SHARP

MODEL

MX-NB12

NETWORK EXPANSION KIT

OPERATION GUIDE

INTRODUCTION

The optional Network expansion kit (MX-NB12) enables the machine to be used as a network printer and a network scanner.

Note
- This manual refers to the digital multifunction device equipped with the network function as "the machine".
- This manual only explains features that can be used when the optional Network expansion kit is installed. For information on loading paper, replacing toner cartridges, clearing paper misfeeds, handling peripheral devices, and other copier-related information, please refer to the Operation Guide for the machine.
- The machine's default settings and default settings for the printer function can be changed using the system settings. For more information, see the Operation Guide for the machine.
- The explanations in this manual assume that the person who will install the product and the users of the product have a working knowledge of Microsoft Windows.
- For information on the operating system, please refer to your operating system manual or the online Help function.
- The explanations of screens and procedures in this manual are for Windows Vista® in Windows® environments. The screens may vary in other versions of the operating systems.
- Where "AR-XXXX" appears in this manual, please substitute the name of your model.
- The explanations in this manual are based on the North American version of the software. Versions for other countries and regions may vary slightly from the North American version.

Warranty

While every effort has been made to make this Operation Guide as accurate and helpful as possible, SHARP Corporation makes no warranty of any kind with regard to its content. All information included herein is subject to change without notice. SHARP is not responsible for any loss or damages, direct or indirect, arising from or related to the use of this Operation Guide.

Trademark Acknowledgments

- Sharpdesk is a trademark of Sharp Corporation.
- Microsoft®, Windows®, Windows® 2000, Windows® XP, Windows Server® 2003, Windows Server® 2008, Windows Vista®, Windows® 7 and Internet Explorer® are registered trademarks or trademarks of Microsoft Corporation in the U.S.A. and other countries.
- Adobe, the Adobe logo, Acrobat, the Adobe PDF logo, and Reader are registered trademarks or trademarks of Adobe Systems Incorporated in the United States and other countries.
- Netscape Navigator is a trademark of Netscape Communications Corporation.
- PCL is a trademark of the Hewlett-Packard Company.
- All other trademarks and copyrights are the property of their respective owners.

SOFTWARE LICENSE

The SOFTWARE LICENSE will appear when you install the software from the CD-ROM. By using all or any portion of the software on the CD-ROM or in the machine, you are agreeing to be bound by the terms of the SOFTWARE LICENSE.

The display screens, messages, and key names shown in the manual may differ from those on the actual machine due to product improvements and modifications.

CONTENTS

5 WEB FUNCTIONS IN THE MACHINE

6 SCANNER FUNCTIONS

7 TROUBLESHOOTING

8 SPECIFICATIONS

1 BEFORE INSTALLATION

CD-ROMS AND SOFTWARE

CD-ROMS IN THE NETWORK EXPANSION KIT

The Network expansion kit contains the following two CD-ROMs: "Software CD-ROM" and "Sharpdesk".

⚠Caution	The Printer Status Monitor on the "Software CD-ROM" cannot be used when the machine is connected to your computer by a USB.

"Software CD-ROM"

The "Software CD-ROM" contains the following software programs:

Software for Windows

- **Printer driver**

  These allow the machine to be used as a printer.

  - **PCL6 printer driver**

    The machine supports the Hewlett-Packard PCL6 printer control languages.

- **Scanner driver**

  The scanner driver allows you to use the scanning function of the machine with TWAIN-compliant and WIA-compliant applications.

- **Printer Status Monitor**

  This allows you to check the status of the network printer on your computer screen.

- **Button Manager**

  Button Manager allows you to use the scanner menus on the machine to scan a document.

"Sharpdesk" CD-ROM (for Windows)

Sharpdesk is a desktop document management application that makes it easy to start applications and file documents and images.

SYSTEM REQUIREMENTS

Before installing the software described in this manual, make sure that your computer satisfies the following requirements.

Computer type	IBM PC/AT or compatible computer equipped with a USB2.0[1] or 10Base-T/100Base-TX LAN interface
Operating system[2][3][4]	Windows 2000 Professional, Windows XP, Windows Server 2003, Windows Vista, Windows Server 2008, Windows 7
Display	1024 x 768 dots resolution and 16-bit colour or higher is recommended.
Hard disk free space	100 MB or more
Other hardware requirements	An environment on which any of the operating systems listed above can fully operate

[1] Compatible with Windows 2000 Professional, Windows XP Professional/Home Edition, Windows Vista or Windows 7 preinstalled model equipped standard with a USB port.
[2] Printing is not available in MS-DOS mode.
[3] The machine does not support printing from a Macintosh environment.
[4] Administrator's rights are required to install the software using the installer.

Installation environment and usable software

The following table shows the drivers and software that can be installed for each version of Windows and interface connection method.

		Operating System					
	Cable	Windows 2000	XP	Vista	7	Server 2003	Server 2008
MFP Printer Driver	**USB**	Yes	Yes	Yes	Yes	N/A	N/A
	LAN	Yes	Yes	Yes	Yes	Yes	Yes
MFP Scanner Driver	**USB**	Yes	Yes	Yes	Yes	N/A	N/A
	LAN	N/A	N/A	N/A	N/A	N/A	N/A
Button Manager	**USB**	Yes	Yes	Yes	Yes	N/A	N/A
	LAN	N/A	N/A	N/A	N/A	N/A	N/A
Printer Status Monitor	**USB**	N/A	N/A	N/A	N/A	N/A	N/A
	LAN	Yes	Yes	Yes	Yes	Yes	Yes

SYSTEM SETTINGS FOR THE NETWORK EXPANSION KIT

When the Network expansion kit is installed in the machine, the following programs are added to the system settings.
The IP address and other network settings are configured using these system settings.

✎**Note**	The procedure for selecting a system setting is explained in "SELECTING A SETTING FOR A SYSTEM SETTING" in the Operation Guide for the machine.

Additional system settings

Program number	Program name	Setting codes (factory default settings appear in bold)	Explanation
37	IP ADDRESS SETTING	1: ENABLE DHCP **- YES** - NO	• If "YES" is selected (factory default setting) and the machine is connected to a TCP/IP network, the IP address will be acquired automatically. This is the factory default setting. If you will manually assign an IP address, select "NO". For the detailed procedure, see "ENABLING/DISABLING DHCP" (p.8).
		IP ADDRESS SETTING - IP ADDRESS - SUBNET MASK - DEFAULT GATEWAY	• This program is used to set the IP address (IP address, Subnet Mask, and Gateway) of the machine when TCP/IP protocol is used on the network. For the detailed procedure, see "SETTING/CHANGING THE IP ADDRESS MANUALLY" (p.9).

2 SETUP

SETTING THE IP ADDRESS OF THE MACHINE BY SYSTEM SETTINGS

To set the IP address of the machine, perform the program number (37) in the system settings (p.7).
The procedure for selecting a system setting is explained in "SELECTING A SETTING FOR A SYSTEM SETTING" in the Operation Guide for the machine.

ENABLING/DISABLING DHCP

Use this setting to have the IP address obtained automatically using DHCP (Dynamic Host Configuration Protocol). When this setting is enabled, it is not necessary to manually enter an IP address.

1 **Press the [Copy ratio display] key (%).**

□ ZOOM
%
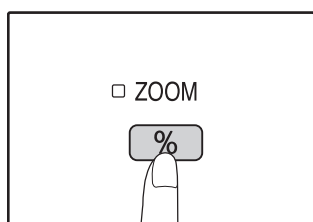
Note
- Every press of [Copy ratio display] key (%) switches enabling and disabling of DHCP.
- DHCP is enabled by the factory default.

SETTING THE IP ADDRESS AUTOMATICALLY

When the DHCP is set to on, set IP address of the machine by the following operation.

1 **Turn the machine power off and then back on.**
The IP address of the machine will be detected and set.
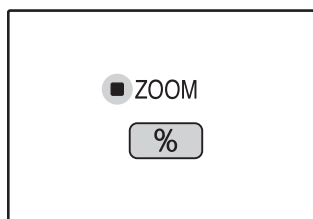
■ ZOOM
%

Note
If DHCP is used, the IP address assigned to the machine may change automatically. If the IP address changes, printing will not be possible.

When the ZOOM indicator is lit:
DHCP is enabled.
When the ZOOM indicator is off:
DHCP is disabled.

SETTING/CHANGING THE IP ADDRESS MANUALLY

Perform the following procedure to use a fixed IP address.

1 Press the [AUTO/TEXT/PHOTO] (AUTO/◖···◗/◺) key to select an item to set.

Every press of [AUTO/TEXT/PHOTO] (AUTO/◖···◗/◺) key switches the item to select.
The indicator of the selected item lights up.
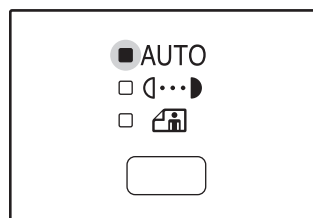
■ AUTO
□ ◖···◗
□ ◺

You can enter the numbers only when the indicator for the item to set is lit.

When "AUTO" (AUTO) is lit:
Enter the IP address.
When "TEXT" (◖···◗) is lit:
Enter the Subnet Mask.
When "PHOTO" (◺) is lit:
Enter the Default Gateway.

2 Press the [Copy ratio display] key (%) to turn off the ZOOM indicator.

The PRESET RATIO indicator that is allocated for the digits to be entered lights up.

Metric (AB) series

■ 200%
□ 141
□ 122
□ 115
□ 100%
□ 86
□ 81
□ 70
□ 50%

Inch series

■ 200%
□ 141
□ 129
□ 121
□ 100%
□ 95
□ 77
□ 64
□ 50%

000.000.000.000
① ② ③ ④

Available numbers for the IP address (The default setting for each digit is "000".)

Item	① (First digit)	② (Second digit)	③ (Third digit)	④ (Fourth digit)
IP address	0-223	0-255	0-255	0-255
Subnet Mask	0-255	0-255	0-255	0-255
Default Gateway	0-223	0-255	0-255	0-255

When the "200%" indicator is lit:
Enter the three digits for ① in the address.
When the "141" indicator is lit:
Enter the three digits for ② in the address.
When the "122 (129)" indicator is lit:
Enter the three digits for ③ in the address.
When the "115 (121)" indicator is lit:
Enter the three digits for ④ in the address.

3 Enter a desired address with the numeric keys.

The entered numbers will appear on the display.

[192] 1 2 3 / 4 □ 6 / 7 □ / ✳
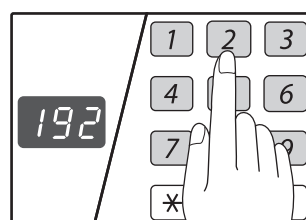
Note
• Press the [CLEAR] key (C) to clear the currently entered three digits.
• You cannot change the IP address if DHCP is set to on.
• When DHCP is set to on, the display shows the IP address obtained automatically.
• "- - -" appears on the display if the IP address cannot be recognized.
• The [READ-END] key (#) and Audit clear key (✳) (ACC.#-C) cannot be used.

4 Press the [START] key (⊙) to fix the entered numbers.

The entered numbers will be fixed and the indicator for the next three digits lights up.
Repeat steps 2 to 5 to enter the whole address.

Note
If the entered digits are not available, a sound notifies the error after you press the [START] key (⊙) and the maximum available 3-digit number appears on the display.

- 9 -

INSTALLING THE SOFTWARE

> **Note**
> - If you need to use a different connection method after installing the software using a USB or network connection, you must first uninstall the software and then install it using the new connection method.
> - In the following explanations it is assumed that the mouse is configured for right hand operation.
> - The scanner feature only works when using a USB cable.
> - If an error message appears, follow the instructions on the screen to solve the problem. After the problem is solved, the installation procedure will continue. Depending on the problem, you may have to click the "Cancel" button to exit the installer. In this case, reinstall the software from the beginning after solving the problem.

USING THE MACHINE WITH A USB CONNECTION

1 **The USB cable must not be connected to the machine. Make sure that the cable is not connected before proceeding.**

If the cable is connected, a Plug and Play window will appear. If this happens, click the "Cancel" button to close the window and disconnect the cable.

> **Note** The cable will be connected in step 12.

2 **Insert the "Software CD-ROM" into your computer's CD-ROM drive.**

3 **Click the "Start" button, click "Computer", and then double-click the CD-ROM icon ( ).**

- In Windows XP, click the "start" button, click "My Computer", and then double-click the CD-ROM icon.
- In Windows 2000, double-click "My Computer", and then double-click the CD-ROM icon.

4 **Double-click the "Setup" icon ( ).**

- In Windows 7, if a message screen appears asking you for confirmation, click "Yes".
- In Windows Vista, if a message screen appears asking you for confirmation, click "Allow".

