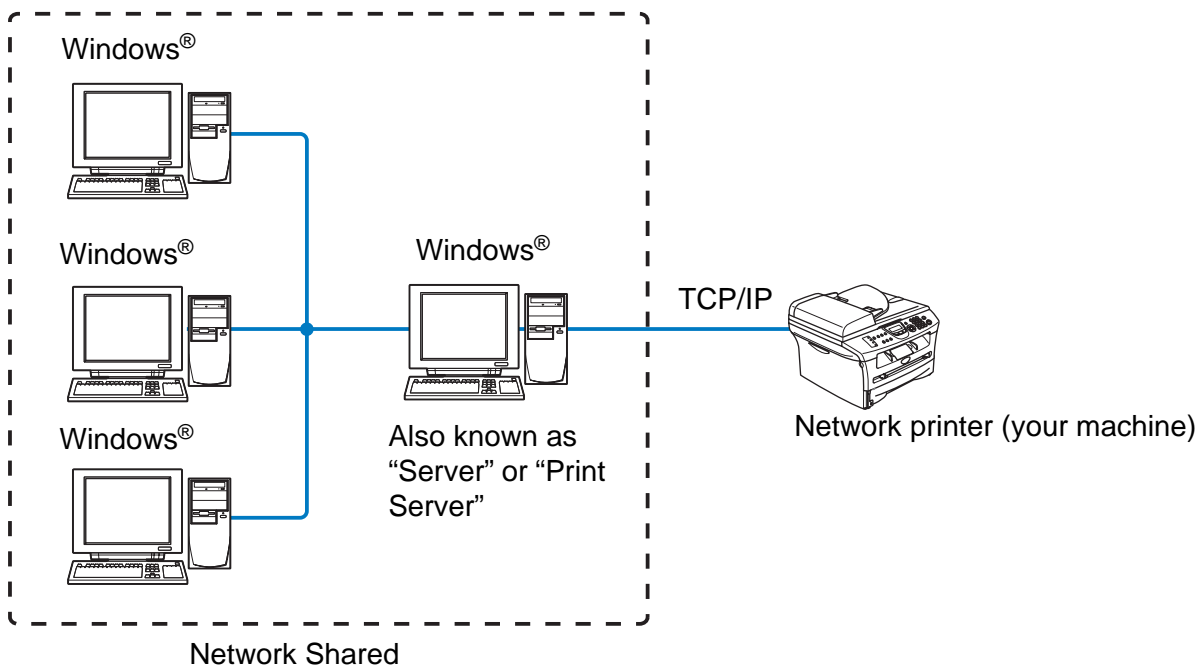
Network Shared

■ In a larger network, we recommend a Network Shared printing environment.

■ The "Server" or the "Print Server" needs the TCP/IP Print Protocol configured.

■ The Brother machine needs to have an appropriate IP address configuration unless the machine is shared via the parallel or USB interface at the server.

Protocols

TCP/IP protocols and functionalities

Protocols are the standardized sets of rules for transmitting data on a network. Protocols allow the users to gain access to network-connected resources.

The print/scan server used on this Brother product supports the TCP/IP (Transmission Control Protocol/Internet Protocol) protocol.

TCP/IP is the most popular set of protocols used for communication such as Internet and E-mail. This protocol can be used in almost all operating systems such as Windows®, Macintosh® and Linux.

The following TCP/IP protocols are available on this Brother product.

DHCP/BOOTP/RARP

By using the DHCP/BOOTP/RARP protocols, the IP address can be automatically configured.

Note

To use the DHCP/BOOTP/RARP protocols, please contact your network administrator.

APIPA

If you do not assign an IP address manually (using the BRAdmin software) or automatically (using a DHCP/BOOTP/RARP server), the Automatic Private IP Addressing (APIPA) protocol will automatically assign an IP address from the range 169.254.1.0 to 169.254.254.255.

DNS client

The Brother print/scan server supports the Domain Name Service (DNS) client function. This function allows the print/scan server to communicate with other devices by using its DNS name.

LPR/LPD

One of the standard printing protocols in a TCP/IP network.

Port9100

HP network printer compatible port.

SMTP client

Simple Mail Transfer Protocol (SMTP) client is used to send e-mails via Internet or Intranet.

IPP

Internet Printing Protocol (IPP Version 1.0) allows you to print documents directly to any accessible printer via the internet.

mDNS

mDNS allows the Brother print/scan server to automatically configure itself to work in a Mac OS® X Simple Network Configured system. (Mac OS® X 10.2.4 or greater).

TELNET

The Brother print/scan server supports TELNET server for command line configuration.

SNMP

Simple Network Management Protocol (SNMP) is used to manage and monitor all sorts of equipments including computers, routers and terminals in a TCP/IP network.

Web server (HTTP)

The Brother print/scan server is equipped with a built in web server that allows you to monitor its status or change some of its configuration settings.

📝 **Note**

We recommend Internet Explorer 6.0 (or higher) or Netscape Navigator 7.1 (or higher). If a different web browser is used, make sure it is compatible with HTTP 1.0 and HTTP 2.0.

Configuring your network printer

Overview

You need to configure the TCP/IP information to your Brother network printer before you use it on your network. In this chapter, you will learn what TCP/IP configuration items you need and how you configure your network printer using these TCP/IP configuration items.

Note

You can configure them using the machine's control panel settings. For the details, please see *Front Panel Setup* in Chapter 3.

We recommend that you use the automatic installer application in the CD-ROM we have provided with the machine. By using this application, you can easily connect your machine to your network and install the network software and printer driver which you need to complete the configuration of your network printer. You will be guided by the on-screen instructions until you are able to use your Brother network printer. Please follow the instructions in the supplied Quick Setup Guide.

If you want to configure your machine without using the automatic installer application, please read this chapter and learn how to configure the TCP/IP information. Then, in Chapter 3 through Chapter 6, you will learn how to install the network software and the printer driver into the operating system running on your computer.

IP addresses, subnet masks and gateways

To use the machine in a networked TCP/IP environment, you need to configure the IP address and subnet mask. The IP address you assign to the print/scan server must be on the same logical network as your host computers. If it is not, you must properly configure the subnet mask and the gateway address.

IP address

An IP address is a series of numbers that identifies each computer connected to a network. An IP address consists of four numbers separated by dots. Each number is between 0 and 255.

Example: In a small network, set the IP addresses by changing the final number.

192.168.1.<u>1</u>, 192.168.1.<u>2</u>, 192.168.1.<u>3</u>

How the IP address is assigned to your print/scan server:

If you have a DHCP/BOOTP/RARP server in your network (typically a UNIX®/Linux or Windows® 2000/XP network) the print/scan server will automatically obtain its IP address from the DHCP server and register its name with any RFC 1001 and 1002-compliant dynamic name services.

For more information on DHCP, BOOTP and RARP, see *Using DHCP to configure the IP address* on page A-1, *Using BOOTP to configure the IP address* on page A-2 and *Using RARP to configure the IP address* on page A-2.

If you do not have a DHCP/BOOTP/RARP server, the Automatic Private IP Addressing (APIPA) protocol will automatically assign an IP address from the range 169.254.1.0 to 169.254.254.255. For more information on APIPA, see *Using APIPA to configure the IP address* on page A-3.

If the APIPA protocol is disabled, the default IP address of a Brother print/scan server is 192.0.0.192. However, you can easily change this IP address number to match with the IP address details of your network. For information on how to change the IP address, see *Setting the IP address and subnet mask* on page 2-3.

Subnet mask

Subnet masks restrict network communication.

Example: PC1 can talk to PC2

> PC1 IP Address:192.168.1.2
> Subnet Mask: 255.255.255.0
>
> PC2 IP Address:192.168.1.3
> Subnet Mask: 255.255.255.0

📝 **Note**

0 denotes that there is no limit to communication at this part of the address.

In the above example, we can communicate with anything that has an IP address that begins with 192.168.1.X

Gateway (and router)

A gateway is a network point that acts as an entrance to another network and sends data transmitted via the network to an exact destination. The router knows where to direct data that arrives at the gateway. If a destination is located at an external network, the router transmits data to the external network. If your network communicates with other networks, you may need to configure the Gateway IP address. If you do not know the Gateway IP address then contact your Network Administrator.

Setting the IP address and subnet mask

Using the BRAdmin Professional utility and the TCP/IP protocol to configure your network printer (for Windows® only)

BRAdmin Professional utility

The BRAdmin Professional utility is designed to allow you to manage your network connected Brother machines in a TCP/IP environment.

How to configure your machine using the BRAdmin Professional utility

📝 **Note**

- Please use the BRAdmin Professional utility version that was supplied on the CD-ROM with your Brother product. You can also download the latest Brother BRAdmin Professional utility version from http://solutions.brother.com. This utility is only available for Windows® users.

- If you are using Personal Firewall software (e.g. the Internet Connection Firewall available in Windows® XP), disable it. Once you are sure that you can print, re-start your Personal Firewall software.

