

**SHARP®**

**MODEL:** AR-2048SV  
AR-2348SV  
AR-2048DV  
AR-2348DV  
AR-2048NV  
AR-2348NV  
AR-2648NV  
AR-3148NV

**DIGITAL MULTIFUNCTIONAL SYSTEM**

# **OPERATION GUIDE**







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# INTRODUCTION

This manual describes the copier, printer, and scanner functions of the AR-2048SV, AR-2048DV, AR-2348DV, AR-2048NV, AR-2348NV, AR-2348SV, AR-2648NV and AR-3148NV digital multifunctional system. And also explains how to configure network settings to enable the machine to be used as a network printer/scanner.



- Where "AR-xxxx" appears in this manual, please substitute the name of your model for "xxxx". For the name of your model, see ["DIFFERENCES BETWEEN MODELS" \(p.7\)](#).
- The screen images and procedures that appear in this manual are mainly for Windows 7 in Windows environments, and Mac OS X v 10.8 in Macintosh environments. With other versions of Windows, some screen images may be different from those in this manual.
- For information on using your operating system, refer to your operating system's manual or online Help.

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.

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## USING THE MANUAL

This machine has been designed to provide convenient copying features in a minimum amount of office space and with maximum operational ease. To get full use of all machine features, be sure to familiarise yourself with this manual and the machine. For quick reference during machine use, SHARP recommends printing out this manual and keep it in a handy location.

### ABOUT THE MANUALS

The manuals for the machine are as follows:

#### Start Guide

This manual explains:

- Specifications
- Cautions for using the machine in safety

#### Operation Guide (this guide)

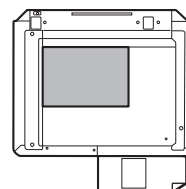
This manual explains:

- How to install the software that allows the machine to be used as a printer and scanner for your computer
- Part names of the machine
- Available paper type for this machine
- Basic copy procedure and advanced copy functions  
(For example: rotating the image 90 degrees, copying multiple originals onto a single sheet of paper)
- Basic print procedure and other frequently used print functions  
(For example: fitting the printed image to the paper, enlarging/reducing the print image)
- Scanning on the machine and from a computer
- Toner cartridge replacement and peripheral devices
- Troubleshooting for using the machine

## THE MEANING OF "R" IN ORIGINAL AND PAPER SIZE INDICATIONS

An "R" appearing at the end of an original or paper size (A4R, etc.) indicates that the original or paper is oriented horizontally as shown on the right.

Sizes that can be placed only in the horizontal (landscape) orientation (B4, A3) do not contain the "R" in their size indication.



<Horizontal (Landscape) orientation>

# CONVENTIONS USED IN THIS MANUAL



Warns the user that injury may result if the contents of the warning are not properly followed.



Cautions the user that damage to the machine or one of its components may result if the contents of the caution are not properly followed.



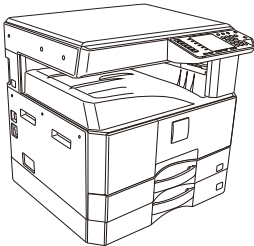
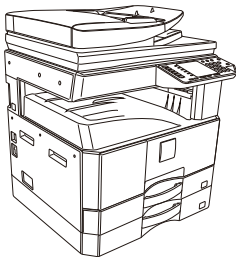
Notes provide information relevant to the machine regarding specifications, functions, performance, operation and such, that may be useful to the user.

## RSPF

This manual refers to the Reversing Single Pass Feeder as the "RSPF".

# DIFFERENCES BETWEEN MODELS

This manual covers the following models.

Model	AR-2048SV AR-2348SV		AR-2048DV <sup>*1</sup> AR-2348DV <sup>*1</sup>		AR-2048NV AR-2348NV		AR-2648NV <sup>*2</sup> AR-3148NV <sup>*2</sup>	
Appearance	 When document cover is installed				 When the RSPF is installed			
	AR-2048SV	20CPM	AR-2048DV	20CPM	AR-2048NV	20CPM	AR-2648NV	26CPM
Copy speed	AR-2348SV	23CPM	AR-2348DV	23CPM	AR-2348NV	23CPM	AR-3148NV	31CPM
Duplex	-		Standard					
Network function	Optional				Standard			
Paper trays	Two (250+500) <sup>*3</sup>						Two (500+500) <sup>*3</sup>	

<sup>\*1</sup>Document cover is required.

<sup>\*2</sup>RSPF is required.

<sup>\*3</sup>500-sheet paper feed tray unit is required.

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## BEFORE SOFTWARE SETUP

This chapter explains how to install and configure the software that is required for the printer and scanner functions of the machine.



This manual refers to the CD-ROM that accompanied the machine simply as "CD-ROM".

## SOFTWARE

The CD-ROM that accompanies the machine contains the following software:

### AR-2048SV/AR-2048DV/AR-2348DV/AR-2348SV

#### MFP driver

##### Printer driver

The printer driver enables you to use the printer function of the machine.

The printer driver includes the Print Status Window. This is a utility that monitors the machine and informs you of the printing status, the name of the document currently being printed, and error messages.

##### Scanner driver

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

#### Button Manager

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

### AR-2048NV/AR-2348NV/AR-2648NV/AR-3148NV

#### Printer driver

The printer driver enables you to use the printer function of the machine.

The printer driver includes the Print Status Window. This is a utility that monitors the machine and informs you of the printing status, the name of the document currently being printed, and error messages.

#### Scanner driver

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



- On a USB connection, the scanner driver cannot be installed.
- For the Print Status Window, refer to ["OUTLINE OF THE PRINT STATUS WINDOW" \(p.76\)](#).

## When the network expansion kit or the printer expansion kit is installed

### Software for Windows

#### Printer driver

These allow the machine to be used as a printer.

- **PCL6 printer driver**

PCL6 printer driver

- **PS printer driver\***

The PS printer driver supports the PostScript 3 page description language developed by Adobe Systems Incorporated.

- **PPD driver\***

The PPD driver enables the machine to use the standard Windows PS printer driver.

#### Scanner driver (TWAIN driver)

This allows you to use the scanner function of the machine from a TWAIN-compliant software application.

### Software for Macintosh

#### PPD file\*

The printer description file supports the PostScript 3 page description language developed by Adobe Systems Incorporated.

\* The PS3 expansion kit is required.

## HARDWARE AND SOFTWARE REQUIREMENTS

Check the following hardware and software requirements before installing the software.

		AR-2048SV* <sup>1</sup> /AR-2048DV* <sup>1</sup> /AR-2348DV* <sup>1</sup> /AR-2348SV* <sup>1</sup>	AR-2048NV/AR-2348NV/AR-2648NV/AR-3148NV
Computer type		IBM PC/AT or compatible computer equipped with a USB 2.0* <sup>2</sup> /1.1* <sup>3</sup>	IBM PC/AT or compatible computer equipped with a USB 2.0* <sup>2</sup> /1.1* <sup>3</sup> IBM PC/AT or compatible computer equipped with a 10BASE-T/100BASE-TX LAN connector
Operating system* <sup>4</sup>	Printer driver	Windows 7, Windows 8.1, Windows 10, Windows Server 2008* <sup>5</sup> , Windows Server 2012* <sup>5</sup> , * <sup>6</sup> , Windows Server 2016* <sup>5</sup> , * <sup>6</sup> , Mac OS X v10.6 to 10.12* <sup>5</sup> , * <sup>7</sup>	Windows 7, Windows 8.1, Windows 10, Windows Server 2008* <sup>8</sup> , Windows Server 2012* <sup>6</sup> , * <sup>8</sup> , Windows Server 2016* <sup>6</sup> , * <sup>8</sup> , Mac OS X v10.6 to 10.12* <sup>7</sup>
	Scanner driver	Windows 7, Windows 8.1, Windows 10, Windows Server 2008* <sup>5</sup> , Windows Server 2012* <sup>5</sup> , * <sup>6</sup> , Windows Server 2016* <sup>5</sup> , * <sup>6</sup>	Windows 7, Windows 8.1, Windows 10, Windows Server 2008, Windows Server 2012* <sup>6</sup> , Windows Server 2016* <sup>6</sup>
Other hardware requirements		An environment on which any of the operating systems listed above can fully operate	

\*<sup>1</sup> When the network expansion kit is installed, 10BASE-T/100BASE-TX LAN functions can be used.

\*<sup>2</sup> The machine's USB 2.0 port will transfer data at the speed specified by the USB 2.0 (Hi-Speed) only if the Microsoft USB 2.0 driver is preinstalled in the computer, or if the USB 2.0 driver for Windows that Microsoft provides through its "Windows Update" is installed.

\*<sup>3</sup> Compatible with Windows 7, Windows 8.1, Windows 10, Windows Server 2008, Windows Server 2012, or Windows Server 2016 preinstalled models equipped with a USB interface as standard.

\*<sup>4</sup> Administrator's rights are required to install the software using the installer.

\*<sup>5</sup> The network expansion kit is required.

\*<sup>6</sup> Including the 64-bit edition OS.

\*<sup>7</sup> The PS3 expansion kit is required.

\*<sup>8</sup> The printer expansion kit is required.



# INSTALLING THE SOFTWARE

- AR-2048SV/AR-2048DV/AR-2348DV/AR-2348SV: this page
- AR-2048NV/AR-2348NV/AR-2648NV/AR-3148NV: page 14
- When the network expansion kit or the printer expansion kit is installed : page 14



- The screen images in this manual are mainly for Windows 7. With other versions of Windows, some screen images may be different from those in this manual.
- 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.

## AR-2048SV/AR-2048DV/AR-2348DV/AR-2348SV

### 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.



The cable will be connected in step 12.

### 2 Insert the CD-ROM into your CD-ROM drive.

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

- In Windows Server 2008, click the "start" button, click "My Computer", and then double-click the "CD-ROM" icon.
- In Windows 8.1/Server 2012, double-click the "CD-ROM" icon.
  - \* If no icon is displayed in Windows Server 2012, right-click in the Start screen (or swipe upward from the bottom edge), then select the App Bar → "All apps" → "Computer" and then double-click "CD-ROM".
  - \* If no icon is displayed in Windows 8.1, click the (  ) icon in the Start screen and then double-click "CD-ROM" icon.
- In Windows 10/Server 2016, click the "File Explorer" icon (  ) on the tool bar, then click "This PC" and double-click the "CD-ROM" icon.

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



If a message screen appears asking you for confirmation, click "Yes" or "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.



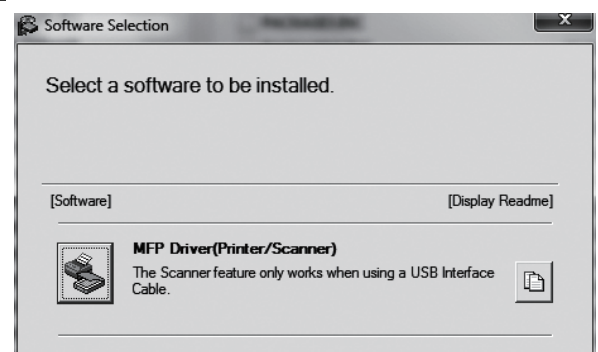
You can show the "SOFTWARE LICENSE" in a different language by selecting the desired language from the language menu. To install the software in the selected language, continue the installation with that language selected.

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

### 7 To connect the machine and a computer directly via a USB cable, normally click the "Standard" button and go to step 11. When you click the "Custom" button, go to the next step.

To automatically install the MFP driver (printer/scanner driver) and Button Manager, select "Standard".