5 **The "SOFTWARE LICENSE" window will appear. Make sure that you understand the contents of the software license, and then click the "Yes" button.**

> **Note** You can show the "SOFTWARE LICENSE" in a different language by selecting the desired language from the language menu. To install the software in the selected language, continue the installation with that language selected.

6 **Read the message in the "Welcome" window and then click the "Next" button.**

7 **To install all of the software, click the "Standard" button of the "Connected to this computer" menu and go to step 12.**

To install particular packages, click the "Custom" button and go to next step.
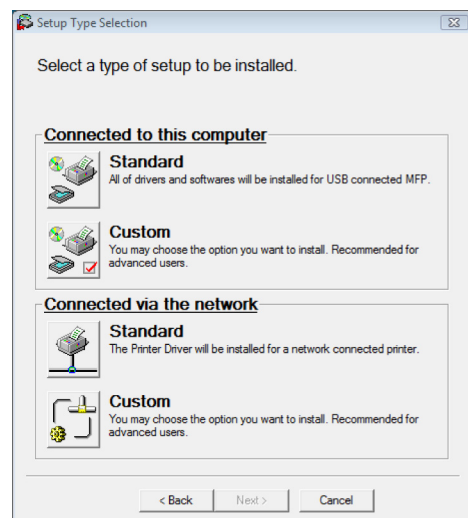
8 **Click the "MFP Driver" button.**

Click the "Display Readme" button to show information on packages that are selected.

Software Selection
Select a software to be installed.
[Software]   [Display Readme]
MFP Driver(Printer/Scanner) The Scanner feature only works when using a USB Interface Cable.
Button Manager Button Manager allows you to use the scanner keys on the machine to scan a document.
< Back   Next >   Close

9 **The files required for installation of the MFP driver are copied.**
Follow the on-screen instructions.

When "The installation of the SHARP software is complete." appears, click the "OK" button.

⚠ **Caution**
- If you are using Windows Vista/7 and a security warning window appears, be sure to click "Install this driver software anyway".
- If you are running Windows 2000/XP and a warning message appears regarding the Windows logo test or digital signature, be sure to click "Continue Anyway" or "Yes".

10 **You will return to the window of step 8. If you wish to install Button Manager, click the "Button Manager" button.**
If you do not wish to install Button Manager, go to step 11.

📝 **Note**
After the installation, a message prompting you to restart your computer may appear. In this case, click the "Yes" button to restart your computer.

11 **When installing is finished, click the "Close" button.**

⚠ **Caution**
- If you are using Windows Vista/7 and a security warning window appears, be sure to click "Install this driver software anyway".
- If you are running Windows 2000/XP and a warning message appears regarding the Windows logo test or digital signature, be sure to click "Continue Anyway" or "Yes".

A message will appear instructing you to connect the machine to your computer. Click the "OK" button.

📝 **Note**
After the installation, a message prompting you to restart your computer may appear. In this case, click the "Yes" button to restart your computer.

12 **Make sure that the power of the machine is turned on, and then connect the USB cable (p.12).**
Windows will detect the machine and a Plug and Play screen will appear.

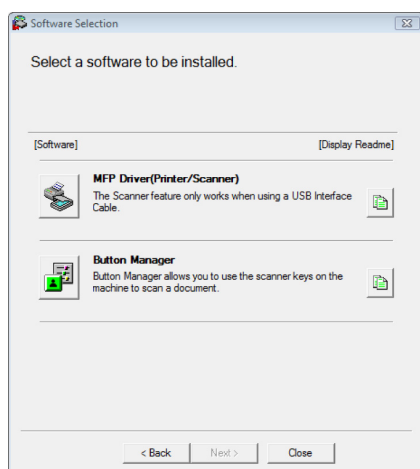**13** **Follow the instructions in the Plug and Play window to install the driver.**
Follow the on-screen instructions.

⚠ **Caution**
- If you are using Windows Vista/7 and a security warning window appears, be sure to click "Install this driver software anyway".
- If you are running Windows 2000/XP and a warning message appears regarding the Windows logo test or digital signature, be sure to click "Continue Anyway" or "Yes".

This completes the installation of the software.
If you installed Button Manager, set up Button Manager as explained in the Operation Guide for the machine.

CONNECTING A USB CABLE

Follow the procedure below to connect the machine to your computer.
A USB cable for connecting the machine to your computer is not included with the machine. Please purchase the appropriate cable for your computer.

⚠ Caution	• USB is available with a PC/AT compatible computer that was originally equipped with USB and had Windows 2000 Professional, Windows XP Professional, Windows XP Home Edition, Windows Vista or Windows 7 preinstalled. • Do not connect the USB cable before installing the MFP driver. The USB cable should be connected during installation of the MFP driver.

📝 Note	• If the machine will be connected using a USB 2.0 port of your computer, please purchase a USB cable that supports USB 2.0. • Even when the Microsoft USB 2.0 driver is used, it may not be possible to obtain full USB 2.0 speed if a PC card supporting USB 2.0 is used. To obtain the latest driver (which may enable a higher speed), contact the manufacturer of your PC card. • Connection is also possible using a USB 1.1 port on your computer. However, the specifications will be USB 1.1 specifications (Full-Speed).

1 **Insert the cable into the USB connector on the machine.**

2 **Insert the other end of the cable into your computer's USB port.**

USING THE MACHINE AS A NETWORK PRINTER

Note Interface cables for connecting the machine to your computer are not included with the machine. Please purchase the appropriate cable for your computer.
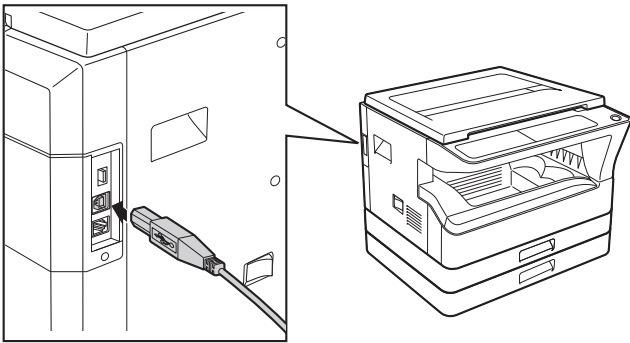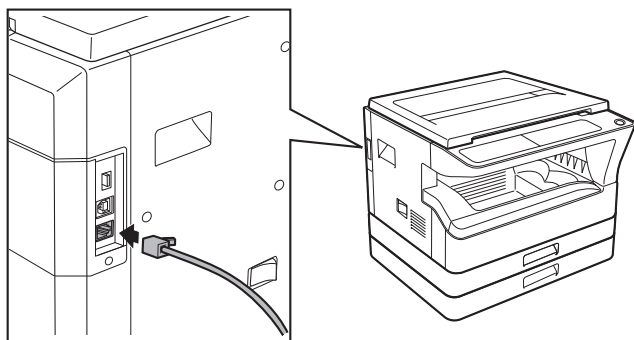
1 **Insert the LAN cable into the LAN connector on the machine.**

Use a network cable that is shielded.

2 **Turn on the machine.**

3 **Insert the "Software CD-ROM" into your computer's CD-ROM drive.**

4 **Click the "Start" button, click "Computer", and then double-click the CD-ROM icon ( ).**

- In Windows XP, click the "start" button, click "My Computer", and then double-click the "CD-ROM" icon.
- In Windows 2000, double-click "My Computer", and then double-click the CD-ROM icon.

5 **Double-click the "Setup" icon ( ).**

- In Windows 7, if a message screen appears asking you for confirmation, click "Yes".
- In Windows Vista, if a message screen appears asking you for confirmation, click "Allow".

6 **The "SOFTWARE LICENSE" window will appear. Make sure that you understand the contents of the license agreement, and then click the "Yes" button.**

Note You can show the "SOFTWARE LICENSE" in a different language by selecting the desired language from the language menu. To install the software in the selected language, continue the installation with that language selected.

7 **Read the message in the "Welcome" window and then click the "Next" button.**

8 **Click the "Standard" button of the "Connected via the network" menu.**
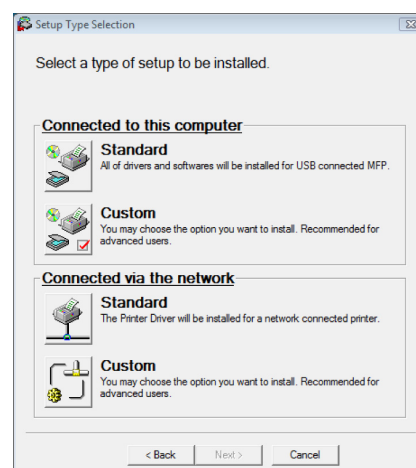
9 **Printers connected to the network are detected. Select the machine and click the "Next" button.**

Note
- If the machine is not found, make sure that the machine is powered on and that the machine is connected to the network, and then click the [Re-search] button.
- You can also click the [Specify condition] button and search for the machine by entering the machine's name (host name) or IP address.
  To check the IP address of the machine, see "SETTING/CHANGING THE IP ADDRESS MANUALLY" (p.9).

10 **A confirmation window appears. Check the contents and then click the "Next" button.**

11 **When the printer driver selection window appears, select the printer driver to be installed and click the "Next" button.**

Select the checkboxes of the printer drivers to be installed.

12 **Select whether or not you wish the printer to be your default printer and click the "Next" button.**

If you are installing multiple printer drivers, select the printer driver to be used as the default printer. If you do not wish to set either printer driver as the default printer, select "No".

Note If you clicked the "Custom" button in step 8, the following windows will appear.
- **Printer name window**
  If you wish to change the printer name, enter the desired name and click the "Next" button.
- **Window confirming installation of the display fonts**
  To install the display fonts for the PCL printer driver, select "Yes" and click the "Next" button.

13 **Follow the on-screen instructions.**

Read the message in the window that appears and click the "Next" button.
Installation begins.

Note
- **If you are using Windows 2000/XP/Server 2003**
  If a warning message regarding the Windows logo test or digital signature appears, be sure to click the "Continue Anyway" or "Yes" button.
- **If you are using Windows Vista/7**
  If a security warning window appears, be sure to click "Install this driver software anyway".

14 **When the installation completed screen appears, click the "OK" button.**

15 **Click the "Close" button.**

Note After the installation, a message prompting you to restart your computer may appear. In this case, click the "Yes" button to restart your computer.

This completes the installation of the software.
- After installation, see "CONFIGURING THE PRINTER DRIVER" (p.18) to check the printer driver settings.
- To install the Printer Status Monitor, see "INSTALLING THE PRINTER STATUS MONITOR" (p.17).

SHARING THE PRINTER USING WINDOWS NETWORKING

If the machine will be used as a shared printer on a network, follow these steps to install the printer driver in the client computer.

> **Note** To configure the appropriate settings in the print server, see the operation manual or help file of your operating system.
> "Print server" as explained here, is a computer that is directly connected to the machine, and a "Client" is any other computer that is connected to the same network.

1 **Insert the "Software CD-ROM" into your computer's CD-ROM drive.**

2 **Click the "Start" button, click "Computer", and then double-click the CD-ROM icon ( ).**

- In Windows XP, click the "start" button, click "My Computer", and then double-click the "CD-ROM" icon.
- In Windows 2000, double-click "My Computer", and then double-click the CD-ROM icon.

3 **Double-click the "Setup" icon ( ).**

- In Windows 7, if a message screen appears asking you for confirmation, click "Yes".
- In Windows Vista, if a message screen appears asking you for confirmation, click "Allow".
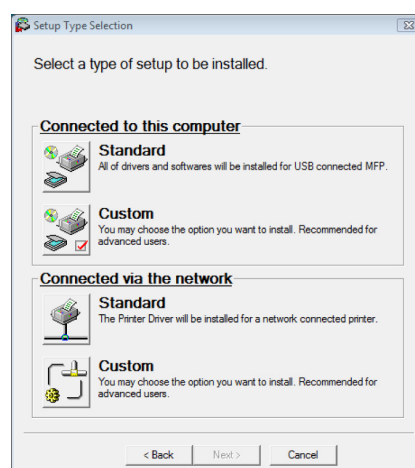
4 **The "SOFTWARE LICENSE" window will appear. Make sure that you understand the contents of the license agreement, and then click the "Yes" button.**

> **Note** You can show the "SOFTWARE LICENSE" in a different language by selecting the desired language from the language menu. To install the software in the selected language, continue the installation with that language selected.

5 **Read the message in the "Welcome" window and then click the "Next" button.**

6 **Click the "Custom" button of the "Connected via the network" menu.**

7 **Click the "Printer Driver" button.**

To view information on the software, click the "Display Readme" button.

