brother.

Multi-Protocol Print/Fax Server

Network User's Guide

NC-100h

Please read this manual thoroughly before using the machine. 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 machine needs. Download the latest drivers and utilities for your Brother machine, read the FAQs and troubleshooting tips or learn about special printing solutions in the 'Solutions' and 'Customer Education' sections.

Version 0

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declares, that the products

Product Name: Brother Network Card (BR-net)
Model Number: NC-100h

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

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

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Cet appareil numérique de la classe B est conforme a la norme NMB-003 du Canada.

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EMC: EN 55022 Class B,   EN 55024

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Table of Contents

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(*1) Complete descriptions of these features are included in the Software User's Guide on the CD-ROM.

1. Introduction

Computer Network Basics

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Overview

The network-connected Brother machine allows multiple computers to carry out several independent print jobs on one machine.

To use the Brother machine through a network, you need to select a protocol, configure the Print / Fax Server, and set up the computers you use.

■ **Protocol selection and Print / Fax Server configuration**
   If a Brother machine has been already connected to a network, please check the current protocol. In this case, you don't need to configure the Print / Fax Server.

■ **Print / Fax Server**
   Print / Fax Server activates the network functions built-in the Brother machine.

Protocols

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

■ **TCP/IP**
   This is the most popular set of protocols used for communication such as Internet and E-mail. This protocol can be used in almost all the operation systems such as Windows®, Macintosh® and Linux.
   TCP/IP is suited to a large-scale network and is widely used for company networks.
   TCP/IP is also widely used as the print protocol. The Brother machine can use the TCP/IP-based protocols such as LPR and NetBIOS Name Resolution.

Protocol Configuration Items

TCP/IP Configuration

- IP Address
- Gateway (when routers exist on your network)

■ **IP Address**
An IP address is a series of numbers that identifies each computer connected to the Internet. An IP address consists of four numbers separated by dots. Each number is between 0 and 255. You must allocate a unique IP address that is correct for the attached network.

Example) In a small network, set the IP addresses by changing the final number.
192.168.1.1, 192.168.1.2, 192.168.1.3

■ **Subnet mask**
Subnet masks restrict network communication and an example of one follows...
- 255.255.0.0

Example) PC1 can talk to PC2

PC1 IP Address	193.	1.	2.	3
Subnet Mask	255.	255.	0.	0
PC2 IP Address	193.	1.	3.	4
Subnet Mask	255.	255.	0.	0

Here is an example of an IP address and a subnet mask.

IP Address	193.	1.	2.	3
Subnet Mask	255.	255.	0.	0

0 means this part of the address is not limited for communication.

In the above example, we can communicate with anything that has an IP address that begins with 193.1.X.X

■ **Gateway (and Router)**

A Gateway is the transfer device that passes data between networks. 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.

Node name

Node name appears in current BRAdmin Professional or Printer configuration page. Default Node name is "BRN_xxxxxx" ("xxxxxx" is the last six digits of Ethernet address.)

Network Connection

Types of Network

There are various ways to configure and arrange networks and network printing depending on the office environment and requirements. We recommend to use this product in a Peer to Peer environment in which each computer directly sends and receives data to and from the Brother machine.

Peer-to-Peer Printing

Each computer requires configuration of the printer port.
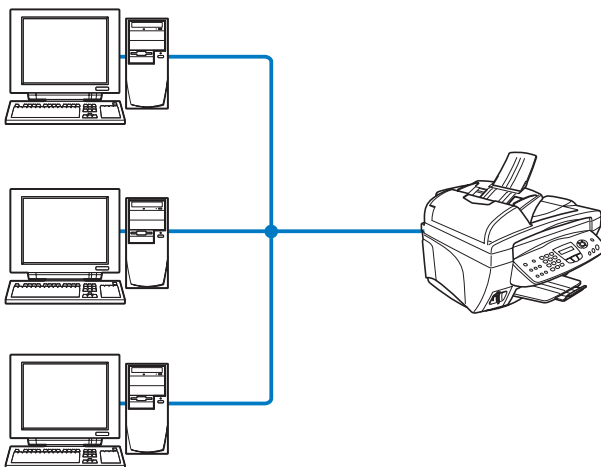
Network Example

Example : Peer-to-Peer (TCP/IP)
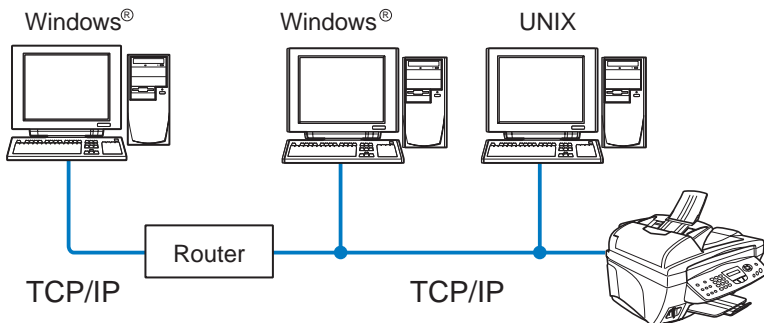
- Each computer needs the TCP/IP and Print Protocol configured.

- The Brother machine needs to have an IP address configured.

- If a TCP/IP environment has been already established, we recommend using Peer-to-Peer.

- If a routers exist, then computers can access the Brother machine through the routers. (In this case, the Gateway address must be configured.)

- The Brother machine can also communicate with Macintosh® (TCP/IP compatible Operating Systems) devices.

Features

Overview

The Brother Network Print / Fax Server allows your Brother machine to be shared on a 10/100Mbit Ethernet Network. Administration utilities provide easy configuration and management of your Brother machine. Once configured, it allows your machine to FAX documents over the Internet; print and scan documents over a network. This is supplied with Brother's Peer to Peer printing software allowing you to easily share the machine as a small workgroup printer.

Network Printing

The Print / Fax server can be utilized as a print server providing printing services for the Windows® 98/Me, Windows® 2000/XP supporting the TCP/IP protocols and Macintosh® Networks supporting QuickDraw over TCP/IP or Rendezvous. (See *chapter 5* for details)

Network Scanning

You can scan documents into a PC on your Network directly or the Brother machine can E-mail them to your PC for editing in Black & White or Color. (See chapter 8 of the Software User's Guide on the CD-ROM)

Network PC-FAX

Your Brother machine can be used as a simple network fax server, allowing users to send documents directly from their PC as faxes. (See chapter 6 of the Software User's Guide on the CD-ROM for complete description)

Internet Fax / Scan to E-mail Server

The Brother machine can be assigned an E-mail address allowing you to send, receive and forward documents on a Local Area Network and the Internet to PC's or other Internet Fax machines. Before using this function, you have to configure the necessary machine settings, such as Setup TCP/IP and Setup Internet of the LAN Main Setup menu by using the machine's control panel as indicated in *chapter 3*. (For more details see *chapter 6* of this User's Guide)

SMTP/POP3 mail server support is required.

Network PhotoCapture Center

You can view or retrieve data from the media card inserted into Brother machine by double-clicking the Network PhotoCapture Center icon on the desk top of your PC. The software is automatically installed when you select network connection during the software installation.

Management Utilities

The BRAdmin Professional utilities provide powerful easy to use configuration and management of Fax, network and E-mail settings.

2 TCP/IP Configuration

Assigning TCP/IP Information (Basic)

Overview

The TCP/IP protocol requires that each device on the network have it's own unique IP address. Use the following information to learn about IP address configuration.

The Automatic Private IP Addressing (APIPA) protocol automatically assigns an IP address from the range: 169.254.1.0 to 169.254.254.255. If you want to disable the APIPA protocol, set APIPA to Off using control panel. For more information see page 2-8. If the APIPA protocol is disabled, the default IP address of a Brother Print/Fax 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. This can be done in any of the following ways:

■ From your machine's control panel settings.

■ BRAdmin Professional utility (for Windows® 98/Me and Windows® 2000/XP).

■ DHCP, APIPA, Reverse ARP (rarp) or BOOTP.

■ Other SNMP based management utilities.

These configuration methods are described in the following paragraphs.

The IP address you assign to the Print/Fax 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 router (gateway). (See page 1-2 for more details)

Using the machine's control panel to allocate an IP address

Refer to *chapter 3* for details on how to configure IP address information using the machine's control panel. By using the control panel on the machine, you can program the IP address details at the same time that other machine parameters are configured.

Changing the IP Address using the BRAdmin Professional utility

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.

Start the BRAdmin Professional utility (from Windows® 98/Me and Windows® 2000/XP), by clicking **Start** / **Programs** / **Brother Administrator Utilities** / **Brother BRAdmin Professional Utilities** / **BRAdmin Professional**.
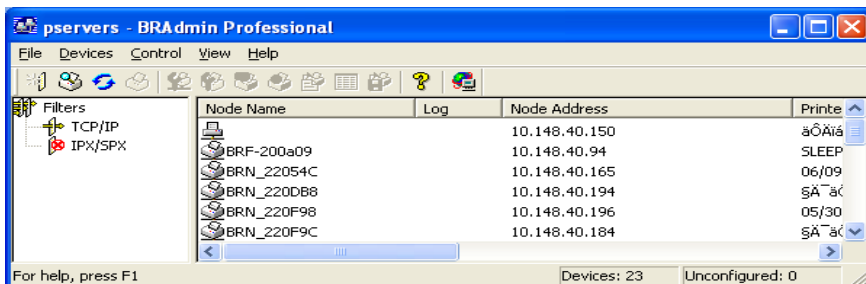
The BRAdmin Professional utility can use the TCP/IP protocols to communicate with the Brother Print/Fax server.

If you wish to use the TCP/IP protocol to manage the Print/Fax server make sure that the print server has a valid IP address. If you are not using DHCP, BOOTP or RARP, you will want to change the IP address.This is how to change the IP address using the BRAdmin Professional utility:

■ Use the TCP/IP protocol and let BRAdmin Professional utility find the Brother print server as an unconfigured device.

Using BRAdmin Professional utility and the TCP/IP Protocol to set the IP address

If your PC is using the TCP/IP protocol, do the following:

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

2   Select the **Device** menu and choose the **Search Active Devices**.

If the Print/Fax server is set to its factory default settings, it will not appear in the BRAdmin Professional utility screen. However, selecting the **Search Active Devices** option will force the BRAdmin Professional utility to find the device as an **unconfigured device**.

3   Select the **Devices** menu and choose **Setup Unconfigured Devices**.

4   Select the MAC address of your Print/Fax server and click the **Configure** button.

You can find the node name and MAC address by printing out the machine configuration page. Refer to this Guide *chapter 3* for information on how to print the configuration page on your Print/Fax server.

5   Enter the **IP address**, **Subnet mask** and **Gateway** (if needed) of your Print/Fax server.

6   Click **OK** then select **Close**.

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

Assigning TCP/IP Information Automatically (Advanced)

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 DHCP Server in your network (typically a Unix/Linux or Windows® 2000, XP network) the Print/Fax server will automatically obtains its IP address from DHCP server and register its name with any RFC 1001 and 1002-compliant dynamic name services.

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

Using APIPA to Configure the IP Address

With Automatic Private IP Addressing (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.

Using RARP to Configure the IP Address

The Brother Print/Fax 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/Fax server and the second entry is the name of the Print/Fax 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/Fax server will get the IP address from the rarp daemon when the printer is powered on.

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".

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/Fax 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/Fax server will load its IP address from the BOOTP server when the machine is powered on.

Other Sources of Information

Visit http://solutions.brother.com/ for more information on TCP/IP protocol.

3 **Front Panel Setup**

LAN Main Setup Menu

You can connect your machine into the network to use the Internet FAX, Network Scanner, Network PC-FAX, Network Printer and Network PhotoCapture Center.