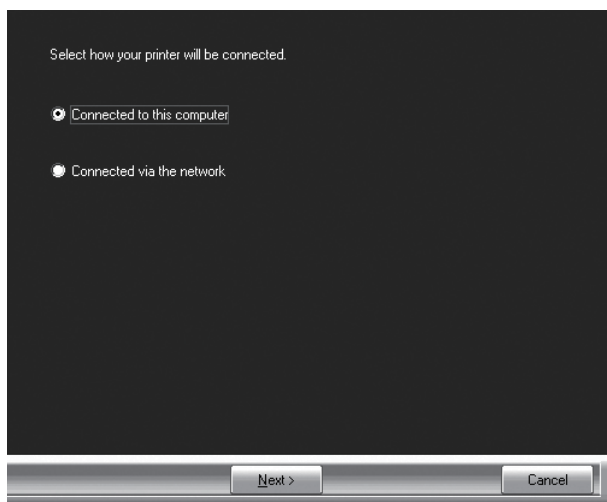
### 8 Click the "MFP Driver" button.



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



## 9 Select "Connected to this computer" and click the "Next" button.



Follow the on-screen instructions.

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



**Caution** If a warning window regarding security is displayed, please click "Install this driver software anyway" or "Install".

## 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 the Button Manager, go to step 11.



Follow the on-screen instructions.



**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.

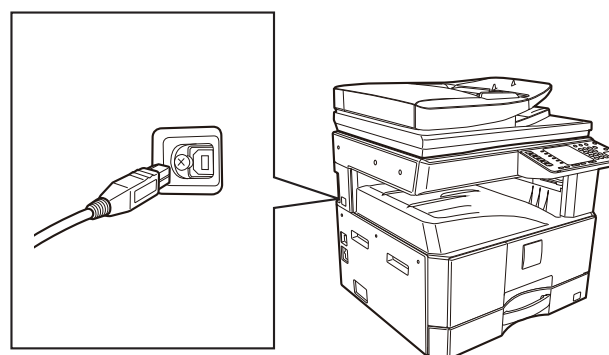
A message will appear instructing you to connect the machine to your computer. Click the "OK" button.



**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 Connect the machine to your computer with a USB cable.

- (1) Make sure that the machine is powered on. (p.37)
- (2) Connect the cable to the USB connector (B type) on the machine.  
The USB interface on the machine complies with the USB 2.0 (Hi-Speed) standard. Please use a shielded USB cable that accompanies the machine.



- (3) Connect the other end of the cable to the USB connector (A type) on your computer.

## 13 Follow the instructions in the Plug and Play window to install the driver.

Follow the on-screen instructions.



**Caution** If a warning window regarding security is displayed, please click "Install this driver software anyway" or "Install".

**This completes the installation of the software.**

### System requirements for USB 2.0 (Hi-Speed mode)

- The machine's USB 2.0 connector will transfer data at the speed specified by the USB 2.0 (Hi-Speed) only if the Microsoft USB 2.0 driver is preinstalled in the computer, or if the USB 2.0 driver for Windows that Microsoft provides through its "Windows Update" Web page is installed.
- 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).
- If your computer is not compatible with USB 2.0 (Hi-Speed), the "USB 2.0 mode switching" setting in the machine's system setting must be set to "Full-Speed". For more information, see ["SYSTEM SETTINGS" \(p.92\)](#).

# USING THE MACHINE AS A SHARED PRINTER

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



To configure the appropriate settings in the print server, see the operation manual or help file of your operating system.

**1** Perform steps 2 through 6 in **"INSTALLING THE SOFTWARE"** (p.10).

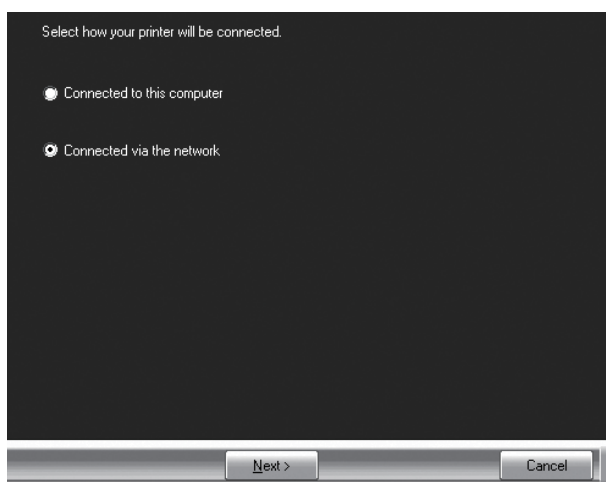
**2** Click the **"Custom"** button.

**3** Click the **"MFP Driver"** button.



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

**4** Select **"Connected via the network"** and click the **"Next"** button.



**5** Click the port you want to use with this printer.

- (1) Select the MFP port in the list.
- (2) Click the "Next" button.

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

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



If the shared printer does not appear in the list, check the settings on the print server.



If a warning window regarding security is displayed, please click "Install this driver software anyway" or "Install".

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

**8** Click the **"Close"** button in the window of step 3.



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.**

# FOR A MODEL THAT HAS THE NETWORK FUNCTION AS A STANDARD FEATURE OR WHEN THE NETWORK EXPANSION KIT IS INSTALLED

This section explains how to install the software when using a machine with network function capability.

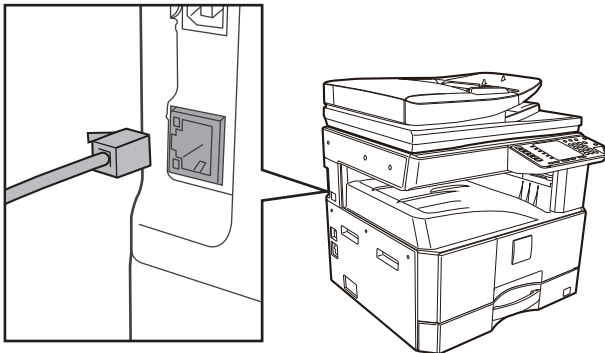
- Installing the printer driver for a machine connected to the network: this page
- Installing the printer driver for a machine connected by USB cable: page 16
- Installing the PS printer driver or PPD printer driver: page 18
- Installing the Print Status Monitor: page 19
- Installing the scanner driver: page 20

## Installing the printer driver

When the machine is connected to a network

### 1 Insert the LAN cable into the LAN connector on the machine.

Use a network cable that is shielded.



### 2 Insert the CD-ROM into your CD-ROM drive.

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

- In Windows Server 2008, click the "start" button, click "My Computer", and then double-click the "CD-ROM" icon.
- In Windows 8.1/Server 2012, double-click the "CD-ROM" icon.
  - \* If no icon is displayed in Windows Server 2012, right-click in the Start screen (or swipe upward from the bottom edge), then select the App Bar → "All apps" → "Computer" and then double-click "CD-ROM".
  - \* If no icon is displayed in Windows 8.1, click the ( ) icon in the Start screen and then double-click "CD-ROM" icon.
- In Windows 10/Server 2016, click the "File Explorer" icon ( ) on the tool bar, then click "This PC" and double-click the "CD-ROM" icon.

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

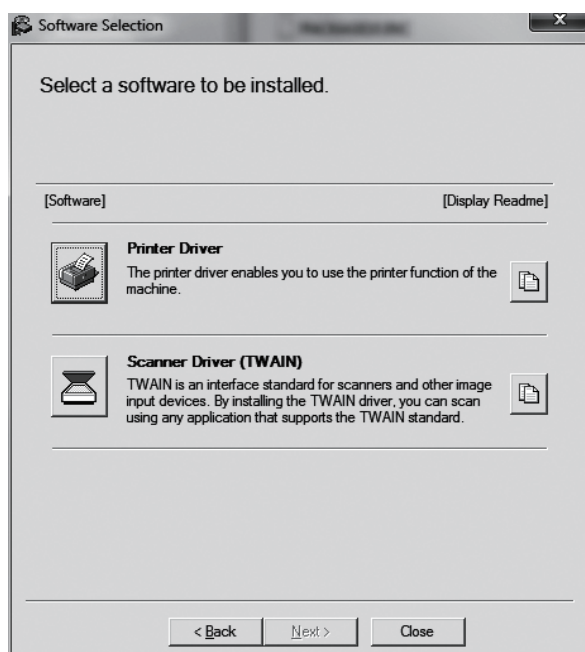


If a message screen appears asking you for confirmation, click "Yes" or "Allow".

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

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

## 7 Click the "Printer Driver" button.



## 8 Click the "Standard installation" button.

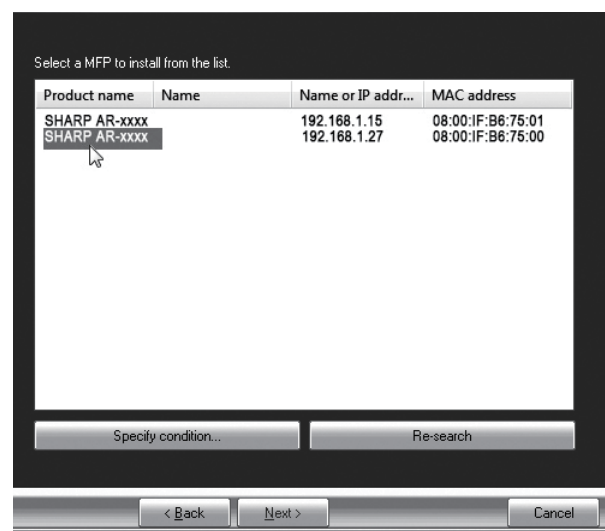


When "Custom installation" is selected, you can change any of the items below. When "Standard installation" is selected, the installation will take place as indicated below.

- Machine connection method:  
LPR Direct Print (Auto Search)
- Set as default printer:  
Yes
- Printer driver name:  
Cannot be changed
- PCL printer display fonts (Only at the time of PCL, PS printer driver or PPD driver installation): Installed.

If you selected "Custom installation", select "LPR Direct Print (Auto Search)" and click the "Next" button.

## 9 Printers connected to the network are detected. Select the machine and click the "Next" button.



- 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.

## 10 Follow the on-screen instructions.

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



If a warning window regarding security is displayed, please click "Install this driver software anyway" or "Install".

## 11 When the installation completed screen appears, click the "OK" button.

## 12 Click the "Close" button in the window of step 7.

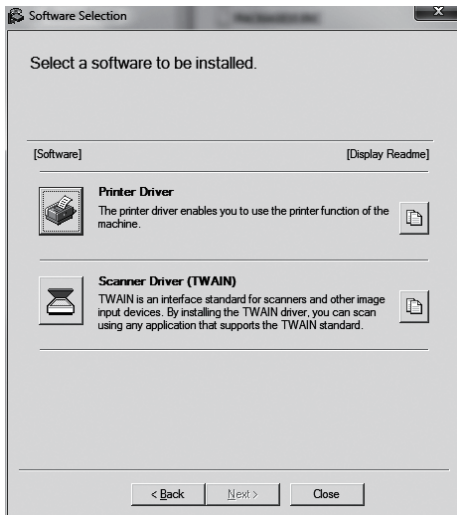


After the installation, a message prompting you to restart your computer may appear. If this message appears, click the "Yes" button to restart your computer.

When the machine will be connected with a USB cable  
(When the network expansion kit or the printer expansion kit is installed)

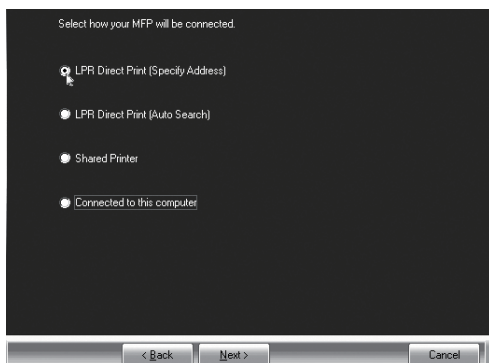
**1** Perform steps 2 through 6 in "**When the machine is connected to a network**" (p.14).

