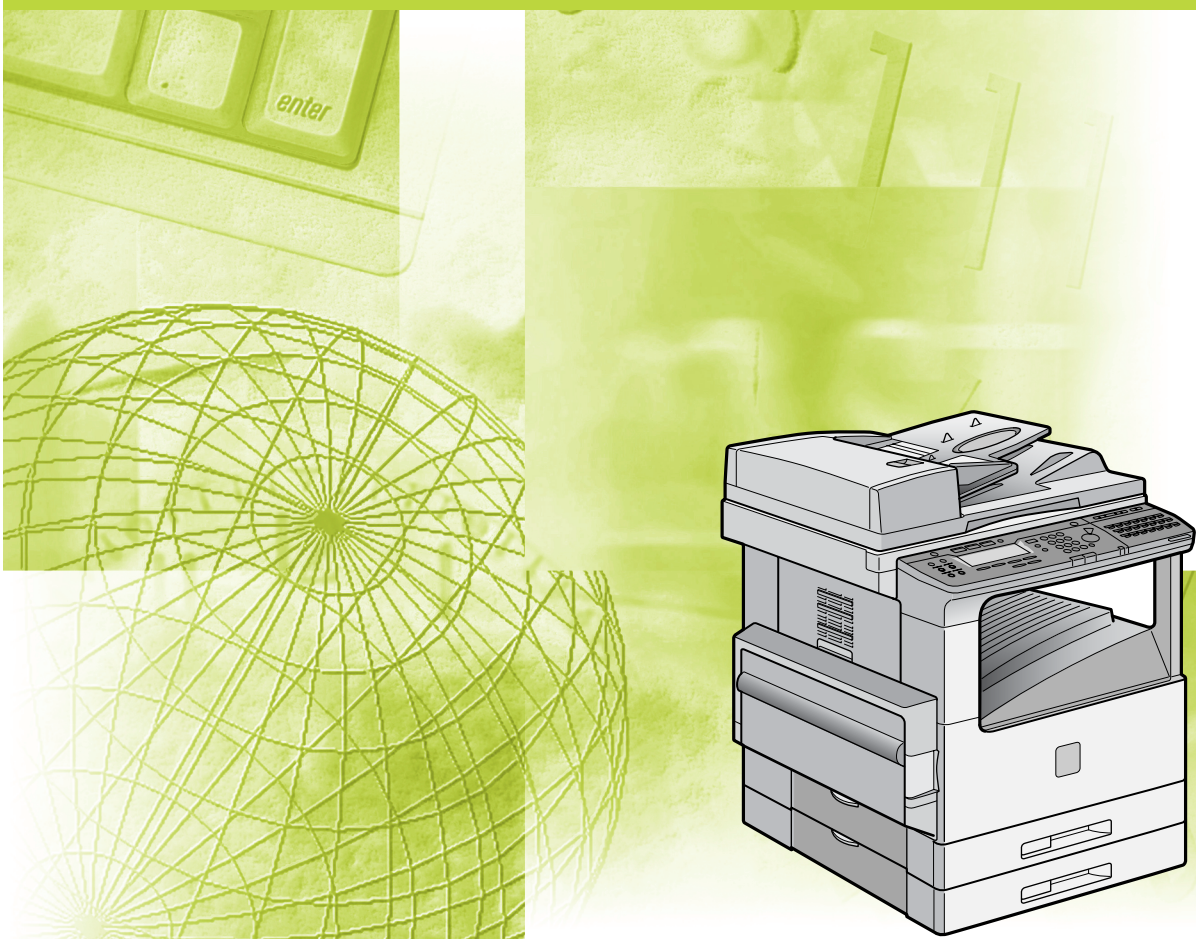
Canon

imageCLASS 2300

Network Guide



Please read this guide before operating this equipment.
After you finish reading this guide, store it in a safe place for future reference.

ENG

imageCLASS 2300
Network Guide

Manuals for the Machine

The manuals for this machine are divided as follows. Please refer to them for detailed information.
Some of the manuals listed below are only supplied with the Network Model of this machine.

Guides with this symbol are book manuals.

Guides with this symbol are PDF manuals included on the accompanying CD-ROM.

• Installing and Setting Up the Machine	Set-Up Sheet for the Machine
• Network and Printer Settings	Set-Up Sheet for Networking and Printing
• Basic Operations	Basic Guide
• Machine Settings • Troubleshooting	Reference Guide
• Copying Instructions	Copying Guide
• Fax Instructions	Facsimile Guide
• Sending Instructions	Sending Guide
• Remote User Interface Instructions	Remote UI Guide
• Network Connectivity and Setup Instructions	Network Guide (This Document)
• PCL Printer Instructions	PCL Printer Guide
• PCL Printer Driver Installation and Instructions	PCL Driver Guide
• Fax Driver and Cover Sheet Editor Installation and Instructions	Fax Driver Guide with Cover Sheet Editor

The product illustration on the cover may differ slightly from your machine.

How This Manual Is Organized

Chapter 1 Before You Start

Chapter 2 Using a TCP/IP Network (Windows/UNIX)

Chapter 3 Using a NetWare Network (Windows)

Chapter 4 Using a NetBIOS Network (Windows 95/98/Me)

Chapter 5 Using Utility Software for Network and Device Settings

Chapter 6 Appendix

Includes troubleshooting, network settings, software information, the glossary and the index.

Considerable effort has been made to ensure that this manual is free of inaccuracies and omissions. However, as we are constantly improving our products, if you need an exact specification, please contact Canon.

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Preface

Thank you for purchasing the Canon imageCLASS 2300. Please read this manual thoroughly before operating the machine in order to familiarize yourself with its capabilities, and to make the most of its many functions. After reading this manual, store it in a safe place for future reference.

How to Use This Manual

Symbols Used in This Manual

The following symbols are used in this manual to explain procedures, restrictions, handling precautions, and instructions that should be observed for safety.

IMPORTANT	Indicates operational requirements and restrictions. Be sure to read these items carefully in order to operate the machine correctly, and to avoid damage to the machine.
NOTE	Indicates a clarification of an operation, or contains additional explanations for a procedure. Reading these notes is highly recommended.

Keys Used in This Manual

The following symbols and key names are a few examples of how keys to be pressed are expressed in this manual:

- Control Panel Keys: <Key icon> + (Key Name)
  Example : (Start)
  (Stop)
- Display Keys : [Key Name]
  Example : [Cancel]
  [Done]

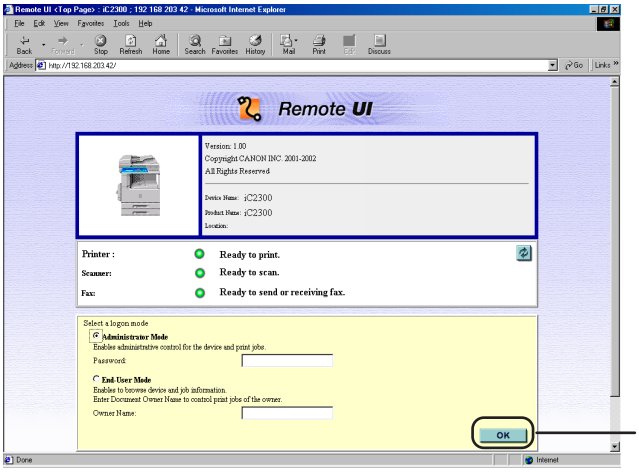
Displays Used in This Manual

Screenshots of computer operation screens used in this manual may differ from the ones you actually see, depending on the model or options that come with your machine.

The keys or buttons which you should press are marked with ( ), as shown below.

When multiple buttons or keys can be pressed, they will be highlighted and mentioned in the order in which they should be pressed.

1 **Click [OK].**



Abbreviations Used in This Manual

In this manual, product names and model names are abbreviated as follows:

Microsoft® Windows® 95 operating system:	Windows 95
Microsoft® Windows® 98 operating system:	Windows 98
Microsoft® Windows® Millennium Edition operating system:	Windows Me
Microsoft® Windows NT® operating system:	Windows NT
Microsoft® Windows® 2000 operating system:	Windows 2000
Microsoft® Windows® XP operating system:	Windows XP
Microsoft® Windows® operating System:	Windows
Novell NetWare®:	NetWare

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Before You Start

1
CHAPTER

This chapter describes what you need to know before you start using the machine, including the network environments the machine is compatible with, and how to check the network environment you are using.

System Environment Requirements 1-2
System Environment Requirements for Printing 1-2
Checking Your Network Environment 1-4
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Using a Network with Various Types of Computers 1-6

System Environment Requirements

This section describes the system environments the machine is compatible with.

System Environment Requirements for Printing

The following network and system environments are compatible when printing with the machine:

■ Printing Using a TCP/IP Network:

Compatible OS:	Microsoft Windows 95/98/Me
	Microsoft Windows NT Server 4.0
	Microsoft Windows NT Workstation 4.0
	Microsoft Windows 2000 Server
	Microsoft Windows 2000 Professional
	Microsoft Windows XP
	Solaris Version 1.1x (SunOS Version 4.1x) or later
	Solaris Version 2.5x (SunOS Version 5.5x) or later
	HP-UX Version 10.x or later
	IBM-AIX Version 4.x or later
	Red Hat Linux 6.1 or later
Compatible Computers:	Windows 95/98/Me/NT/2000; IBM PC/compatibles

■ Printing Using a NetWare Network:

Compatible Servers:	Novell NetWare Version 3.2/4.1/4.11/4.2/5.0/5.1
Compatible Clients:	Microsoft Windows 95/98/Me/XP
	Microsoft Windows NT Server 4.0
	Microsoft Windows NT Workstation 4.0
	Microsoft Windows 2000 Server
	Microsoft Windows 2000 Professional
Compatible Computers:	IBM PC/compatibles

■ Printing Using a NetBIOS Network:

Compatible OS:	Microsoft Windows 95/98/Me
Compatible Computers:	IBM PC/compatibles
Required Memory for Computers:	More than 16MB

IMPORTANT

- If you are using Windows NT 4.0, install Service Pack 5 or later.
- While it is possible to set AppleTalk protocol settings, you cannot print from a Macintosh computer.

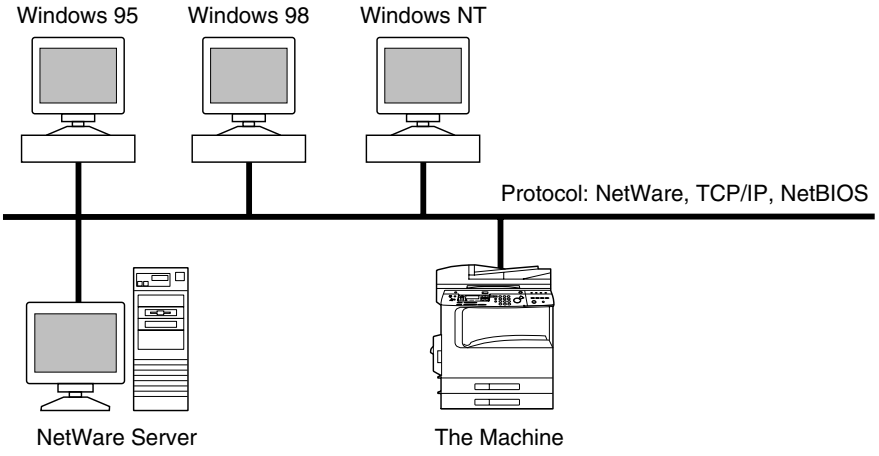
Checking Your Network Environment

Refer to the following diagram examples to confirm the network environment that is connected to the machine, and then perform the necessary operations for that environment.

Sample Windows Network

With a NetWare Server

In a network environment like the one below, a NetWare, TCP/IP, or NetBIOS (NetBIOS over TCP/IP) protocol can be used for printing. Multiple protocols can also be used at the same time. NetBIOS is available only for Windows 95/98/Me.

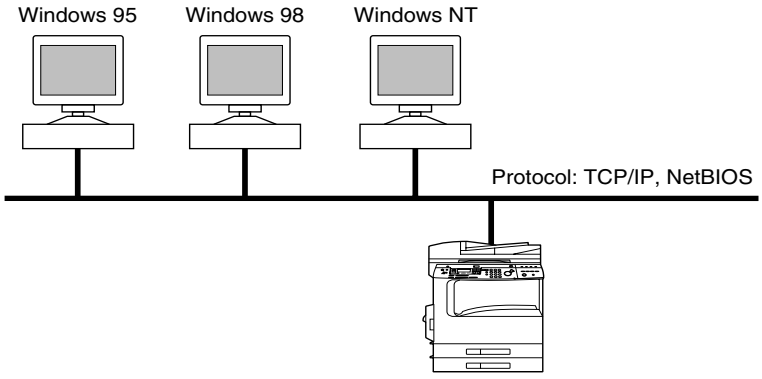


Depending on the protocol, see the following:

- Chapter 2, "Using a TCP/IP Network (Windows/UNIX)"
- Chapter 3, "Using a NetWare Network (Windows)"
- Chapter 4, "Using a NetBIOS Network (Windows 95/98/Me)"

Without a NetWare Server

In a network environment like the one below, either TCP/IP or NetBIOS (NetBIOS over TCP/IP) protocol can be used. Multiple protocols can also be used at the same time. NetBIOS is available only for Windows 95/98/Me.



Depending on the protocol, see the following:

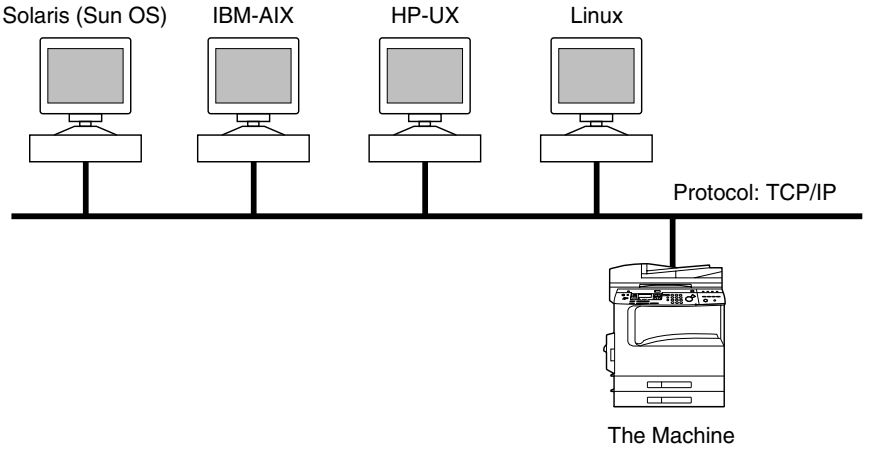
- Chapter 2, "Using a TCP/IP Network (Windows/UNIX)"
- Chapter 4, "Using a NetBIOS Network (Windows 95/98/Me)"

NOTE

- Once you set up the machine as a network printer, each computer can output directly to it. Using TCP/IP protocol with Windows 2000/XP or Windows NT as a print server provides efficient management of your network printer. For the detailed procedure, see "Print Server Settings," on p. 2-35.
- In a network comprising only Windows 95/98/Me that does not use the TCP/IP protocol, you can use NetBIOS protocol only to specify basic settings.

Sample UNIX Network

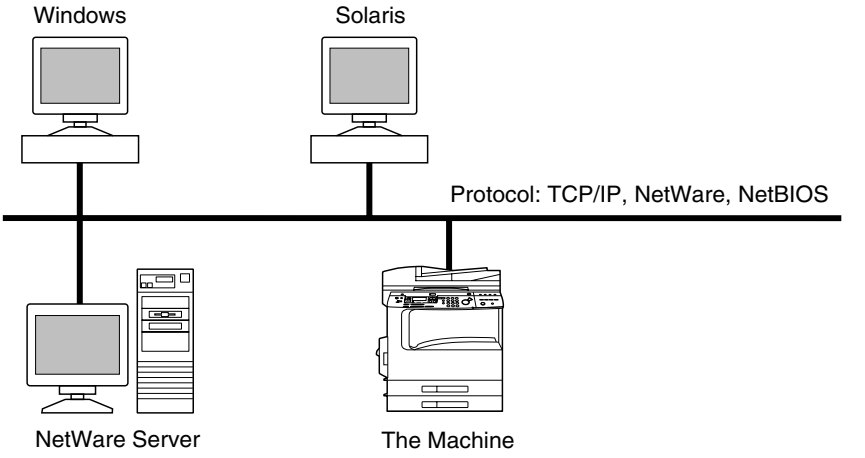
With UNIX computers, theTCP/IP protocol is used. (See Chapter 2, "Using a TCP/IP Network (Windows/UNIX).")