- Node name: Node name appears in current BRAdmin Professional window. The default Node name is "BRN_xxxxxx" ("xxxxxx" is the last six digits of Ethernet address.).

- The default password for Brother print/scan servers is access.

1 Start the BRAdmin Professional utility (from Windows® 98/98SE/Me, Windows NT® 4.0 and Windows® 2000/XP), by clicking **Start** / **Programs** / **Brother Administrator Utilities** / **Brother BRAdmin Professional Utilities** / **BRAdmin Professional**.

2 Select **TCP/IP** in the left frame of the main BRAdmin window.

3 Select **Search Active Devices** from the **Devices** menu. BRAdmin Professional will search for new devices automatically.
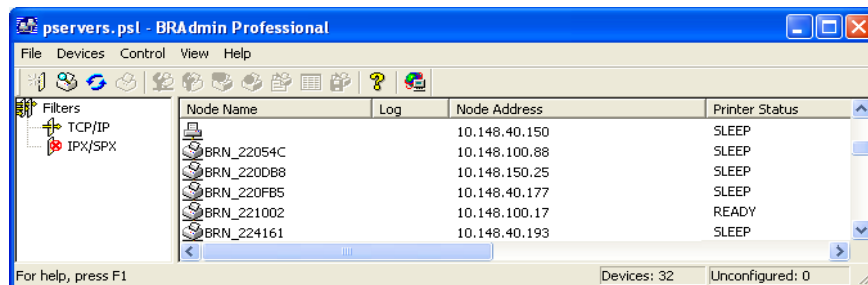
> 📝 **Note**
>
> - If the print/scan server is set to its factory default settings without using a DHCP/BOOTP/RARP server, the device will appear as APIPA in the BRAdmin Professional utility screen.
> - You can find the node name and Ethernet address (**Node Address** above) by printing out the Network Configuration Page. See *Printing the Network Configuration Page* on page 3-7 for information on how to print the Network Configuration Page on your print/scan server.

4 Double-click the unconfigured device you want to configure.

5 Enter the **IP address**, **Subnet Mask** and **Gateway** (if needed) of your print/scan server.

6 Click **OK**.

7 With the correctly programmed IP address, you will see the Brother print/scan server in the device list.

Using other methods to configure your network printer

You can configure your network printer using other methods. See *Other ways to set the IP address (for advanced users and administrators)* on page A-1.

Changing the print/scan server settings

Using the BRAdmin Professional utility and the TCP/IP protocol to change the print/scan server settings (for Windows® only)

1 Start the BRAdmin Professional utility (from Windows® 98/98SE/Me, Windows NT® 4.0 and Windows® 2000/XP), by clicking **Start** / **Programs** / **Brother Administrator Utilities** / **Brother BRAdmin Professional Utilities** / **BRAdmin Professional**.

2 Select **TCP/IP** in the left frame of the main BRAdmin window.

3 Select the print/scan server which you want to configure, in the right frame of the main BRAdmin window.

4 Select **Configure print server** from the **Control** menu.

5 Enter a password. The default Password is `access`.

6 You can now change the print/scan server settings.

Using the HTTP (web browser) and the TCP/IP protocol to change the print/scan server settings

A standard web browser (we recommend Microsoft Internet Explorer® version 6.0 or later, or Netscape Navigator® version 7.1 or later) can be used to change your print/scan server settings using the HTTP (Hyper Text Transfer Protocol). To use a web browser, you must have assigned an IP address to the print/scan server.

1 Type `http://printer_ip_address/` into your browser. (Where `printer_ip_address` is the IP address or the print/scan server name)

   For example: http://192.168.1.2/ (if the printer's IP address is 192.168.1.2.)

📝 **Note**

If you have edited the hosts file on your computer or are using Domain Name System, you can also enter the DNS name of the print/scan server. As the print/scan server supports TCP/IP and NetBIOS names, you can also enter the NetBIOS name of the print/scan server. The NetBIOS name can be seen in the Network Configuration page. The NetBIOS name assigned is the first 15 characters of the node name and by default it will appear as `BRN_xxxxxx` where `xxxxxx` is the last six digits of the Ethernet address.

2 Click **Network Configuration**.

3 Enter a user name and a password. The User Name is `admin` and the default Password is `access`.

4 Click **OK**.

5 Click **Configure TCP/IP**.

6 You can now change the printer server settings.

3 Front Panel Setup

LAN Main Setup Menu

You can connect your machine into the network to use the Network Printer and Network Scanner.

To use all the network functions, you can set up your machine using the control panel LAN menu.

The LAN menu selections allow you to set up the Brother machine for your network configuration. Press **Menu/Set,** then press the appropriate number, **5** for LAN for example. Proceed to the menu selection you wish to configure.

Please note that the machine is supplied with the BRAdmin Professional Windows® software, which also can be used to configure many aspects of the network.

Setup TCP/IP

This menu has nine sections: **Boot Method**, **IP Address**, **Subnet Mask**, **Gateway**, **Node Name**, **WINS Config**, **WINS Server**, **DNS Server** and **APIPA**.

BOOT Method

1 Press **Menu/Set**, **5**, **1**, **1**.

2 Press ▲ or ▼ to select `Auto`, `Static`, `RARP`, `BOOTP` or `DHCP`.

3 Press **Menu/Set**.

4 Press **Stop/Exit**.

Static mode

In this mode the machine's IP address must be manually assigned. Once entered the IP address is locked to the assigned address.

Auto mode

In this mode, the machine will scan the network for a DHCP server, if it can find one, and if the DHCP server is configured to allocate an IP address to the machine, then the IP address supplied by the DHCP server will used. If no DHCP server is available, then the machine will scan for a BOOTP server. If a BOOTP server is available, and it is configured correctly, the machine will take its IP address from the BOOTP server. If a BOOTP server is not available, the machine will scan for a RARP server. If a RARP server also does not answer, the IP Address is scanned through APIPA facility, see page A-3. After it is initially powered ON, it may take a few minutes for the machine to scan the network for a server.

RARP mode

Brother print/scan server IP address can be configured using the Reverse ARP (RARP) facility on your host computer. This is done by editing the /etc/ethers file (if this file does not exist, you can create it) with an entry similar to the following:

```
00:80:77:31:01:07   BRN_310107
```

Where the first entry is the Ethernet address of the print/scan server and the second entry is the name of the print/scan server (the name must be the same as the one you put in the /etc/hosts file).

If the rarp daemon is not already running, start it (depending on the system the command can be rarpd, rarpd -a, in.rarpd -a or something else; type man rarpd or refer to your system documentation for additional information). To verify that the rarp daemon is running on a Berkeley UNIX-based system, type the following command:

```
ps -ax | grep -v grep | grep rarpd
```

For AT&T UNIX-based systems, type:

```
ps -ef | grep -v grep | grep rarpd
```

The Brother print/scan server will get the IP address from the rarp daemon when it is powered on.

BOOTP mode

BOOTP is an alternative to rarp that has the advantage of allowing configuration of the subnet mask and gateway. In order to use BOOTP to configure the IP address make sure that BOOTP is installed and running on your host computer (it should appear in the /etc/services file on your host as a real service; type man bootpd or refer to your system documentation for information). BOOTP is usually started up via the /etc/inetd.conf file, so you may need to enable it by removing the "#" in front of the bootp entry in that file. For example, a typical bootp entry in the /etc/inetd.conf file would be:

```
#bootp dgram udp wait /usr/etc/bootpd bootpd -i
```

📝 **Note**

Depending on the system, this entry might be called "bootps" instead of "bootp".

In order to enable BOOTP, simply use an editor to delete the "#" (if there is no "#", then BOOTP is already enabled). Then edit the BOOTP configuration file (usually /etc/bootptab) and enter the name, network type (1 for Ethernet), Ethernet address and the IP address, subnet mask and gateway of the print/scan server. Unfortunately, the exact format for doing this is not standardized, so you will need to refer to your system documentation to determine how to enter this information (many UNIX systems also have template examples in the bootptab file that you can use for reference). Some examples of typical /etc/bootptab entries include:

```
BRN_310107 1  00:80:77:31:01:07 192.189.207.3
```

and:

```
BRN_310107:ht=ethernet:ha=008077310107:\
ip=192.189.207.3:
```

Certain BOOTP host software implementations will not respond to BOOTP requests if you have not included a download filename in the configuration file; if this is the case, simply create a null file on the host and specify the name of this file and its path in the configuration file.

As with rarp, the print/scan server will load its IP address from the BOOTP server when the printer is powered on.

DHCP mode

Dynamic Host Configuration Protocol (DHCP) is one of several automated mechanisms for IP address allocation. If you have DHCP server in your network (typically a Unix, Windows® 2000/XP network) the print/scan server will automatically obtains its IP address from DHCP server and register its name with any RFC 1001 and 1002-compliant dynamic name services.