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



**3** Click the "Custom installation" button.

**4** When you are asked how the printer is connected, select "Connected to this computer" and click the "Next" button.



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

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

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



If a warning window regarding security is displayed, please click "Install this driver software anyway" or "Install".

**6** Click the "Close" button in the window of step 2.

When a message appears prompting you to connect the machine to your computer, click the "OK" button.

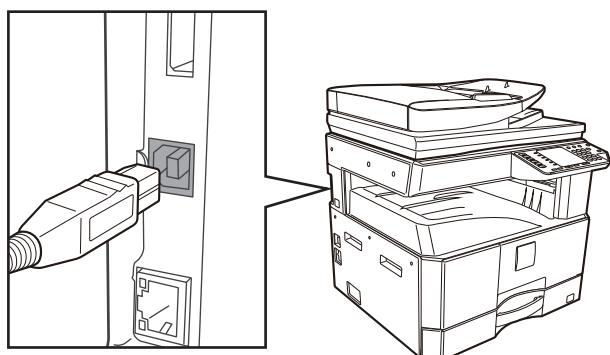


After the installation, a message prompting you to restart your computer may appear. If this message appears, click the "Yes" button to restart your computer.

## 7 Connect the machine to your computer with a USB cable.

- (1) Make sure that the machine is powered on. (p.37)
- (2) Connect the cable to the USB connector (B type) on the machine.

The USB interface on the machine complies with the USB 2.0 (Hi-Speed) standard. For AR-2048SV/AR-2048DV/AR-2348DV/AR-2348SV, please use a shielded USB cable accompanies the machine. For AR-2048NV/AR-2348NV/AR-2648NV/AR-3148NV, please purchase a shielded USB cable.



- (3) Connect the other end of the cable to the USB connector (A type) on your computer.

## 8 Installation of the PCL6 printer driver begins.



If a warning window regarding security is displayed, please click "Install this driver software anyway" or "Install".



PCL6 can be used when the printer expansion kit is installed.

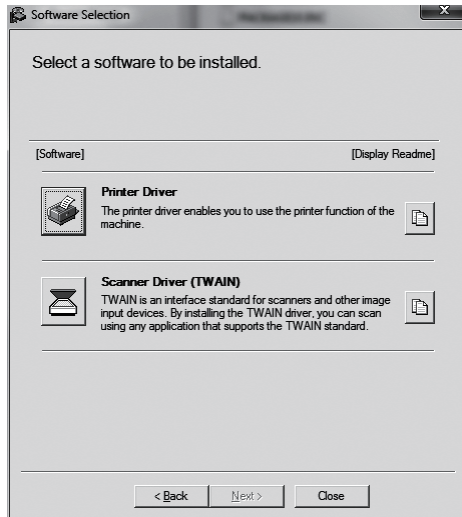
**This completes the installation.**



## When installing the PS printer driver or PPD driver

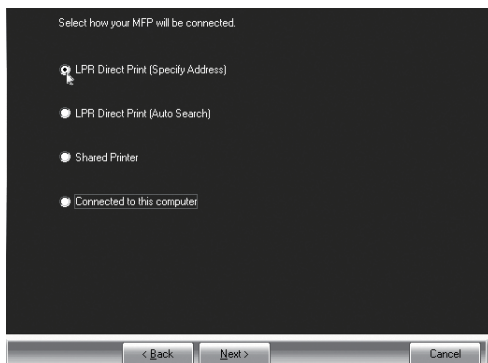
Installation is possible even after the USB cable has been connected. Make sure to install the driver again after you have performed the steps on page 16 to 17.

### 1 Click the "Printer Driver" button.



### 2 Click the "Custom installation" button.

### 3 When you are asked how the printer is connected, select "LPR Direct Print (Specify Address)" and click the "Next" button.



When selecting "Connected to this computer", the PS printer driver or PPD driver can not be installed. Only selecting excluded from "Connected to this computer" can go to step 5.

### 4 Input your printer name or IP address. When the port selection window appears, select the model that you want to use and click the "Next" button.

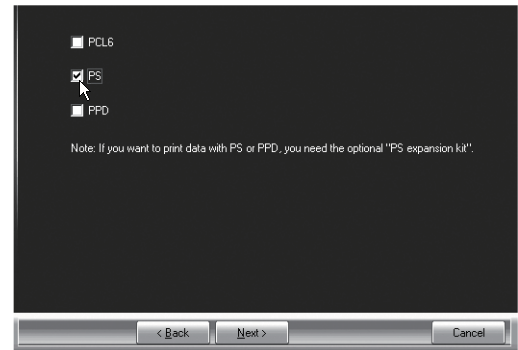
Read the message in the window that appears and click the "Next" button.



To use USB installing, please select the printer model suffix with "USB".

### 5 When the printer driver selection window appears, remove the "PCL6" checkmark and select the printer driver to be installed, and then click the "Next" button.

Click the checkbox of the printer driver to be installed so that a checkmark (☑) appears.



The PS3 expansion kit is required to use the PS printer driver or the PPD driver.

### 6 Follow the on-screen instructions.

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



If a warning window regarding security is displayed, please click "Install this driver software anyway" or "Install".

### 7 When the installation completed screen appears, click the "OK" button.

### 8 Click the "Close" button in the window of step 1.



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.



## Installing the printer status monitor (when the network expansion kit or the printer expansion kit is installed)

Printer Status Monitor is a printer utility that allows general users to check the current status of the machine on their computer screen, such as whether or not the machine is ready to print. The Printer Status Monitor shows error information such as paper misfeeds, printer configuration information as an image, the paper sizes that can be used, and the amount of paper remaining.

Administrator's rights are required to install the software.



The Printer Status Monitor cannot be used in the following situations:

- When the machine is connected by a USB cable.

### 1 Download the Printer Status Monitor (SMON\_1708a\_x86\_x64) from our website and execute installation.

For more information, consult your dealer or nearest authorized service representative.

### 2 Follow the on-screen instructions.

### 3 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 ☒ and click the "Finish" button.



- After the installation, the readme file may appear.
- 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.

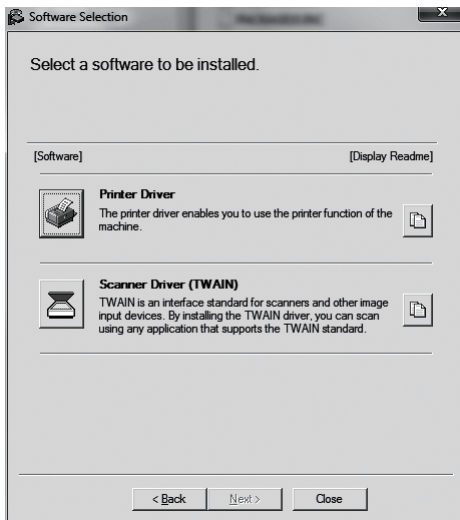
For the procedures for using the Printer Status Monitor, see the Help file. Follow these steps to view the Help file: Click the "start" button, select "All Programs", select "SHARP Printer Status Monitor" and then select "Help".

- In Windows Server 2012, right-click in the startup window and select "All Applications", then select "Help" in the SHARP Printer Status Monitor menu.
- In Windows 8.1, click the (⏵) icon in the start screen, and then select [Help] in the [SHARP Printer Status Monitor] menu.
- In Windows 10, right click the [Start] button (⊞), then click [All Applications] → [Help] in the [SHARP printer status monitor] menu.
- In Windows Server 2016, right click the [Start] button (⊞), then select [Help] in the [SHARP printer status monitor] menu.

## Installing the scanner driver

**1** Perform steps 2 through 6 in **"When the machine is connected to a network"** (p.14).

**2** Click the **"Scanner Driver (TWAIN)"** button.



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

Read the message in the window that appears and click the "Yes" button.

**4** When the finish setup window appears, click the **"OK"** button.

**5** Click the **"Close"** button in the window of step 2.



**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. Next, configure the IP address of the machine in the scanner driver.**

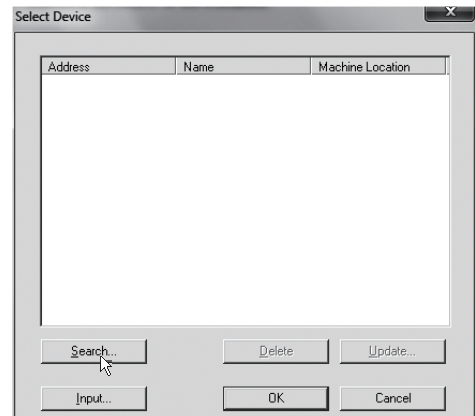
When the scanner driver is installed, the "Select Device" utility is also installed.

The IP address of the machine is configured in the scanner driver using "Select Device".

**6** Click the **"start"** button, select **"All Programs"**, select **"SHARP MFP TWAIN AC"** ("SHARP MFP TWAIN K" on a network connection), and then select **"Select Device"**.

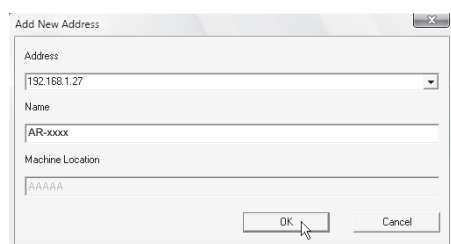
**7** Click the **"Search"** button.

If you know the IP address, you can click the "Input" key and enter the IP address without searching.

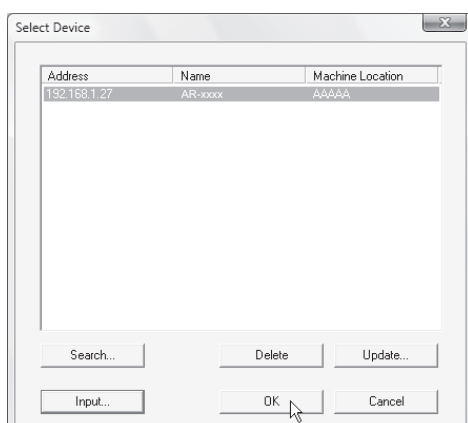


## 8 Select the IP address of the machine from the "Address" menu and click the "OK" button.

- Be sure to ask your system administrator (network administrator) for the IP address of the machine.
- The name (host name) or IP address of the machine can be directly entered in "Address".
- If the port number used by the scanner function of the machine has been changed, enter a colon ":" following the IP address and then enter the port number. (Normally the port number does not need to be entered.)



## 9 Click the "OK" button.



**This completes the configuration of the scanner driver.**

# INSTALLING THE PS DISPLAY FONTS

Fonts that can be used by the PS printer driver are contained on the "PRINTER UTILITIES" CD-ROM that accompanies the PS3 expansion kit. Install these fonts as needed for the PS printer driver.



To install on Mac OS, see ReadMe on the "PRINTER UTILITIES" CD-ROM that is included in the PS3 expansion kit.

**1** Insert the "PRINTER UTILITIES" CD-ROM that accompanies the PS3 expansion kit into your computer's CD-ROM drive.

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

- In Windows Server 2008, click the "start" button, click "My Computer", and then double-click the "CD-ROM" icon.
- In Windows 8.1/Server 2012, double-click the "CD-ROM" icon.
  - \* If no icon is displayed in Windows Server 2012, right-click in the Start screen (or swipe upward from the bottom edge), then select the App Bar → "All apps" → "Computer" and then double-click "CD-ROM".
  - \* If no icon is displayed in Windows 8.1, click the ( ) icon in the Start screen and then double-click "CD-ROM" icon.
- In Windows 10/Server 2016, right-click the "File Explorer" icon ( ) on the tool bar, then click "This PC" and double-click the "CD-ROM" icon.

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



If a message screen appears asking you for confirmation, click "Yes" or "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.



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 "PS Display Font" button.