Using a Network with Various Types of Computers

When there are various types of computers on the network, network operations depend on the type of computer being used.

For example, if you are using Windows 98 and UNIX computers, you will need to specify the settings described in both "Sample Windows Network," on p. 1-4 and "Sample UNIX Network," on p. 1-6.



Depending on the protocol, see the following:

- Chapter 2, "Using a TCP/IP Network (Windows/UNIX)"
- Chapter 3, "Using a NetWare Network (Windows)"
- Chapter 4, "Using a NetBIOS Network (Windows 95/98/Me)"

Using a TCP/IP Network (Windows/UNIX)

2
CHAPTER

This chapter describes the settings and procedures necessary to connect and use the machine with a TCP/IP network.

TCP/IP Network Setup Procedures 2-2

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TCP/IP Network Setup Procedures

To use a TCP/IP network, it is necessary to perform the following procedures.

1 **Network Cable Connection (See Chapter 1, "Before You Start Using This Machine," in the *PCL Printer Guide*.)**

Connect the network cables in accordance with the *PCL Printer Guide*.

2 **Preparation for Protocol Settings (See "Preparation for Protocol Settings," on p. 2-3.)**

Specify the machine's basic protocol settings for communication between the machine and computers using the machine. To specify the settings use:

- The machine's Control Panel (Additional Functions menu)
- NetSpot Device Installer (Canon utility software)
- ARP/PING commands

3 **Protocol Settings (See "Protocol Settings," on p. 2-13.)**

Specify the machine's advanced protocol settings. To specify the settings use:

- NetSpot Device Installer (Canon utility software)
- NetSpot Console (via a web browser) (Canon utility software)
- A web browser (Remote UI)
- An FTP client

4 **Computer Settings for Printing (See "Setting Up a Computer for Printing," on p. 2-21.)**

Specify the settings for each computer you use for printing.

IMPORTANT

- It is recommended that the network manager perform steps 1, 2, and 3 above.
- If you are printing using a TCP/IP network, you can use the following print applications:
  - LPD
  - FTP
  - Raw (Windows 2000/XP only)
  - IPP (Windows 95/98/Me/2000/XP only)
- This machine does not come with printer driver software that can be used for each UNIX platform.
- If configuring the basic protocol settings for the first time, use the control panel of this machine.

Preparation for Protocol Settings

Before you specify the machine's protocol settings, it is necessary to specify the machine IP address to enable communication between the machine and your computers. You can use any of the following to specify the settings. Specify the settings using the easiest method.

- The machine's control panel (Additional Functions menu)
- NetSpot Device Installer (Canon software included on the Network User Software CD-ROM)
- The ARP/PING commands

IMPORTANT

- In the following operations, the machine's MAC address is necessary. To check the MAC address from the printer control panel, follow the procedure below to make a test print.
  1. Press PRINT (PRINT) → (OK) on the control panel; the Online indicator goes off.
  2. Press F1 (F1) repeatedly until <TEST MENU> appears.
  3. Press F2 (F2) repeatedly until <PRINT EN CONFIG> appears in the second line of the display.
  4. Press F4 (F4).
- Before you perform the following operations in this section, check that the machine is ON and connected to the network.
- If you are using NetSpot Device Installer or ARP/PING commands, the following steps directly allocate the IP address to the machine. For this machine, in addition to direct allocation of the IP address to the machine, you can use DHCP, BOOTP, or RARP to specify the IP address. When the machine is started or reset, it checks whether DHCP, BOOTP, or RARP is being used, and then allocates the IP address using the first available setting method. Because the machine IP address is automatically allocated at this time, it is not necessary for you to perform the following operations in this section. However if you are reallocating the IP address, or if DHCP, BOOTP, or RARP cannot be used, perform the following operations.

Settings from the Control Panel

IMPORTANT

Settings specified from the control panel become effective after the machine is restarted, after the procedure.

Additional Functions

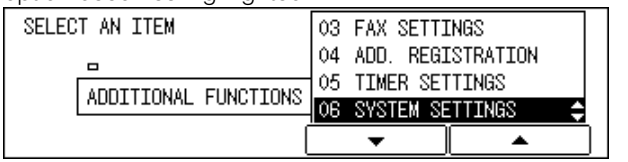
1 Press [Additional Functions].

The ADDITIONAL FUNCTIONS menu appears.

F3
F4
OK

2 Press [F3] (▼) or [F4] (▲) to highlight <06 SYSTEM SETTINGS> → press [OK].

Each time you press F3 (▼) or F4 (▲), the next or previous menu option becomes highlighted.



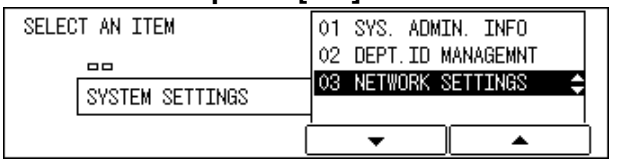
The SYSTEM SETTINGS menu appears.

IMPORTANT

When <ENTER A MANAGEMENT ID NUMBER> is displayed, input the System Administration ID and the System Password. For how to input the System Administration ID and the System Password, see Chapter 5, "System Manager Settings," in the *Reference Guide*.

F3
F4
OK

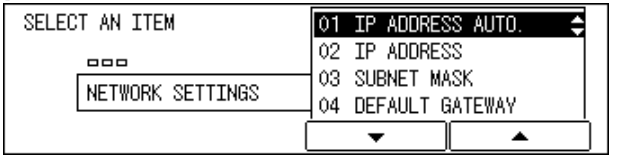
3 Press [F3] (▼) or [F4] (▲) to highlight <03 NETWORK SETTINGS> → press [OK].



The NETWORK SETTINGS menu appears.

OK

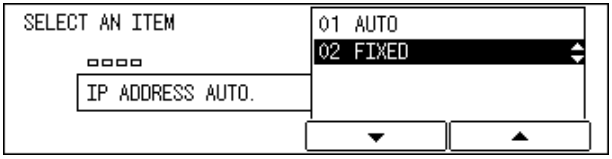
4 Make sure that <01 IP ADDRESS AUTO.> is highlighted → press [OK].



The IP ADDRESS AUTO. menu appears.

F3
F4

5 Press [F3] (▼) or [F4] (▲) to highlight <01 AUTO> or <02 FIXED>.



● If you have selected <01 AUTO>:

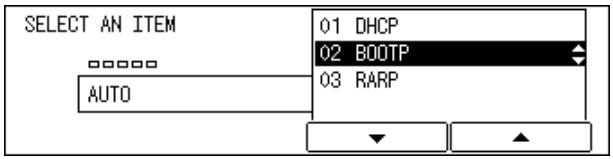
OK

❑ Press [OK].

The AUTO menu appears.

F3
F4
OK

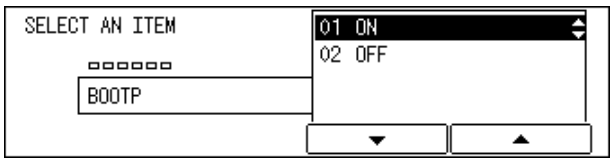
❑ Press [F3] (▼) or [F4] (▲) to select <01 DHCP>, <02 BOOTP>, or <03 RARP> → press [OK].



The DHCP, BOOTP, or RARP menu appears.

F3
F4
OK

❑ Press [F3] (▼) or [F4] (▲) to select <01 ON> or <02 OFF> → press [OK].



The AUTO or NETWORK SETTINGS menu returns.

NOTE

Press (BACK) to return to the NETWORK SETTINGS menu from the AUTO menu.

● If you have selected <02 FIXED>:

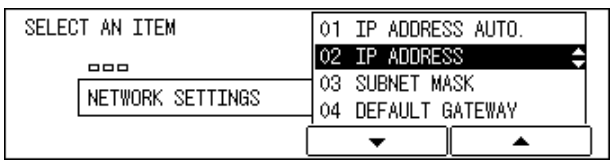
OK

❑ Press [OK].

The NETWORK SETTINGS menu returns.

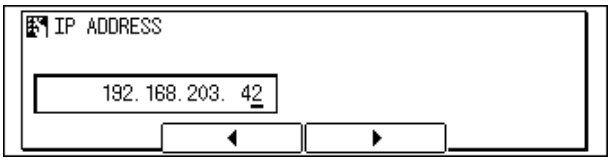
F3
F4
OK

❑ Press [F3] (▼) or [F4] (▲) to select <02 IP ADDRESS>, <03 SUBNET MASK>, or <04 DEFAULT GATEWAY> → press [OK].



The display for entering the IP address appears.

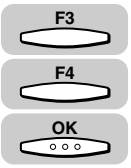
❑ Enter the number using the numeric keys → press [OK].



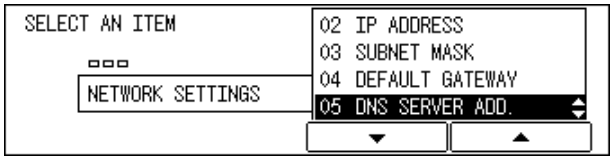
The NETWORK SETTINGS menu returns.

NOTE

- You can delete the number you entered by pressing (C) (Clear).
- If the number has been previously entered, press (C) (Clear) before entering a new number.
- You can move the cursor by pressing F2 (◀) or F3 (▶).

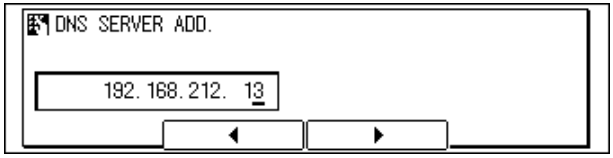


6 Press [F3] (▼) or [F4] (▲) to highlight <05 DNS SERVER ADD.> → press [OK].



The display for entering the DNS server address appears.

7 Enter the DNS server address using the numeric keys → press [OK].



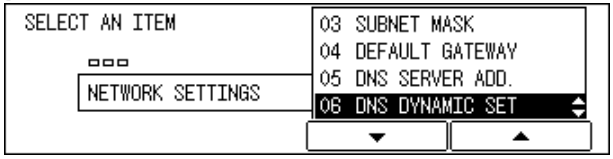
The NETWORK SETTINGS menu returns.

NOTE

- You can delete the number you entered by pressing (C) (Clear).
- If the number has been previously entered, press (C) (Clear) before entering a new number.
- You can move the cursor by pressing F2 (◀) or F3 (▶).

OK

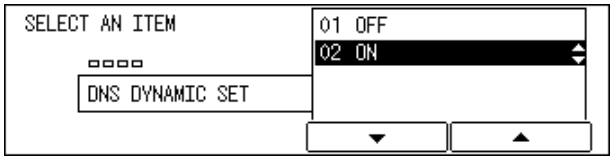
8 Make sure that <06 DNS DYNAMIC SET> is highlighted → press [OK].



The DNS DYNAMIC SET menu appears.

F3
F4
OK

9 Press [F3] (▼) or [F4] (▲) to highlight <01 OFF> or <02 ON> → press [OK].



The NETWORK SETTINGS menu returns.

Setting the Host Name

Follow the procedures below to specify the host name of this machine.

Additional Functions

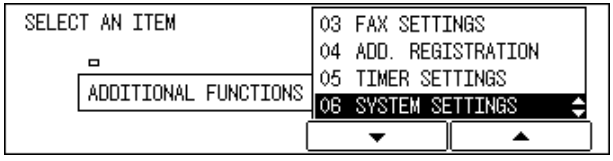
1 Press [Additional Functions].

The ADDITIONAL FUNCTIONS menu appears.

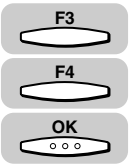
F3
F4
OK

2 Press [F3] (▼) or [F4] (▲) to highlight <06 SYSTEM SETTINGS> → press [OK].

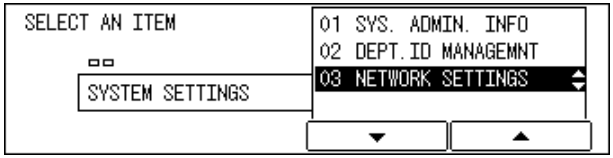
Each time you press F3 (▼) or F4 (▲), the next or previous menu option becomes highlighted.



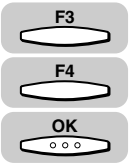
The SYSTEM SETTINGS menu appears.



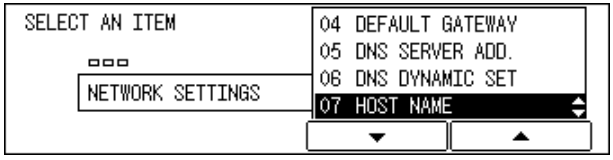
3 Press [F3] (▼) or [F4] (▲) to highlight <03 NETWORK SETTINGS> → press [OK].



The NETWORK SETTINGS menu appears.



4 Press [F3] (▼) or [F4] (▲) to highlight <07 HOST NAME> → press [OK].

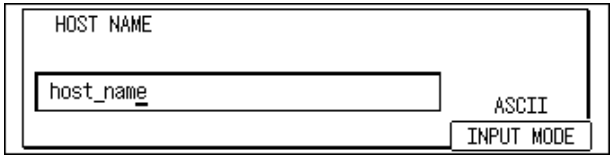


The display for entering the host name appears.

5 Enter the host name using the numeric keys → press [OK].

Input Example: host_name

You can change the input mode by pressing [INPUT MODE] (F4). (See Chapter 1, "Before You Start Using This Machine," in the *Reference Guide*.)



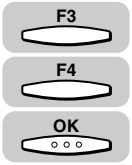
The NETWORK SETTINGS menu returns.

Setting the Domain Name

Follow the procedures below to specify the domain name of this machine.

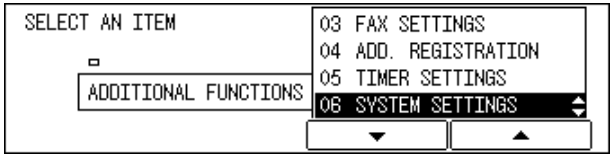
1 Press [Additional Functions].

The ADDITIONAL FUNCTIONS menu appears.

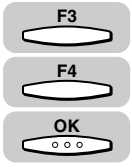


2 Press [F3] (▼) or [F4] (▲) to highlight <06 SYSTEM SETTINGS> → press [OK].

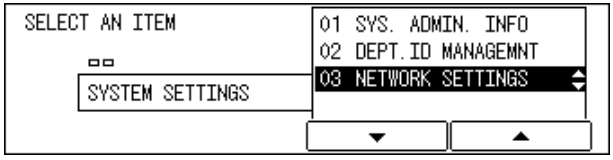
Each time you press F3 (▼) or F4 (▲), the next or previous menu option becomes highlighted.



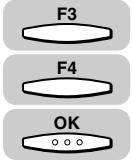
The SYSTEM SETTINGS menu appears.



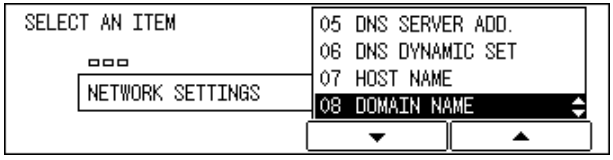
3 Press [F3] (▼) or [F4] (▲) to highlight <03 NETWORK SETTINGS> → press [OK].



The NETWORK SETTINGS menu appears.



