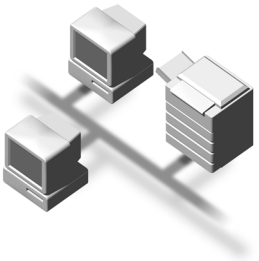
Network Printing Guide



For safety, please read this manual carefully before you use this product and keep it handy for future reference.

Introduction

To get maximum versatility from this machine all operators should carefully read and follow the instructions in this manual. Please keep this manual in a handy place near the machine.

Please read the Safety Information before using this machine. It contains important information related to USER SAFETY and PREVENTING EQUIPMENT PROBLEMS.

Important

Contents of this manual are subject to change without prior notice. In no event will the company be liable for direct, indirect, special, incidental, or consequential damages as a result of handling or operating the machine.

Software Version Conventions Used in this Manual

- NetWare 3.x means NetWare 3.12 and 3.2.
- NetWare 4.x means NetWare 4.1, 4.11 and IntranetWare.

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The proper names of the Windows operating systems are as follows:

- The product name of Windows® 95 is Microsoft® Windows 95.
- The product name of Windows® 98 is Microsoft® Windows 98.
- The product name of Windows® Me is Microsoft® Windows Millennium Edition (Windows Me).
- The product names of Windows® 2000 are as follows:
  Microsoft® Windows® 2000 Advanced Server
  Microsoft® Windows® 2000 Server
  Microsoft® Windows® 2000 Professional
- The product names of Windows® XP are as follows:
  Microsoft® Windows® XP Professional
  Microsoft® Windows® XP Home Edition
- The product names of Windows Server™ 2003 are as follows:
  Microsoft® Windows Server™ 2003 Standard Edition
  Microsoft® Windows Server™ 2003 Enterprise Edition
  Microsoft® Windows Server™ 2003 Web Edition
- The product names of Windows NT® 4.0 are as follows:
  Microsoft® Windows NT® Server 4.0
- Microsoft® Windows NT® Workstation 4.0

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1. Windows 95/98/Me Configuration

2. Windows 2000 Configuration

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4. Windows NT 4.0 Configuration

5. NetWare Configuration

6. Macintosh Configuration

7. Appendix

Manuals for This Machine

The following manuals describe the operational procedures and maintenance of this machine.

To enhance safe and efficient operation of this machine, all users should read and follow the instructions carefully.

❖ **Quick Installation Guide**
Describes how to install the printer.

❖ **Setup Guide**
Provides information about setting up the printer and its options. This manual is provided as a printed manual, and also as a PDF file on the CD-ROM labeled "Operating Instructions".

❖ **Printer Reference**
Describes the procedures and provides necessary information about using this machine. This manual is included as a PDF file on the CD-ROM labeled “Operating Instructions”.

❖ **Network Printing Guide**
Describes the procedures and provides necessary information about setting up and using the printer under the network environment. We recommend this manual as your first choice to read, and it is included as a PDF file on the CD-ROM labeled “Operating Instructions” (this manual).

❖ **PostScript 3 Operating Instructions Supplement**
Describes the menus and features you can set using the PostScript 3 printer driver. This manual is provided as a PDF file on the CD-ROM labeled “Operating Instructions”.

Note

❒ There are three CD-ROMs that come with this printer. "Operating Instructions", "Printer Drivers and Utilities", and "Document Management Utility".

❒ Concerning UNIX information, please visit our web site or consult your authorized reseller.

How to Read This Manual

Symbols

In this manual, the following symbols are used:

⚠ ***WARNING:***
This symbol indicates a potentially hazardous situation which, if instructions are not followed, could result in death or serious injury.

⚠ ***CAUTION:***
This symbol indicates a potentially hazardous situation which, if instructions are not followed, may result in minor or moderate injury or damage to property.

* The statements above are notes for your safety.

Important
If this instruction is not followed, paper might be misfed, originals might be damaged, or data might be lost. Be sure to read this.

Preparation
This symbol indicates the prior knowledge or preparations required before operating.

Note
This symbol indicates precautions for operation, or actions to take after misoperation.

Limitation
This symbol indicates numerical limits, functions that cannot be used together, or conditions in which a particular function cannot be used.

Reference
This symbol indicates a reference.

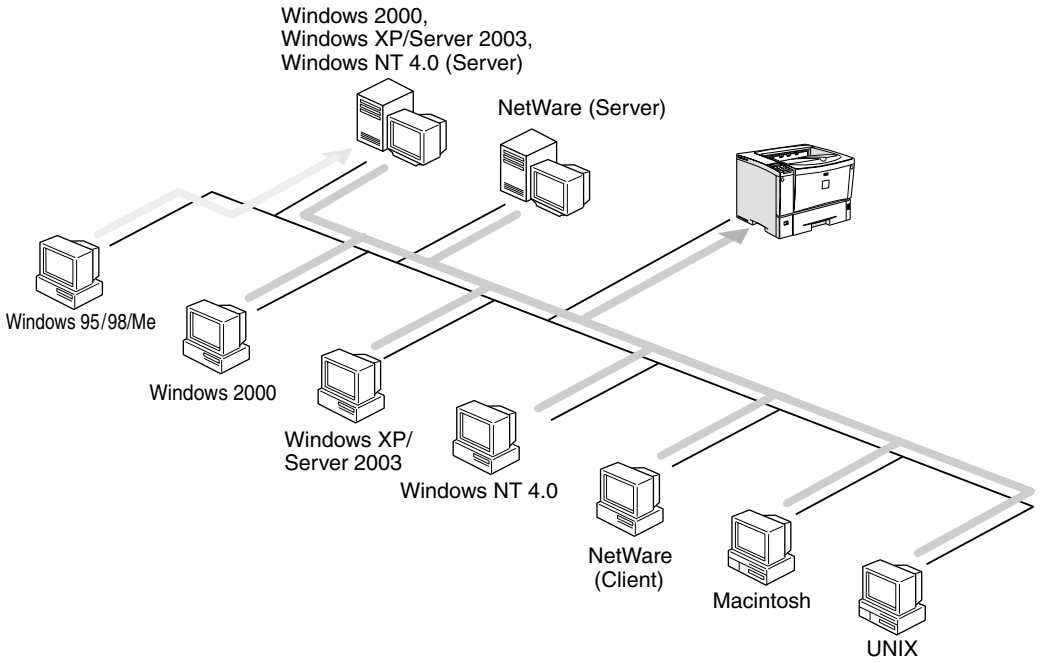
[ ]
Keys that appear on the machine's panel display.

Keys and buttons that appear on the computer's display.

【 】
Keys built into the machine's control panel.

Keys on the computer's keyboard.

This manual contains detailed instructions on configuring the machine as a network printer. Read the section appropriate to your network environment on how to configure the machine correctly.



Important

❒ The procedures written in this manual assume that you are a network administrator. If you are not, be sure to consult your network administrator before configuration.

Reference

For more information about configuring the Network Interface Board with the control panel, see the Setup Guide.

❖ Features

- Support for 100BASE-TX, 10BASE-T, IP over 1394 and IEEE 802.11b.
- The Network Interface Board is compatible with NetWare [*1] (IPX/SPX, TCP/IP), Windows NT 4.0 (TCP/IP, NetBEUI [*2], IPP [*3]), Windows 2000 (TCP/IP, NetBEUI [*2], IPP [*3]), Windows XP/Server 2003 (TCP/IP, IPP [*3]), Windows 95/98/Me (TCP/IP, NetBEUI [*2], IPP [*3]), UNIX (TCP/IP) and Macintosh (AppleTalk) protocols. This allows you to use the machine in a network that uses different protocols and operating systems.
- A computer used as a dedicated print server is not required because the Network Interface Board can be configured as a NetWare print server.

- The Network Interface Board can connect the machine to the network without requiring its own power supply because the Network Interface Board is installed inside the machine.

*1 If the optional 802.11b Interface Unit has been installed, you cannot use the ad hoc mode.
*2 To use NetBEUI, use the SmartNetMonitor for Client port.
*3 IPP (Internet Printing Protocol) is a protocol for printing via the Internet.

❖ Interface supported protocols

		Interface		
		Ethernet	IEEE 802.11b	IEEE 1394 (IP over 1394)
Protocol	TCP/IP	❍	❍	❍
	NetBEUI	❍	❍	×
	NetWare	❍	❍ *1	×
	AppleTalk	❍	❍	×

❍ means that the protocol is supported.
× means that the protocol is not supported.

*1 If the optional 802.11b Interface Unit has been installed, you cannot use the ad hoc mode.

Setting Up the Machine on a Network

Windows 95/98/Me, Windows 2000/Windows XP/Server 2003, Windows NT 4.0

For setting up the machine as a network printer in Windows 95/98/Me, Windows 2000/Windows XP/Server 2003 and Windows NT 4.0 environment.

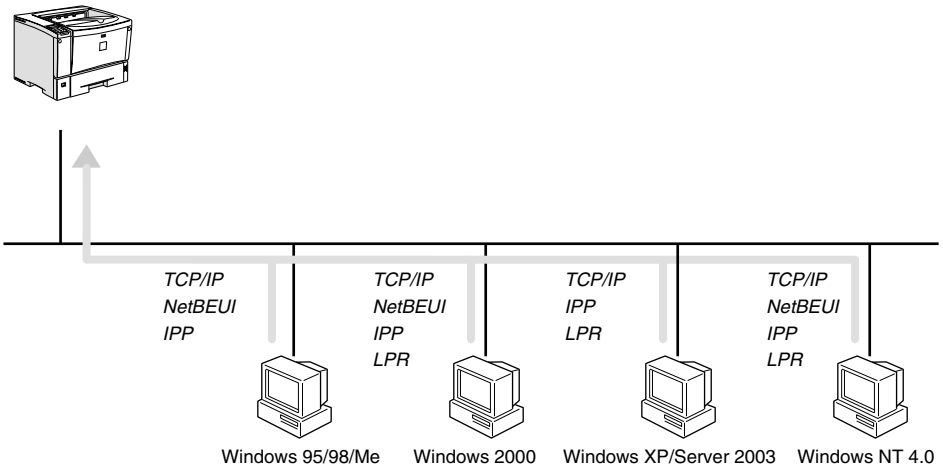
See p.11 “Windows 95/98/Me Configuration”.

See p.23 “Windows 2000 Configuration”.

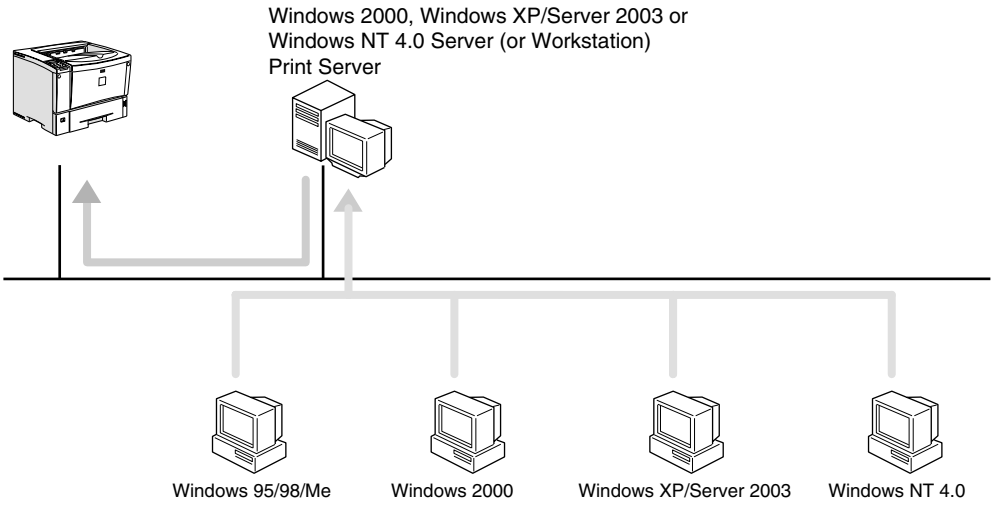
See p.37 “Windows XP/Server 2003 Configuration”.

See p.49 “Windows NT 4.0 Configuration”.

❖ Printing Without a Print Server



❖ Printing With a Windows 2000, Windows XP/Server 2003 or Windows NT 4.0 Print Server



NetWare

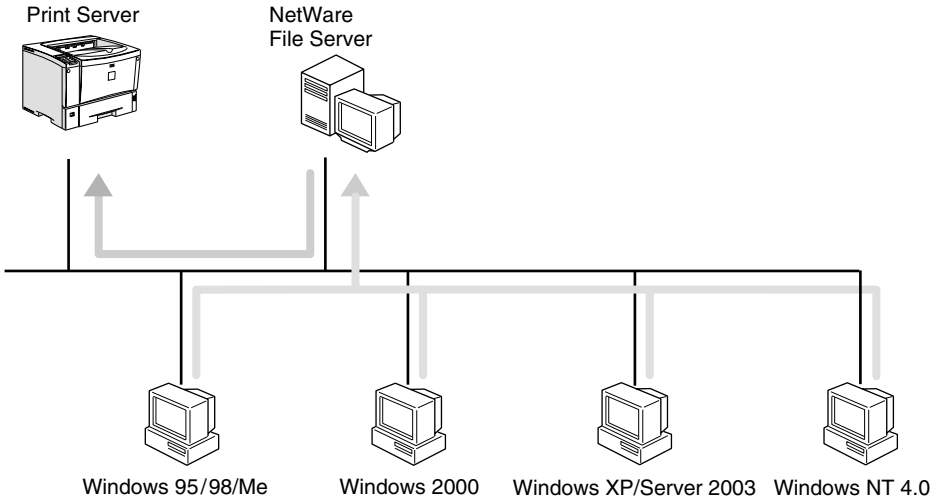
For setting up the machine as a network printer in a NetWare environment, see p.61 “NetWare Configuration”. The Network Interface Board allows you to use the machine as either a print server or a remote printer.

For more information about setting up the clients, see the following pages.

- See p.75 “Windows 95/98/Me” .
- See p.76 “Windows 2000/XP/Server 2003, Windows NT 4.0” .

Configuring the machine as a print server

A dedicated NetWare print server is not required because the machine can be configured as a print server.

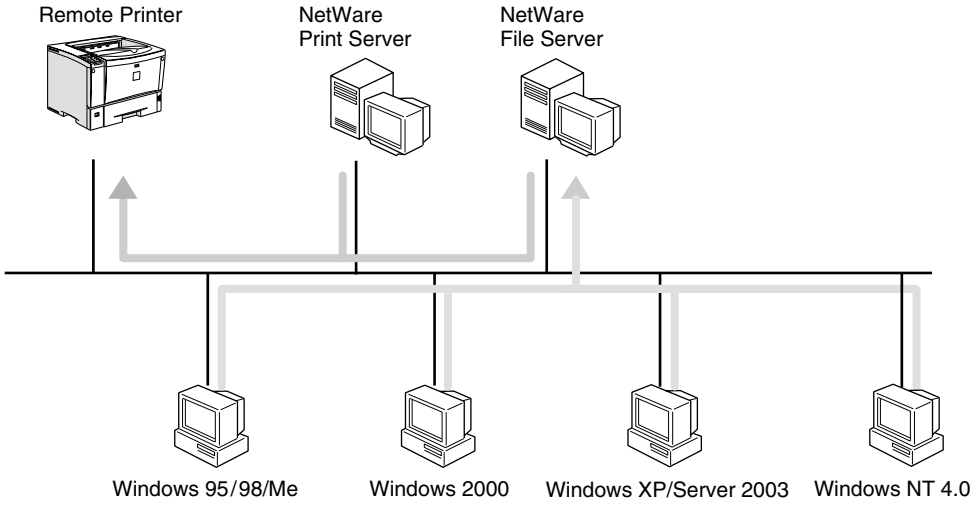


The actual procedures for configuring the machine depend on the NetWare version.

- NetWare 3.x
  See p.63 “Setting Up as a Print Server”.
- NetWare 4.x, 5/5.1, 6
  See p.68 “Setting Up as a Print Server”.

Configuring the machine as a remote printer

If a dedicated NetWare print server is being used, the machine should be configured as a remote printer.

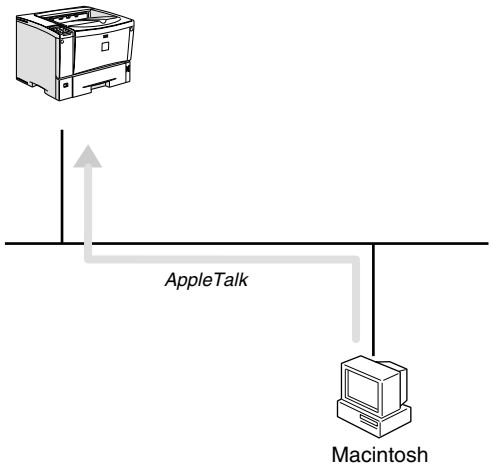


The actual procedures for configuring the machine depend on the NetWare version.

- NetWare 3.x
  See p.64 “Setting Up as a Remote Printer”.
- NetWare 4.x, 5/5.1, 6
  See p.71 “Setting Up as a Remote Printer”.

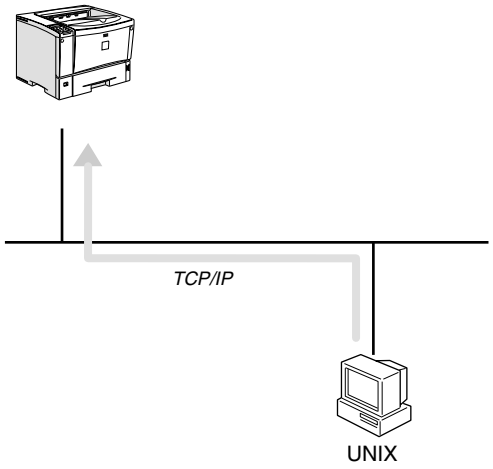
Macintosh

For setting up the machine as a network printer in a Macintosh environment, see p.79 “Macintosh Configuration”.



UNIX

Concerning UNIX printing information, please visit our Web site or consult your authorized reseller.



Printing using the IEEE 802.11b Interface

This section describes how to print after installing the optional 802.11b Interface Unit.

There are two methods of using this machine as a network printer with IEEE 802.11b.

❖ ad hoc mode

This is the mode for transmitting between each wireless LAN client. You must make the channels the same for each wireless LAN client to transmit using this basic transmitting method which does not require an access point. See p.98 "Using the IEEE 802.11b (Wireless LAN)".

❖ infrastructure mode

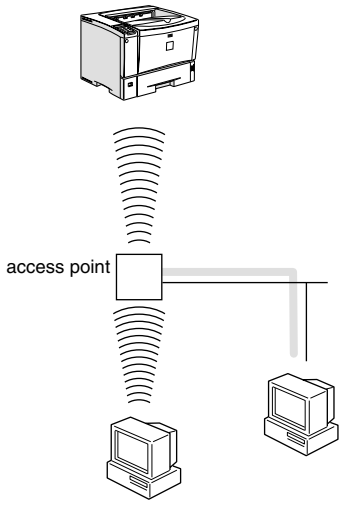
This is the mode for transmitting via an access point. If an SSID [*1] and WEP [*2] are set in the access point, you must set the same values for the access point and IEEE 802.11b. By connecting the access point to Ethernet, you can transmit the current network environment. See p.98 "Using the IEEE 802.11b (Wireless LAN)".

[*1] This is called a Service Set ID and is used in the connection between the wireless LAN client and the access point. Only a wireless LAN client and an access point that have the same SSID can transmit to each other. (The character strings to be set are in the range ASCII 0x20-0x7e and the SSID is case-sensitive to 32 bytes.)

[*2] This is used to protect coded wireless data transmission. To transmit between wireless LAN clients and the coded access point, you must set the same WEP key as the printer. (You can set only 10 hexadecimal characters.)

❖ad hoc mode

❖infrastructure mode



Printing using the IEEE 1394 Interface

This section describes how to print via the IEEE 1394 interface after installing the 1394 Interface Unit Type 4510.

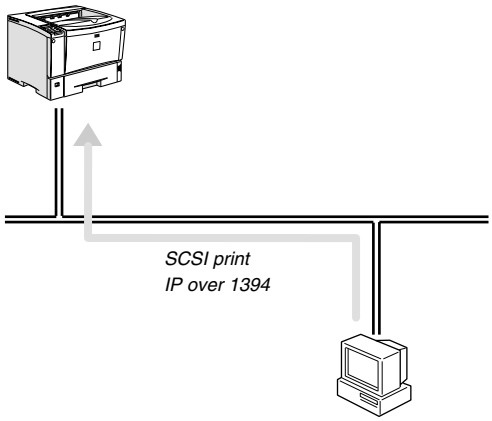
There are two methods of using the machine as a network printer with IEEE 1394.

❖ **SCSI print**

You can print using the SCSI print device provided by Windows 2000 and Windows XP/Server 2003. For more information, see "IEEE 1394 Configuration" in the Setup Guide.

❖ **IP over 1394**

You can print by setting the IP address for this machine and the computer on which Windows XP/Server 2003 is installed. For more information, see "IEEE 1394 Configuration" in the Setup Guide and p.37 "Printing with a Standard TCP/IP Port" in the Windows XP/Server 2003 Configuration.



1. Windows 95/98/Me Configuration

Configuring Windows 95/98/Me

Printing without a Print Server

The following procedure describes how to configure Windows 95/98/Me to use the machine on a network without a Windows 2000 Server, Windows 2000 Professional, Windows XP/Server 2003, Windows NT Server, Windows NT Workstation, or NetWare based print server.

1 Specify the protocol to use

Consult your network administrator about which of the three protocols is appropriate.

- TCP/IP
- IPP
- NetBEUI

2 Configure the chosen protocol.

- See p.12 “Configuring TCP/IP and IPP for Printing”.
- See p.13 “Configuring NetBEUI for Printing”.

3 Install the software and set the printer driver port

- Install SmartNetMonitor for Client from the CD-ROM labeled "Printer Drivers and Utilities". For more information about how to install the software and how to specify the printer driver port, see the Setup Guide.

Printing with a Windows 2000, Windows XP/Server 2003 or Windows NT Print Server

See p.20 “Setting Up a Client Computer” for configuring Windows 95/98/Me with a Windows 2000, Windows XP/Server 2003 or Windows NT print server.

Configuring Protocols

1

Configuring TCP/IP and IPP for Printing

These instructions are for configuring the Network Interface Board and Windows 95/98/Me to use the TCP/IP protocol and IPP.

Configuring the machine

Configure the machine to use the TCP/IP protocol.

- Make sure that the TCP/IP protocol is set to active. (The default is active.)
- Assign an IP address and make other settings required for using the TCP/IP protocol.

Reference

For more information about how to make the above settings, see the Setup Guide.

If DHCP is used to assign IP addresses, see p.139 “Using DHCP”.

