

B6500

OKI[®]
PRINTING SOLUTIONS

NETWORK GUIDE

59388401

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Document Information

B6500 Network Guide

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PREFACE

Thank you for choosing this printer.

This Network Guide provides all the necessary information about installing and operating this printer on the network.

Please read this guide in detail to ensure full and efficient use of this product on a network and keep it handy for a quick reference should you encounter any difficulties when using the machine.

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USING THIS GUIDE

PREREQUISITE KNOWLEDGE

Read this guide in detail before using this printer. If you are not familiar with the machine to which the printer is to be connected or the basic operations or concepts of the software, read the relevant manuals first.

Machines and software to which the printer is to be connected refer to personal computers, workstations, networks, and the respective operating systems and applications on which these machines run.

ORGANIZATION

The following is a summary of each chapter.

Overview

This chapter contains information on using the printer as a network printer.

Configuration

This section details configuring the printer's network interface and should be done prior to configuring your computer.

Printing from a Windows Computer

This chapter explains the installation procedure for printing from a Windows NT 4.0/ Windows 2000/Windows XP/Windows Server 2003 computer through LPD or Port9100. This chapter also explains the installation procedure for printing from another Windows computer by creating a shared printer on a Windows NT 4.0/Windows 2000/ Windows XP/ Windows Server 2003 computer.

Printing From UNIX

This chapter explains the procedure for printing from a UNIX computer.

Printing From a Macintosh Computer

This chapter explains the procedure for printing from a Macintosh computer.

Network Utility Software

This chapter explains how to use the Network Utility Software.

Precautions and Limitations

This chapter explains the operational precautions and limitations under each network environment.

Troubleshooting

This chapter explains how to solve problems under each network environment.

Appendix

This chapter explains how to manually set the printer's IP address.

CONVENTIONS

1. In this guide, "computer" refers to both the personal computer and workstation.
2. The following icons are used in this guide:
 - Important** Indicates important information which you should read.
 - Note** Indicates additional information on operations or features.
 - Refer to** Indicates reference sources.
3. The following conventions are used in this guide:
 - Refer to "xxx"**: The cross-reference is within this guide.
 - Refer to YYY** : The cross-reference is not within this guide.
 - []** : Indicates items displayed on the computer and the printer control panel. Also indicates the title of printed reports/lists from the printer.
 - < >** : Indicates items such as hard buttons and indicators on the keyboard and printer.

OVERVIEW

SUPPORTED ENVIRONMENT

This printer can be connected to a network through the Ethernet interface.

The printer supports multiple protocols. As a result, one printer can be shared even from different network environments.

Supported OS and Environment

Connection		Network		
Port		LPD	Port 9100	EtherTalk
Protocol		TCP/IP	TCP/IP	Apple Talk
OS	Windows 95	●*1	●*1	
	Windows 98	●*1	●*1	
	Windows Me	●*1	●*1	
	Windows NT 4.0	●		
	Windows 2000	●	●	
	Windows XP	●	●	
	Windows Server 2003	●	●	
	UNIX	●*2		
	Macintosh	●*4		●*3

*1: When using Windows 95/98/Me, use OKI LPR.

*2: UNIX Filter are required to print PostScript data. UNIX Filter is compatible with the OSs in Solaris, HPUX and Linux (Redhat, SuSE).

*3: Supports Mac OS 9.0 or later.

*4: Supports only Mac OS X.

Important

The EtherTalk port setting in this printer is disabled by default. To use this port, enable the setting on the control panel.

CONFIGURATION

INTRODUCTION

The B6500 is a fast 100BASE-TX/10BASE-T network capable printer. It supports major protocols such as TCP/IP and Ethertalk. This section details configuring the printer's network interface and should be done prior to configuring your computer.

INITIAL IP ADDRESS

The factory configuration is for the printer to obtain an IP address automatically from your networks' DHCP server.

Use the printers' console to determine the printers' address.

1. Press the **<MENU>** button on the control panel.
2. Press the **<▼>** button until the text "Network Menu" is shown on the first line of the display.
3. Press the **<▶>** button to enter the Network menu.
4. Press the **<▲>** or **<▼>** buttons to move through the submenus until the text "**IP Address**" is shown on the first line of the display.
5. Note the IP address shown on the second line of the display.

If your network does not have a DHCP server, the IP address will have to be set manually.

Use the printers' console to manual set the printers' address.

1. Press the **<MENU>** button on the control panel.
2. Press the **<▼>** button until the text "**Network Menu**" is shown on the first line of the display.
3. Press the **<▶>** button to enter the Network menu.
4. Press the **<▲>** or **<▼>** buttons to move through the submenus until the text "IP Address Set" is shown on the first line of the display.
5. Press the **<▶>** button to enter the submenu

6. Press the <▲> or <▼> buttons to toggle between Automatic and Manual, select manual. Press <SELECT> to save the selection
7. Press the <▲> or <▼> buttons to move through the submenus until the text "IP Address" is shown on the first line of the display.
8. Press the <▶> button to enter the submenu
9. The first set of numbers blinks. Press the <▲> or <▼> buttons to scroll to the desired number. Press the <▶> button to save the current set of numbers and move to the next set. Repeat the procedure for each set of numbers. When the last set of numbers is set, press <SELECT> to save the IP address.
10. Repeat steps 7 through 9 to set the Subnet Mask.
11. Repeat steps 7 through 9 to set the Gateway Address.

PRINTER SETUP USING A BROWSER

If the printer is connected to the network using TCP/IP, its settings can be configured using a Web browser such as Internet Explorer or FireFox. Refer to the relevant manuals for details on how to launch and use the browser.

Set the browser's address to the IP address found in the prior section.



The network addresses used in this manual are shown as examples only. Use the address found in the prior section.

To apply configuration changes using a Web browser, select the Administrator Login. You will be prompted for a username and password. The username is [root] and the default password is the last six digits of the Ethernet MAC address. The MAC address can be

found on the Network Summary page. Note that the password is case sensitive and letters should be entered in upper case.



The following explanation uses Windows XP and Internet Explore version 6.0 as an example to manually set the printers IP address.

1. Launch the Web browser
2. Select Administrator Login, enter the username and password.
3. Select the Network group.
4. Select the TCP/IP subgroup.
5. Select "Set IP Manually"
6. Configure the IP Address, Subnet Mask and Gateway for the printers' network interface. Once the new address is submitted to the printer, the new address will have to be entered into the browsers' address.