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

You can also set up the LAN settings using BRAdmin. (See *chapter 2* or visit at: http://solutions.brother.com)

The LAN menu selections allow you to setup the Brother machine for your network and Internet Fax configuration. Press **Menu/Set** then press the appropriate number, **5** for LAN. In the LAN Main Setup menu, there are seven main selections: **Setup TCP/IP**, **Setup Internet**, **Setup Mail RX**, **Setup Mail TX**, **Setup Relay**, **Setup Misc.** and **Scan to E-mail**. Proceed to the menu selection you wish to configure. (See chapter 3 of the User's Guide for the LAN menu options)

Please note that the machine is supplied with the BRAdmin Professional Windows® software, which 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**, **Host 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. 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 / Fax 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 / Fax server and the second entry is the name of the Print / Fax server (the name must be the same as the one you put in the /etc/hosts file).

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```

The Brother Print / Fax 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:

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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 / Fax 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 / Fax 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 / Fax server will automatically obtains its IP address from DHCP server and register its name with any RFC 1001 and 1002-compliant dynamic name services.

If you do not want your Print / Fax server configured via DHCP, BOOTP or RARP, you must set the Boot Method to Static, this will prevent the Print / Fax server from trying to obtain an IP address from any of these systems. To change the Boot Method, you can use the front panel or 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**.

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 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 Select **1** to change. Enter the Gateway address.

3 Press **Menu/Set**.

4 Press **Stop/Exit**.

Host 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 Enter the Host 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**.

3 - 6 FRONT PANEL SETUP

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

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

2 Press ⬂ or ⬀ to select `On` or `Off`.

3 Press **Menu/Set**.

4 Press **Stop/Exit**.

Setup Internet

This menu has five selections: **Mail Address**, **SMTP Server**, **POP3 Server**, **Mailbox Name** and **Mailbox Pwd**.

Mail Address

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

2 Select **1** to change. Enter the mail address. Press **Menu/Set**.

3 Press **Stop/Exit**.

Entering text
You can access the character you want by pressing the appropriate number key repeatedly.

Key	Once	Twice	Three times	Four times
1	@	.	/	1
2	A	B	C	2
3	D	E	F	3
4	G	H	I	4
5	J	K	L	5
6	M	N	O	6
7	P	Q	R	S
8	T	U	V	8
9	W	X	Y	Z

To change the mode between upper case and lower case for entering the E-mail / I-Fax address press **Shift** (MFC-3320CN) or **Search/Speed Dial** (MFC-3820CN) and **3**.

Making corrections:
If you entered a letter incorrectly and want to change it, press ◁ to move the cursor under the incorrect character. Then press **Stop/Exit**. The letter above the cursor will be deleted. Re-enter the correct character.

Repeating letters:
If you need to enter a character assigned to the same key as the previous character, press ⬭ move the cursor to the right.

As you enter the E-mail address, it will appear character by character on the LCD panel.

If you specify more than 16 characters, the LCD panel will scroll the name to the left, character by character. You can enter up to 60 characters.

SMTP Server

This field displays the Host Name (up to 30 characters) or IP address of an SMTP mail server (outgoing E-mail Server) on your network. (Ex, mailhost.brothermail.net -or- 192.000.000.001)

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

2 Press ⬭ or ⬭ to select Name or IP Address.

3 Enter the host name or IP address for SMTP Server.

4 Press **Menu/Set**.

5 Press **Stop/Exit**.

POP3 Server

This field displays the Host Name (up to 30 characters) or IP address of the POP3 server (incoming E-mail server) used by the Brother machine. This address is necessary for the Internet Fax features to function correctly.
(Ex, mailhost.brothermail.net -or- 192.000.000.001)

1 Press **Menu/Set**, **5**, **2**, **3**.

2 Press ⬭ or ⬭ to select Name or IP Address.

3 Enter the host name or IP address for POP3 Server.

4 Press **Menu/Set**.

5 Press **Stop/Exit**.

Mailbox Name

1 Press **Menu/Set**, **5**, **2**, **4**.

2 Enter the user account name (up to 20 characters) assigned to the Brother machine to login to the POP3 Server.

This is the portion of e-mail address before the @.
For example: If the e-mail address is jsmith@brother.uk, the mailbox name is jsmith.

3 Press **Menu/Set**.

4 Press **Stop/Exit**.

Mailbox Pwd

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

2 Enter the user password assigned to the machine to login to the POP3 Server. Please note that this password is case sensitive.

3 Press **Menu/Set**.

4 Press **Menu/Set** again to verify the password.

5 Press **Stop/Exit**.

Setup Mail RX

This menu has five selections: **Auto Polling**, **Poll Frequency**, **Header**, **Del Error Mail** and **Notification**.

Auto Polling

When set to On the machine automatically will check the POP3 server for new messages (default is On). "No Mail" will be displayed if there are no E-mail messages when the POP3 server is polled.

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

2 Press ⌄ or ⌄ to select On or Off.

3 Press **Menu/Set**.

4 Press **Stop/Exit**.

Poll Frequency

Sets the interval for checking for new messages on the POP3 server (default is 10Min).

1 Press **Menu/Set**, **5**, **3**, **2**.

2 Enter the polling frequency. (01 to 60 Min)

3 Press **Menu/Set**.

4 Press **Stop/Exit**.

Header

This selection allows the contents of the mail header to be printed when the received message is printed (Subject+From+To or All or None). The default is None, the text mail is not printed at all.

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

2 Press ⌄ or ⌄ to select All or Subject+From+To or None.

3 Press **Menu/Set**.

4 Press **Stop/Exit**.

Del Error Mail

When set to On, the machine automatically deletes error mails that the machine cannot receive from the POP server (default is On).

1 Press **Menu/Set**, **5**, **3**, **4**.

2 Press ⌣ or ⌣ to select On or Off.

3 Press **Menu/Set**.

4 Press **Stop/Exit**.

Notification

Notification feature allows a receive notification message to be transmitted to the sending station to indicate successful reception of the I-Fax.

When set to On, the machine sends notification mail to all I-Fax machines. With the setting of MDN, the machine only sends an E-mail to I-Fax that supports the "MDN" specification (default is Off).

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

2 Press ⌣ or ⌣ to select On or MDN or Off.

3 Press **Menu/Set**.

4 Press **Stop/Exit**.

Setup Mail TX

This menu has three selections: **Sender Subject**, **Size Limit** and **Notification**.

Sender Subject

This field displays the subject that is attached to the Internet Fax data being sent from the Brother machine to a PC (default is "Internet Fax Job").

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

2 Select **1** to change the Sender Subject—**OR**—**2** to exit.

3 Enter the subject information (up to 40 characters).

4 Press **Menu/Set**.

5 Press **Stop/Exit**.

Size Limit

Some E-mail servers do not allow you to send large E-mail documents. The machine may display Out of Memory when trying to send E-mail documents (the System Administrator will often place a limit on the maximum E-mail size). With this function enabled, the machine will display Out of Memory when trying to send E-mail documents over 1Mbyte in size. The document will not be sent and an error report will be printed. The document you are sending should be separated into smaller documents that will be accepted by the mail server (default is Off). (Ex. A 42 page document of the ITU-T Test Chart#1 test chart is approximately 1Mbyte in size).

1 Press **Menu/Set**, **5**, **4**, **2**.

2 Press ⬆ or ⬇ to select On or Off.

3 Press **Menu/Set**.

4 Press **Stop/Exit**.

Notification

Notification feature when switched to `On` sends two fields of data in addition to the image data which requests a notification from the receiving station for successful reception. The receiving I-Fax station must support the `MDN` standard in order to be able to understand the request and consequently submit a notification message confirming successful receipt of the I-Fax (default is `Off`).

1 Press **Menu/Set**, **5**, **4**, **3**.

2 Press ◁▷ or ◁▽ to select `On` or `Off`.

3 Press **Menu/Set**.

4 Press **Stop/Exit**.

Setup Relay

This menu has three selections: **Rly Broadcast**, **Relay Domain** and **Relay Report**. For details on Relay Broadcast refer to *chapter 6*.

Rly Broadcast

This function allows the machine to receive a document over the Internet, and then relay it to other fax machines through conventional analog landlines (default is `Off`).

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

2 Press ◁▷ or ◁▽ to select `On` or `Off`.

3 Press **Menu/Set**.

4 Press **Stop/Exit**.

Relay Domain

You can register the Domain Names (Max.5) that are allowed to request a Relay Broadcast.

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

2 Press ⬇ or ⬆ to select the Relay Domain (01 - 05).

3 Press **Menu/Set**.

4 Enter the Relay Domain name for the Domain that is being allowed to request a Relay Broadcast (up to 30 characters).

5 Press **Menu/Set**.

6 Press **Stop/Exit**.

Relay Report

A Relay Broadcast Report can be printed by the machine used as the Relay Station for all Relay Broadcasts. Also, when the machine is used with the Brother Internet Fax Printing Software (BFP), the machine is acting as a Relay Station for fax transmissions from the network so a Relay Report can also be printed for confirmation of sent network faxes. (For US / Canada only)

Its primary function is to print reports of Relay Broadcasts from external sources through the machine. Please note that Relay Broadcast is not possible without the Relaying Station providing permission in the form of a Relay Domain.

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

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 server to operate in 100BaseTX full or half duplex, or in 10BaseT 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 server link mode. This change is valid after the print server has been reset (default is Auto).

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

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

2 Press ⬆ or ⬇ to select Auto/100B-FD/100B-HD/ 10B-FD/10B-HD.

3 Press **Menu/Set**.

4 Press **Stop/Exit**.

Time Zone

This field displays the time zone you can set for your country. The time is the difference between your location and Greenwich Mean Time. This time will be shown on documents received via the Internet. For example the Time Zone for Eastern Time in the USA and Canada is GMT-05:00.

1 Press **Menu/Set**, **5**, **6**, **2**.

2 Enter the time.

3 Press ⬆ or ⬇ to press **Menu/Set** to accept the selection.

4 Press **Stop/Exit** to exit the configuration menu.

Windows® Time Zone Setting
You can determine the time difference for you location by using the Time Zone setting in Windows®.

1 Click on **Start**.

2 Select **Settings** / **Control Panel**.

3 Double click on **Date/Time**.

4 Select **Time Zone**.

Verify your time zone setting from the pull-down menu (this menu displays the time difference from GMT).

Scan to E-mail

Quality

You can select the quality for Scan to E-mail (E-mail server) function (default is Color 150 dpi).

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

2 Press ⬓ or ⬒ to select B/W 200x100 dpi / B/W 200 dpi / Color 150 dpi / Color 300 dpi / Color 600 dpi.

3 Press **Menu/Set**.

4 Press **Stop/Exit**.

Black and White File Type

You can select the default black and white file type for Scan to E-mail (E-mail server) function (default is TIFF).

1 Press **Menu/Set**, **5**, **7**, **2**.

2 Press ⬓ or ⬒ to select TIFF or PDF.

3 Press **Menu/Set**.

4 Press **Stop/Exit**.

Color File Type

You can select the default color file type for Scan to E-mail (E-mail server) function (default is PDF).

1 Press **Menu/Set**, **5**, **7**, **3**.

2 Press ⬠ or ⬡ to select PDF or JPEG.

3 Press **Menu/Set**.

4 Press **Stop/Exit**.

Network Configuration List

This feature prints a report listing all the current network Print / Fax Server Settings.

1 Press **Menu/Set**, **7**, **6**.

2 Press **Black Start** or **Color Start**. (US)
Press **Mono Start** or **Colour Start**. (UK)

3 Press **Stop/Exit**.

Restoring the Network Settings to Factory Default

Follow the steps below to restore all network settings of the internal Print/Fax server to factory default.

1 Disconnect the Ethernet cable from the machine.

2 Press the up and down arrow navigation keys to display the Network Default menu.

3 Press **1** to return all settings of the Print/Fax server back to factory default.

4 Power off the machine.

5 Reconnect the Ethernet cable and power the machine back ON.

4 Network Printing from Windows® (Peer to Peer)

For Windows® 2000/XP, LAN Server and Warp Server users

Overview

Windows® 2000/XP users are able to send print jobs directly to the printer without installing any additional software. Brother's print server also supports transparent printing from IBM LAN Server and OS/2 Warp Server file servers, as well as from OS/2 Warp Connect workstations using the TCP/IP protocol.