4 Press [F3] (▼) or [F4] (▲) to highlight <08 DOMAIN NAME> → press [OK].

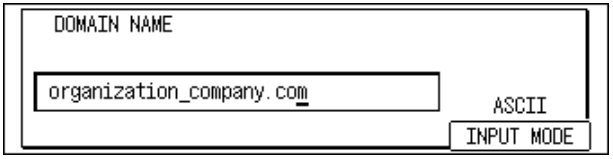


The display for entering the domain name appears.

5 Enter the domain name using the numeric keys → press [OK].

Input Example: organization_company.com

You can change the input mode by pressing [INPUT MODE] (F4). (See Chapter 1, "Before You Start Using This Machine," in the *Reference Guide*.)



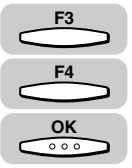
The NETWORK SETTINGS menu returns.

Checking the Current Network Settings

You can check the network settings of the machine. Settings specified from the Control Panel become effective after the machine is restarted, after the procedure.

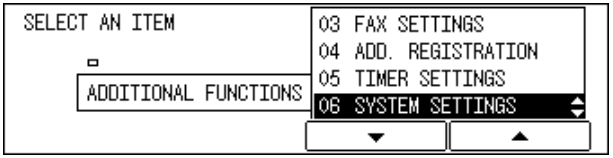
1 Press [Additional Functions].

The ADDITIONAL FUNCTIONS menu appears.

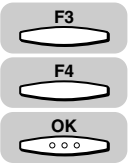


2 Press [F3] (▼) or [F4] (▲) to highlight <06 SYSTEM SETTINGS> → press [OK].

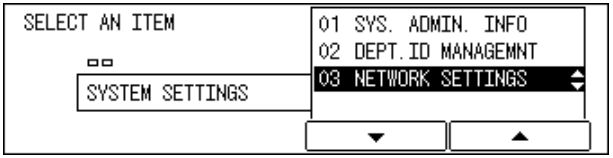
Each time you press F3 (▼) or F4 (▲), the next or previous menu option becomes highlighted.



The SYSTEM SETTINGS menu appears.



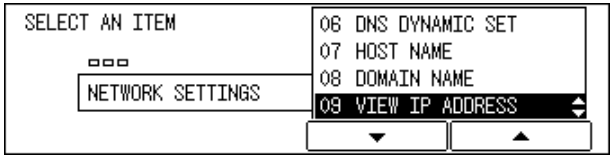
3 Prress [F3] (▼) or [F4] (▲) to highlight <03 NETWORK SETTINGS> → press [OK].



The NETWORK SETTINGS menu appears.

F3
F4
OK

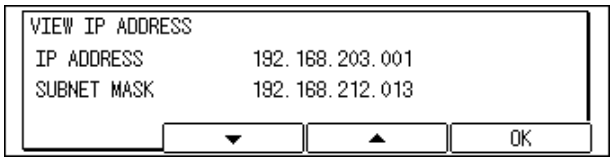
4 Press [F3] (▼) or [F4] (▲) to highlight <09 VIEW IP ADDRESS> → press [OK].



The VIEW IP ADDRESS menu appears.

F2
F3

5 Press [F2] (▼) or [F3] (▲) to display the setting you want to check.



Each time you press F2 (▼) or F3 (▲), IP ADDRESS, SUBNET MASK, DEFAULT GATEWAY, DNS SERVER ADD., HOST NAME, and DOMAIN NAME are displayed in sequence.

You can return to the NETWORK SETTINGS menu by pressing F4 (OK).

Settings Using NetSpot Device Installer

You can install NetSpot Device Installer from the Network User Software CD-ROM provided with the machine, and use it to specify the protocol settings on the computer you are using.

For instructions on how to install NetSpot Device Installer and how to specify the protocol settings using NetSpot Device Installer, see "NetSpot Device Installer," on p. 5-2.

NOTE

The online instructions on how to install and set protocol settings using NetSpot Device Installer are found in the Readme file and Online Help, respectively, included on the Network User Software CD-ROM provided with the machine.

1 Start up the MS-DOS prompt or the Command prompt.

If you are using UNIX, display the console screen, and then log in as a superuser.

2 Execute the following command to add a static entry to the arp table.

`arp -s` <IP Address> <MAC Address>

IP Address: Specify the IP Address you want to allocate to the machine. The IP address consists of 4 numbers ranging from 0 to 255, using periods (.) as separators.

MAC Address: Specify the MAC Address of the machine. Every second digit is separated by "-" (":" for UNIX).

Input Example (Windows): `arp -s 172.20.88.125 00-00-85-05-70-31`

Input Example (UNIX): `arp -s 172.20.88.125 00:00:85:05:70:31`

NOTE

If you are using IBM-AIX, enter "arp -s ether <IP Address> <MAC Address>."

3 Execute the applicable command below to set the IP address for the network board.

`ping` <IP Address> `-l 479` (for Windows)

`ping -s` <IP Address> `479` (for Solaris 1.x/2.x)

`ping` <IP Address> `479` (for IBM-AIX)

`ping` <IP Address> `487` (for HP-UX)

`ping -s 479` <IP Address> (for Red Hat Linux)

`ping -s 480` <IP Address> (for Turbolinux)

IP Address: Specify the same IP ADDRESS that you specified in step 2 above.

Input Example (Windows): `ping 172.20.88.125 -l 479`

NOTE

- The character "`-l`" is the alphabet letter "L".
- The Subnet Mask and Gateway Address are set as <0.0.0.0>.

The preparation for the machine's protocol settings are complete.

Protocol Settings

You can specify the machine's protocol settings on the computer by using any of the following software. Specify the settings using the easiest method.

- NetSpot Device Installer (Canon software included on the Network User Software CD-ROM)
- NetSpot Console (via a web browser) (Canon software included on the Network User Software CD-ROM)
- A web browser (Remote UI)
- An FTP client

IMPORTANT

You can enhance the security by setting the range of IP addresses of the computers authorized to access the machine. Once you set the range of IP addresses of computes from which data can be sent to the machine for printing, the machine rejects data sent from computers whose IP addresses are not allowed. For instructions on how to register the IP addresses of computers permitted or rejected to print on the machine, see Chapter 2, "Remote UI Functions," in the *Remote UI Guide*.

NOTE

If you change the IP (Internet Protocol) address on the web browser (Remote UI), the change will not be reflected on the display of the machine. You can confirm the change of the IP address by checking "VIEW IP ADDRESS" under the Network Settings menu, or by printing a User Data List.

Settings Using NetSpot Console or NetSpot Device Installer

You can install NetSpot Console or NetSpot Device Installer from the Network User Software CD-ROM provided with the machine, and use it to specify the protocol settings on the computer you are using.

For instructions on how to install NetSpot Console or NetSpot Device Installer, and how to specify the protocol settings using NetSpot Console or NetSpot Device Installer, see "NetSpot Console," on p. 5-3, or "NetSpot Device Installer," on p. 5-2, respectively.

NOTE

- You can also find online instructions on how to install NetSpot Console in the *NetSpot Console User's Guide* or the Readme file, and how to set protocol settings in the *NetSpot Console User's Guide*, Online Manual, or Online Help, all of which are included in the NetSpot Console folder on the Network User Software CD-ROM provided with the machine.

- The online instructions on how to install and set protocol settings using NetSpot Device Installer are found in the Readme file and Online Help, respectively, included in the NetSpot Device Installer folder on the Network User Software CD-ROM.

Settings Using a Web Browser (Remote UI)

1 Start the web browser → enter the URL below in [Location] or [Address] → press [Enter] on the keyboard.

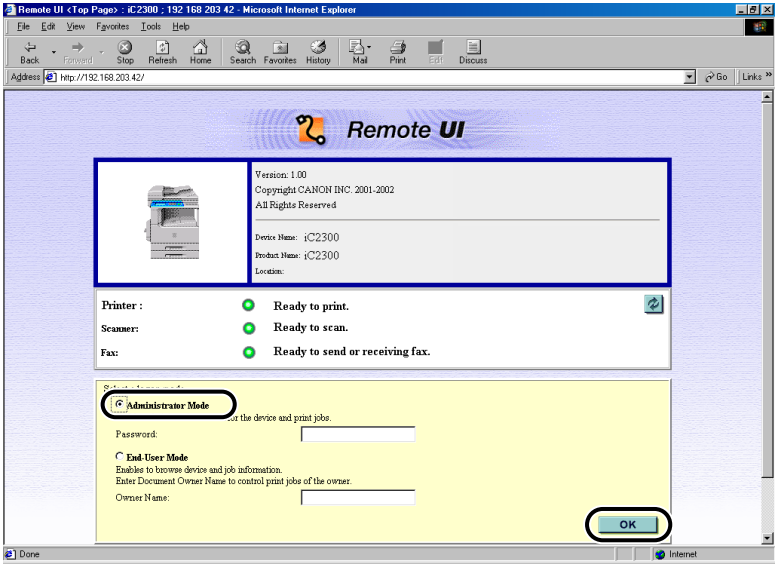
http://<machine host name or IP address >/

Input Example : `http://192.168.203.42/`

IMPORTANT

- For your web browser, use Netscape Navigator/Communicator 4.04 or later, or Internet Explorer 4.01 SP1 or later.
- You cannot set this machine's protocol settings through Netscape Communicator 4.08 with Turbolinux 4.0. You have to use a different version web browser.
- If you are using a connection via a proxy server, use the following settings. (The settings differ depending on the network environment.)
  - When configuring your web browser to use the proxy server, add the IP address of the machine to Exception (the address not using the proxy server).
- Set up the web browser to accept cookies.
- If more than one Remote UI is running at the same time, only the last setting specified will be valid. It is recommended that only one Remote UI is running.

2 Select [Administrator Mode] → click [OK].

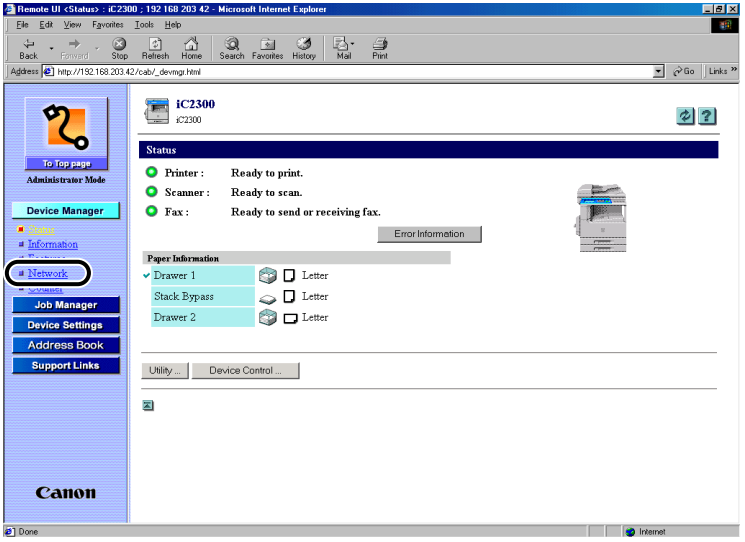


The Remote UI starts.

NOTE

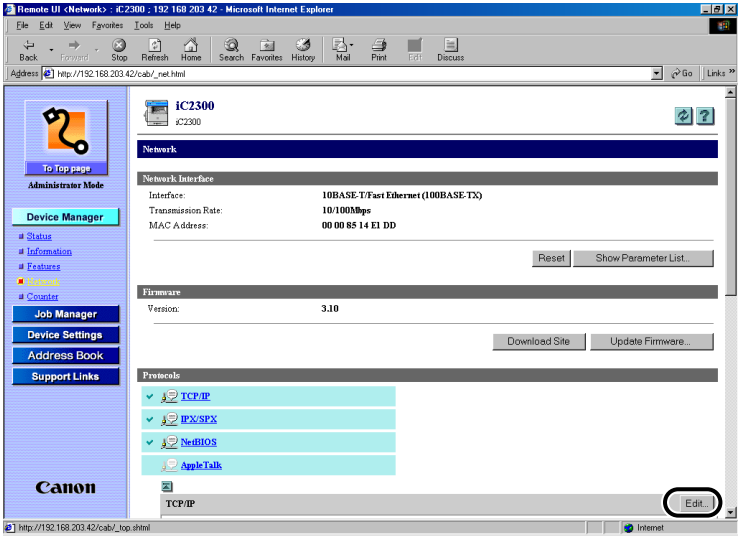
If a password has been set for the machine, enter the password → click [OK]. If no password has been set, it is not necessary to enter a password.

3 Under [Device Manager] in the left column of the screen → click [Network].



The [Network] page is displayed.

4 Click [Edit] at the right of [TCP/IP].



Scroll down if TCP/IP is not visible.

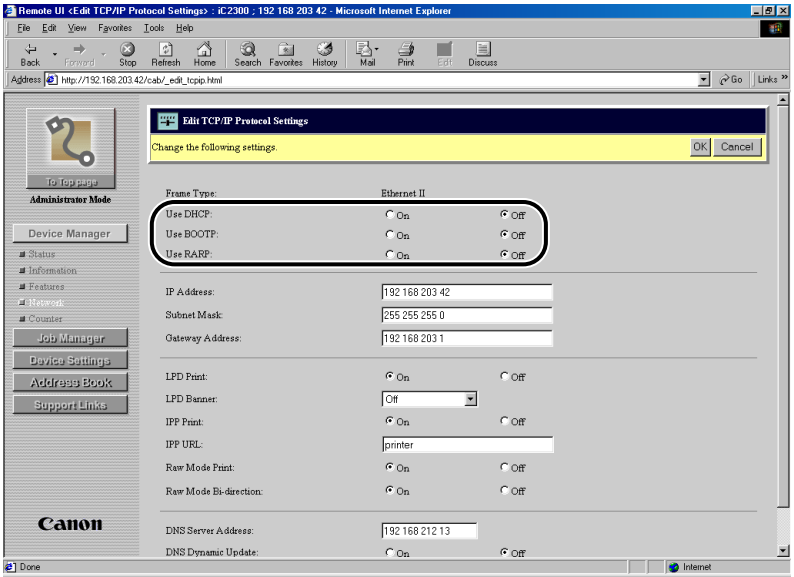
The [Edit TCP/IP Protocol Settings] page is displayed.

5 Specify the setting method for the machine IP address.

To use [Use DHCP], [Use BOOTP], and [Use RARP] for the IP address setting, select [On].

If selecting [Off] for [Use DHCP], [Use BOOTP], and [Use RARP], the machine does not check the protocols.

If neither DHCP, BOOTP, nor RARP can be used, the IP address specified in [IP Address] is allocated.



IMPORTANT

For this machine, in addition to direct allocation of the IP address to the machine, you can use DHCP, BOOTP, or RARP to specify the IP address. When the machine is started or reset, it checks whether DHCP, BOOTP, or RARP is being used, and then allocates the IP address using the first available setting method.

NOTE

- Checking whether DHCP, BOOTP or RARP can be used takes about 1 to 2 minutes; it is recommended you set unused protocols to 'Off'.
- Depending on whether you use DHCP, BOOTP, or RARP to allocate the IP address, you need to start the DHCP server, BOOTP daemon, or RARP daemon.

6 Specify [IP Address], [Subnet Mask], and [Gateway Address].

In [IP Address], enter the machine IP address. In [Subnet Mask] and [Gateway Address], enter the subnet mask and gateway address used by the TCP/IP network.

NOTE

If you are using DHCP, BOOTP, or RARP, some of the items above are not used. The values obtained from DHCP, BOOTP, or RARP are used.

7 In [LPD Banner], select the type of output for the banner page (the separator page of each print job).

[Auto]: The banner page is enabled only for print jobs set to output a banner page, and disabled for print jobs not set to output a banner page.

[On] (final insertion): The banner page is always enabled, regardless of the banner page output settings. The banner page is output on the last page.

[Off]: The banner page is always disabled, regardless of the banner page output settings.