Note

❒ After setting the IP address, use the ping command to make sure that it has been set correctly.

① Enable the use of the command prompt as follows:

- On Windows 95 or Windows 98
  Click **[Start]**, point to **[Programs]**, and then click **[Command Prompt]**.
- On Windows Me
  Click **[Start]**, point to **[Programs]**, point to **[Accessories]**, and then click **[Command Prompt]**.

② Type the following: (Example IP address is 192.168.15.16)

```
C:\> ping 192.168.15.16
```

If the address has been configured correctly, the following message appears.

```
Reply from 192.168.15.16 : bytes=32 time<10ms TTL=32
```

If the address has been configured incorrectly, the following message appears.

```
Request timed out.
```

Configuring a Windows 95/98/Me computer

These steps are for configuring a Windows 95/98/Me computer to use the TCP/IP protocol.

1 **Open [Control Panel] and then double-click the [Network] icon. Make sure that "TCP/IP" is listed in the [The following network components are installed:] box on the [Configuration] tab.**

Note

❒ If the TCP/IP protocol is not installed, click **[Add]** on the **[Configuration]** tab to install it. For more information about installing the TCP/IP protocol, see Windows 95/98/Me Help.

❒ Under Windows Me, if you want to use IEEE 1394 (IP over 1394), make sure TCP/IP is bound to the IEEE 1394 adaptor being used. The following message appears:

```
TCP/IP -> (IEEE 1394 adaptor in use)
```

2 **Configure the TCP/IP protocol with the appropriate IP address, subnet mask and other settings.**

Check with the network administrator that the settings are correct.

Configuring NetBEUI for Printing

These instructions are for configuring the Network Interface Board and Windows 95/98/Me to use the NetBEUI protocol.

Preparation

To use NetBEUI, use the SmartNetMonitor for Client port.

Configuring the machine

Configure the machine to use the NetBEUI protocol.

- Make sure that the NetBEUI protocol is set to active. (The default is active.)

Reference

For more information about how to make the above settings, see the Setup Guide.

Configuring a Windows 95/98/Me computer

Install the NetBEUI protocol on the Windows 95/98/Me computer and set it as the default protocol.

1. **Open [Control Panel], and then double-click the [Network] icon. Make sure that "NetBEUI" is listed in the [The following network components are installed:] box on the [Configuration] tab.**

   Note

   ❒ If the NetBEUI protocol is not installed, click **[Add]** on the **[Configuration]** tab to install it. For more information about installing the NetBEUI protocol, see Windows 95/98/Me Help.

   ❒ If "NetBEUI →Dial-Up Adaptor" is listed in the **[The following network components are installed:]** box, select it and click **[Remove]** to remove the binding.

2. **Set the NetBEUI protocol as the default protocol. Click the [Configuration] tab, select "NetBEUI" in the [The following network components are installed:] box, and then click [Properties].**

3. **Click the [Advanced] tab, select [Set this protocol to be the default protocol], and then click [OK].**

4. **Click [OK] to close the [Network] dialog box.**

5. **When the message to restart appears, click [Yes].**

Using SmartNetMonitor for Client

SmartNetMonitor for Client is a utility that helps you to use network printers effectively. It is useful in environments where two or more network printers are used. It is recommended that you install SmartNetMonitor for Client to use Parallel Printing and Recovery Printing. For more information about SmartNetMonitor for Client, see SmartNetMonitor for Client Help.

❖ SmartNetMonitor for Client features

- Sends a print job directly to the network printers without using a print server.
- Notifies when a printing error occurs.
- Prints documents using other printers in the printer group when the specified printer is busy (Recovery Printing).
- Equally divides the number of copies to be printed among the selected printers in the printer group (Parallel Printing).

Important

❒ The following must be the same for the specified printer and the printers selected for Recovery Printing or Parallel Printing.

- Printer models (for Parallel Printing only)
- Installed options (e.g. Paper tray unit)
- Size and orientation of paper in each paper tray unit
- Total memory
- Installed fonts (including the downloaded fonts)

Note

❒ Failure to meet any of the conditions above may result in unexpected print results.

Installing SmartNetMonitor for Client

Install SmartNetMonitor for Client from the CD-ROM labeled "Printer Drivers and Utilities". For more information about how to install, see the Setup Guide.

After the installation is complete, configure the printer port with SmartNetMonitor for Client. See p.17 "Setting Up the Printer Driver".

Deleting the port

The following procedure allows you to delete the printer port. If you want to delete the port which is currently used in Windows, switch the port to another such as "FILE", and then delete it. For more information about SmartNetMonitor for Client, see SmartNetMonitor for Client Help.

1. **From the [Printers] window, click the icon of the printer which uses SmartNetMonitor for Client to print. On the [File] menu, click [Properties].**
2. **Click the [Details] tab, and then make sure that the SmartNetMonitor for Client port is shown in the [Print to the following port] box.**

   Remember the port name because this port should be deleted later.
3. **From the [Print to the following port] box, select [FILE].**
4. **Click [Delete Port].**
5. **Click the SmartNetMonitor for Client port name as in step 2, and then click [OK].**

   The port is deleted.
6. **Click [OK] to close the printer properties.**

Uninstalling SmartNetMonitor for Client

Preparation

Before uninstalling SmartNetMonitor for Client, make sure that:

- The SmartNetMonitor for Client settings dialog box is closed.
- No printer is using the SmartNetMonitor for Client port as a printer port.

1. **Open [Control Panel], and then double-click the [Add/Remove Programs] icon.**
2. **On the [Install/Uninstall] tab, click [SmartNetMonitor for Client], and then click [Add/Remove].**
3. **After the confirmation message appears, click [Yes].**

   UninstallShield removes all of the components of SmartNetMonitor for Client.

4 **After the confirmation message, click [Yes].**

5 **Acknowledge the [Question] dialog box.**

6 **When the uninstallation is complete, click [OK].**

Setting Up the Printer Driver

The following procedure allows you to configure the printer port to use SmartNetMonitor for Client.

Preparation

The target printer must be turned on before starting the installation process.

1 **Install the printer driver of the printer you want to use.**

2 **From the [Printers] window, click the icon of the printer. On the [File] menu, click [Properties].**

3 **Click the [Details] tab and click [Add Port].**

4 **Click [Other], click [SmartNetMonitor] from the list, and then click [OK].**

The **[Select Printer]** dialog box appears .

The displayed items are as follows:

Model Name: The model name of the printer.

Name: The name of the Network Interface Board.

Comment: Additional information about the Network Interface Board.

Address: The IP address of the printer.

5 **Select the printer.**

TCP/IP

❶ **Click the printer you want to use, and then click [OK].**

Note

❒ Printers that respond to an IP broadcast from the computer will be displayed. To print to a printer not listed here, click **[Specify Address]**, and then type the IP address or host name.

❒ You cannot add an address partially similar to that already used. For example, when "192.168.0.2" is already used, "192.168.0.2xx" cannot be used. Similarly, when "192.168.0.20" is already used, "192.168.0.2" cannot be used.

NetBEUI

❶ **Click [NetBEUI].**

A list of printers that can be printed to by the NetBEUI protocol appears.

❷ **Click the printer you want to use, and then click [OK].**

Note

❒ Printers that respond to a broadcast from the computer will be displayed. To print to a printer not listed here, click **[Specify Address]**, and then type the NetBEUI address. Make sure that the NetBEUI address is on the configuration page. For more information about the printing of the configuration page, see "Printing a Configuration Page" in the Setup Guide. The NetBEUI address appears as "\\RNPxxxx\xxx" on the configuration page. Type the printer's network path name in the form of "%%Computer name\Share name". Do not type "\\" as head characters but "%%".

❒ You cannot print to printers beyond routers.

IPP

❶ **Click [IPP].**

The IPP setting dialog box appears.

❷ **To specify the IP address of the printer, type "http://printer's-ip-address/printer" or "ipp://printer's-ip-address/printer" in the [Printer URL] field.**

(Example IP address is 192.168.15.16)

`http://192.168.15.16/printer`

`ipp://192.168.15.16/printer`

❸ **As necessary, type the names to distinguish the printer in [IPP Port Name]. Type a name differing from those of any existing port names.**

If you omit this, the address typed in **[Printer URL]** will be set as the IPP port name.

❹ **If using a proxy server and IPP user name, click [Detailed Settings] and configure the necessary settings.**

Note

❒ For more information about these settings, see SmartNetMonitor for Client Help.

6 **Click [OK].**

7 **Make sure that the specified printing port is displayed in the [Print to the following Port] box, and then click [OK].**

This completes the settings.

To print, select the specified printer. SmartNetMonitor for Client will now direct print data to the printer automatically.

Changing Port Settings

Follow these steps to change SmartNetMonitor for Client settings, such as Parallel Printing, Recovery Printing, TCP/IP, the proxy server and IPP URL.

Note

❒ There are no settings for the NetBEUI protocol.

❒ You can configure Timeout Settings for the TCP/IP protocol.

1 **From the [Printers] window, click the printer icon. On the [File] menu, click [Properties].**

2 **Click the [Details] tab, and then click [Port Settings].**

The **[Port Settings]** dialog box appears.

- For IPP, you can configure User Settings, Proxy Settings and Timeout Settings.

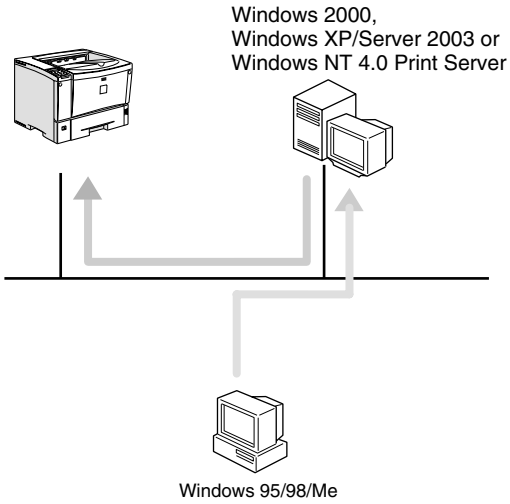
Note

❒ For more information about these settings, see SmartNetMonitor for Client Help.

Setting Up a Client Computer

This section describes the procedures for setting up a client on a network that uses Windows 2000, Windows XP/Server 2003, Windows NT Server or Windows NT Workstation as a print server.

When using a Windows 2000, Windows XP/Server 2003 or Windows NT print server, select a shared printer on Windows 2000, Windows XP/Server 2003 or Windows NT.



Limitation

❒ When using a print server connected to the printer with SmartNetMonitor for Client, you cannot use Recovery Printing and Parallel Printing.

Note

❒ This section assumes that the client has already been configured to communicate with a Windows 2000, Windows XP/Server 2003 or Windows NT print server. Do not begin the following procedure until the client has been set up and configured correctly.

1 Install the printer driver as a local printer.

Reference

For more information about installing the printer driver, see the Setup Guide.

Note

❒ Any port can be selected during the installation, however, LPT1 is recommended.

2 Click [Start], point to [Settings], and then click [Printers].

3 **Click the icon of the printer you want to use. On the [File] menu, click [Properties].**

4 **Click the [Details] tab, and then click [Add Port].**

5 **Click [Network], and then click [Browse].**

6 **On the network tree, double-click the name of the computer used as the print server.**

The printers connected to the network are displayed.

7 **Click the name of the printer you want to use, and then click [OK].**

8 **Click [OK].**

9 **Make sure that the port name is displayed in the [Print to the following port] box, and then click [OK].**

2. Windows 2000 Configuration

Configuring Windows 2000

Printing without a Print Server

The following procedure describes how to configure Windows 2000 to use the machine on a network without a Windows 2000 Server, Windows 2000 Professional, Windows XP/Server 2003, Windows NT Server, Windows NT Workstation or NetWare based print server.

1 Specify the protocol to use

Consult your network administrator about which of the three protocols is appropriate.

- TCP/IP
- IPP
- NetBEUI

2 Configure the chosen protocol.

- See p.25 “Configuring TCP/IP and IPP for Printing”.
- See p.26 “Configuring NetBEUI for Printing”.

3 Install the software and set the printer driver port

- Install SmartNetMonitor for Client from the CD-ROM labeled "Printer Drivers and Utilities". For more information about how to install the software and how to specify the printer driver port, see the Setup Guide.

Printing with a Standard TCP/IP Port

Standard TCP/IP port is a standard port of Windows 2000 to enable Peer-to-Peer printing in a network environment.

For more information about Standard TCP/IP port settings, see Windows 2000 Help.

Note

❒ If a device model selection dialog box appears during the procedure to add the standard TCP/IP port, select "RICOH Network Printer C Model".

Printing with a LPR Port

See p.33 “Configuring LPR Port Printing” for configuring a LPR port in Windows 2000.

Printing with a Windows 2000, Windows XP/Server 2003 or Windows NT Print Server

See p.34 “Setting Up a Client Computer” for configuring Windows 2000 with a Windows 2000, Windows XP/Server 2003 or Windows NT print server.

Configuring the Protocols

Configuring TCP/IP and IPP for Printing

Follow these instructions to configure the Network Interface Board and Windows 2000 to use the TCP/IP protocol and IPP.

Configuring the machine

Configure the machine to use the TCP/IP protocol.

- Make sure that the TCP/IP protocol is set to active. (The default is active.)
- Assign an IP address and make other settings required for using the TCP/IP protocol.

Reference

For more information about how to make the above settings, see the Setup Guide.

If DHCP is used to assign IP addresses, see p.139 “Using DHCP”.

Note

❒ After setting the IP address, use the ping command to make sure that it has been set correctly.

① Click **[Start]**, point to **[Programs]**, point to **[Accessories]**, and then click **[Command Prompt]**.

② Type the following: (Example IP address is 192.168.15.16)
`C:\> ping 192.168.15.16`
If the address has been configured correctly, the following message appears.
`Reply from 192.168.15.16 : bytes=32 time<10ms TTL=32`
If the address has been configured incorrectly, the following message appears.
`Request timed out.`

Configuring a Windows 2000 computer

Follow these steps to configure a Windows 2000 computer to use the TCP/IP protocol.

1. **Click [Start] on the taskbar, point to [Settings], and then click [Network and Dial-up Connections].**

2. **Click [Local Area Connection]. On the [General] tab, click [Properties].**

3. **Make sure that the"Internet Protocol (TCP/IP)" is selected in the [Components checked are used by this connection:] box on the [General] tab.**

   Note

   ❒ Select the TCP/IP protocol box if it is not already selected.

   ❒ If the TCP/IP protocol is not installed, click **[Install]** on the **[General]** tab to install it. For more information about installing the TCP/IP protocol, see Windows 2000 Help.

4. **Configure the TCP/IP protocol with the appropriate IP address, subnet mask and other settings.**

   Check with the network administrator that the settings are correct.

Configuring NetBEUI for Printing

Follow these instructions to configure the Network Interface Board and Windows 2000 to use the NetBEUI protocol.

Preparation

To use NetBEUI, use the SmartNetMonitor for Client port.

Configuring the machine

Configure the machine to use the NetBEUI protocol.

- Make sure that the NetBEUI protocol is set to active. (The default is active.)

Reference

For more information about how to make the above settings, see the Setup Guide.

Configuring a Windows 2000 computer

Follow these steps to configure a Windows 2000 computer to use the NetBEUI protocol.

1. **Click [Start] on the taskbar, point to [Settings], and then click [Network and Dial-up Connections].**

2. **Click [Local Area Connection]. On the [General] tab, click [Properties].**

3. **Make sure that the"NetBEUI Protocol" is selected in the [Components checked are used by this connection:] box on the [General] tab.**

Note

- Select the NetBEUI protocol box if it is not already selected.
- If the NetBEUI protocol is not installed, click **[Install]** on the **[General]** tab and install it. For more information about installing the NetBEUI protocol, see Windows 2000 Help.

Using SmartNetMonitor for Client

SmartNetMonitor for Client is a utility that helps you to use network printers effectively. It is useful in environments where two or more network printers are used. It is recommended that you install SmartNetMonitor for Client to use Parallel Printing and Recovery Printing. For more information about SmartNetMonitor for Client, see SmartNetMonitor for Client Help.

❖ SmartNetMonitor for Client features

- Sends a print job directly to the network printers without using a print server.
- Notifies when a printing error occurs.
- Prints documents using other printers in the printer group when the specified printer is busy (Recovery Printing).
- Equally divides the number of copies to be printed among the selected printers in the printer group (Parallel Printing).

Important

❒ The following must be the same for the specified printer and the printers selected for Recovery Printing or Parallel Printing.

- Printer models (for Parallel Printing only)
- Installed options (e.g. Paper tray unit)
- Size and orientation of paper in each paper tray unit
- Total memory
- Installed fonts (including the downloaded fonts)

Note

❒ Failure to meet any of the conditions above may result in unexpected print results.

Installing SmartNetMonitor for Client

Install SmartNetMonitor for Client from the CD-ROM labeled "Printer Drivers and Utilities". For more information about how to install, see the Setup Guide.

After the installation is complete, configure the printer port with SmartNetMonitor for Client. See p.30 "Setting Up the Printer Driver".

Deleting the port

The following procedure allows you to delete the printer port. If you want to delete the port which is currently used in Windows, switch the port to another such as "FILE", then delete it. For more information about SmartNetMonitor for Client, see SmartNetMonitor for Client Help.

1. **From the [Printers] window, click the icon of the printer which uses SmartNetMonitor for Client to print. On the [File] menu, click [Properties].**
2. **Click the [Ports] tab, and then make sure that the SmartNetMonitor for Client port is shown in the [Print to the following port(s)] box.**

   Remember the port name because this port should be deleted later.
3. **Select the [FILE] check box in the [Port] column.**
4. **Click [OK] to close the Printer Properties.**

   The port which is currently in use is changed.
5. **Open the Printer Properties of the same printer.**
6. **Select the [Ports] tab.**
7. **At the [Port] column in the [Print to the following port(s)] dialog box, click to select the SmartNetMonitor for Client port name as in step 2.**
8. **Click [Delete Port].**
9. **When the confirmation message appears, click [Yes].**

   The port is deleted.
10. **Click [Close] to close the Printer Properties.**

Uninstalling SmartNetMonitor for Client

Preparation

Before uninstalling SmartNetMonitor for Client, make sure that:

- The port settings dialog box is closed.
- No printer is using the SmartNetMonitor for Client port as a printer port.
- You have performed login with the same user authority as that used to install SmartNetMonitor for Client.

1 **Open [Control Panel], and then double-click the [Add/Remove Programs] icon.**

2 **Click the [Change or Remove Programs] tab, click [SmartNetMonitor for Client], and then click [Change/Remove].**

3 **After the confirmation message appears, click [Yes].**

UninstallShield removes all of the components of SmartNetMonitor for Client.

4 **After the confirmation message appears, click [Yes].**

5 **Acknowledge the [Remove Shared File?] dialog box.**

6 **When the uninstallation is complete, click [OK].**

Setting Up the Printer Driver

The following procedure allows you to configure the printer port to use SmartNetMonitor for Client.

Preparation

The target printer must be turned on before starting the installation process.

1 **Install the printer driver for the printer you want to use.**

2 **From the [Printers] window, click the icon of the printer. On the [File] menu, click [Properties].**

3 **Click the [Ports] tab and click [Add Port].**

4 **Click [SmartNetMonitor for Client] in the [Available port types:] box, and then click [New Port].**

The **[Select Printer]** dialog box appears and printers on the network are browsed.

The displayed items are as follows:

Model Name: The model name of the printer.

Name: The name of Network Interface Board.

Comment: Additional information about Network Interface Board.

Address: The IP address of the printer.

5 Select the printer.

TCP/IP

❶ Click the printer you want to use, and then click [OK].

Note

❒ Printers that respond to an IP broadcast from the computer will be displayed. To print to a printer not listed here, click **[Specify Address]** and then type the IP address or host name.

NetBEUI

❶ Click [NetBEUI].

A list of printers that can be printed by the NetBEUI protocol appears.

❷ Click the printer you want to use, and then click [OK].

Note

❒ Printers that respond to a broadcast from the computer will be displayed. To print to a printer not listed here, click **[Specify Address]** and then type the NetBEUI address. Make sure that the NetBEUI address is on the configuration page. For information about the printing of the configuration page, see "Printing a Configuration Page" in the Setup Guide. The NetBEUI address appears as "\\RNPxxxx\xxx" on the configuration page. Type the printer's network path name in the form of "%%Computer name\Share name". Do not type "\\" as head characters but "%%".

❒ You cannot print to printers beyond routers.

IPP

❶ Click [IPP].

The IPP setting dialog box appears.

❷ To specify the IP address of the printer, type "http://printer's-ip-address/printer" or "ipp://printer's-ip-address/printer" in the [Printer URL] field.

(Example IP address is 192.168.15.16)

```
http://192.168.15.16/printer
```

```
ipp://192.168.15.16/printer
```

❸ As necessary, type the names to distinguish the printer in [IPP Port Name]. Type a name different from those of any existing port names.

If you omit this, the address entered in **[Printer URL]** will be set as the IPP port name.

❹ **If using a proxy server and IPP user name, click [Detailed Settings] and configure the necessary settings.**

Note

❒ For more information about these setting, see SmartNetMonitor for Client Help.

6 **Click [OK].**

7 **Make sure that the specified printing port is displayed in the [Print to the following Port(s)] box, and then click [Close].**

This completes the settings.

To print, select the specified printer. SmartNetMonitor for Client will now direct print data to the printer automatically.

Changing Port Settings

Follow the steps to change SmartNetMonitor for Client settings, such as Parallel Printing, Recovery Printing, TCP/IP, the proxy server and IPP URL.

Note

❒ There are no settings for the NetBEUI protocol.

1 **From the [Printers] window, click the icon of the printer you want to use. On the [File] menu, click [Properties].**

2 **Click the [Ports] tab, and then click [Configure Port].**

The **[Port Settings]** dialog box appears

- For TCP/IP protocol, you can configure Parallel Printing, Recovery Printing and Timeout Settings.
- For IPP, you can configure User Settings, Proxy Settings and Timeout Settings.

Note

❒ For more information about these settings, see SmartNetMonitor for Client Help.

Configuring LPR Port Printing

This section explains the procedure for printing to a LPR port from Windows 2000.

Note

❒ The TCP/IP protocols must be installed and configured correctly. For more information about configuring the protocols, see p.25 “Configuring TCP/IP and IPP for Printing”.

1 **Click [Start], point to [Settings], and then click [Printers].**

The **[Printers]** window appears.

2 **Click the icon of the printer you want to use. On the [File] menu, click [Properties].**

3 **Click the [Ports] tab and click [Add Port].**

4 **In the [Available port types:] box, click “LPR Port”, and then click [New Port].**

Note

❒ If “LPR Port” does not appear, “Print Services for Unix” has not been installed. For more information about how to install "Print Services for Unix", see Windows 2000 Help.