Quick Tips:

1 The Automatic Private IP Addressing (APIPA) protocol automatically assigns an IP address from the range: 169.254.1.0 to 169.254.254.255. If you want to disable the APIPA protocol, set APIPA to Off using control panel. For more information see page 2-8. If the APIPA protocol is disabled, the default IP address of a Brother Print/Fax server is 192.0.0.192. To change it, use the machine's control panel, the BRAdmin Professional utility software or let your DHCP server allocate an IP address to the printer.

2 The default password for Brother Print/Fax servers is `access`.

3 Windows® 2000/XP users can print using TCP/IP using the standard Network Printing software.

4 The default name for a Brother Print/Fax server is usually `BRN_xxxxxx` (where `xxxxxx` is the last six digits of the Ethernet address of the Print/Fax server).

Windows® 2000/XP (TCP/IP) Configuration

The default configuration of Windows® 2000/XP automatically installs the TCP/IP protocol. Refer to the appropriate section in this chapter for more information.

Windows® 2000/XP Printing (Printer Driver not yet installed)

By default, Windows® 2000/XP systems install with all the necessary software required for you to be able to print. This chapter describes the most commonly used configurations, Standard TCP/IP Port printing. If you have already installed the printer driver, jump to the **printer driver already installed** section.

Standard TCP/IP Port Printing

1 From the **Printers** folder select **Add Printer**. The **Add Printer Wizard** will now start. Click on **Next**.

2 Now select the **Local Printer** option and deselect the **Automatically detect and install my Plug and Play printer** option.

3 Click on **Next**.

4 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.

5 When you have done that click **Next**.

6 The **Add Standard TCP/IP Port Wizard** will now appear. Click the **Next** button.

7 Enter the IP address, or name of the printer you wish to configure. The Wizard will automatically enter the Port name information for you.

8 Click the **Next** button.

9 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.

10 Click the **Finish** button to complete the Wizard.

11 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. You can also click the **Windows Update** button to connect directly to Microsoft's support Web site to download printer drivers.

12 When the driver is installed, click the **Next** button.

13 Specify a name and click the **Next** button.

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

15 Continue through the Wizard clicking the **Finish** button when complete.

Windows® 2000/XP Printing (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 choose **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 6-10 of the "Standard TCP/IP Port Printing" section.

For Windows® 98/Me users

Overview

Microsoft's Windows® 98/Me operating systems feature built-in networking capabilities. These capabilities allow a Windows® PC to be configured as a client workstation in a file server based network environment.

For smaller networks, Windows® 98/Me also allows the PC to operate in a peer-to-peer mode. In this mode, the PC can share resources with other PCs on the network without the need for a central file server.

Quick Tips:

1 The Automatic Private IP Addressing (APIPA) protocol automatically assigns an IP address from the range: 169.254.1.0 to 169.254.254.255. If you want to disable the APIPA protocol, set APIPA to Off using control panel. For more information see page 2-8. If the APIPA protocol is disabled, the default IP address of a Brother Print/Fax server is 192.0.0.192. To change it, use the machine's control panel, the BRAdmin Professional utility software or let your DHCP server allocate an IP address to the printer.

2 Refer to *chapter 2* of this user guide to learn how to configure the IP address on your machine.

3 The default password for Brother Print/Fax servers is `access`.

Driver Deployment Wizard

This installer includes the Windows driver and Brother network port driver (LPR).

If the administrator installs the printer driver and port driver using this software, they can save the file to the File server or send the file in an E-mail to other users. The user just clicks on the attached file and the printer driver, port driver and IP address are automatically installed to their PC.

NETWORK PRINTING FROM WINDOWS® (Peer-to-Peer) 4 - 4

TCP/IP Printing

Brother's Peer to Peer printing software requires the TCP/IP protocol to be installed on your Windows® peer-to-peer computers and an IP Address has to be defined for the Print/Fax server. Refer to your Windows® documentation for more information on how to configure the TCP/IP protocol on your Windows® PC.

If you haven't already done so, configure the IP address of the machine, for more information on IP address configuration, refer to *chapter 2* of this user guide.

Installing the Brother Peer to Peer Software

If you already installed the driver from the printer's CD-ROM 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 proper model and then the **Software Installation** menu. Then select the appropriate menu to start the **Brother Network Print Software** installation program.

3 Push the **Next** button in response to the Welcome message.

4 Select the **Brother Peer to Peer Print (LPR)** button.

5 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.

6 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.

7 You must now enter the actual IP address of the Print/Fax server in the **Printer name or IP address** field. If you have edited the hosts file on your computer or are using Domain Name System, you can also enter the name of the print server. As the Print/Fax server supports TCP/IP and NetBIOS names, you can also enter the NetBIOS name of the Print/Fax server. The NetBIOS name can be seen in your printer configuration page. By default the NetBIOS name will usually appear as BRN_xxxxxx where xxxxxx is the last six digits of the Ethernet address.

Windows® 98/Me store the hosts file in the default Windows® directory. By default, the Windows® hosts file is called hosts.sam. If you wish to use the hosts file you must rename the file to hosts with no extension. The .sam extension stands for sample.

8 Click the **OK** button. 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 Select **Add Printer** to begin the printer installation.

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 push **Next**.

5 Select the correct driver. Click **Next** when you are done.

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 press **Next**.

7 Select the Brother LPR port (the port name you assigned in step 6 of the "Installing the Brother Peer to Peer Software" on page 4-5) and press **Next**.

8 Enter any desired name for the Brother printer and press **Next**. For example, you could call the printer "Networked Brother Printer".

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, press the **Start** button, select **Settings**, and open the **Printers** window. Click on the icon of the printer that you wish to configure, select **File** from the menu bar, and then choose **Properties**. Click on the **Details** tab and push 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 the **OK** button. 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

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1 Visit http://solutions.brother.com/ for more information on network printing and for documents on the IPP protocol and how to configure a Windows® 98/Me/2000/XP System.

2 Refer to *chapter 2* of this user guide to learn how to configure the IP address of the machine.

5 Network Printing from Macintosh®

TCP/IP Printing for Macintosh®

This chapter explains how to print from Macintosh® 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.

Rendezvous Printing (Mac OS® 10.2.4 or greater)

Rendezvous lets you create an instant network of computers and smart devices just by connecting them to each other.

Rendezvous support allows a Rendezvous ready printer or MFC to automatically configure itself to work in a Mac OS® X Rendezvous system. You do not need to manually configure any IP address or network settings within the printer as the printer will automatically configure itself.

Refer to the information below if you wish to learn how to configure a Brother machine into a Mac OS® X Rendezvous environment. Please note Brother recommends that you use version Mac OS® 10.2.4 or greater.

1 Run the **Print Center** software and click the **Add**.
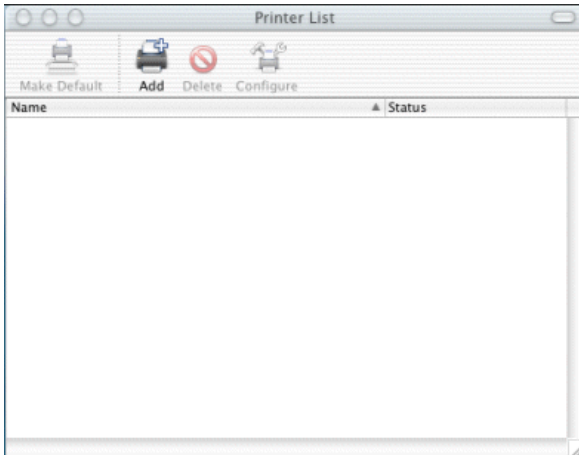
2 Select **Rendezvous** and any Rendezvous compatible machines will be displayed.
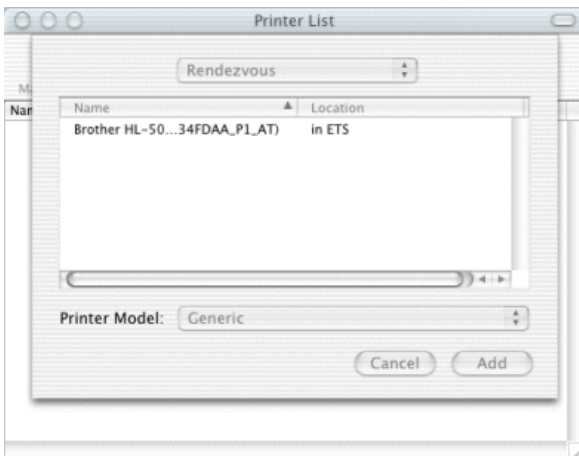
If you are using OS X 10.2.1, three machines are listed. Select any one of the machine listed.

3 Click the machine and then change the **Printer Model** to "Brother". The PPD files that are installed on your Macintosh are displayed. Select the relevant PPD file.
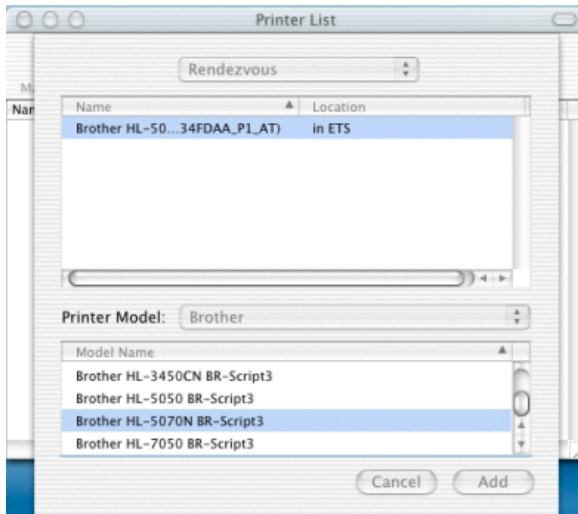
4 The Rendezvous ready machine is displayed.

5 Click the machine and click the **Make Default** button to set the printer as the default printer.The machine is now ready to print.

Other Sources of Information
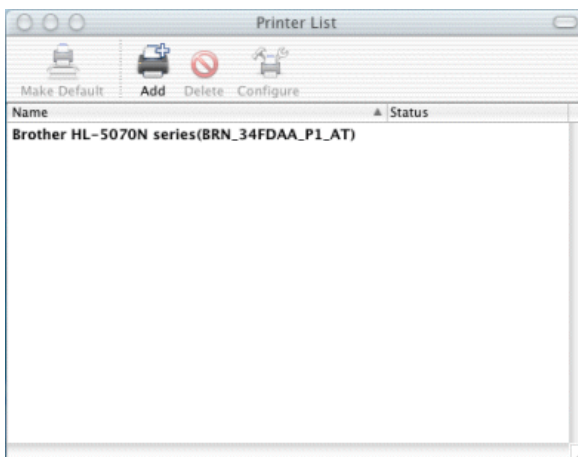
Visit http://solutions.brother.com/ for the latest information on Rendezvous Printing for Mac OS® 10.2.4.

6 **Internet FAX**

Overview

Internet Faxing (I-FAX) allows you to send and receive FAX documents using the Internet as the transport mechanism. Documents are transmitted in E-mail messages as attached TIFF-F or JPEG files. This means that PC's are also able to receive and send documents, providing that the PC has as an application that can generate and view TIFF-F or JPEG files, you can use Microsoft® Imaging or a TIFF-F or JPEG viewer application. Any documents sent via the machine will automatically be converted into a TIFF-F or JPEG format. If you wish to send and receive messages to and from your machine, your mail application on the PC must be able to support the MIME format.
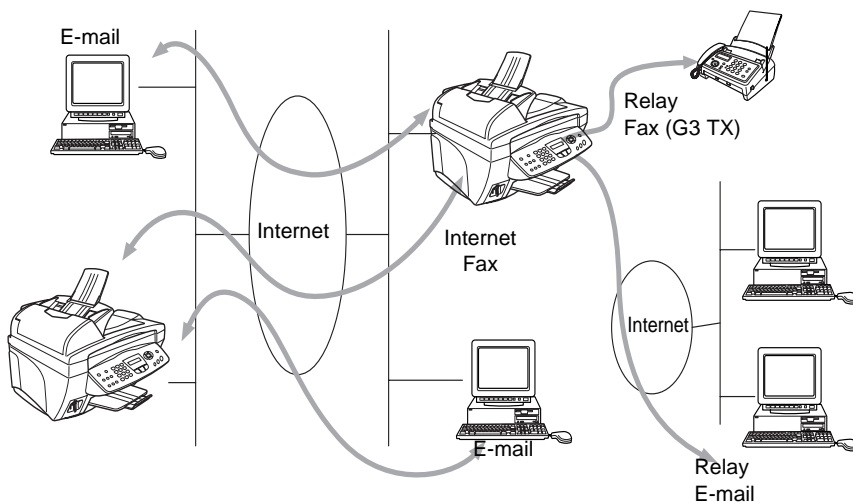
Getting Connected

Before sending or receiving an Internet Fax you must configure your Brother machine to communicate with your network and mail server. You must ensure the following: a correctly configured IP address for your machine, an E-mail address for your machine, the mail server(s) IP address, mailbox name and password for your Brother machine. If you are unsure of any of these items, please contact your network administrator.