📝 **Note**

If you do not want your print/scan server configured via DHCP, BOOTP or RARP, you must set the BOOT METHOD to static, this will prevent the print/scan server from trying to obtain an IP address from any of these systems. To change the BOOT METHOD, use the front panel, Web browser or by using the BRAdmin application.

IP Address

This field displays the current IP address of the machine. If you have selected a BOOT Method of Static, enter the IP address that you wish to assign to the machine (check with your network manager for the IP address to use). If you have selected a method other than Static, the machine will attempt to determine its IP address using the DHCP or BOOTP protocols. The default IP address of your machine will probably be incompatible with the IP address numbering scheme of your network. We recommend that you contact your network manager for an IP address for the network the unit will be connected on.

1 Press **Menu/Set**, **5**, **1**, **2**.

2 Select **1** to change. Enter the IP address.

3 Press **Menu/Set**.

4 Press **Stop/Exit**.

📝 **Note**

When the BOOT METHOD is set to "Auto", the machine cannot receive IP address from a BOOTP server in Windows® 2000. So please ensure that you use DHCP for Windows® 2000 server.

Subnet Mask

This field displays the current subnet mask used by the machine. If you are not using DHCP or BOOTP to obtain the subnet mask, enter the desired subnet mask. Check with your network manager for the subnet mask to use.

1 Press **Menu/Set**, **5**, **1**, **3**.

2 Select **1** to change. Enter the Subnet Mask address.

3 Press **Menu/Set**.

4 Press **Stop/Exit**.

Gateway

This field displays the current gateway or router address used by the machine. If you are not using DHCP or BOOTP to obtain the gateway or router address, enter the address you wish to assign. If you do not have a gateway or router, leave this field blank. Check with your network manager if you are unsure.

1 Press **Menu/Set**, **5**, **1**, **4**.

2 Enter the Gateway address.

3 Press **Menu/Set**.

4 Press **Stop/Exit**.

Node Name

You can register the machine name on the Network. This name is often referred to as a NetBIOS name; it will be the name that is registered by the WINS server on your network. Brother recommends the name BRN_XXXXXX (where XXXXXX is the last six digits of the Ethernet address) (up to 15 characters).

1 Press **Menu/Set**, **5**, **1**, **5**.

2 Select **1** to change. Enter the Node Name.

3 Press **Menu/Set**.

4 Press **Stop/Exit**.

WINS Config

This selection controls how the machine obtains the IP address for the WINS server.

1 Press **Menu/Set**, **5**, **1**, **6**.

2 Press ▲ or ▼ to select `Auto` or `Static`.

3 Press **Menu/Set**.

4 Press **Stop/Exit**.

Auto

Automatically uses a DHCP request to determine the IP addresses for the primary and secondary WINS servers. You must set the BOOT Method to Auto for this feature to work.

Static

Uses a specified IP address for the primary and secondary WINS servers.

WINS Server

1 Press **Menu/Set**, **5**, **1**, **7**.

2 Press ▲ or ▼ to select `Primary` or `secondary`.

3 Press **Menu/Set**.

4 Enter the WINS Server address.

5 Press **Menu/Set**.

6 Press **Stop/Exit**.

Primary WINS Server IP Address

This field specifies the IP address of the primary WINS (Windows® Internet Naming Service) server. If set to a non-zero value, the machine will contact this server to register its name with the Windows® Internet Name Service.

Secondary WINS Server IP Address

This field specifies the IP address of the secondary WINS server. It is used as a backup to the Primary WINS server address. If the Primary server is unavailable, the machine still can register itself with a secondary server. If set to a non-zero value, the machine will contact this server to register its name with the Windows® Internet Name Service. If you have a primary WINS server, but no secondary WINS server, simply leave this field blank.

DNS Server

1 Press **Menu/Set**, **5**, **1**, **8**.

2 Press ▲ or ▼ to select `Primary` or `Secondary`.

3 Press **Menu/Set**.

4 Enter the DNS Server address.

5 Press **Menu/Set**.

6 Press **Stop/Exit**.

Primary DNS Server IP Address

This field specifies the IP address of the primary DNS (Domain Name Service) server.

Secondary DNS Server IP Address

This field specifies the IP address of the secondary DNS server. It is used as a backup to the Primary DNS server address. If the Primary server is unavailable, the machine will contact the Secondary DNS server.

APIPA

The setting of On will cause the print/scan server to automatically allocate a Link-Local IP address in the range (169.254.1.0 - 169.254.254.255) when the print/scan server cannot obtain an IP address through the BOOT Method you have set (**Menu/Set**, **5**, **1**, **1**). Selecting Off means the IP address doesn't change, when the print/scan server cannot obtain an IP address through the BOOT Method you have set.

1 Press **Menu/Set**, **5**, **1**, **9**.

2 Press ▲ or ▼ to select `On` or `Off`.

3 Press **Menu/Set**.

4 Press **Stop/Exit**.

Setup Misc.

Ethernet

Ethernet link mode. Auto allows the print/scan server to operate in 100BaseTX full or half duplex, or in 10BaseT full or half duplex mode by auto negotiation.

100BaseTX Full Duplex (100B-FD) or Half Duplex (100B-HD) and 10BaseT Full Duplex (10B-FD) or Half Duplex (10B-HD) fix the print/scan server link mode. This change is valid after the print/scan server has been reset (default is Auto).

📝 **Note**

If you incorrectly set this value, you may not be able to communicate with your print/scan server.

1 Press **Menu/Set**, **5**, **2**, **1**.

2 Press ▲ or ▼ to select Auto/100B-FD/100B-HD/10B-FD/10B-HD.

3 Press **Menu/Set**.

4 Press **Stop/Exit**.

Printing the Network Configuration Page

📝 **Note**

Node name: Node name appears in the Network Configuration Page. The default Node name is "BRN_xxxxxx" ("xxxxxx" is the last six digits of Ethernet address.).

The Network Configuration Page prints a report listing all the current network configuration including the network print/scan server settings.

1 Press **Reports**.

2 Press ▲ or ▼ to select Network Config.

3 Press **Menu/Set**.

Restoring the network settings to factory default

If you wish to reset the print/scan server back to its default factory settings (resetting all information such as the password and IP address information), please follow these steps:

1 Make sure the machine is not operating, then disconnect all the cables from the machine (except power cable).

2 Press **Menu/Set**, **5**, **0**.

3 Press **1** to select Reset.

4 Press **1** to select Yes.

5 The machine will re-start, re-connect cables once this is complete.

4 Network printing from Windows®: basic TCP/IP Peer-to-Peer printing

Overview

If you are a Windows® user and want to print using the TCP/IP protocol in a Peer-to-Peer environment, please follow the instructions in this chapter. This chapter explains how to install the network software and the printer driver which you will need to be able to print using your network printer.

> **Note**
> - You must configure the IP address on your machine before you proceed with this chapter. If you haven't done yet, see *Chapter 2* first.
> - Verify the host computer and print/scan server are either on the same subnet, or that the router is properly configured to pass data between the two devices.
> - The default password for Brother print/scan servers is `access`.

For Windows® 2000/XP users

By default, Windows® 2000/XP systems install with all the necessary software required for you to be able to print. This section describes the most commonly used configuration, Standard TCP/IP Port printing. Windows® 2000/XP users can also print via Internet using the IPP protocol. For more information, see *Internet printing for Windows®* on page 5-1.

If you have already installed the printer driver, jump to *Printer driver already installed* on page 4-2.

Configuring the standard TCP/IP port

Printer driver not yet installed

1 For Windows® 2000: Go to the **Start** button, select **Settings** and then **Printers**.
For Windows® XP: Go to the **Start** button and select **Printers and Faxes**.

2 For Windows® 2000: Double click the **Add Printer** icon to get the **Add Printer Wizard**.
For Windows® XP: Duble-click **Add a printer** to get the **Add Printer Wizard**.

3 Click **Next** when you see the **Welcome to the Add Printer Wizard** screen.

4 Select **Local printer** and deselect the **Automatically detect and install my Plug and Play printer** option.

5 Click **Next**.

6 You must now select the correct Network printing port. Select **Create a new port** and select **Standard TCP/IP Port** port from the pull-down window.

7 Click **Next**.

8 The **Add Standard TCP/IP Printer Port Wizard** will now appear. Click **Next**.

9 Enter the IP address, or the print/scan server name you wish to configure. The Wizard will automatically enter the Port name information for you.

10 Click **Next**.

11 Windows® 2000/XP will now contact the printer that you specified. If you did not specify the correct IP address or name then you will receive an error message.

12 Click **Finish** to complete the Wizard.

13 Now that you have configured the port, you must specify which printer driver you wish to use. Select the appropriate driver from the list of supported printers. If you are using a driver supplied with the machine on CD-ROM then select the **Have Disk** option to browse to the CD-ROM.

14 For example, select the "X:\your language\W2K\Addprt" folder (where X is your drive letter). Click **Open**, and then **OK**. Select your printer, then click **Next**.