5 **Type the IP address of the Network Interface Board into the [Name or address of server providing lpd:] box.**

6 **Type “lp” into the [Name of printer or print queue on that server box:], and then click [OK].**

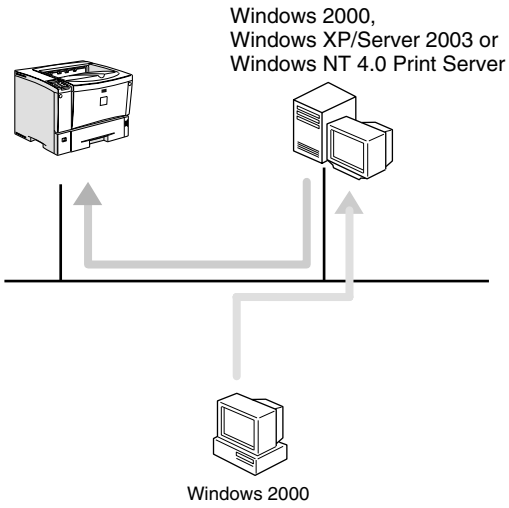
7 **Click [Close].**

8 **Make sure that the port name is displayed in the [Print to the following port(s)] box and that the check box is selected, and then click [OK].**

Setting Up a Client Computer

This section describes the procedures for setting up a client in a network that uses Windows 2000, Windows XP/Server 2003, Windows NT Server or Windows NT Workstation as a print server.

When using a Windows 2000, Windows XP/Server 2003 or Windows NT print server, select a shared printer on Windows 2000, Windows XP/Server 2003 or Windows NT.



Limitation

❒ When using a print server connected to the printer with SmartNetMonitor for Client, you cannot use Recovery Printing and Parallel Printing.

Note

❒ This section assumes that the client has already been configured to communicate with a Windows 2000, Windows XP/Server 2003 or Windows NT print server. Do not begin the following procedure until the client has been set up and configured correctly.

Use the **[Printers]** window to set up the printer.

1 Click [Start], point to [Settings] and then click [Printers].

2 Double-click the [Add Printer] icon.

This launches the Add Printer Wizard.

3 Click [Next >].

4 Click [Network printer], and then click [Next >].

5 Click [Next >].

6 In the [Shared printers:] box, double-click the name of the computer used as a print server.

The printers attached to the network are displayed.

7 Click the printer you want to use, and then click [Next >].

Note

❒ If the printer driver is not installed in the print server, a message appears. If a driver has been installed on the client, click **[OK]**, and then follow the instructions on the screen.

❒ There is a Windows 2000 printer driver on the CD-ROM labeled "Printer Drivers and Utilities".

8 Select whether to use this printer as the default printer, and then click [Next >].

9 After the installation is complete, click [Finish].

The icon of the newly installed printer appears in the **[Printers]** window.

3. Windows XP/Server 2003 Configuration

Configuring Windows XP/Server 2003

Printing without a Print Server

The following procedure describes how to configure Windows XP/Server 2003 to use the machine on a network without a Windows 2000 Server, Windows 2000 Professional, Windows XP/Server 2003, Windows NT Server, Windows NT Workstation or NetWare based print server.

1 Specify the protocol to use

Consult your network administrator about which of the three protocols is appropriate.

- TCP/IP
- IPP

2 Configure the protocol.

- See p.39 “Configuring TCP/IP and IPP for Printing”.

3 Install the software and set the printer driver port

- Install SmartNetMonitor for Client from the CD-ROM labeled "Printer Drivers and Utilities". For more information about how to install the software and how to specify the printer driver port, see the Setup Guide.

Printing with a Standard TCP/IP Port

Standard TCP/IP port is a standard port of Windows XP/Server 2003 to enable Peer-to-Peer printing in a network environment.

For more information about Standard TCP/IP port settings, see Windows XP/Server 2003 Help.

Note

❒ If a device model selection dialog box appears during the procedure to add the standard TCP/IP port, select "RICOH Network Printer C Model".

Printing with a LPR Port

See p.46 “Configuring LPR Port Printing” for configuring a LPR port in Windows XP.

Printing with a Windows 2000, Windows XP/Server 2003 or Windows NT Print Server

See p.47 “Setting Up a Client Computer” for configuring Windows XP/Server 2003 with a Windows 2000, Windows XP/Server 2003 or Windows NT print server.

Configuring the Protocols

Configuring TCP/IP and IPP for Printing

Follow these instructions to configure the Network Interface Board and Windows XP/Server 2003 to use the TCP/IP protocol and IPP.

Configuring the machine

Configure the machine to use the TCP/IP protocol.

- Make sure that the TCP/IP protocol is set to active. (The default is active.)
- Assign an IP address and make other settings required for using the TCP/IP protocol.

Reference

For more information about how to make the above settings, see the Setup Guide.

If DHCP is used to assign IP addresses, see p.139 “Using DHCP”.

To use the IP over 1394, see the Setup Guide.

Note

❒ After setting the IP address, use the ping command to make sure that it has been set correctly.

① Click **[Start]**, point to **[All Programs]**, point to **[Accessories]**, and then click **[Command Prompt]**.

② Type the following: (Example IP address is 192.168.15.16)
`C:\> ping 192.168.15.16`
If the address has been configured correctly, the following message appears.
`Reply from 192.168.15.16 : bytes=32 time<10ms TTL=32`
If the address has been configured incorrectly, the following message appears.
`Request timed out.`

Configuring a Windows XP/Server 2003 computer

Follow these steps to configure a Windows XP/Server 2003 computer to use the TCP/IP protocol.

1 **Click [Start] on the taskbar, point to [Control Panel], and then click [Network and Internet Connections].**

2 **Click [Local Area Connection]. On the [General] tab, click [Properties].**

Note

❒ With the IP over 1394, click **[1394 Connection]**.

3 **Make sure that the"Internet Protocol (TCP/IP)" is selected in the [This connection uses the following items:] box on the [General] tab.**

Note

❒ Select the TCP/IP protocol box if it is not already selected.

❒ If the TCP/IP protocol is not installed, click **[Install...]** on the **[General]** tab to install it. For more information about installing the TCP/IP protocol, see Windows XP/Server 2003 Help.

4 **Configure the TCP/IP protocol with the appropriate IP address, subnet mask and other settings.**

Check with the network administrator that the settings are correct.

Using SmartNetMonitor for Client

SmartNetMonitor for Client is a utility that helps you to use network printers effectively. It is useful in environments where two or more network printers are used. It is recommended that you install SmartNetMonitor for Client to use Parallel Printing and Recovery Printing. For more information about SmartNetMonitor for Client, see SmartNetMonitor for Client Help.

❖ SmartNetMonitor for Client features

- Sends a print job directly to the network printers without using a print server.
- Notifies when a printing error occurs.
- Prints documents using other printers in the printer group when the specified printer is busy (Recovery Printing).
- Equally divides the number of copies to be printed among the selected printers in the printer group (Parallel Printing).

Important

❒ The following must be the same for the specified printer and the printers selected for Recovery Printing or Parallel Printing.

- Printer models (for Parallel Printing only)
- Installed options (e.g. Paper tray unit)
- Size and orientation of paper in each paper tray unit
- Total memory
- Installed fonts (including the downloaded fonts)

Note

❒ Failure to meet any of the conditions above may result in unexpected print results.

Reference

For more information about how to use SmartNetMonitor for Client, see the "readmeXP.txt" file included on the CD-ROM labeled "Operating Instructions" (If the CD-ROM drive is D, the folder will be "D: etwork etmonClientDisk1").

Installing SmartNetMonitor for Client

Install SmartNetMonitor for Client from the CD-ROM labeled "Printer Drivers and Utilities". For more information about how to install, see the Setup Guide.

After the installation is complete, configure the printer port with SmartNetMonitor for Client. See p.43 "Setting Up the Printer Driver".

Deleting the port

The following procedure allows you to delete the printer port. If you want to delete the port which is currently used in Windows, switch the port to another such as "FILE", then delete it. For more information about SmartNetMonitor for Client, see SmartNetMonitor for Client Help.

1. **From the [Printers] window, click the icon of the printer which uses SmartNetMonitor for Client to print. On the [File] menu, click [Properties].**
2. **Click the [Ports] tab, and then make sure that the SmartNetMonitor for Client port is shown in the [Print to the following port(s)] box.**

   Remember the port name because this port should be deleted later.
3. **Select the [FILE] check box in the [Port] column.**
4. **Click [OK] to close the Printer Properties.**

   The port which is currently in use is changed.
5. **Open the Printer Properties of the same printer.**
6. **Select the [Ports] tab.**
7. **At the [Port] column in the [Print to the following port(s)] dialog box, click to select the SmartNetMonitor for Client port name as in step 2.**
8. **Click [Delete Port].**
9. **When the confirmation message appears, click [Yes].**

   The port is deleted.
10. **Click [Close] to close the Printer Properties.**

Uninstalling SmartNetMonitor for Client

Preparation

Before uninstalling SmartNetMonitor for Client, make sure that:

- The port settings dialog box is closed.
- No printer is using the SmartNetMonitor for Client port as a printer port.
- You have performed login with the same user authority as that used to install SmartNetMonitor for Client.

1 **Open [Control Panel], and then double-click the [Add/Remove Programs] icon.**

2 **Click the [Add or Remove Programs]category, click [SmartNetMonitor for Client], and then click [Change/Remove].**

3 **After the confirmation message appears, click [Yes].**

UninstallShield removes all of the components of SmartNetMonitor for Client.

4 **After the confirmation message appears, click [Yes].**

5 **Acknowledge the [Remove Shared File?] dialog box.**

6 **When the uninstallation is complete, click [OK].**

Setting Up the Printer Driver

The following procedure allows you to configure the printer port to use SmartNetMonitor for Client.

Preparation

The target printer must be turned on before starting the installation process.

1 **Install the printer driver for the printer you want to use.**

2 **From the [Printers] window, click the icon of the printer. On the [File] menu, click [Properties].**

3 **Click the [Ports] tab and click [Add Port].**

4 **Click [SmartNetMonitor for Client] in the [Available port types:] box, and then click [New Port].**

The **[Select Printer]** dialog box appears and printers on the network are browsed.

The displayed items are as follows:

Model Name: The model name of the printer.

Name: The name of Network Interface Board.

Comment: Additional information about Network Interface Board.

Address: The IP address of the printer.

5 **Select the printer.**

TCP/IP

❶ **Click the printer you want to use, and then click [OK].**

Note

❒ Printers that respond to an IP broadcast from the computer will be displayed. To print to a printer not listed here, click **[Specify Address]** and then type the IP address or host name.

IPP

❶ **Click [IPP].**

The IPP setting dialog box appears.

❷ **To specify the IP address of the printer, type "http://printer's-ip-address/printer" or "ipp://printer's-ip-address/printer" in the [Printer URL] field.**

(Example IP address is 192.168.15.16)

`http://192.168.15.16/printer`

`ipp://192.168.15.16/printer`

❸ **As necessary, type the names to distinguish the printer in [IPP Port Name]. Type a name different from those of any existing port names.**

If you omit this, the address entered in **[Printer URL]** will be set as the IPP port name.

❹ **If using a proxy server and IPP user name, click [Detailed Settings] and configure the necessary settings.**

Note

❒ For more information about these setting, see SmartNetMonitor for Client Help.

6 **Click [OK].**

7 **Make sure that the specified printing port is displayed in the [Print to the following Port(s)] box, and then click [Close].**

This completes the settings.

To print, select the specified printer. SmartNetMonitor for Client will now direct print data to the printer automatically.

Changing Port Settings

Follow the steps to change SmartNetMonitor for Client settings, such as Parallel Printing, Recovery Printing, TCP/IP, the proxy server and IPP URL.

Note

❒ There are no settings for the NetBEUI protocol.

1 **Access the [Printers and Faxes] window from [Start] on the taskbar.**

2 **Click the icon of the printer you want to use. On the [File] menu, click [Properties].**

3 **Click the [Ports] tab, and then click [Configure Port].**

The **[Port Settings]** dialog box appears

- For TCP/IP protocol, you can configure Parallel Printing, Recovery Printing and Timeout Settings.
- For IPP, you can configure User Settings, Proxy Settings and Timeout Settings.

Note

❒ For more information about these settings, see SmartNetMonitor for Client Help.

Configuring LPR Port Printing

This section explains the procedure for printing to a LPR port from Windows XP.

Note

❒ The TCP/IP protocols must be installed and configured correctly. For more information about configuring the protocols, see p.39 "Configuring TCP/IP and IPP for Printing".

1. **Access the [Printers and Faxes] window from [Start] on the taskbar.**
2. **Click the icon of the printer you want to use. On the [File] menu, click [Properties].**
3. **Click the [Ports] tab and click [Add Port].**
4. **In the [Available port types:] box, click "LPR Port", and then click [New Port].**

   Note

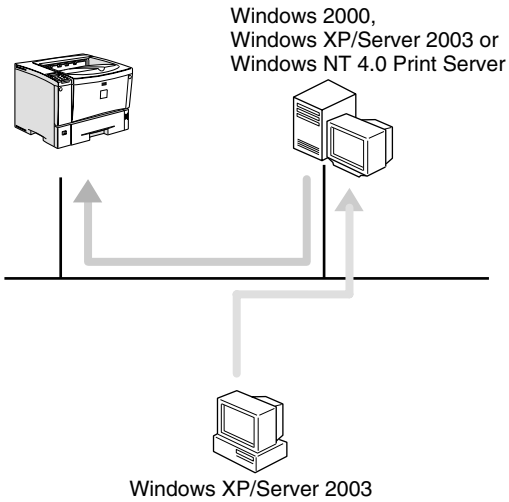
   ❒ If "LPR Port" does not appear, "Print Services for Unix" has not been installed. For more information about how to install "Print Services for Unix", see Windows XP/Server 2003 Help.

5. **Type the IP address of the Network Interface Board into the [Name or address of server providing lpd:] box.**
6. **Type "lp" into the [Name of printer or print queue on that server box:], and then click [OK].**
7. **Click [Close].**
8. **Make sure that the port name is displayed in the [Print to the following port(s)] box and that the check box is selected, and then click [OK].**

Setting Up a Client Computer

This section describes the procedures for setting up a client in a network that uses Windows 2000, Windows XP/Server 2003, Windows NT Server or Windows NT Workstation as a print server.

When using a Windows 2000, Windows XP/Server 2003 or Windows NT print server, select a shared printer on Windows 2000, Windows XP/Server 2003 or Windows NT.



Limitation

❒ When using a print server connected to the printer with SmartNetMonitor for Client, you cannot use Recovery Printing and Parallel Printing.

Note

❒ This section assumes that the client has already been configured to communicate with a Windows 2000, Windows XP/Server 2003 or Windows NT print server. Do not begin the following procedure until the client has been set up and configured correctly.

Use the **[Printers]** window to set up the printer.

1 **Access the [Printers and Faxes] window from [Start] on the taskbar.**

2 **Click [Add Printer] in the Printer Tasks category.**

This launches the Add Printer Wizard.

3 **Click [Next >].**

4 **Click [A network printer, or a printer attached to another computer.], and then click [Next >].**

5 **Click [Next >].**

6 In the [Shared printers:] box, double-click the name of the computer used as a print server.

The printers attached to the network are displayed.

7 Click the printer you want to use, and then click [Next >].

Note

❒ If the printer driver is not installed in the print server, a message appears. If a driver has been installed on the client, click **[OK]**, and then follow the instructions on the screen.

❒ There is a Windows XP/Server 2003 printer driver on the CD-ROM labeled "Printer Drivers and Utilities".

8 Select whether to use this printer as the default printer, and then click [Next >].

9 After the installation is complete, click [Finish].

The icon of the newly installed printer appears in the **[Printers]** window.

4. Windows NT 4.0 Configuration

Configuring Windows NT 4.0

Printing without a Print Server

The following procedure describes how to configure Windows NT 4.0 to use the machine on a network without a Windows 2000 Server, Windows 2000 Professional, Windows XP/Server 2003, Windows NT Server, Windows NT Workstation or NetWare based print server.

1 Specify the protocol to use

Consult your network administrator about which of the three protocols is appropriate.

- TCP/IP
- IPP
- NetBEUI

2 Configure the chosen protocol.

- See p.50 “Configuring TCP/IP and IPP for Printing”.
- See p.51 “Configuring NetBEUI for Printing”.

3 Install the software and set the printer driver port

- Install SmartNetMonitor for Client from the CD-ROM labeled "Printer Drivers and Utilities". For more information about how to install the software and how to specify the printer driver port, see the Setup Guide.

Printing with a LPR Port

See p.58 “Configuring LPR Port Printing” for how to configure a LPR port in Windows NT 4.0.

Printing with a Windows 2000, Windows XP/Server 2003 or Windows NT Print Server

See p.59 “Setting Up a Client Computer” for configuring Windows NT 4.0 with a Windows 2000, Windows XP/Server 2003 or Windows NT print server.

Configuring the Protocols

Configuring TCP/IP and IPP for Printing

These instructions are for configuring the Network Interface Board and Windows NT to use the TCP/IP protocol and IPP.

Configuring the machine

Configure the machine to use the TCP/IP protocol.

- Make sure that the TCP/IP protocol is set to active. (The default is active.)
- Assign an IP address and make other settings required for using the TCP/IP protocol.

Reference

For more information about how to make the above settings, see the Setup Guide.

If DHCP is used to assign IP addresses, see p.139 "Using DHCP".

Note

❒ After setting the IP address, use the ping command to make sure that it has been correctly set.

① Click **[Start]**, point to **[Programs]**, and then click **[Command Prompt]**.

② Type the following: (Example IP address is 192.168.15.16)

```
C:\> ping 192.168.15.16
```

If the address has been configured correctly, the following message appears.

```
Reply from 192.168.15.16 : bytes=32 time<10ms TTL=32
```

If the address has been configured incorrectly, the following message appears.

```
Request timed out.
```

Configuring a Windows NT computer

These steps are for configuring a Windows NT computer to use the TCP/IP protocol.

1 Open [Control Panel], and then double-click the [Network] icon. Make sure that "TCP/IP Protocol" is listed in the [Network protocols] box on the [Protocols] tab.

Note

❒ If the TCP/IP protocol is not installed, click **[Add]** on the **[Protocols]** tab to install it. For more information about installing the TCP/IP protocol, see Windows NT Help.

2 Configure the TCP/IP protocols with the appropriate IP address, subnet mask and other settings.

Check with the network administrator that the settings are correct.

3 Click the [Services] tab, and then make sure that "Microsoft TCP/IP Printing" is installed.

If "Microsoft TCP/IP Printing" is not installed, click **[Add]** on the **[Services]** tab, to install it. For more information about installing and configuring network services, see Windows NT Help.

Configuring NetBEUI for Printing

These instructions are for configuring the Network Interface Board and Windows NT to use the NetBEUI protocol.

Preparation

To use NetBEUI, use the SmartNetMonitor for Client port.

Configuring the machine

Configure the machine to use the NetBEUI protocol.

- Make sure that the NetBEUI protocol is set to active. (The default is active.)

Reference

For more information about how to make the above settings, see the Setup Guide.

Configuring a Windows NT computer

Install the NetBEUI protocol on the Windows NT computer, and then change the LAN adapter number (Lana Number).

1. **Open [Control Panel], and then double-click the [Network] icon. Make sure that "NetBEUI Protocol" is listed in the [Network Protocols] box on the [Protocols] tab.**

   Note

   ❒ If the NetBEUI protocol is not installed, click **[Add]** on the **[Protocols]** tab to install it. For more information about installing the NetBEUI protocol, see Windows NT Help.

2. **Change the Lana Number. Click the [Services] tab, click "NetBIOS Interface" in the [Services] tab, and then click [Properties].**

3. **Click the Lana Number corresponding the Nbf protocol of the [Network Route] headline, and then click [Edit].**

4. **Type "0" as the Lana Number.**

   Note

   ❒ If the other protocol's Lana Number is configured with "0", you must change the Lana Number a number other than "0".

5. **Click [OK].**

6. **Click [Close], and then close the [Network] dialog box.**

7. **After checking the message to restart, click [Yes].**

   Note

   ❒ After you change the Lana Number, you must restart the computer.

Using SmartNetMonitor for Client

SmartNetMonitor for Client is a utility that helps you to use network printers effectively. It is useful in environments where two or more network printers are used. It is recommended that you install SmartNetMonitor for Client to use Parallel Printing and Recovery Printing. For more information about SmartNetMonitor for Client, see SmartNetMonitor for Client Help.

❖ SmartNetMonitor for Client features

- Sends a print job directly to the network printers without using a print server.
- Notifies when a printing error occurs.
- Prints documents using other printers in the printer group when the specified printer is busy (Recovery Printing).
- Equally divides the number of copies to be printed among the selected printers in the printer group (Parallel Printing).

Important

❒ The following must be the same for the specified printer and the printers selected for Recovery Printing or Parallel Printing.

- Printer models (for Parallel Printing only)
- Installed options (e.g. Paper tray unit)
- Size and orientation of paper in each paper tray unit
- Total memory
- Installed fonts (including the downloaded fonts)

Note

❒ Failure to meet any of the conditions above may result in unexpected print results.

Limitation

❒ On a computer that is used as a print server, do not use the features such as Parallel Printing, Recovery Printing and Notify. For more information about turning off these features, see SmartNetMonitor for Client Help.

Installing SmartNetMonitor for Client

Install SmartNetMonitor for Client from the CD-ROM labeled "Printer Drivers and Utilities". For more information about how to install, see the Setup Guide.

After the installation is complete, configure the printer port with SmartNetMonitor for Client. See p.55 "Setting Up the Printer Driver".

Deleting the port

The following procedure allows you to delete the printer port. If you want to delete the port which is currently used in Windows, switch the port to another such as "FILE", then delete it. For more information about SmartNetMonitor for Client, see SmartNetMonitor for Client Help.

1. **From the [Printers] window, click the icon of the printer which uses SmartNetMonitor for Client to print. On the [File] menu, click [Properties].**
2. **Click the [Ports] tab, and then make sure that the SmartNetMonitor for Client port is shown in the [Print to the following port] box.**

   Remember the port name because this port should be deleted later.
3. **From the [Print to the following port] box, select [FILE].**
4. **Click [Apply].**

   The port which is currently in use is changed.
5. **Click [Delete Port].**
6. **After the confirmation message appears, click [Yes].**

   The port is deleted.
7. **Click [OK] to close the printer properties.**

Uninstalling SmartNetMonitor for Client

Preparation

Before uninstalling SmartNetMonitor for Client, make sure that:

- The port settings dialog box is closed.
- No printer is using the SmartNetMonitor for Client port as a printer port.
- You have performed login with the same user authority as that used to install SmartNetMonitor for Client.