8 **Select "Shared Printer" and click the "Next" button.**

9 **For the port to be used, select the machine set as a shared printer, and click the "Next" button.**

If you are using Windows 2000/XP, you can also click the "Add Network Port" button and select the printer to be shared by browsing the network in the window that appears. (In Windows Vista/7, the "Add Network Port" button does not appear.)

> **Note** If the shared printer does not appear in the list, check the settings in the printer server.

10 **When the model selection window appears, select model name of your machine and click the "Next" button.**

11 **When the printer driver selection window appears, select the printer driver to be installed and click the "Next" button.**

Be sure to select the same printer driver as the printer driver used in the print server (the machine).

12 **Follow the on-screen instructions.**

Read the message in the window that appears and click the [Next] button.
Installation begins.

Note
- **If you are using Windows 2000/XP/Server 2003**
  If a warning message regarding the Windows logo test or digital signature appears, be sure to click the "Continue Anyway" or "Yes" button.
- **If you are using Windows Vista/Server 2008/7**
  If a security warning window appears, be sure to click "Install this driver software anyway".

13 **When the installation completed screen appears, click the "OK" button.**

14 **Click the "Close" button in the window of step 6.**

Note
After the installation, a message prompting you to restart your computer may appear. If this message appears, click the "Yes" button to restart your computer.

This completes the installation of the software.
- After installation, see "CONFIGURING THE PRINTER DRIVER" (p.18) to check the printer driver settings.
- To install the Printer Status Monitor, see "INSTALLING THE PRINTER STATUS MONITOR" (p.17).

- 16 -

INSTALLING THE PRINTER STATUS MONITOR

1 Insert the "Software CD-ROM" into your computer's CD-ROM drive.

2 Click the "Start" button, click "Computer", and then double-click the CD-ROM icon ( ).
- In Windows XP, click the "start" button, click "My Computer", and then double-click the "CD-ROM" icon.
- In Windows 2000, double-click "My Computer", and then double-click the CD-ROM icon.

3 Double-click the "Setup" icon ( ).

- In Windows 7, if a message screen appears asking you for confirmation, click "Yes".
- In Windows Vista, if a message screen appears asking you for confirmation, click "Allow".

4 The "SOFTWARE LICENSE" window will appear. Make sure that you understand the contents of the license agreement, and then click the "Yes" button.

Note You can show the "SOFTWARE LICENSE" in a different language by selecting the desired language from the language menu. To install the software in the selected language, continue the installation with that language selected.

5 Read the message in the "Welcome" window and then click the "Next" button.

6 Click the "Custom" button of the "Connected via the network" menu.

7 Click the "Printer Status Monitor" button.

To view information on the software, click the "Display Readme" button.
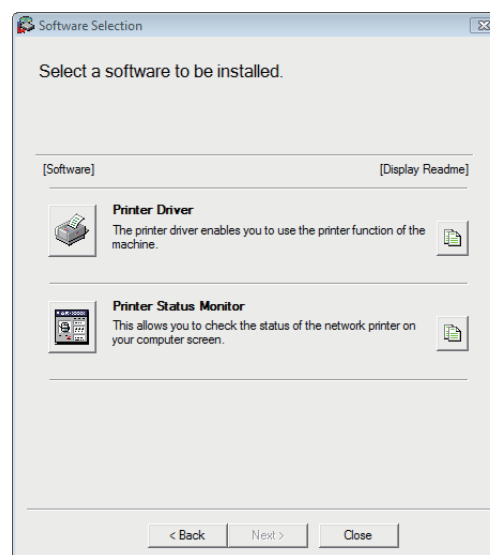
8 Follow the on-screen instructions.

Read the message in the window that appears and click the [Next] button.
Installation begins.

9 When the installation completed screen appears, click the "Finish" button.

To have the Printer Status Monitor start automatically when your computer is started, select the "Add this program to your Startup folder" checkbox.

10 Click the "Close" button in the window of step 6.

Note After the installation, a message prompting you to restart your computer may appear. If this message appears, click the "Yes" button to restart your computer.

This completes the installation.

For the procedures for using the Printer Status Monitor, see the Help file. Follow these steps to view the Help file:
Click the Windows "Start" button, select "All Programs" ("Programs" in Windows 2000), select "SHARP Printer Status Monitor" and then select "Help".

CONFIGURING THE PRINTER DRIVER

After installing the printer driver, you must configure the printer driver settings appropriately for the number of paper trays on the machine and the size of paper loaded in each tray.

1 **Click the "Start" button, click "Control Panel", and then click "Printer".**

- In Windows 7, click the "Start" button and then click "Devices and Printers".
- In Windows XP/Server 2003, click the "start" button and then click "Printers and Faxes".
- In Windows 2000, click the "Start" button, select "Settings", and then click "Printers".

Note In Windows XP, if "Printers and Faxes" does not appear in the "start" menu, select "Control Panel", select "Printers and Other Hardware", and then select "Printers and Faxes".

2 **Click the "SHARP AR-XXXX" printer driver icon and select "Properties" from the "Organize" menu.**

- In Windows 7, right-click the "SHARP AR-XXXX" printer driver icon, and then click "Printer properties".
- In Windows XP/2000, select "Properties" from the "File" menu.

3 **Click the "Configuration" tab and set the printer configuration based on the options that have been installed.**

Set the printer configuration properly. Otherwise, printing may not take place correctly.
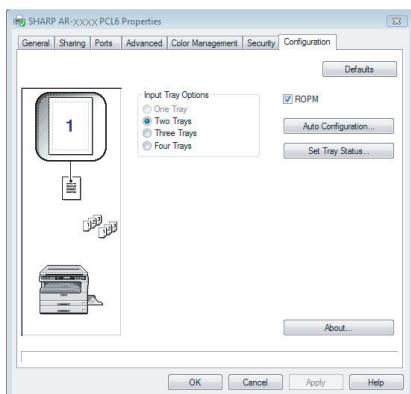
Note To automatically configure the settings based on the detected machine status, click the "Auto Configuration" button.

4 **Click the "Set Tray Status" button and select the size of paper that is loaded in each tray.**
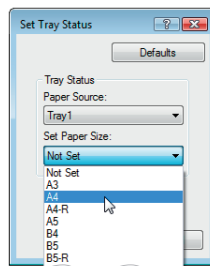
Select a tray in the "Paper Source" menu, and select the size of paper loaded in that tray from the "Set Paper Size" menu. Repeat for each tray.

5 **Click the "OK" button in the "Set Tray Status" window.**

6 **Click the "OK" button in the printer properties window.**

3 PRINTER FUNCTIONS

This chapter explains how to use the printer functions.
The procedure for loading paper is the same as for loading copy paper. See the Operation Guide for the machine.

<table>
<tr><td>Note</td><td>• Print jobs received while the machine is copying or scanning will be stored in memory. When the copy job is finished, the print jobs will begin printing.
• Printing is not possible when the front or side cover is opened for machine maintenance, or when a misfeed occurs or the machine runs out of paper or toner, or when the drum cartridge reaches its replacement time.
• If an original misfeed occurs in the SPF/RSPF, printing will not be possible until the misfed original is removed and the SPF/RSPF is restored to a usable state.</td></tr>
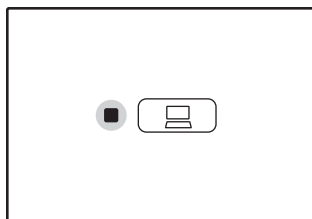</table>

BASIC PRINTING

The following example explains how to print a document from WordPad.
Before printing, make sure that the correct size of paper for your document has been loaded in the machine.

1 **Make sure that the ON LINE indicator on the operation panel is lit.**

If the ON LINE indicator is not lit, press the [ON LINE] key ( ).

When the indicator is:
• Lit, the machine is online and ready to print, or is printing.
• Blinking, the machine is processing print data in memory or printing has been paused.
• Off, the machine is off-line and cannot print.

2 **Start WordPad and open the document that you wish to print.**

3 **Select "Print" from the application's "File" menu.**

If you are using Windows 7, click the button.
The "Print" dialog box will appear.

4 **Make sure that "SHARP AR-XXXX" is selected as the printer.**

If you need to change any print settings, click the "Preferences" button to open the printer driver setup screen.
The printer driver setup screen will appear.

Windows 2000 does not have the "Preferences" button in this dialog box. Select settings as needed on each of the tabs in the setup screen and click the "OK" button.
"PRINTER DRIVER SETTINGS" (p.22)

5 **Click the "Print" button.**

Printing begins.
The print job will be delivered to the output tray.

If the tray runs out of paper during printing

Add paper to the tray or press the [PAPER SELECT] key ( ) to select a different tray, and then press the [ON LINE] key ( ) to resume printing.
Note that if the "Auto tray switching" setting in the system settings is enabled on a model that has two or more paper trays and there is the same size of paper in another tray, the machine will automatically switch to the other tray and continue printing.

Pausing a print job

To pause a print job during printing, press the [ON LINE] key ( ) on the operation panel to switch the machine off-line. Printing will be paused and the ON LINE indicator will blink.
• To cancel a print job, press the [CLEAR] key (C) or the [CLEAR ALL] key (CA).
• To resume printing, press the [ON LINE] key ( ) to switch the machine online.

When "Paper Source" is set to "Auto Select"

If "Paper Source" is set to "Auto Select" in the "Paper" tab of the printer driver setup screen and the correct size of paper for a print job is not loaded in the machine, the printing procedure will vary depending on the "Use close paper size" setting in the system settings. See the Operation Guide for the machine.

When "Use close paper size" is disabled

The PAPER SIZE indicator on the operation panel will blink. You can press the [PAPER SELECT] key ( ) to select a tray manually, or load paper in the bypass tray and press the [ON LINE] key ( ) to begin printing.
* The paper sizes that appear in the operation panel will vary by country and region.

Metric (AB) series   **Inch series**

Metric (AB) series	Inch series
A3	11×17
A4	8½×14
A4	8½×11
A5	8½×5½
B4	8½×11
8½×13	8½×13
EXTRA	EXTRA

When "Use close paper size" is enabled

Printing will take place using a size of paper that is close to the size of the print image.

OPENING THE PRINTER DRIVER FROM THE "Start" BUTTON

To change the printer driver settings, follow the steps below. Settings adjusted in this way will be the initial settings when you print from an application. (If you change the settings in the printer driver setup screen at the time of printing, the settings will revert to the initial settings when you quit the application.)

1 Click the "Start" button and select "Control Panel" and then select "Printer".

- In Windows 7, click the "Start" button and then click "Devices and Printers".
- In Windows XP, click the "start" button, and then click "Printers and Faxes".
- In Windows 2000, click the "Start" button and point to "Settings", and then select "Printers".

Note In Windows XP, if "Printers and Faxes" does not appear in the "start" menu, select "Control Panel", select "Printers and Other Hardware", and then select "Printers and Faxes".

2 Click the "SHARP AR-XXXX" printer driver icon.

3 Select "Properties" from the "Organize" menu.

- In Windows 7, right-click the "SHARP AR-XXXX" printer driver icon, and then click "Printer properties".
- In Windows XP/2000, select "Properties" from the "File" menu.