Front Panel Key Functions

Shift + **1** (For MFC-3320CN)
Search/Speed Dial + **1** (For MFC-3820CN)
Used to change input mode, so you can use the Dial Pad keys as Standard alphabet character keys.

Dial Pad
Used to enter Standard Alpha characters (26 letters), as well as @ . space ! " # % & ' () + / : ; < > = ? [ ] ^ - $, *, _ and Numbers.

Shift + **3** (For MFC-3320CN)
Search/Speed Dial + **3** (For MFC-3820CN)
To change between upper case and lower case for entering the E-mail / I-Fax address.
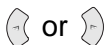
◁ or ▷
Moves the LCD cursor to the left or right when you enter texts.

Menu/Set
Used to store numbers and addresses.

Black Start or **Color Start** (US)
Mono Start or **Colour Start** (UK)
Begins transmitting the document.

Stop/Exit
Deletes entered data and stops the scanning or transmitting process.

One-Touch (MFC-3320CN only) / **Speed-Dial** / **Group Dial**
These functions work the same way as with conventional machine's.

However, please note that you cannot use chain dialling for E-mail addresses.

Shift + **Black Start** or **Color Start** (US MFC-3320CN)
Shift + **Mono Start** or **Colour Start** (UK MFC-3320CN)
Search/Speed Dial + **Black Start** or **Color Start**
(US MFC-3820CN)
Search/Speed Dial + **Mono Start** or **Colour Start**
(UK MFC-3820CN)
Used to receive E-mail from the POP3 server manually.

Sending an Internet Fax

Sending an Internet Fax is the same as sending a normal Fax only using the Internet instead of phonelines.

If you have already programmed the addresses of the Internet Fax receivers into the machine as Speed-Dial or One-Touch dial locations, you can send the Internet Fax by loading the document into the machine, use the Fax Resolution key to set the preferred resolution and select a Speed-Dial or One-Touch dial number and pressing Black Start(US)/Mono Start(UK) or Color Start(US)/Colour Start(UK).

This will differ depending on the whether your machine contains Speed-Dial or One-Touch dial keys or includes Navigator Keys.

If you wish to manually enter the Internet Fax Address load the document into the machine and press **Shift** (For MFC-3320CN) or **Search/Speed Dial** (For MFC-3820CN) and **1** simultaneously to change into the "alphabet" dialling mode.

Please refer to the following section on how to manually enter the Internet Fax address.

If you specify more than 16 characters, the LCD panel will scroll the name to the left character by character. You can enter up to 60 characters.

1 Press **Black Start** (US)**/Mono Start** (UK) or **Color Start**
(US)/Colour Start (UK) to send the document.

After the document is scanned, it is transmitted to the Recipient Internet Fax Machine automatically via your SMTP server. You can cancel the send operation by pressing the **Stop/Exit** button during scanning. After the transmission is finished, the machine will return to standby mode.

Some E-mail servers do not allow you to send large E-mail documents (the System Administrator will often place a limit on the maximum E-mail size). You can enable the Limit Size of the Sent Mail feature. The machine will display `Out of Memory` when trying to send E-mail documents over 1Mbyte in size. The document will not be sent and an error report will be printed. The document you are sending should be separated into smaller documents that will be accepted by the mail server. You can turn on this feature through the LAN function menu. (See *chapter 3* for details)

Manually Entering Text

Press **Shift** (For MFC-3320CN) or **Search/Speed Dial** (For MFC-3820CN) and **1** simultaneously to change into the "alphabet" dialling mode.

You can now use the Dial Pad to dial the E-mail address. Refer to the following table: Most number keys have three or four letters printed above them. The 0, #, * keys do not have printed letters because they are used for special characters.

By pressing the appropriate number key the correct number of times, you can access the character you want.

Key	Once	Twice	Three times	Four times
1	@	.	/	1
2	A	B	C	2
3	D	E	F	3
4	G	H	I	4
5	J	K	L	5
6	M	N	O	6
7	P	Q	R	S
8	T	U	V	8
9	W	X	Y	Z

6 - 4 INTERNET FAX

To change the mode between upper case and lower case, press
Shift (MFC-3320CN) or **Search/Speed Dial** (MFC-3820CN) and **3**.

If you want to enter a blank space, press ⟩ twice.

If you specify more than 16 characters, the LCD panel will scroll the
name to the left character by character. You can enter up to 60
characters.

Making corrections:
If you entered a letter incorrectly and want to change it, press ⟨ to
move the cursor under the incorrect character. Then press **Stop/
Exit.** The letter above the cursor will be deleted. Re-enter the correct
character.

Repeating letters:
If you need to enter a character assigned to the same key as the
previous character, press ⟩ to move the cursor to the right.

Special characters and symbols

Press * for   (space) ! " # $ % & ' () * + , - . / €

Press # for   : ; < = > ? @ [ ] ^ _

Press Ø for   É À È Ê Î Ç Ë Ö 0 (For US and Canada users)

                Ä Ë Ö Ü À Ç È E 0 (For other users)

As you enter the Internet Fax address, it will appear character by
character on the LCD panel.

Receiving E-mail or Internet Fax

There are 2 ways you can receive E-mail messages:

■ POP3 receiving at regular intervals

■ POP3 receiving (manually initiated)

Using POP3 receiving the machine must poll the E-mail server to receive the print jobs. This polling can occur at set intervals (for example, you can configure the machine to poll the E-mail server at 10 minute intervals) or you can manually poll the server by pressing the **Shift** (MFC-3320CN) or **Search/Speed Dial** (MFC-3820CN) + **Black Start** or **Color Start** (US)/**Mono Start** or **Colour Start** (UK) button.

If your machine starts to receive E-mail print jobs, the LCD panel will reflect this activity. For example, you will see Receiving on the LCD panel followed by "xx E-mail(s)". If you press the **Shift** (MFC-3320CN) or **Search/Speed Dial** (MFC-3820CN) + **Black Start** or **Color Start** (US)/**Mono Start** or **Colour Start** (UK) buttons to manually poll the E-mail server for E-mail print jobs. If there are no mail documents waiting to be printed, the machine will display No Mail on the LCD panel for two seconds.

If your machine is out of paper when receiving data, the received data will be held in the machine's memory. This data will be printed automatically after paper is re-inserted into the machine. (For European, Asian and Oceanian machines, Memory receive must be switched "ON".)

If the received mail is not in a plain text format or an attached file is not in the TIFF-F or JPEG format, the following error message will be printed: "ATTACHED FILE FORMAT NOT SUPPORTED. FILE NAME:XXXXXX.doc" If the received mail is too large, the following error message will be printed: "E-MAIL FILE TOO LARGE." If "Del Error Mail" is "ON" (default) then error mail is automatically deleted from the E-mail Server.

Receiving an Internet Fax to a PC

When a PC receives an Internet Fax document, the document is attached to a mail message that informs the PC that it is receiving a document from an Internet Fax. This is notified in the Subject field of the received mail message.

If the PC to which you wish to send a document is not running Windows® 98/98SE/Me or Windows® 2000/XP operating system, please inform the PC's owner that software must be downloaded for documents in the TIFF-F or JPEG format to be viewed.

You can use " Microsoft® Imaging" that is supplied with Windows® 98/Me or Windows® 2000/XP.

Forwarding Received E-mail and Fax Messages

You can forward received E-mail or standard fax messages to another E-mail address or fax machine. Received messages can be forwarded via E-mail to a PC or Internet Fax. They can also be forwarded via standard phone lines to another machine.

Please see your machine's User's Guide to check that this feature is supported. This function is not available for color fax documents.

This can be done through the front panel. The steps for configuring Fax Forward can be found in the User's Guide supplied with your machine.

Relay Broadcasting

This function allows the Brother machine to receive a document over the Internet, and then relay it to other fax machines through conventional telephone lines.

If you wish to use your machine as a relay broadcast device, you must specify the domain name that you trust at the machine, in other words, the portion of the domain after the '@' sign.

A trusted domain refers to the E-mail address. For example, if the other party's address is bob@brother.com, then we identify the domain as brother.com. If the E-mail address is jack@brother.co.uk, then we identify the domain as brother.co.uk.

Use carefully in selecting a trusted domain since any user on a trusted domain will be able to send a Relay Broadcast. You can register up to 5 domain names.

Relay Broadcast can support the relay of a document up to a maximum of 48 fax machines through conventional telephone lines. If you try to send a document to over 49 machines, the following error message will be printed: "Relay Error".

Relay Broadcasting does not support the relay of color files types.

Relay Broadcast from a machine
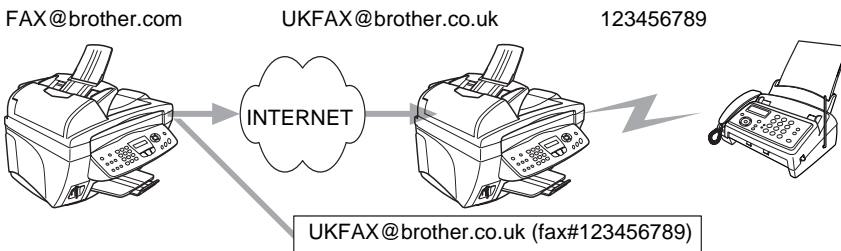
Your machine has an E-mail address of FAX@brother.com, when you wish to send a document from this machine to another machine in England with an E-mail address of UKFAX@brother.co.uk, this machine will then forward the document to a standard fax machine using a conventional telephone line. If your E-mail address is FAX@brother.com, you must configure a trusted domain name of brother.com on the machine in England that will broadcast the document to the conventional fax machine. If you do not enter the domain name information, then the machine in the middle (the machine that will broadcast the document) will not trust any internet jobs that it receives from the machine in the @brother.com domain.

After the trusted domain is set you can send the document from your machine [I.E. FAX@brother.com] by entering the E-mail address of the machine [I.E. UKFAX@brother.co.uk] that will forward the document followed by the phone number of the fax that will receive the document. The following is an example of how to enter the E-mail address and phone number.

UKFAX@brother.co.uk(fax#123456789)

E-mail address   Fax Phone Number

The word "fax#" must be included with the phone number inside the parenthesis.

Sending to multiple phone numbers:
If you want to have the document relayed to more than one standard fax machine the address can be entered using the following method:

1 Enter the phone number of the first Fax machine UKFAX@brother.co.uk(Fax#123).

2 Press the "Set" key.

3 Enter the phone number of the second Fax machine UKFAX@brother.co.uk(Fax#456).

4 Press **Black Start** (US)**/Mono Start** (UK).

TX Verification Mail

Transmission Verification Mail supports two separate functions. Verification Mail for sending allows you request notification from the receiving station that the I-Fax or E-mail was received and processed. Verification Mail for receiving allows you to transmit a default report back to the sending station after successfully receiving and processing an I-Fax or E-mail.

To use this feature you must set the "Notification" option within the "Setup Mail RX" and "Setup Mail TX" options.

Setup Mail (TX)

You can set the "Notification" option in the "Setup Mail TX" option to either On or Off. When switched to On an additional field of information is sent with the image data. This field is named "MDN".