NOTE

Depending on the OS or LPR (Line Printer Remote) being used, it may not be possible to specify the banner page output settings. If this occurs, you can specify the settings for banner page output by selecting items other than [Auto].

8 In [IPP URL] and [Raw Mode Bi-direction], specify the IPP (Internet Printing Protocol) and Raw settings.

Select [On] or [Off] to enable or disable printing for each mode. Normally, there is no need to make changes.

9 If you are using DNS, specify the DNS settings.

- ❑ Enter the IP address of the DNS server in [DNS Server Address].
- ❑ Enter the host name of this machine in [DNS Host Name].

  Input Example : `sales_printer`
- ❑ Enter the domain name belonging to the machine in [DNS Domain Name].

  Input Example : `sales_dept.xyz_company.co.jp`

NOTE

The machine uses DNS when the DNS dynamic update function is used ([DNS Dynamic Update] is set to 'On' in step 11).

10 To use the DNS dynamic update function, select [On] in [DNS Dynamic Update] → specify the following item settings.

In [DNS Host Name], enter the host name of this machine.

Input Example : sales_printer

In [DNS Domain Name], enter the domain name of this machine.

Input Example : sales_dpt.xyz_company.co.jp

NOTE

- The DNS dynamic update function automatically registers the names specified in [DNS Host Name] and [DNS Domain Name] to the DNS server for the machine IP address.
- When using this function, specify the DNS settings in step 10.
- You can use this function in an environment with a DNS server that can perform dynamic registration (dynamic DNS server).
- If using LPR to specify the DNS Host Name and DNS Domain Name settings, you can use the machine without specifying the IP address of the machine.

11 Click [OK].

The settings become valid after you reset the print server or restart the machine.

To reset the print server, under [Device Manager], select [Network] → click [Reset].

The protocol settings are complete.

Settings Using the FTP Client

1 Start up the MS-DOS prompt or the Command prompt.

If you are using UNIX, display the console screen.

2 Execute the following command.

`ftp` <machine IP address>

3 Enter "root" as the user name.

● **If a password is set for the machine:**

❑ Enter the password set for the machine.

● **If no password is set:**

❑ Press [Enter] on the keyboard without entering a password.

NOTE

- You can log in using a user name other than "root" (blank, etc.). However, you cannot specify settings. You can only perform operations.
- You cannot log in as "Anonymous".

4 Execute the following command to download the config (configuration) file.

```
get config
```

5 Edit the downloaded config file using Notepad (or similar program).

For an explanation of each item, see "Network Setting Items," on p. 6-8.

6 Execute the following command to upload the config file.

```
put config CONFIG
```

7 To confirm the settings, execute the following command to reset the print server.

```
get reset
```

You can also confirm that the settings are valid by restarting the machine.

The protocol settings are complete.

Setting Up a Computer for Printing

After you have completed the protocol settings of the machine, you are ready to set up each of the computers for printing.

■ Connecting to a TCP/IP Network

All computers that use the printer must have TCP/IP client software installed and must be enabled for TCP/IP network use. For details, see the manuals provided with the operating system.

■ Installing the Printer Driver and Specifying the Printer Destination Setting

To print from a computer, you must install a printer driver and specify a setting for the printer destination. The printer destination setting differs depending on the print application used for printing. Use the following information as a guide to determine the print application you are using, and then perform the necessary operations.

- LPD (Line Printer Daemon)

  This is the print application generally used with TCP/IP. See "Printer Connection Method (LPD/Raw)," on p. 2-22 to install the printer driver and to specify the printer destination setting.

- Raw

  This is a print application used with Windows 2000/XP. It can print at higher speeds than LPD. See "Printer Connection Method (LPD/Raw)," on p. 2-22 to install the printer driver and to specify the printer destination setting.

- IPP (Internet Printing Protocol)

  This is a print application that can be used with Windows 95/98/Me/2000/XP. It uses the HTTP protocol to print using internet/intranet connections. See "Printer Connection (IPP)," on p. 2-33 to install the printer driver and specify the printer destination setting.

- FTP (File Transfer Protocol)

  This is a print application that prints files by copying them to the printer using FTP client software. For details, see "Printer Management," on p. 2-37.

IMPORTANT

- If the IP address range settings in the Remote UI do not permit the IP address of a computer in which a printer driver is installed, you cannot print from the computer. For details, see Chapter 2, "Remote UI Functions," in the *Remote UI Guide*.
- If printing with IPP, the [Pause Printing and Cancel All Documents] settings on the Printer menu in the Windows print queue cannot be used. (To view the print queue, click the [Start] Menu → point to [Settings] → click [Printers] → double-click the icon of the machine.)

NOTE

Configuration of Windows 2000/XP or Windows NT as a print server provides efficient management of your network printer. For the detailed procedure, see "Print Server Settings," on p. 2-35.

Printer Connection Method (LPD/Raw)

Windows 95/98/Me

1 Install the printer driver. (See the *PCL Driver Guide*.)

When the dialog box for selecting the printer destination appears, select [Local printer]. Do not select [Network printer].

The port selection can be changed after installation. You can select any port, such as [LPT1].

2 Install the LPR Port Utility from the Network User Software CD-ROM provided with the machine.

- ❑ Insert the Network User Software CD-ROM into the CD-ROM drive.
- ❑ Double-click the [My Computer] icon.
- ❑ Right click the CD-ROM drive icon → click [Open] on the pop-up menu.
- ❑ Double-click the LPRPORT folder.
- ❑ Double-click the [Setup] icon.

  In some environments this icon appears as [Setup.exe].

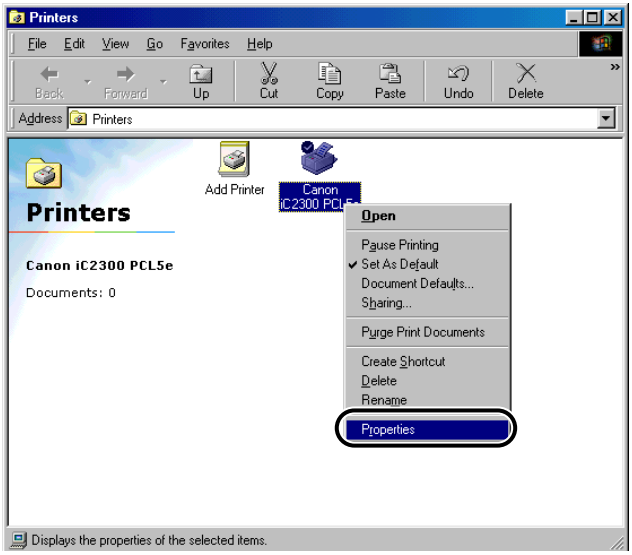
  The Install program starts.
- ❑ Follow the instructions to install the LPR Port Utility.

IMPORTANT

Depending on your environment, the CD-ROM menu is displayed when you insert the CD-ROM into the CD-ROM drive. In this case, click [Finish] → perform step 3.

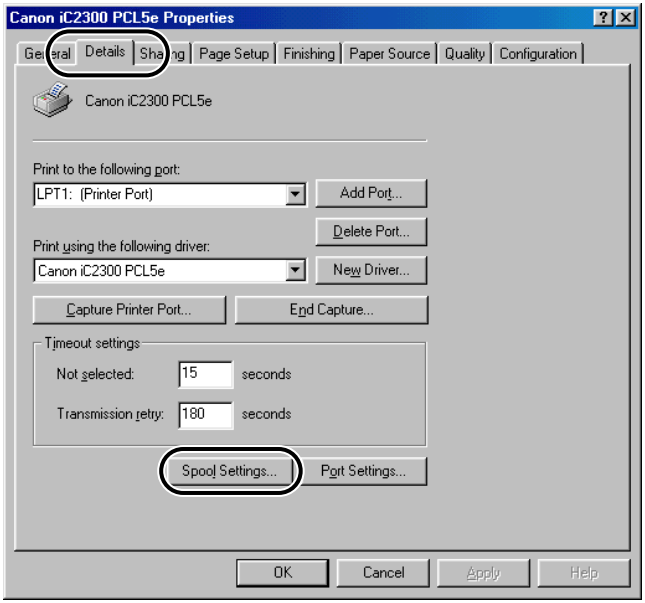
3 Open the Printer Properties dialog box.

- ❑ On the [Start] menu, point to [Settings] → click [Printers].
- ❑ Right click the printer icon you installed in step 1.
- ❑ On the pop-up menu, click [Properties].

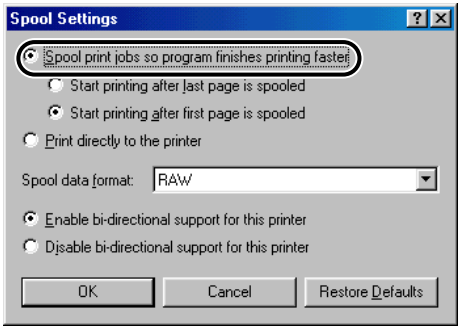


4 Specify the Spool settings.

❑ Click the [Details] tab to display the [Details] sheet.



❑ Click [Spool Settings] to open the [Spool Settings] dialog box.



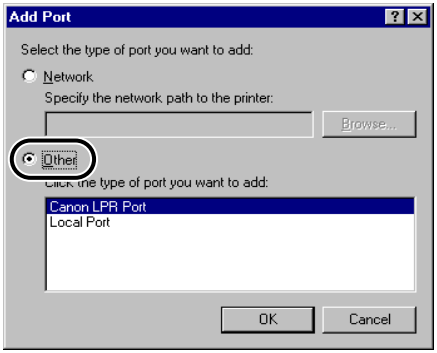
❑ Select [Spool print jobs so program finishes printing faster].

❑ Click [OK].

5 Specify the Port settings.

❑ Click [Add Port] to open the [Add Port] dialog box.

❑ Select [Other].

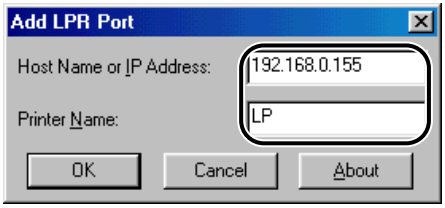


❑ Under [Click the type of port you want to add], select [CANON LPR Port] → click [OK].

The [Add LPR Port] dialog box opens.

❑ Enter the printer host name or IP address in [Host Name] or [IP Address].

❑ Enter "LP" in [Printer Name] → click [OK].



IMPORTANT

Before setting the port, check that the machine is connected to the network, and that the machine is turned ON.

NOTE

You can specify a print queue in [Printer Name]. The following three print queues are available (be sure to use only capital letters to enter a print queue):

- LP: The machine prints according to its spool settings. Normally enter "LP" as a print queue.
- SPOOL: The machine prints only after spooling a print job on the hard disk regardless of its spool settings.
- DIRECT: The machine prints without spooling a print job on the hard disk regardless of its spool settings.

6 Click [OK] to enable the settings.

The printer destination settings are complete.

Windows 2000/XP

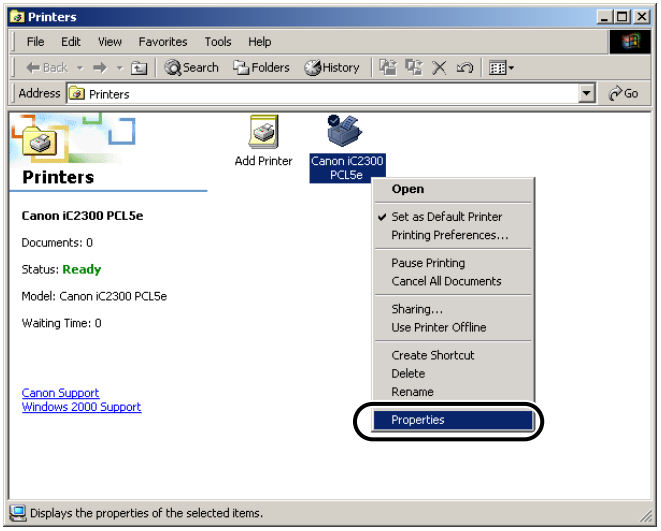
1 Install the printer driver. (See Chapter 1, "Before You Start Using This Machine," in the *PCL Driver Guide*.)

When the dialog box for selecting the printer connection method appears, select [Local printer] → select [Automatically detect and install Plug and Play printer]. Do not select [Network printer].

The port selection can be changed after installation. You can select any port, such as [LPT1].

2 Open the Printer Properties dialog box.

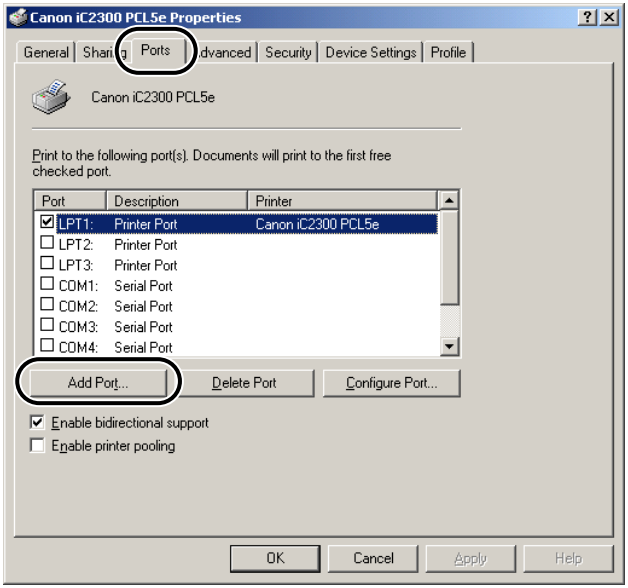
- ❑ On the [Start] menu, point to [Settings] → click [Printers].
- ❑ Right click the icon of the printer you want to use for printing.
- ❑ On the pop-up menu, click [Properties].



3 Set up the printing destination.

❑ Click the [Ports] tab to display the [Ports] sheet.

❑ Click [Add Port] to open the [Printer Ports] dialog box.



❑ From [Available Ports], select [Standard TCP/IP Port] → click [New Port].

The [Add Standard TCP/IP Printer Port Wizard] starts.

❑ Click [Next].

❑ In [Printer Name] or [IP Address], enter the printer IP address or printer host name → click [Next].

After the computer has confirmed that there is a printer at the IP address you entered, the [Completing the Add Standard TCP/IP Printer Port Wizard] window appears.

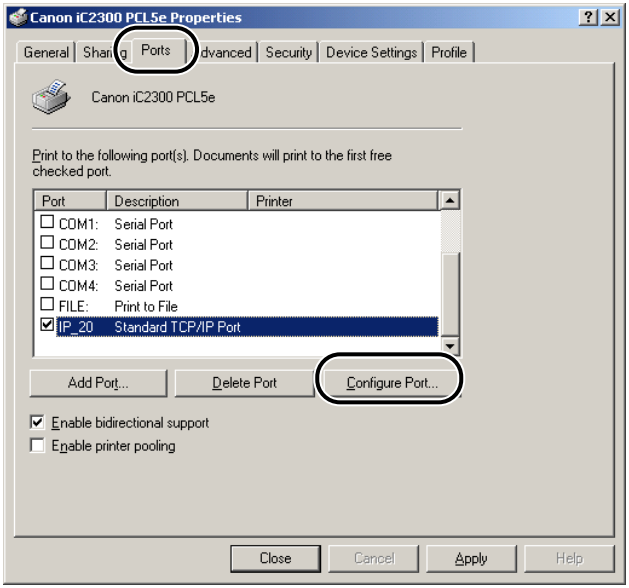
If the dialog box displays <Additional Port Information Required>, follow the instructions on the screen to search again, or select [Standard-Canon Network Printing Device with P9100] from [Device type] → click [Next] to exit the Wizard.

❑ Click [Finish].

❑ Click [Close] to close the [Printer Ports] dialog box.

4 If you are using LPD, change the port configuration information.

❑ Click [Configure Port].



❑ Select [LPR] under [Protocol], enter "LP" in [Queue Name] under [LPR Settings] → click [OK].