Most of the printers' configuration can be done through the browser including setting the administrator password.

PRINTING FROM A WINDOWS COMPUTER

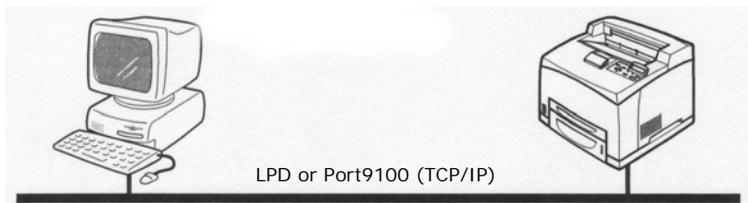
OVERVIEW

This chapter provides guidelines on how to print over the network from various Microsoft Windows platforms. There are numerous ways of printing from Windows and the exact set-up will vary depending upon your environment. There are also numerous versions of Windows, which can be configured as either a client, server or both.

Although there are many variants of Windows, the principles of network printing are the same. Microsoft provides on-line help with all of their operating systems and this is a good reference point for the exact details of each configuration option within Windows.

The network printer supports TCP/IP protocol that can be used in conjunction with the Windows operating system.

Windows NT 4.0/Windows 2000/Windows XP/
Windows Server 2003



Once the printer registered on the Windows NT 4.0/Windows 2000/Windows XP/Windows Server 2003 computer is shared, you can also print from Windows 95/Windows 98/Windows Me computers through this printer.

INSTALLATION OF TCP/IP PROTOCOL

There are a number of options available when printing using TCP/IP for Windows. The following table lists the options:

WINDOWS	VERSION METHOD
Win 95/98/Me	OKI LPR Utility
NT 4.0	OKI LPR Utility
	Microsoft LPR ¹
Windows 2000/ Windows XP	OKI LPR Utility
	Microsoft LPR ¹
	Port 9100 ¹

¹These functions are built into Windows and are displayed as options when using the Add Printer Wizard.

Although there are some differences in configuration options between the various Windows platforms, the procedure for printing using TCP/IP is the same.

- 1.** Ensure that the TCP/IP protocol has been installed in Windows. This can be confirmed by checking the network settings from within the Control Panel. If TCP/IP has not been installed refer to the section below Installation of TCP/IP protocol.
- 2.** If not already configured, a suitable IP address, Subnet Mask and Gateway address should be configured. Please refer to the on-line help if necessary. It is vital that the IP address entered is unique and valid. Entering an incorrect IP address may cause severe network problems. Please check the address with the network administrator.
- 3.** If your network environment uses domain names, DNS should be enabled and configured on your system. However, this step is not essential to enable network printing.
- 4.** Restart the operating system.

WINDOWS 95/98/ME

1. Click the [Start] button, select [Settings] and then click [Control Panel].
2. In the [Control Panel] double-click on the [Network] icon.
3. In the [Network] dialogue box click [Configuration Panel].
4. If the [Client for Microsoft Networks] is not listed, click [Add].
5. In the [Select Network Component Type] dialogue box, select [Protocol] then click [Add].
6. In the [Select Network Protocol] dialogue box, select [Microsoft] from the list of manufacturers, then select [TCP/IP] from the list of network protocols, then click [OK].
7. The Windows installation CD-ROM may be required. Follow the remaining dialogue box prompts.

WINDOWS NT 4.0

1. Click [Start], select [Settings] and then click [Control Panel].
2. Double-click the [Network] icon.
3. In the Network dialogue box, click the [Protocols] tab.
4. If the [TCP/IP Protocol] is not listed, click [Add].
5. In the [Select Network Protocol] dialogue box, select [TCP/IP Protocol] and click [OK].
6. The Windows NT installation CD-ROM may be required. Follow the remaining dialogue box prompts.

WINDOWS 2000

1. Click the [Start] button, select [Settings] and then click [Network and Dial-up Connections].
2. Double-click the [Local Area Connection] icon. In the [Local Area Connection Status] dialogue box, click [Properties].
3. In the [Local Area Connection Properties] dialogue box, click [Install].

4. In the [Select Network Component Type] dialogue box, select [Protocol] and click [Add].
5. In the [Select Network Protocol] dialogue box, select [TCP/IP Protocol] and click [OK].
6. Click [Close] button in the [Local Area Connection Properties] dialogue box.
7. Click [Close] in the [Local Area Connection Status] dialogue box.

WINDOWS XP

1. Click the [Start] button and select [Control Panel].
2. Select [Network and Internet Connection] and [Network Connection].
3. Double-click [Local Area Connection] and click [Properties] in the [Local Area Connection Status] dialogue box.
4. If the [Internet Protocol (TCP/IP)] is not listed, click [Install.].
5. In the [Select Network Component Type] dialogue box, select [Protocol] then click [Add].
6. In the [Select Network Protocol] dialogue box, select [Internet Protocol (TCP/IP)] then click [OK].
7. The Windows XP installation CD-ROM may be required. Follow the remaining dialogue box prompts.

Once the protocol has been installed and configured in Windows, the next step is to configure the TCP/IP parameters in the network printer.

CONFIGURING AS A NETWORK PRINTER

WINDOWS 95/98/ME

When printing using TCP/IP, the Oki LPR utility is the only option to use. The following procedure should be used.

When installing the driver, ensure it is installed as a local printer and not a network printer. Ensure the appropriate printer driver has been installed in Windows.

Install the Oki LPR utility as described on page 25 of this manual and add the printer installed earlier.

WINDOWS NT 4.0

With Windows NT 4.0, you have two options for printing using TCP/IP. They are:

- Oki LPR
- Microsoft LPR

In order to use Microsoft LPR, it must first be installed into your operating system.

NT 4.0 requires administrator privileges.

Oki LPR

Please follow the procedure described in the Windows 95/98/Me section on page 18.

Microsoft LPR

To install this port, the following needs to be carried out.

1. Select [Start], [Settings], [Control Panel] and then select [Printers].
2. Select [Add Printer] Wizard.
3. Select [My Computer] and then [Next].
4. Select [Add Port].
5. Select [LPR Port] and then [OK].
6. In [Name or address of server providing lpd] type the host name or IP address of the host for the printer you are adding.
7. In [Name of printer or print queue on that server] type the logical printer name "lp" and then click [OK].
8. Follow the instructions on the screen to finish installing the LPR-compatible printer.