MDN
Mail Disposition Notification - This field requests the status of the I-Fax / E-mail message after delivery through the SMTP (send mail transfer protocol) transport system. Once the message has arrived at the Receiving station this data is used when the machine or user reads or prints the received I-Fax or E-mail. For example, if the message is opened for reading or is printed the receiving station sends back a notification to the original sending machine or user.

The receiving station must support the MDN field in order to be able to send a notification report, otherwise the request will be ignored.

Setup Mail (RX)

There are three possible settings for this option On/MDN/Off.
Receive Notification "On"
When switched to "On" a fixed message is sent back to the sending station to indicate successful reception and processing of the message. These fixed messages depend on the operation requested by the sending station.

Report messages consist of

```
SUCCESS : Received From <mail address>
```

Receive Notification "MDN"
When switched to "MDN" a report as described above is sent back to the sending station if the originating station sent the "MDN" field to request confirmation.

Receive Notification "Off"
Off - Switches all forms of receive notification Off, no messages are send back to the sending station regardless of the request.

Error mail

If there is a mail delivery error while sending an Internet Fax, the mail server will send an error message back to the machine and the error message will be printed. If there is an error while receiving mail, an error message will be printed (Example: "The message being sent to the machine was not in a TIFF-F or JPEG format.").

Important information on Internet Fax

Internet Fax Communication on a LAN system is basically the same as communication via E-mail; however, it is different from Fax communication using standard phone lines. The following is important information for using Internet Fax:

■ Factors such as the receiver's location, structure of the LAN system, and how busy the network is, may cause the system to take a long time to send back an error mail. (normally 20 sec to 30 sec).

■ In the case of transmission through the Internet, due to its low level of security, we recommend that you use standard phone lines to send confidential documents.

■ If the receiver's mail system is not compatible with the MIME format, you cannot transmit a document to the receiver. Depending on receiver's server, there may be some cases in which the error mail will not be sent back.

■ If the size of a document's image data is huge, there is a possibility of unsuccessful transmission.

■ You cannot change font and character size of Internet mail that you received.

7 Configuring Internet Printing for Windows®

Internet Printing Installation

Overview

Our Brother Internet Print (BIP) software, for Windows® 98/Me, allows a PC user at one location to send a print job to a Brother Printer at a remote location via the Internet. For example, a user on a PC in New York could print a document directly from his Microsoft Excel application program to a printer in Paris.

Quick Tips:

1 The Automatic Private IP Addressing (APIPA) protocol automatically assigns an IP address from the range: 169.254.1.0 to 169.254.254.255. If you want to disable the APIPA protocol, set APIPA to Off using control panel. For more information see page 2-8. If the APIPA protocol is disabled, the default IP address of a Brother Print/Fax server is 192.0.0.192. To change it, use the machine's control panel, the BRAdmin Professional utility software or let your DHCP server allocate an IP address to the machine.

2 Refer to *chapter 2* of this user guide to learn how to configure the IP address on your machine.

3 The default password for Brother Print/Fax servers is `access`.

4 Windows® 2000/XP users can print using TCP/IP using the standard Network Printing software.

Brother Internet Print General Information

The BIP software is installed using a standard Windows® 98/Me/2000/XP Installation Wizard. It creates a virtual port on the Windows® 98/Me/2000/XP PC that operates in a similar way to the standard LPT1 printer port from the application program point of view. The user can use the Windows® 98/Me/2000/XP Print Manager to create a printer that uses this port along with a standard Windows® 98/Me, 2000/XP-compatible machine. Any Windows® 98/Me/2000/XP applications program can therefore print to this machine (and hence to the virtual port) without modification or operational procedure.

When a job is printed to the BIP virtual port, it is actually MIME-encoded (converted to a standard Internet E-mail message) and sent out to a Brother Print/Fax server at the remote location. This means that BIP is compatible with most common E-mail software packages. The only requirement is that the E-mail server be capable of sending E-mail message over the Internet.

In more detail, the procedure works in the following way:

■ If you are connected to a Local Area Network, the E-mail message is passed to the E-mail server, which in turn transmits the message out over the Internet using the SMTP protocol (Simple Mail Transport Protocol) to the remote Print/Fax server.

■ If you are connecting via a modem directly to an Internet Service Provider (ISP), the ISP handles the routing of the E-mail to the remote Print/Fax server.

■ At the remote site, an E-mail server receives the E-mail message. The remote Print/Fax server, which has its own E-mail address, uses the POP3 protocol (Post Office Protocol 3) to download the E-mail message from the E-mail server. It then decodes the attachment and prints it out on the machine.

If an E-mail is received that has not been configured to use the BIP virtual port driver, the machine will print the E-mail out as a text document.

Brother Internet Print
Configuring the Brother Print/Fax Server

The Print/Fax server can be configured using BRAdmin Professional utility.

Print Server Configuration Checklist

Before configuring the print server to receive BIP jobs, be sure that the E-mail server at the remote site (the receiving end) is configured to handle the TCP/IP POP3, and SMTP protocols (SMTP is only required if the notification feature is enabled).

1 Configure the POP3 server on the E-mail server at the remote site with a mail account (Mailbox name) and password for the Brother Print/Fax server (generally, the mail account name will be the first part of the Email address; for example, if you assign the E-mail address emailprinter@xyz.com, then the mail account name would be emailprinter).

2 Make sure that the Print/Fax server is installed and running with TCP/IP enabled and has a valid IP address assigned to it.

Because access to the E-mail server on most networks is usually restricted, you may need to have your network administrator check the configuration and add the mail account.

Brother Internet Print
Using BRAdmin Professional utility to Configure the Print Server

Using the BRAdmin Professional utility, you can configure the Brother print server using the TCP/IP protocol.

The steps required to configure the Print/Fax server to receive print jobs from a Windows® 98/Me/2000/XP. PC running the BIP software is as follows:

1 Start BRAdmin Professional utility.

2 Select the node name of the desired Brother Print/Fax server from the list and double click on it. (the default node name is usually BRN_xxxxxx, where xxxxxx is the last six digits of the Ethernet address (MAC address)). You will be prompted for a password; the default password is access.

You can find the node name and MAC address by printing out the machine configuration page. Refer to this user's guide *chapter 3* for information on how to print the configuration page on your Print/Fax server.

3 Click on the **POP3/SMTP** tab.

4 Enter the address of the POP3 server (consult your network administrator if you do not know this address).

5 Enter the mailbox name for the remote Brother Print/Fax server. Usually this will be the first part of the E-mail address (for example, if the E-mail address of the print server is emailprinter@xyz, then the mailbox name would be emailprinter).

6 Enter the password for the mailbox, if any.

7 The Print/Fax server is configured by default to poll the POP3 server every 30 seconds. You may change this value, if desired.

8 If you have enabled notification, enter the address of your SMTP server (consult your network administrator if you do not know this address).

9 Press the **OK** button and save the changes. Now exit the BRAdmin Professional utility. You have now configured the Print/Fax server to receive print jobs.

Brother Internet Print Installing the BIP software on Windows® 98/Me/2000/XP

To install the BIP software on a Windows® 98/Me/2000/XP PC, execute the following steps:

- Be sure that the PC is running an E-mail program (for example, Microsoft Outlook) that is capable of sending E-mail message using Winsock.
- Be sure that your E-mail server is capable of sending messages across the Internet.

Setup from CD-ROM

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

2 Select the proper model and **Software Installation** menu. Then select the **Network Print Software** menu to start the **Brother Network Print Software** installation program.

3 Push the **Next** button in response to the Welcome message.

4 Select the **Brother Internet Print** button.

5 Select the desired directory to install the BIP files and then push **Next**. The installation program will create the directory for you if it does not already exist.

6 You will then be asked for a port name. Enter the name of the port. The port name must begin with the BIP and end with a number, for example, BIP1.

7 You will then see a message about **Partial E-mail Print**. Partial E-mail Print is the ability of the Brother Internet Print software to break down E-mail Print jobs into smaller sections to prevent a mail file size limitation problem for the mail server.

8 Press **OK** to continue.

9 You will then be asked to enter the port settings for the remote Print/Fax server:

Enter any unique legal Internet E-mail address for the remote Print/Fax server (for example emailprinter@xyz.com). Note that Internet E-mail addresses cannot have spaces in them.

Enter your E-mail address and the IP address of your SMTP E-mail server (consult your network administrator if you do not know this address). Also specify if you are going to use the **Partial E-mail Print** option and the **Notification** type.

10 Press **OK** to continue. You will then be asked to re-start your computer.

11 Once your computer has re-started you must create a printer on your Windows® 98/Me/2000/XP system using the standard Windows® 98/Me/2000/XP printer setup procedure. To do this, go the **Start** button, select **Settings** and then **Printers** (Windows® 98/Me/2000/XP). To do this, go to the **Control Panel**, select **Printers and Other Hardware** and then **Printers and Faxes** (or **Add a printer**)(Windows® XP)

12 Select **Add Printer** to begin the printer installation.

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

<For Windows® 98/Me users>

14 Select **Local Printer** when you are asked how the printers are connected to your computer and push **Next**.

<For Windows® 2000/XP users>

14 Select **Local Printer**, and then delete the check mark in **Plug and Play** check box.

<For Windows® XP users>

14 Select **Local Printer** attached to this computer.

<For Windows® 98/Me users>

15 Select the desired model of the remote printer or MFC (for example, Brother MFC-series). If necessary, click **Have Disk** to load the driver from the CD-ROM. Click **Next** when you are done.

16 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 press **Next**.

17 Select the **Brother Internet port** (BIP...) which you selected in step 6 and press **Next**.

<For Windows® 2000/XP users>

15 Select the **Brother Internet port** (BIP...) which you selected in step 6 and press **Next**.

16 Select the desired model of the remote printer or MFC (for example, Brother MFC-series). If necessary, click **Have Disk** to load the driver from the CD-ROM. Click **Next** when you are done.

17 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 press **Next**.

18 Enter any desired name for the BIP remote printer and press **Next**. Note that this name does not need to match the port name that you assigned in step 6, or E-mail address that you assigned in step 9.

19 Select **No** when asked if you want to print a test page, unless you have already configured the remote Print/Fax server to receive BIP print jobs.

You have now finished installing the BIP software. If you need to configure another remote Print/Fax server, go to the next section, "Adding a Second Brother Internet Port".

Adding a Second Brother Internet Port

You should not re-run the install program to add a new Brother Internet Port. Instead, press the **Start** button, select **Settings**, and open the **Printers** window. Click on the icon of a machine that is using BIP, select **File** from the menu bar, and then choose **Properties**. Click on the **Details** tab and push the **Add Port** button.

In the **Add Port** dialog, select the **Other** radio button (Windows® 98/Me only) and then **Brother Internet Port**. Click **OK** and it will give you the **Port Name** text box. Any unique name can be given here as long as it starts with "BIP" and another port does not already exist with the same name.

Other Sources of Information

1 Visit http://solutions.brother.com/ for more information on network printing and how to configure a Windows® 2000/98/Me System.

2 Visit Microsoft's web site for the "Microsoft Internet Print Services" software for Windows® 98/Me.

3 Refer to *chapter 2* of this user guide to learn how to configure the IP address of the machine.

8 Troubleshooting

Overview

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

1 Installation Problems

2 Intermittent Problems

3 Protocol-Specific Troubleshooting

4 Internet FAX Troubleshooting

Installation problems

If you cannot print over the network, check the following:

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

Verify that the machine and the configuration are good by printing the Network configuration page. Refer to page 3-19 of this user's guide. If the test fails, check:

a If the LCD does not display "LAN Active" after being connected to the network, then the network firmware settings may be corrupted. Please refer to Step 3.

b In this event, try to restore the factory default settings of the Print/Fax server by pressing both upper and lower narrows at Navigation key to show Network Default menu, then press 1. Once you have done that, switch the machine off and then on again, and try to print out the Network configuration page. (See *Restoring the Network Settings to Factory Default*, page 3-19)

2 If the configuration page prints but you cannot print documents, try the following

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

a **If you are using TCP/IP:**
Try pinging the Print/Fax server from the host operating system command prompt with the command:
`ping ipaddress`

Where `ipaddress` is the Print/Fax server IP address (note that in some instances it can take up to two minutes for the Print/Fax server to load its IP address after setting the IP address). If a successful response is received, then proceed to the Windows®98/Me Peer to Peer (LPR) or Internet Printing troubleshooting section. Otherwise, proceed to step 3, and then go to TCP/IP Troubleshooting section.

b **If you are running Macintosh:**
If you are using the Quick Draw driver make sure that you can see the Print/Fax server name under the Brother Ink (IP) icon in the Chooser. If it is visible, then the connection is good, so proceed to the Macintosh Section. Otherwise, go to step 3. If you use the Rendezvous function, please visit the Brother Solutions Center web site on: http://solutions.brother.com

3 If you cannot make any of the connections in step 2, check the following:

a Make sure the machine is powered on and on-line.

b Check the cabling, network connection, and print out a configuration page in the Network STATISTICS information to see if bytes are being transmitted and received.