1 Open [Control Panel], and then double-click the [Add/Remove Programs] icon.

2 On the [Install/Uninstall] tab, click [SmartNetMonitor for Client] and click [Add/Remove].

3 After the confirmation message appears, click [Yes].

UninstallShield removes all of the components of SmartNetMonitor for Client.

4 After a confirmation message appears, click [Yes].

5 Acknowledge the [Remove Shared File?] dialog box.

6 When the uninstallation is complete, click [OK].

Setting Up the Printer Driver

The following procedure allows you to configure the printer port to use SmartNetMonitor for Client.

Preparation

The target printer must be turned on before starting the installation process.

1 Install the printer driver of the printer you want to use.

2 From the [Printers] window, click the icon of the printer. On the [File] menu, click [Properties].

3 Click the [Ports] tab and click [Add Port].

4 Click [SmartNetMonitor] from the list, and then click [New Port...].

The **[Select Printer]** dialog box appears .

The displayed items are as follows:

Model Name: The model name of the printer.

Name: The name of the Network Interface Board.

Comment: Additional information about the Network Interface Board.

Address: The IP address of the printer.

5 Select the printer.

TCP/IP

❶ **Click the printer you want to use, and then click [OK].**

Note

❒ Printers that respond to an IP broadcast from the computer will be displayed. To print to a printer not listed here, click **[Specify Address]**, and then type the IP address or host name.

NetBEUI

❶ **Click [NetBEUI].**

A list of printers that can be printed by the NetBEUI protocol appears.

❷ **Click the printer you want to use, and then click [OK].**

Note

❒ Printers that respond to a broadcast from the computer will be displayed. To print to a printer not listed here, click **[Specify Address]** and then type the NetBEUI address. Make sure that the NetBEUI address is on the configuration page. For information about the printing of the configuration page, see "Printing a Configuration Page" in the Setup Guide. The NetBEUI address appears as "\\RNPxxxx\xxx" on the configuration page. Type the printer's network path name in the form of "%%Computer name\Share name". Do not type "\\" as head characters but "%%".

❒ You cannot print to printers beyond routers.

IPP

❶ **Click [IPP].**

The IPP setting dialog box appears.

❷ **To specify the IP address of the printer, type "http://printer's-ip-address/printer" or "ipp://printer's-ip-address/printer" in the [Printer URL] field.**

(Example IP address is 192.168.15.16)

```
http://192.168.15.16/printer
```

```
ipp://192.168.15.16/printer
```

❸ **As necessary, type the names to distinguish the printer in [IPP Port Name]. Type a name different from those of any existing port names.**

If you omit this, the address entered in **[Printer URL]** will be set as the IPP port name.

❹ **If using a proxy server and IPP user name, click [Detailed Settings] and configure the necessary settings.**

Note

❒ For more information about these setting, see SmartNetMonitor for Client Help.

6 **Click [OK].**

7 **Make sure that the specified printing port is displayed in the [Print to the following Port] box, and then click [OK].**

This completes the settings.

To print, select the printer specified here. SmartNetMonitor for Client will now direct print data to the printer automatically.

Changing Port Settings

Follow the steps to change SmartNetMonitor for Client settings, such as Parallel Printing, Recovery Printing, TCP/IP, the proxy server settings and IPP URL.

Note

❒ There are no settings for the NetBEUI protocol.

1 **From the [Printers] window, click the icon of the printer you want to use. On the [File] menu, click [Properties].**

2 **Click the [Ports] tab, and then click [Port Configuration].**

The **[Port Settings]** dialog box appears

- For TCP/IP protocol, you can configure Recovery Printing, Parallel Printing and Timeout Settings.
- For IPP, you can configure User Settings, Proxy Settings and Timeout Settings.

Note

❒ For more information about these settings, see SmartNetMonitor for Client Help.

Configuring LPR Port Printing

This section explains the procedure for printing to a LPR port from Windows NT.

Note

❒ The following procedure assumes that the printer drivers have already been installed. This is the procedure to change the printer port to LPR.

❒ The TCP/IP protocols must be installed and configured correctly. For more information about configuring the protocol, see p.50 "Configuring TCP/IP and IPP for Printing".

1. **Click [Start], point to [Settings], and then click [Printers].**
2. **Click the icon of the printer you want to use. On the [File] menu, click [Properties].**
3. **Click the [Ports] tab, and then click [Add Port].**
4. **In the [Available Printer Ports] box, click "LPR Port", and then click [New Port].**

   Note

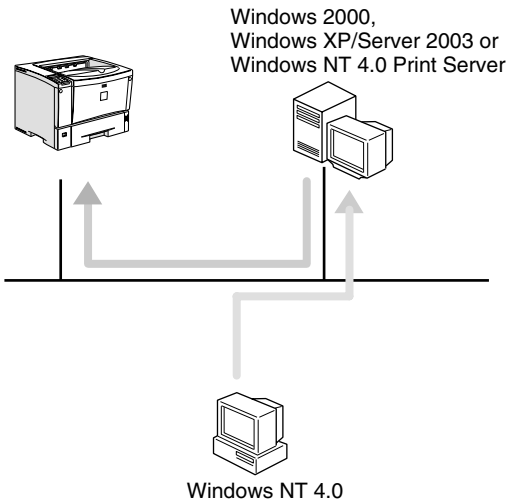
   ❒ If "LPR Port" does not appear, "Microsoft TCP/IP Printing" has not been installed.

5. **Type the IP address of the Network Interface Board into the [Name or address of server providing lpd] box.**
6. **Type "lp" into the [Name of printer or print queue on that server] box, and then click [OK].**
7. **Click [Close].**
8. **Make sure that the port name is displayed in the [Print to the following port(s)] box and the check box is selected, and then click [OK].**

Setting Up a Client Computer

This section describes the procedures for setting up a client in a network that uses Windows 2000, Windows XP/Server 2003, Windows NT Server or Windows NT Workstation as a print server.

When using a Windows 2000, Windows XP/Server 2003 or Windows NT print server, select a shared printer on Windows 2000, Windows XP/Server 2003 or Windows NT.



Limitation

❒ When using a print server connected to the printer with SmartNetMonitor for Client, you cannot use Recovery Printing and Parallel Printing.

Note

❒ This section assumes that the client has already been configured to communicate with a Windows 2000, Windows XP/Server 2003 or Windows NT print server. Do not begin the following procedure until the client has been set up and configured correctly.

Use the **[Printers]** window to set up the printer.

1 Click [Start], point to [Settings], and then click [Printers].

2 Double-click the [Add Printer] icon.

This launches the Add Printer Wizard.

3 Click [Network printer server] and click [Next >].

4 In the [Shared Printers] box, double-click the name of the computer used as a print server.

The printers attached to the network are displayed.

5 **Click the printer you want to use and click [OK].**

Note

❒ If the printer driver is not installed in the print server, a message appears. If a driver has been installed on the client, click **[OK]** and follow the instructions on the screen.

❒ There is a Windows NT printer driver on the CD-ROM labeled "Printer Drivers and Utilities".

6 **Select if you want to use this printer as the default printer, and then click [Next >].**

7 **After the installation is complete, click [Finish].**

The icon of the newly installed printer appears in the **[Printers]** window.

5. NetWare Configuration

This chapter describes how to configure the machine to use as a print server or a remote printer in a NetWare environment.

NetWare must be set to active using the machine's control panel. For more information about how to set it, see the Setup Guide.

❖ SmartNetMonitor for Admin

To use a printer in a NetWare environment, configure the NetWare printing environment using SmartNetMonitor for Admin.

Note

❒ If you configure the NetWare printing using SmartNetMonitor for Admin under the following environments, Novell NetWare Client is required:

- NDS mode in Windows 95/98/Me
- NDS or Bindary mode in Windows 2000/XP/Server 2003/Windows NT 4.0

❒ Use the version of Novell Client provided with your operating system, or the latest version.

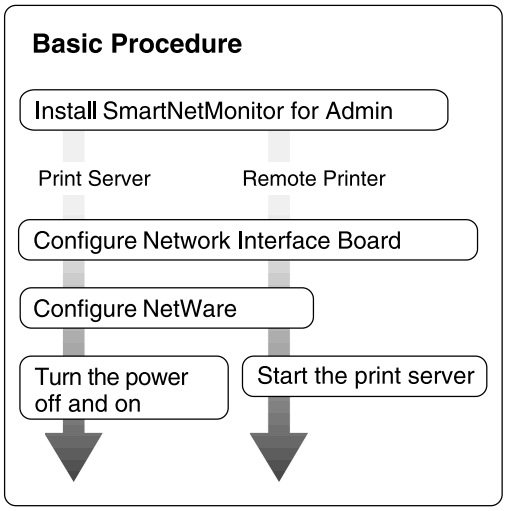
❖ Printers listed by SmartNetMonitor for Admin

SmartNetMonitor for Admin displays a list of printers connected to the network.

If you cannot find the printer on the displayed list, refer to the configuration page printed on the printer. For more information about printing a configuration page, see Printer Reference provided as a PDF file on the CD-ROM labeled “Operating Instructions”

NetWare 3.x - Advanced Settings

The actual procedures for configuring the machine vary depending on whether the Network Interface Board is configured as a print server or as a remote printer. This section describes how to configure the machine in the NetWare 3.x environment.



Note

❒ This section assumes NetWare is functional and that the necessary environment for the NetWare Print Service is available.

Installing SmartNetMonitor for Admin

Install SmartNetMonitor for Admin on your computer. For the installation procedure, see *"Installing the SmartNetMonitor for Client/Admin"* in the Setup Guide.

After installing SmartNetMonitor for Admin, go to p.63 "Setting Up as a Print Server" to use this computer as a print server, or to p.64 "Setting Up as a Remote Printer" to use it as a remote printer.

Setting Up as a Print Server

1 Log on to the file server as a Supervisor or a Supervisor equivalent.

2 Run SmartNetMonitor for Admin.

3 On the [Group] menu, point to [Search Device], and then click [IPX/SPX].

A list of printers appears.

Note

❒ If you cannot identify which printer to configure from the list of printers, print the configuration page and find it. For more information about printing the configuration page, see *"List/Test Print Menu"* in the Printer Reference provided as a PDF file on the CD-ROM labeled "Operating Instructions"

❒ If no printer name appears on the list, match the IPX/SPX frame types between the computer and printer. Use the **[Network]** dialog box of Windows to change the computer frame type. For more information about changing equipment frame types, see *"Configuring the Printer for the Network"* in the Setup Guide.

4 Select the printer you want to configure, and then click [NIB Setup Tool] on the [Tools] menu.

5 Click [Wizard], and then click [OK].

6 Enter the device name in the [Device Name] box, a comment in the [Comment] box if necessary, and then click [Next>].

7 Select the [NetWare] check box, and then click [Next>].

8 Click [Bindery Mode], enter the file server name in the [File Server Name:] box, and then click [Next>].

In the **[File Server Name:]** box, enter the name of the file server in which the print server is to be created. You can also select a file server from the list that appears by clicking **[Browse]**.

9 Enter the print server name in the [Print Server Name] box, the printer name in the [Printer Name] box, and the print queue name in the [Print Queue Name] box, then click [Next>].

- In the **[Print Server Name]** box, enter the name of the NetWare print server using up to 47 characters.
- In the **[Printer Name]** box, enter the name of the NetWare printer.
- In the **[Print Queue Name]** box, enter the name of the print queue to be added to NetWare.

10 After confirming the settings, click [Next>].

The settings take effect, and NIB Setup Tool closes.

11 Exit SmartNetMonitor for Admin.

12 Turn the printer power off and on.

Note

❒ To check the printer is configured correctly, enter the following after the command prompt:

```
F:> USERLIST
```

❒ If the printer works as configured, the name of the print server appears as an attached user.

Setting Up as a Remote Printer

1 Log on to the file server as a Supervisor or the equivalent of a Supervisor.

2 Run the SmartNetMonitor for Admin.

3 On the [Group] menu, point to [Search Device], and then click [IPX/SPX].

A list of printers appears.

Note

❒ If you cannot identify which printer to configure from the list of printers, print the configuration page and find it. For more information about printing the configuration page, see *"List/Test Print Menu"* in the Printer Reference provided as a PDF file on the CD-ROM labeled "Operating Instructions"

❒ If no printer name appears on the list, match the IPX/SPX frame types between the computer and printer. Use the **[Network]** dialog box of Windows to change the computer frame type. For more information about changing equipment frame types, see *"Configuring the Printer for the Network"* in the Setup Guide.

4 Select the printer you want to configure, and then click [NIB Setup Tool] on the [Tools] menu.

5 Click [Property Sheet], and then click [OK].

6 Click the [NetWare] tab, and then make the following settings:

❶ In the [Print Server Name] box, enter the name of the print server.

❷ In the [File Server Name] box, enter the name of the file server in which a print server is to be created.

By clicking **[Browse]**, you can select a file server among those listed in the **[Browse]** dialog box.

❸ **In the [Print Server Operation Mode] group, click [As Remote Printer].**

❹ **In the [Remote Printer No.] box, enter the printer number.**

Important

❒ Use the same printer number as that to be created in the printer server.

❺ **Click [OK] to close the property sheet.**

❻ **After a confirmation dialog box appears, click [OK].**

7 **On the [NIB] menu, click [Exit] to exit NIB Setup Tool.**

8 **Enter "PCONSOLE" after the command prompt.**

```
F:> PCONSOLE
```

9 **Create a print queue as follows:**

Note

❒ If you use a currently defined print queue, proceed to step **10**.

❶ **On the [Available Options] menu, click [Print Queue Information], and then press [Enter].**

❷ **Press [INSERT], and then enter a print queue name.**

❸ **Press [ESC] to return to the [Available Options] menu.**

10 **Create a printer as follows:**

❶ **On the [Available Options] menu, click [Print Server Information], and then press [Enter].**

❷ **To create a new print server, press [INSERT], and then enter a print server name.**

If you are using a currently defined print server, select one of the print servers shown in the **[Print Server]** list.

Important

❒ Use the same name as that specified in NIB Setup Tool. (Step **6** - ❶).

❸ **On the [Print Server Information] menu, click [Print Server Configuration].**

❹ **On the [Print Server Configuration] menu, click [Printer Configuration].**

❺ **Select the printer which is indicated as "Not Installed".**

Important

❒ Use the same number as that specified as the Remote Printer No. using NIB Setup Tool. (Step **6** - ❹).

❻ **If you want to change the name of the printer, enter a new name.**

The name "Printer x" is assigned to the printer. The "x" stands for the number of the selected printer.

❼ **For type, click [Remote Parallel, LPT1].**

IRQ, Buffer size, Starting form, and Queue service mode are automatically configured.

❽ **Press the【ESC】key, and then click [Yes] in the confirmation dialog box.**

❾ **Press the【ESC】key to return to [Print Server Configuration Menu].**

⓫ **Assign print queues to the created printer as follows:**

❶ **From [Print Server Configuration Menu], click [Queues Serviced By Printer].**

❷ **Select the printer created in step ⓾.**

❸ **Press the【INSERT】key to select a queue serviced by the printer.**

Note

❒ You can select more than one queue at a time.

❹ **Follow the instructions on the screen to make other necessary settings.**

When you have finished the above steps, check the queues are assigned.

5

⓬ **Press the【ESC】key until "Exit?" appears, and then click [Yes] to close PCONSOLE.**

⓭ **Start the print server by entering the following from the console of the NetWare Server:**

If it is running, restart it after exiting it.

❖ **To exit**

```
CAREE: unload pserver
```

❖ **To start**

```
CAREE: load pserver print_server_name
```

Note

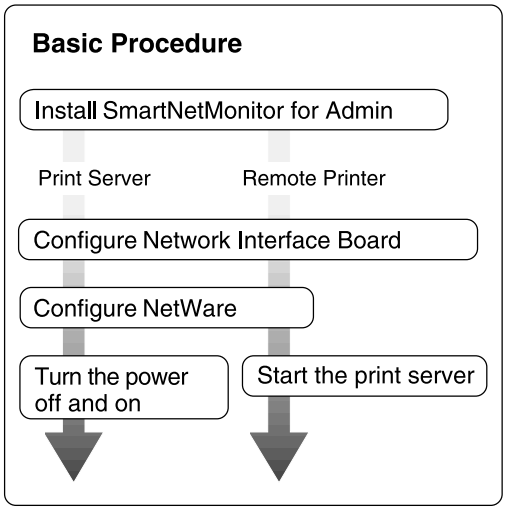
❒ If the printer works as configured, "Waiting for job" appears.

NetWare 4.x, 5/5.1, 6 - Advanced Settings

The actual procedures for configuring the machine vary depending on whether the Network Interface Board is configured as a print server or as a remote printer. This section describes how to configure it in the NetWare 4.x, 5/5.1, 6 environment.

❖ **To use NetWare 5/5.1, 6**

- Use the printer as a print server.
  Do not use as a remote printer.
- If you use Pure IP, configure the machine to use the TCP/IP protocol. For more information about how to make the settings, see *"Configuring the Printer for the Network"* in the Setup Guide.



Installing SmartNetMonitor for Admin

Install SmartNetMonitor for Admin on your computer. For the installation procedure, see *"Installing the SmartNetMonitor for Client/Admin"* in the Setup Guide.

After installing SmartNetMonitor for Admin, go to p.68 "Setting Up as a Print Server" to use this computer as a print server, or to p.71 "Setting Up as a Remote Printer" to use it as a remote printer.

Setting Up as a Print Server

Important

❒ You must set up the print server using NDS mode in NetWare 4.x, 5/5.1, 6.

1 **Log on to the file server as a Supervisor or the equivalent of a Supervisor.**

2 **Run SmartNetMonitor for Admin.**

3 **On the [Group] menu, point to [Search Device], and then click [IPX/SPX] or [TCP/IP].**

A list of printers appears.

Note

❒ If you use Pure IP, click **[TCP/IP]**.

❒ If you cannot identify which printer to configure from the list of printers, print the configuration page and find it. For more information about printing the configuration page, see *"List/Test Print Menu"* in the Printer Reference provided as a PDF file on the CD-ROM labeled "Operating Instructions" .

❒ If no printer name appears in the list, match the IPX/SPX frame types between the computer and printer. Use the **[Network]** dialog box of Windows to change the computer frame type. For more information about changing equipment frame types, see *"Configuring the Printer for the Network"* in the Setup Guide.

4 **Select the printer you want to configure, and then click [NIB Setup Tool] on the [Tools] menu.**

Note

❒ If you use Pure IP, see p.70 "Using Pure IP in the NetWare 5/5.1, 6 environment".

5 **Click [Wizard], and then click [OK].**

6 **Enter the device name in the [Device Name] box, a comment in the [Comment] box if necessary, and then click [Next>].**

7 **Select the [NetWare] check box, and then click [Next>].**

8 Click [NDS Mode], enter the file server name in the [File Server Name:] box, the NDS tree name in the [NDS Tree:] box and the context in the [NDS Context:] box, and then click [Next>].

In the **[File Server Name:]** box, enter the name of the file server in which the print server is to be created. You can also select a file server from the list that appears by clicking **[Browse]**.

By clicking **[Browse]**, you can select a NDS context from those listed in the **[Browse]** dialog box.

For context, object names are entered from a lower object and divided by a period. For example, if you want to create a print server into NET under DS, enter "NET.DS".

9 Enter the print server name in the [Print Server Name] box, the printer name in the [Printer Name] box, the print queue name in the [Print Queue Name] box, and the print queue volume in the [Print Queue Volume], and then click [Next>].

- In the **[Print Server Name]** box, enter the name of the NetWare print server using up to 47 characters.
- In the **[Printer Name]** box, enter the name of the NetWare printer.
- In the **[Print Queue Name]** box, enter the name of the print queue to be added to NetWare.
- In **[Print Queue Volume]**, enter the print queue volume. As a volume, object names are entered from a lower object and divided by a period. You can select a volume by clicking **[Browse]**.

10 After confirming the settings, click [Next>].

NIB Setup Tool completion screen appears.

11 Click [Finish].

The new settings are applied, and NIB Setup Tool closes.

12 Exit SmartNetMonitor for Admin.

13 Turn the printer power off and on.

Note

❒ To check the printer is configured correctly, enter the following after the command prompt:

```
F:> NLIST USER /A/B
```

❒ If the printer works as configured, the name of the print server appears as an attached user.

Using Pure IP in the NetWare 5/5.1, 6 environment

Note

❒ When not using IPX, it is recommended that you change the print server protocol in the Web browser from **[TCP/IP+IPX]** to **[TCP/IP]**.

1 Log on to the file server as an Admin or the equivalent of an Admin.

2 Run SmartNetMonitor for Admin.

3 Click [Property Sheet], and then click [OK].

The **[NIB Setup Tool]** dialog box appears.

4 Click the [NetWare] tab, and make the following settings:

❶ Select [File Server Mode] or [NDS Mode] as the Logon Mode.

❷ In the [Print Server Name:] box, enter the name of the print server.

Limitation

❒ Enter a maximum of 47 single-byte characters and numerals.

❸ In the [File Server Name:] box, enter the name of the file server in which a print server is to be created.

By clicking **[Browse]**, you can select a file server among those listed in the **[Browse File Server]** dialog box.

❹ In the [NDS Tree Name:] box, enter the name of the NDS tree.

Click **[Browse]** to display the NDS Tree list in the **[Browse Context]** dialog box. If you double-click the NDS Tree selected from the list, its NDS Context is displayed. Click the selected NDS Context to display it reversed, then click **[OK]** and the name of the selected NDS Tree and NDS Context is added to the **[NDS Tree Name:]** and **[NDS Context Name:]** dialog boxes.

Limitation

❒ Enter a maximum of 32 characters, including hyphens and underscores.

❺ In the [NDS Context:] box, enter the context of the print server.

Note

❒ When selecting from the list in step❹, the NDS Context is already added.

For context, object names are entered from a lower object and divided by a period. For example, if you want to create a print server into Net under DS, enter “NET.DS”:

❻ **In the [Print Server Operation Mode] group, click [As Print Server].**

❼ **Click [OK] to close the property sheet.**

❽ **After the confirmation dialog box appears, click [OK].**

5 **Exit SmartNetMonitor for Admin.**

After this step, proceed to step 8 on p.68 "Setting Up as a Print Server".

Setting Up as a Remote Printer

1 **Log on to the file server as an Admin or the equivalent of an Admin.**

2 **Run the SmartNetMonitor for Admin.**

3 **On the [Group] menu, point to [Search Device], and then click [IPX/SPX].**

A list of printers appears.

Note

❒ If you cannot identify which printer to configure from the list of printers, print the configuration page and find it. For more information about printing the configuration page, see *"List/Test Print Menu"* in the Printer Reference provided as a PDF file on the CD-ROM labeled "Operating Instructions" .

❒ If no printer name appears on the list, match the IPX/SPX frame types between the computer and printer. Use the **[Network]** dialog box of Windows to change the computer frame type. For more information about changing equipment frame types, see *"Configuring the Printer for the Network"* in the Setup Guide.