If the LPR port is not available, install the Microsoft TCP/IP Printing Service.

Insert the printer driver for Windows NT4.0.

1. Select [Start].[Settings].[Control Panel] and then double-click the [Network] icon.
2. In the Network dialog box, click the [Services] tab.
3. If [Microsoft TCP/IP Printing] is not listed, click [Add].
4. In the [Select Network Service] dialog box, select [Microsoft TCP/IP Printing] and click [OK].
5. The Windows NT installation CD-ROM may be required. Follow the remaining dialog box prompts.

WINDOWS 2000

Windows 2000 requires administrator privileges.

With Windows 2000, there are four options for printing using TCP/IP.

- Oki LPR
- Microsoft LPR
- Port 9100
- IPP

In order to use Microsoft LPR, it must first be installed on your system.

OKI LPR

Please follow the procedure described in the Windows 95/98/Me section on page 18.

Microsoft LPR

To install this port, the following needs to be carried out:

1. Select [Start], [Settings], [Control Panel and Printers].
2. Open the [Printers] folder.
3. Double-click [Add Printer] and then select [Next].

4. Select [Local Printer], clear the [Automatically detect my printer] check box, and then select [Next].
5. Select [Create a new port] and then [LPR Port].
6. Select [Next] and then provide the following information:

In [Name or address of server providing LPD] enter the host name or Internet Protocol (IP) address of the host for the printer you are adding.

In [Name of printer or print queue on that server] type lp.

Follow the instructions on the screen to finish installing the TCP/IP printer.

Port 9100

1. Select [Start].[Settings].[Control Panel].
2. Open the [Printers] folder.
3. Double-click [Add Printer] and then select [Next].
4. Select [Local Printer], clear the [Automatically detect my printer] check box and then click [Next].
5. Select [Create a New Port] and select [Standard TCP/IP Port].
6. Select [Next].
7. The [Welcome to the Add Standard TCP/IP Printer Port Wizard] will appear.
8. Select [Next] and provide the following information. Enter [Printer name] or IP address, for example: 172.168.1.31. If the above IP address is entered, the Port Name will default to IP_172.168.1.31.
9. Select [Next]. Additional port information will be required.
10. Under [Device Type], select [Custom] then [Settings].
11. Ensure [Protocol] is set to [Raw].
12. Ensure [Port Number] is 9100 and [SNMP Status Enabled] is deselected.
13. Select [OK].
14. Select [Follow the instructions on the screen to finish installing the printer.]

WINDOWS XP

Windows XP requires administrator privileges.

With Windows XP, there are four options for printing using TCP/IP.

- Oki LPR
- Microsoft LPR
- Port 9100
- IPP

In order to use Microsoft LPR, it must first be installed on your system.

OKI LPR

Please follow the procedure described in the Windows 95/98/Me section on page 18.

Microsoft LPR

To install this port, the following needs to be carried out:

1. Select [Start].[Settings].[Control Panel].[Printers and Other Hardware].
2. Select [Printers and Faxes].
3. Click [Add Printer], then select [Next].
4. Select [Local printer attached to this computer], clear the [Automatically detect and install my Plug and Play printer] check box, and then click [Next].
5. Select [Create a New Port] and [Type Standard TCP/IP Port].
6. Click [Next].
7. [Welcome to the Add Standard TCP/IP Printer Port Wizard] appears.
8. Click [Next] and provide the following information. Enter [Printer name or IP address], for example: 172.168.1.31. If the above IP address is entered, the Port Name will default to IP_172.168.1.31.
9. Click [Next]. [Additional Port Information Required] displayed.
10. Under [Device Type], select [Custom] then [Settings].

11. Ensure [Protocol] is set to [LPR].
12. Ensure [Queue Name] is Ip and [SNMP Status Enabled] is deselected.
13. Click [OK].
14. Follow on screen instructions to finish installing the printer.

Port 9100

1. Select [Start].[Settings].[Control Panel].[Printers and Other Hardware].
2. Select [Printers and Faxes].
3. Click [Add Printer] and then click [Next].
4. Select [Local printer attached to this computer], clear the [Automatically detect and install my Plug and Play printer] check box, and then click[Next].
5. Select [Create a New Port] and select [Type Standard TCP/IP Port].
6. Click [Next].
7. [Welcome to the Add Standard TCP/IP Printer Port Wizard] appears.
8. Click [Next] and provide the following information. Enter [Printer name or IP address], for example: 172.168.1.31. If the above IP address is entered, the Port Name will default to IP_172.168.1.31.
9. Click [Next]. [Additional Port Information Required] is displayed.
10. Under [Device Type], select [Custom] then [Settings].
11. Ensure [Protocol] is set to [Raw].
12. Ensure [Port Number] is 9100 and [SNMP Status Enabled] is deselected.
13. Click [OK].
14. Follow the instructions on the screen to finish installing the printer.

CREATING A SHARED PRINTER

Create a shared printer as required.

Settings Windows NT 4.0/2000/XP/Server 2003

The following procedure explains how to do the settings, using Windows XP as an example.

1. Click [Start], and then select [Printers and Faxes].
The [Printers and Faxes] window appears.
2. Select the icon of a printer to set, and then select [Sharing] from the right-click menu. Then the printer properties dialogue box is displayed.
3. Click [Share this printer] and enter a share name.
4. Click [Additional Drivers] and select a substitute driver to install, and then click [OK].
5. When installing a substitute driver, an input screen is displayed for the printer driver file location. Insert the attached CD-ROM and specify the appropriate folder.

Settings of Windows 95/98/Me

1. Click [Start], and then select [Settings], followed by [Printers]. The [Printers] window appears.
2. Double click [Add Printer]. The [Add Printer Wizard] dialog box appears.
3. Install the printer driver according to the on-screen instructions. Select [Network Printer] for the printer connection, then specify the shared printer created on Windows NT 4.0/Windows 2000/Windows XP/Windows Server 2003 in the previous section.

OKI LPR

The OKI LPR Utility is network software which supported TCP/IP printing on Windows Me, Windows 98, and Windows 95. It redirects print data from the LPR port to the specified IP address.

INSTALLING THE OKI LPR UTILITY

The OKI LPR utility requires that the TCP/IP protocol be installed on your Windows system. To install the TCP/IP protocol onto your Windows system, consult your Windows manual.