**4 Click the "Printing Preferences" button in the "General" tab.**

In Windows 7, click the "Preferences" button in the "General" tab.
The printer driver setup screen will appear.
☞ "PRINTER DRIVER SETTINGS" (p.22)

PRINTER DRIVER SETTINGS

Some restrictions exist on the combinations of settings that can be selected in the printer driver setup screen. When a restriction is in effect, an information icon (i) will appear next to the setting. Click the icon to view an explanation of the restriction.
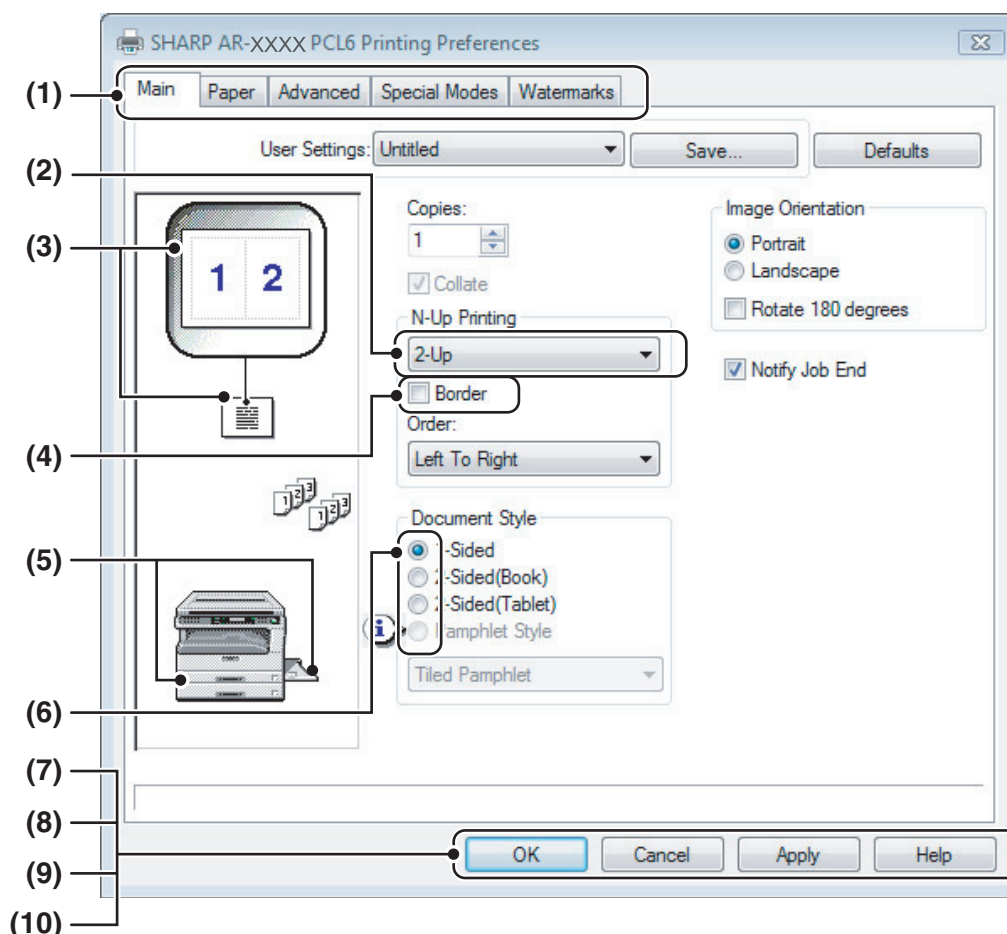
(1) Tab

The settings are grouped on tabs. Click on a tab to bring it to the front.

(2) Drop-down list

Allows you to make a selection from a list of choices.

(3) Print setting image

This shows the effect of the selected print settings.

(4) Checkbox

Click on a checkbox to activate or deactivate a function.

(5) Machine image

The paper tray (in blue) selected in "Paper Selection" on the "Paper" tab.
You can also click on a tray to select it.

(6) Check button

Allows you to select one item from a list of options.

(7) "OK" button

Click this button to save your settings and exit the dialog box.

(8) "Cancel" button

Click this button to exit the dialog box without making any changes to the settings.

(9) "Apply" button

Click to save your settings without closing the dialog box.

> ✎**Note** The "Apply" button does not appear when you open this window from an application.

(10) "Help" button

Click this button to display the help file for the printer driver.

> ✎**Note**
> • The settings and the image of the machine will vary depending on the model. If a tray option is installed, see "CONFIGURING THE PRINTER DRIVER" (p.18) to configure the settings for the option.
> • For information on the printer function, see "PRINTER DRIVER SPECIFICATIONS" (p.60).

- 22 -

TWO-SIDED PRINTING (ONLY FOR MODELS THAT SUPPORT TWO-SIDED PRINTING)

On models that have the two-sided printing function, both sides of the paper can be printed on.
To use this function, open the printer driver setup screen and select "2-Sided(Book)" or "2-Sided(Tablet)" from "Document Style" in the "Main" tab.
See "BASIC PRINTING" (p.19) for details on how to open the printer driver.
Two-sided printing also helps conserve paper.
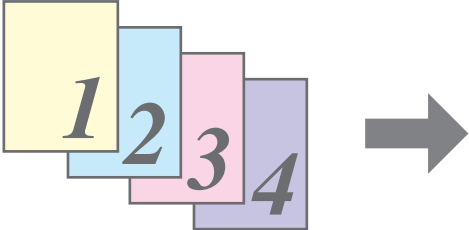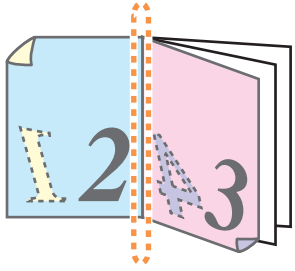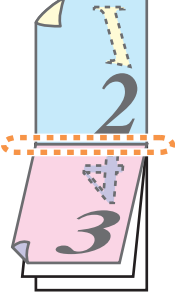
> **Note**
> - Paper sizes that can be used for two-sided printing are Ledger, Letter, Legal, Foolscap, A3, A4, A5, B4 and B5.
> - The bypass tray cannot be used for two-sided printing.

The following example shows the result when portrait data is printed on both sides of the paper.
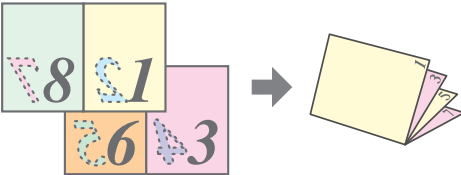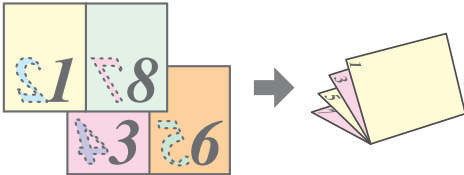
Print data	Printing result	
	2-Sided(Book)	**2-Sided(Tablet)**
	The pages are printed so that they can be bound at the side.	The pages are printed so that they can be bound at the top.

PAMPHLET STYLE

Pamphlet style prints two pages each on the front and back of each sheet of paper (four pages total on one sheet) so that the sheets can be folded down the centre and bound to create a pamphlet. This function is convenient when you wish to compile printed pages into a pamphlet.

To use this function, open the printer driver and select "Titled Pamphlet" or "2-Up Pamphlet" in "Document Style" in the "Main" tab.

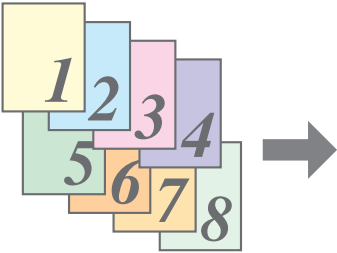The direction of opening of the pamphlet can be selected with the "Right Turning Pamphlet" checkbox in the "Advanced" tab. The following examples show how 8 pages are printed when "Titled Pamphlet" is selected.

Print data	Printing result	
	☐ **Right Turning Pamphlet**	☑ **Right Turning Pamphlet**

Note
- Only letter, invoice, A4 and A5 size paper can be used for pamphlet style printing.
- Because four pages are printed on each sheet of paper, blank pages are automatically added at the end when the total number of pages is not a multiple of four.
- When "Titled Pamphlet" is selected, printing will take place on paper that is twice the size of the paper size specified in the application.
- When "2-Up Pamphlet" is selected, each page is reduced in the same way as for 2-Up and printed on the size of paper that is specified in the application.

PRINTING MULTIPLE PAGES ON ONE PAGE

This feature allows you to reduce and print two, four, six, eight or sixteen document pages on a single sheet of paper.

To use this function, open the printer driver setup screen and select the number of pages per sheet (2-Up, 4-Up, 6-Up, 8-Up, 9-Up, or 16-Up) in "N-Up Printing" in the "Main" tab.

The order of the pages can be changed in the "Order" menu.

☞See "BASIC PRINTING" (p.19) for details on how to open the printer driver.

> **Note**
> The "N-Up Printing" setting is not available when "Fit To Paper Size" is selected.
> ☞"FITTING THE PRINTED IMAGE TO THE PAPER" (p.26)

For example, when "2-Up" or "4-Up" is selected, the result will be as follows depending on the selected order.

N-Up	Left to Right	Right to Left
[2-Up]	1 2 3 4	2 1 4 3

N-Up	Right , and Down	Down , and Right	Left , and Down	Down , and Left
[4-Up]	1 2 / 3 4	1 3 / 2 4	2 1 / 4 3	3 1 / 4 2

If you select the "Border" checkbox, borderlines will be printed around each page.

> **Note**
> Examples for 2-Up and 4-Up are shown here. The order of 6-Up, 8-Up, 9-Up, and 16-Up is the same as 4-Up. The order can be viewed in the print setting image in the printer driver setup screen.
> ☞"PRINTER DRIVER SETTINGS" (p.22)

FITTING THE PRINTED IMAGE TO THE PAPER

The printer driver can adjust the size of the printed image to match the size of the paper loaded in the machine. Follow the steps shown below to use this function. The explanation below assumes that you intend to print A4 (letter) size document onto B5 (invoice) size paper.
☞See "BASIC PRINTING" (p.19) for details on how to open the printer driver.

> **Note** The "Fit To Paper Size" setting is not available when "N-Up Printing" is selected.
> ☞"PRINTING MULTIPLE PAGES ON ONE PAGE" (p.25)

1 Click the "Paper" tab in the printer driver setup screen.

2 Select the original size (A4 (letter)) of the print image in "Paper Size".

3 Check the "Fit To Paper Size" button.

4 Select the actual size of paper to be used for printing (B5 (invoice)).

The size of the printed image will be automatically adjusted to match the paper loaded in the machine.

Paper Size: A4 (letter)
Fit To Paper Size: B5 (invoice)
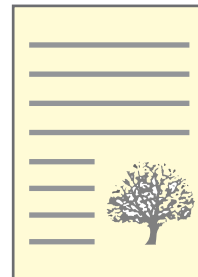
A4 or Letter size document (Paper Size)
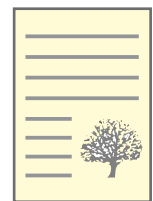
B5 or Invoice size paper (Fit To Paper Size)

ROTATING THE PRINT IMAGE 180 DEGREES

The print image can be rotated 180 degrees.
This feature rotates the print image 180 degrees to enable correct printing on paper that can only be loaded in one orientation.
To use the function, select the image orientation in "Image Orientation" on the "Main" tab, and then select the "Rotate 180 degrees" checkbox.
☞See "BASIC PRINTING" (p.19) for details on how to open the printer driver.

Printing result	
☑ Rotate 180 degrees	☐ Rotate 180 degrees
ABCD *(rotated 180 degrees)*	ABCD

Note The procedure for loading paper is explained in the Operation Guide for the machine.

CREATING OVERLAYS FOR PRINT DATA

The print data can be printed in a previously created overlay. By creating table rulings or a decorative frame in an application different from that of the text file and registering the data as an overlay file, an attractive print result can be easily obtained without the need for complex manipulations.
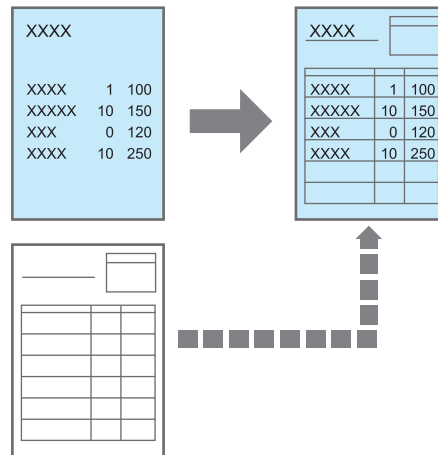
☞See "BASIC PRINTING" (p.19) for details on how to open the printer driver.

CREATING AN OVERLAY FILE

To register an overlay file, create a document with any application and perform the following procedure.

1 **Click the "Advanced" tab in the printer driver setup screen.**

Configure the printer driver settings from the software application that you wish to use to create the overlay file.

2 **Click the "Edit" button.**

3 **Click the "Create Overlay" button and specify the name and folder to be used for the overlay file that you wish to create.**

The file will be created when the settings are completed and printing is started.

Note
- When printing is started, a confirmation message will appear. The overlay file will not be created until the "Yes" button is clicked.
- To register a previously existing overlay file, click the "Load Overlay" button.

PRINTING WITH AN OVERLAY FILE

1 **Click the "Advanced" tab in the printer driver setup screen.**

Configure the printer driver settings from the application from which you wish to print using the overlay file.

2 **Select an overlay file.**

A previously created or stored overlay file can be selected from the pull-down menu.