4 If you are using a repeater or hub, make sure that SQE (heartbeat) is turned off at the hub (if applicable). Also, if you have a hub or multi-port repeater, verify that the hub or repeater port is good by trying the Print/Fax server on a different port or on the other hub or multi-port repeater.

5 If you have a bridge or router located between the Print/Fax server and host computer, make sure that the device is set up to allow the Print/Fax server to send and receive data from the host. For example, a bridge can be set up to only allow certain types of Ethernet addresses to pass through (a process known as filtering); therefore, such a bridge must be configured to allow Brother Print/Fax server addresses. Likewise, a router can be set up to pass only certain protocols, so be sure that the desired protocol can be passed through to the Print/Fax server.

Intermittent Problems

If the Print/Fax server and machine start up OK, but you intermittently have problems printing, check the following:

1 If you can print small jobs but large graphics jobs are distorted or incomplete, make sure that you have adequate memory in your machine and the latest printer driver installed on your computer. The latest Brother printer drivers can be downloaded from http://solutions.brother.com

2 Check the individual protocol troubleshooting sections in this chapter for additional causes of intermittent printer problems.

TCP/IP Troubleshooting

If you are using TCP/IP and cannot print to the print server and you have checked the hardware and network as described in the previous steps, then check the following:

It is always a good idea to try following in order to eliminate the possibility of setup errors.

Turning off the machine and then on again,
Deleting and recreating the Print/Fax server and creating a new print queue in order to eliminate the possibility of setup errors.

1 The problem may be the result of mismatched or duplicate IP address. Verify that the IP address is correctly loaded into the Print/Fax server (via the configuration page. Make sure that no other nodes on the network have this address (DUPLICATE IP ADDRESS ARE THE BIGGEST CAUSE OF TCP/IP PRINTING PROBLEMS).

2 Make sure that the TCP/IP protocol of the print server is enabled.

3 If you used rarp, make sure that you started the rarp daemon on any workstation using the rarpd, rarpd-a, or equivalent command. Verify that the `/etc/ethers` file contains the correct Ethernet address and that the Print/Fax server name matches the name in the `/etc/hosts` file.

4 If you used bootp, make sure that you started the bootp daemon on any UNIX workstation and bootp is enabled (i.e., the "#" is removed from the bootp entry) in the `/etc/bootptab` file is correctly configured.

5 Also verify that host computer and the Print/Fax server are either on the same subnet, otherwise that the router is properly configured to pass data between the two devices.

Windows® 98/Me Peer to Peer Print (LPR) Troubleshooting

If you are having trouble printing on a Windows® 98/Me 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 "TCP/IP Printing" on page 4-5.

2 Try to turn the **Byte Coun**t 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/Me computers. Press the ALT and TAB keys to make it appear.

Brother Internet Print (TCP/IP) Troubleshooting

1 The first step in troubleshooting is to make sure that you have a valid E-mail connection on both the sending PC and the receiving Print/Fax server. Try sending an E-mail message from the PC to a user at the remote site who can receive mail via the POP3 server. If this does not work, there may be an E-mail configuration problem on the PC, on the local E-mail server, or on the remote POP3 server. Double check to make sure that the E-mail parameters that you configured on the PC and on the remote Print/Fax server match those that are configured on the E-mail servers.

2 If you can print small files OK but are having problems printing large files, the problem may be in the E-mail system! Some E-mail systems have difficulties printing large files. If the file does not reach its destination intact, then the problem is with the E-mail system.

3 You can also enable the partial E-mail print facility on your client PC, this will split the E-mail up into fragments which should then not overwhelm your E-mail server. To do this, select the property dialog of the Brother Internet Print Port.

Internet Fax Troubleshooting

1 If there is a mail delivery error while sending an Internet Fax, the mail server will send an error message back to the machine and the error message will be printed. If there is an error while receiving mail, an error message is printed (Ex. The message being sent to the machine was not in a TIFF-F or JPEG format.) All documents transmitted to the machine via E-mail must be in a TIFF-F or JPEG format.

2 If an error message is printed while receiving E-mail text from a PC "ATTACHED FILE FORMAT NOT SUPPORTED" the senders mail application may not be set for a "Plain Text" format or "Vcard" the virtual business card feature may be set to ON.

3 If the receiver's mail system is not compatible with the MIME format, you cannot transmit a document to the receiver. Depending on the receiver's server, there are some cases that the error mail will not be sent back.

4 Messages cannot be received in an HTML format. This format is not supported. All messages must be received in a TIFF-F or JPEG Format.

5 If the size of a documents image data is huge, there is a possibility of unsuccessful transmission if the system administrator has imposed a limit on the maximum size of E-mails and their attachments. The document you are sending should be separated into smaller documents that will be accepted by the mail server. (Ex. A 42 page document of the CCITT#1 test chart is approximately 1Mbyte in size).

6 If you do not receive E-mail, check the Auto Polling setting and Polling frequency.

7 If you cannot retrieve mail from the mail server, check the settings for the POP3 server and Mailbox name. Check that the POP3 password is entered correctly. This setting is case sensitive.

8 If Relay Broadcast is not forwarding E-mail to a G3 Fax, check the Relay Broadcast settings and Relay Domain registration. A Relay Domain must be entered for this function to work.

9 The Relay Broadcasting and Broadcasting features cannot be used at the same time.

10 Relay Broadcast can support the relay of a document up to a maximum of 48 fax machines through conventional telephone lines. If sending to more than 48 locations the sender must divide the transmission locations into 48 locations or less for each relay broadcast.

11 When receiving E-mail messages from the POP3 server, the machine can receive a maximum of 32 mail messages. If there are more than 32 mail messages in the POP3 server, the machine will receive a maximum of 32 mail massages and then receive the remaining after the next polling interval.

12 The Print / Fax Server requires a portion of the user memory for operation. The number of Fax sheets that can be sent or received will be reduced (by approximately 30 pages of the brother No1 Test Chart) from the standard machine capacity.

9 Brother Internet Fax Printing Software (USA/Canada only)

Overview

Depending on your network configuration and application requirements for sending faxes via a network, you can choose between Brother Network PC FAX Software or Brother Internet Fax Printing Software. With either software, viewable document such as web pages, word documents, PDF documents can be sent from the users desktop to any standard Facsimile machines, Internet fax machines and E-mail addresses.

Brother Internet Fax Printing Software (BFP) is a Windows® 98/Me and Windows® 2000/XP software utility that gives network PC Fax and Internet Fax functionality from the desktop to users on your network or over the Internet.

BFP utilizes SMTP as the transport for sending documents from your PC. This allows any PC supported by a SMTP mail server to send an Internet FAX even if that PC does not have direct access to the networked machine.

Brother Network PC Fax Software utilizes LPR as the transport for sending documents from your PC to the networked machine for transmission. This requires that the sending PC has access to the network that the sending machine is connected.
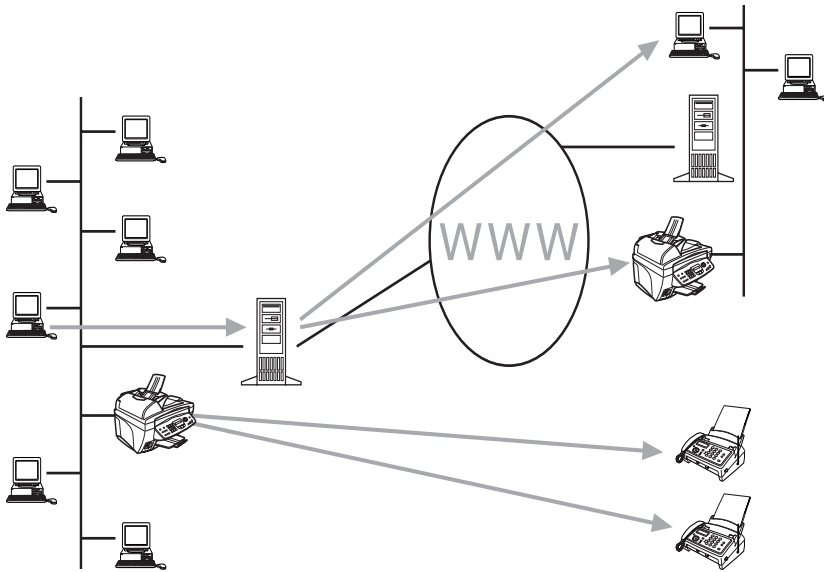
Installing Brother Internet Fax Printing Driver

Insert the CDROM supplied with your Brother machine into your CD-ROM Drive. The installer screen will automatically start.

If the installer screen does not appear automatically select **Start | Run** and type **X:/setup.exe**
(**X:/** should be the drive letter of your CD ROM drive on your PC)

1 Select **Install Software**.

2 Select **Network Applications**.

3 Highlight **Brother Internet Fax Printing (BFP) Driver**.

4 Click **Install**.

Next you will be presented with the licensing agreement, please carefully read the agreement and make the necessary choice.

During the installation you are presented with the following screen, select the default unless you have previously installed this software. If this is the case use a port number that has not been previously configured. Example BFP2
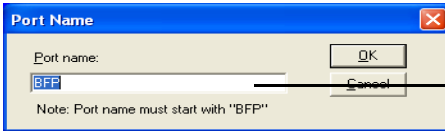
When Installing BFP on Windows® 2000 and XP operating systems we recommend that you add a ":" to the end of the port name, so BFP1 = BFP1:

You also need to enter certain information into the printer driver dialog screen as illustrated below.
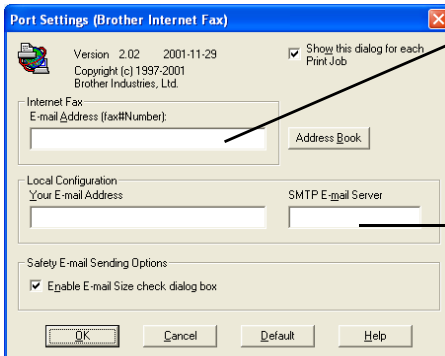
Here you can enter the default E-mail address or you can leave it blank.
* If an address is specified here this will always be used as default sending address.

This can be the host name or IP address of the E-mail server

It is very important that you enter your own E-mail address. You also need to configure the SMTP mail server IP address or host name as illustrated above.

If in any doubt contact your Network Administrator for assistance

Changing the BFP Port Settings

If you have more than one networked machine with this Print/Fax Server you may want to change the settings of the BFP software to use an alternative machine as the network fax print server.