15 Specify a name and select **Yes** or **No** if you want this driver to be default printer, and then click **Next**.

16 Now specify if you wish to share the printer, enter the share name and click **Next**.

17 Select **Yes** and **Next** to print a test page.

18 Continue through the Wizard clicking **Finish** when complete.

Printer driver already installed

If you have already installed the printer driver and wish to configure it for network printing, follow these steps:

1 Select the printer driver you wish to configure.

2 Select **File** and then **Properties**.

3 Click the **Ports** tab of the driver and click **Add Port**.

4 Select the port that you wish to use. Typically this would be **Standard TCP/IP Port**. Then click the **New Port...** button.

5 The **Standard TCP/IP Port Wizard** will start. Follow steps 8 to 12 of *Printer driver not yet installed* on page 4-1.

For Windows NT® 4.0 users

Windows NT® 4.0 users can send print job using Brother Peer-to-Peer Print software provided on the Brother CD-ROM supplied with the machine.

Installing the TCP/IP protocol

If you did not install the TCP/IP protocol during the installation of your Windows NT®4.0 system (either workstation or server) follow these steps. If you have already installed the TCP/IP protocol, proceed to the next section, *Installing the Brother Peer-to-Peer software* on page 4-3.

1 Go to the **Start** button, select **Settings**, and then **Control Panel**.

2 Run the **Network** applet by double clicking the **Network** icon and then click the **Protocols** tab.

3 Select **Add**, and double click **TCP/IP Protocol**.

4 Insert the requested disk(s), or CD-ROM, to copy the required files.

5 Click **Close**. The Windows NT®4.0 system will review protocol bindings and then you will see the **TCP/IP Properties** dialog.

6 Configure the host IP address, subnet mask, and gateway address in that dialog. Consult your system manager for these addresses.

7 Click **OK** to exit (your Windows NT®4.0 workstation or server will need to be re-booted).

Installing the Brother Peer-to-Peer software

1 Start the CD-ROM installation menu program according to the Quick Setup Guide.

2 Select the model name and your language (if necessary), and then click **Install Optional Applications**.

3 Click **Network Print Software**.

4 Click **Next** in response to the Welcome message. Follow the on-screen instructions.

5 Select **Brother Peer-to-Peer Print (LPR)**.

6 Select the desired directory to install the **Brother Peer-to-Peer Print (LPR)** files and click **Next**. The installation program will create the directory for you if it does not already exist on your disk.

7 Enter the Port name that you wish to use and click **OK**. The default port name is BLP1. Whichever name you choose, it must be unique and it MUST begin with BLP.

8 You must now enter the actual IP address of the print/scan server and the print/scan server name. If you have edited the hosts file on your computer or are using Domain Name System, you can also enter the DNS name of the print/scan server. As the print/scan server supports TCP/IP and NetBIOS names, you can also enter the NetBIOS name of the print/scan server. The NetBIOS name can be seen in the network configuration page. The NetBIOS name assigned is the first 15 characters of the node name and by default it will appear as BRN_xxxxxx where xxxxxx is the last six digits of the Ethernet address.

> **Note**
> - The node name and the NetBIOS name is printed on the network configuration page. To learn how to print the Network Configuration Page, see *Printing the Network Configuration Page* on page 3-7.
> - If you search for the device using the search function in Step 8 above, disable the Personal Firewall software if you are using it. Once you are sure that you can print, re-start your Personal Firewall software.

9 Click **OK**. When prompted you must re-boot your computer.

Associating to the printer

You must now create a printer on your Windows® system using the standard Windows® printer setup procedure.

1 To do this, go to the **Start** button, select **Settings** and then **Printers**.

2 Double click the **Add Printer** icon to get the **Add Printer Wizard**.

3 Select **My Computer** (not Network Printer) and click **Next**.

4 Select the Brother LPR Port (the port name you assigned in step 7 of the "Installing Brother Peer-to-Peer Software" section in this chapter) and click **Next**.

5 Select the desired printer model. If the correct model is not displayed, click the **Have Disk** option and insert the CD-ROM supplied with your machine.

6 If the driver already exists, select **Keep Existing Driver** (if it does not exist, this step will be skipped), and then click **Next**.

7 If desired, change the name of the printer and select **Yes** or **No** if you want this driver to be default printer, and then click **Next**.

8 If desired, make the printer shared (so other user can access it), and select the operating system(s) that these other computers will be running. Click **Next**.

9 Select **Yes** when you asked **Would you like to print a test page?**. Click **Finish** to complete the installation. You may now print to the printer as if it were a local printer.

Adding a second Brother LPR port

You do not need to re-run the install program to add a new Brother LPR port. Instead, go to the **Start** button, select **Settings**, and open the **Printers** window. Click the icon of the printer that you wish to configure, select **File** from the menu bar, and then **Properties**. Click the **Ports** tab and then the **Add Port** button. In the **Printer Ports** dialog, highlight **Brother LPR Port**. Click the **New Port** button and enter the port name. The default port name is BLP1. If you have already used this name, you will get an error message if you try to use it again, in which case use BLP2, etc... Once you have specified the port name, click **OK**. You will then see the **Port Settings** dialog.

Enter the IP address of the printer that you wish to print to and click **OK**. And then click **Close** in the **Printer Ports** dialog. You should now see the port that you have just created in the **Print to the following port(s)** setting of the printer driver.

For Windows® 95/98/Me users

Windows® 95/98/Me users can send print job using Brother Peer-to-Peer Print software provided by the CD-ROM which we have supplied with the machine.

Installing the Brother Peer-to-Peer software

Note

If you already installed the driver from the supplied CD-ROM with the machine Installer and you selected "Brother Peer-to-Peer Network Printer" during the installation then you do not need to install the Brother Network Print Software again.

1 Start the CD-ROM installation menu program according to the Quick Setup Guide.

2 Select the model name and your language (if necessary), and then click **Install Optional Applications**.

3 Click **Network Print Software**.

4 Click **Next** in response to the Welcome message. Follow the on-screen instructions.

5 Select **Brother Peer-to-Peer Print (LPR)**.

6 Select the desired directory to install the **Brother Peer-to-Peer Print (LPR)** files and push **Next**. The installation program will create the directory for you if it does not already exist on your disk.

7 Enter the **Port name** that you wish to use and click **OK**. The default port name is BLP1. Whichever name you choose, it must be unique and it MUST begin with BLP.

8 You must now enter the actual IP address of the print/scan server and the print/scan server name. If you have edited the hosts file on your computer or are using Domain Name System, you can also enter the DNS name of the print/scan server. As the print/scan server supports TCP/IP and NetBIOS names, you can also enter the NetBIOS name of the print/scan server. The NetBIOS name can be seen in the network configuration page. The NetBIOS name assigned is the first 15 characters of the node name and by default it will appear as `BRN_xxxxxx` where `xxxxxx` is the last six digits of the Ethernet address.

> 📝 **Note**
>
> - The node name and the NetBIOS name is printed on the Network Configuration Page. To learn how to print the Network Configuration Page, see *Printing the Network Configuration Page* on page 3-7.
>
> - If you search for the device using the search function in Step 8 above, disable the Personal Firewall software if you are using it. Once you are sure that you can print, re-start your Personal Firewall software.

9 Click **OK**. When prompted you must re-boot your computer.

Associating to the printer

You must now create a printer on your Windows® system using the standard Windows® printer setup procedure.

1 To do this, go the **Start** button, select **Settings** and then **Printers**.

2 Double click the **Add Printer** icon to get the **Add Printer Wizard**.

3 Click **Next** when you get the **Add Printer Wizard** window.

4 Select **Local Printer** when you are asked how the printers are connected to your computer, and then click **Next**.

5 Select the desired printer model. If the correct model is not displayed, click the **Have Disk** option and insert the CD-ROM supplied with your machine.

6 If you have selected a printer driver that is already being used, you have the option of either keeping the existing driver (recommended) or replacing it. Select the desired option and click **Next**.

7 Select the Brother LPR port (the port name you assigned in step 7 of the *Installing the Brother Peer-to-Peer software* on page 4-5) and click **Next**.

8 Enter any desired name for the Brother printer. For example, you could call the printer "Networked Brother Printer". Select **Yes** or **No** if you want this driver to be default printer, and then click **Next**.

9 Windows® will now ask you if you wish to print out a test page, select **Yes** and then select **Finish**. You have now finished installing the Peer-to-Peer Print (LPR) software.

Adding a second Brother LPR port

You do not re-run the install program to add a new Brother LPR port. Instead, go to the **Start** button, select **Settings**, and open the **Printers** window. Click the icon of the printer that you wish to configure, select **File** from the menu bar, and then **Properties**. Click the **Details** tab and then the **Add Port** button. In the **Add Port** dialog, select the **Other** radio button and then highlight **Brother LPR port**. Click **OK** and enter the port name. The default port name is BLP1. If you have already used this name, you will get an error message if you try to use it again, in which case use BLP2, etc... Once you have specified the port name, click **OK**. You will then see the **Port Properties** dialog.