NOTE

- If you are using Raw, this step is not required.
- You can specify a print queue in [Queue Name]. The following three print queues are available (be sure to use only capital letters to enter a print queue):
  - LP: The machine prints according to its spool settings. Normally enter "LP" as a print queue
  - SPOOL: The machine prints only after spooling a print job on the hard disk regardless of its spool settings.
  - DIRECT: The machine prints without spooling a print job on the hard disk regardless of its spool settings.

5 Click [OK] to enable the settings.

The printer destination settings are complete.

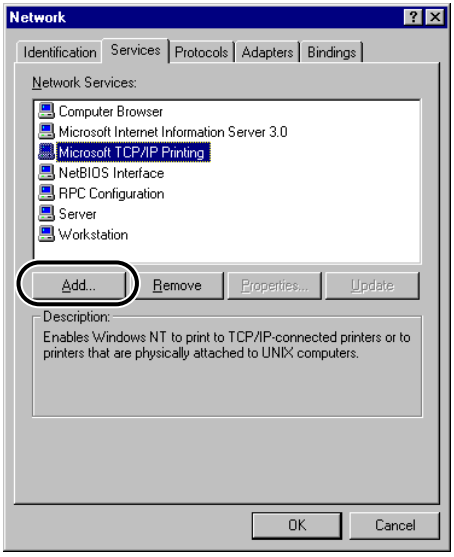
1 Check that [Microsoft Windows TCP/IP Printing] is installed.

- ❑ Right click the [Network Neighborhood] icon on the screen → click [Properties].
- ❑ Click the [Services] tab to display the [Services] sheet.

  If [Microsoft TCP/IP Printing] is not included in [Network Services], proceed to step 2; otherwise skip to step 3.

2 If [Microsoft TCP/IP Printing] is not installed, install it.

- ❑ Click [Add].



- ❑ Select [Microsoft TCP/IP Printing] from [Network Services] → click [OK].
- ❑ When asked to insert the Windows NT setup disk, insert the disk, and then continue.

  After the files have been copied, the [Network] dialog box opens.
- ❑ Click [OK].
- ❑ Click [Restart] to restart Windows NT.

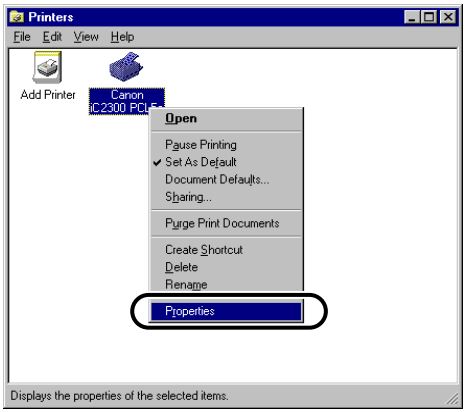
3 Install the printer driver. (See Chapter 1, "Before You Start Using This Machine," in the *PCL Driver Guide*.)

When the dialog box for selecting the printer management appears, select [My Computer]. Do not select [Network printer server].

The port selection can be changed after installation. You can select any port, such as [LPT1].

4 Open the [Printer Properties] dialog box.

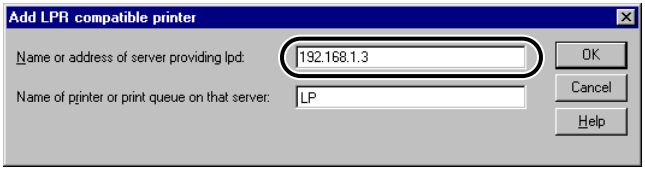
- ❑ On the [Start] menu, point to [Settings] → click [Printers].
- ❑ Right click the printer icon you want to use for printing.
- ❑ On the pop-up menu, click [Properties].



5 Set up the printing destination.

- ❑ Click the [Ports] tab to display the [Ports] sheet.
- ❑ Click [Add Port] to open the [Printer Port] dialog box.
- ❑ From [Available Printer Ports], select [LPR Port] → click [New Port].

  The [Add LPR compatible printer] dialog box opens.
- ❑ Enter the IP address or printer host name in [Name or address of server providing LPD].



- ❑ Enter "LP" in [Name of printer or print queue on that server] → click [OK].

NOTE

You can specify a print queue in [Name of printer or print queue on that server]. The following three print queues are available (be sure to use only capital letters to enter a print queue):

- LP: The machine prints according to its spool settings. Normally enter "LP" as a print queue.
- SPOOL: The machine prints only after spooling a print job on the hard disk regardless of its spool settings.
- DIRECT: The machine prints without spooling a print job on the hard disk regardless of its spool settings.

6 Click [OK] to enable the settings.

The printer destination settings are complete.

UNIX

NOTE

Printing using LPD is explained below. For an explanation of the printing procedure using FTP, see "Printer Management," on p. 2-37.

1 Log in to a workstation as a superuser.

2 Set up the spooling system.

● **Example using Solaris 1.x**

❑ Add the following to the /etc/printcap file:

<Print queue name>|<comment>:\

:lp=<device special file>:\

:sd=<spool directory>:\

:rm=<machine IP address or host name>:

Input example:

print_queue_name|comments:\

:lp=/var/spool/print_queue_name/.null:\

:sd=/var/spool/print_queue_name:\

:rm=printer_host_name:

● **Example using Solaris 2.x**

❑ Start the admintool utility.

❑ Select [Browse] → [Printers].

❑ Select [Edit] → [Add. Select Access to Printer].

❑ In [Printer Name], enter the desired print queue name.

❑ In [Print Server], enter the printer host name or IP address.

❑ Click [OK].

● Example using Red Hat Linux

- ❑ Start the Printer Configuration utility on the Control Panel.
- ❑ Select [Add] → [Other Unix (lpd) Queue] → press [OK].
- ❑ In [Printer Name], [Remote Host], and [Remote Queue], enter the desired print queue name, print IP address or name, and "LP".
- ❑ To use a filter, select the filter. If there is no appropriate filter for your machine, temporarily select a filter, exit the Printer Configuration utility, and then change the postscript.cfg file in the spool directory to match your machine. For details, see the ghostscript manual.

● Example using Turbolinux

- ❑ Execute the turboprintcfg command.
- ❑ Select [Add] → [Remote LPD Queue] → click [OK].
- ❑ Enter the desired print queue name → select [Continue].
- ❑ Select [Configure] from [LPD Settings] → enter the machine host name or IP address in [Remote Host name], and "LP" in [Remote Queue].
- ❑ Return to the initial screen → select [Save and Exit].
- ❑ When you do not use a filter, open the /etc/printcap file, and then delete one line starting with ":if=" in the added print queue's section.
- ❑ When you use a filter, change the postscript.cfg file in the spool directory to match your machine. For details, see the ghostscript manual.

● Example using HP-UX

- ❑ Start the SAM utility.
- ❑ Select [Printers and Plotters] → [Printers/Plotters] from the menu.
- ❑ Select [Add Remote Printer/Plotter] from the [Actions] menu.
- ❑ Enter the desired Print queue name in [Printer Name], and printer host name or IP address in [Remote System Name].
- ❑ Enter "LP" in [Remote Printer Name].
- ❑ Select [Remote Printer] on a BSD System.
- ❑ Click [OK].

● Example using IBM-AIX

- ❑ Start the SMIT utility.
- ❑ Select [Print Spooling] → [Print Queue Addition] → select [Remote].
- ❑ Select [Standard Process Addition].
- ❑ Enter the desired additional Print queue name in [Queue Name] and the printer host name or IP address in [Remote Server Host Name].
- ❑ Enter "LP" in [Remote Server Queue Name].
- ❑ Enter "BSD" in [Remote Server Print Spooler Type].

NOTE

- The admintool utility, SAM utility, and SMIT utility belong to the operating systems. For specific operating instructions, see the operating system manual.
- The above procedures are only examples. The setup procedures for your environment may differ.
- You can specify a print queue. The following three print queues are available (be sure to use only capital letters to enter a print queue):
  - LP: The machine prints according to its spool settings. Normally enter "LP" as a print queue.
  - SPOOL: The machine prints only after spooling a print job on the hard disk regardless of its spool settings.
  - DIRECT: The machine prints without spooling a print job on the hard disk regardless of its spool settings.

The host computer settings are complete.

Printer Connection (IPP)

Windows 95/98/Me/2000/XP

1 Check the IP address range settings in the Remote UI to see whether the IP address of the computer in which a printer driver is to be installed is permitted. (See Chapter 2, "Remote UI Functions," in the *Remote UI Guide*.)

IMPORTANT

- If the IP address range settings do not permit the IP address, you cannot install a printer driver.
- If the IP address of the computer is beyond the range of the permitted addresses in the IP Address Range Settings menu in the Remote UI, you cannot print from the computer.

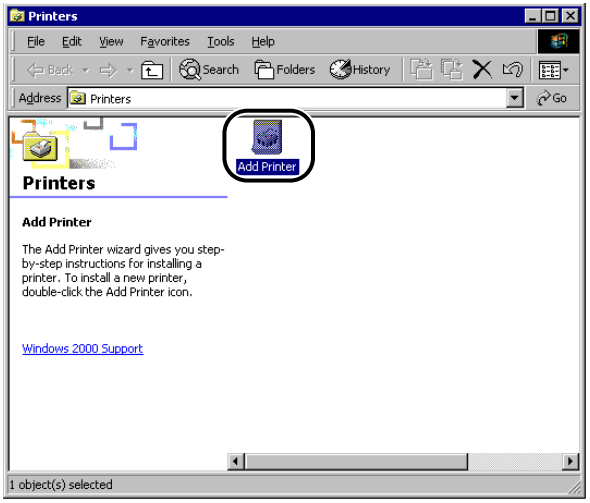
NOTE

For Windows 95/98/Me: Install the IPP Client software for Windows 95/98/Me provided by Microsoft, and then restart your computer.

2 Start the Add Printer Wizard.

❑ On the [Start] menu, point to [Settings] → click [Printers].

❑ Double-click the [Add Printer] icon.



3 Enter the URL of your printer.

❑ Click [Next].

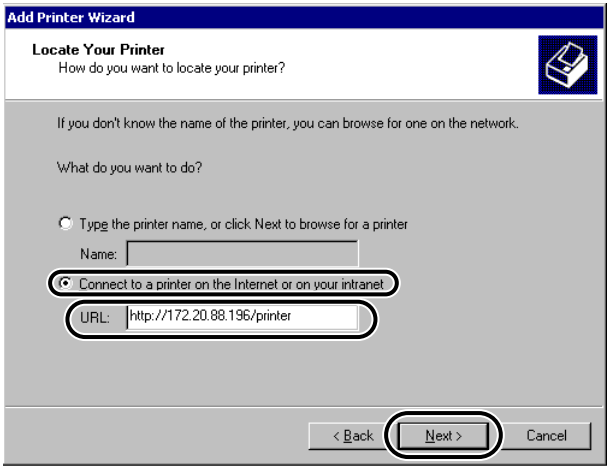
A dialog box for selecting the printer connection method appears.

❑ Select [Network Printer] → click [Next].

A dialog box for locating your printer appears.

❑ Select [Connect to a printer on the Internet or on your intranet] → enter the following URL in [URL] → click [Next].

http://<the machine IP address or printer name>/printer



A dialog box for selecting the printer manufacturer and printer name appears.

❑ Click [Have Disk] → specify the folder on the CD-ROM that contains the printer driver.

4 Follow the instructions on the screen to complete the installation.

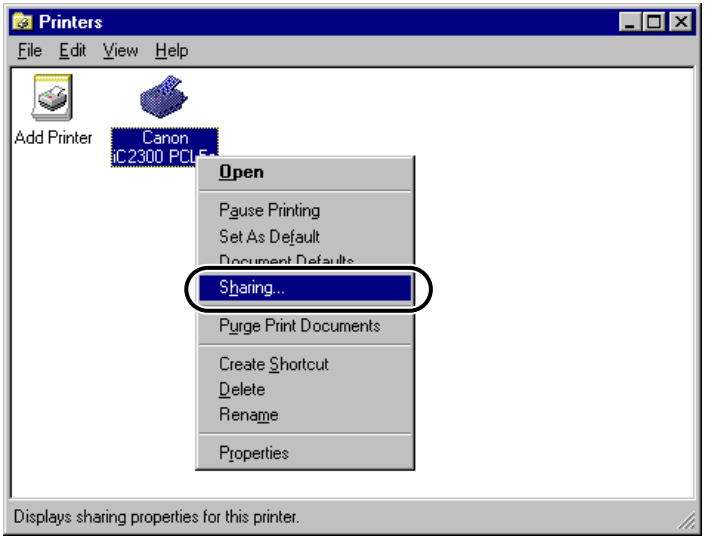
The printer destination settings are complete.

Print Server Settings

If Windows NT or Windows 2000/XP is on your network, the following procedure enables you to set up a print server for more efficient management of network printers. Once a print server is set up, print jobs can be managed by the print server. Also, by setting up an alternate driver for the print server, printer drivers can be installed in each computer via the network.

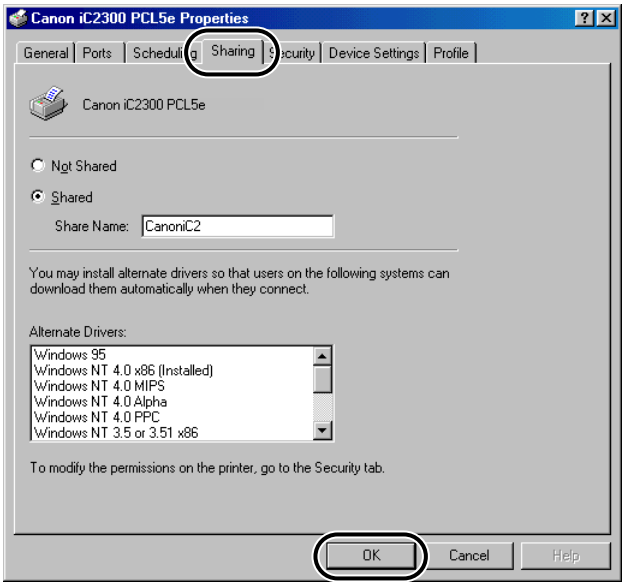
1 In the Printer Driver Properties dialog box, display the [Sharing] sheet.

- ❑ On the [Start] menu, point to [Settings] → click [Printers].
- ❑ Right click the icon of the machine you want to use for printing.
- ❑ On the pop-up menu, click [Sharing].



2 Specify the Sharing settings.

- ❑ Select [Shared] → enter a share name.
- ❑ If you are using Windows NT, select the printer driver you want to install from [Alternate Drivers]. If you are using Windows 2000/XP, click [Additional Drivers] → select the printer driver you want to install.
- ❑ Click [OK].



When the alternate driver is installed, additional windows will open for entering the location of the file containing the printer driver. Follow the instructions in these windows.

IMPORTANT

When using Windows NT 4.0, the use of the alternate driver function requires the installation of the Windows NT Service Pack 5 or later.

NOTE

To install the printer driver on another computer, use the [Printer Wizard] window for selecting the printer destination → select [Network printer] → select the shared printer for the computer selected in the print server.

The shared printer settings are complete.

Printer Management

The machine enables you to use any of the following software to check the status and to specify the settings on your computer.

- NetSpot Device Installer (Canon software included on the Network User Software CD-ROM)
- NetSpot Console (via a web browser) (Canon software included on the Network User Software CD-ROM)
- A web browser (Remote UI)
- An FTP client

Printer Management Using NetSpot Console or NetSpot Device Installer

You can use NetSpot Console or NetSpot Device Installer to manage various network printers on your computer. (See "NetSpot Device Installer," on p. 5-2)

Printer Management Using a Web Browser (Remote UI)

You can use the Remote UI (User Interface) installed in the machine to monitor the printer status and edit the machine settings remotely on a web browser.

For instructions on how to start the Remote UI, see step 1 of "Settings Using a Web Browser (Remote UI)," on p. 2-14. For instructions how to use the Remote UI, see Chapter 2, "Remote UI Functions," in the *Remote UI Guide*.