1. Set up the printer driver and designate the output destination to be Local Printer (LPT:). For information on setting up your printer driver, see the printer user manual.
2. Insert the CD-ROM provided with your printer into the CD-ROM drive. If the Menu Installer doesn't start automatically, click Start?Run?Browse. Browse to your CD-ROM and click Install?Open?OK.
3. Select [Network Software].
4. Select [Installation/Config]
5. Select [Oki LPR].
6. Follow the on-screen instructions.
7. Select [Install Oki LPR].
8. Follow the on-screen instructions.
9. Click [Next] when the [Welcome] screen is displayed.
10. Verify [Destination Folder] and [Spool Folder] and click [Next].
11. Check [Register in Startup] if you want automatic startup as Windows boots up. Check [Launch as Minimized] if you want to startup in the Icon state and click [Next].
12. Verify the program folder name and click [Next]. The installation starts.
13. When the installation ends, the [Setup complete] screen is displayed. Check [Yes, I want to launch OKI LPR Utility now] and click [Finish]. Check [Yes, I want to view the ReadMe File] if you want to read the Readme file. The OKI LPR utility starts.

14. Select [Add Printer] on the [Remote Print] menu.
15. Select [Printer] to accept the printer that has been added in Step 1.
16. Enter an IP address at [IP Address] and click [OK]. A printer is added to the main window.

Refer to the On-Line Help for information on how to use the utility.

UNINSTALL

1. Stop the OKI LPR Utility. Right-click the OKI LPR icon in the system tray and click [Exit].
2. Select Start ?Program?Okidata?OKI LPR Utility?Uninstall OKI LPR Utility
3. Click [Yes] when the [Confirm File Deletion] dialogue is displayed. Removal of the OKI LPR utility starts.
4. When the removal is complete, the [Uninstall Complete] screen is displayed. Click [OK].

PRINTING FROM UNIX

FOR PRINTING FROM UNIX

This section explains the installation procedure for printing from a UNIX computer.

SYSTEM CONFIGURATION

The printer uses the Line Printer Daemon Protocol (LPD) that supports TCP/IP as the transport protocol. With the LPD, the printer can be under a UNIX network environment.

The printer LPD supports Spool Mode where print jobs from clients are spooled once before output and Non-spool Mode where print jobs are sequentially output without spooling.



NOTE

When the LPD port is used, the printer can limit print instructions by IP addresses. For details, refer to the User's Guide.

TARGET COMPUTERS

The target computers are as follows:

- Workstation or personal computer with RFC 1179 Line Printer Daemon Protocol.

INTERFACE

The printer LPD is available on the following interfaces:

- Ethernet 100BaseTX
- Ethernet 10Base-T

The applicable frame types conform to Ethernet II.

SET UP PROCEDURE

The setting procedure is as follows:

1. Setting up the printer

Set the IP address on the printer control panel.

Use the printer control panel or printer web page to set the LPD port to [Enable] (default: [Enable]).

NOTE

> Before activating the LPD port, set the IP address of the printer. For details on how to set the IP address and the port, refer Printer Configuration.

> The printer web page allows more detailed settings.

2. Settings of the workstation

Set the printer in the workstation.

Refer to:

“Setting Up the Workstation” on page 29

SETTING UP THE WORKSTATION

This section explains the settings of Solaris 2.x workstation for printing.

BEFORE SETUP

Before setting up the workstation, check the following:

- The setup procedures and commands may vary according to different versions of OS. Refer to the manuals that came with the workstation for details.
- To setup the printer, the user must be a superuser. Contact your network administrator to perform the setup if you do not have the authority of a superuser.
- Check the IP address set up for the printer in advance. Be cautious as an incorrect IP address may cause severe errors.
- Before performing any network setup (such as the IP address) to a host running under NIS (Network Information Service), consult the NIS administrator.

EXAMPLES OF SETTINGS FOR SOLARIS 2.X

The examples below show printer settings for Solaris 2.6 where the printer host name is printer1.

1. Registering a printer (printer name: P001) supporting the PostScript language

```
#lpadmin -p P001 -s printer1\!PS
```

2. Registering a printer (printer name: P002) supporting the PostScript language that feeds paper from an A4-size paper tray for duplex printing

```
#lpadmin -p P002 -s printer1\!PS A4_DUP
```

3. Registering a logical PostScript printer PS01 set using the printer web page.

```
#lpadmin -p P003 -s printer1\!PS01
```

NOTE

- > Enter the host name and printer name of the remote host after -s by linking with !. The printer name corresponds to the print language/mode.*
- > The output style may be specified at the same time. The parameters for specifying a style are the same as those available for the -C option. As the example of (2) shows, insert "_" between the printer name and output parameters. You can enter up to 14 characters.*
- > If PS%n or PLT%nH is specified for the printer name as in the example of (3), however, the printer does not operate normally with an output style different from the preset one.*
- > Set a printer name corresponding to the print language/mode and output style.*

Refer to:

- Manuals, such as online manuals, that came with various workstations.
- For details about the -C option: see "-C Option (lpr Command)" on page 36.

PRINTING (SOLARIS)

This section describes the procedure for printing from workstations running or Solaris.

Refer to:

Manuals that came with the workstations.

PRINT (LP)

The "lp" command is used for printing.

Command Format

lp [-d Printer name] [-n No. of copies] File name

Command Options

The following command options are available:

-d Printer name

Specify the printer name registered by the "lpadmin" command as the -d option. If this option is omitted, the default printer lp will be specified.

-n No. of copies

This option specifies the number of copies. If one "lp" command is issued to print multiple files, the number of copies specified by this option will apply to all the files.

However, this option is effective when the printer is in the spool mode. In the non-spool mode, the client must be a Windows NT machine to use this option.

Precautions

- Among options not listed above (e.g. -m option), those not processed by the workstation which sends the print instructions will not be effective.

In the spool mode, up to 32 files can be printed by one "lp" command. Files that come after the 32nd files will be ignored.

Sample

To print a file named "file1" to a printer set up as "P001", enter the following command:

```
%lp -d P001 file1
```

To output three copies of "file1" and "file2" to "P001", enter the following:

```
$lp -d P001 -n3 file1 file2
```

DELETE (CANCEL)

This cancel command is used to delete print data which has been sent to print.

Command Format

```
cancel [Printer name] [Job Number]
```

Command Options

The following command options are available:

Printer name

This option specifies the printer name. The "cancel" command can be effectively used with the combined use of -a, -e and -u as shown below. This option is invalid in the non-spool mode.