Enter the IP address of the printer that you wish to print to and click **OK**. You should now see the port that you have just created in the **Print to the following port** setting of the printer driver.

Other sources of information

See *Chapter 2* of this User's Guide to learn how to configure the IP address of the printer.

5 Internet printing for Windows®

Overview

Windows® 2000/XP users can print using TCP/IP using the standard Network Printing software and IPP protocol software built into any Windows® 2000/XP installation.

📝 **Note**
- You must configure the IP address on your machine before you proceed with this chapter. If you haven't done yet, see *Chapter 2* first.
- Verify the host computer and print/scan server are either on the same subnet, or that the router is properly configured to pass data between the two devices.
- The default password for Brother print/scan servers is `access`.

Windows® 2000/XP IPP printing

Use the following instructions if you wish to use the IPP printing capabilities of Windows® 2000/XP.

1 For Windows® 2000: Go to the **Start** button, select **Settings** and then **Printers**.
For Windows® XP: Go to the **Start** button and select **Printers and Faxes**.

2 For Windows® 2000: Double click the **Add Printer** icon to get the **Add Printer Wizard**.
For Windows® XP: Double-click **Add a printer** to get the **Add Printer Wizard**.

3 Click **Next** when you see the **Welcome to the Add Printer Wizard** screen.

4 Select **Local printer** or **Network printer**. For Windows® 2000: Make sure that you select **Network Printer**.
For Windows® XP: Make sure that you select **A network printer, or a printer attached to another computer**.

5 Click **Next**.

6 For Windows® 2000: Select **Connect to a printer on the Internet or on your intranet** and then enter the following in the URL field: `http://printer_ip_address:631/ipp` (Where `printer_ip_address` is the IP address or the print/scan server name).

For Windows® XP: Select **Connect to a printer on the Internet or on a home or office network** and then enter the following in the URL field: `http://printer_ip_address:631/ipp` (Where `printer_ip_address` is the IP address or the print/scan server name).

Note

If you have edited the hosts file on your computer or are using Domain Name System, you can also enter the DNS name of the print/scan server. As the print/scan server supports TCP/IP and NetBIOS names, you can also enter the NetBIOS name of the print/scan server. The NetBIOS name can be seen in the network configuration page. The NetBIOS name assigned is the first 15 characters of the node name and by default it will appear as BRN_xxxxxx where xxxxxx is the last six digits of the Ethernet address.

7 When you click **Next**, Windows® 2000/XP will make a connection with the URL that you specified.

If the printer driver has already been installed:

If the appropriate printer driver is already installed on your PC, Windows® 2000/XP will automatically use that driver for use. In this case, you will simply be asked if you wish to make the driver the default driver, after which the Driver installation Wizard will complete. You are now ready to print.

If the printer driver has NOT been installed:

One of the benefits of the IPP printing protocol is that it establishes the model name of the printer when you communicate with it. After successful communication you will see the model name of the printer automatically. This means that you do not need to inform Windows® 2000 the type of printer driver to be used.

8 Click **OK**. You will then see the printer selection screen in the **Add Printer Wizard**.

9 If your printer is not in the list of supported printers, click **Have Disk**. You will then be asked to insert the driver disk.

10 Click **Browse** and select the CD-ROM or network share that contains the appropriate Brother printer driver.

11 Now specify the model name of the printer.

12 If the printer driver that you are installing does not have a Digital Certificate you will see a warning message. Click **Yes** to continue with the installation. The **Add Printer Wizard** will then complete.

13 Click the **Finish** button and the printer is now configured and ready to print. To test the printer connection, print a test page.

Specifying a different URL

Please note that there are several possible entries that you can enter for the URL field.

http://printer_ip_address:631/ipp

This is the default URL and we recommend that you use this URL. Please note the **Get More Info** option will not display any printer data.

http://printer_ip_address:631/ipp/port1

This is for HP® Jetdirect® compatibility. Please note the **Get More Info** option will not display any printer data.

http://printer_ip_address:631/

If you forget the URL details, you can simply enter the above text and the printer will still receive and process data. please note the **Get More Info** option will not display any printer data.

If you are using the built in service names that the Brother print/scan server supports, you can also use the following: (However, please note the **Get More Info** option will not display any printer data).

http://printer_ip_address:631/brn_xxxxxx_p1

http://printer_ip_address:631/binary_p1

http://printer_ip_address:631/text_p1

http://printer_ip_address:631/pcl_p1

http://printer_ip_address:631/postscript_p1

http://printer_ip_address:631/brn_xxxxxx_p1_at

Where printer_ip_address is the IP address or the print/scan server name.

Other sources of information

See *Chapter 2* of this User's Guide to learn how to configure the IP address of the printer.

6 Network printing from Macintosh®

Overview

This chapter explains how to configure the PostScript driver on a Network. For more information on how to configure the default Quick Draw driver on a Network. see the Quick Setup Guide included with the machine.

How to select the print server (TCP/IP) (Mac OS® 9.1 - 9.2)

1 Open the **Applications (Mac OS® 9)** folder.

2 Open the **Utilities** folder.

3 Open the **Desktop Printer Utility** icon.

4 Select the **Printer (LPR)** option and click **OK**.
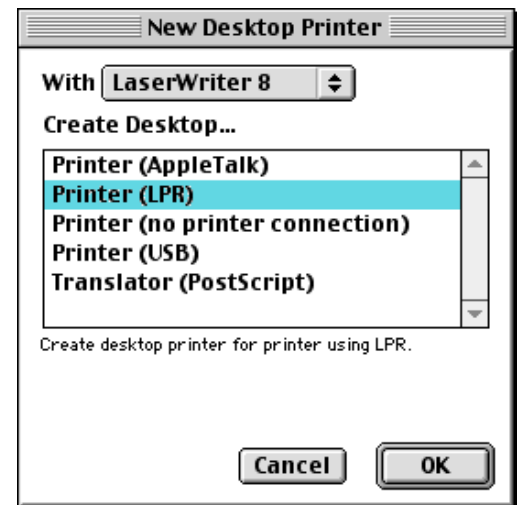
5 At this point we must select the correct PPD file for the machine and also configure the correct LPR information. Click **Change** in the **PostScript Printer Description (PPD) File** section and select the appropriate PPD file for your model.
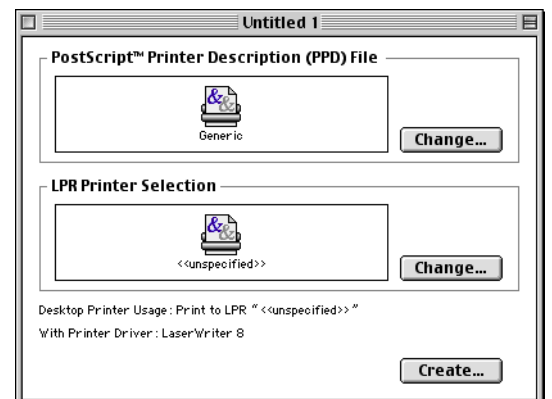
6 At this point we must select the correct PPD file for the machine and also configure the correct LPR information. Click **Change** in the **PostScript Printer Description (PPD) File** section and select the appropriate PPD file for your model.

7 Now select the **Change** button below the **LPR Printer Selection** text.

8 You must then enter the IP address and service name details of the machine. When specifying the **Queue**, use the value `brn_xxxxxx_p1_at` where `xxxxxx` are the last 6 digits of the Ethernet address.

Note

If you do not specify the correct value the machine may not print, or it may not print the data correctly. Please ensure that the value you enter here matches with the Service name of the machine.
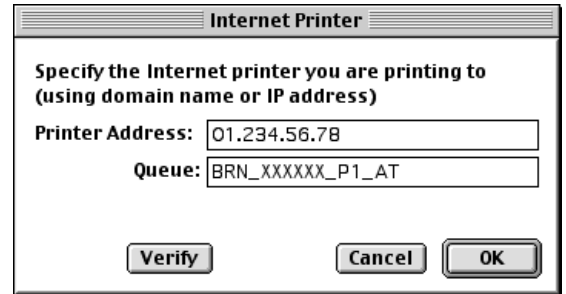
9 Click **OK** to go back to the previous screen.

10 You are now ready to create the printer for use. To do that, click **Create** and you will see the following:
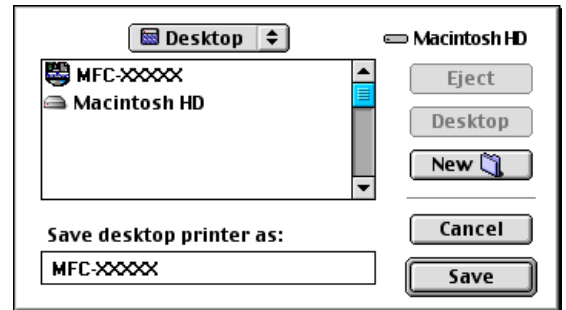
11 Enter the name of the printer in the **Save desktop printer As:** option and click **Save**.

12 We must now make this our default printer by clicking the printer name once and then select **Printing** and **Set Default Printer**.