Printer Management Using the FTP Client

To manage the printer with the FTP client, follow the procedure below. With the FTP client, you can print files from the machine, and upgrade the firmware of the printer network module.

1 Start up the MS-DOS prompt or the Command prompt.

If you are using UNIX, display the console screen.

2 Execute the following command.

`ftp` <machine IP address>

3 Enter "root" as the user name.

If a password is set for the machine, enter your password. If no password is set, press [Enter] key on the keyboard without entering a password.

You can perform the following operations:

- Printing a file: `put` <file name to be printed> `PRINTER`
- Resetting the printer network module: `get reset`
- Acquiring the current setting values: `get config`
- Acquiring the default setting values: `get defaults`
- Setting the printer to file values: `put` <setting file> `CONFIG`
- Upgrading firmware: `put` <firmware image file> `FLASH`

IMPORTANT

Use the bindery mode for printing of bindery files created with a Windows printer driver.

NOTE

- You can log in using a user name other than "root" (blank, etc.). However, you cannot specify settings. You can only perform operations.
- You cannot log in as "Anonymous".

Using a NetWare Network (Windows)

3
CHAPTER

This chapter describes settings and procedures for using the machine with a NetWare network.

NetWare Network Setup Procedures 3-2
NetWare Print Service Settings 3-3
Types of Print Service 3-3
Settings Using NetSpot Console or NetSpot Device Installer 3-4
Setup Using NetWare Administrator or PCONSOLE 3-4
Protocol Settings 3-8
Printer Protocol Settings 3-8
Setting Up a Computer for Printing 3-10
Connecting to a NetWare Network 3-10
Installing Printer Drivers 3-10
Setting the Printer Destination 3-10

NetWare Network Setup Procedures

To use a NetWare network, it is necessary to perform the following procedures.

1 **Network Cable Connection (See Chapter 1, "Before You Start Using This Machine," in the *PCL Printer Guide*.)**

Connect the network cables in accordance with the *PCL Printer Guide*.

2 **NetWare Print Service Settings (See "NetWare Print Service Settings," on p. 3-3.)**

Specify the NetWare print service settings. To specify the settings, use:

- NetSpot Device Installer (Canon software included on the Network User Software CD-ROM)
- NetSpot Console (via a web browser) (Canon software included on the Network User Software CD-ROM)
- NWADMIN or PCONSOLE (Novell software provided with NetWare)

3 **Protocol Settings (See "Protocol Settings," on p. 3-8.)**

Specify the protocol settings. To specify the settings, use:

- NetSpot Device Installer (Canon software included on the Network User Software CD-ROM)
- NetSpot Console (via a web browser) (Canon software included on the Network User Software CD-ROM)
- A web browser (Remote UI)
- An FTP client

4 **Computer Settings for Printing (See "Setting Up a Computer for Printing," on p. 3-10.)**

Specify the settings for each computer you use for printing.

IMPORTANT

- It is recommended that the network manager perform steps 1, 2, and 3 above.
- To configure settings with software other than NetSpot Console or NetSpot Device Installer, TCP/IP protocol must be supported by your network environment.
- When printing in a NetWare network, disable the banner page.

NetWare Print Service Settings

To print using a NetWare network, you need to specify print service settings, including the print server and queue settings. You can use any of the software listed below to specify the print service settings from your computer. Specify the settings using the easiest method.

- NetSpot Device Installer (Canon software included on the Network User Software CD-ROM)
- NetSpot Console (via a web browser) (Canon software included on the Network User Software CD-ROM)
- NWADMIN or PCONSOLE (Novell software provided with NetWare)

IMPORTANT

- To specify the print service settings from NetSpot Console or NWADMIN, the computer must have Novell Client (NetWare Client by Novell) installed.
- The following procedures explain a sample NetWare setup procedure. Depending on your environment, the actual setup procedure may differ.

Types of Print Service

Before specifying print service settings, refer to the following descriptions to determine the type of print service you are using.

NOTE

- Normally with NetWare 4.x or later, it is recommended that you use NDS print service. With NetWare 3.x, it is recommended that you use Bindery print service. This manual describes procedures for these two combinations only.
- With NetWare 5.x, you can use NDPS (Novell Distributed Print Services). If using NDPS, the gateway should be the Novell printer gateway provided with NetWare. This manual does not describe NDPS settings. For NDPS settings, see the NetWare manual.

■ NDS (Novell Directory Service) and Bindery Mode

This machine supports both NDS and Bindery mode.
Determine the appropriate mode according to the network environment you are using. (If you are using NetWare 3.x, only the Bindery mode is available.)

■ **Queue Server Mode and Remote Printer Mode**

This machine supports both queue server mode and remote printer mode.

- Queue Server Mode

  When the machine is used in the queue server mode, all print server functions are provided by the machine itself; no other print server hardware or software is required. In NDS queue server mode (NDS PServer), the NDS print server is used for printing. In Bindery queue server mode (Bindery PServer), the Bindery print server is used for printing. In queue server mode, a separate NetWare user operating license is required for each machine.

- Remote Printer Mode

  In the remote printer mode, a NetWare print server is required to control the printer. The machine prints using the NDS print server in NDS remote printer mode (NPrinter), and the Bindery print server in Bindery remote printer mode (RPrinter).

Settings Using NetSpot Console or NetSpot Device Installer

You can install NetSpot Console or NetSpot Device Installer from the Network User Software CD-ROM provided with the machine, and use it to specify the protocol settings on the computer you are using.

For instructions on how to install NetSpot Console or NetSpot Device Installer and how to specify the protocol settings using NetSpot Console or NetSpot Device Installer, see "NetSpot Console," on p. 5-3, or "NetSpot Device Installer," on p. 5-2, respectively.

Setup Using NetWare Administrator or PCONSOLE

Using NetWare Administrator in NDS Queue Server Mode or Remote Printer Mode (NetWare 4.x or Later)

1 Log in to NetWare as Administrator (or equivalent access) → start NetWare Administrator.

2 Execute Quick Setup.

❑ Select the container object for the printer object you want to create → click [Print Services Quick Setup] on the [Tools] menu.

3 Specify the [Print Server name], [Printer], and [Queue] settings.

❑ Enter the print server name in [Print Server name].

To use an existing print server, click the button to the right of [Print Server name] → select the print server from the list box.

❑ Under [Printer], enter the printer name in [Name].

❑ From [Type], select the printer connection method.

If you are using the queue server mode, select [Other/Unknown].
If you are using the remote printer mode, select [Parallel] → click [Communication] to open the [Parallel Communication] dialog box → select [LPT1] from [Port], and [Manual load] under [Connection type]. Under [Interrupts], specify the appropriate setting for your environment → click [OK] to close the [Parallel Communication] window.

❑ Under [Print Queue], enter the queue name in [Name]. In [Volume], enter the volume in which the queue is placed.

To use an existing print server, click the button to the right of [Volume] → select the print server from the list box.

❑ Click [Create] → exit NetWare Administrator.

NOTE

- Be sure to remember the name of the print server. You need it to specify the machine's protocol settings.
- If you perform Quick Setup, the machine is allocated printer number zero. If you are using the queue server mode, do not change the printer number from zero.

4 If you are using the remote printer mode, start the print server.

❑ If you are using the NetWare file server as a print server, enter "Load PSERVER.NLM" in the file server → press [Enter] on the keyboard.

NOTE

If you are using the queue server mode, this step is not required.

NetWare print service settings are complete. Proceed to "Protocol Settings," on p. 3-8.

Using PCONSOLE in the Queue Server Mode or Remote Printer Mode in the Bindery Mode (NetWare 3.x)

1 Log in to NetWare as Supervisor → start PCONSOLE.

2 If you have not set up a print server yet, set up the print server.

- ❑ On the [Available Options] menu, select [Print Server Information] → press [Enter] on the keyboard.
- ❑ Press [Insert] on the keyboard.
- ❑ Enter the name of the print server you are setting up → press [Enter] on the keyboard.
- ❑ Press [Esc] on the keyboard to return to the [Available Options] menu.

NOTE

- Be sure to remember the name of the print server. You need it to specify the printer's protocol settings.
- To use the machine in queue server mode in a multiple NetWare server environment, use the same print server name for each NetWare server.

3 Set up a Queue, and then assign the print server to the queue.

- ❑ On the [Available Options] menu, select [Print Queue Information] → press [Enter] on the keyboard.
- ❑ Press [Insert] on the keyboard.
- ❑ Enter the name of the queue you are setting up → press [Enter] on the keyboard.
- ❑ Select the name of the queue you specified → press [Enter] on the keyboard.
- ❑ Select [Queue Servers] → press [Enter] on the keyboard.
- ❑ Press [Insert] on the keyboard.
- ❑ Select the print server you set up in step 2 → press [Enter] on the keyboard.
- ❑ Press [Esc] on the keyboard repeatedly until the [Available Options] menu appears.

4 Assign the printer to the print server.

- ❑ On the [Available Option] menu, select [Print Server Information] → press [Enter] on the keyboard.
- ❑ Select the print server you set up in step 2 → press [Enter] on the keyboard.
- ❑ Select [Print Server Configuration] → press [Enter] on the keyboard.
- ❑ Select [Printer Configuration] → press [Enter] on the keyboard.

❑ From [Configured Printers], select the number of the printer you want to use → press [Enter] on the keyboard.

❑ To use queue server mode, select printer number [0]. For remote printer mode, you can select your desired printer number.

5 Specify the printer name, type, etc.

❑ In [Name], enter the name you want to use for the printer → press [Enter] on the keyboard.

❑ If you are using queue server mode, select [Defined elsewhere] from [Type]. If you are using remote printer mode → select [Remote Parallel, LPT 1] from [Type].

❑ Specify the remaining items → press [Esc] on the keyboard.

❑ In the confirmation box that opens, select [Yes] → press [Enter] on the keyboard.

❑ Press [Esc] on the keyboard to return to the [Print Server Configuration] menu.

6 Assign a queue to the printer.

❑ Select [Queues Serviced by Printer] → press [Enter] on the keyboard.

❑ Select the name of the printer you set up in step 5 → press [Enter] on the keyboard.

❑ Press [Insert] on the keyboard.

❑ Select the queue you set up in step 3 → press [Enter] on the keyboard.

7 Press [Esc] on the keyboard repeatedly until the [Exit PCONSOLE] window appears → select [Yes] to quit [PCONSOLE].

8 If you are using remote printer mode, start the print server.

❑ If you are using a NetWare file server as the print server, enter "LOAD PSERVER.NLM (print server name)" on the file server → press [Enter] on the keyboard.

❑ If you are using a dedicated print server, enter "PSERVER.EXE" and then the print server name on the print server → press [Enter] on the keyboard.

NOTE

This step is not required if you are using queue server mode.

NetWare print service settings are complete. Proceed to "Protocol Settings," on p. 3-8.

Protocol Settings

You can specify the protocol settings of the machine by using any of the following software. Specify the settings using the easiest method.

- NetSpot Device Installer (Canon software included on the Network User Software CD-ROM)
- NetSpot Console (via a web browser) (Canon software included on the Network User Software CD-ROM)
- A web browser (Remote UI)
- An FTP client

Printer Protocol Settings

You can install NetSpot Console or NetSpot Device Installer from the Network User Software CD-ROM provided with the machine, and use it to specify the protocol settings on the computer you are using.

For instructions on how to install NetSpot Console or NetSpot Device Installer and how to specify the protocol settings using NetSpot Console or NetSpot Device Installer, see "NetSpot Console," on p. 5-3, or "NetSpot Device Installer," on p. 5-2, respectively.

IMPORTANT

- The machine's MAC address is necessary. To check the MAC address using the control panel, follow the procedure below to perform a test print.
  1. Press PRINT (PRINT) → (OK) on the control panel; the Online indicator goes off.
  2. Press F1 (MENU) until <TEST MENU> appears.
  3. Press F2 (ITEM) until <PRINT EN CONFIG> appears in the second line of the display.
  4. Press F4 (ENTER).
- Check that the machine is connected to the network and that the machine's power is turned ON.

NOTE

- You can also find online instructions on how to install NetSpot Console in the *NetSpot Console User's Guide* or the Readme file, and how to set protocol settings in the *NetSpot Console User's Guide*, Online Manual, or Online Help, all of which are included in the NetSpot Console folder on the Network User Software CD-ROM provided with the machine.

- The online instructions on how to install and set protocol settings using NetSpot Device Installer are found in the Readme file and Online Help, respectively, included in the NetSpot Device Installer folder on the Network User Software CD-ROM.
- To specify settings using software other than NetSpot Console or NetSpot Device Installer, see Chapter 2, "Using a TCP/IP Network (Windows/UNIX)."

Setting Up a Computer for Printing

After you have completed NetWare print service settings and printer protocol settings, you are ready to set up each of the computers for printing.

Connecting to a NetWare Network

In order to use a NetWare network, all computers that will perform printing need to have NetWare client software installed. For details, see your NetWare and operating system manuals.

Installing Printer Drivers

NetSpot Console or NetSpot Device Installer is software for specifying printer and network settings.

Printing from a computer requires the installation of a printer driver. (See Chapter 1, "Before You Start Using This Machine," in the *PCL Driver Guide*.) In the installation procedure, select the network printer as the printer destination, and select the print queue that you created in "NetWare Print Service Settings," on p. 3-3.

Setting the Printer Destination

1 On the [Start] menu, point to [Settings] → click [Printers] → right click the icon of the machine you will use for printing → click [Properties].

2 Click the [Details] tab or the [Port] tab to display the [Details] sheet or the [Port] sheet → set the printer destination port to the print queue you created in "NetWare Print Service Settings," on p. 3-3.

3 Click [OK] to enable the settings.

NOTE

If you set up the printer destination when you installed the printer driver, this step is not necessary.

Using a NetBIOS Network (Windows 95/98/Me)

4

CHAPTER

This chapter describes settings and procedures for using the machine with a NetBIOS network.

NetBIOS Network Setup Procedures 4-2

Setting Up a Computer for Printing 4-3

- NetBIOS Network Connection Method 4-3
- Installing the Printer Driver 4-4
- Setting the Printer Destination 4-4

NetBIOS Network Setup Procedures

To use a NetBIOS network, it is necessary to perform the following procedures.

1 **Network Cable Connection (See Chapter 1, "Before You Start Using This Machine," in the *PCL Printer Guide*.)**

Connect the network cables in accordance with the *PCL Printer Guide*.

2 **Computer Settings for Printing (See "Setting Up a Computer for Printing," on p. 4-3.)**

Specify the settings for each computer you use for printing.

IMPORTANT

- It is recommended that the network manager perform Step 1 above.
- The machine does not support NetBIOS over TCP/IP (NetBT). If you are using a TCP/IP in your environment, use the TCP/IP protocol for printing. (See Chapter 2, "Using a TCP/IP Network (Windows/UNIX).")

Setting Up a Computer for Printing

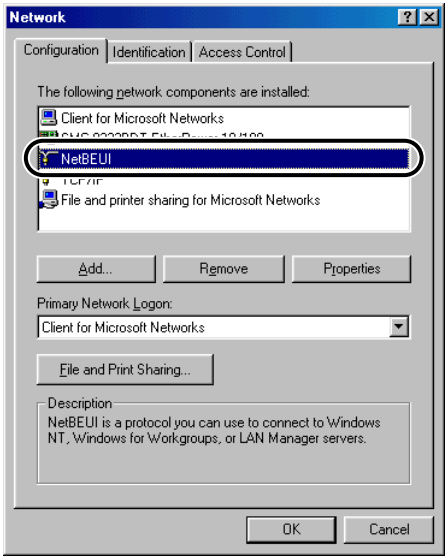
To set up each of the computers for printing, follow the procedure below.

NetBIOS Network Connection Method

Each computer used for printing must have NetBEUI client software installed. To check whether NetBEUI client software is installed, follow the procedure below.