4 **Select the printer you want to configure, and then click [NIB Setup Tool] on the [Tools] menu.**

5 **Click [Property Sheet], and then click [OK].**

6 **Click the [NetWare] tab, and make the following settings:**

❶ **Select [File Server Mode] or [NDS Mode] as the Logon Mode.**

❷ **In the [Print Server Name:] box, enter the name of the print server.**

Limitation

❒ Enter a maximum of 47 single-byte characters and numerals.

❸ **In the [File Server Name:] box, enter the name of the file server in which a print server is to be created.**

By clicking **[Browse]**, you can select a file server among those listed in the **[Browse File Server]** dialog box.

❹ **In the [NDS Tree Name:] box, enter the name of the NDS tree.**

Click **[Browse]** to display the NDS Tree list in the **[Browse Context]** dialog box. If you double-click the NDS Tree selected from the list, its NDS Context is displayed. Click the selected NDS Context to display it reversed, then click **[OK]** and the name of the selected NDS Tree and NDS Context is added to the **[NDS Tree Name:]** and **[NDS Context Name:]** dialog boxes.

Limitation

❒ Input using a maximum of 32 characters including hyphens and underscores.

❺ **In the [NDS Context:] box, enter the context of the print server.**

Note

❒ When selecting from the list in step❹, the NDS Context is already added.

For context, object names are entered from a lower object and divided by a period. For example, if you want to create a print server into Net under DS, enter "NET.DS":

❻ **In the [Print Server Operation Mode] group, click [As Remote Printer].**

❼ **In the [Remote Printer No.] box, enter the number of the printer.**

Important

❒ Use the same number as that of the printer to be created in the print server.

❽ **Click [OK] to close the property sheet.**

7 **On the [NIB] menu, click [Exit] to exit NIB Setup Tool.**

8 **From Windows, run NWadmin.**

Reference

For more information about NWadmin, see the documentation provided with NetWare.

9 **Create a print queue as follows:**

❶ **Select the container object the print queue is located in among those in the directory tree, and then click [Create] on the [Object] menu.**

❷ **In the [Class of new object] box, click [Print Queue], and then click [OK].**

❸ **In the [Print Queue name] box, enter the name of the print queue.**

❹ **In the [Print Queue Volume] box, click [Browse].**

❺ In the [Available objects] box, click the volume in which the print queue is created, and then click [OK].

❻ After confirming the settings, click [Create].

10 Create a printer as follows:

❶ Select the container object the printer is located in, and then click [Create] on the [Object] menu.

❷ In the [Class of new object] box, click [Printer], and then click [OK]. When you are using NetWare 5/5.1, 6, click [Printer (Non NPDS)].

❸ In the [Printer name] box, enter the name of the printer.

❹ Select the [Define additional properties] check box, and then click [Create].

11 Assign print queues to the created printer as follows:

❶ Click [Assignments], and then click [Add] in the [Assignments] group.

❷ In the [Available objects] box, click the queue created in step **9**, and then click [OK].

❸ Click [Configuration], and in the [Printer type] list, click [Parallel], and then click [Communication].

❹ Click [Manual load] in the [Communication type] group, and then click [OK].

❺ After confirming the settings, click [OK].

12 Create a print server as follows:

❶ Select the context specified using NIB Setup Tool (Step **9** - ❶), and on the [Object] menu, click [Create].

❷ In the [Class of new object] box, click [Print Server], and then click [OK]. When you are using NetWare 5/5.1, 6, click [Print Server (Non NPDS)].

❸ In the [Print Server name] box, enter the name of the print server.

Important

❒ Use the same name as that specified using NIB Setup Tool. (Step **6** - ❷).

❹ Select the [Define additional properties] check box, and then click [Create].

13 Assign the printer to the created print server as follows:

❶ Click [Assignments], and then click [Add] in the [Assignments] group.

❷ In the [Available objects] box, click the queue created in step **11**, and then click [OK].

❸ In the [Printers] group, click the printer assigned in step ❷, and then click [Printer Number].

❹ Enter the printer number, and then click [OK].

Important

❒ Use the same number as that specified as Remote Printer No. using NIB Setup Tool. (Step **6** - ❼).

❺ After confirming the settings, click [OK].

14 Start the print server by typing the following from the console of the NetWare Server.

If it is running, restart it after closing.

❖ **To exit**

```
CAREE: unload pserver
```

❖ **To start**

```
CAREE: load pserver print_server_name
```

Setting Up a Client Computer

This section describes how to set up a client computer when using a NetWare print server.

Note

❒ Use the version of Novell Client provided with your operating system or the latest version.

❒ This section assumes that the client has NetWare client applications installed and is correctly configured to communicate with a NetWare print server. If not, install the necessary applications before starting the setting up procedure.

Windows 95/98/Me

Follow the procedure to set up a Windows 95/98/Me client.

After installing the printer driver, change the print port to NetWare queue.

Preparation

Log on to the NetWare file server before starting the following procedure.

1 Install the printer driver you want to use as "Local printer".

Reference

For more information about installing the printer driver, see the Setup Guide.

Note

❒ Any port can be selected during the installation, however, LPT1 is recommended.

2 Click [Start], point to [Settings], and then click [Printers].

3 In the [Printers] window, click the icon of the printer you want to use.

4 On the [File] menu, click [Properties].

5 Click the [Details] tab, and then click [Add Port].

6 Click [Network] and click [Browse].

7 On the network tree, double-click the name of the file server.

The queues are displayed.

8 Click the queue you want to print, and then click [OK].

9 Click [OK].

In the **[Print to the following port]** box, a network path to the printer appears.

10 Click [OK] to close the Printer Properties, and again, open it.

11 Click the [Printer Settings] tab.

12 Select to clear the [Form feed] and [Enable banner] check boxes.

Note

❒ You should not select these boxes because they should be specified using the printer driver. If they are selected, the printer might not print correctly.

When using the PostScript printer driver

Follow these steps to set up for the PostScript printer driver.

❶ Click the [PostScript] tab.

❷ Click [Advanced].

❸ Click to clear the [Send CTRL+D before job] and [Send CTRL+D after job] check boxes.

13 Click [OK] to close the Printer Properties.

Windows 2000/XP/Server 2003, Windows NT 4.0

Follow the procedure to set up a Windows 2000/XP/Server 2003, Windows NT 4.0 client.

Preparation

Log on to the NetWare file server before starting the following procedure.

1 Double-click the [My Network Places] icon on the desktop and navigate to the queue you want to use, and then double-click it.

The printers dialog box appears.

Note

❒ When using Windows NT 4.0, the **[Network Neighborhood]** icon appears on the desktop instead of the **[My Network Places]** icon.

2 Click [No].

3 Close all the applications that are currently running.

4 Insert the CD-ROM labeled "Printer Drivers and Utilities" into the CD-ROM drive.

If the setup menu starts automatically, you can go to the next step. If not, see the Setup Guide.

5 The [Printer Installation] dialog box appears.

6 From the [Port] list, select the queue you selected in step 1, and then click [Next >].

7 Follow the instructions on the screen to complete the installation of the printer driver.

NDPS

The machine operates using NDPS. Operating requirements are as follows:

- NetWare Version: 5.0, 5.1, 6

❖ Printer Drivers and Operating Systems

Printer Driver	OS
PCL	Windows 95/98/Me Windows 2000 Windows XP/Server 2003 Windows NT 4.0
PostScript 3	Windows 95/98 Windows NT 4.0

To use the machine with NDPS, NDPS Gateway is required.

- Novell NDPS Gateway
  For more information about using Novell NDPS Gateway, see the manual provided with it.
- Custom NDPS Gateway
  For more information about using Custom NDPS Gateway, consult your authorized retailer.

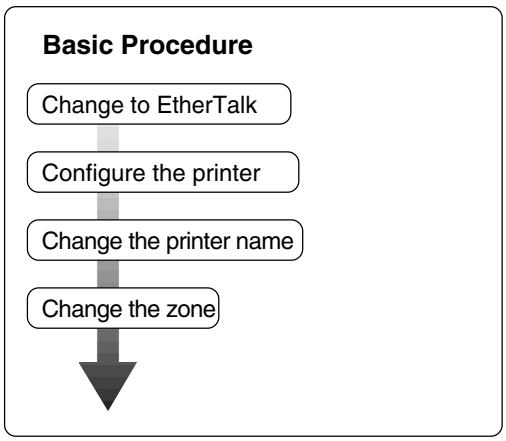
iPrint

This machine does not support iPrint.

6. Macintosh Configuration

Configuring Macintosh

This section describes how to configure a Macintosh computer to use EtherTalk. The actual procedures to configure a Macintosh may vary depending on the version of the Mac OS. The following procedure describes how to configure Mac OS 9.1. If you are not using Mac OS 9.1, see the manual that comes with your version of Mac OS for more information.



Limitation

❒ The required version of Mac OS is 8.6 or later. (Mac OS X Classic environment is supported.)

Changing to EtherTalk

The following procedure is for configuring a Macintosh computer to use EtherTalk.

Reference

For more information about installing the software required for EtherTalk, see the Macintosh manuals.

Mac OS

1 Open [Control Panel], and then double-click the [AppleTalk] icon.

2 On the [Connect via:] pop-up menu, select "Ethernet".

3 If you change zones, select a name on the [Current zone:] pop-up menu.

4 Close the [AppleTalk] dialog box.

5 Restart the computer.

Mac OS X

Preparation

You need an administrator name and a password (phrase). For more information, consult your administrator.

1. **Open [System Preference], and then click the [Network] icon.**
2. **Click the [AppleTalk] tab.**
3. **If you change zone, select a name on the [AppleTalk Zone:] pop-up menu.**
4. **When the setting is complete, click [Apple Now].**

Configuring the Printer

Use the control panel to activate the EtherTalk protocol. (The default is active.)

Reference

For more information about configuration, see the Setup Guide.

Changing the Printer Name

If the network has several similar model printers, the names will be the same. Printers that have the same name will have their names slightly changed in the Chooser. For example, three printers named “printer” will appear in the chooser as “printer0”, “printer1” and “printer2”.

To change the printer name in the Macintosh EtherTalk environment, use the Printer Utility for Mac included on the CD-ROM labeled “Printer Drivers and Utilities”.

Changing the Zone

To change the zone configuration in the Macintosh EtherTalk environment, use the Printer Utility for Mac included on the CD-ROM labeled “Printer Drivers and Utilities”.

Reference

For more information about using Printer Utility for Mac, see PostScript 3 Supplement provided as a PDF file on the CD-ROM labeled “Operating Instructions”.

Using SmartNetMonitor for Admin

Using SmartNetMonitor for Admin, you can not only monitor the status of network printers, but also allows you to change the configurations of the Network Interface Board using the TCP/IP protocol or IPX/SPX protocol.

SmartNetMonitor for Admin is equipped with the following functions.

- Limits the settings to be done from the control panel, and disables changes to be made to some of the items.
- Enables the selection of paper type loaded in the printer.
- Switches to the Energy Saver mode, and wakes up from the Energy Saver mode.
- Checks the information on printing, paper exhaustion, and such, on the computer.
- Monitors multiple printers at the same time. When there are many printers, you can create groups and classify the printers to facilitate management.
- Checks the printer's network settings and detailed information of devices.
- Enables you to change the printer's network settings.
- Checks the number of pages printed for each computer, using the user codes.

Operating system	Protocol stack
Microsoft Windows 95/98/Me	TCP/IP provided with Windows 95/98/Me IPX/SPX provided with Windows 95/98/Me NetWare network client provided with Windows 95/98/Me Novell Client for Windows 95/98/Me
Microsoft Windows 2000	TCP/IP provided with Windows 2000 IPX/SPX provided with Windows 2000 NetWare Client provided with Windows 2000 Novell Client for Windows NT/2000/XP
Microsoft Windows XP/Server 2003	TCP/IP provided with Windows XP IPX/SPX provided with Windows XP Novell Client for Windows NT/2000/XP
Microsoft Windows NT 4.0	TCP/IP provided with Windows NT IPX/SPX provided with Windows NT Client Service for NetWare provided with Windows NT Novell Client for Windows NT/2000/XP

Note

❒ Select the appropriate protocol stack for your operating system.

Limitation

❒ A TCP/IP environment is required when using the following functions:

- Using Tools
  - Locking the Control Panel Menu
  - Selecting the Paper Type
  - Managing User Information
  - Viewing and Deleting Spool Print Jobs
- Opening the Web browser using SmartNetMonitor for Admin

Changing the Network Interface Board Configuration

Limitation

❒ Internet Explorer 4.01 or a later version is required to use NIB Setup Tool.

1 Run SmartNetMonitor for Admin.

2 Click the [Group] menu, point to [Search Device], and then select [TCP/IP] or [IPX/SPX].

A list of printers appears.

Note

❒ Select the protocol of the printer you want to change its configuration.

3 On the list, Select a printer you want to change its configuration.

4 From the [Tools] menu, select [NIB Setup Tool].

The NIB Setup Tool starts up.

5 Select [Wizard] or [Property Sheet], and then click [Next].

- When configuring the Network Interface Board for the first time, select **[Wizard]**.
- When changing the configuration of the Network Interface Board or configuring it in detail, select **[Property Sheet]**.

Selecting **[Wizard]**

❶ **Fill in the necessary items, and then click [Next].**

Selecting **[Property Sheet]**

❶ **A configuration list appears on the dialog box.**

For more information about each item on the dialog box, see Help.

Displaying Machine Status

You can view the status of machines using SmartNetMonitor for Admin.

1. **Run SmartNetMonitor for Admin.**
2. **Click the [Group] menu, point to [Search Device], and then select [TCP/IP] or [IPX/SPX].**

   The status of machines is indicated by an icon in the list.

   Note

   ❒ For more information about status icons, see SmartNetMonitor for Admin Help.
3. **For further information, click the desired machine from the list, and then click [Open] on the [Device] menu.**

   The status of the machine is displayed in the dialog box.

   Note

   ❒ For more information about each item in the dialog box, see SmartNetMonitor for Admin Help.

Locking the Control Panel Menu

1. **Run SmartNetMonitor for Admin.**
2. **Click the [Group] menu, point to [Search Device], and then select [TCP/IP] or [IPX/SPX].**

   A list of machines appears.

   Note

   ❒ Select the protocol of the machine for which you want to change configuration.
3. **In the list, select the machine whose numerical values you want to manage.**
4. **On the [Tools] menu, point to [Device Settings], and then click [Lock Operation Panel Menu].**

   A screen prompting you to enter a password appears.
5. **Enter your user name and password, and then click [OK].**

   Note

   ❒ To use the factory default account, enter no user name and type "password" for the password.

   Check the device status on the Device Settings of the Web browser, and change the device settings.

   Reference

   For more information about viewing status information and changing settings using a Web browser, see Device Settings Help.

Selecting the Paper Type

1. **Run SmartNetMonitor for Admin.**
2. **Click the [Group] menu, point to [Search Device], and then select [TCP/IP] or [IPX/SPX].**

   A list of machines appears.

   Note

   ❒ Select the protocol of the machine for which you want to change configuration.
3. **In the list, select the machine whose numerical values you want to manage.**
4. **On the [Tools] menu, point to [Device Settings], and then click [Select Paper Type].**

   A screen prompting you to enter a password appears.
5. **Enter your user name and password, and then click [OK].**

   Note

   ❒ To use the factory default account, enter no user name and type "password" for the password.

Check the device status on the Device Settings of the Web browser, and change the device settings.

Reference

For more information about viewing status information and changing settings using a Web browser, see Device Settings Help.

Managing the User Information

1. **Run SmartNetMonitor for Admin.**
2. **Click the [Group] menu, point to [Search Device], and then select [TCP/IP] or [IPX/SPX].**

   A list of printer appears.

   Note

   ❒ Select the protocol of the printer you want to change its configuration.
3. **On the list, Select a printer whose statistics information you want to manage.**
4. **From the [Tools] menu, select [User Management Tool].**

   The screen that prompts you to type a password appears.
5. **Type the password, and then click [OK].**

   Note

   ❒ The factory default password is "password".

   The User Code Maintenance Tool starts up.

   For more information about using the User Management Tool, see SmartNetMonitor for Admin Help.

Viewing and Deleting Spool Print Jobs

1. **Run SmartNetMonitor for Admin.**
2. **Click the [Group] menu, point to [Search Device], and then select [TCP/IP] or [IPX/SPX].**

   A list of machines appears.

   Note

   ❒ Select the protocol of the machine for which you want to change configuration.
3. **In the list, select a machine whose numerical values you want to manage.**
4. **On the [Tools] menu, click [Spool Printing Job List (Printer)].**
5. **Enter your user name and password, and then click [OK].**

   Note

   ❒ To use the factory default account, enter no user name and type "password" for the password.

   Check Spool Print Job List on the Web browser, and print out.

   Reference

   For more information about Spool Print Job List, see Spool Print Job List Help.

   Note

   ❒ To display Spool Print Job List, spool must be set to **[Enable]** on Device Settings in advance.

Managing Address Information

1. **Run SmartNetMonitor for Admin.**
2. **Click the [Group] menu, point to [Search Device], and then select [TCP/IP] or [IPX/SPX].**

   A list of machines appears.

   Note

   ❒ Select the protocol of the machine for which you want to change configuration.
3. **In the list, select a machine whose statistics information you want to manage.**
4. **On the [Tools] menu, click [Install Printer Driver].**

   A screen prompting you to enter a password appears.
5. **Enter the password, and then click [OK].**

   Note

   ❒ The factory default password is "password".

   Install Printer Driver starts.

   Reference

   For more information about Install Printer Driver, see Install Printer Driver Help.

Configuring the Energy Save Mode

1 **Run SmartNetMonitor for Admin.**

2 **Click the [Group] menu, point to [Search Device], and then select [TCP/IP] or [IPX/SPX].**

A list of printer appears.

Note

❒ Select the protocol of the printer you want to change its configuration.

3 **Click [Group], point to [Energy Save Mode], and select any energy saver mode from the menu that appears.**

For more information about settings, see SmartNetMonitor for Admin Help.

Note

❒ Point to **[Set by Group]** if you want to change all devices in the group.

❒ Point to **[Set Individually]** if you want to change only selected devices.

❒ In both cases, select the energy saver mode on the displayed menu.

❒ When you point to **[Set Individually]**, **[Timer Settings]** is not displayed.

Configuring the Network Interface Board with a Web Browser

You can check the status of a machine and change its settings using the Web browser.

❖ Configuring the machine

This requires the TCP/IP protocol to be installed. After the machine has been configured to use the TCP/IP protocol, it will be possible to adjust the settings using a Web Browser.

Reference

For more information about configuring the machine to use the TCP/IP protocol, see the Setup Guide.

❖ Operating system browser requirements

Operating system	Browser
Windows 95/98/Me	Microsoft Internet Explorer 5.5 or later Netscape Navigator 6.2 or later
Windows 2000/XP/Server 2003	
Windows NT 4.0	
Mac OS 8.1 ~ 9.2.2	Netscape Navigator 6.2 or later
Mac OS X 10.1 or later	Netscape Navigator 6.2 or later

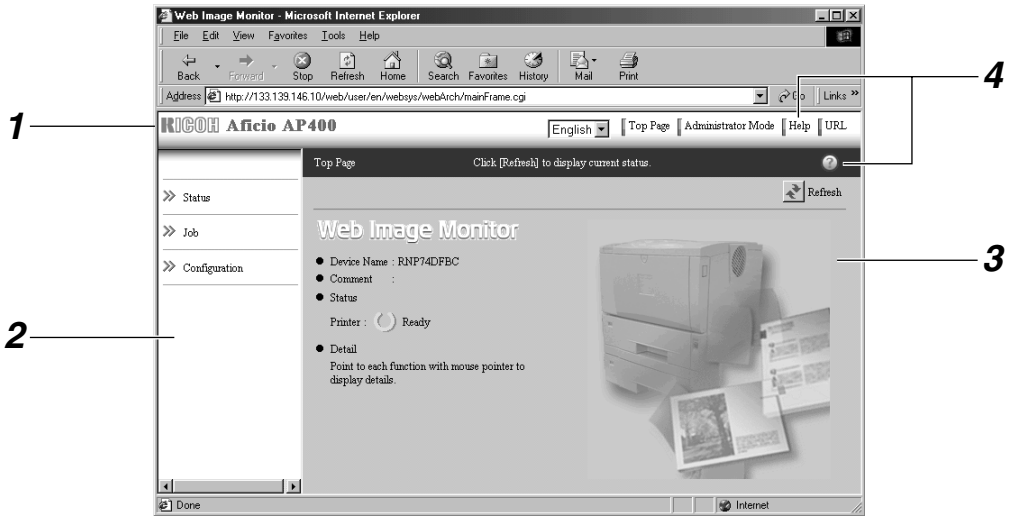
Limitation

- ❒ If the Web browser in use is older than the recommended version or **[JavaScript]** and **[Cookie]** are not effective, display and operation problems may occur.
- ❒ If you use a proxy server, change the Web browser settings. Consult your network administrator about the settings.
- ❒ Sometimes after clicking **[Back]** , the previous page may not appear. In this case, click **[Refresh]** or **[Reload]** .
- ❒ This machine information cannot reload automatically. Click **[Reload]** or **[Refresh]** on the Web browser when you want to reload this machine information.

❖ Specifying the Address

Point the browser to the URL or IP address of the printer (e.g., http://XXX.XXX.XXX.XXX/, where the Xs are the numbers in the IP address). If the host name of the machine is registered on the DNS server or WINS server, you can enter it.

Going to the Top Page



1. Header Area

You can register favorite URLs with **[URL]**. To view the Help section, click **[HELP]**.

2. Menu Area

These Buttons are to configure the network interface board and for checking machine status.

3. Status

Displays the name and comments of the network interface board, and machine status.

4. Help

Types of Menu Configuration and Mode

The items that appear on the menu area differ between user mode and administrator mode.

The work area which appears under the selected menu displays the status of the machine under the user mode and the machine setting under the administrator mode.

Menu				User Mode	Administrator Mode
Status	Input Tray			❍	❍
	Output Tray			❍	❍
	Toner			❍	❍
	Function			❍	❍
	System			❍	❍
	Printer Language			❍	❍
Job	Printer	Job History		❍	●
		Error Log		❍	●
		Locked & Sample Print		●	●
Configuration	Paper			—	●
	System			—	●
	Printer			❍	●
	Notification			—	●
	E-mail			❍	●
	Network	Interface		❍	●
		Protocol	Protocol	❍	●
			TCP/IP	❍	●
			NetWare	❍	●
			AppleTalk	❍	●
			SMB	❍	●
			SNMP	—	●
		System Log		❍	❍
	Webpage			❍	●
	Security	Password		—	●
		Access Control		—	●
		IPP Authentication		—	●

Limitation

❒ Documents stored under the copier and printer functions cannot be downloaded.