PRINTING THE FRONT COVER PAGE ON DIFFERENT PAPER

The front cover page of a document can be printed on paper that is different from the other pages. Use this function when you wish to print the front cover page on a different type of paper.
☞See "BASIC PRINTING" (p.19) for details on how to open the printer driver.
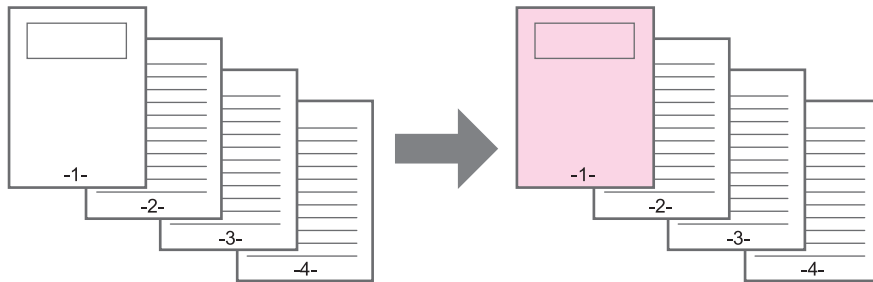
1 **Click the "Special Modes" tab in the printer driver setup screen.**

2 **Select "Different Paper" and click the "Settings" button.**

3 **Check the "Cover Page" box.**

4 **From the "Paper Source" drop-down list, select the tray that you wish to feed paper.**

> **Note**
> • When "Bypass Tray" is selected in "Paper Source", be sure to load paper in the bypass tray.
> • If the "2-Sided" box is checked, the front cover page and the next page after it will be printed on the front and reverse side of the paper.

ADDING INSERTS WHEN PRINTING

An identical insert page can be interleaved after each printed page.
☞See "BASIC PRINTING" (p.19) for details on how to open the printer driver.
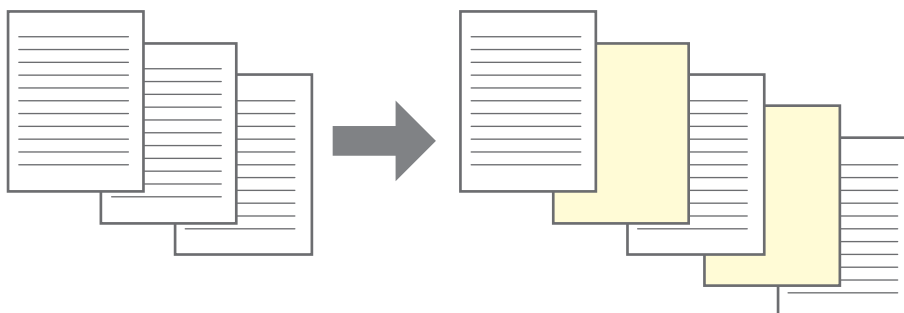
1 Click the "Special Modes" tab in the printer driver setup screen.

2 Select "Page Interleave" and click the "Settings" button.

3 From the "Overlays" drop-down list, select the overlay file that you wish to print.
When you want to insert blank pages, select "No Overlay".

> **Note** The overlay files must be created in advance. To create an overlay file, see "CREATING OVERLAYS FOR PRINT DATA" (p.28).

4 Specify the position to insert the page data in "Insert Position".

PRINTING A WATERMARK

You can print a watermark such as "CONFIDENTIAL" on your document. To print a watermark, open the printer driver, click the "Watermarks" tab, and follow the steps below.
☞See "BASIC PRINTING" (p.19) for details on how to open the printer driver.

HOW TO PRINT A WATERMARK

From the "Watermark" drop-down list, select the watermark that you wish to print (for example "CONFIDENTIAL"), and start printing.

Print sample
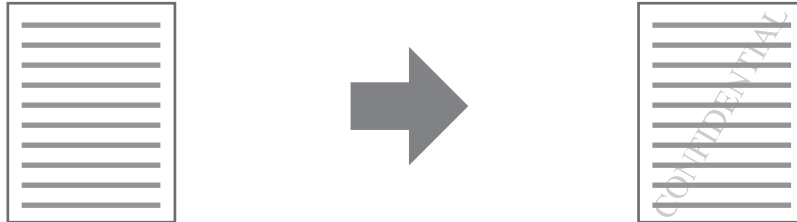
You can enter text to create your own custom watermark. For details on watermark settings, view printer driver Help.
☞"PRINTER DRIVER SETTINGS" (p.22)

PRINTING TEXT AND LINES IN BLACK

Colour text and lines that are normally printed in light colour can be printed in black. Colour text and lines that are faint when printed normally can be printed in black to improve legibility.

PRINTING TEXT IN BLACK

Text that is any colour other than white is printed in black.
To use this function, open the printer driver setup screen and select the "Text To Black" checkbox in the "Advanced" tab.

Print data	Printing result	
	☐ Text To Black	☑ Text To Black
ABCD EFGH ➡	ABCD EFGH	**ABCD EFGH**

Note If "Print as graphics" is selected in "TrueType Mode" of "Font" in the "Advanced" tab, this function cannot be used.

PRINTING LINES AND VECTOR GRAPHICS IN BLACK

Lines and solids that are any colour other than white are printed in black.
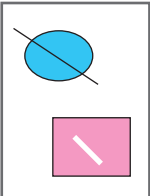To use this function, open the printer driver setup screen and select the "Vector To Black" checkbox in the "Advanced" tab.
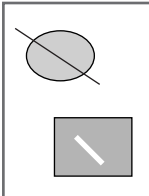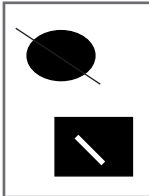
Print data	Printing result	
	☐ Vector To Black	☑ Vector To Black
➡		

Note If "Raster" is selected in "Graphics Mode" in the "Advanced" tab, this function cannot be used.

SAVING FREQUENTLY USED PRINT SETTINGS

Settings configured on each of the tabs at the time of printing can be saved as user settings. Saving frequently used settings or complex colour settings under an assigned name makes it easy to select those settings the next time you need to use them.

SAVING SETTINGS AT THE TIME OF PRINTING

Settings can be saved from any tab of the printer driver properties window. Settings configured on each tab are listed at the time of saving, allowing you to check the settings as you save them.
For the steps for opening the printer driver, see "BASIC PRINTING" (p.19).

1 Configure print settings on each tab and click the "Save" button on any tab.
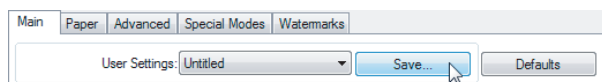
2 After checking the displayed settings, enter a name for the settings (maximum of 20 characters).

Setting Name:

Untitled
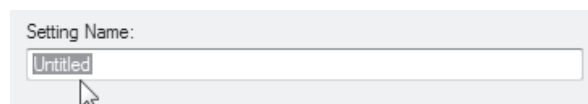
Note
• Up to 30 sets of user settings can be saved.
• A watermark that you created cannot be saved in user settings.

3 Click the "OK" button.

Using saved settings

Select the user settings that you wish to use on any tab.
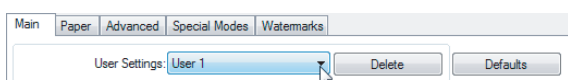
Deleting saved settings

Select the user settings that you want to delete in "Using saved settings" (above), and click the "Delete" button.

4 PRINTER STATUS MONITOR

PRINTER STATUS MONITOR

"Printer Status Monitor" is on the "Software CD-ROM".
This allows the user to check on the computer screen whether or not the machine is able to print.
It provides information on error states such as paper misfeeds and shows the configuration of the machine (number of trays, etc.) by means of illustrations. Available paper sizes and paper remaining are also indicated.

Note	• In order to use the Printer Status Monitor, the machine must be connected to a network. • To install the Printer Status Monitor, see "INSTALLING THE PRINTER STATUS MONITOR" (p.17).

BEFORE USING THE PRINTER STATUS MONITOR

To use the Printer Status Monitor to monitor the status of the machine, the printing environment must be configured as explained below.

Printing via a server

Install the software as explained in "USING THE MACHINE AS A NETWORK PRINTER" (p.13).
When the first print job is executed after starting up the Printer Status Monitor, the machine's IP address is automatically set in the Printer Status Monitor.

Direct printing without a server

Install and configure the software as explained in "INSTALLING THE SOFTWARE" (p.10). (This is not necessary if the software has already been installed and configured.)

- 34 -

USING THE PRINTER STATUS MONITOR

For information on using the Printer Status Monitor, see the Help file. The Help file can be viewed as follows: Click the "Start" button, point to "All Programs" ("Programs" in Windows 2000) and then "SHARP Printer Status Monitor". Select "Help".

CHANGING THE PRINTER STATUS MONITOR SETTINGS

Once installed, the Printer Status Monitor normally runs in the background in Windows. If you need to change the Printer Status Monitor settings, follow the steps below.

1 **Right-click the Printer Status Monitor icon ( ) on the task bar, and select "Preferences" from the pop-up menu.**

2 **Change the Printer Status Monitor settings as desired.**

For information on the Printer Status Monitor settings, see Printer Status Monitor Help. (Click the "Help" button in the settings window.)
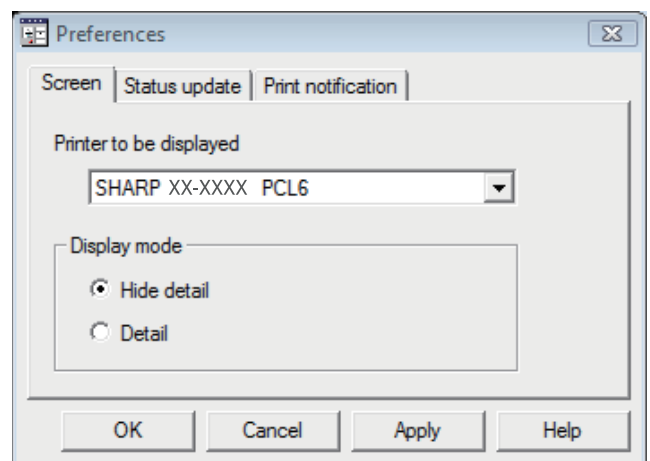
CHECKING THE PRINTER STATUS

The Printer Status Monitor allows you to check whether or not toner and paper remain in the machine.

1 **Right-click the Printer Status Monitor icon ( ) on the task bar, and select "Show the Status" from the pop-up menu.**

> 📝**Note** The icon turns red when printing is not possible due to a machine error or other problem.

2 **Check the current status of the printer in the screen that appears. If you wish to know more detailed status information, click the "Detail" button.**
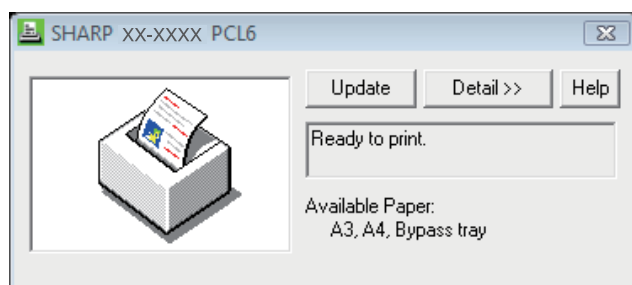
The screen will change to the detailed status screen.
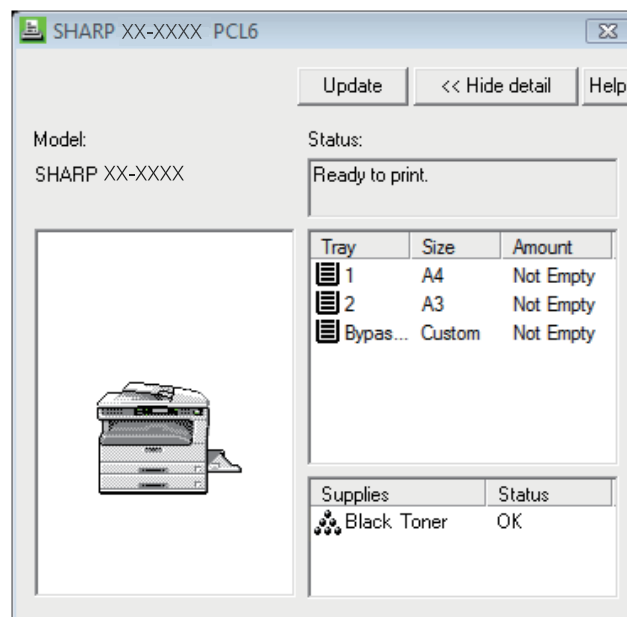
To return to the abbreviated status screen, click the "Hide detail" button.

> 📝**Note** By default, the abbreviated status screen appears when "Show the Status" is selected in Step 1. If desired, you can change the setting to have the detailed status screen initially appear.
> ☞"CHANGING THE PRINTER STATUS MONITOR SETTINGS" (p.35)

WEB FUNCTIONS IN THE MACHINE

ABOUT THE WEB PAGES

The Network expansion kit includes a built-in Web server. The Web server is accessed using a Web browser on your computer. The Web pages include both pages for users and pages for the administrator. In the user Web pages, users can monitor the machine, directly print a file specified on a computer, and select printer configuration settings. In the administrator Web pages, the administrator can configure the machine's e-mail settings, settings for print by e-mail, and passwords. Only the administrator is allowed to configure these settings.