1 Right click the [Network Neighborhood] icon on the screen → click [Properties].

2 Check that [NetBEUI] is in [The following network components are installed].



If [NetBEUI] is not installed, click [Add] to install [NetBEUI].

Installing the Printer Driver

In order to print, it is necessary to install the printer driver. (See Chapter 1, "Before You Start Using This Machine," in the *PCL Driver Guide*.)

When the screen for selecting the printer destination is displayed during printer driver installation, select [Local Printer]. Do not select [Network Printer].

The port selection can be changed after installation. You can select any port, such as [LPT1].

IMPORTANT

- If the IP address range settings do not permit the IP address, you cannot install a printer driver.
- If the IP address of the computer is beyond the range of the permitted addresses in the IP Address Range Settings menu in the Remote UI, you cannot print from the computer.

Setting the Printer Destination

To set the printer destination, follow the procedure below.

1 Install the NetBIOS/NetBEUI Port Monitor utility from the Network User Software CD-ROM provided with the machine.

❑ Insert the CD-ROM into the CD-ROM drive.

❑ Double-click the [My Computer] icon on the screen.

❑ Right click the CD-ROM drive icon → click [Open] on the pop-up menu.

❑ Double-click the Portmon folder.

❑ Double-click the [Setup] icon.

In some environments, this icon appears as [Setup.exe].

The install program starts.

❑ Follow the instructions on the screen to complete the installation.

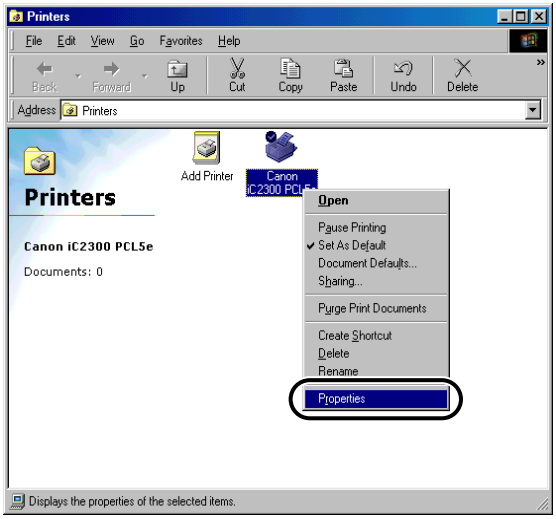
NOTE

Depending on the environment you are using, the CD-ROM menu may be automatically displayed when you insert the CD-ROM into the CD-ROM drive. In this case, click [End] → perform the procedures in this step.

2 Open the Printer driver's Property dialog box.

❑ On the [Start] menu, point to [Settings] → click [Printer].

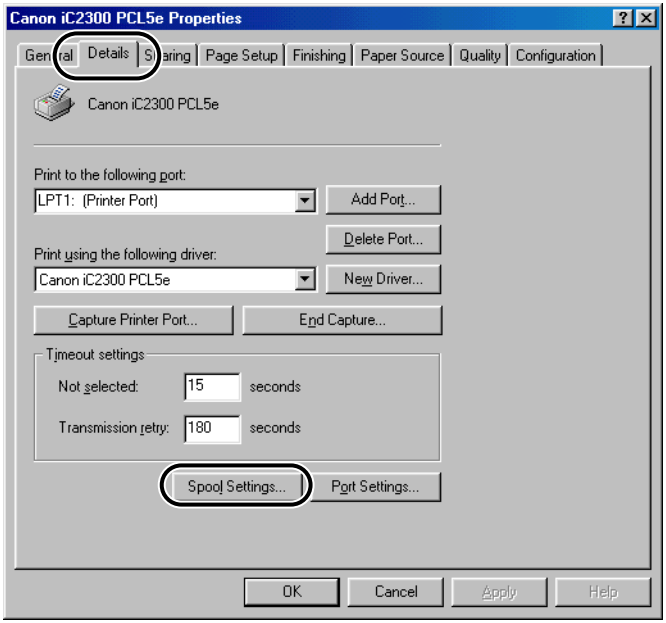
❑ Right click the [printer] icon you want to use for printing → click [Properties].



3 Specify the Spool settings.

❑ Click the [Details] tab to display the [Details] sheet.

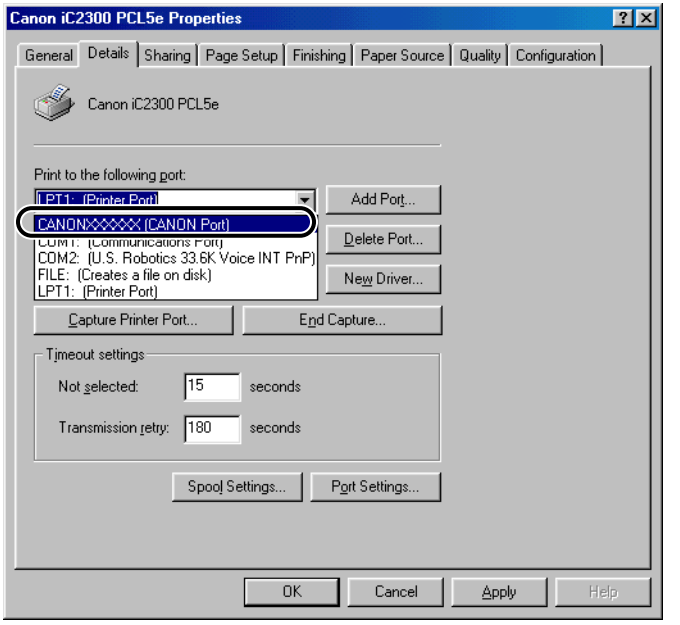
❑ Click [Spool Setting] to open the [Printer Spool Setting] dialog box.



❑ Select [Spool print jobs] so the program finishes printing faster.

❑ Click [OK].

4 Select [CANONxxxxxx (CANON Port)] from [Print to the following port].



NOTE

- "xxxxxx" is the last 6 digits of the MAC address of the machine. To check the MAC address, follow the procedure below on the printer control panel to perform a test print.
  - 1. Press PRINT (PRINT)→ (OK) on the control panel; the Online indicator goes off.
  - 2. Press F1 (MENU) until <TEST MENU> appears.
  - 3. Press F2 (ITEM) until <PRINT EN CONFIG> appears in the second line of the display.
  - 4. Press F4 (ENTER).
- If [CANONxxxxxx (CANON Port)] is not displayed in [Print to the following port], see "Troubleshooting," on p. 6-2.

5 Click [OK] to enable the settings.

The printer destination settings are complete.

Using Utility Software for Network and Device Settings

5
CHAPTER

This chapter describes the utility software used for managing networks and printers.

NetSpot Device Installer 5-2
NetSpot Console. 5-3
Displaying the Readme File 5-3
Displaying the NetSpot Console User's Guide 5-4

NetSpot Device Installer

NetSpot Device Installer is utility software for specifying the initial settings of Canon devices connected to a network. Available on the CD-ROM, NetSpot Device Installer can be accessed directly without installation, enabling network users to quickly and easily specify the initial settings of network devices.

For the system requirements for NetSpot Device Installer and instructions on how to install the software, see the Readme file for NetSpot Device Installer. The procedure for displaying the Readme file is as follows:

1 **Insert the Network User Software Disc into the CD-ROM drive.**

2 **Double-click the [My Computer] icon on the screen → right-click the CD-ROM drive icon → click [Open] on the pop-up menu.**

3 **Find the subfolder for the desired language in the [NetSpot_Device_Installer] folder on the CD-ROM → double-click the [Windows] folder → double-click the [Readme] icon.**

NetSpot Console

NetSpot Console is utility software capable of managing devices connected to a network. This software enables network administrators to set or view various types of information about network devices using a web browser, such as list or map display of devices, detailed protocol settings, display and notification of device status, and job manipulations.

For the system requirements for NetSpot Console and instructions on how to install the software, see the *NetSpot Console User's Guide* or the Readme file. The procedure for displaying the *NetSpot Console User's Guide* or Readme file is as follows.

Displaying the Readme File

1 **Insert the Network User Software Disc into the CD-ROM drive.**

2 **Right-click the CD-ROM drive icon → click [Open] on the pop-up menu.**

3 **Find the subfolder for the desired language in the [NetSpot_Console] folder on the CD-ROM → double-click the [Windows] folder → double-click the [Readme] icon.**

Displaying the NetSpot Console User's Guide

1 **Insert the Network User Software Disc into the CD-ROM drive.**

2 **Right-click the CD-ROM drive icon → click [Open] on the pop-up menu.**

3 **Install Acrobat Reader in your computer.**

If Acrobat or Acrobat Reader is already installed in your computer, this step is not required.

4 **Find the subfolder for the desired language in the [NetSpot_Console] folder on the CD-ROM → double-click the [Guide] folder → double-click the PDF file.**

Appendix

6
CHAPTER

This chapter describes how to resolve printing problems, how to uninstall software, network setting items and software for doing so, the glossary, and the index.

Troubleshooting 6-2
How to Uninstall Software 6-6
LPR Port Utility Deletion 6-6
NetBIOS/NetBEUI Port Monitor Utility Deletion 6-7
Network Setting Items 6-8
Network Setting Items Using the Control Panel 6-8
Network Setting Items Using NetSpot Console, NetSpot Device Installer, a Web Browser (Remote UI), or an FTP Client 6-9
Available Software for Network Settings 6-14
Glossary 6-15
Index 6-21

Troubleshooting

This section describes how to resolve basic network printing problems.

Detailed information concerning the machine cannot be set or browsed using a web browser (Remote UI).

Cause The IP addresses of computers on which the web browser (Remote UI) is used are not allowed in the IP Address Range Settings menu in the Remote UI.

Remedy If the IP address range settings in the Remote UI do not permit the IP address of a computer on which a web browser (Remote UI) is used, you cannot set the machine setting items or browse information on the machine.
Check the IP address range settings in the Remote UI. (See Chapter 2, "Remote UI Functions," in the *Remote UI Guide*.)

Unable to Print from a TCP/IP Network

Cause 1 The machine and cable are not properly connected.

Remedy After checking the following connections, restart the machine.
Check that the machine is connected to the network using the proper cable. (See Chapter 1, "Before You Start Using This Machine," in the *PCL Printer Guide*.)

Cause 2 TCP/IP network is not properly set up.

Remedy Confirm that the IP addresses are properly set up. Check if the IP addresses were set using DHCP, BOOTP, or RARP, and then confirm that they are operating.

Cause 3 The computer that is printing is not properly set up.

Remedy Check the following:

- Confirm that the proper printer driver is installed. Check if you are printing from Windows 95/98/Me, each computer must have a printer driver installed. For instructions on installing printer drivers, see Chapter 1, "Before You Start Using This Machine," in the *PCL Driver Guide*.
- Confirm that the correct printer is set as the output destination for the computer that is printing. Check the output destination for the Printer in the Control Panel or Print Manager.

- If you are using LPD with Windows 95/98/Me, confirm that the spooling settings are made correctly. (See steps 3 to 5 in "Windows 95/98/Me," on p. 2-22.)

Cause 4 The name of the file being printed is too long.

Remedy Normally LPR (or the Microsoft TCP/IP Printer, if you are using Windows NT/2000/XP) sends jobs either under the name of the application software used for printing, or the file name. However, a job name longer than 255 characters cannot be sent to the printer. To correct this problem, rename the file with a shorter name.

Cause 5 The IP address of the computer from which data are to be sent to the machine is not permitted in the IP Address Range Settings menu in the Remote UI.

Remedy Check the IP address range settings in the Remote UI. (See Chapter 2, "Remote UI Functions," in the *Remote UI Guide*.)

Unable to Print from a NetWare Network

Cause 1 The machine and cable are not properly connected.

Remedy After checking the following connections, restart the machine.
Check that the machine is connected to the network using the proper cable. (See Chapter 1, "Before You Start Using This Machine," in the *PCL Printer Guide*.)

Cause 2 The NetWare network is not properly set up.

Remedy Check the following:
- Confirm that the NetWare file server is running.
- Confirm that there is sufficient disk space on the NetWare file server. Large files cannot be printed if there is insufficient disk space.
- Start NetSpot Console, NetSpot Device Installer, NWADMIN, or PCONSOLE, and then confirm that the print queue is set up properly and is active.
- Confirm that the network settings of the machine are correctly set. (See "Printer Protocol Settings," on p. 3-8.) Check the following in particular:
  - A valid frame type is selected from Frame Type.
  - Print Server Name and Printer Number are correctly specified.

Cause 3 The computer that is printing is not properly set up.

Remedy Check the following:
- Confirm that the proper print driver is installed. If you are printing from Windows 95/98/Me, each computer must have a printer driver installed.
- For instructions on installing printer drivers, see Chapter 1, "Before You Start Using This Machine," in the *PCL Driver Guide*.
- Confirm that the correct printer is set as the output destination for the computer that is printing. In Windows 95/98/Me, confirm the output destination for the Printer in the Control Panel or Print Manager.

Cause 4 Data transmission is not possible from the NetWare server to the machine on another subnet.

Remedy When the NetWare server transmits data to the machine, NCP Burst Mode is used. But depending on the network environment, the NetWare server fails to transmit data to a printer on another subnet. In this case, set NCP Burst Mode of the printer protocol to 'Off'. NCP Burst Mode cannot be set with NetSpot Console or NetSpot Device Installer; use a web browser or an FTP client to set it. (See "Printer Protocol Settings," on p. 3-8.)

Unable to Print from a NetBIOS Network or the Printer Port Name is not displayed in [Print to the following port].

Cause 1 The machine and cable are not properly connected.

Remedy After checking the connections, restart the machine.
Check that the machine is connected to the network using the proper cable. (See Chapter 1, "Before You Start Using This Machine," in the *PCL Printer Guide*.)

Cause 2 The computer that is printing is on a different subnet to the machine.

Remedy The machine uses NetBEUI protocol for printing, so printing cannot be performed in a network environment with a router between the computer that is printing and the machine. Use a different protocol for printing, or print from the machine without going through the router.

Cause 3 The computer that is printing is not properly set up.

Remedy Check the following:
- Confirm that the proper print driver is installed in each computer. For instructions on installing printer drivers, see Chapter 1, "Before You Start Using This Machine," in the *PCL Driver Guide*.
- Confirm that the correct printer is set as the output destination for the computer that is printing, and that the spool is properly set. (See "Setting the Printer Destination," on p. 3-10.) In Windows 95/98/Me, confirm the output destination for the printer in the control panel or Print Manager.

Cause 4 The IP address of the computer from which data are to be sent to the machine is not permitted in the IP Address Range Settings menu in the Remote UI.

Remedy Check the IP address range settings in the Remote UI. (See Chapter 2, "Remote UI Functions," in the *Remote UI Guide*.)

How to Uninstall Software

To uninstall the LPR Port utility or NetBIOS/NetBEUI Port Monitor utility in Windows 95/98/Me, follow the procedure below.

NOTE

To uninstall NetSpot Console or NetSpot Device Installer, see the NetSpot Console or NetSpot Device Installer Readme file for details.

LPR Port Utility Deletion

1 Set [Print Destination Port] of the printer driver to a port other than the Canon LPR Port.

The print destination port can be set using the [Details] sheet in the printer Properties dialog box.

The Canon LPR Port is displayed on the screen in a format such as <172.20.88.125@LP (Canon LPR Port)>.

2 Insert the Network User Software CD-ROM provided with the machine into the CD-ROM drive.

3 Double-click [Uninstlp] in the Lprport folder on the CD-ROM.

4 Follow the instructions on the screen to uninstall the LPR Port Utility.

NetBIOS/NetBEUI Port Monitor Utility Deletion

1 **On the [Start] menu, point to [Settings] → click [Control Panel].**

2 **Double-click the [Application Add/Delete] icon.**

3 **Select the software you want to delete from the software list → click [Add/Delete].**

A confirmation message is displayed.

4 **Click [Yes].**

The software is uninstalled (deleted).