Note

❒ ❍ in the list indicates that machine status can be displayed.

❒ ● in the list indicates that machine settings can be changed.

Reference

For more information about displaying status and changing settings, see p.91 "Using Help on the Web Browser".

Verifying the Network Interface Board Settings

1 Start the Web browser.

2 Point your browser at the machine's URL or IP address (for example, http://XXX.XXX.XXX.XXX, where the Xs are the number of the IP address).

The status of the machine you chose appears on the Web browser.

3 Click the selected menu in the menu area.

If a sub-menu appears, click it.

Reference

For more information about each item, see p.91 "Using Help on the Web Browser".

Configuring the Network Interface Board Settings

1 Start the Web browser.

2 Point your browser at the machine's URL or IP address (for example, http://XXX.XXX.XXX.XXX, where the Xs are the number of the IP address).

The status of the machine you chose appears on the Web browser.

3 Click [Administrator Mode].

The dialog box for entering the password and user name is displayed.

4 Enter your user name and password, and then click [OK].

To use the factory default account, enter no user name and enter "password" for the password.

5 Click the selected item in the menu area and make the necessary settings.

6 Click [Apply].

The configuration is transmitted.

Reference

For more information about making settings, see p.91 "Using Help on the Web Browser".

Using Help on the Web Browser

When using Help for the first time, clicking either **[Help]** in the header area or the icon marked "?" in the work area makes the following screen appear. From there you can check Help in two different ways, as shown below:

❖ **Checking a Help Using the Internet**
You can check the latest Help updates.

❖ **Downloading and Checking Help**
You can download Help from the Internet.

Note

❒ By clicking **[Help]** in the header area, Help contents normally appears.

❒ By clicking "?", the Help icon in the work area, Help for the items shown in the work area normally appears.

Downloading Help

1 Select the operating system in the [OS:] list.

2 Select the language in the [Language] list.

3 Click [Download].

4 Download Help by following the messages on screen.

5 Save the downloaded compressed file and decompress it.

Note

❒ To check the downloaded Help, specify the path where the document is decompressed.

Linking the address (URL) to the [Help] button

You can link the address (URL) of the [Help] button to the Help files on the computer or Web server.

① Download the Help files on the machine to the desired location.

② Using a Web browser, navigate to Top Page and click **[Administrator Mode]**.

③ Click **[Configration]**, and then click **[Webpage]**.

④ Enter your password, (it is not necessary to enter a user name) and click **[OK]**.

⑤ Enter the path to the Help files in the **[Help URL]** box.
If you copied the Help files to "C:\HELP\EN", enter "file ://C:/HELP/". For example, if you copied the files to a Web server and the index URL is "http:// a.b.c.d/HELP/EN/index.html", enter "http://a.b.c.d/HELP/".

⑥ Click **[Apply]**.

Monitoring and Configuring the Printer

Changing Names and Comments

You can change printer names and make a comment on printers to easily identify the printers listed on SmartNetMonitor for Client.

The following utilities are used to change printer names and comments.

❖ **SmartNetMonitor for Admin**

Allows you to change names and comments when the TCP/IP protocol or IPX/SPX protocol is available. You can install SmartNetMonitor for Admin from the CD-ROM that comes with the printer. For more information about installing SmartNetMonitor for Admin, see the Setup Guide.

❖ **Web Browser**

Allows you to change names and comments when the TCP/IP protocol is available.

Note

❒ Each of the names, in a TCP/IP protocol form (printer name) and in a NetBEUI protocol form, is changed individually. Comments are, however, common to both of them.

❒ The factory default name consists of "RNP" and the last 3 bytes of the MAC address on the Network Interface Board. For example, when the MAC address is 00:00:74:62:7D:D5, the factory default name is "RNP627DD5". Comments are not configured.

SmartNetMonitor for Admin

1 Run SmartNetMonitor for Admin.

2 Click the [Group] menu, point to [Search Device], and select [TCP/IP] or [IPX/SPX]. A list of printers appears.

Note

❒ Select the protocol of the printer you want to change its configuration.

3 On the list, Select a printer whose Network Interface Board you want to change its configuration.

4 From the [Tools] menu, select [NIB Setup Tool].

The NIB Setup Tool starts up.

5 **Select [Property Sheet], and then click [OK].**

TCP/IP

❶ **Click the [General] tab, and then type the device name into the [Device Name] box and comment into the [Comment] box.**

- In the **[Device Name]** box, type the name of the printer in under 13 characters. The factory default name consists of "RNP" and the last 3 bytes of the MAC address on the Network Interface Board. For example, when the MAC address is 00:00:74:62:7D:D5, the factory default name is "RNP627DD5". No name of 9 characters is permitted if the prefix is "RNP". Also, when DHCP is selected as an IP address setting, the number of characters is limited to 13 characters.
- In the **[Comment]** box, type any comment on printers in under 31 characters.

NetBEUI

❶ **Click the [General] tab, and then type the comment into the [Comment] box.**

In the **[Comment]** box, type any comment on printers in under 31 characters.

❷ **Click the [NetBEUI] tab.**

❸ **Type the computer name into the [Computer Name] box.**

- In the **[Computer Name]** box, type the name that helps you to identify printers using the NetBEUI protocol. The factory default name consists of "RNP" and the last 3 bytes of the MAC address on the Network Interface Board. For example, when the MAC address is 00:00:74:62:7D:D5, the factory default name is "RNP627DD5". A maximum of 13 characters consisting of uppercase English letters, numeric, or symbols (except "*+,/:;<=>?[\]|. and space) can be used. No name is permitted if the prefix is "RNP". You must avoid the duplication of the same name on a network.
- In the **[Comment]** box, type any comment on printers in under 31 characters.

6 **Click [OK].**

The NIB Setup Tool exits, and the setting is transmitted to the printer.

7 **Exit SmartNetMonitor for Admin.**

Web Browser

1 Run the Web browser.

2 Type the address "http:// (IP address of the printer you want to change the settings)".

The status of the selected printer is displayed on the Web browser.

3 Click [Configuration].

A dialog box that prompts you to type the user name and a password appears.

4 Type the user name and the password, and then click [OK].

Type only the password in this dialog box. The factory default password is "password".

5 Change names and comments.

TCP/IP

❶ Click [General], and then type the name into the [Device Name:] box and comment into the [Comment] box.

- In the **[Device Name:]** box, enter the name of the printer in under 13 characters. The factory default name consists of "RNP" and the last 3 bytes of the MAC address on the Network Interface Board. For example, when the MAC address is 00:00:74:62:7D:D5, the factory default name is "RNP627DD5". No name of 9 characters is permitted if the prefix is "RNP". Also, when DHCP is selected as an IP address setting, the number of characters is limited to in under 13 characters.
- In the **[Comment]** box, type any comment on printers in under 31 characters.

❷ Click the [IEEE 1394], and then type the name into the [Device Name:] box when you change the device name for IEEE 1394 (IP over 1394) interface.

- In the **[Device Name:]** box, enter the name of the printer in under13 characters. The factory default name consists of "RNP" and the last 5 bytes of the EUI-64 on the IEEE 1394 (IP over 1394) Interface. For example, when the EUI-64 is 00:00:74:00:02:01:0A:66, the factory default name is "RNP0002010A66". No name of 13 characters is permitted if the prefix is "RNP".

NetBEUI

❶ **Click [NetBEUI].**

❷ **Type the name into the [Computer Name] box and comment into the [Comment] box.**

- In the **[Computer Name]** box, type the name that helps you to identify printers using the NetBEUI protocol. The factory default name consists of "RNP" and the last 3 bytes of the MAC address on the Network Interface Board. For example, when the MAC address is 00:00:74:62:7D:D5, the factory default name is "RNP627DD5". A maximum of 13 characters consisting of uppercase English letters, numeric, or symbols (except "*+,/:;<=>?[\]|. and space) can be used. No name is permitted if the prefix is "RNP". You must avoid the duplication of the same name on a network.
- In the **[Comment]** box, type any comment on printers in under 31 characters.

6 **Click [Apply].**

The setting is transmitted to the printer.

7 **Exit the Web browser.**

Displaying the Status of Printer

You can view the status of printers using SmartNetMonitor for Admin, SmartNetMonitor for Client, or Web browser.

SmartNetMonitor for Admin

1 **Run SmartNetMonitor for Admin.**

2 **Click the [Group] menu, point to [Search Device], and then select [TCP/IP] or [IPX/SPX].**

The status of printers is indicated with an icon in the list.

Note

❒ For more information about the status icons, see SmartNetMonitor for Admin Help.

3 **Getting further information, click the desired printer to select from the list, and then click [Open] on the [Device] menu.**

The status of the printer is displayed on the dialog box.

Note

❒ For more information about each item on the dialog box, see Help.

SmartNetMonitor for Client

Viewing the status of printers using SmartNetMonitor for Client, you must, in advance, configure SmartNetMonitor for Client so it monitors the printer whose status you want to view.

Monitoring Printers

1 Run SmartNetMonitor for Client.

The SmartNetMonitor for Client icon appears at the right end of the taskbar.

2 Right-click the SmartNetMonitor for Client icon, and check if the desired printer is configured on the pop-up menu that appears.

If it is configured, see SmartNetMonitor for Client Help.

3 If the desired printer is not configured, click [Options] on the pop-up menu.

The **[SmartNetMonitor for Client - Options]** dialog box appears.

4 Click the printer to be monitored, and select the [To Be Monitored] check box from the [Monitoring Information Settings] group.

Note

❒ Selecting the **[Displayed on Task Bar]** check box will bring up the status of a printer with an icon on the SmartNetMonitor for Client icon on the task tray.

5 Click [OK].

The dialog box closes and the configured printer is monitored.

Displaying the Status of Printers

1 Run SmartNetMonitor for Client.

2 The status of printers is displayed on the SmartNetMonitor for Client icon on the task tray.

Note

❒ For more information about the status icons, see SmartNetMonitor for Client Help.

3 Getting further information on the status, right-click the SmartNetMonitor for Client icon, and then click the desired printer.

The status of the printer is displayed on the dialog box.

Note

❒ For more information about each item on the dialog box, see Help.

Web Browser

1. **Run the Web browser.**

2. **Type the address "http:// (IP address of the printer whose status you want to view)".**

   The status of the selected printer is displayed on the Web browser.

3. **Click [Status] and you can check the status of the printer.**

Note

❒ For more information about each item, see Help.

Using the IEEE 802.11b (Wireless LAN)

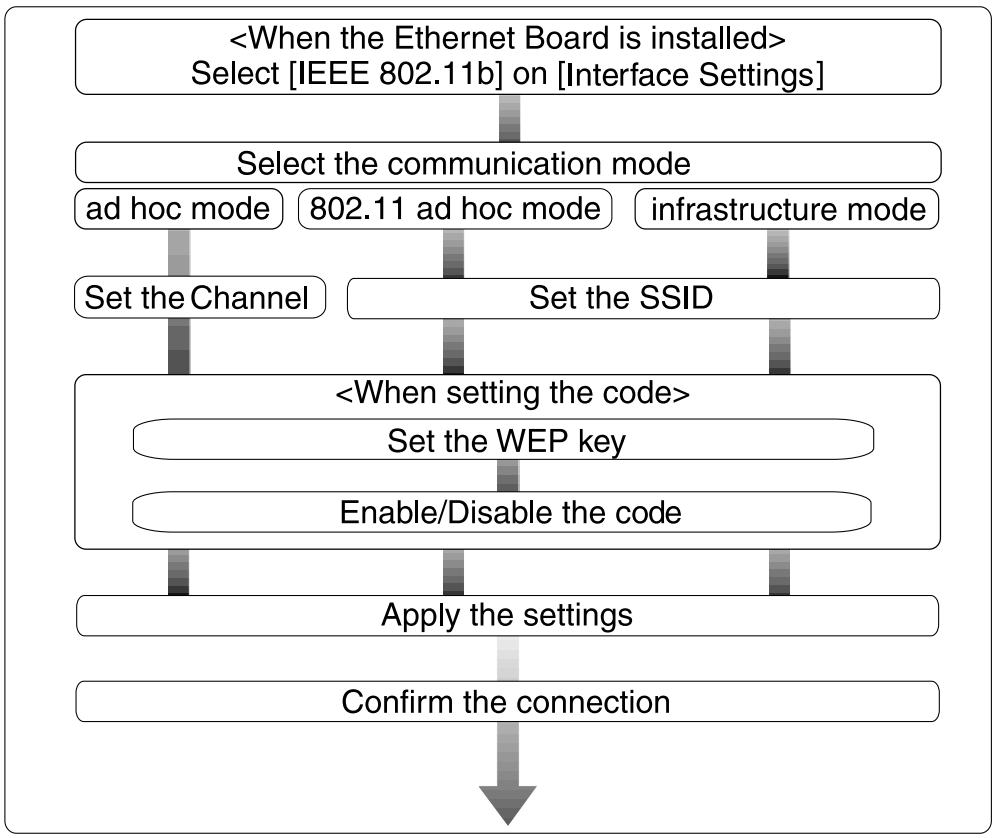
Preparation

Make sure to configure the IP address and Subnet mask of this machine. To make settings from the control panel of this machine, see the Setup Guide.

Use the WiFi authorized card for an access point and the IEEE 802.11b card in the computer.

Setting IEEE 802.11b (Wireless LAN)

■ IEEE 802.11b (wireless LAN) setup procedure



Note

❒ When using Windows XP/Server 2003 standard Driver or Utilities to communicate with Windows XP/Server 2003 wireless LAN clients, select "802.11 Ad hoc mode".

Using in Infrastructure Mode

Infrastructure mode is for transmitting data to the network via an access point.

The infrastructure mode settings can be made on the machine control panel; however, they can also be made from telnet or a web browser.

Reference

For more information about how to make settings from the control panel of the printer, see the *General Settings Guide*.

For more information about how to use telnet and a Web browser, see p.87 "Configuring the Network Interface Board with a Web Browser" or p.102 "Remote Maintenance by telnet".

Important

- ❒ If you cannot connect after making SSID and WEP key settings, press **[System Settings]** then **[Interface Settings]** then **[IEEE 802.11b]**, and then **[Return to Defaults]** to return to the default settings.
- ❒ With some products, depending on the access point or IEEE 802.11b card in use, it is possible to set more than one WEP key. In this case, make the first key the same as the WEP key set in the printer.

Using in Ad hoc Mode

Ad hoc mode is for transmitting data between wireless LAN clients without using an access point. Depending on the client's operating environment, make sure to select "802.11 Ad hoc mode" which need a SSID or "Ad hoc mode" which does not need a SSID. The ad hoc mode settings can be made on the machine control panel; however, they can also be made from telnet or a web browser.

Reference

For more information about how to make settings from the control panel of the machine, see the Setup Guide.

For more information about how to use telnet and a Web browser, see p.87 "Configuring the Network Interface Board with a Web Browser" or p.102 "Remote Maintenance by telnet".

For more information about how to make setting for the IEEE 802.11b card installed in the computer and the computer in use, see the appropriate operating instructions or consult your network administrator.

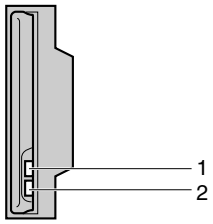
Note

- ❒ Depending on the client software of the IEEE 802.11b card installed in the computer, the channels might not be able to be set. In this case, set the printer channel to the channel specified by the computer.
- ❒ When there are multiple ad hoc mode clients using different communication modes, communications may not work correctly.

Confirming the Connection

1 **Make sure the LED of the IEEE 802.11b card is lit.**

❖ **When using in Infrastracture Mode**

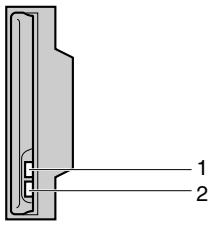


ZGDH600J

1. **If the IEEE 802.11b card is working, it is lit in orange. If the IEEE 802.11b (wireless LAN) is not selected, it does not light, even if the printer power is on.**

2. **If it is connected properly to a network, the LED is green in infrastructure mode. When the LED is blinking, the machine is searching for devices.**

❖ **When using in Ad hoc Mode/802.11 Ad hoc Mode**



ZGDH600J

1. **If the IEEE 802.11b card is working, it is lit in orange.**

2. **If it is connected properly to a network, the LED is green in ad hoc mode or 802.11 ad hoc mode. When the LED is blinking, the machine is searching for devices. The LED will light after a few seconds.**

2 **Use a Web Browser to check the printer is connected properly. See p.87 "Configuring the Network Interface Board with a Web Browser".**

3 **Print the configuration page to verify settings.**

For more information about how to print the configuration page, see the Printer Reference.

Infrastracture Mode

You can check the machine's radio wave status using the machine's control panel.

1 **Press the [Menu] key.**

"Menu" appears on the panel display.

2 **Press [▼] or [▲] to display the "Maintenance" menu.**

3 **Press [Enter #].**

The following message appears on the panel display.

4 **4 Press [▼] or [▲] to display "WL.LAN Signal".**

5 **Press [Enter #].**

One of the following messages appears on the panel display.

The machine's radio wave status is displayed.

6 **Press [Escape].**

"Ready" appears on the panel display.

When Moving the Machine

When moving the machine with the antennas attached, keep the following points in mind.

Detach the antennas when relocating the machine.

After moving the machine, reattach the antennas, ensuring that:

- the antennas are positioned away from obstacles.
- there is 40 to 60 mm between the antennas, so they do not touch.

Remote Maintenance by telnet

You can view the printer status and configure the Network Interface Board using telnet.

Note

❒ You should specify a password so that only the network administrator, or a person having network administrator privileges, can use remote maintenance.

Using telnet

The following is a sample procedure using telnet.

Limitation

❒ Only one person at a time can be logged on to do remote maintenance.

1 **Using the IP address or host name of the machine, start telnet.**

```
% telnet IP_address
```

Note

❒ In order to use the host name instead of the IP address, you must write it to the hosts file.

2 **Type the password.**

Note

❒ The default is “password”.

3 **Type a command.**

Reference

For more information about telnet commands, see p.103 “Commands List”.

4 **Exit telnet.**

```
msh> logout
```

When the configuration is changed, a message requests whether or not the changes should be saved.

5 Type "yes" to save the changes, and then press the 【ENTER】 key.

If you do not want to save the changes, type "no", and then press the 【ENTER】 key. If you want to make additional changes, type "return" at the command line, and then press the 【ENTER】 key.

Note

❒ If the "Cannot write NVRAM information" message appears, the changes are not saved. Repeat the steps above.

❒ The Network Interface Board is reset automatically when the settings are changed.

❒ When the Network Interface Board is reset, the active print job which has already been sent to the machine will finish printing. However, jobs that have not been sent yet will be canceled.

Commands List

Use this command to display remote maintenance use.

Note

❒ Type "help" to see a list of commands that can be used.

```
msh> help
```

❒ Type "help command_name" to display information about the syntax of that command.

```
msh> help command_name
```

TCP/IP address

Use the ifconfig command to configure TCP/IP (IP address, subnet mask, broadcast address, default gateway address) for the machine.

❖ **Reference**

```
msh> ifconfig
```

❖ **Configuration**

```
msh> ifconfig interface_name parameter address
```

Interface name	Interface to be configured
ether nc0	Ethernet Interface *1
ip1394 *2 fwip0 *2	IEEE 1394 Interface
wlan *3 wi0 *3	IEEE 802.11b Interface

*1 If you did not enter the interface name, it will be automatically set to the Ethernet interface.
*2 Available when the 1394 Interface Unit Type 4510 is installed.
*3 You can specify an interface when installing the optional 802.11b Interface Unit Type A.

Parameter	Meaning
(no parameter)	IP address
netmask	subnet mask
broadcast	broadcast address

❖ **Changing the Interface**

You can specify either the LAN interface or IEEE 802.11b interface when using the optional 802.11b Interface Unit.

```
msh> ifconfig interface up
```

Note

❒ You cannot specify the optional IEEE 1394 Interface Unit Type 4510.

The following is an example for configuring an IP address of 192.168.15.16 on Ethernet interface.

```
msh> ifconfig ether 192.168.15.16
```

The following is an example for configuring a subnet mask of 255.255.255.0 on Ethernet interface.

```
msh> ifconfig ether netmask 255.255.255.0
```

Note

❒ This affects the configuration of the Network Interface Board of the IP address that is used.

❒ The TCP/IP setting is the same as that for the LAN interface and IEEE 802.11b interface.

❒ To type an address using hexadecimal, prefix it by "0x".

Address

❖ **Subnet Mask**

A number used to mathematically "mask" or hide the IP address on the network by eliminating those parts of the address that are alike for all the machines on the network.

Note

❒ To get the above addresses, contact your network administrator.

❒ The subnet mask is the same as that for the LAN interface and IEEE 802.11b interface.

❒ When installing the optional 1394 Interface Unit Type 4510, set the subnet so that it does not overlap with the LAN interface or the 1394 interface.

Access Control

Use the access command to view and configure access control. You can also specify two or more access ranges.

❖ Reference

```
msh> access
```

❖ Configuration

```
msh> access ☆ range start-address end-address
```

- ☆ represents a target number between 1 and 5. (Up to five access ranges can be registered and selected.)

Example: To specify accessible IP addresses between 192.168.0.10 and 192.168.0.20:

```
msh> access 1 range 192.168.0.10 192.168.0.20
```

Note

❒ The access range restricts the workstations from which printing is possible by means of an address. If you do not need to restrict printing, make the setting “0.0.0.0”.

❒ The entry is invalid if the start address is greater than the end address.

❒ Up to five access ranges can be specified. The entry is invalid if the target number is omitted.

❒ When using a Web browser, telnet or SmartNetMonitor for Client/Admin, you can use an IP address that has not been restricted by access control.

❖ Access Control Initialization

```
msh> access flush
```

Note

❒ This restores the factory-default settings so that all access ranges become "0.0.0.0".

Protocol

Use the set command to allow/prevent remote access for each protocol.

msh> set *protocol* {up | down}

Protocol	
appletalk tcpip netware netbeui smb scsiprint [*1] ip1394 [*1] lpr ftp rsh diprint web snmp ipp	"up" means active and "down" means inactive.

[*1] Available when the 1394 Interface Unit Type 4510 is installed.

Note

❒ If you prohibit remote access using TCP/IP and then log out, you cannot use remote access. If this was a mistake, you can use the control panel to allow access by TCP/IP.

❒ When you prevent access via TCP/IP, you are also prevented from using ip1394, lpr, ftp, rsh, diprint, web, snmp and ipp.

DHCP

Use the "dhcp" command to configure the DHCP settings.

❖ Reference

The following command displays the current DHCP settings.

msh> dhcp

❖ Configuration

You can configure the DHCP settings.

msh> dhcp *interface_name* {on|off}

Note

❒ Select **[on]** to enable DHCP. Select **[off]** to disable DHCP.