HOW TO ACCESS THE WEB PAGE AND VIEW HELP

Use the following procedure to access the Web pages. [Help] can be clicked at the bottom of the menu frame to view information on the various function settings that can be configured remotely over the network from the machine's Web pages. For the settings of each function, see the explanations in Help.

1 Open the Web browser on your computer.

Supported browsers:
Internet Explorer: 6.0 or higher (Windows®)
Netscape Navigator: 9 (Windows®)
Firefox: 2.0 or higher (Windows®)

2 In the "Address" field of your Web browser, enter the IP address that has been configured in the machine.

If you do not know the IP address, see "SETTING/CHANGING THE IP ADDRESS MANUALLY" (p.9).
When the connection is completed, the Web page will appear in your Web browser.
☞ "ABOUT THE WEB PAGES (FOR USERS)" (p.39)

3 Click the [Help] button at the bottom of the menu frame.

To view information on a function setting, click the corresponding item in the Help screen.

4 When finished, close the Web pages.

When you have finished using the Web pages, click the ⊠ (close) button in the top right corner of the page.

CHANGING/CHECKING THE IP ADDRESS IN THE WEB PAGE

The settings of the IP address, Subnet Mask, and Default Gateway can be changed in the Web page.
You can also check the machine's current IP address settings.

Note
- To acquire the IP address automatically, set "DHCP" to "Enable".
- When "DHCP" settings are changed, the change will take effect after the machine is restarted.

1 **Click [Network Status] in the menu frame of the Web page.**

2 **Click [TCP/IP].**

**3** **Enter desired "IP Address", "Subnet Mask", and "Default Gateway".**

4 **When you have finished entering all items, click [Submit].**
The entered settings are stored.

ABOUT THE WEB PAGES (FOR USERS)

When you access the user Web pages in the machine, the following page will appear in your browser.
A menu frame appears on the left side of the page. When you click an item in the menu, a screen appears in the right frame that allows you to configure settings for that item.
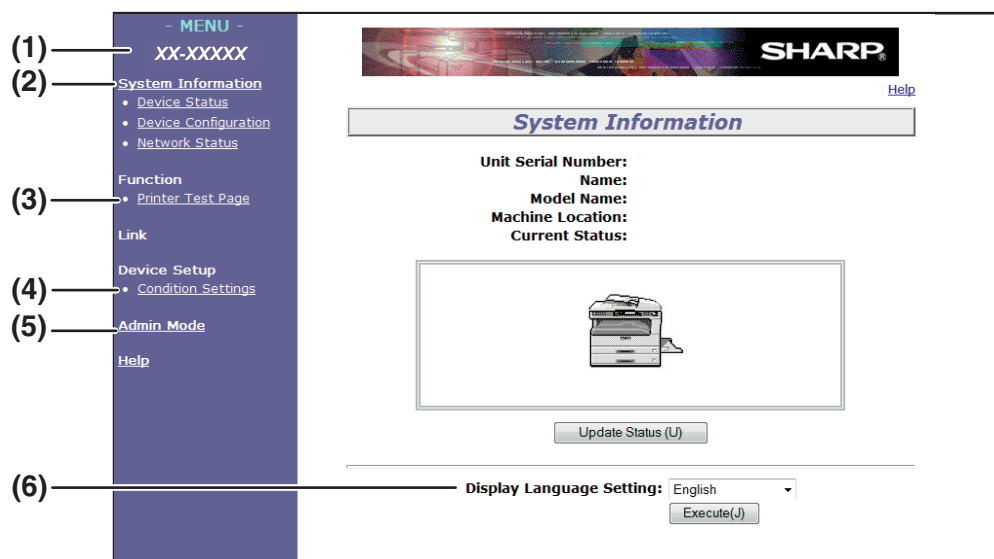
(1) Menu frame

Click a setting in the menu to configure it.

(2) System Information

Shows the current status of the machine and model name.

- Device Status
  Shows the current status of the machine, paper trays, output trays, toner and other supplies, and page counts.
  Out of paper and other warnings appear in red.
- Device Configuration
  Shows what options are installed.
- Network Status
  Shows the network status. Information on "General" and "TCP/IP" is shown on the respective pages.

(3) Printer Test Page

The "Printer Settings List", which shows printer condition settings and system settings, and various font lists can be printed.

(4) Condition Settings

Configure basic printer settings and printer language settings.

☞"CONFIGURING THE PRINTER CONDITION SETTINGS" (p.40)

(5) Admin Mode

To open the Web pages for the administrator, click here and then enter the administrator's user name and password.

☞"ABOUT THE WEB PAGES (FOR THE ADMINISTRATOR)" (p.43)

☞"PROTECTING INFORMATION PROGRAMMED IN THE WEB PAGE ([Passwords])" (p.44)

(6) Display Language Setting

Select the desired language setting from the pull-down menu.

CONFIGURING THE PRINTER CONDITION SETTINGS

The printer condition settings allow basic printer settings to be configured. The following items can be set:

● "Default Settings" (p.41):   Basic settings that are mainly used when the printer driver is not used.
● "PCL Settings" (p.42):   PCL symbol set, font, line feed code, and other settings.

✎**(Note)** When the printer driver is used and the same settings are configured both in the printer driver and in the above screens, the settings configured in the printer driver override the settings in the above screens. If a setting is available in the printer driver, use the printer driver to configure the setting.

HOW TO CONFIGURE THE SETTINGS

To display the Condition Settings screen, click [Condition Settings] in the menu frame.
For detailed explanations of the procedures for establishing settings, click [Help] in the menu frame.
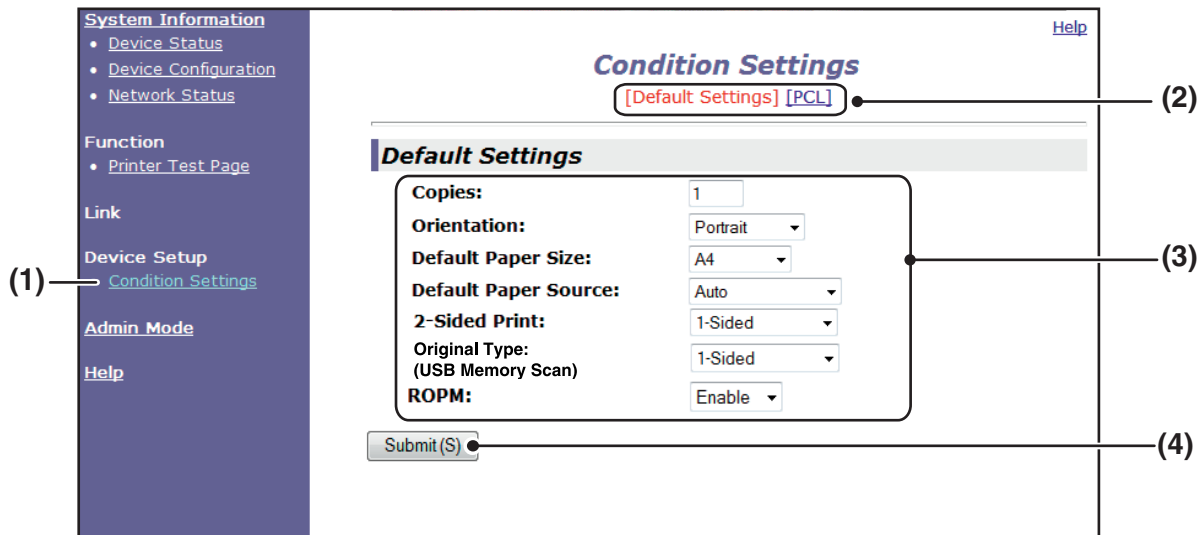
(1) Condition Settings

This displays the page for configuring the printer condition settings.

(2) Default Settings/ PCL

Select the type of condition settings that you wish to configure.

(3) Settings

The factory default settings are displayed.
Change the settings as desired by selecting from drop-down lists and by directly entering settings.
For information on the settings, see "PRINTER CONDITION SETTINGS" (p.41).

(4) Submit

Click to store the Web page settings in the machine.

PRINTER CONDITION SETTING MENU

Click on a setting to view an explanation of the setting.

Condition Settings

Default Settings	Factory default settings
Copies	1
Orientation	Portrait
Default Paper Size	A4
Default Paper Source	Auto
2-Sided Print	1-Sided
Original Type (USB Memory Scan)	1-Sided
ROPM (Rip Once, Print Many)	Enable

Condition Settings

PCL Settings	Factory default settings
Symbol Set	PC-8
Font	0: Courier (internal font)
Line Feed Code	CR=CR; LF=LF; FF=FF
Wide A4	Disable

PRINTER CONDITION SETTINGS

Factory default settings are indicated in bold.

Default Settings

| Item	Selections	Description
Copies	**1** - 999	This is used to select the number of copies.
Orientation	**Portrait**, Landscape	This sets the orientation of the printed page. Select [Portrait] when the image is longer in the vertical direction, or [Landscape] when the image is longer in the horizontal direction.
Default Paper Size	A3, B4, **A4**, B5, A5, Ledger, Legal, Foolscap, Letter, Invoice	This sets the default paper size used for printing. Even if the set size of paper is not in any of the trays, the printed image is formed in accordance with this setting.
Default Paper Source	**Auto**, Tray 1, Tray 2*, Tray 3*, Tray 4*, Bypass (Manual), Bypass (Auto)	This sets the default paper tray. *Selections available depend on the trays that are installed.
2-Sided Print	**1-Sided**, 2-Sided (Book), 2-Sided (Tablet)	When [2-Sided (Book)] is selected, two-sided printing takes place so as to allow binding at the left side. When [2-Sided (Tablet)] is selected, two-sided printing takes place so as to allow binding at the top. (Only for models that support two-sided printing.)
Original Type (USB Memory Scan)	**1-Sided**, 2-Sided	This sets whether or not to allow two-sided original for USB Memory Scan. (Only for models that support two-sided original.)
ROPM (Rip Once, Print Many)	**Enable**, Disable	This enables the ROPM function. When enabled, multi-page print jobs are stored in memory before printing, and thus the computer does not need to repeatedly send the print data when multiple copies are printed.

PCL Settings

Item	Selections	Description
Symbol Set	Select one of 35 sets.	This specifies which country's characters (PCL symbol set) are assigned to certain of the symbols in the character code list. The factory default setting is [PC-8].
Font	Select one internal or one external font.	This specifies which PCL font to use for printing. One font can be specified from among the internal fonts. The factory default setting is [0: Courier].
Line Feed Code	**CR=CR; LF=LF; FF=FF,** CR=CR+LF; LF=LF; FF=FF, CR=CR; LF=CR+LF; FF=CR+FF, CR=CR+LF; LF=CR+LF; FF=CR+FF	This specifies the line break code by means of a combination of the "CR" (return) code, "LF" (line break) code, and "FF" (page break) code. The factory default setting is printing based on the transmitted code. The setting can be changed by selecting one of four combinations.
Wide A4	Enable, **Disable**	This setting can be enabled to print 80 lines on A4 size paper with each line 10CPI font (English characters). When the setting is disabled (a checkmark does not appear), each line is 78 characters long.

ABOUT THE WEB PAGES (FOR THE ADMINISTRATOR)

In addition to the menus that appear for users, other menus that can only be used by the administrator appear in the administrator Web pages.

A menu frame appears on the left side of the page. When you click an item in the menu, a screen appears in the right frame that allows you to configure settings for that item. Settings that can only be configured by the administrator are explained here.
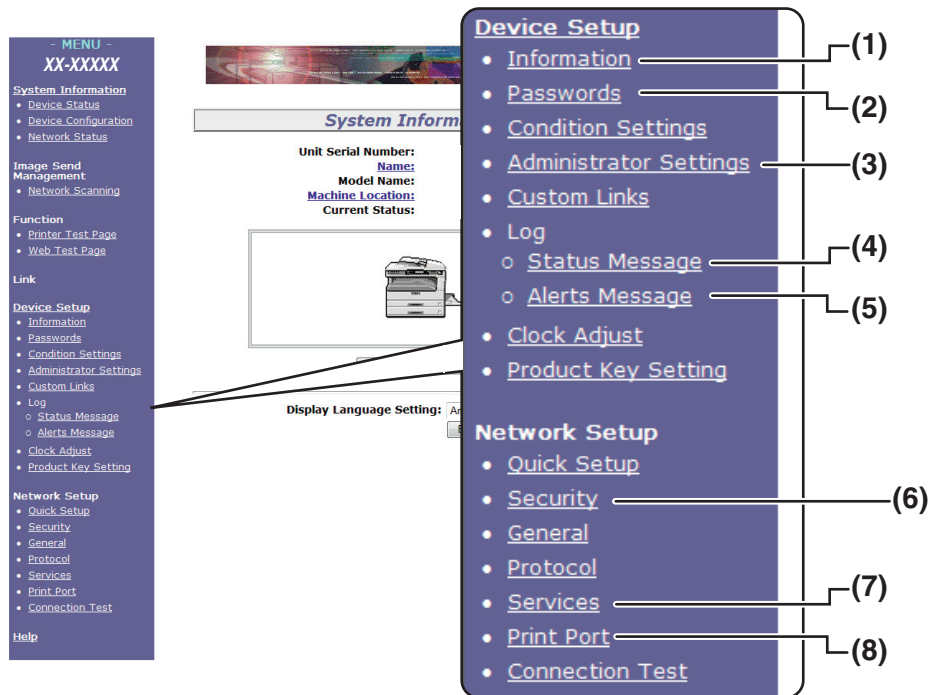
(1) Information

Configure machine identification information for the status & alert E-mail function.
☞"INFORMATION SETUP" (p.47)

(2) Passwords

To protect the Web site, the system administrator can establish passwords. Enter a password that you would like to establish and click the [Submit] button.