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

**8** Click the "Close" button in the screen of step 6.

# 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.

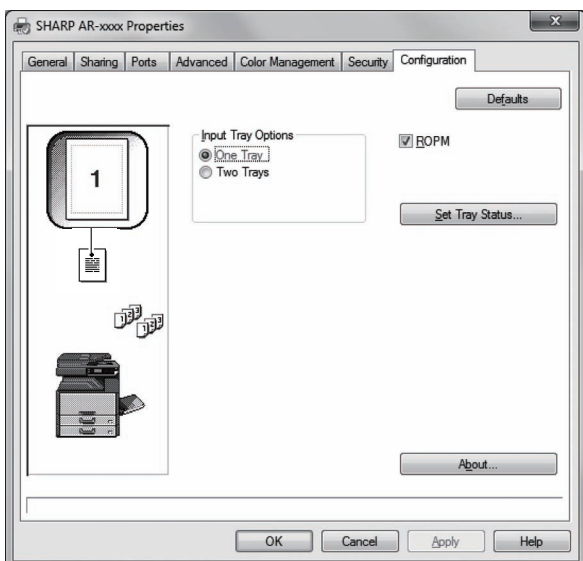
## 1 Click the "Start" button ( ), click "Control Panel", and then click "Devices and Printers" (or "View devices and printers").

- In Windows Server 2012, right-click in the Start screen (or swipe upward from the bottom edge), then click the App Bar → "All apps" → "Control Panel" → "Hardware and Sound" → "Devices and Printers" → "Printers".
- In Windows 8.1, click the (  ) icon in the start screen, then click the "Control Panel" → "Hardware and Sound" → "Devices and Printers" → "Printers".
- In Windows 10, right-click the "Start" button (  ), then click the "Control Panel" → "Hardware and Sound" → "Devices and Printers".
- In Windows Server 2016, right-click the "Start" button (  ), then click the "Control Panel" → "View Devices and Printers".

## 2 Right-click the "SHARP AR-xxxx" printer driver icon, and then click "Printer properties".

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

Set the printer configuration properly. If not, printing may not take place correctly.



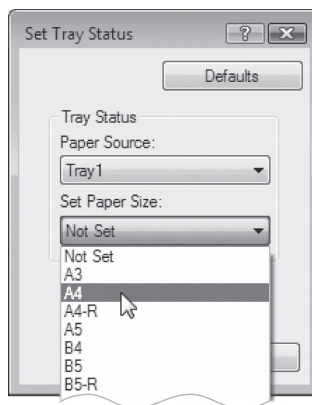
\*This screen is related to the SPLC printer driver with network installing.



For the PCL Driver or SPLC Driver with USB installing, to configure the settings automatically 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.

# SETTING UP BUTTON MANAGER

## (For AR-2048SV/AR-2048DV/AR-2348DV/AR-2348SV)

Button Manager is a software program that works with the scanner driver to enable scanning from the machine.

To scan using the machine, Button Manager must be linked with the scan menu on the machine. Follow the steps below to link Button Manager to scanner events.

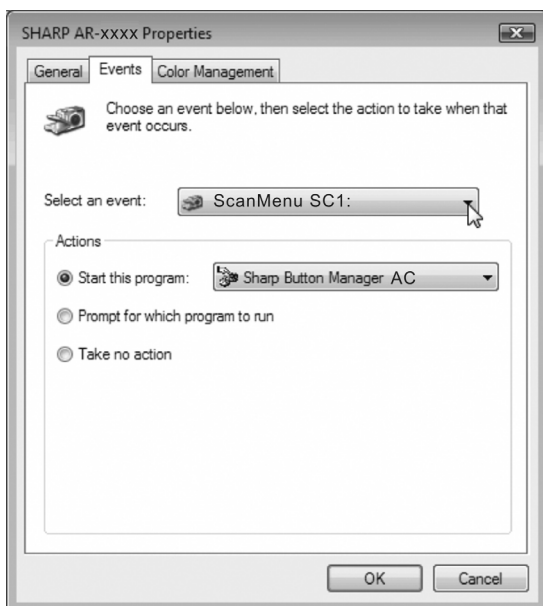
### 1 Click the "Start" button ( ), click "Control Panel", and then click "Devices and Printers" (or "View devices and printers").

- In Windows Server 2012, right-click in the Start screen (or swipe upward from the bottom edge), then click the App Bar → "All apps" → "Control Panel" → "Hardware and Sound" → "Devices and Printers" → "Printers".
- In Windows 8.1, click the ( ) icon in the start screen, then click the "Control Panel" → "Hardware and Sound" → "Devices and Printers" → "Printers".
- In Windows 10, right-click the "Start" button ( ), then click the "Control Panel" → "Hardware and Sound" → "Devices and Printers".
- In Windows Server 2016, right-click the "Start" button ( ), then click the "Control Panel" → "View Devices and Printers".

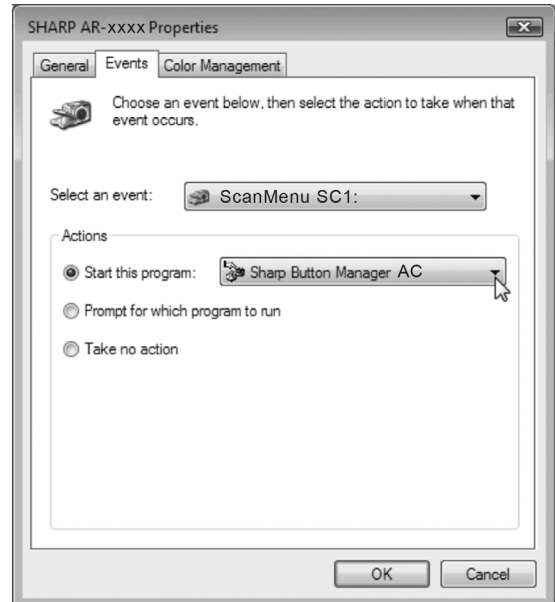
### 2 Right-click the "SHARP AR-xxxx" icon and select "Scan properties".

### 3 In the "Properties" screen, click the "Events" tab.

### 4 Select "ScanMenu SC1:" from the "Select an event" pull-down menu.



### 5 Select "Start this program" and then select "Sharp Button Manager AC" from the pull-down menu.



### 6 Repeat Steps 4 and 5 to link Button Manager to "ScanMenu SC2:" through "ScanMenu SC6:".

Select "Scanmenu SC2:" from the "Select an event" pull-down menu. Select "Start this program", select "Sharp Button Manager AC" from the pull-down menu. Do the same for each scan menu through "Scanmenu SC6:".

### 7 Click the "OK" button.

Button Manager is now linked to the scan menu (1 through 6).

The scan settings for each of scan menu 1 through 6 can be changed with the setting window of Button Manager.

For the factory default settings of the scan menu and the procedures for configuring Button Manager settings, see ["BUTTON MANAGER SETTINGS" \(p.81\)](#).


# TROUBLESHOOTING

If the software is not installed correctly, check the following items on your computer.

## Plug and Play window does not appear

If the Plug and Play window does not appear after you connect the machine to your computer with a USB cable and turn on the machine, follow the steps below to verify that the USB port is available.

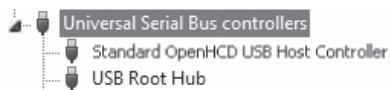
### 1 Click the "Start" button, select "Control Panel", and then click "System".

- In Windows 8.1, right-click in the Start screen (or swipe upward from the bottom edge), then click the App Bar → "All apps" → "Control Panel" → "Hardware and Sound" → "Devices Manager".
- In Windows 10, right-click the "start" button (  ), click "Windows System", click "Control Panel", and then click "Hardware and Sound".

### 2 Click "Device Manager", and if a message screen appears asking you for confirmation, click "Continue".

"Universal Serial Bus controllers" will appear in the list of devices.

### 3 Click the icon beside "Universal Serial Bus controllers".




Two items should appear: your controller chipset type and Root Hub. If these items appear, you can use the USB port. If the "Universal Serial Bus controllers" shows a yellow exclamation point or does not appear, you must check your computer manual for USB troubleshooting or contact your computer manufacturer.

### 4 Once you have verified that the USB port is enabled, install the software as explained in ["INSTALLING THE SOFTWARE" \(p.10\)](#).

## The driver cannot be correctly installed by Plug and Play

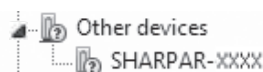
If the driver cannot be correctly installed by Plug and Play (for example, Plug and Play takes place without copying the required files for the driver installation), follow these steps to remove unneeded devices and then install the driver as explained in ["INSTALLING THE SOFTWARE" \(p.10\)](#).

### 1 Click the "Start" button ( ), select "Control Panel", and then click "System".

- In Windows 8.1, right-click in the Start screen (or swipe upward from the bottom edge), then click the App Bar → "All apps" → "Control Panel" → "Hardware and Sound" → "Devices Manager".
- In Windows 10, right-click the "start" button (  ), click "Control Panel", and then click "Hardware and Sound".

### 2 Click "Device Manager", and if a message screen appears asking you for confirmation, click "Continue".

### 3 Click the icon beside "Other devices".



If "SHARP AR-xxxx" appears, select and delete the item.



If "Other devices" does not appear, close the "Device Manager" window.

### 4 Install the software as explained in ["INSTALLING THE SOFTWARE" \(p.10\)](#).

## Removing the software

If you need to remove the software, follow these steps.

### **1** Click the "start" button and then click "Control Panel".

- In Windows Server 2012, right-click in the startup window (or swipe upward from the bottom edge), then select "Taskbar" → "All Applications" → "Control Panel".
- In Windows 8.1, click the (⏵) icon in the start screen, then click the "Control Panel".
- In Windows 10/Server 2016, right click the "Start" button (⊞) and then click "Control Panel".

### **2** Click "Program and Function".

### **3** Select the program or driver that you wish to delete.

For more information, see the manual for the operating system or Help.

### **4** Restart your computer.



# SETUP IN A MACINTOSH ENVIRONMENT

This chapter explains how to install the PPD file to enable printing from a Macintosh and how to configure the printer driver settings.

- The printer expansion kit and PS3 expansion kit are required to use the machine as a printer in a Macintosh environment. In addition, the machine must be connected to a network. A USB connection cannot be used.
- The scanner driver cannot be used in a Macintosh environment.

## MAC OS X



The explanations of screens and procedures are primarily for Mac OS X v10.8. The screens may vary in other versions of the operating system.

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

**2** Double-click the "CD-ROM" icon (📀) on the desktop, and copy the "MacOS" folder to your computer.

**3** Double-click the "MacOS" folder.

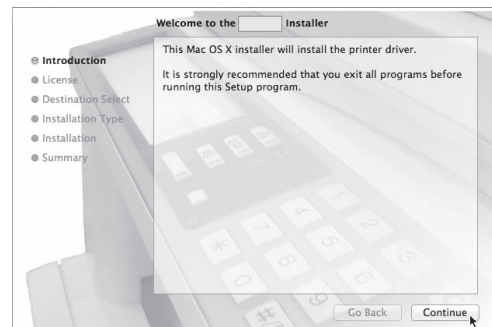
**4** Double-click the DMG file.

**5** Double-click the "MacOSX" folder.  
Before installing the software, be sure to read "ReadMe First". "ReadMe First" is in the "US-English" folder ("English" folder in areas other than the U.S.) in the "Readme" folder

**6** Double-click the folder corresponding to the versions of the operating system.

**7** Double-click the "SH-L01" icon (📀).

**8** Click the "Continue" button.



- 9** The License Agreement window will appear. Make sure that you understand the contents of the license agreement and then click the "Continue" button.