❖ Interface Priority Configuration

You can assign priorities governing which interface obtains DHCP parameters.

```
msh> dhcp priority interface_name
```

Note

❒ Priority assignment is useful when connecting more than one interface to the machine.

❒ If an interface is not selected, it appears according to the currently set priority regardless of multiple interface connections.

Interface name	Interface to be configured
ether	Ethernet interface
wlan *1	IEEE 802.11b interface
ip1394 *2	IEEE 1394 interface

*1 Available when the optional 802.11b interface Unit is installed.
*2 Available when the optional 1394 interface Unit is installed.

Reference

For more information about DHCP, see p.139 “Using DHCP”.

Printer status

The following commands can be used to get information about the current status of the printer.

```
msh> command
```

Command	Information that is displayed
status	Status of printer. Information about the print jobs.
info	Information about the paper tray, output tray, printer language of printer.
prnlog [ID]	Lists the last 16 print jobs.

Note

❒ More information about any print job is displayed when the ID number is added after the prnlog command.

Reference

For more information about the meaning of the data returned with these commands, see p.126 “Configuring the Network Interface Board”.

Network Interface Board configuration settings information

Use the show command to display the Network Interface Board configuration settings.

```
msh> show [-p]
```

Note

❒ Add "-p" to the show command to have the information displayed one screen at a time.

Reference

For more information about the meaning of the data returned with this command, see p.126 "Configuring the Network Interface Board".

System log information

Use the syslog command to display information stored in the machine's system log.

```
msh> syslog
```

Reference

For more information about the displayed information, see p.130 "System Log Information".

SNMP

Use the snmp command to display and edit SNMP configuration settings such as the community name.

Note

❒ The 1394 interface board supports TCP/IP only.

❒ You can configure from ten SNMP access settings numbered 1-10.

❒ Default access settings 1 and 2 are as follows.

Number	1	2
Community name	public	admin
IP address	0.0.0.0	0.0.0.0
Access type	read-only trap off	read-write trap off

❖ Display

Shows the SNMP information and available protocols.

```
msh> snmp ?
msh> snmp [-p] [registered_number]
```

Note

❒ If the -p option is added, you can view the settings one by one.

❒ Omitting the number displays all access settings.

❖ Community name configuration

You can set the community name of the registered number.

```
msh> snmp number name community_name
```

Note

❒ The community name must consist of 15 characters or less.

❖ Access type configuration

You can select the access type from those listed below.

```
msh> snmp number type access_type
```

Access type	Type of access which is permitted
read	Read only
write	Read and write
trap	User is notified of trap messages.
no	All access is denied.

❖ Protocol configuration

You should use the following command to set the protocols to active or inactive. If you set a protocol to inactive, all access settings set to use that protocol will be disabled:

```
msh> snmp {ip | ipx} {on | off}
```

- "on" means active and "off" means inactive.

To change the protocol of an access setting use the following command. However, if you disabled a protocol with the above command, making it active here will have no effect.

```
msh> snmp number active {ip | ipx} {on | off}
```

❖ Access configuration

You can configure the address of a host depending on protocols used.
The network interface board accepts requests only from hosts with addresses "read-only" or "read-write" access type. Enter "0" to have the network interface board accept requests from any host without requiring a specific type of access.

msh> snmp *number* {ip | ipx} *address*

Note

❒ To specify TCP/IP protocol, enter ip followed by a space, and then the IP address.

❒ To specify the IPX/SPX protocol, enter ipx followed by a space, and then the IPX address followed by a decimal, and then the MAC address of the network interface board.

The following is an example of how to configure registration number 3 with the IP address 192.168.15.16:

msh> snmp 3 ip 192.168.15.16

The following is an example of how to configure registration number 3 with the IPX address 7390A448, and the MAC address 00:00:74:62:5C:65:

msh> snmp 3 ipx 7390A448:000074625C65

IPP

Use the ipp command to configure the IPP settings.

❖ Viewing setting

The following command displays the current IPP settings.

msh> ipp

Example output:

```
timeout=900(sec)
auth basic
```

- The "timeout" setting specifies how many seconds the computer keeps trying to access the network printer to send print jobs when no connection can be made.
- The "auth" setting indicates the user authorization mode.

❖ IPP timeout configuration

Specify how many seconds to wait before canceling a print job if it has been interrupted for some reason. The range of time can be changed between 30 to 65535 seconds.

msh> ipp timeout {30 - 65535}

❖ **IPP user authorization configuration**

Use the IPP user authorization to restrict users that can print with IPP. The default is "off" .

```
ipp auth {basic|digest|off}
```

- "basic" and "digest" are user authorization setting.
- "off" removes the user's authorization.

Note

❒ If you select "basic" or "digest", see next section "Entry the IPP User Authorization" for how to configure the user name. Up to ten user names are available.

❖ **Configuring the IPP user authorization**

Use the following command:

```
ipp user
```

The following message appears.

```
Input user number (1 to 10):
```

Type the number, user name and password.

```
IPP user name:user1
IPP password:*******
```

After configuring the settings, the following message appears.

```
User configuration changed.
```

SPRINT

To make setting for IEEE 1394 (SCSI print), use the "sprint" command.

❖ **View settings**

The IEEE 1394 (SCSI print) settings are displayed.

```
msh> sprint
```

❖ **Bidirectional configuration for the IEEE 1394 (SCSI print)**

Use this setting to set the IEEE 1394 (SCSI print) to bidirectional.
The factory default is "on".

```
msh> sprint bidi [on/off]
```

Direct Printing Port

The direct printing port allows printing directly from a computer, connected to the network, to the printer.

Use the diprint command to change the direct printing port settings.

❖ View settings

The following command displays the current direct printing port settings.

```
msh> diprint
```

Example output:

```
port 9100
timeout=300(sec)
bidirect off
```

- The "Port" specifies the port number of the direct printing port.
- The "bidirect" setting indicates whether the direct printing port is bidirectional.

❖ Setting timeout

You can specify the timeout interval to use when receiving data from the network.

```
msh> diprint [0~65535]
```

Note

❒ The factory default is 300 seconds.

❒ If 0 is set, timeout is disabled.

❖ Bidirectional configuration for the direct printing port

Use this setting to configure whether the direct printing port is bidirectional. The factory default is "off".

```
msh> diprint bidirect {on|off}
```

Note

❒ If you select "on", SmartNetMonitor for Client or Standard TCP/IP on Windows 2000 might not work correctly.

SMB

Use the "smb" command to configure or delete the computer name, workgroup name, or comment.

msh> smb *parameter*

Parameter	Settings
comp	Your computer name consisting of up to 15 characters
group	Workgroup name consisting of up to 15 characters
comment	Comment consisting of up to 31 characters
clear comp	Clears the computer name
clear group	Clears the Workgroup name
clear comment	Clears comment

❖ Protocol Configuration

Use the following command to (in) activate the protocols.

msh> smb protocol *protocol_name* {up|down}

Protocol name	
netbeui	"up" means active and "down" means inactive
tcpip	

web

Use the "web" command to display and configure the parameters on the Web browser.

❖ View Settings

msh> web

❖ URL Configuration

The link address reached by pressing **[URL]** on the Web browser can be set.

web url *The URL or IP address you want to register.*

Example:
(Xs represent the IP address.)

msh> web url http://XXX.XXX.XXX.XXX/

❖ Link Name Configuration

You can enter the name for **[URL]** that appears on the Web browser.

msh> web name *Name you want to display*

Example:
(Xs represent the name you want to display.)

msh> web name XXX

❖ Help URL Configuration

The link address reached by pressing **[Help]** or "?" on the Web browser can be set.

```
msh>web help Help URL or IP address
```

Example:
(Xs represent the IP address.)

```
msh> web url http://XXX.XXX.XXX.XXX/help/
```

ROUTE

Use the route command to control the routing table.

This command allows you to configure and display routing information. You can change the network configuration from remote PCs using this command.

Note

❒ The maximum number of routing tables are 16.

Commands	Topics of setting
route add {host | net} destination *1 gateway *1	Adds a host/network route to "destination", and a gateway address to "gateway" in the table. Host becomes the default setting.
route delete {host | net} destination *1	Deletes a host/network route from the table. Host becomes the default setting.
route get {destination *1 }	Displays only route information corresponding to a specified destination. When the destination is unspecified, all routing information is displayed.
route active {host | net} destination *1 on/off	You can turn the specified destination on or off. Host becomes the default setting.
route add default gateway *1	You can set the default gateway address.
route flush	Deletes all routing information.

*1 IP address

SLP

Use this command to configure SLP settings.

You can search the NetWare server using SLP in the PureIP environment of NetWare5/5.1. To use the slp command, you can configure the value of TTL which can be used by the SLP multi-cast-packet.

Note

❒ The default value of TTL is "1". A search is executed only within a local segment. If the router does not support multi-cast, the settings are not available even if the TTL value is increased.

❒ The acceptable TTL value is 1 - 255.

```
msh> slp ttl {1 - 255}
```

Setting IEEE 802.11b

To make setting for IEEE 802.11b, use the wiconfig command.

Limitation

❒ You can make settings when installing the optional 802.11b Interface Unit.

❖ View settings

The IEEE 802.11b settings are displayed.

```
msh> wiconfig
```

The IEEE 802.11b card information is displayed.

```
msh> wiconfig cardinfo
```

Note

❒ If the IEEE 802.11b interface is not working correctly, the IEEE 802.11b card information is not displayed.

❖ Configuration

Parameter	Value to be configured
mode [ap | adhoc | 802.11adhoc]	You can set infrastructure mode (ap), 802.11 ad hoc mode (802.11adhoc) or ad hoc mode (adhoc). The default is ad hoc mode.
ssid *ID value*	You can set for SSID in infrastructure mode. The characters that can be used are ASCII 0x20-0x7e (32 bytes). A SSID value is set automatically to the nearest access point if the setting has not been made. If the setting has not been made for ad hoc mode, the same value as for infrastructure mode or an "ASSID" value is set automatically if the setting has not been made.
channel frequency *channel no.*	You can set the channel. You can specify from following channel. • Metric Version :1-13 • Inch Version :1-11 Set the same channel for all the machines you are using.
enc [on | off]	You can enable or disable the WEP function. To enable the WEP function, specify [on]; to disable it, specify [off]. To start the WEP function, enter the correct WEP key.

Parameter	Value to be configured
key [*key value*]	With 64-bit WEP, you can use 10 digit hexadecimal. With 128-bit WEP, you can use 26 digit hexadecimal. To use this function, set the same WEP key for all ports that transmit to each other.
auth [open | shared]	You can set the authorized mode when using WEP. The specified value and the authorized mode are as follows: open: Open system authorized (default) shared: Shared key authorized
rate [auto | 11m | 5.5m | 2m | 1m]	You can set the IEEE 802.11b transmitting speed. The transmitting speed you specify here is the speed at which data is sent. You can receive data at any speed. auto: automatically set (default) 11m: 11 Mbps fixed 5.5m: 5.5 Mbps fixed 2m: 2 Mbps fixed 1m: 1 Mbps fixed

7

Job Spool

Use this command to configure Job Spool settings.

Limitation

❒ You can only specify the LPR and IPP protocol.

❖ Reference

The job spool setting appears.

```
msh> spoolsw
```

❖ Job Spool Setting

```
msh> spoolsw spool {on | off}
```

Note

❒ Specify "on" to enable the job spool function or "off" to disable it.

❖ Protocol Configuration

To change the protocol settings, use the following command. You can specify the setting for **[lpr]** or **[ipp]**.

- lpr

```
msh> spoolsw lpr {on | off}
```

- ipp

```
msh> spoolsw ipp {on | off}
```

- smb

  msh> spoolsw smb {on |off}

Changing the Host Name

Use the hostname command to change the printer name.

msh> hostname [*interface_name*] *printer_name*

interface name	Interface to be configured
ether	Ethernet interface *1
wlan *2	IEEE 802.11b interface
ip1394 *3	IEEE 1394 interface

*1 If you did not enter the interface name, it will be automatically set to the Ethernet interface.
*2 If you install the 802.11b Interface Unit Type A, you can set the command.
*3 If you install the 1394 Interface Unit Type 4510, you can set the command.

Note

❒ Enter the printer name using up to 13 characters.

❒ You cannot use a printer name starting with RNP or rnp.

❒ The Ethernet interface and IEEE 802.11b interface will have the same printer name.

WINS

Use the wins command to configure the WINS server settings

For more information about WINS server settings, see p.141 “Configuring a WINS Server”.

❖ Viewing setting

The following command displays the WINS server IP address.

msh> wins

Example out put:

```
wins: primary server 0.0.0.0 secondary server 0.0.0.0
DHCP current config:
 primary server 192.168.10.1 secondary server
192.168.10.2
 hostname RNP620B47 ScopeID
```

Note

❒ If DHCP is used to start from the network, the current WINS server address is displayed. This address, however, is not displayed if DHCP is not used.

❒ If the IP address obtained from DHCP differs from the WINS IP address, the DHCP address is the valid address.

❖ **Configuration**

Use the set command to make WINS active or inactive.

```
msh> set wins {on|off}
```

- "on" means active and "off" means inactive.

❖ **Address configuration**

Use this command to configure a WINS server IP address.

```
msh> wins {primary|secondary} IP_address
```

Note

❒ Use the "primary" to configure a primary WINS server IP address.

❒ Use the "secondary" to configure a secondary WINS server IP address.

AutoNet

Use the "autonet" command to configure AutoNet settings.

❖ **Display**

The following command displays the current AutoNet settings.

```
msh> autonet
```

❖ **Configuration**

You can configure the AutoNet settings.

```
msh> autonet interface_name {on|off}
```

Note

❒ Select **[on]** to enable AutoNet.

❒ Select **[off]** to disable AutoNet.

❖ **Interface Priority Configuration**

You can assign priorities governing which interface obtains AutoNet parameters.

```
msh> autonet priority interface_name
```

Note

❒ Priority assignment is useful when connecting more than one interface to the machine.

❒ If an interface is not selected, the interface appears according to the currently set priority, regardless of multiple interface connections.

Interface name	Interface to be configured
ether	Ethernet interface
wlan *1	IEEE 802.11b interface
ip1394 *2	IEEE 1394 interface

*1 Available when the optional 802.11b interface kit is installed.
*2 Available when the optional 1394 interface board is installed.

Reference

For more information about AutoNet, see p.140 “Using AutoNet”.

SNTP

The printer clock can be synchronized with a NTP server clock using the Simple Network Time Protocol (SNTP). To change the SNTP settings, use the sntp command. Confirm with the network administrator that the NTP server settings are correct.

Limitation

❒ SNTP supports the NTP servers running xnptd V3 and V4.

❖ **Reference**

```
msh> sntp
```

❖ **NTP Server Address Configuration**

You can specify the IP address of the NTP server.

```
msh> sntp server IP_address
```

❖ **Interval Configuration**

You can specify the interval at which the printer synchronizes with the operator-specified NTP server.

```
msh> sntp interval polling_time
```

Note

❒ The factory default setting is 3600 seconds.

❒ You can set the interval from 16 to 16384 seconds.

❒ If you set 0, the printer synchronizes with the NTP server only when you turn the printer on. After that, the printer does not synchronize with the NTP server.

❖ **Time-zone Configuration**

You can specify the time difference between the printer clock and the NTP server clock.

```
msh> sntp timezone +/-hour_time
```

Example: To set the time-zone difference to +8 hours:

```
msh> sntp timezone +08:00
```

Note

❒ The time is in 24-hour notation.

Changing the password

Use the passwd command to change the remote maintenance password.

Important

❒ Be sure not to forget or lose the password.

Note

❒ The default password is “password”.

1 **Type “passwd”.**

```
msh> passwd
```

2 **Type the current password.**

```
Old password:
```

3 **Type the new password.**

```
New password:
```

Note

❒ The password must consist of 3 to 8 alphanumeric characters and symbols. Upper and lower case characters are considered unique. For example, R is different from r.

❒ The password is the same as that used in the configuration of the Network Interface Board using a Web Browser and that used in the NIB Setup Tool. If you change a password from telnet, the other passwords are also changed.

4 **Type the new password once again.**

```
Retype new password:
```

DNS

Use the "dns" command to configure or display DNS (Domain Name System) settings.

❖ **View setting**

The following command displays current DNS settings:

```
msh> dns
```

❖ **Using the DNS server obtained from the DHCP server**

The following command enables/disables use the DNS server obtained from the DHCP server:

```
msh> dns dhcp {valid | invalid}
```

- If you use the DNS server obtained from the DHCP server, select “valid”. If not, select “invalid”.
  If you set “valid”, the DNS server from the DHCP server is prioritized.

❖ DNS server configuration

The following command enables/disables use of the DNS server address:

msh> dns *number* server / *server address*

The following is a sample configuration using an IP address of 192.168.15.16 on DNS 1 server:

msh> dns 1 server 192.168.15.16

- You can register up to three DNS server numbers.
- You cannot use "255.255.255.255" as the DNS server address.

Domain name

Use the "domainname" command to display or configure domain name settings.

You can configure the Ethernet interface, IEEE 1394 interface, or IEEE 802.11b interface.

❖ View setting

The following command displays the current domain name:

msh> domainname

❖ Interface domain configuration

The following command displays or sets the Ethernet interface domain name, IEEE 1394 interface, or IEEE 802.11b interface.

msh> domainname / *interface_name*

The following is a sample configuration using a domain name on the Ethernet interface:

msh> domainname ether

Interface	Interface that can be set
ether	Ethernet interface
ip1394 *1	IEEE 1394 interface
wlan *2	IEEE 802.11b interface

*1 Available when the optional 1394 interface board is installed.
*2 Available when the optional 802.11b interface kit is installed.

Note

❒ A domain name can consist of up to 63 alphanumeric characters.

Setting Protocols

The protocols described in this section provide various functions that can be used on the machine.

Important

❒ If a protocol is disabled or inactive, functions provided by that protocol cannot be used.

Reference

For more information about setting protocols, consult your network administrator.

❖ LPR

- Printer function using Standard TCP/IP
- Printer function using command line

❖ RSH/RCP

- Printer function using command line
- Scanner function using the network TWAIN driver
- Function to obtain device information by command line

❖ DIPRINT

- Printer function using SmartNetMonitor for Client

❖ FTP

- Printer function using command line
- Scanner function using a delivery server
- Function to obtain device information by command line

❖ IPP

- Printer function using SmartNetMonitor for Client

❖ NetWare

- Printer function using NetWare server (remote printer/printer server)

Note

❒ If protocols are disabled or inactive under PureIP environment, only the print server can be used.

❖ **AppleTalk**

- Printer function using Appletalk with Macintosh

Note

❒ This function can be selected when a module supporting PostScript 3 is attached.

❖ **SMB**

- Printer function using SmartNetMonitor for Client
- Printer function using Microsoft Windows Network

❖ **SNMP**

- Bidirectional configuration for the printer driver
- Function to obtain device information by SmartNetMonitor for Admin/Client

SNMP

The Network Interface Board functions as an SNMP (Simple Network Management Protocol) agent using the UDP and IPX protocols. Using the SNMP manager you can get information about the printer.

The default community names are “public” and “admin”. You can get MIB information using these community names.

Reference

You can configure SNMP from the command line using telnet. See p.108 “SNMP”.

You can configure SNMP from SmartNetMonitor for Admin using the NIB Setup Tool. See Help for SmartNetMonitor for Admin.

You can configure SNMP from your Web browser. See Help on the CD-ROM.

Limitation

❒ The kinds of supported MIBs vary depending on the printer.

❖ Supported MIBs

- MIB-II
- PrinterMIB
- HostResourceMIB
- RicohPrivateMIB

Understanding the Displayed Information

This section describes how to read the status information returned by the Network Interface Board.

Print Job Information

The status of the print job can be viewed using the following commands.

- telnet : Use the status command. See p.107 “Printer status” .

Item name	Meaning
Rank	Print job status. • Active Printing or preparing for printing. • Waiting Waiting to be transferred to the printer.
Owner	Print request user name.
Job	Print request number.
Files	The name of the document.
Total Size	The size of the data (spooled). The default is “0 bytes”.

Print Log Information

This is a record of the most recent 16 jobs that have been printed.

This log can be displayed with the following commands.

- telnet : Use the prnlog command. See p.107 “Printer status” .

Name	Meaning
ID	Print request ID.
User	Print request user name.
Page	The number of pages that is printed.
Result	The result of the print request.
Time	The time when the print request was received
UserID *1	User ID that is to be configured in the printer driver.
JobName *1	The name of the document for printing.

*1 Appears the UserID and JobName information when entering the info command with the ID.

Configuring the Network Interface Board

The Network Interface Board settings can be displayed by using the commands below.

- telnet : Use the show command. See p.108 “Network Interface Board configuration settings information” .

Item name	Meaning
Common	
Mode	
Protocol Up/Down	Up means active, Down means inactive.
AppleTalk	
TCP/IP	
NetWare	
NetBEUI	
smb	
IP over 1394 *1	
SCSI print *1	
Ethernet interface	Internal version number.
Syslog priority	
NVRAM version	
Device name	
Comment	
Location	
Contact	
Soft switch	
AppleTalk	
Mode	AppleTalk protocol in selection.
Net	Network number.
Object	Macintosh printer name.
Type	The type of printer.
Zone	Name of the zone that the printer belongs to.

Item name	Meaning
TCP/IP	
Mode	Up means active, Down means inactive.
ftp	
lpr	
rsh	
diprint	
web	
http	
ftpc	
telnet	
snmp	
ipp	Frame type.
autonet	IP address.
EncapType	Subnet mask.
Address	Broadcast address.
Netmask	Default gateway address.
Broadcast	Access Control Range.
Gateway	NTP server address
Access Range[☆] *2	NTP server time difference
Time server	Synchronizes interval
Time Zone	URL of homepage.
Time server polling time	URL name of homepage.
Syslog server	URL of help page.
Home page URL	Protocol used with SNMP.
Home page link name	
Help page URL	
SNMP protocol	
NetWare	
EncapType	Frame type.
RPRINTER number	Remote printer number.
Print server name	Print server name.
File server name	Name of the connect file server.
Context name	Context of print server.
Switch	
Mode	Active mode.
NDS/Bindery	(this value is fixed)
Packet negotiation	
Login Mode	Select File Server Mode or NDS Mode as the Logon Mode.
Print job timeout	Time of the job timeout.