One password can be established for the administrator and one password can be established for users.
☞"PROTECTING INFORMATION PROGRAMMED IN THE WEB PAGE ([Passwords])" (p.44)

(3) Administrator Settings

Setting changes can be prohibited and interface settings can be configured.
☞"ADMINISTRATOR SETTINGS" (p.45)

(4) Status Message

Configure parameters required for sending status messages, such as destination addresses and time schedules.
☞"STATUS MESSAGE SETUP" (p.48)

(5) Alerts Message

Store destination addresses for alert messages.
☞"ALERTS MESSAGE SETUP" (p.48)

(6) Security

Unused ports can be disabled for greater security and port numbers can be changed.

(7) Services

Configure information concerning the e-mail system.
☞"SMTP SETUP" (p.47)

(8) Print Port

Configure settings for LPD and Raw print.

PROTECTING INFORMATION PROGRAMMED IN THE WEB PAGE ([Passwords])

Passwords can be set (click [Passwords] in the menu frame) to restrict Web page access and protect settings. The administrator must change the password from the factory default setting. The administrator must also take care to remember the new password. The next time the Web pages are accessed, the new password must be entered. A password can be set for the administrator and a password can be set for users.

1 Click [Passwords] in the menu frame.

2 Enter the current password in "Admin Password".

When establishing a password for the first time, enter "Sharp" in "Admin Password".

⚠ Caution	Be sure to enter "S" in upper case and "harp" in lower case (passwords are case sensitive).

3 Enter passwords in "User Password" and "Admin Password".

- A maximum of 7 characters and/or numbers can be entered for each password (passwords are case sensitive).
- Be sure to enter the same password in "Confirm Password" as you did in "New Password".

4 When you have finished entering all items, click [Submit].

The entered password is stored.
After setting the password, turn the machine power off and then back on.

📝 Note	When prompted to enter a user name, a user should enter "user" and an administrator should enter "admin" in "User Name". In "Password", the respective password for the entered user name should be entered. For more information, click [Help] in the upper right-hand corner of the window.

ADMINISTRATOR SETTINGS

The administrator settings are used to prohibit changes to the [Condition Settings] and to configure interface settings.
● "Default settings" (p.46): Select the setting for which you wish to prohibit changes.
● "Interface settings" (p.46): Enable monitoring of data sent to the network port and set restrictions.

CONFIGURING A SETTING IN THE ADMINISTRATOR SETTINGS

1 Click [Administrator Settings] in the menu frame.

The "Default Settings" screen of the [Administrator Settings] will appear. If you wish to select a setting in the "Default Settings" screen, go to step 3.

2 Click the desired setting.

3 Make a selection for the setting in the screen that appears.

See "ADMINISTRATOR SETTINGS" (p.46) for descriptions of the settings.

4 Click [Submit] to store the entered information.

ADMINISTRATOR SETTINGS

When "YES, NO" appears in the "Settings" column, "YES" is selected when a checkmark appears in the checkbox of the item, and "NO" is selected when checkmark does not appear.

Default settings

Item	Settings	Description
Prohibit Test Page Printing	YES, **NO**	This setting is used to prohibit printing of a printer test page.
Disable Default Setting Changes	YES, **NO**	This setting is used to prohibit changes to the default condition settings.

Interface settings

Item	Settings	Description
I/O Timeout	1- **60** - 999 (sec)	During reception of a print job, if remaining data is not received after the time set here elapses, the port connection is broken and the next print job is begun.
Port Switching Method	**Switch at End of Job**, Switch after I/O Timeout	Select the method for switching network ports.

E-MAIL STATUS AND E-MAIL ALERT SETTINGS

These functions send information on machine use (print count, copy count, etc.) and error conditions (paper misfeed, out of paper, out of toner, etc.) via e-mail to the administrator of the machine or the dealer.

INFORMATION SETUP

Machine identification information for the status and alert e-mail functions is configured in the "Information Setup" screen. The entered information will be included in status and alert e-mail messages.

1 Click [Information] in the menu frame.

The "Information Setup" screen will appear.

2 Enter the machine information.

For detailed information, click the [Help] button in the upper right-hand corner of the window.

3 Click [Submit] to store the entered information.

SMTP SETUP

The Status and alert e-mail functions use SMTP (Simple Mail Transport Protocol) to send e-mail. The following procedure is used to set up the e-mail environment. This must be done by the system administrator or other person familiar with the network.

1 Click [Services] in the menu frame.

The "Services Setup" screen will appear.

2 Click [SMTP].

3 Enter the information required to set up the e-mail environment.

For detailed information, click the [Help] button in the upper right-hand corner of the window.

4 Click [Submit] to store the entered information.

STATUS MESSAGE SETUP

Use the status message function to send the current counter information, including the copy count, print count, and total output count, based on the specified schedule. The destinations can be set for administrators and dealers respectively.

To set up the status message, follow these steps.

1 Click [Status Message] in the menu frame.

The "Status Message Setup" screen will appear.

2 Enter the required information, including the destination addresses and time schedule.

For detailed information, click the [Help] button in the upper right-hand corner of the window.

3 Click [Submit] to store the entered information.

When the E-mail Status settings are completed, printer count information will be sent periodically by e-mail to the specified e-mail addresses.

Note If you quit the browser before clicking [Submit], the settings will be cancelled. To send printer information immediately to the specified e-mail addresses, click [Send Now].

ALERTS MESSAGE SETUP

Use the alert message function to send alert information, such as empty toner and paper and trouble including paper misfeeds, to specified destinations when such problems occur. The destinations can be set for administrators and dealers respectively.

To set up the alert message, follow the procedure below.

1 Click [Alerts Message] in the menu frame.

The "Alerts Message Setup" screen will appear.

2 Enter the destination addresses.

For detailed information, click the [Help] button in the upper right-hand corner of the window.

3 Click [Submit] to store the entered information.

If these parameters are set, event information for the printer will be transmitted to the specified addresses via E-mail each time a specified event occurs. The meaning of each event item is shown below.

(Example)
Paper Jam: A paper misfeed has occurred.
Toner Low: Toner is low.
Toner Empty: Toner must be added.
Paper Empty: Paper must be loaded.

Note If you quit the browser before clicking [Submit], the settings will be cancelled.

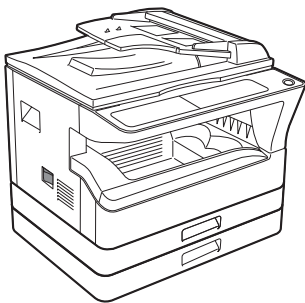# 6 SCANNER FUNCTIONS

ABOUT THE SCANNER FUNCTIONS

With this machine a document or photo can be scanned into an image file. You can select from the following scanning methods.

	1. Scanning from a TWAIN-compliant or WIA-compliant application
	The scanner driver installed into your PC allows you to use the scanning function of the machine with TWAIN-compliant or WIA-compliant applications. When you use the machine with the Network expansion kit, "SHARP MFP TWAIN AB" can be installed to your computer. For more information on scanning from a TWAIN-compliant or WIA-compliant application, see the Operation Guide for the machine.

	2. Scanning from the machine using the Button Manager
	Button Manager is a software utility that allows you to use the scanner function at the machine. When you use the machine with the Network expansion kit, "Sharp Button Manager AB" can be installed to your computer. Once installed, Button Manager normally runs in the background in the Windows operating system. Button Manager allows you to configure five sets of scanning settings as a scan menu on the machine. (See "Button Manager scan menu" (p.50) for the factory default menus.) For more information on Button Manager and changing the settings, see the Operation Guide for the machine.

3. Sending the scanned image to a USB memory

The scanned image can be sent to a USB memory installed on the machine. This is called **"USB Memory Scan"** in this manual. For more information on USB Memory Scan, see "USB MEMORY SCAN" (p.51).

Button Manager scan menu

| Display/Button Manager menu	Application that starts
SC1:	Sharpdesk
SC2:	Email
SC3:	OCR
SC4:	Microsoft Word
SC5:	Filing

USB MEMORY SCAN

BASIC SETTINGS FOR USB MEMORY SCAN (FOR THE ADMINISTRATOR)

To use the USB Memory Scan function, setting from the Web page is required.
Click [Network Scanning] (p.43) in the menu frame and configure the required settings. A password is required to access this screen. (p.44) These settings should only be configured by the network administrator. For explanations of each of the items, click [Help] in the menu frame.
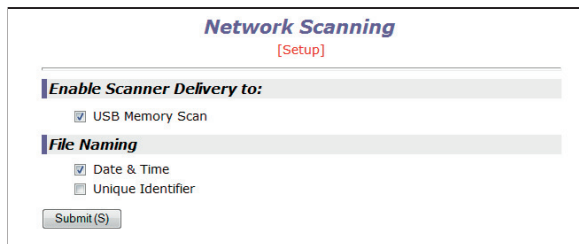
1 **Click [Network Scanning] in the menu frame.**

Image Send Management
• Network Scanning
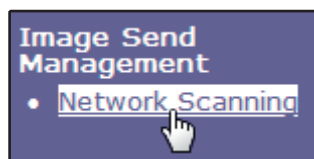
The Network Scanning setup page appears.

2 **Select "USB Memory Scan".**

In the "Enable Scanner Delivery to:" field, click the checkbox so that a checkmark appears in the checkbox.

Network Scanning
[Setup]

Enable Scanner Delivery to:
☑ USB Memory Scan

File Naming
☑ Date & Time
☐ Unique Identifier

Submit (S)

3 **Select the method for assigning a file name to a scanned image.**

Select the method for assigning a file name to a scanned image. In "File Naming", click the items that you wish to use in the file name. "Date & Time" is initially selected.

Note If you are going to send images more than once, we recommend that you also select "Unique Identifier" to prevent sending multiple files with the same name, which would result in each successive file overwriting the previous file.
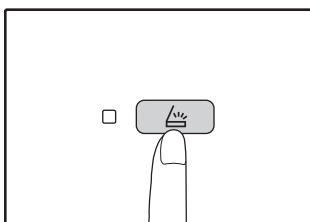
4 **Click [Submit].**

After entering the settings, be sure to click [Submit] to store them.

USING THE USB MEMORY SCAN FUNCTION

A scanned image can be sent to a commercially available USB memory device that has been connected to the Network expansion kit on the back of the machine.
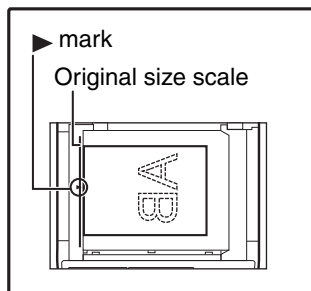
1 **Connect the USB memory to the USB connector of the Network expansion kit.**
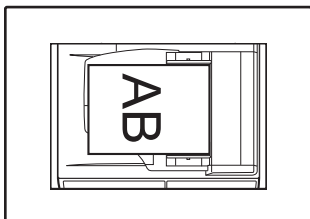
2 **Press the [SCAN] key (⬛).**

3 **Place the original(s) that you wish to scan on the document glass/SPF/RSPF.**
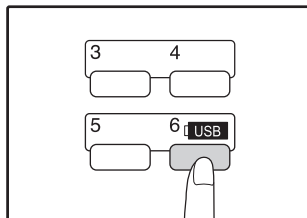
When scanning from the document glass

▶ mark
Original size scale

Place the original face down on the document glass. Align the edge of the original with the original size scale, to be centred with the centring mark (▶).

When scanning from the SPF/RSPF

Set the original(s) face up in the document feeder tray.

4 **Press the [USB MEMORY SCAN] key (USB).**

"USB" will appear in the display and the START indicator is lit.