Network Setting Items

Network Setting Items Using the Control Panel

You can change the settings of the machine with the control panel of the machine. The setting items you can change are shown below.

■ System Settings

Item	Setting Description	Default Setting
Network Settings		
IP Address Auto	FIXED/AUTO (DHCP/BOOTP/RARP, ON/OFF)	Fixed
IP Address	IP address	192.168.0.215
Subnet Mask	IP address	0.0.0.0
Default Gateway	IP address	0.0.0.0
DNS Server Add.	IP Address	0.0.0.0
DNS Dynamic Set	On/Off	Off
Host Name	Host name of this device	(null)
Domain Name	Domain name for this device	(null)

Network Setting Items Using NetSpot Console, NetSpot Device Installer, a Web Browser (Remote UI), or an FTP Client

You can change the settings of the machine with NetSpot Console, NetSpot Device Installer, a web browser (Remote UI), or an FTP Client. The setting items you can change are shown in the tables that follow.

IMPORTANT

While it is possible to set AppleTalk protocol settings, you cannot print from a Macintosh computer.

NOTE

- The information shown in parentheses in the tables that follow is specific to the FTP client.
- Items with an asterisk (*) cannot be set using NetSpot Device Installer. Items with two asterisks (**) cannot be set using NetSpot Device Installer or NetSpot Console. Set them using the control panel of the machine or the Remote UI.

■ Common Settings

Item	Setting Description	Default Setting
Device Name (DEVICE_NAME)	Device name (0 to 32 characters)	(null)
Location (SYS_LOC)	Device installation location (0 to 32 characters)	(null)
Administrator (SYS_CONTACT)	Device administrator name (0 to 32 characters)	(null)
Contact Person (SERVICE_MAN_NAME)	Serviceman name (0 to 64 characters)	(null)
Phone (SERVICE_TEL)*	Telephone number of service center (0 to 64 characters)	(null)
Comment (E-mail) (SERVICE_COMMENT)*	Comments by service personnel (0 to 64 characters)	(null)
Password (ROOT_PWD)	Device password (0 to 15 characters)	(null)
Permit End User's Job Operation (USER_JOB_CONT)**	Whether or not to permit operating print job in general user mode	(Off)
Display Language (DISP_LANG)**	Default language configuration for web browsing	English
Link (LINK_NAME)**	Link name displayed on support link page of the Remote UI	(null)
URL (LINK_URL)**	URL displayed on support link page of the Remote UI	(null)
Comments (LINK_COMMENT)**	Comments displayed on support link page of the Remote UI	(null)
Download Site Link (DOWNLOAD_SITE_NAME)**	Link name displayed on the download site page of the Remote UI	(null)
Download Site URL (DOWNLOAD_SITE_URL)**	URL displayed on the download site page of the Remote UI	(null)
Download Site Comments (DOWNLOAD_SITE_COMMENT)**	Comments displayed on the download site page of the Remote UI	(null)

■ TCP/IP Settings

Item	Setting Description	Default Setting
Frame Type (TCP_FRAME_TYPE)	Frame type used with TCP/IP	Ethernet II (fixed)
Use DHCP (DHCP_ENB)	Whether DHCP is used in setting the IP address	(Off)
Use BOOTP (BOOTP_ENB)	Whether BOOTP is used in setting the IP address	(Off)
Use RARP (RARP_ENB)	Whether RARP is used in setting the IP address	(Off)
IP address (INT_ADDR)	IP address of the machine	192.168.0.215
Subnet Mask (NET_MASK)	Subnet Mask	0.0.0.0
Gateway Address (DEF_ROUT)	Gateway Address	0.0.0.0
LPD Banner (LPD_BANN)*	Banner page output method when printing using LPD	(Off)
IPP URL (IPP_PRT_URI)*	URL (1 to 255 characters) when printing using IPP	Printer
Raw Mode Bi-direction (RAW_BIDIR_ENB)*	Whether bidirectional transmission is supported when printing using Raw	(On)
DNS Server Address (DNS_ADDR)*	IP address of the DNS server	0.0.0.0
DNS Dynamic Update (DDNS_ENB)*	Whether the machine is dynamically updated to DNS	(Off)
DNS Host Name (HOST_NAME)*	Host name of the machine	(null)
DNS Domain Name (DOMAIN_NAME)*	Domain name for the machine	(null)
IP Address Range Settings		
Permit printing from specified address**	Apply Settings: On/Off Up to 8 IP addresses can be stored.	(Off)
Reject printing from specified address**	Apply Settings: On/Off Up to 8 IP addresses can be stored.	(Off)

■ NetWare Settings

Item	Setting Description	Default Setting
Frame Type (NW_FRAME_TYPE)	Frame type used for NetWare	802.2
NCP Burst Mode (NCP_BURST_MODE)**	Whether NCP burst mode is used (Leave it on normally)	(On)
Bindery PServer		
Print Server Name (PSERVER_BINDERY_NAME)	Name of NetWare print server being used	(null)
NetWare Server Name (PSERVER_BINDERY)	Name of NetWare file server that has NetWare print server	(null)
Polling Interval (BINDERY_JOB_CHECK_DELAY)	Interval for checking job (1 to 15 seconds)	5
NDS PServer		
Print Server Name (PSERVER_NDS_NAME)	Name of NetWare print server being used	(null)
NDS Tree (PSERVER_NDS_TREE)	Name of NDS tree that has NetWare print server	(null)
Context Name (PSERVER_NDS_CONTEXT)	Context Name (1 to 255 characters) that has NetWare print server	(null)
Polling Interval (NDS_JOB_CHECK_DELAY)	Interval for checking job (1 to 255 seconds)	5
RPrinter		
Print Server Name (RPRINTER_PS_NAME)	Name of NetWare print server being used	(null)
Printer Number (RPRINTER_NO)	Number of printer (0 to 15) connected to NetWare print server	0

NPrinter		
Print Server Name (NPRINTER_PS_NAME)	Name of NetWare print server being used	(null)
Printer Number (NPRINTER_NO)	Number of printer (0 to 254) connected to NetWare print server	0

■ NetBIOS Settings

Item	Setting Description	Default Setting
Base Protocol (LSLM_ENB)*	Protocol used for communication (if NetBIOS is used)	NetBEUI (On)

Available Software for Network Settings

You can specify the network settings of the machine using the following software:

Item	NetSpot Device Installer	NetSpot Console	Web Browser (Remote UI)	FTP Client	ARP/PING Commands	The Machine Control Panel
NetWare Protocol Settings (See p. 3-8.)	▲	▲	✓	✓	—	—
TCP/IP Preparation for Protocol Settings (See p. 2-3.)	▲	✓	—	—	✓	✓
TCP/IP Protocol Settings (See p. 2-13.)	▲	▲	✓	✓	—	—
NetBIOS Protocol Settings	—	▲	✓	✓	—	—

✔: Available

—: Not Available

▲: Only some of the items can be set. (See "Network Setting Items Using NetSpot Console, NetSpot Device Installer, a Web Browser (Remote UI), or an FTP Client," on p. 6-9.)

Glossary

Banding

Specifies the method for the Banding operation performed in the printer driver. As Banding defines the output image data of a page by processing it in rectangular bitmap sections called Bands, you can print a document faster.
If [On] is selected, Banding is constantly performed; but if [Auto] is selected, Banding is performed only when necessary.

BOOTP

BOOTstrap Protocol. A protocol that enables a client machine to automatically obtain network setup information from a server over a TCP/IP network. BOOTP enables a client to automatically locate such information as the host name, domain name, and IP address, so that it is not necessary to create these items manually.

Buffer size

The size of a data area, or buffer, shared by devices or programs working at different speeds or with different priorities. The buffer is designed to prevent one device or process from being held up by another. For this to be possible, the buffer must be set up correctly.

Container object

An object in the directory tree of a NetWare network which can hold other objects. An organizational unit such as a company department is a container object. This organizational unit can contain objects representing network resources, such as workstations, servers, and printers.

Context

In NetWare, this indicates the location of an object existing in the directory tree.

Cookie

A file left on a user's computer when the user visits a web site. A cookie allows the web site to recognize the user on subsequent visits. Cookies are generally used to enable a user to automatically sign on to certain web sites and to customize the features offered by such sites.

Daemon

A process that runs in the background and performs a specified operation, at predefined times or in response to certain events. Typical daemons include print spoolers and automated network information system protocols.

DHCP

Dynamic Host Configuration Protocol. A protocol that automatically specifies the network settings of a client on a TCP/IP network. Many of the settings required to set up TCP/IP, which is the standard protocol of the Internet, can be made automatically.

DNS

Domain Name System. The system that associates the IP address assigned to a computer with the domain name.

DNS server

Domain Name System server. The system that maintains a database that translates the domain names of Internet servers, such as "www.w3.org," into Internet Protocol (IP) addresses, such as "18.176.0.26".

Domain

Management concept that divides large scale networks into groups for identifying individual computers and users. The internet is managed by classifying domains according to country, type (business, organization, education, etc.), company, etc.

Ethernet

An industry-standard local area network (LAN) system for connecting together multiple computers. Data is sent from one computer to another by breaking it into packets, and a packet reaches its destination smoothly without any collision with other packets.

File server

A personal computer or workstation to which two or more users on client personal computers can gain access via a local area network (LAN) in order to share and use its hard disk drive.

Frame type

The packet format that the network adapter of a computer uses to communicate over a network. On Ethernet, there are four frame types: Ethernet 802.2, Ethernet 802.3, Ethernet II, and Ethernet SNAP.

FTP

File Transfer Protocol. A client-server protocol enabling a user to transfer files on one computer to and from another computer over a TCP/IP network. The File Transfer Protocol also governs the client program with which the user transfers files.

Gateway Address

The default address of a network or Web site. It provides a single domain name and point of entry to the site.

HP-GL/2

A graphics language that allows computer applications to draw graphic images using printers. Images in HP-GL/2 are represented as vector graphics. Vector objects describe an image in terms of geometric shapes, such as lines and polygons, and fills. HP-GL/2 is supported by your Canon machine.

HTTP

Hypertext Transfer Protocol. The client-server TCP/IP protocol used on the World Wide Web for the transfer of HTML (Hypertext Markup Language) documents across the Internet.

Internet Protocol (IP)

The underlying set of networking rules that describes how data is transmitted across the Internet. Internet Protocol allows data from one computer to be split into packets to be sent to another computer with a specific IP address.

IP address

Internet Protocol address. A 32-bit numeric address used by IP (internet protocol) to specify a computer on the Internet. The IP address is usually written as four numbers separated by periods. An example is 128.121.4.5.

IPP

Internet Printing Protocol. A protocol used between a client and a print server for carrying out remote printing over the Internet.

LAA

Locally Administered Address. When a device is powered on, its network address is presented to the network. The default network address assigned by the manufacturer at the time of production is known as the Universally Administered Address (UAA), while an address specified by the network administrator to override the UAA is the Locally Administered Address (LAA). Each LAA must be unique on a Local Area Network.

LAN

Local Area Network. It is a network system formed by linking a server, workstations, and computers, which are all located in the same building or some other relatively limited area.

Log in

Entering a user name and password as a means of user authentication to start a computer session or access to a service.

LPD

Line Printer Daemon. A daemon is a program that runs, without human intervention, to accomplish a given task. The Line Printer Daemon controls the flow of print jobs to a printer.

MAC address

Media Access Control address. The hardware address of the network adapter of a computer connected to a local area network.

NetBEUI

NetBIOS Enhanced User Interface. NetBEUI is a network protocol originally designed by IBM and later extended by Microsoft and Novell. In a small network, NetBEUI is more efficient than other protocols such as TCP/IP. It is supported natively by IBM operating systems and Microsoft Windows to provide services such as file sharing and printing.

NetBIOS

Network Basic Input Output System. A program that allows applications on different computers to communicate within a local area network (LAN). NetBIOS is used in Ethernet, Token Ring, and Windows NT networks.

NetWare

Novell NetWare. Novell Inc.'s client-server network operating system for the IBM PC. NetWare uses the IPX/SPX, NetBEUI, or TCP/IP network protocols. NetWare supports MS-DOS, Microsoft Windows, OS/2, and Macintosh clients. NetWare for Unix gives users access to Unix hosts.

OS/2

A family of multitasking operating systems developed by IBM for Intel x86-based computers. OS/2 provides both a graphic user interface similar to Windows as well as a command line interface similar to DOS. Add-ons to OS/2 allow it to run DOS and Windows applications.

Packet Signature

Encrypted signatures used when exchanging data packets to guarantee that a packet really came from the computer that it claims to have come from. Packet Signature is designed to prevent packet forgery and unauthorized Supervisor access to a NetWare server.

Protocol

A set of rules that govern the transmission of data across a network. Examples of protocols are FTP, DHCP, BOOTP, RARP, IPP, and TCP/IP.

Proxy server

A server that provides a cache of files available on remote servers that are slow or expensive to access. The term "proxy server" normally refers to a World Wide Web server that, on receiving a URL, tries to supply the requested file from its cache. If it cannot locate the file there, the proxy server would bring it from the remote server and also save a copy in its cache so that the next request can be obtained locally.

Queue server mode

When the printer is used in NetWare's queue server mode, all print server functions are provided by the printer itself, and no other print server hardware nor software is required.

RARP

Reverse Address Resolution Protocol. A protocol that associates a network adapter address (MAC address) with an Internet Protocol (IP) address.

Raster

Raster graphics describes an image as a pattern of dots, compared to vector graphics which represents an image as a geometrical formula. Each row of color dots in the mosaic of color dots constitutes one raster graphic. In a printer, a raster graphic is used as the master image from which a page is printed, because the image can be transferred to paper by printing one raster at a time.

Raw

This is a print application used with Windows 2000/XP. It can print at higher speeds than LPD.

RIP (Raster Image Processor)

The hardware and/or software functions of a printer that convert vector graphic descriptions from a computer into raster graphic images that can be printed.

Scope ID

The Scope ID is a character string value that is appended to the NetBIOS name, and is used for all NetBIOS over TCP/IP communications. It provides a way for a computer to communicate only with others sharing the same Scope ID.

SMB

Server Message Block. A protocol that provides file and printer sharing over a network for Windows computers.

Source Routing

Normally, a host has no control over the route taken by a packet it sends. Source routing is a technique whereby the sender of a packet can specify the route that a packet should take through the network to its destination.

Spooling

Simultaneous Peripheral Operations On-Line. Spooling means putting jobs in a buffer, which is a special area in memory or on a disk. Because devices access data at different rates, the buffer provides a waiting station where the data can wait until the device for which it is meant is ready to access it.

Subnet Mask

SUBNETwork mask. The method used to determine which subgroup, or subnet, an IP address belongs to on TCP/IP networks, all devices whose IP addresses have the same prefix would belong to the same subnet. Dividing a network into subnets is useful for both security and performance reasons.

Switching hub

A network connection box to which a number of computers can be connected. The switching hub forwards a data packet from the network to the appropriate computer according to the packet's address. Conventional hubs simply send every packet to every connected computer. Since a switching hub forwards packets only to their intended recipients, it provides greater efficiency.

TCP/IP

Acronym for Transmission Control Protocol/Internet Protocol. The protocol used to connect to the Internet and to wide-area networks.

Token Ring

A local area network system developed by IBM, in which conflict during message transmission is avoided by granting "tokens" that allow computers to send messages. The system can transmit data at 4 or 16 Mbps.

UAA

Universally Administered Address.
See also LAA.

URL

Uniform Resource Locator. A standard way of specifying the location of an object, usually a web page, on the Internet. The URL for a web page would look something like this: "http://www.w3.org/default.html". Here, "http:" indicates that a web page is being accessed, "http://www.w3.org" is the address of the server containing the web page, and "default.html" is the file name under which the web page is stored on the server.

Vector Graphics

See Raster.

WAN

Wide Area Network.

WINS

Windows Internet Name Service. A service for associating a NetBIOS name, which is a computer name or printer name on a NetBIOS network, with an IP address. To use WINS, a WINS server is required.

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