-a

Deletes all the print data, sent by a user who issues this command, from the data which has been received by a specified printer.

-e

Deletes all the print data received by a specified printer.

-u user name

Deletes all the print data sent by a specified user and received by a specified printer.

JOB NUMBER

This option specifies the job number of the print data to be deleted. These numbers can be checked by issuing a "lpstat" command.

This option is invalid in the non-spool mode.

Precautions

- Print data that consists of multiple files sent in one print instruction cannot be deleted file by file. All the files will be deleted at one go.
- This command will become invalid if it is executed without options having been specified or if there is no print data which matches the option.
- A workstation can only delete print data it has sent. It cannot delete print data sent by other workstations.
- When a command to delete print data is received, the file concerned will be deleted even if it is in the process of being printed. Only the print data available prior to file deletion will be printed.

Sample

To cancel the print data related to the files of printer "P001" (Job number: P001-27), enter the following command:

```
%cancel P001-27
```

To cancel all the printer data of printer "P001", enter the following command:

```
%cancel P001 -e
```

INQUIRY (LPSTAT)

The "lpstat" command is used to inquire about the status of the printer.

Important:

In the non-spool mode, this function is available to Windows NT clients but not to Solaris clients.

Command Format

lpstat [Option]

Command Options

The following command options are available:

If no option is specified, all the print data-related information will be displayed.

The sequence of the options does not affect the outcome.

To use more than one argument at the same time, separate them by commas and enclose all the arguments with " ".

E.g. %lpstat -u "user1,user2,user3"

-o [Printer name]

This option displays the print data received. The printer name is specified in the argument.

-t

This option displays all the information.

-u [User name]

This option displays received print data information on users of specified user names.

-v [Printer name]

This option displays the printer name and the device path name. The printer name is specified in the argument.

Precautions

- Long file names will be truncated.
- Up to 64 print instruction information can be displayed.
- If two or more types of print languages/modes are set up on a single workstation, identical job numbers may be displayed when an inquiry command (lpstat) is issued.

Sample

To inquire about the print data received by a printer set up as "P001", enter the following command:

```
%lpstat -o P001
```

-C OPTION (LPR COMMAND)

This section explains the functions which can be specified and printing operations which will be affected by the -C option.

The -C option is available only when the SunOS directs the printer to enter the spool mode.

Important:

- When the PostScript logical printer that was configured on the printer web page and -C option of "lpr" command have been specified simultaneously, some of the actions cannot be guaranteed to work. Also, when specifying the PostScript logical printer as a default printer on Unix, it is recommended not to use the -C option by "lpr" command.

FUNCTION

The following items can be set up by using the -C option:

NOTE

Any parameter other than below becomes invalid if specified.

Selecting a Paper Tray

When selecting a paper tray, either the paper size or the tray itself is specified. If the paper size is specified, the printer automatically searches and selects the tray where the specified paper is loaded.

The following parameters can be specified:

PARAMETER	DESCRIPTION
INTRAY1/intray1	Selects Tray 1.
INTRAY2/intray2	Selects Tray 2.
INTRAY3/intray3	Selects Tray 3 (option).
INTRAY4/intray4	Selects Tray 4 (option).
A4/a4	Selects the tray where A4 paper is loaded.
B5/b5	Selects the tray where B5 paper is loaded.
A5/a5	Selects the tray where A5 paper is loaded.
LETTER letter	Selects the letter size.
LEGAL/legal	Selects the legal size (8.5 x 14).

NOTE

- > *If several parameters are specified in one "lpr" command, data may not be printed correctly.*
- > *The system default is used if no tray number is specified, a specified tray is not loaded, or paper of a specified size is not loaded.*
- > *This option is for specifying a paper size only. Paper is selected but the document size is not corrected according to the paper size.*
- > *If the print data specifies a paper tray, the tray specification by the data becomes valid and that by the -C option becomes invalid.*
- > *If an unacceptable combination is specified, the printer may not operate correctly.*
- > *For some print language, the specification may be invalid.*

Selecting a Paper Output Tray

The following parameters can be specified:

PARAMETER	DESCRIPTION
OUTUP/outup	Ejects prints to the rear tray (option).
OUTDOWN/outdown	Ejects prints to the center tray.

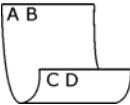
Selecting a Paper Type

The following parameters can be specified:

PARAMETER	DESCRIPTION
PTS/pts	Selects Plain paper.
PT1/pt1	Selects Heavy weight paper 1.
PT2/pt2	Selects Heavy weight paper 2.
POH/poh	Selects Transparency.
PRC/prc	Selects Recycled paper.

Specifying 2 sided Printing

The following parameters can be specified:

PARAMETER	DESCRIPTION
DUP/dup	2 sided printing as follows: 
TUMBLE/tumble	2 sided printing as follows: 
SIMP/simp	1 sided printing

NOTE

- > *If several parameters are specified in one "lpr" command, data may not be printed correctly.*
- > *The system default is used if no parameter is specified.*
- > *If the print data specifies 2 sided or 1 sided printing, the specification by the data becomes valid and overrides that by -C option.*

Specifying Paper Size and 2 sided Printing

Select a paper size and a binding type. The following parameters can be specified:

PARAMETER	DESCRIPTION
A4D/a4d	2 sided printing on A4 paper and long-side binding
A4T/a4t	2 sided printing on A4 paper and short-side binding
A5D/a5d	2 sided printing on A5 paper and long-side binding
A5T/a5t	2 sided printing on A5 paper and short-side binding
B5D/b5d	2 sided printing on 85 paper and long-side binding
B5T/b5t	2 sided printing on B5 paper and short-side binding

NOTE

- > *If several parameters are specified in one "lpr" command, data may not be printed correctly.*
- > *The system default is used if no parameter is specified.*
- > *If the print data specifies 2 sided or 1 sided printing, the specification by the data becomes valid and overrides that by -C option.*

Specifying Collation

The following parameter can be specified:

PARAMETER	DESCRIPTION
COLLATE/collate	Sorts prints electronically.

NOTE

- > *For some print language, the specification may be invalid.*

Specifying Color and Print Modes

The following color and print mode parameters can be specified:

PARAMETER	DESCRIPTION
CC/cc	Selects color for color mode and quality priority for print mode.
CB/cb	Selects color for color mode and speed priority for print mode.
GC/gc	Selects monochrome for color mode and quality priority for print mode.
GB/gb	Selects monochrome for color mode and speed priority for print mode.
AC/ac	Selects auto (color/monochrome) for color mode and quality priority for print mode.
AB/ab	Selects auto (color/monochrome) for color mode and speed priority for print mode.