5 **Press the [START] key (◎) to begin scanning.**

While the original is scanned into the USB memory, the display blinks and the START indicator goes out.
After scanning is finished, the display will stop blinking and the START indicator is lit again.
The machine is ready to start the next scanning.

Note
- Press the [CLEAR] key (C) or the [CLEAR ALL] key (CA) to stop scanning in the middle of a run. If you press the [CLEAR ALL] key (CA), the scanning job and the scanning settings for the USB Memory Scan are cleared.
- If you press the [CLEAR ALL] key (CA) or move to another function in the USB Memory Scan mode, the machine will revert to the initial settings.
- When an invalid key is pressed, a beep sound will be heard.

Changing the scanning settings

If you wish to change the scan settings, follow the procedures below after performing step 3.

To change the scanning density

Press the [Light] key (◁) or [Dark] key (▷) to lighten or darken the density level as desired.

1 · 3 · 5
◁■·■·□▷
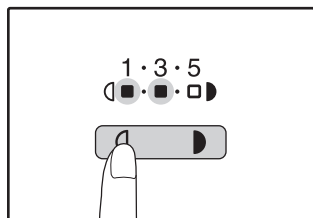
- There are five density levels indicated by three indicators.
- If exposure level 2 or 4 is selected, the two indicators will light simultaneously.

The density level and the indicators are as follows.

When level 1 is selected: ◁ 1·3·5 ■·□·□ ▷

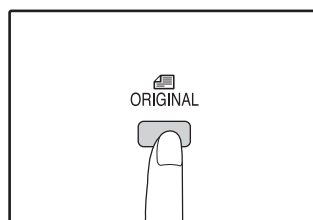When level 2 is selected: ◁ 1·3·5 ■·■·□ ▷

When level 3 is selected*: ◁ 1·3·5 □·■·□ ▷

When level 4 is selected: ◁ 1·3·5 □·■·■ ▷

When level 5 is selected: ◁ 1·3·5 □·□·■ ▷

*Factory default

To select the original size

Press the [ORIGINAL] key (ORIGINAL) and select the original size.

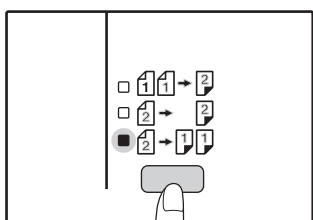ORIGINAL

When scanning from the document glass:
The factory default is set to A3 (11" x 17").
When scanning from the SPF/RSPF:
The factory default is set to the size that was detected by the original size scale.

To scan on both sides of an original

Press the [ORIGINAL TO COPY] key to select two-sided scanning.

☐ 1 1 → 2
☐ 2 → 2
■ 2 → 1

Make sure that the indicator is lit.

When scanning from the document glass, press the [READ-END] key (#) when you have finished scanning the original pages.

7 TROUBLESHOOTING

TROUBLESHOOTING

If a problem or question arises, try to solve the situation using the following information before contacting your authorised SHARP dealer.
For problems related to the machine such as running out of paper or paper misfeeds, see the Operation Guide for the machine.

Points to check for connections

■ Are you using a port that was created with Standard TCP/IP Port?

If you are using a port created using Standard TCP/IP Port in Windows environment, printing may not take place correctly if "SNMP Status Enabled" is selected in the port settings of the printer driver. Open the printer driver properties and click the "Configure Port" button on the "Ports" tab. In the window that appears, make sure the "SNMP Status Enabled" checkbox is not selected.

Problem	Cause and solution	Page
Cannot connect to the network.	**The LAN cable is disconnected.** → Make sure that the LAN cable is firmly inserted in the connectors on the Network expansion kit and your computer.	13
	The machine configured for use is not on the same network as the computer. → The machine cannot be used if it is not connected to the same network as the computer, or if it is not configured for use on the network. For more information, consult your network administrator.	–
Print jobs are not received. (ON LINE indicator does not blink.)	**The machine is set to off-line mode.** → Press the [ON LINE] key ( ) to turn on the ON LINE indicator.	19
	Your machine is not selected correctly in the current application for the print job. → When choosing "Print" from the "File" menu located in applications, be sure you have selected "SHARP AR-XXXX" (where XXXX is the model name of your machine) printer displayed in the "Print" dialog box.	–
	Copy or scan job is performed. → Wait until the copy or scan job is complete.	–
	The printer driver has not been installed correctly. → Install the proper printer driver.	10
	The port setting is not correct. → Printing is not possible if the printer driver port setting is not correct. Set the port correctly.	15
Printing does not take place. (ON LINE indicator is blinking.)	**There is no paper in the specified tray.** → Load paper in the tray.	Operation Guide
A Notice Page (UP-001) has been printed, but the print data has not been printed completely.	**A print job containing more data than can be held in the print memory is sent to the machine.** → Disable the ROPM function on the "Configuration" tab of the printer driver setup screen. If you need to use the ROPM function, divide the pages of the print data into two or more print jobs. → The memory allocated to the printer function can be changed in the system setting "Memory allocated to printer mode".	18 Operation Guide

Problem	Cause and solution	Page
Printing is slow.	**Simultaneous use of two or more application software programs.** → Start printing after quitting all unused application software programs.	–
The printed image is light and uneven.	**The paper is loaded so that printing takes place on the back side of the paper.** → Some paper types have a front and back side. If the paper is loaded so that printing takes place on the back side, toner will not adhere well to the paper and a good image will not be obtained.	Operation Guide
The printed image is dirty.	**You are using paper that is outside the specified size and weight range.** → Use copy paper within the specified range.	Operation Guide
	Paper curled or damp. → Do not use curled or crimped paper. Replace with dry copy paper. During periods when the machine is not used for a long time, remove the paper from the tray and store it in a dark place in a bag to prevent moisture absorption.	Operation Guide
	You did not set sufficient margins in the paper settings of your application. → The top and bottom of the paper may be dirty if the margins are set outside of the specified print quality area. → Set the margins in the software application within the specified print quality area.	– –
The printed image is skewed or it runs off the paper.	**The paper loaded in the tray is not the same size as that specified in the printer driver.** → Check if the "Paper Size" options suit the size of the paper loaded in the tray. If the "Fit To Paper Size" setting is activated, make sure that the paper size selected from the drop-down list is the same as the size of the loaded paper.	–
	The orientation of document setting is not correct. → Click the "Main" tab in the printer driver setup screen, and verify if the "Image Orientation" option is set to your requirements.	–
	Paper is not loaded properly. → Make sure the paper is properly loaded.	Operation Guide
	The margins are not set correctly in the application. → Check the paper size and margin settings in the application. Also make sure that the print settings are correct for the paper size.	–
The scanned image is clipped.	**The selected "Scan Size" setting is smaller than the actual original size.** → Set the scan size to the actual original size and make sure that the original is placed in the correct orientation. If you intentionally selected a size setting smaller than the actual original size, take into consideration the part of the original that you wish to scan when placing the original. For example, if the actual size is A4 (8-1/2" x 11") and you selected B5 (5-1/2" x 8-1/2") for the size setting, place the original so that the part that you wish to scan is within the B5 (5-1/2" x 8-1/2") area at the left, centre of the glass.	–
The scanned image data cannot be opened.	**The viewer program does not support the format of the scanned image data.** → The scanned image is provided in PDF format. To view the image in PDF format, Acrobat Reader or Adobe Reader of Adobe Systems Incorporated is required. If neither program is installed on your computer, the programs can be downloaded from the following URL: **http://www.adobe.com/**	–
Transmission takes a long time.	When there is a large amount of image information, the data file is also large and transmission takes a long time.	–

Problem	Cause and solution	Page
The START indicator is not lit in the USB Memory Scan mode.	**The USB memory is not recognized or not inserted, or any device other than USB memory is inserted in the USB port.** → Check the USB port of the Network expansion kit.	–
"ERR" appears in the display during USB Memory Scan.	**Any device other than USB memory is inserted in the USB port, the USB memory is write-protected, or it was taken off during USB Memory Scan.** → Check your USB memory device and use it properly.	–
"FUL" appears in the display during USB Memory Scan.	**The memory of the USB device became full.** → Use the USB device with sufficient memory.	–

REMOVING THE SOFTWARE

In the event that you need to remove the driver or utilities, follow these steps:

1 **Click the "Start" button, and then click "Control Panel".**
- In Windows XP, click the "start" button and then click "Control Panel".
- In Windows 2000, click the "Start" button, select "Settings", and then click "Control Panel".

2 **Click "Uninstall a program".**

- In Windows XP, click "Add or Remove Programs".
- In Windows 2000, double-click the "Add/Remove Programs" icon.

3 **Select the driver or utility that you wish to remove from the list, and click the appropriate button to remove it.**
For more information, refer to your operating manual or to the help files for your operating system.

4 **Restart your computer.**

8 SPECIFICATIONS

For information on power requirements, power consumption, dimensions, weight, and other specifications that are common to all features of the machine, refer to the Operation Guide for the machine.

NETWORK EXPANSION KIT SPECIFICATIONS

Memory	256 MB
Emulation	PCL6
Interface	10Base-T/100Base-TX Ethernet, USB 2.0 (Full Speed / Hi Speed compatible interface)

PRINTER SPECIFICATIONS

Printing speed	The print speed based on the machine specifications
Resolution	600 dpi / 300 dpi
Network expansion kit memory	256 MB
Emulation	PCL6
Installed fonts	PCL6 compatible: 80 outline fonts and 1 bitmap font
Interface	10Base-T/100Base-TX Ethernet, USB 2.0 (Full Speed / Hi Speed compatible interface)

Note
- As a part of our policy of continuous improvement, SHARP reserves the right to make design and specification changes for product improvement without prior notice. The performance specification figures indicated are nominal values of production units. There may be some deviations from these values in individual units.
- Some discrepancies may exist in the illustrations and content due to improvements to the machine.

SCANNER SPECIFICATIONS

USB MEMORY SCAN

File format	File type: PDF
Scanning colours	Colour
Resolution	300 dpi
Device	USB memory
Interface	USB 2.0 (Full-Speed/Hi-Speed compatible interface)
Paper Size	A5, B5, B5R, A4, A4R, B4, A3 (5-1/2" x 8-1/2", 8-1/2" x 11", 8-1/2" x 11"R, 8-1/2" x 14", 11" x 17")

TWAIN/BUTTON MANAGER SCAN

Type	Flatbed scanner
Scanning method	Document glass/SPF/RSPF
Light source	Cold cathode fluorescent lamp
Resolution	Factory default: 150 dpi Setting range: 50 dpi - 9600 dpi
Original types	Sheets, bound documents
Effective scanning area	Approx. 297 mm (11-11/16") (Lengthwise) x 431 mm (16-31/32") (Width)
Scanning speed	1.44 msec/line (Colour), 0.48msec/line (Greyscale/Black and White)
Input Data	1 bit or 12 bit
Output Data	1 bit or 8 bit
Scanning colours	Black and white 2 value, Greyscale, Colour
Protocol	TWAIN, WIA (Windows XP/Vista/7), STI
Interface	USB 2.0 (Full-Speed/Hi-Speed compatible interface)
Drop out colour	No
Supported operating systems	Windows 2000/XP/Vista/7
Void area	Max. 2.5 mm (1/10") (leading and trailing edges) Max. 3.0 mm (3/25") (along other edges in total)
Interface cables	[USB cable] Shielded twisted pair cable (max. length 3 m (10 feet), must support USB 2.0) Please purchase a commercially available USB cable.
Scanner utilities	Button Manager

> **Note**
> • As a part of our policy of continuous improvement, SHARP reserves the right to make design and specification changes for product improvement without prior notice. The performance specification figures indicated are nominal values of production units. There may be some deviations from these values in individual units.
> • Some discrepancies may exist in the illustrations and content due to improvements to the machine.

PRINTER DRIVER SPECIFICATIONS

Function			PCL6
Frequently used functions	Number of copies		1 to 999
	Printing orientation		Yes
	Two-sided printing		Yes
	Binding Style		Book/Tablet
	Pamphlet Style		Yes
	N-up	Number	2, 4, 6, 8, 9, 16
		Order	Selectable
		Border	Yes/No
Paper	Paper Size		Yes
	Custom Paper Size		1 size
	Source Selection		Yes
	Cover Settings		Yes
Graphics	Resolution		600/300 dpi
	Graphics Mode		Yes
	Fit to Page		Yes
Fonts	Resident fonts		80 fonts
	Selectable download fonts		bitmap, TrueType, Graphics
Other functions	Auto configuration Settings		Yes
	ROPM		Yes
	Overlay		Yes
	Different Paper		Yes
	Page Interleave		Yes
	Watermark		Yes

SHARP CORPORATION