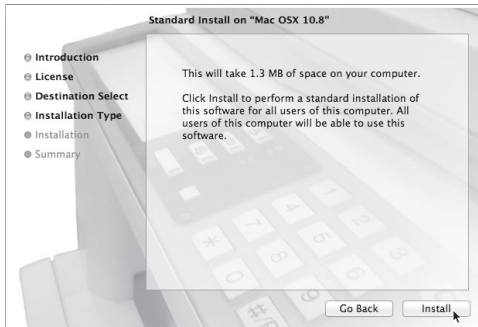
A message will appear asking you if you agree to the terms of the license. Click the "Agree" button.



- If the license appears in the different language, change the language in the language menu.
- In Mac OS X v10.6 to 10.7, click the "Change Install Location" button if you change the hard drive which the printer driver is installed.

- 10** Click the "Install" button.

Installation begins.



- If the "Authenticate" window appears, enter the password and click the "Install Software" button.  
In Mac OS X v10.6, enter the password and click the "OK" button.

- 11** When the installation completed screen appears, click the "Close" button.

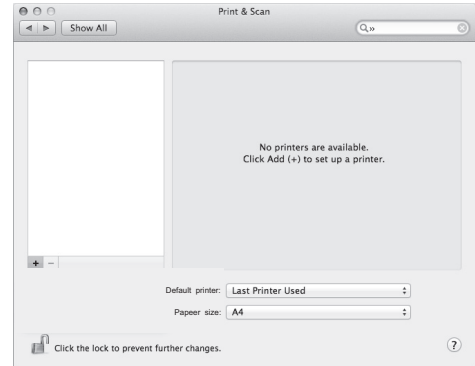
This completes the installation of the software. Next, configure the printer driver settings.

- 12** Click "System Preference" in the Apple menu () and select "Print & Scan" (🖨️).

- If you are using Mac OS X v10.6, click "System Preferences" in the Apple menu () and select "Print & Fax" (🖨️).
- If you are using Mac OS X v10.9 to 10.12, click "System Preferences" in the Apple menu () and select "Printers & Scanners" (🖨️).
- \* If this is the first time you are installing a printer driver on your computer, a confirmation message will appear. Click the "Add" button.

- 13** Click the button and select add the printer and scanner.

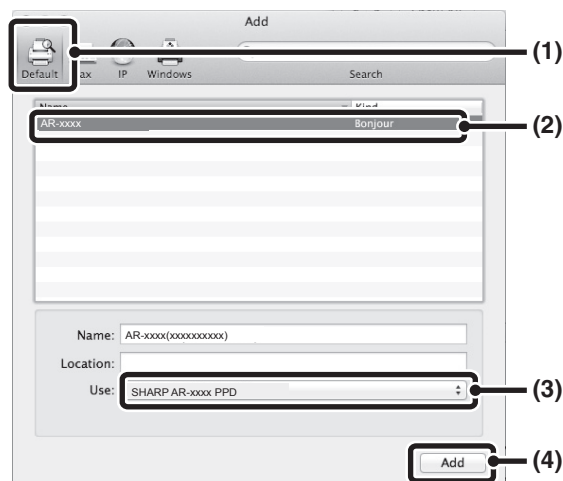
When the printer is added automatically, go to step 15.



In Mac OS X v10.6, when the screen for adding a printer appears, click the button.

## 14 Configure the printer driver.

If you wish to use the IPP function, see ["Printing using the IPP function" \(p.30\)](#) to configure the printer driver settings.



1 Click the "Default" icon.

2 Click the machine's model name.

- Using with AppleTalk:  
The machine's model name usually appears as "SCxxxxxx"\*.
- Using with Bonjour:  
The machine's model name usually appears as "xxxxxx"\*.
- \* "xxxxxx" is a sequence of characters that varies depending on your model.

3 Make sure that the PPD file of your model is selected.

The PPD file of the machine is automatically selected.

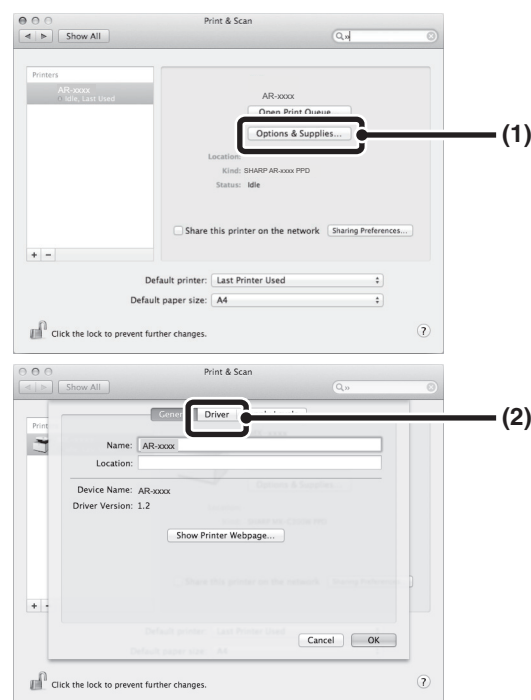
4 Click the "Add" button.

- Using with AppleTalk:  
The PPD file of the machine is automatically selected and the peripheral devices installed on the machine are detected and automatically configured.
- Using with Bonjour:  
The "Installable Options" screen appears. Select the machine configuration and click the "Continue" button.



The PPD file is installed in the following folders on the startup disk.  
"Library" - "Printers" - "PPDs" - "Contents" - "Resources"

## 15 Click the "Option & Supplies" button and click the "Driver" (or "Options") tab.



## 16 Select the machine configuration.

If you selected "Auto Select" in (3) of step 14, the machine configuration is detected and automatically configured. Check the configured settings to make sure they are correct.

1 Select the options that are installed on the machine.

In Mac OS X v10.9 to 10.12, before you are selecting the option, select "Options".

2 Click the "OK" button.

3 Click to close the window.



You can check the options that are installed on the machine by viewing in the web page of "Device Configuration". (However, note that "Input Tray Options" must be set to the number of trays on the machine.)

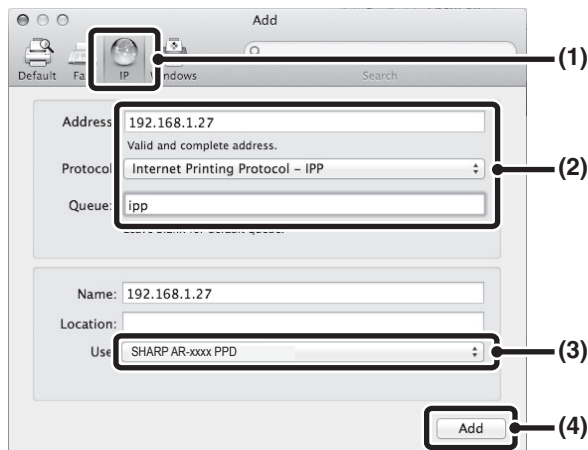
**This completes the configuration of the printer driver.**

## Printing using the IPP function

The machine can print using the IPP function. When the machine is in a remote location, this function can be used in place of the fax function to print a higher quality image than a fax. If you wish to use the IPP function, follow these steps to select the PPD file when configuring the printer driver (step 14 on page 29).



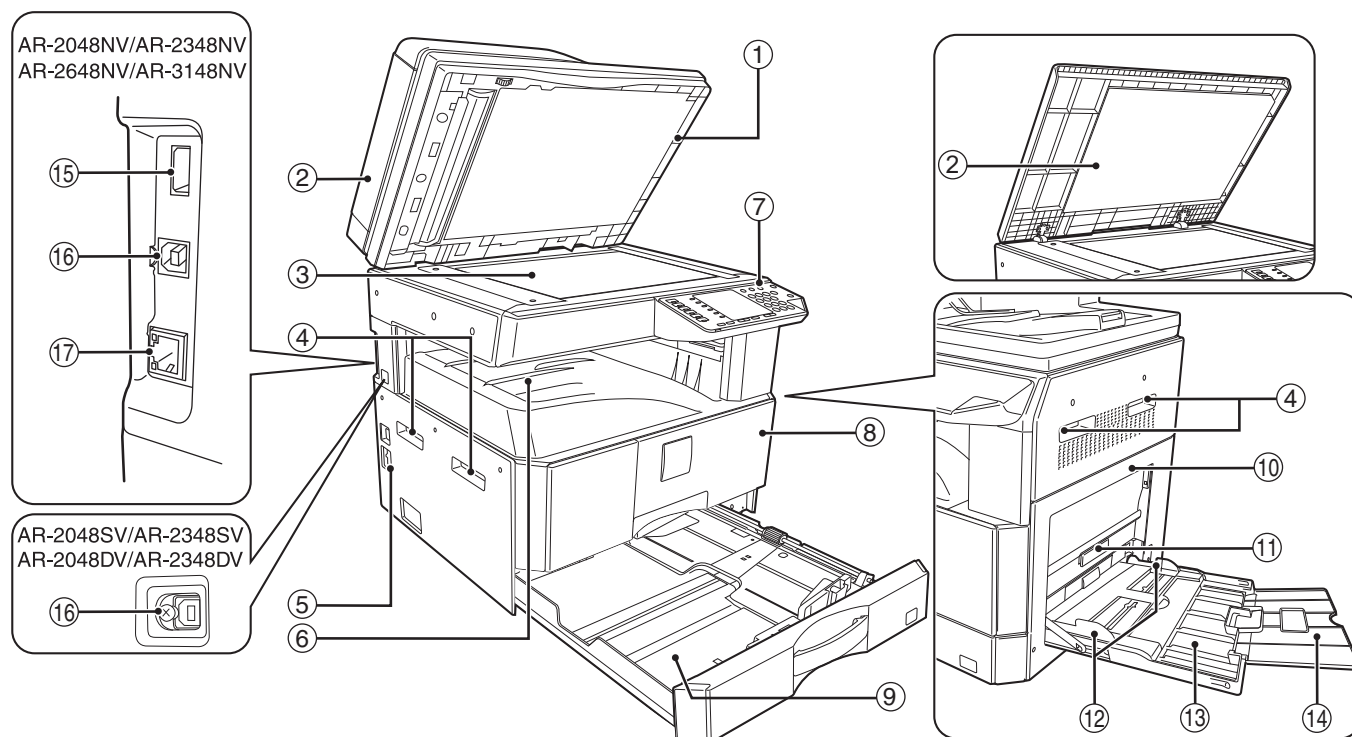
- This function can be used on network function standard models and on models with the network expansion kit installed.
- This function can not be available for Mac OS X v 10.10 to 10.12.



- 1 Click the "IP" icon.**
- 2 Select "Internet Printing Protocol" in "Protocol". Enter the address of the machine (IP address or domain name) and the queue name.**  
Enter "ipp" in "Queue".
- 3 Select "Select a driver to use" (or "Select Printer Software") from "Use" and click the PPD file for your model.**  
If you are using Mac OS X v 10.6 to 10.7, select "Select a driver to use"(or "Select Printer Software") from "Print Using" and click the PPD file of your model.
- 4 Click the "Add" button.**  
The screen for the machine configuration appears. Make sure that the settings are correct and click the "OK" button.

This chapter contains basic information that should be read before using the machine.

## PART NAMES AND FUNCTIONS



① **Glass cleaner (when the RSPF is installed)**

Use to clean the original scanning glass. (p.123)

② **Document feeder cover (when the RSPF is installed) /document cover**

Open to make copies from the document glass. (p.44)

③ **Document glass**

Place an original that you wish to scan face down here. (p.44)

④ **Handles**

Use to move the machine.

⑤ **Power switch**

Press to turn the machine power on and off. (p.37)

⑥ **Paper output tray**

Copies and prints are deposited to this tray.

⑦ **Operation panel**

Contains operation keys and indicator lights. (p.33)

⑧ **Front cover**

Open to remove paper misfeeds and perform machine maintenance. (p.115, p.116, p.120)

⑨ **Paper trays**

The tray holds 250 sheets of paper. (p.39)

When AR-2648NV/AR-3148NV is used, each tray holds 500 sheets of paper.