NOTE

- > *If several parameters are specified in one "lpr" command, data may not be printed.*
- > *For some print language, the specification may be invalid.*
- > *The system default is used if no parameter is specified.*
- > *The color setting is not available on this printer.*

PRINTING

To specify the output format of printing, enter the following command:

-C, [Parameter], [Parameter]

Enter a "," (comma) after -C followed by the parameters which specify the output format. To specify multiple parameters, separate them with ",".

For example, to output a file named "file1" 2-sided on A4 to printer "P001", enter the following command:

```
%lpr -P P001 -C, DUP, A4 file1
```

Important:

- > *If the command specified by the -C option exceeds 64 characters, the operation may not function correctly.*

PRINTING FROM A MACINTOSH COMPUTER

PRINTING FROM A MACINTOSH COMPUTER

This section explains the installation procedure for printing from a Macintosh computer.

SYSTEM CONFIGURATION

As the printer supports EtherTalk and LPD protocol, you can print from Macintosh.

NOTE

- > *Printing using the LPD protocol is available only with the Mac OS X.*

TARGET COMPUTERS

The printer supports a Macintosh or Power Macintosh with the following OS:

- > *Mac OS 9 and up*
- > *Mac OS X*

Refer to:

- > *User Guide (PostScript Driver)*

SET UP PROCEDURE

The setting procedure is as follows:

1. Setting up the printer

Use the printer control panel or printer web page to set the following port to [Enable].

- Printing through LPD: LPD port (default: [Enable])
- Printing through EtherTalk: EtherTalk port (default: [Disable])

NOTE

- > *For details on how to set the port, refer to the User Guide.*
- > *The printer web page allows more detailed settings.*

2. Setting up the Macintosh

Install the printer driver (Adobe PS) for Macintosh. Install the screen font if necessary.

Refer to:

- User Guide (PostScript Driver)

SNMP SUPPORT

The printer can be managed via a standard SNMP management station. The printer supports SNMP-v1, SNMP-v2c, MIB-II, Host Resources MIB, Printer MIB and OKI Data Private MIB.

The OKI Data Private MIB file can be found in the MIB folder on the CD-ROM included with the printer. Please refer to the readme file in the MIB folder for further information.

NETWORK UTILITY SOFTWARE

STATUS MONITOR

The Status Monitor is a tool that enables users to monitor the network printer status by an icon or a dialog box on the computer.

The Status Monitor can be installed from the CD-ROM that was bundled with your printer.

OPERATING REQUIREMENTS

The following is a list of computer operating systems that are supported by the Status Monitor.

OS	PRINTER
Windows 95 Windows 98 Windows ME Windows NT 4.0 Windows 2000 Windows XP	Printer with drivers installed and configured.

USING THE STATUS MONITOR

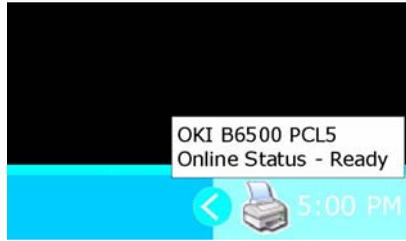
The procedure here explains with Windows XP as an example

1. Start the Status Monitor.
2. The Status Monitor dialog will appear and will automatically discover the printer and display its status
3. Minimize the dialog to use the Status Monitor as an icon. The icon will be displayed at the bottom right corner



of the task bar. The icon's color will change according to the printer's status.

4. Place the mouse cursor over the icon and the status of the printer will be displayed.
5. Double click the icon to display the Status Monitor dialog box.



COLOR OF THE ICON AND PRINTER STATUS

The color icon indicates the printer's status.

COLOR	DISPLAY	PRINTER STATUS
Blue		Ready, printer is ready to print
Yellow		Warming, printer requires user intervention
Red		Error, printer requires user intervention

PRECAUTIONS AND LIMITATIONS

ON USING TCP/IP

This section explains the precautions and limitations of using this printer with TCP/IP.

SETTING UP

Setting Up the Printer

- Be very careful in setting up IP addresses which are controlled as an entire system. Consult your network administrator before performing any setup on IP addresses.
- Depending on the network environments, some require subnet mask and gateway to be set up. Consult your network administrator and set up the necessary items.

Setting Up the Computer

- Be very careful in setting up IP addresses which are controlled as an entire system. Consult your network administrator before performing any setup on IP addresses.
- Before performing any network setup (such as the IP address) to a host running under NIS (Network Information Service), consult the NIS administrator.

When setting a UNIX workstation, note the following also:

- The setup procedures and commands may vary according to different versions of OS. Refer to the manuals that came with the workstation for the details.
- To setup the printer, the user must be a superuser. Contact your network administrator to perform the setup if you do not have the authority of a superuser.
- The print language/mode is determined by the printer model and configuration. Before setting a UNIX workstation, check the available languages/modes.
- To specify multiple entries for the logical printer, make sure each printer entry is assigned its own unique spool directory. If a single spool directory is used for multiple printer entries, the printer select option may not function correctly.

SWITCHING THE POWER ON/OFF

Take note of the following when switching off the printer:

Printer Spooling Is Set to [On] Spool Mode

All the spooled print data, including print data which is being printed, will be saved. When the power is switched on again, the stored print data will be printed first even if new print data has been instructed.

Printer Spooling Is Set to [Off] Nonspool Mode

All the print data spooled in the printer receive buffer, including print data which is being output, will be deleted. When the printer is switched on again, the print data will not be found.

However, if the power is switched off immediately after the print data has been sent, the data may be stored on the computer. In this case, when the power is switched on again, the stored print data will be printed first even if new print data has been sent.

PRINTING FROM WINDOWS

Take note of the following when printing from Windows:

- In the spool mode, if the print data is bigger than the remaining capacity of the hard disk or the memory at the point of receiving, the data will not be received by the printer.