To alter BFP settings, select **Start | Printers and Faxes** to open the Printers dialogue box. From the Printers windows illustrated below highlight the **Brother Internet Fax** and right click the mouse. From the list presented select **Properties**.
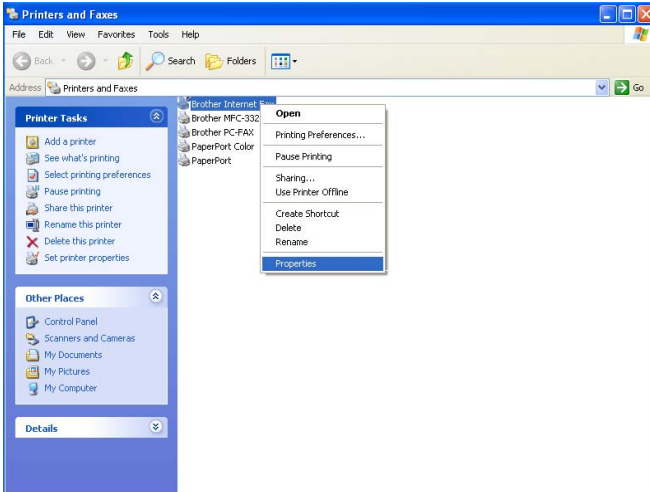
You are now presented with the screen below, which allows you to configure the BFP settings. To change the details of the print server, select the Ports tab.
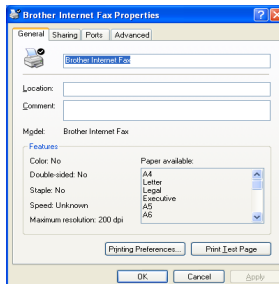
The following screen shows the current configuration. To alter this configuration, press the **Configure Port...** key.
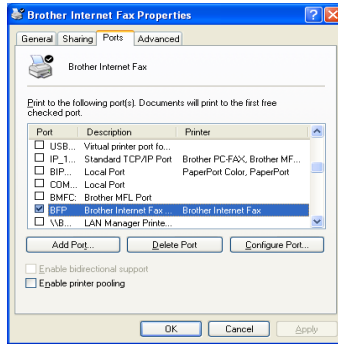
From the **Configure Port...** dialogue box you can change the settings.
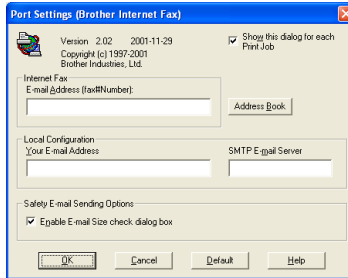
Relay Broadcast Function

Before you can successfully use this machine as a network fax solution you need to switch the feature "Relay Broadcasting" ON at the machine. In addition you also need to set a "Trusted Domain" at the machine.

In order for the machine to receive data and then send this information (network fax) to other fax machines the "Relay Broadcast Function" must be switched "ON". Also you must tell the networked machine which networks can relay faxes through your machine. This is known as setting the "Trusted Domain". For instance, if a network machine has an E-mail address of fax@brother.com and users of this machine also have E-mail addresses with the same domain name then the machine must be told to allow these users to send network faxes through the machine. This is known as the "Relay Function" and "Trusted Domains". So we set the trusted domain as brother.com.

"Trusted Domains" Provide security for your machine. In that only users from a particular domain can send faxes through your network connected machine.

Uninstalling from Windows® 98/Me/2000/XP

Select **Start | Control Panel** and then double click the **Add or Remove programs** icon. From the list of installed programs select the Brother Internet Fax Vx.xx as shown below then click the **Add/Remove** button.

In the case of Windows® 2000/XP you also need to remove the Brother Internet Fax Driver from the **Start | Control Panel | Add or Remove Programs** properties.
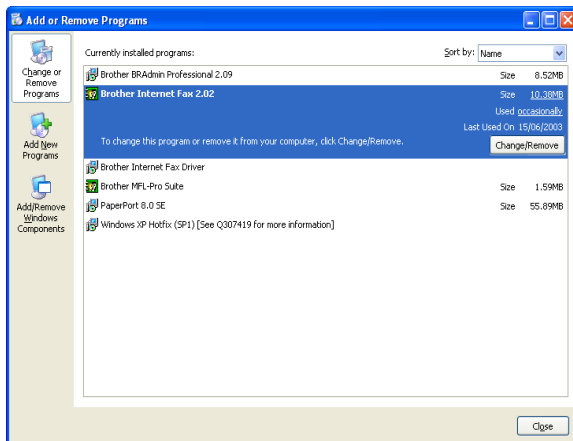
In addition to this you also need to manually remove the Brother Internet Fax Driver from the printers list.

To do this select **Start | Printers and Faxes** you are then presented with the Window illustrated below.
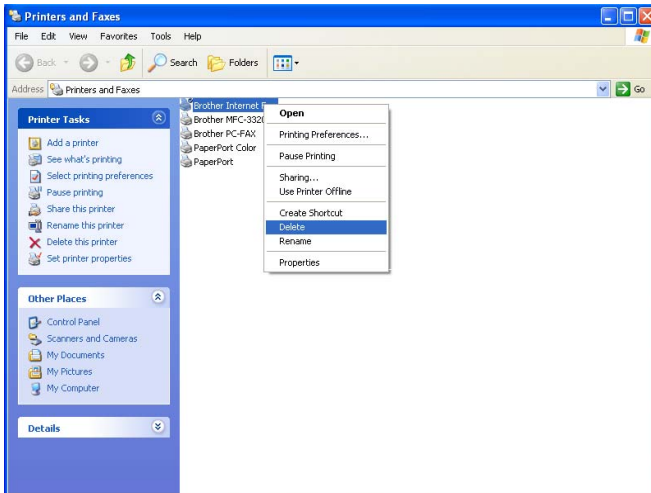
Right click the **Brother Internet Fax**, from the list click **Delete**. Accept the confirmation and the driver will be deleted.

Using the BFP Address Book

This utility can administer the Fax addresses, Internet Fax addresses and E-mail address of all the contacts that you wish to use with the BFP Software. Additionally you can create Groups of contacts that you may wish to broadcast documents to.

From the **Start** menu, select **Programs**, **Brother**, **Brother MFL Pro Suite**, **Internet Fax** and then click **Brother Address Book**. The **Brother Address Book** dialog box will appear:
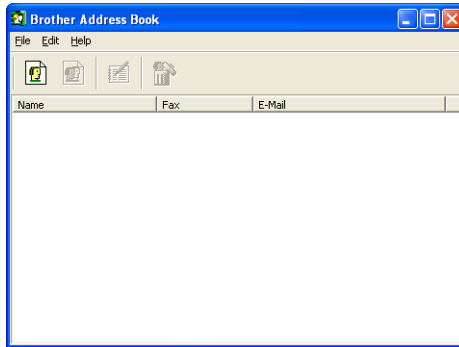
Setting Up a Member in the Address Book
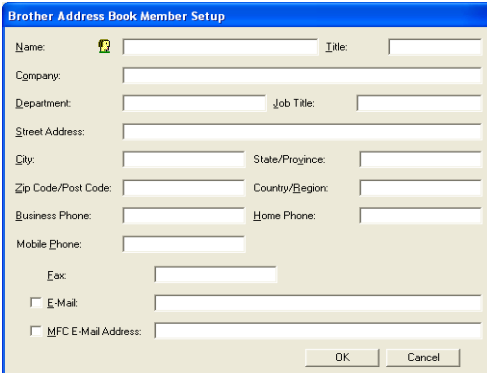
In the **Brother Address Book** dialog box you can add, edit and delete stored information for members and groups.

1 In the Address Book dialog box, click the icon to add a member.
The **Brother Address Book Member Setup** dialog box will appear:

When creating the Address Book member please select the method of default delivery.

2 In the Brother Address Book Member Setup dialog box, type the member's information.

Name is a required field. You can also enter the an E-mail contact address and machine address for the address book member. Click the **OK** button to save the member's information.

Setting Up a Group for Broadcasting

If you repeatedly send the same PC-FAX to multiple recipients, you can combine members into a Group.

1 In the **Brother Address Book** dialog box, click the 🗃 icon to create a group.
The **Brother Address Book Group Setup** dialog box appears:
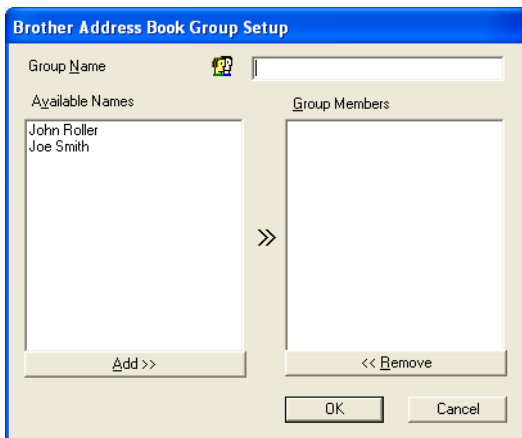
2 Type the name of the new group in the **Group Name** field.

3 In the **Available Names** box, select each member to be included in the Group, and then click **Add>>**.

4 Members you add to the group will be listed in the **Group Members** box.

5 After all the members have been added, click **OK**.

Editing Member Information

To edit a Member or Group:

1 Select the Member or Group you want to edit.

2 Click the 🖆 Edit icon.

3 Edit the Member or Group information.

4 Click **OK** to save your changes.

Deleting a Member or Group
To delete a Member or Group:

1 Select the Member of Group you want to delete.

2 Click the 🗑 Delete icon.

3 Click **OK** when the **Delete OK?** dialog appears.

Exporting the Address Book

You can export the address book to an ASCII text file (*.csv).

To export the current telephone book:

1 From the Address Book select **File**, point to **Export**, and then click **Text**—**OR**—Click **Vcard** and go to Step 5.

2 Select the data fields you wish to Export from the **Available Items** column, and then click **Add>>**.

3 If you are exporting to an ASCII file, select **Divide Character** - **Tab** or **Comma**. This selection inserts a Tab or Comma between each data field when it is Exported.

4 Select the **OK** button to save the data.

5 Type in the name of the file, and then select **Save**.

6 If you are creating a Vcard, you must first select the member.

7 Select items in the order you want them listed.

Sending a Network Fax with BFP

From the application you wish to send the document from select File | Print. Ensure that the Brother Internet Fax is selected as shown below.
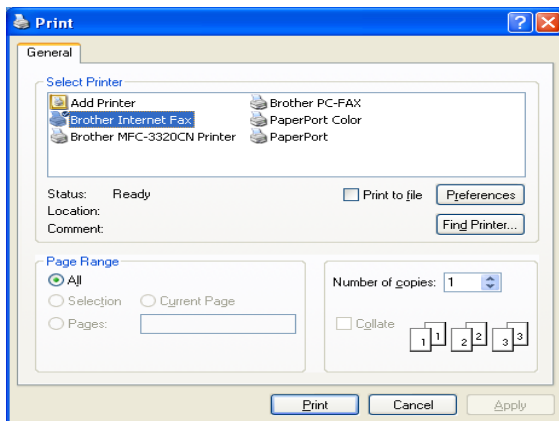
Clicking Print and the BFP dialogue box will be displayed. From this dialogue box you can either specify an address in the address line or select a location from the address book. If you wish to type more than one location in the address line make sure they are separated by ";".
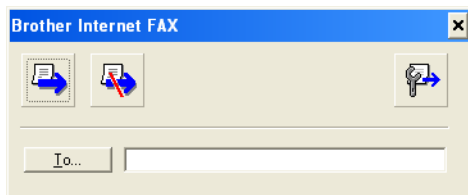
When entering a Fax Contact you must first specify the Internet Address of the machine that will send the document followed by the fax number as shown below.
Mailmfc9650@brother.co.uk(fax#2537)

A Appendix

Appendix A

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General Information

You can change the configuration of your Print/Fax server using any of the following methods.

- Brother BRAdmin Professional utility for Windows® 98/Me and Windows® 2000/XP
- Brother Web BRAdmin Professional utility for IIS*

BRAdmin Professional utility (Recommended)
The Brother BRAdmin Professional utility can use the TCP/IP protocol. This utility allows you to graphically manage aspects of the network and printer. It can also be used to upgrade the firmware of the Print/Fax server.

Web BRAdmin
The Web BRAdmin 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
                    or
          Internet Information Service 5.0, 5.1

Using Services

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General

A service is a resource that can be accessed by computers that wish to print to the Brother Print/Fax server. The Brother Print/Fax server provides the following predefined services (do a SHOW SERVICE command in the Brother Print/Fax 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).
BRN_xxxxxx_P1	Quickdraw Driver for Mac OS® 8.6 - 9.2, Mac OS® X 10.2.4 or greater.