⑩ **Side cover**

Open to remove paper misfeeds and perform machine maintenance. (p.114, p.115)

⑪ **Side cover handle**

Pull to open the side cover. (p.114)

⑫ **Bypass tray guides**

Adjust to the width of the paper. (p.40)

⑬ **Bypass tray**

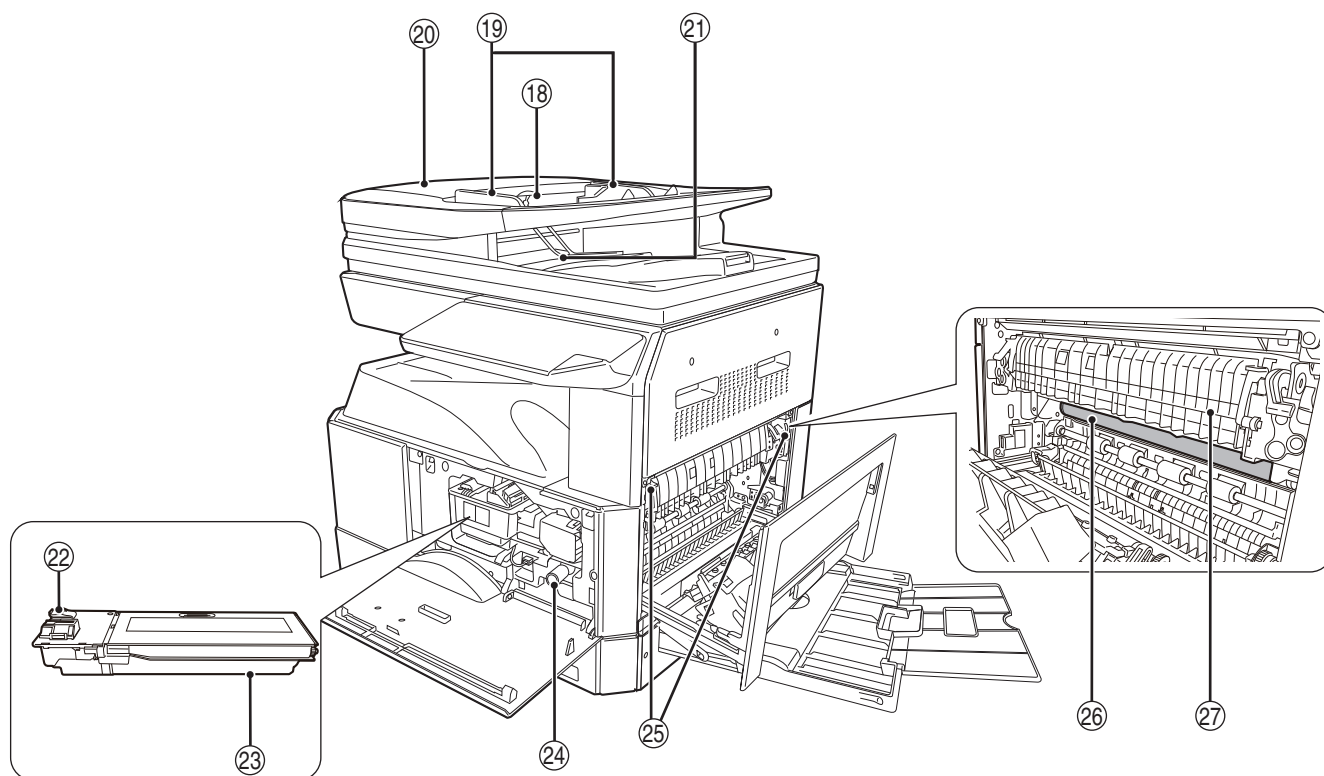
Paper including special paper (such as transparency film) can be fed from the bypass tray. (p.40, p.55)

⑭ **Bypass tray extension**

Pull out when feeding large paper such as B4 and A3. (p.40)

⑮ **USB 2.0 connector (Type B) (when the network expansion kit is installed)**

Connect to the USB device.



## ⑩ USB 2.0 connector

Connect to your computer to use the printer and scanner functions.

## ⑪ 10BASE-T/100BASE-TX LAN connector

Connect to your network to use the printer and scanner functions. (p.14)

## ⑫ Document feeder tray (when the RSPF is installed)

Place the original(s) that you wish to scan face up here. Holds up to 100 originals. (p.46)

## ⑬ Original guides (when the RSPF is installed)

Adjust to the size of the originals. (p.45)

## ⑭ Feeding roller cover (when the RSPF is installed)

Open to remove misfed originals. (p.113)

## ⑮ Exit area (when the RSPF is installed)

Originals exit the machine here after copying.

## ⑯ Toner cartridge lock release lever

To replace the toner cartridge, pull out the toner cartridge while pushing on this lever. (p.120)

## ⑰ Toner cartridge

Contains toner. (p.120)

## ⑱ Roller rotating knob

Turn to remove misfed paper. (p.115, p.116)

## ⑲ Fusing unit release levers

To remove a paper misfeed from the fusing unit, push down on these levers and remove the paper. (p.116)



**The fusing unit is hot. Do not touch the fusing unit when removing misfed paper. Doing so may cause a burn or injury.**

## ⑳ Photoconductive drum

Copy images are formed on the photoconductive drum.

## ㉑ Fusing unit paper guide

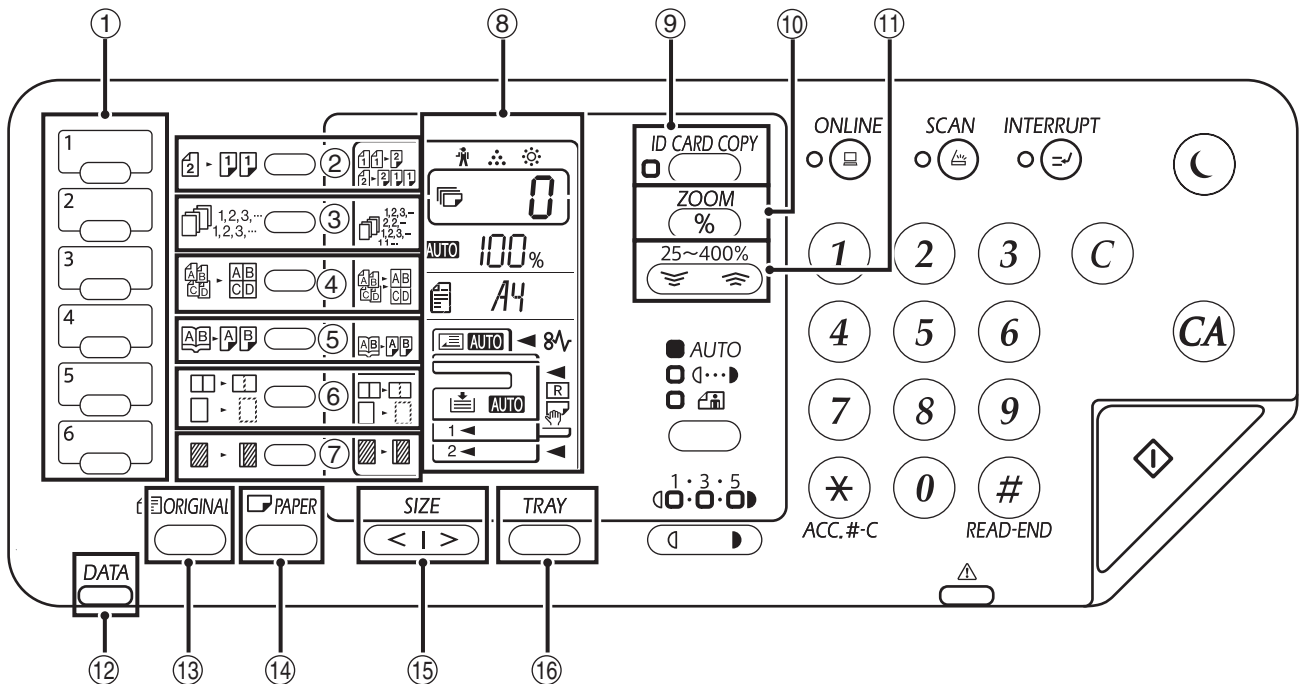
Open to remove misfed paper. (p.117)



**The model name can be seen on the machine's front cover.**

# OPERATION PANEL

2



## ① SCAN MENU key

Press to scan using the keys on the machine. (p.79)

## ② ORIGINAL TO COPY key ( )

Press to select duplex copy. (p.52)

## ③ SORT/GROUP/ROTATE SORT key ( ) / indicators

Press to select the "SORT", "GROUP" or "ROTATE SORT" mode. (p.59)

## ④ 2 IN 1 / 4 IN 1 key ( ) / indicators

Press to select the "2 IN 1" or "4 IN 1" mode. (p.61)

## ⑤ DUAL PAGE COPY key ( ) / indicator

Use to make individual copies of the two pages of an open book or other two-page original. (p.56)

## ⑥ ERASE key ( ) / indicators

Press to select the "EDGE ERASE", "CENTRE ERASE" or "EDGE + CENTRE ERASE" mode. (p.64)

## ⑦ MARGIN SHIFT key ( ) / indicator

Shifts text or image on the copy to leave a binding margin on the edge of the copy. (p.63)

## ⑧ Display

Shows the set number of copies, as well as the copy ratio, system setting function or setting code, or an error code when an error occurs.

## ⑨ ID CARD COPY key/indicators

Press to use ID Card copy. (p.65)

## ⑩ Zoom key ( )

Hold down when the machine is not in use to display the copy ratio in the display. (p.50)

## ⑪ Copy ratio keys ( , )

Use to select any reduction or enlargement copy ratio from 25% to 400% in increments of 1%. (p.50)

## ⑫ Data Notification indicator (Green) ( )

The indicator lights solidly or blinks to indicate the status of a job. (p.36)

## ⑬ ORIGINAL key

Use to check and set the original size. (p.44)

## ⑭ PAPER key

Use to check and set the paper size in the paper trays. (p.41, p.47)

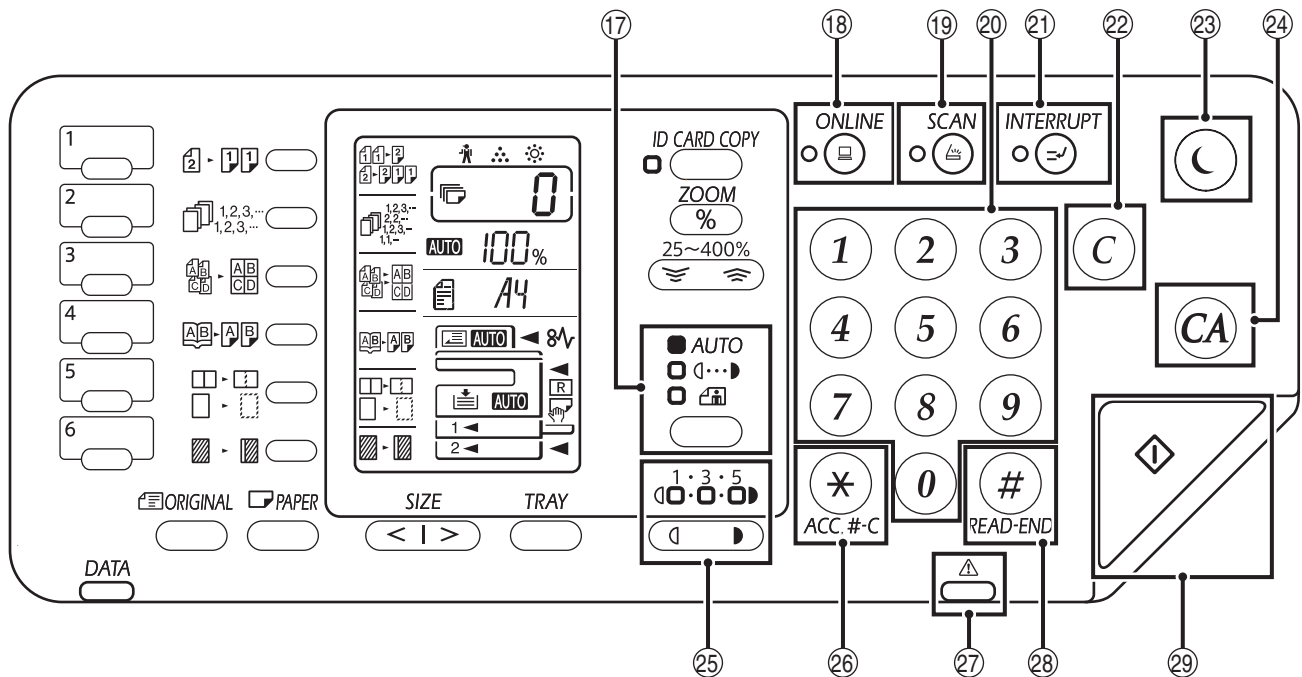
## ⑮ SIZE key

Use to select original/paper size. (p.35)