NOTE

- > *Some client computers may re-send immediately when the print data has exceeded the receiving capacity. When this occurs, the client appears as if it has crashed. To rectify this situation, the client computer must be stopped from sending print data.*
- > *In the non-spool mode, printing will commence once data starts to be received by the printer. Therefore, if the printer has accepted a print request from a computer, it will not receive another print request from another computer.*
- > *For PCL and DUMP, the specification for the number of copies is invalid.*

PRINTING FROM UNIX

Take note of the following when printing from UNIX:

Print

- In the spool mode, up to 32 files can be printed by one command. Files that come after the 32nd file will be ignored. An instruction with more than 32 files will be treated by the printer as a print request of up to 32 files.
- In the spool mode, if the print data is bigger than the remaining capacity of the hard disk or the memory at the point of receiving, the data will not be received by the printer.

NOTE

- > *Some client workstations may re-send immediately when the print data has exceeded the receiving capacity. When this occurs, the client workstation appears as if it has crashed. To rectify this situation, the client must be stopped from sending print data.*
- > *In the non-spool mode, multiple files can be printed by issuing one command. Furthermore, the number of files is not limited.*
- > *In the non-spool mode, printing will commence once the data starts to be received by the printer. Therefore, if the printer has accepted a print request from a client workstation, it will not receive another print request from another client workstation.*
- > *Options, such as -m option, not processed by the workstation which sends the print instructions will not be valid.*
- > *For PCL and DUMP, the specification for the number of copies is invalid.*

Delete

- Print data which consists of multiple files sent in one print instruction, cannot be deleted file by file. All the files will be deleted at one go.
- This command will become invalid if it is executed without options having been specified or if there is no print data which matches the option.
- A workstation can only delete print data it has sent. It cannot delete print data sent by other workstations.
- Print data which is in the process of printing may not be deleted.

Inquiry

- Long file names will be truncated.
- Up to 64 print instructions can be displayed.
- If two or more types of print languages/modes are set up on a single workstation, identical job numbers may be displayed when an inquiry command is issued.
- In the non-spool mode, the client must be a Windows NT machine to use this option.

Others

- When the IP address or the computer name of a workstation is changed, the printer may not process inquiries or deletions correctly. Make sure the printer is free of all spooled data and switch off/on the printer.

NOTE

The function to stop/eject print data spooled to the printer spool can be operated from the printer control panel. Refer to the Setup Guide for information on this operation.

TROUBLESHOOTING

USING TCP/IP

This section provides information on the possible causes, verifying methods and recommended actions pertaining to errors which may occur when the printer is used with TCP/IP.

WHEN USING WINDOWS 95/98/ME

CAUSE		TREATMENT
The printer and the computer are connected to different networks.	Status Display	Unable to print (Network Error)
	Verification	Check with the system administrator of the network verify that the network connecting the computer and that connecting the printer are linked by a router or a gateway.
	Action	Connect the printer directly to the network connecting the computer.
An error has occurred on the network between the computer and the printer. Connection cannot be established.	Status Display	Unable to print (Network Error)
	Verification	-
	Action	Ask the system administrator of the network to check the network for errors.
The printer is switched off after the print instruction has been sent from the computer. Or the print instruction is sent to the printer which is switched off	Status Display	Unable to print (Network Error)
	Verification	Check whether or not the printer is switched on.
	Action	Switch on the printer.
Print instructions from multiple computers are sent to the printer at the same time.	Status Display	Unable to print (Network Error)
	Verification	-
	Action	(Print will be reprocessed automatically.)

CAUSE		TREATMENT
Printing cannot be spooled due to insufficient disk capacity of the computer.	Status Display	Double click [My Computer] and right click the disk installed with Windows 95/98/Me (e.g. C-drive)
	Verification	Select [Properties] from the menu displayed and check the free space available.
	Action	After erasing unnecessary files to increase the free space available, select [Pause Printing] from the [Document] menu of the printer window to enable printing to restart

USING WINDOWS NT 4.0/2000/XP/SERVER 2003

The Printer Is Not Printing

Cause	Verification	Action
Incorrect IP address.	Ask the network administrator to check that the IP address is correct.	Set up the correct IP address for the printer.
If LPD spool is set to [On], the print data sent by the user in a single print instruction has exceeded the remaining storage capacity of the destination device.	Check the remaining storage capacity of the destination device.	1. If single print data has exceeded the storage capacity of the destination device, free space on the device, or split the file into smaller ones to keep them below the remaining storage space.
		2. If multiple files have exceeded the storage of the destination device, reduce the number of files which can be sent at a time.
An irrecoverable error has occurred during printing.	Check the error message on the printer control panel.	Switch off the printer, then switch it on again.
The data format of the print data to be processed by the printer and that sent by the computer are different.	-	Disable the output function of Ctrl-D.

Unable to obtain the desired print results.

CAUSE	VERIFICATION	ACTION
The specified print language and that of the print data are different.	Check the specified print language and that of the print data.	Specify the print language consistent with that used in the print data.
The printer driver for this printer is not used. (The printer driver of another company is used)	Check that the printer driver which came with this printer has been selected.	Select the printer driver which came with this printer. If it does not appear on the selection list, install and select the printer driver. If a printer driver from another maker is used, the printer may not print properly.

WHEN USING UNIX

The printer is not printing

CAUSE	VERIFICATION	ACTION
Incorrect IP address.	Ask the network administrator to check if the IP address is correct.	Set up the correct IP address for the printer.
Error occurs on the network connecting the workstation and the printer.	Activate the network test mode (ping) on the workstation to check the communication status.	As the network administrator to look into the network failure.
Unable to set the correct printer entry on the workstation.	Check and correct the printer entry settings on the workstation. Check the/etc/printcap file on the workstation or use the "lpstat" command to troubleshoot.	Re-enter the correct printer entry.
The printer is in the offline status.	Check whether "Off-line" is displayed on the printer control panel.	Press the <ON LINE> button.
If LPD spool is set to [On], the print data sent by the user in a single print instruction has exceeded the remaining storage capacity of the destination device.	Check the remaining storage capacity of the destination device.	1. If single print data has exceeded the storage capacity of the destination device, free space on the device, or split the file into smaller ones to keep them below the remaining storage space.
		2. If multiple files have exceeded the storage of the destination device, reduce the number of files which can be sent at a time.
An irrecoverable error has occurred during print.	Check the error message on the printer control panel.	Switch off the printer, then switch it on again.
The data format of the print job does not conform to the printing environment of the workstation. (Print data from the client contains TBCP.)	-	Specify PSASC on the client side to print data containing TBCP by the PostScript language.

CAUSE	VERIFICATION	ACTION
The data format of the print job does not conform to the printing environment of the workstation. (Print data from the client is of a binary format.)	-	Specify PSBIN on the client side for the printer name on the remote host to print a binary file in the PostScript language.
The printer has run out of paper.	Check the message on the printer control panel	Load paper into the paper tray.