Whenever you send a print job, the printer that you just created will be used.

How to select the print server (TCP/IP) (Mac OS® X 10.2.4 or greater)

1 Turn the power of the machine ON.

2 Open the **Applications** folder.

3 Open the **Utilities** folder.

4 Open the **Printer Setup Utility** Icon. (Mac OS® X 10.2.x users, open the **Print Center** icon.)

5 Click **Add**.

6 Select **IP Printing**.
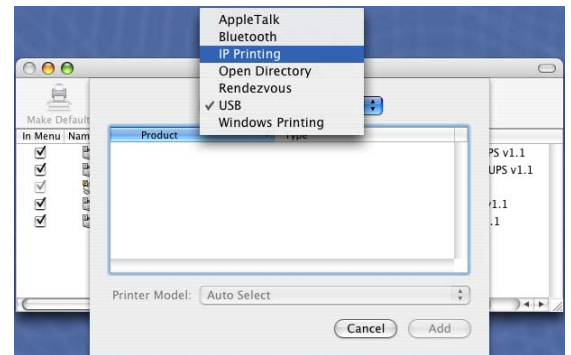
7 Enter the TCP/IP address of the printer into the **Printer Address** box.

The network configuration page will allow you to confirm the TCP/IP address. For information on how to print the configuration page, See *Printing the Network Configuration Page* on page 3-7.
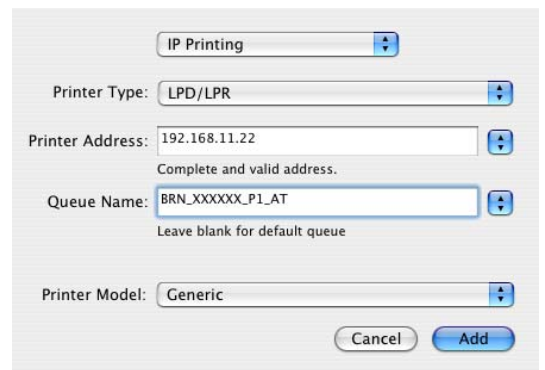
8 When specifying the **Queue Name**, use the value `brn_xxxxxx_p1_at` where `xxxxxx` are the last 6 digits of the Ethernet address.

9 From the **Printer Model** pull-down list select your model. For example, select **Brother MFC-XXXXX BR-Script3**.

10 Click **Add** and the printer will be available from the **Printer List**.
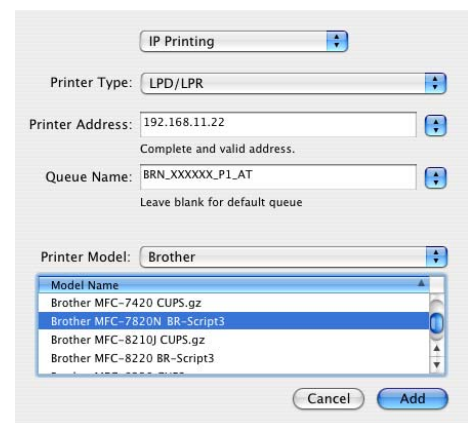
Changing the configuration using a web browser

From a Macintosh®, the easiest way to change the printer or print/scan server parameters is to use a web browser.

Simply connect to the printer using the format: `http://ip_address` where `ip_address` is the address of the printer.

See *Using the HTTP (web browser) and the TCP/IP protocol to change the print/scan server settings* on page 2-5.

Other sources of information

1 Visit http://solutions.brother.com for more information on network printing.

2 See *Chapter 2* of this User's Guide to learn how to configure the IP address of the printer.

7

Web Based Management

How to use a Web Browser to manage your Device

Overview

A standard Web Browser (we recommend Microsoft Internet Explorer® version 6.0 or later, or Netscape Navigator® version 7.1 or later) can be used to manage your machine using the HTTP (Hyper Text Transfer Protocol). You can get the following information from a printer on your network using a web browser:

■ Printer status information.

■ Change Fax configuration items, such as General Setup. Quick-Dial settings and Remote Fax.

■ You can also change network settings such as TCP/IP information.

■ Software version information of the machine and print/scan server.

■ Change network and machine configuration details.

You must use the TCP/IP protocol on your network and have a valid IP address programmed into the print/scan server and your computer.

1 To learn how to configure the IP address on your machine, see *Chapter 2 Configuring your network printer*.

2 The default password for Brother print/scan servers is `access`.

3 You can use a web browser on most computing platforms, for example, Macintosh and Unix users are also able to connect to the machine and manage it.

4 You can also use the BRAdmin Professional utility to manage the printer and its network configuration.

How to connect to your machine using a Browser

Type `http://printer's IP Address /` into your browser (you can also use the NetBIOS name of the print/scan server, if you are in a Microsoft Windows domain/Workgroup environment). Enter the DNS name of the machine if connecting to a network that uses the DNS protocol.

Password Information

Web Based Management offers two levels of password access. Users are able to access to the General Setup, Fax settings and Lists and Reports. The default user name for Users is **user** (case sensitive) and the default password is **access**.

Administrators are able to access all settings. The login name for the Administrator is **admin** (case sensitive) and the default password is **access**.

8 Troubleshooting

Overview

This chapter describes procedures for troubleshooting problems you may encounter with a Brother print/scan server, it is divided into the following sections:

■ General problems
■ Network print software installation problems
■ Printing problems
■ Protocol-specific troubleshooting

General problems

CD-ROM is inserted, but does not start automatically

If your computer does not support Autorun, the menu will not start automatically after inserting the CD-ROM. In this case, execute **setup.exe** in the root directory of the CD-ROM.

How to reset the Brother print/scan server to factory default

You can reset the print/scan server back to its default factory settings (resetting all information such as the password and IP address information). See *Restoring the network settings to factory default* on page 3-8.

Network print software installation problems

The Brother print/scan server is not found during setup of the network print software installation or from the printer driver of the Brother machine in Windows®.

The Brother print/scan server is not found using the Simple Network Configuration capabilities of Mac OS® X.

Make sure you have completed the IP address setting of the Brother print/scan server according to *Chapter 2* or *Chapter 3* of this User's Guide before installing the network print software or printer driver. Check the following:

1 Make sure that the machine is powered on, is on-line and ready to print.

2 Check to see if there is any LED activity. Brother print/scan servers have two LEDs on the back panel of the machine. The upper side LED shows Link status. The lower side LED shows Activity (Receive/Transmit) status.

No light: If both LEDs are off, then the print/scan server is not connected to the network.

Link LED is green: The Link LED will be green if the print/scan server is connected to a Ethernet network.

3 Print the Network Configuration Page and check if the settings such as IP address settings are correct for your network. The problem may be the result of mismatched or duplicate IP address. Verify that the IP address is correctly loaded into the print/scan server. And make sure that no other nodes on the network have this IP address. For information on how to print the Network Configuration Page, see *Printing the Network Configuration Page* on page 3-7.

4 Verify that the print/scan server is on your network as follows:

For Windows®

Try pinging the print/scan server from the host operating system command prompt with the command:

```
ping ipaddress
```

Where `ipaddress` is the print/scan server IP address (note that in some instances it can take up to two minutes for the print/scan server to load its IP address after setting the IP address).

For Macintosh®

For Mac OS® 9.1 to 9.2

(1) From the **Apple** menu, open the **Chooser**.

(2) Click the **Brother Laser (IP)** icon, and make sure that your print/scan server name appears in the right frame. If it is visible, then the connection is good. Otherwise, go to Step 5.

For Mac OS® X 10.2.4 or greater

(1) From the **Go** menu, select **Applications**.

(2) Open the **Utilities** folder.

(3) Double-click the **Printer Setup Utility** icon.

(4) Click **Add**.

(5) Make the following selection. Make sure that your print/scan server appears. If it is visible, then the connection is good. Otherwise, go to Step 5.
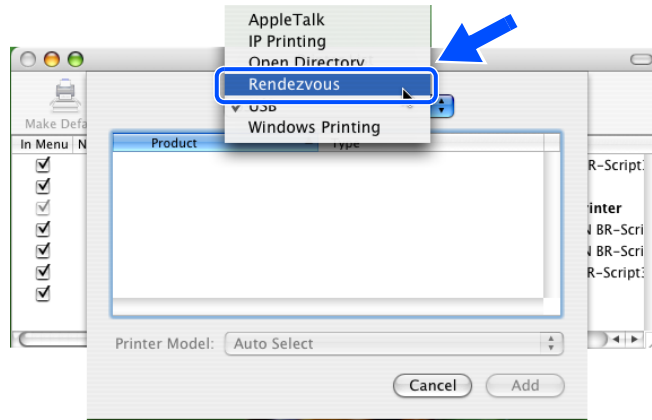
5 If you have tried 1 to 4 above and it does not work, then reset the print/scan server back to the default factory settings and try from the initial setup again. For information how to reset to the default factory settings, see *Restoring the network settings to factory default* on page 3-8.