## ⑯ TRAY SETTING key

Use to manually select a paper tray. (p.41)





**17 AUTO/TEXT/PHOTO key (AUTO / 0... / PHOTO) / indicators**

Use to select the exposure mode: "AUTO", "TEXT", or "PHOTO". (p.47)

**18 ONLINE key (ONLINE) / indicator**

Press to toggle the machine between online and off-line. The indicator lights up when the machine is online, and goes off when the machine is off-line. (p.66)

**19 SCAN key (SCAN) / indicator**

Press to switch the machine to scanner mode and scan by means of the provided Button Manager software. (p.79) The indicator blinks during scanning and transmission of the scanned data.

**20 Numeric keys**

Use to select the desired copy quantity or to make system setting entries. (p.48)

To display the total number of pages output by the machine, hold the [0] key down. (p.121)

**21 INTERRUPT key (INTERRUPT) / indicator**

Interrupts a copy run. (p.57)

**22 CLEAR key (C)**

Clears the copy quantity display or terminates a copy run.

**23 POWER SAVE key (C) / indicator**

Use to switch the machine to "Auto power shut-off" mode, which is a power save function.

[Power save indicator] (C) blinks when the machine is in an auto power shut-off mode. (p.37)

**24 CLEAR ALL key (CA)**

Press to return the copy and scan settings to the initial settings. (p.37)

**25 Light and Dark keys (Light / Dark) / indicators**

The selected exposure level indicator lights up. (p.47)

**26 Audit clear key (\*) (ACC.#-C)**

While using the copy enabling the auditing mode, press to return the machine to the status of the waiting for account number-in. (p.101)

**27 Error indicator (Error indicator)**

Lights solidly or blinks to indicate the status of the error. (p.36)

**28 READ-END key (#)**

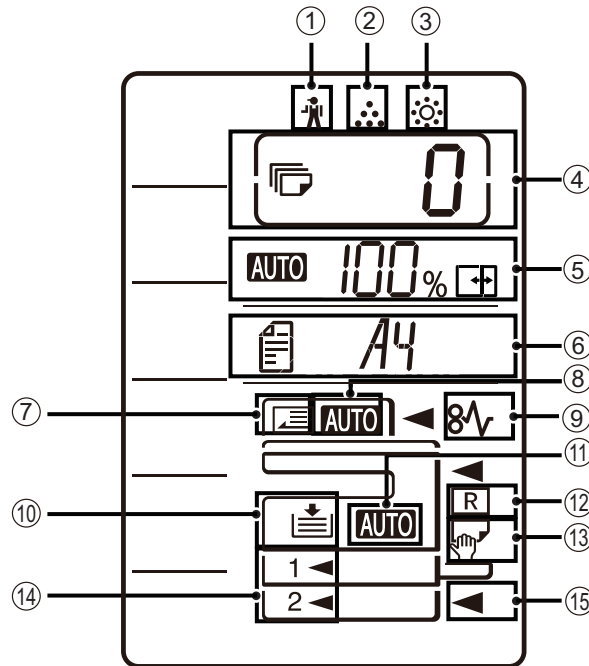
Copying starts if you press this key when you check the total number of copies made and have finished scanning the original pages. (p.121)

**29 START key (START) / indicator**

Press to make a copy. (p.44) Also, press to configure the system settings. Copying is possible when the indicator is on.







# DISPLAY




- ① [ ] **Maintenance indicator (p.112)**
- ② [ ] **Toner cartridge replacement required indicator (p.112)**
- ③ [ ] **Developer replacement required indicator (p.112)**
- ④ **The number of copies display**  
Shows the set number of copies, system setting function or setting code, or an error code when an error occurs. Also, shows the program number when the scanner function is used.
- ⑤ **Ratio display**  
Shows the copy ratio.  
 [ AUTO ] : Auto ratio selection indicator. Appears when the ratio has been selected automatically. (p.48)  
 : Appears when XY ZOOM Copying is used or when the bypass tray is setting "EXTRA" paper size. (p.48)
- ⑥ **Size display**  
Shows the placed original/paper size. The sign "R" indicates that the original and the paper are placed in a horizontal direction.  
 : When an original is placed, this shows the orientation and size of the original. (p.48)  
 : The paper orientation and size appears when you check or set the tray paper. (p.48)
- ⑦ **Original detection indicator**  
Lights up when there is an original in the RSPF.
- ⑧ **Original size auto detection indicator**  
Lights up when the original size is detected automatically.
- ⑨ [ 8V ] **Misfeed indicator (p.112)**
- ⑩ **Paper tray indicator**  
Blinks when the tray has run out of paper.
- ⑪ **Auto Paper select indicator**  
Paper of the proper size will be automatically selected depending on the original size and selected copy ratio when this indicator is on. (p.46)
- ⑫ **Auto rotation indicator**  
Appears when rotation copy is used. (p.58)
- ⑬ **Bypass tray indicator**  
Appears when the bypass tray is selected. (p.42)
- ⑭ **Paper tray indicator**  
The currently selected paper tray lights up. (p.44)
- ⑮ **Misfeed position indicator**  
The location where the misfeed occurred lights up. ( ) (p.113)

## NOTIFICATION INDICATOR

The data notification indicator () and the error indicator () lights solidly or blinks to indicate the status of the machine.

Tray	Error indicator (  ) (red)	Data notification indicator (  ) (green)	
		Pattern1	Pattern2
Solidly	Errors that do not stop machine operation, such as almost out of toner.	Job in progress, such as paper feeding or output.	Ready state or other state where jobs can be accepted.
Blinks	Errors that stop machine operation, such as misfeeds and out of toner.	Scanning an original or processing data	Job processing in progress

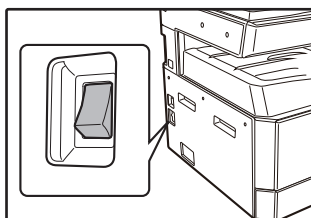
"Pattern 1" and "Pattern 2" on the data notification indicator () can be set in the user settings. See ["SYSTEM SETTINGS" \(p.92\)](#).

# POWER ON AND OFF

The power switch is located on the left side of the machine.

## POWER ON

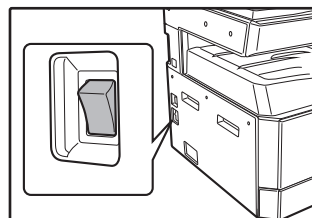
Turn the power switch to the "ON" position.



While the machine is warming up, the [START] key (⏏) will blink. (The [START] key (⏏) will light when the machine is ready to copy.)

## POWER OFF

Make sure that the machine is not in operation and then turn the power switch to the "OFF" position.



If the power switch is turned off while the machine is in operation, a misfeed may occur and the job that was in progress will be cancelled.

Check the following to make sure the machine is not in operation:

- The START indicator is lit. (Initial state)
- The POWER SAVE indicator (Ⓢ) and [START] key (⏏) will lit. (Preheat mode)
- The POWER SAVE indicator (Ⓢ) will blink. (Auto power shut-off mode)



- The machine reverts to the initial settings when it is first turned on, when the [CLEAR ALL] key (Ⓢ) is pressed, or when no keys are pressed for the preset "Auto clear" time following the end of a copy job. When the machine reverts to the initial settings, all settings and functions selected to that point are cancelled. The "Auto clear" time can be changed in the user settings. (p.92)
- The machine is initially set to automatically enter power save mode if not used for copying or printing, for a preset period of time. This setting can be changed in the system settings. (p.92)

## Power save modes

The machine has two power save modes to reduce overall power consumption thereby reducing the cost of operation. In addition, these modes conserve natural resources and help reduce environmental pollution. The two power save modes are "Preheat mode" and "Auto power shut-off mode".

### Preheat mode

This function automatically switches the machine to a low power consumption state if the set duration of time elapses without the machine being used when the power is on. The POWER SAVE indicator (Ⓢ) lights up, however, the keys on the operation panel can be used. Normal operation automatically resumes when a key on the operation panel is pressed, an original is placed, or a print job is received.

### Auto power shut-off mode

This function automatically switches the machine to a state that consumes even less power than preheat mode if the set duration of time elapses without the machine being used when the power is on. The POWER SAVE indicator (Ⓢ) will only blink. To resume normal operation, press the [POWER SAVE] key (Ⓢ). Normal operation also resumes automatically when a print job is received. While in auto power shut-off mode, no keys (except the [POWER SAVE] key (Ⓢ)) can be used.



The preheat activation time and the "Auto power shut-off timer" can be changed using system settings. It is suggested that you set times that are appropriate for your usage of the machine. (p.92)

## Initial settings

The machine assumes the initial settings when it is first turned on, when the [CLEAR ALL] key (Ⓢ) is pressed, and approximately one minute after the last copy is made in any mode.

**Copy ratio:** 100%, **Exposure:** Automatic

**Copy quantity:** 0, **All special copier modes:** Off

**Auto paper selection:** On, **Paper feed station:** The tray selected in the "Default tray setting" in the system settings. (p.94)

# LOADING PAPER

The paper display blinks, and the display of the paper tray that ran out of paper blinks. or when the selected paper tray is not installed or is improperly installed.

## PAPER

For best results, use only SHARP recommended paper.

Paper tray type	Paper type	Size	Weight	Capacity
Tray 1	Standard paper Recycled paper Thin paper* <sup>3</sup>	A5R B5R B5 A4R A4 B4 A3 8K 16K 16KR 5.5 x 8.5R 8.5 x 11R 8.5 x 11 8.5 x 13 8.5 x 13.4 8.5 x 13.5 8.5 x 14 11 x 17	55 g/m <sup>2</sup> to 105 g/m <sup>2</sup> * <sup>1</sup>	250 sheets(500 sheets for AR-2648NV/ AR-3148NV) * <sup>2</sup> (Load paper lower than the line on the tray)
Tray 2 500-sheet paper feed unit				500 sheets * <sup>2</sup> (Load paper lower than the line on the tray)
Bypass tray* <sup>4</sup>	Standard paper Recycled paper	A6R to A3, 8K,16K,16KR, Custom (5.5 x 8.5 to 11 x 17)	60 g/m <sup>2</sup> to 105 g/m <sup>2</sup>	100 sheets * <sup>2</sup>
	Thin paper* <sup>3</sup>		55 g/m <sup>2</sup> to 59 g/m <sup>2</sup>	
	Transparency film Labels		-	Load one sheet of paper each time on the bypass tray.
	Heavy paper 1	A6R to A4 (5.5 x 8.5 to 8.5 x 11)	106 g/m <sup>2</sup> to 128 g/m <sup>2</sup>	You can load multiple sheets of paper on the bypass tray.
	Heavy paper 2		129 g/m <sup>2</sup> to 200 g/m <sup>2</sup>	Load one sheet of paper each time on the bypass tray.
	Envelopes	International DL (110 mm x 220 mm) Monarch Commercial 10	-	10 sheets

\*<sup>1</sup> When making a large number of copies or prints using more than 90 g/m<sup>2</sup> paper, remove the output from the paper output tray when about 100 pages have been printed. The output may not stack correctly if more than 100 pages are allowed to accumulate.