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

Reloading the Print / FAX Server Firmware

General

The firmware on the Print/Fax server is stored in flash memory. This means that you can upgrade the firmware by downloading the appropriate update file. To get the latest firmware update, visit the Brother Solutions web site at http://solutions.brother.com/

Some software versions that we provide will automatically factory reset your Print/Fax server parameters. We try to avoid doing this. However, if we add a significant new feature to our Print/Fax server, it can result in the Print/Fax server being factory reset.

Because of this, we STRONGLY recommend that you make a note of the current Print/Fax server configuration before you upgrade. To do this, print out a configuration page (Refer to this User's Guide *chapter 3* for information on how to print a configuration page).

There are three methods of upgrading the firmware in your Brother Print/Fax server:

1 Use the BRAdmin Professional utility **(Recommended)**

2 Use another system (such as a Novell or Unix system to send the new firmware file to the Print/Fax server).

Reloading firmware using BRAdmin Professional utility

The BRAdmin Professional utility can be used to easily re-program your Brother Print/Fax server.

1 Start BRAdmin Professional utility.

2 Highlight the appropriate Print/Fax server. Then press select the Control menu and choose Load Firmware. You can select more than one Print/Fax server by pressing CTRL+<select> or SHIFT+<select> on each additional Print/Fax server.

   There are three possible ways of sending the new software version to the print server. For whichever method you select, you must enter a password for the print server. The default password for the Print/Fax server is access.

3 TFTP PUT from this host

   Use this method if you have TCP/IP already installed on your PC. BRAdmin Professional utility will use the TFTP protocol to send the new firmware data to the Print/Fax server.

AFTER SENDING FIRMWARE TO THE MACHINE, DO NOT TURN OFF THE MACHINE UNTIL AFTER THE MACHINE HAS PERFORMED AN AUTOMATIC RESTART.

Reloading process

The LCD on the control panel will show "Receiving" during the firmware file loading process. During this programming process, "Program Change" will be indicated on the LCD. After the firmware update is completed, the machine will re-start automatically. DO NOT TURN OFF THE MACHINE DURING THESE PROCESSES.

If the LCD does not change after about two minutes, check to make sure that you correctly entered all parameters and that your network connections are good. Then power the print server/printer off and then on again, to retry the download.

If you encounter problems upgrading the firmware and you find that the network portion of the machine no longer functions, call Brother Customer Service in your country.

Appendix B

Updating other machines through the Network

It is possible to program Brother machine on the network with either settings from an already programmed machine or with data from the Brother Network PC-FAX Address Book. (See Software User's Guide chapter 6)

When Brother Network PC-FAX in used from a PC that has BRAdmin Professional installed, an extra option appears in BRAdmin. By selecting a networked machine in the BRAdmin main window and right clicking it you will be presented with an extra option, **Import Auto Dial**.

If import Auto Dial option does not appear, open the Brother PC-FAX address book by selecting **Start**, **Programs**, **Brother**, **MFL-Pro Suite**, **PC-FAX Address Book**. It is necessary to run the address book utility to create an address book file.
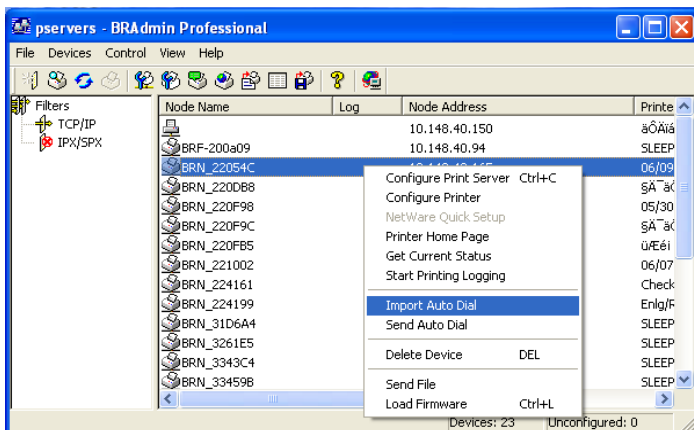
When you select this option BRAdmin reads the telephone settings from that machine (if there are any programmed) into Brother PC-FAX Address Book.
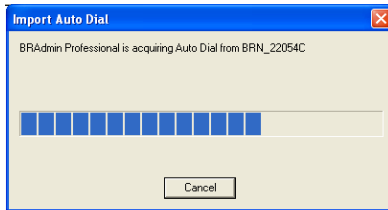

Illustrated below is the Brother Address Book, on the left are One-Touch / Speed-Dial numbers read from the machine. On the right is the Brother Address Book. It is now possible to allocate One-Touch / Speed-Dial numbers from the machine into the Brother Address Book and also use members of the Brother Address Book and send them to the machine. You can now make changes to the data in the Brother Network PC-FAX Address Book and click OK.
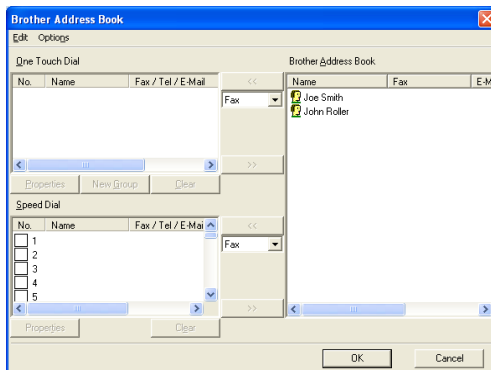
This data is then stored in the Windows® Temp Folder and can be used to update singular or multiple machine on the network.

Highlight singular or multiple networked Brother machine in the main BRAdmin window by highlighting and pressing the shift key on your keyboard. Right click the highlighted machine and press **Send Auto Dial**. The new data is then sent to all the highlighted machine.
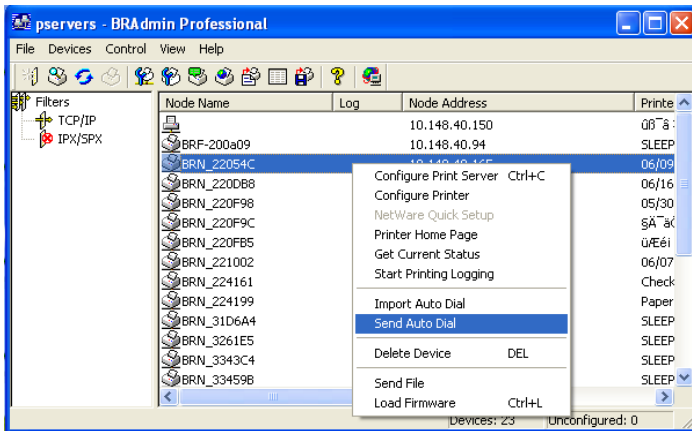
A dialog box is displayed showing the upload status of current machine and beneath this the whole progress is displayed if updating multiple machine.

When the process is finished a dialog box is displayed showing which machine on the network have been updated.
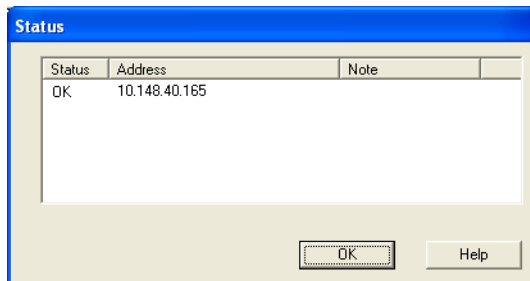
Appendix C

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Specifications

Operating System Support

Windows® 98/98SE/Me and Windows® 2000/XP

Mac OS® 8.6-9.2 / Mac OS® 10.2.4 or greater

Protocol Support

TCP/IP(including the following)

- RARP, BOOTP, DHCP, APIPA, NetBIOS Name Resolution, WINS, DNS Resolver, LPR/LPD, Port9100, SMTP/POP3, Rendezvous, TELNET, SNMP, TFTP

Network

10/100Base-TX Ethernet Network

Network Printing

Windows® 98/Me Peer-to-Peer Printing

Windows® 2000/XP TCP/IP Printing

Macintosh® Printing (Quick Draw over TCP/IP)

Rendezvous

Network PC Fax send

Windows® 98/98SE/Me and Windows® 2000/XP

Mac OS® 8.6-9.2 / Mac OS® 10.2.4 or greater

Network Scanning

B/W Resolution (TIFF/PDF): 200x100, 200x200dpi

Color Resolution (JPEG/PDF): 150x150, 300x300, 600x600dpi

Windows® 98/98SE/Me and Windows® 2000/XP

Up to 25 clients can be connected to one machine at a time.

Internet Fax

SMTP/POP3 E-mail server required.

T.37 Simple mode

Tiff-F Profile-S, JPEG

Resolution: 200x100, 200x200, 204x98, 204x196dpi

Coding System: MH

Width: 1728 dot

Fax / E-mail / I-Fax Forwarding / Paging feature.

(Please check the User Guide for your Brother MFC to verify is this feature is available).

Scan to key: E-mail / OCR / Image / File

Internet Fax Relay

E-mail Relay

Relay Broadcast

Computer Requirements (for drivers, BRAdmin Professional, Peer-to-Peer software, etc.)

CPU

- Pentium 75MHz or Higher for Windows® 98/98SE
- Pentium 150MHz or Higher for Windows® Me
- Pentium 133MHz or Higher for Windows® 2000
- Pentium 233MHz or Higher for Windows® XP

RAM

- 24MB or greater (32MB recommended) for Windows® 98/98SE
- 32MB or greater (64MB recommended) for Windows® Me
- 64MB or greater (128MB recommended) for Windows® 2000/XP

For Macintosh® connection

Computer

- Ethernet ready Power Macintosh®

RAM

- 32MB or more (64MB or more recommended) for Mac OS® 8.6-9.2
- 128MB or more (160MB or more recommended) for Mac OS® X 10.2.4 or greater

OS

- Mac OS® 8.6-9.2 / Mac OS® X 10.2.4 or greater

Management Utilities

BRAdmin Professional utility

- Windows® 98/98SE/Me and Windows® 2000/XP

Web BRAdmin

- Windows® 2000 Professional/Server/Advanced Server/XP Professional

Function Table and Factory Default Settings

LEVEL ONE	LEVEL TWO	LEVEL THREE	OPTIONS	OPTIONS	FACTORY DEFAULT
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.X.X *1
		3.Subnet Mask	[000-255].[000-255].[000-255].[000-255]		255.255.0.0 *1
		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) 000.000.000.000	(Secondary) 000.000.000.000	000.000.000.000
		8.DNS Server	(Primary) 000.000.000.000	(Secondary) 000.000.000.000	000.000.000.000
		9.APIPA	On/Off		On
	2.Setup Internet	1.Mail Address	(60 characters)		
		2.SMTP Server	[000-255].[000-255].[000-255].[000-255]	Name (up to 30 characters)	000.000.000.000
		3.POP3 Server	[000-255].[000-255].[000-255].[000-255]	Name (up to 30 characters)	000.000.000.000
		4.Mailbox Name	(up to 20 characters)		
		5.Mailbox Pwd	Password:******	Verify:******	
	3.Setup Mail RX	1.Auto Polling	On/ Off		On
		2.Poll Frequency	xxMin		10 Min
		3.Header	All/ Subject+From+To/ None		None
		4.Del Error Mail	On/ Off		On
		5.Notification	On/ MDN/ Off		Off
	4.Setup Mail TX	1.Sender Subject			Internet Fax Job
		2.Size Limit	On/ Off		Off
		3.Notification	On/ Off		Off
	5.Setup Relay	1.Rly Broadcast	On/ Off		Off
		2.Relay Domain	RelayXX:		
		3.Relay Report	On/ Off		Off
	6.Setup Misc.	1.Ethernet	Auto/ 100B-FD/ 100B-HD/ 10B-FD/ 10B-HD		Auto
		2.Time Zone	GMTXXX:XX		GMT-5:00
	7.Scan to E-Mail	1.Quality	B/W 200x100 dpi / B/W 200 dpi / Color 150 dpi / Color 300 dpi / Color 600 dpi		Color 150 dpi
		2.B&W File Type	TIFF/PDF		TIFF
		3.Color File Type	PDF/ JPEG		PDF

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

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