6 Check if a personal firewall such as ICF (Internet Connecting Firewall) for Windows XP is running on your computer. If it is running, temporarily turn it off and try again.

Note

If none of the above steps are successful, there is almost certainly a hardware or network problem!

Printing problems

Print job is not printed

Make sure the status and configuration of the print/scan server. Check following:

1 Make sure that the machine is powered on, is on-line and ready to print.

2 Print the Network Configuration Page of the machine and check if the settings such as IP address settings are correct for your network. The problem may be the result of mismatched or duplicate IP address. Verify that the IP address is correctly loaded into the print/scan server. And make sure that no other nodes on the network have this IP address.

3 Verify that the print/scan server is on your network as follows:

For Windows®

(1) Try pinging the print/scan server from the host operating system command prompt with the command:

`ping ipaddress`

Where `ipaddress` is the print/scan server IP address (note that in some instances it can take up to two minutes for the print/scan server to load its IP address after setting the IP address).

(2) If a successful response is received, then proceed to *Windows® 98/98SE/Me and Windows NT®4.0 Peer-to-Peer print (LPR) troubleshooting*, and *Windows® 2000/XP IPP troubleshooting*. Otherwise, proceed to Step 4.

For Macintosh®

For Mac OS® 9.1 to 9.2

(1) From the **Apple** menu, open the **Chooser**.

(2) Click the **Brother Laser (IP)** icon, and make sure that your print/scan server name appears in the right frame. If it is visible, then the connection is good. Otherwise, go to Step 4.

For Mac OS® X 10.2.4 or greater

(1) From the **Go** menu, select **Applications**.

(2) Open the **Utilities** folder.

(3) Double-click the **Printer Setup Utility** icon.

(4) Click **Add**.

(5) Make the following selection. Make sure that your print/scan server appears. If it is visible, then the connection is good.

8
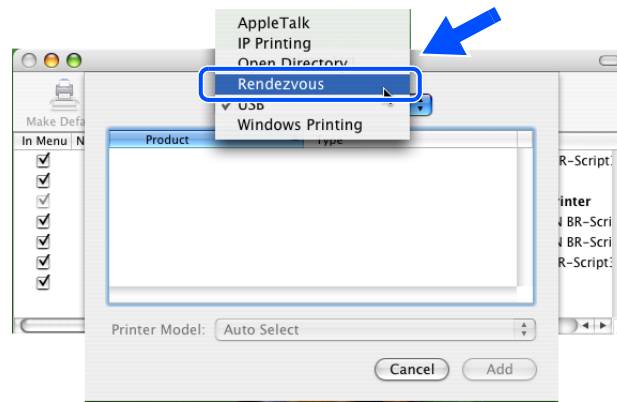
4 If you have tried 1 to 4 above and it does not work, then reset the print/scan server back to the default factory settings and try from the initial setup again. For information how to reset to the default factory settings, see *Restoring the network settings to factory default* on page 3-8

Error during printing

If you try to print while other users are printing large amounts of data (e.g. many pages or color pages with high resolution), the printer is unable to accept your print job until the ongoing printing is finished. If the waiting time of your print job exceeds a certain limit, a time out situation occurs, which causes the error message. In such situations, execute the print job again after the other jobs are completed.

Protocol-specific troubleshooting

Windows® 98/98SE/Me and Windows NT®4.0 Peer-to-Peer print (LPR) troubleshooting

If you are having trouble printing on a Windows® 98/98SE/Me, Windows NT® 4.0 or later Peer-to-Peer network (LPR method), check the following:

1 Make sure that the Brother LPR Port driver is correctly installed and configured according to the Windows® 98/98SE/Me or Windows NT® 4.0 Peer-to-Peer chapters.

2 Try to turn the **Byte Count** on in the **Configure port** area of printer driver properties.

You may find that during the installation of BLP software, the screen that prompts you for a Port name is not displayed. This may happen on some Windows® 98/98SE/Me and Windows NT® 4.0 computers. Press the ALT and TAB keys to make it appear.

Windows® 2000/XP IPP troubleshooting

8

Want to use a different Port number other than 631.

If you are using Port 631 for IPP printing, you may find that your firewall may not let the print data through. If this is the case, use a different port number (port 80), or configure your Firewall to allow Port 631 data through.

To send a print job using IPP to a printer using Port 80 (the standard HTTP port) enter the following when configuring your Windows® 2000/XP system.

```
http://ip_address/ipp
```

Get More Info option in Windows® 2000 not working

If you are using a URL of:

```
http://ip_address:631 or http://ip_address:631/ipp,
```

the **Get More Info** option in Windows® 2000 will not function. If you wish to use the **Get More Info** option, use the following URL:

http://ip_address

This will then force Windows® 2000/XP to use Port 80 to communicate with the Brother print/scan server.

Web browser troubleshooting (TCP/IP)

1 If you can not connect to the print/scan server using your web browser it may be worth checking the Proxy Settings of your browser. Look in the Exceptions setting and if necessary, type in the IP address of the print/scan server. This will stop your PC from trying to connect to your ISP or proxy server every time you wish to look at the printer server.

2 Make sure that you are using the proper web browser, we recommend Netscape Navigator® version 7.1 or later/ Microsoft Internet Explorer® version 6.0 or later.

A Appendix A

Using services

A service is a resource that can be accessed by computers that wish to print to the Brother print/scan server. The Brother print/scan server provides the following predefined services (do a SHOW SERVICE command in the Brother print/scan server remote console to see a list of available services): Enter `HELP` at the command prompt for a list of supported commands.

Service (Example)	Definition
BINARY_P1	TCP/IP binary, NetBIOS service
TEXT_P1	TCP/IP text service (adds carriage return after each line feed)
PCL_P1	PCL® service (switches PJL-compatible printer to PCL® mode)
BRN_xxxxxx_P1	TCP/IP binary

Where `xxxxxx` is the last six digits of the Ethernet address (for example, BRN_310107_P1).

Other ways to set the IP address (for advanced users and administrators)

For information on how to configure your network printer using the BRAdmin Professional utility or a web browser, see *Setting the IP address and subnet mask* on page 2-3.

Using DHCP to configure the IP address

The Dynamic Host Configuration Protocol (DHCP) is one of several automated mechanisms for IP address allocation. If you have a DHCP server in your network, the print/scan server will automatically obtain its IP address from DHCP server and register its name with any RFC 1001 and 1002-compliant dynamic name services.

Note

If you do not want your print/scan server configured via DHCP, BOOTP or RARP, you must set the BOOT METHOD to static so that the print/scan server has a static IP address. This will prevent the print/scan server from trying to obtain an IP address from any of these systems. To change the BOOT METHOD, use the BRAdmin Professional utility.

Using BOOTP to configure the IP address

BOOTP is an alternative to rarp that has the advantage of allowing configuration of the subnet mask and gateway. In order to use BOOTP to configure the IP address make sure that BOOTP is installed and running on your host computer (it should appear in the `/etc/services` file on your host as a real service; type `man bootpd` or refer to your system documentation for information). BOOTP is usually started up via the `/etc/inetd.conf` file, so you may need to enable it by removing the "#" in front of the bootp entry in that file. For example, a typical bootp entry in the /etc/inetd.conf file would be:

```
#bootp dgram udp wait /usr/etc/bootpd bootpd -i
```

Depending on the system, this entry might be called "bootps" instead of "bootp".

📝 **Note**

In order to enable BOOTP, simply use an editor to delete the "#" (if there is no "#", then BOOTP is already enabled). Then edit the BOOTP configuration file (usually /etc/bootptab) and enter the name, network type (1 for Ethernet), Ethernet address and the IP address, subnet mask and gateway of the print/scan server. Unfortunately, the exact format for doing this is not standardized, so you will need to refer to your system documentation to determine how to enter this information (many UNIX® systems also have template examples in the bootptab file that you can use for reference). Some examples of typical /etc/bootptab entries include:

```
BRN_310107 1  00:80:77:31:01:07 192.168.1.2
```
and:
```
BRN_310107:ht=ethernet:ha=008077310107:\
ip=192.168.1.2:
```

Certain BOOTP host software implementations will not respond to BOOTP requests if you have not included a download filename in the configuration file; if this is the case, simply create a null file on the host and specify the name of this file and its path in the configuration file.

As with rarp, the print/scan server will load its IP address from the BOOTP server when the printer is powered on.

Using RARP to configure the IP address

The Brother print/scan server's IP address can be configured using the Reverse ARP (RARP) facility on your host computer. This is done by editing the `/etc/ethers` file (if this file does not exist, you can create it) with an entry similar to the following:

```
00:80:77:31:01:07   BRN_310107
```

Where the first entry is the Ethernet address of the print/scan server and the second entry is the name of the print/scan server (the name must be the same as the one you put in the `/etc/hosts` file).