Item name	Meaning
Protocol SAP internal time NDS Tree Name	For the protocol used for communication with the print server, select from TCP/IP+IPX, IPX, and TCP/IP. The SAP sending interval for service notification from the device side. The name of the connected NDS Tree.
SMB Switch Mode Direct Print Notification Workgroup name Computer name Comment Share name[1] Protocol NetBEUI TCP/IP	 (this value is fixed) (this value is fixed) Notification of print job completion. Name of the workgroup. Name of the computer. Comment. Share name (name of the printer type).
IEEE 802.11b *3 SSID Channel range Channel Communication mode Rate WEP encryption Auth Encryption key	SSID being used. Channels available for use. Channel being used. IEEE 802.11b interface transmitting mode. IEEE 802.11b interface speed. Whether WEP is enabled or disabled. Validity or invalidity of the authorized mode setting when using WEP. WEP key.
IP over 1394 *4 Device name Address Netmask Broadcast	 IP address. Subnet mask. Broadcast address.
SCSI print *4 Bidi.	 Bidirectional setting (on/off).
Shell mode	Mode of the remote maintenance tool.
Domain name ether wlan *3 ip1394 *4	 Ethernet interface domain name IEEE 802.11b interface domain name IEEE 1394 interface domain name

Item name	Meaning
WINS	
ether	Ethernet interface WINS name
Primary WINS	Primary WINS server address
Secondary WINS	Secondary WINS server address
ip 1394 *1	IEEE 1394 interface WINS name
Primary WINS	Primary WINS server address
Secondary WINS	Secondary WINS server address
wlan *3	IEEE 802.11b interface WINS name
Primary WINS	Primary WINS server address
Secondary WINS	Secondary WINS server address
Shell mode	Mode of the remote maintenance tool

*1 The 1394 Interface Unit Type 4510 supports TCP/IP only.
*2 ☆ represents a target number between 1 and 5.
*3 You can display the item names when installing the optional 802.11b Interface Unit Type A.
*4 You can display the item names when installing the optional 1394 Interface Unit Type 4510.
*5 ☆ represents a target number between 1 and 3.

Message List

This is a list of messages written to the machine's system log. The system log can be viewed using the syslog command.

System Log Information

You can use the following methods to view the system log.

- telnet : Use the syslog command. See p.108 “System log information” .

Message	Description and Solutions
Access to NetWare server <file servername> denied. Either there is no account for this print server on the NetWare server or the password was incorrect.	(In print server mode) Cannot log in to the file server. Make sure that the print server is registered on the file server. If a password is specified for the print server, delete it.
add_sess: community<community name> already defined.	The same community name already exists. Use another community name.
add_sess: session<community name>already defined.	A requested community name is not defined.
add_sess: bad trap addr:<IpAddress>, community:<community name>	The IP address (0.0.0.0.) is unavailable when the community access type is TRAP. Specify the host IP address for the TRAP destination.
add_sess_ipx: bad trap addr: <IPX address>, community:<community name>	The IPX address (00:00:00:00:00:00) is unavailable when the community access type is TRAP. Specify the host IPX address for the TRAP destination.
add_sess_ipx: community <community name> already defined.	The same community name already exists. Use another community name.
add_sess_ipx: session_ipx<community name> not defined.	A requested community name is not defined.
ANONYMOUS FTP LOGIN FROM <IP address>, <password>	An anonymous login has been made with a password <password> from the host <IP address>.
anpd start. (AppleTalk)	An anpd (AppleTalk Network Package Daemon) has started.
Attach FileServer =<file server name>	Attached to the file server as a nearest server.
Attach to print queue <print queue name>	(In print server mode) Attached to the print queue name.
Cannot create service connection	(In remote printer mode) Cannot establish a connection with the file server. The number of file server users may exceed the maximum number that the file server can handle.

Message	Description and Solutions
Cannot find rprinter (<print server name>/<printer number>)	The printer having the number displayed on the print server does not exist. Make sure that the number of the printer is registered in the print server.
Change IP address from DHCP Server.	The IP address changes when DHCP LEASE is renewed. To always assign the same IP address, set a static IP address to the DHCP server.
child process exec error! (process name)	Failed to start the network service. Turn the printer off and then on. If this does not work, contact your service or sales representatives.
Connected DHCP Server(<DHCP server address>).	The IP address was successfully received from the DHCP server.
connection from <IP address>	Logged on from the host <IP address>.
Could not attach to FileServer<error number>	(In remote printer mode) Cannot attach to the file server. For some reason, the file server refuses the connection. Check the file server configuration.
Could not attach to PServer<print server>	(In remote printer mode) Cannot attach to the print server. For some reason, the print server refuses the connection. Check the print server configuration.
Current Interface Speed:xxxMbps	The speed of the network (10 Mbps or 100 Mbps).
Current IP address <current IP address>	The IP address <current IP address> was received from the DHCP server.
Current IPX address<IPX address>	The current IPX address.
DHCP lease time expired.	DHCP lease time has expired. The printer tries to discover the DHCP server again. The IP address used up to now becomes invalid.
DHCP server not found.	The DHCP server cannot be found. Make sure the DHCP server is running on the network.
dhcpcd start.	A dhcpcd (DHCP client service) has started.
Duplicate IP=<IP address>(from <MAC address>).	The same IP address is used. An IP address must be unique. Check the address of the device indicated in <MAC address>.
Established SPX Connection with PServer, (RPSocket=<socket number>, connID= <connection ID>)	(In remote printer mode) A connection with the print server has been established.
exiting	lpd service has ended and the system is exiting the process.

Message	Description and Solutions
Exit pserver	(In print server mode) Exits the print server because the necessary print server settings have not been made.
failed to connect smtp server.	Failed to connect the SMTP server. This could be because: • There is no connection to the network. • The network configuration is incorrect, so there is no response from the SMTP server. • The SMTP server name is incorrect. • The specified SMTP server is incorrect. • There is no specified SMTP server IP address in the DNS server. • Another server other than the SMTP server has been specified. • The SMTP server port number is incorrect.
failed to connect smtp server. timeout.	Failed to connect the SMTP server due to timeout. This could be because: • The SMTP server name is incorrect. • There is no connection to the network. • The network configuration is incorrect, so there is no response from the SMTP server.
failed to get smtp server ip-address.	Failed to get the SMTP server IP address. This could be because: • The DNS server could not be found. • There is no connection to the network. • The specified DNS server could not be connected to. • Incorrect DNS server is specified. • No specified SMTP server IP address in the DNS server.
Frametype =<frame type name>	The <frame type name> is configured to be used on NetWare.
httpd start.	An httpd has started.
IEEE 802.11b current channel <Channel>	The current channel is displayed. The value chosen by the user is displayed in ad hoc mode. The channel used in the access point is displayed in infrastructure mode. (Example: Current channel is 11.) IEEE 802.11b current channel 11

Message	Description and Solutions
IEEE 802.11b MAC Address = <MAC Address>	The IEEE 802.11b I/F MAC address is displayed. (Example: Current MAC address is 00:00:74:XX:XX:XX.) IEEE 802.11b MAC Address = 00:00:74:XX:XX:XX
IEEE 802.11b SSID <ssid> (AP MAC Address < MAC Address>)	The SSID of the access point used in infrastructure mode and the MAC address of the access point are displayed. (Example: Current MAC address is xx:xx:xx:xx:xx:xx and SSID value is "test-ssid".) IEEE 802.11b SSID test-ssid (AP MAC Address xx:xx:xx:xx:xx:xx)
IEEE 802.11b Tx Rate <Transfer Speed>	The IEEE 802.11b transmitting speed (set speed) is displayed. (Example: Current Tx Rate is 11Mbps.) IEEE 802.11b Tx Rate 11Mbps
inetd start.	An inetd has started.
<interface> started with IP: <IP address>	<IP address> has been set for <Interface> and <Interface> started.
<Interface>: Subnet overlap.	Subnet from Netmask and the IP address you tried to set for <Interface> overlap the subnet for another interface. Set Subnet so that it does not overlap with another interface.
IPP cancel-job: permission denied.	The printer could not authenticate the name of the user attempting to cancel a job.
ipp disable.	Printing with ipp is disabled.
ipp enable.	Printing with ipp is enabled.
IPP job canceled. jobid=%d.	The spooled job has been canceled due to an error or by user request.
job canceled. jobid=%d.	The spooled job has been canceled due to an error or by user request.
LeaseTime=<lease time>(sec), RenewTime=<renew time>(sec).	The resource lease time that was received from the DHCP server is <lease time> in seconds. The renewal time is also <renew time> in seconds.
Login to fileserver <file server name> (<IPX | IP>,<NDS | BINDERY>)	(In print server mode) Logged in to the file server with NDS or BINDERY mode.
multid start.	Data transmission service for multiprotocols has started.

Message	Description and Solutions
nbstart start. (NetBEUI)	The service for NetBEUI protocol stack setting has started.
NBT Registration Broadcast(<NetBIOS name>)	Use a local broadcast to map <NetBIOS name> with the IP address.
nbtd start.	A nbtd (NetBIOS over TCP/IP Daemon) has started. (Available only in DHCP mode)
NetBEUI Computer Name =<computer name>	The NetBEUI Computer Name is defined as <computer name>.
nmsd start. (NetBEUI)	A nmsd (Name Server Daemon) has started.
no smtp server. connection close.	No response from the SMTP protocol. Cannot connect to the SMTP server. This could be because: • Another server other than the SMTP server has been specified. • The SMTP server port number is incorrect.
npriter start. (NetWare)	(In remote printer mode) NetWare service has started.
nwstart start. (NetWare)	The service for NetWare protocol stack setting has started.
Open log file <file name>	(In print server mode) The specified log file has been opened.
papd start. (AppleTalk)	AppleTalk print service has started.
permission denied.	Job cancellation was determined to be unauthorized after checking the user name and host address (except for ROOT authorization).
phy release file open failed.	Replacing the Network Interface Board is required. Contact your sales or service representatives.
Print queue <print queue name> cannot be serviced by printer 0, <print server name>	(In print server mode) The print queue name cannot be serviced. Make sure that print queue volume exists on the specified file server.
Print server <print server name> has no printer.	(In print server mode) The printer object is not assigned to the print server <print server name>. Using NWAdmin, assign the printer object, and then restart the printer device.
Print session full	Cannot accept the print session.
Printer <printer name> has no queue	(In print server mode) The print queue is not assigned to the printer. Using NWAdmin, assign the print queue to the printer, and then restart it.
pserver start. (NetWare)	(In print server mode) NetWare service has started.

Message	Description and Solutions
refused connect by smtp server.	The connection to the SMTP server is denied. This could be because: • Another server other than the SMTP server has been specified. • The SMTP server port number is incorrect.
Required computer name (<Computer name>) is duplicated name	The same computer name is detected on the network. The start job determines the computer name by adding the computer name to the suffix (0,1....). Configure a new computer name that is unique.
Required file server (<file server name>) not found	Cannot find the required file server.
restarted.	LPD has started.
sap enable, saptype=<SAP type>, sapname=<SAP name>	The SAP function has started. The SAP (SAP type and SAP name) packet is issued to advertise the service on the SAP table on the NetWare server.
Set context to <NDS context name>	A <NDS context name> has been set.
shutdown signal received. network service rebooting...	Rebooting the network service.
smbd start. (NetBEUI)	An smbd (SMB (Server Message Block) service) has started.
Snmp over ip is ready.	Communication over TCP/IP with SNMP is available.
Snmp over IP over 1394 is ready.	Communication over IP over 1394 with SNMP is available.
Snmp over ipx is ready.	Communication over IPX with SNMP is available.
snmpd start.	SNMP service has started.
started.	Direct print service has started.
The print server received error <error number> during attempt to log in to the network.Access to the network was denied.Verify that the print server name and password are correct.	Cannot log in to the file server. The print server is not registered or the password is specified. Register the print server without specifying a password.
username or password wasn't correct.	Failure to establish a connection with the SMTP server. The following causes can be attributed. • Incorrect SMTP user name assigned. • Incorrect SMTP password assigned.
win2kspd protocol-DOWN (APPEXIT).	NVRAM setting ioctl (SPIO CAPPEXIT) of device SBP2TSP was set by protocol-DOWN. SCSI print is not receiving data.

Message	Description and Solutions
win2kspd protocol-UP (APPENTRY).	NVRAM setting ioctl (SPIO CAPPENTRY) of device SBP2TSP was set by protocol-UP. SCSI print is not receiving data.
win2kspd started.	SCSI print (SBP-2) service has started.
WINS name refresh :Server No Response	There has been no response to the update request from the server. Confirm that the WINS server address is correct and the WINS server is working properly.
WINS name registration/refresh error code <error number>	Set unique (not shared) NetBIOS names. Confirm the WINS server address is correct and working properly.
WINS name registration:Server No Response	There has been no response to the registration request from the server. Confirm that the WINS server address is correct and the WINS server is working properly.
WINS server address0.0.0.0	The WINS server address has not been specified. Specify the WINS server address to match the printer name with WINS.
WINS Server=<WINS server address> NetBIOS Name=<NetBIOS name>	The printer name has been successfully registered in <WINS server address>.
WINS wrong scopeID	The scope ID is wrong. Specify the correct scope ID.
write error occurred. (diskfull)	The hard disk became full while the spool file was being written. Wait until enough HDD space becomes available as printing proceeds.
write error occurred. (fatal)	A fatal error occurred while the spool file was being written. Turn the printer off and then on. If this does not work, contact your service or sales representative.

Precautions

Please pay attention to the following when using the Network Interface Board. When configuration is necessary, follow the appropriate procedures below.

Connecting a Dial-Up Router to a Network

When the NetWare file server and the printer are on the opposite side of a router, packets are continuously sent back and forth, possibly causing communications charges to increase. Because the packet transmission is a specification of NetWare, you need to change the configuration of the router. If the network you are using does not allow you to configure the router, configure the machine.

Configuring the router

Filter the packets so that they do not pass over the dial-up router.

Note

❒ The MAC address of the printer doing the filtering is printed on the printer configuration page. For more information about printing a configuration page, see the Setup Guide.

❒ For more information about configuring the printer if the router cannot be configured, see the instructions below.

Configuring the printer with NetWare

1 Following the setup method in this manual, configure the file server.

2 Set the frame type for a NetWare environment.

Reference

For more information about selecting a frame type, see the Setup Guide.

Configuring the printer without NetWare

1 While not printing, the Network Interface Board sends packets on the network. Set the NetWare to inactive.

Reference

For more information about selecting a protocol, see the Setup Guide.

PostScript Printing from Windows

When printing PostScript from Windows, see the PostScript 3 Operating Instructions Supplement provided as a PDF file on the CD-ROM labeled "Operating Instructions".

NetWare Printing

Form Feed

You should not configure the form feed on NetWare. The form feed is controlled by the printer driver on Windows. If the NetWare form feed is configured, the printer might not work properly. If you want to change the form feed setting, always configure it on Windows.

- With Windows 95/98/Me, clear the **[Form feed]** check box on the **[Printer Settings]** tab in the printer properties dialog box.
- With Windows 2000/XP/Server 2003, clear the **[Form feed]** check box on the **[NetWare Settings]** tab in the printer properties dialog box.
- With Windows NT 4.0, clear the **[Form feed]** check box on the **[NetWare Settings]** tab in the printer properties dialog box.

Banner Page

You should not configure a banner page on NetWare. If you want to change the banner page setting, always configure it on Windows.

- With Windows 95/98/Me, clear the **[Enable banner]** check box on the **[Printer Settings]** tab in the printer properties dialog box.
- With Windows 2000/XP/Server 2003, clear the **[Enable banner]** check box on the **[NetWare Settings]** tab in the printer properties dialog box.
- With Windows NT 4.0, clear the **[Enable banner]** check box on the **[NetWare Settings]** tab in the printer properties dialog box.

Printing after resetting the machine

After resetting the remote printer, the connection from the print server will be cut off for about 30-40 seconds before re-connecting. Due to the NetWare specification, print jobs may be accepted, but they will not be printed during this interval.

When using the machine as a remote printer, wait about 2 minutes after resetting the printer before attempting to print.

Using DHCP

You can use the printer under a DHCP environment. You can also register the printer NetBIOS name on a WINS server when it is running.

If you connect an Ethernet interface and IEEE 1394 (IP over 1394) interface simultaneously, pay attention to the following:

❖ **When a static IP address is set for both interfaces**

- IP Address: If interface IP addresses overlap, the Ethernet interface is selected.
- Subnet Mask: If interface subnet masks overlap, the Ethernet interface is selected.
- Gateway Address: The selected value is applied.

Note

❒ Make the gateway address setting inside the subnet set in the interface.

❒ If a value is beyond the range of the subnet selected by the interface, the machine operates with "0.0.0.0".

❖ **When obtaining addresses from the DHCP server**

- IP Address, Subnet Mask: You can configure addresses assigned by a DHCP server.

  Note

  ❒ If IP addresses overlap or the same subnet IP addresses are selected, the effective value is assigned only to the prioritized interface.

  ❒ Default interface priority is Ethernet.

- AutoNet: A temporary IP address starting with 169.254 that is not used on the network, assigned to the prioritized interface.

  Note

  ❒ Default interface priority is IEEE 1394 (IP over 1394).

- Gateway Address, DNS Server Address, and Domain Name: You can configure the addresses assigned by DHCP to the prioritized interface.

  Note

  ❒ Default interface priority is Ethernet.

❖ **When there are static IP addresses and addresses assigned by DHCP**

- IP Address and subnet mask: If a static IP address is the same as an address assigned by DHCP, or the static subnet mask address and the subnet mask address assigned by DHCP overlap, the machine uses the static IP address interface.

Note

❒ The interface with the DHCP setting is set by default.

- Gateway Address: Operates with the address entered manually.

Note

❒ If a static address is not selected, or is set to 0.0.0.0, the interface with the address assigned by DHCP is used.

Note

❒ Printers that register the printer NetBIOS name on a WINS server must be configured for the WINS server. See p.117 “WINS”.

❒ Supported DHCP servers are Windows NT 4.0 Server Service Pack 4 or later, Windows 2000, Windows XP Professional/Windows Server 2003 Server, and NetWare 5/5.1, 6.

❒ If you do not use the WINS server, reserve the printer's IP address in the DHCP server so that the same IP address is assigned every time.

❒ To use the WINS server, change the WINS server setting to “active” using the control panel.

❒ Using the WINS server, you can configure the host name via the remote network printer port.

❒ DHCP relay-agent is not supported. If you use DHCP relay-agent on a network via an ISDN line, it will result in expensive line charges. This is because your computer connects to the ISDN line whenever a packet is transferred from the printer.

Using AutoNet

If the printer IP address is not assigned by a DHCP server automatically, a temporary IP address starting with 169.254 which is not used on the network can be selected automatically by the printer.

Note

❒ The IP address assigned by the DHCP server is given priority to that selected by AutoNet.

❒ You can confirm the current IP address on the configuration page. For more information about the configuration page, see the Printer Reference.

❒ When AutoNet is running, the NetBIOS name is not registered on the WINS server.

❒ The machine cannot communicate with devices that do not have the AutoNet function.

Configuring a WINS Server

The printer can be configured to register its NetBIOS name with a WINS server when power is turned on. This enables the NetBIOS name of the printer to be specified from SmartNetMonitor for Admin even under a DHCP environment.

This section describes how to configure the WINS server.

Note

- ❒ The WINS Server is supported with Windows NT 4.0 Server Service Pack 4 or later, and Windows 2000 Servers WINS Manager.
- ❒ For more information about the WINS Server settings, see Windows Help.
- ❒ If there is no reply from the WINS Server, the NetBIOS name will be registered by broadcast.
- ❒ The NetBIOS name consists of up to 13 alphanumeric characters.

Using a Web browser

1. **Start the Web browser.**
2. **Point your browser at the URL or IP address of the printer (e.g. http://XXX.XXX.XXX.XXX where the Xs are the number of the IP address).**

   The status of the printer you chose appears on the Web browser.
3. **Click [Administrator Mode].**

   The dialog box for entering the password and user name is displayed.
4. **Enter your user name and password, and then click OK.**

   To use the factory default account, enter no user name and type "password" for the password.
5. **Point to [Configuration], [Network], [Protocol], and then click [TCP/IP].**
6. **Set WINS to [Enable] and enter the IP address of the WINS server in [Primary WINS Server;] and [Secondary WINS Server] boxes.**
7. **Click [Apply].**
8. **Quit the Web browser.**
9. **Exit the Web browser.**

Using telnet

1. **Connect to the remote printer using telnet.**
2. **Use the "set" command to make WINS active.**

   ```
   msh> set wins on
   ```

3. **Specify the IP addresses (primary and secondary) using the following commands.**

   ```
   msh> wins primary Ipaddress msh> wins secondary Ipaddress
   ```

   Note

   ❒ To confirm the current configuration, use the "show" command.

4. **Log out from telnet.**

When Using the NIB Setup Tool

If the Network Interface Board cannot browse using the TCP/IP protocol, make sure that the TCP/IP environment is correctly configured in your computer.

When Using IPP with SmartNetMonitor for Client

When using IPP with SmartNetMonitor for Client, note the following:

- The network printer can only receive one print job from SmartNetMonitor for Client at a time. While the network printer is printing a job, another user cannot access the network printer until it completes the job. In this case, SmartNetMonitor for Client tries to access the network printer until the retry interval expires.
- If SmartNetMonitor for Client cannot access the network printer and times out, SmartNetMonitor for Client stops sending the print job. In this case, you should cancel the paused status from the print queue window. SmartNetMonitor for Client will resume access to the network printer. You can delete the print job from the print queue window, but canceling a print job that has been printed by the network printer might cause the next print job sent from another user to be incorrectly printed.
- If a print job that is sent from SmartNetMonitor for Client is interrupted and the network printer cancels the job because something went wrong, launch the print job again.
- Print jobs sent from another computer do not appear in the print queue window regardless of the protocol.
- If various users send print jobs using SmartNetMonitor for Client to network printers, the printing order might not be in the order in which the jobs were sent.
- An IP address cannot be used for the IPP port name because the IP address is used for the SmartNetMonitor for Client port name.

Specifications

Interface	100BASE-TX, 10BASE-T, IEEE 1394 (IP over 1394) [*1], IEEE 802.11b
Frame type	EthernetII, IEEE 802.2, IEEE 802.3, SNAP
Protocol	• TCP/IP Windows 95 Windows 98 Windows Me Windows 2000 Windows XP/Server 2003 Windows NT 4.0 • IPX/SPX NetWare 3.12, 3.2, 4.1, 4.11, 4.2, 5, 5.1, 6, IntranetWare • NetBEUI [*2] Windows 95 Windows 98 Windows Me Windows 2000 Windows NT 4.0 • IPP Windows 95 Windows 98 Windows Me Windows 2000 Windows XP/Server 2003 Windows NT 4.0 • SMB Windows 95 Windows 98 Windows Me Windows 2000 Windows XP/Server 2003 Windows NT 4.0 • AppleTalk Mac OS 8.6 or later Mac OS X 10.1 or later
SNMP	MIB-II, PrinterMIB, HostResourceMIB, RicohPrivateMIB

[*1] The 1394 Interface Unit Type 4510 supports TCP/IP and IPP.
[*2] To use NetBEUI, use the SmartNetMonitor for Client port.

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