Unable to Obtain the Desired Print Results

CAUSE	VERIFICATION	ACTION
The indicated print language and the print language used in the print data are different.	Check that the print language specified is the print language used in the print data.	Specify the print language consistent with that used in the print data.

PROBLEM		TREATMENT
<p>The printer does not appear in Chooser. Continued</p>	Verification 2	<p>Use of a network management application software, such as Apple Inter-Pole, and check that the printer exists on the network.</p> <p>Check that the network is connected correctly.</p>
	Action 2	<p>If the printer cannot be found on the network, the printer may be off or the network cable maybe faulty.</p> <p>If the printer is on and the network cable normal, contact our Printer Support Desk.</p>
<p>Unable to obtain desired print results.</p>	Cause 1	<p>The print language of the printer and that of the print drawer are different.</p>
	Verification 1	<p>Check the print language set up for the printer and that for the printer driver for Macintosh.</p>
	Action 1	<p>Ensure that PostScript and Adobe PS are set up as the print language for the printer and printer driver respectively.</p> <p>If the print language of the printer is the dump mode, the print data sent from Macintosh will be output in hexadecimal notations.</p>
	Cause 2	<p>The printer driver which came with the printer is not set up on the Macintosh. A printer driver of another maker has been used instead.</p>
	Verification 2	<p>Check the installation procedure for the printer driver which came with the printer again and confirm that the printer driver is installed on the Macintosh.</p> <p>Check that the printer driver which came with the printer appears in the Chooser.</p>
	Action 2	<p>If garbled characters are still printed after the printer driver for the printer has been selected, contact service.</p> <p>If a printer driver of another maker is used, the printer may not print properly.</p>

PROBLEM		TREATMENT
The printer is not connected.	Cause 1	On the Macintosh, the printer is not selected correctly in the Chooser. Or, the printer is processing another job.
	Verification 1	Check that the printer is selected correctly on the Macintosh. If the printer is processing another job, the job must be completed before the printer can be connected.
	Action 1	If the printer is still not connected though it is selected correctly and is not processing another job, check the following causes.
	Cause 2	The EtherTalk port of the printer is set to [Disable]. Or, the Start/Stop setting for EtherTalk has been set to Off by the PostScript command. Or, the printer is in the offline status.
	Verification 2	Check that the port used is set to [Enable] and that the Start/ Stop setting is set to [Start]. Check whether "Off-line" is displayed on the printer control panel.
	Action 2	If the printer still cannot be connected although all the above conditions are normal, contact service.

PROBLEM		TREATMENT
Although it is connected, the printer does not print.	Cause 1	The printer is in the offline status.
	Verification 1	Check whether "Off-line" is displayed on the printer control panel.
	Action 1	Press the <ON LINE> button.
	Cause 2	The print language of the printer and that of the printer driver are different.
	Verification 2	Check the print language set up for the printer and that for the printer driver for Macintosh.
	Action 2	If the print language of the printer and that of the printer driver are different, set the same language for them. If the problem remains, check the following causes.
	Cause 3	After the Macintosh was connected to the printer, the power to the printer was shut off. Or, paper jam has occurred in the printer. Or, the network is faulty.
	Verification 3	Check that the printer is switched on. Select the printer again from Macintosh and reprint.
	Action 3	If the problem remains, contact service.
"Please reboot printer" is displayed on the printer control panel.	Cause	The AppleTalk function of the printer has failed.
	Verification	Switch off the printer, then switch it on again.
	Action	If "Please reboot printer" still appears on the printer control panel, contact service.

SETTING IP ADDRESS

When the printer is connected to the network, it retrieves the IP address automatically from the DHCP server once it is switched on.

If the DHCP server is not available or not in use, use one of the following methods to retrieve and set the IP address.

- Set the IP address from the control panel
- Use the IP address Setup Tool in the CD-ROM bundled with this printer.

Important:

- When using the DHCP server, use WINS (Windows Internet Name Service) server at the same time.
- The address information can also be retrieved automatically via the BOOTP or RARP servers. For such cases, change the [Get IP Address] selection on the control panel to [BOOTP] or [RARP].
- Depending on the network environment, you may need to set the subnet mask and gateway address.
- Please check with your network administrator if you have any questions concerning your network environment.

Refer to:

- Details on retrieving IP address: Reference Guide
- IP Address Setup Tool: Network Print Environment User Guide
- Web browser: Reference Guide

NOTE

- > *You can change the IP address using a web browser.*
- > *You can check the current IP address, subnet mask and gateway address settings from the [System Settings List].*
- > *This section explains how to set IP address from the control panel.*

NOTE

- If you have made a mistake when operating the control panel, press the <MENU> button to restart.

APPENDIX A: SETTING IP ADDRESS

1. Press the **<MENU>** button to display the Menu screen.
2. Press the **<▲>** or **<▼>** button until [Network Menu] is displayed, then press the **<▶>** button.
3. Check that [TCP/IP] is displayed, then press the **<▶>** button.
4. Press the **<▲>** or **<▼>** button until TCP/IP is set for [Enable], then press the **<SELECT>** button.
5. Press the **<▲>** or **<▼>** button until [IP Address Set] is displayed, then press the **<▶>** button.
6. Press the **<▲>** or **<▼>** button until [Manual] is displayed, then press the **<SELECT>** button.
7. Press the **<▲>** or **<▼>** button until [IP Address] is displayed, then press the **<▶>** button.
8. The first set of numbers of the IP address will blink. Press the **<▲>** or **<▼>** button to scroll to the desired number.
9. Press the **<▶>** button to save the current set of numbers and move to the next set.
10. Repeat steps 8 and 9 until all numbers have been set, then press the **<SELECT>** button.
11. Press the **<▲>** or **<▼>** button until [Subnet Mask] is displayed, then press the **<▶>** button.
12. The first set of numbers of the Subnet Mask will blink. Press the **<▲>** or **<▼>** button to scroll to the desired number.
13. Press the **<▶>** button to save the current set of numbers and move to the next set.
14. Repeat steps 12 and 13 until all numbers have been set, then press the **<SELECT>** button.
15. Repeat steps 11, 12, 13, & 14 to set the Gateway Address as necessary.
16. Press the **<CANCEL>** button. To exit the menus.
17. Reboot the printer.