If the rarp daemon is not already running, start it (depending on the system the command can be `rarpd`, `rarpd -a, in.rarpd -a` or something else; type `man rarpd` or refer to your system documentation for additional information). To verify that the rarp daemon is running on a Berkeley UNIX®-based system, type the following command:

```
ps -ax | grep -v grep | grep rarpd
```

For AT&T UNIX®-based systems, type:

```
ps -ef | grep -v grep | grep rarpd
```

The Brother print/scan server will get the IP address from the rarp daemon when the printer is powered on.

Using APIPA to configure the IP address

The Brother print/scan server supports the Automatic Private IP Addressing (APIPA) protocol. With APIPA, DHCP clients automatically configure an IP address and subnet mask when a DHCP server is not available. The device chooses it's own IP address in the range 169.254.1.0 through to 169.254.254.255. The subnet mask is automatically set to 255.255.0.0 and the gateway address is set to 0.0.0.0.

By default, the APIPA protocol is enabled. If you want to disable the APIPA protocol, you can disable it using control panel of the machine. For more information, see *APIPA* on page 3-6.

If the APIPA protocol is disabled, the default IP address of a Brother print/scan server is 192.0.0.192. However, you can easily change this IP address number to match with the IP address details of your network.

Using ARP to configure the IP address

If you are unable to use the BRAdmin application and your network does not use a DHCP server, you can also use the ARP command. The ARP command is available on Windows® systems that have TCP/IP installed as well as UNIX® systems. To use arp enter the following command at the command prompt:

```
arp -s ipaddress ethernetaddress
```

Where `ethernetaddress` is the Ethernet address (MAC address) of the print/scan server and `ipaddress` is the IP address of the print/scan server. For example:

Windows® systems

Windows® systems require the hash "-" character between each digit of the Ethernet address.

```
arp -s 192.168.1.2 00-80-77-31-01-07
```

UNIX®/Linux systems

Typically, UNIX® and Linux systems require the colon ":" character between each digit of the Ethernet address.

```
arp -s 192.168.1.2 00:80:77:31:01:07
```

📝 **Note**

You must be on the same Ethernet segment (that is, there cannot be a router between the print/scan server and operating system) to use the arp -s command.

If there is a router, you may use BOOTP or other methods described in this chapter to enter the IP address. If your Administrator has configured the system to deliver IP addresses using BOOTP, DHCP or RARP your Brother print/scan server can receive an IP address from any one of these IP address allocation systems. In which case, you will not need to use the ARP command. The ARP command only works once. For security reasons, once you have successfully configured the IP address of a Brother print/scan server using the ARP command, you cannot use the ARP command again to change the address. The print/scan server will ignore any attempts to do this. If you wish to change the IP address again, use a web browser, TELNET (using the SET IP ADDRESS command) or factory reset the print/scan server (which will then allow you to use the ARP command again).

To configure the print/scan server and to verify the connection, enter the following command `ping ipaddress` where `ipaddress` is the IP address of the print/scan server. For example, `ping 192.189.207.2.`

Using the TELNET console to configure the IP address

You can also use the TELNET command to change the IP address.

Using TELNET is effective way, when you change the IP address. But a valid IP address must already be programmed into the print/scan server.

Type `TELNET` ipaddress at the command prompt of the system prompt, where ipaddress is the IP address of the print/scan server. When you are connected, push the Return or Enter key to get the "#" prompt, enter the password `access` (the password will not appear on the screen).

You will be prompted for a user name. Enter anything in response to this prompt.

You will then get the `Local>` prompt. Type `SET IP ADDRESS ipaddress`, where `ipaddress` is the desired IP address you wish to assign to the print/scan server (check with your network manager for the IP address to use). For example:

```
Local> SET IP ADDRESS 192.168.1.3
```

You will now need to set the subnet mask by typing `SET IP SUBNET subnet mask`, where `subnet mask` is the desired subnet mask you wish to assign to the print/scan server (check with your network manager for

the subnet mask to use). For example:

```
Local> SET IP SUBNET 255.255.255.0
```

If you do not have any subnets, use one of the following default subnet masks:

255.0.0.0 for class A networks

255.255.0.0 for class B networks

255.255.255.0 for class C networks

The leftmost group of digits in your IP address can identify the type of network you have. The value of this group ranges from 1 through 127 for Class A networks (e.g., 13.27.7.1), 128 through 191 for Class B networks (e.g.,128.10.1.30), and 192 through 255 for Class C networks (e.g., 192.168.1.4).

If you have a gateway (router), enter its address with the command SET IP ROUTER routeraddress, where routeraddress is the desired IP address of the gateway you wish to assign to the print/scan server. For example:

```
Local> SET IP ROUTER 192.168.1.4
```

Type SET IP METHOD STATIC to set the method of IP access configuration to static.

To verify that you have entered the IP information correctly, type SHOW IP.

Type EXIT or Ctrl-D (i.e., hold down the control key and type "D") to end the remote console session.

Using the Brother Web BRAdmin server software for IIS* to configure the IP address

The Web BRAdmin server software is designed to manage all LAN/WAN Brother network connected devices. By installing the Web BRAdmin server software on a computer running IIS*, Administrators with a web browser can connect to the Web BRAdmin server, which then communicates with the device itself. Unlike the BRAdmin Professional utility - which is designed for Windows® systems only - the Web BRAdmin server software can be accessed from any client computer with a web browser that supports Java.

Please note this software is not included on the CD-ROM that was supplied with your Brother product.

Please visit http://solutions.brother.com/webbradmin to learn more about this software and to download it.

IIS* = Internet Information Server 4.0, 5.0 or 5.1

Print/Scan Server specifications

Operating system support	Windows® 98/98SE/Me, Windows NT® 4.0, Windows® 2000/XP Mac OS® 9.1 to 9.2, Mac OS® X 10.2.4 or greater	
Protocol support	TCP/IP	ARP, RARP, BOOTP, DHCP, APIPA (Auto IP), NetBIOS Name Resolution, WINS, DNS Resolver, LPR/LPD, Custom Raw Port/Port9100, SMTP Client, IPP, FTP Server, mDNS, TELNET, SNMP, HTTP
Network type	10/100BASE-TX Ethernet network	
Network printing	Windows® 98/98SE/Me Peer-to-Peer printing Windows NT® 4.0 and Windows® 2000/XP TCP/IP printing Macintosh® printing (Mac OS® 9.1-9.2 and Mac OS® 10.2.4 or greater supporting TCP/IP)	
Computer requirements (for drivers, BRAdmin Professional, Peer-to-Peer software, etc.)	Processor Minimum Speed	Pentium® II or eguivalent for Windows® 98/98SE/Me/2000 Professional/XP and Windows NT® 4.0
	Minimum RAM	32MB for Windows® 98/98SE/Me 64MB for Windows® 2000 Professional and Windows NT® 4.0 128MB recommended Windows® XP
	Recommended RAM	64MB for Windows® 98/98SE/Me 128MB for Windows® 2000 Professional and Windows NT® 4.0 256MB recommended Windows® XP
Macintosh connection	Computer	Ethernet ready Power Macintosh®
	Processor Minimum Speed	All base models meet minimum requirements
	Minimum RAM	32MB for Mac OS® 9.1 to 9.2 128MB for Mac OS® X 10.2.4 or greater
	Recommended RAM	64MB for Mac OS® 9.1 to 9.2 160MB for Mac OS® X 10.2.4 or greater
Management utilities	BRAdmin Professional utility	Windows® 98/98SE/Me, Windows NT® 4.0, Windows® 2000/XP
	Web BRAdmin	Windows® 2000 Professional / Server / Advanced Server, Windows® XP Professional

A

Function Table and Default Factory Settings

LEVEL ONE	LEVEL TWO	LEVEL THREE	OPTIONS	OPTIONS	FACTORY SETTING
5.LAN	1.Setup TCP/IP	1.BOOT Method	Auto/ Static/ RARP/ BOOTP/ DHCP		Auto
		2.IP Address	[000-255].[000-255].[000-255].[000-255]		[169].[254].[001-254].[000-255]
		3.Subnet Mask	[000-255].[000-255].[000-255].[000-255]		255.255.0.0
		4.Gateway	[000-255].[000-255].[000-255].[000-255]		000.000.000.000
		5.Host Name	BRN_XXXXXX=(last 6 figures of Ethernet address) (up to 15 characters)	BRN_XXXXXX	BRN_XXXXXX
		6.WINS Config	Auto/ Static		Auto
		7.WINS Server	(Primary) [000-255].[000-255].[000-255].[000-255]	(Secondary) [000-255].[000-255].[000-255].[000-255]	000.000.000.000
		8.DNS Server	(Primary) [000-255].[000-255].[000-255].[000-255]	(Secondary) [000-255].[000-255].[000-255].[000-255]	000.000.000.000
		9.APIPA	On/Off		On
	2. Setup Misc.	1.Ethernet	Auto/ 100B-FD/ 100B-HD/ 10B-FD/ 10B-HD		Auto
	0.Factory Reset	-			

*1: The factory setting for **IP Address** and **Subnet Mask** may be changed by the **APIPA** setting.

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