\*<sup>2</sup> The number of sheets of the paper which can be set changes with the weight of a paper.

\*<sup>3</sup> Thin paper cannot be used for two-sided copying.

\*<sup>4</sup> When you make two-sided copy using the paper in the bypass tray, only plain paper (A3/A4/A4R/B4/B5/B5R/A5R/8K/16K/16KR) can be used.

## Special papers

Follow these guidelines when using special papers.

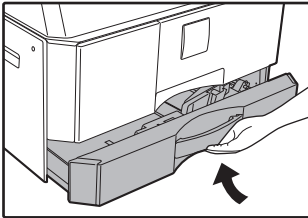
- Use SHARP recommended transparency film and label sheets. Using other than SHARP recommended paper may result in misfeeds or smudges on the output. Feed each sheet one at a time using the bypass tray (do not attempt continuous copying or printing).
- There are many varieties of special paper available on the market, and some cannot be used with this machine. Before using special paper, contact your authorised service representative.
- Before using other than SHARP recommended paper, make a test copy to see if the paper is suitable.

# LOADING PAPER

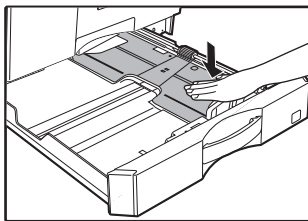
Make sure that the machine is not copying or printing, and then follow these steps to load paper.

## Loading the paper tray

- 1 Gently pull out the paper tray until it stops.**

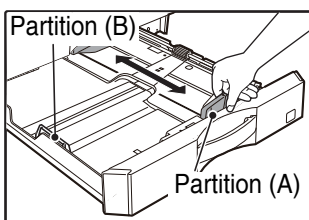


- 2 Push the pressure plate down until it locks in place.**

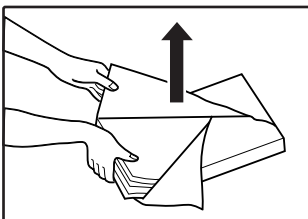


Push the centre of the pressure plate down until it locks into place.

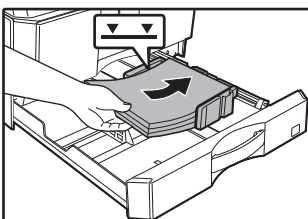
- 3 Extend the partition plates in the tray.**



- 4 Load paper into the tray.**

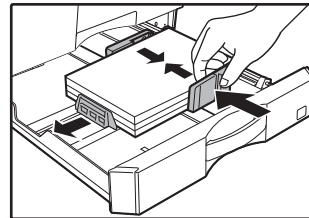


- Open the package of the paper and load it without fanning the paper.
- Make sure the stack of paper is straight before loading it.

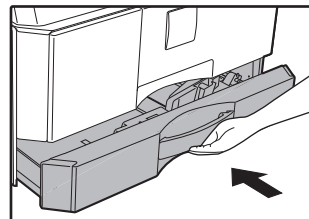


- Do not load paper higher than the line on the tray (up to 250 sheets (up to 500 sheets, when AR-2648NV/AR-3148NV or 500-sheet paper feed unit is used)).
- Do not add paper to the loaded paper. It may cause multiple feed of paper.

- 5 Adjust the partition plates in the tray to match the length and width of the paper.**



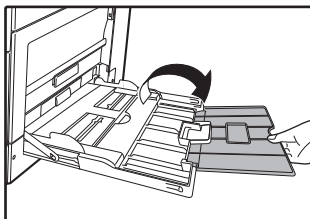
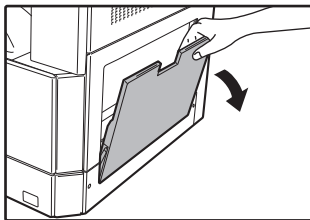
- 6 Gently push the paper tray into the machine.**



- If you loaded a different size of paper than was loaded previously in the tray, go to ["CHANGING A TRAY'S PAPER SIZE SETTING"](#) (p.41).
- When misfeed occurs, rotate the paper 180 degrees and reload it.
- Straighten curled paper before using it.

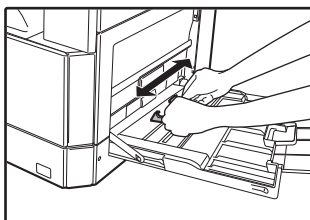
## Loading the bypass tray

### 1 Unfold the bypass tray.

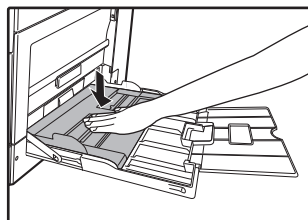


When feeding large paper such as B4 and A3, open the bypass tray extension.

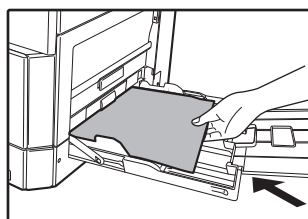
### 2 Set the paper guides to the copy paper width.



### 3 Push the rotation plate down until it locks in place.



### 4 Insert the paper (print face down) all the way into the bypass tray.



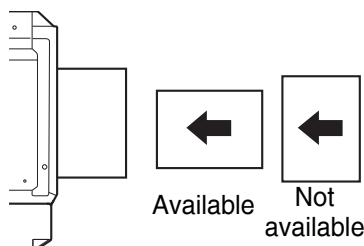
To prevent a misfeed, verify once more that the paper guides are adjusted to the width of the paper.



**Note** When loading heavy paper in the bypass tray, hold down the [PAPER] key for at least 5 seconds, use the [TRAY] key to select the bypass tray, and press the [Copy ratio] key ( , ) to select "1" for Heavy Paper 1 or "2" for Heavy Paper 2. For the types of heavy paper that can be used, refer to "PAPER" (p.38).

## Important points when inserting paper in the bypass tray

- Up to 100 sheets of standard copy paper can be set in the bypass tray.
- Be sure to place A6, B6 or 5.5 x 8.5 size paper or envelopes horizontally as shown in the following diagram ( ).



- When loading envelopes, make sure that they are straight and flat and do not have loosely glued construction flaps (not the closure flap).
- Special papers except SHARP recommended transparency film, labels, and envelopes must be fed one sheet at a time through the bypass tray.
- When adding paper, first remove any paper remaining in the tray, combine it with the paper to be added and then reload as a single stack. The paper to be added must be the same size and type as the paper already in the tray.
- Do not use paper that is smaller than the original. This may cause smudges or unclear images.
- Do not use paper that has already been copied or printed.

## Envelopes

Do not use the following envelopes, as misfeeds will occur.

- Envelopes with metal tabs, clasps, strings, holes, or windows.
- Envelopes with rough fibres, carbon paper, or glossy surfaces.
- Envelopes with two or more flaps.
- Envelopes with tape, film, or paper attached to the flap.
- Envelopes with a fold in the flap.
- Envelopes with glue on the flap to be moistened for sealing.
- Envelopes with labels or stamps.
- Envelopes that are slightly inflated with air.
- Envelopes with glue protruding from the seal area.
- Envelopes with part of the seal area peeled off.

## CHANGING A TRAY'S PAPER SIZE SETTING

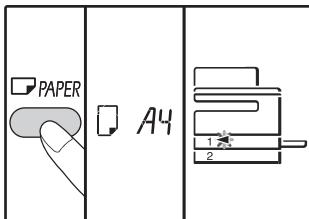
Follow these steps to change a tray's paper size setting.

2



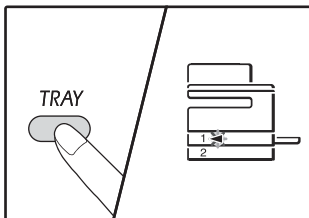
- The paper size setting cannot be changed when the machine has stopped temporarily due to running out of paper or a misfeed, or during interrupt copying.
- During printing (even in copy mode), the paper size setting cannot be changed.
- A5 size paper can only be selected in bypass tray.
- Do not load paper that is a different size than the paper size setting. This may cause smudges, unclear image and dirty. Copying will not be possible.

### 1 Hold down the [PAPER] key for more than 5 seconds to set the selected paper size.



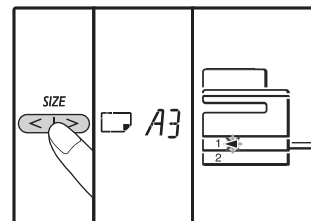
The currently selected paper feed location indicator will blink and the corresponding paper size (which is currently set) indicator will display.

### 2 If the machine has two or more paper trays, use the [TRAY] key to select the paper tray for which you wish to change the paper size setting.



Each time the [TRAY] key is pressed, a paper tray will be indicated with a blinking paper feed location indicator.

### 3 Use the [SIZE] key to select the paper size.



#### Changing bypass tray's paper size setting

To change the bypass tray's paper size setting, hold down the [PAPER] key for more than 5 seconds, use the [TRAY] key to select the bypass tray, and select the desired paper size.

#### Customise the bypass tray setting

When the bypass tray is selected, "EXTRA" is displayed in the size display. You can also change the paper size setting with the following procedure.

- Enter a value for the horizontal/vertical direction by pressing the numeric keys.

Press the [ZOOM] key ( ) to switch the horizontal/vertical direction.

#### The horizontal direction is selected:

horizontal indicator ( ) lights up

#### The vertical direction is selected:

vertical indicator ( ) lights up

#### Available value

Direction	min. (mm)	max. (mm)
horizontal	100	297
vertical	139	420

\*Value can be entered only in metric (AB series).

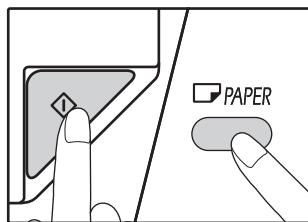
## Metric (AB series) and inch series reference

Inch series (inch)	Metric series (AB series) (mm)
5.5 x 8.5	140 x 216
8.5 x 11	216 x 279
8.5 x 13	216 x 330
8.5 x 13.4	216 x 340
8.5 x 13.5	216 x 343
8.5 x 14	216 x 356
11 x 17	279 x 432

#### 4 Change the selected tray's paper size.

See "LOADING PAPER" (p.39)

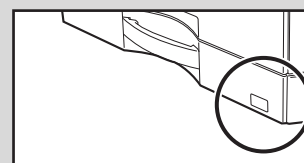
#### 5 Press the [START] key (⏏) and then the [PAPER] key.



To change the paper size setting of another tray, repeat steps 2 to 5 after pressing the [START] key (⏏).



The paper size indicator sheet of the size set in step 3 appears in the window on the right side of the tray.



#### Important points when using the printer mode

Make sure that the tray's paper size setting is the same as the tray's paper size setting in the printer driver. For example, if the tray's paper size setting is A4R, set "Set Paper Size" to "A4R". For more information, see "CONFIGURING THE PRINTER DRIVER" (p.23).

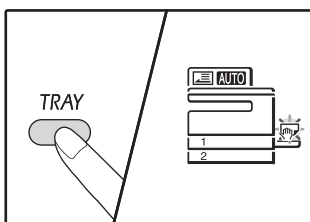
### Easy setting mode (Only the bypass tray)

If you are using the bypass tray, you can be easily set the paper size in the easy setting mode.



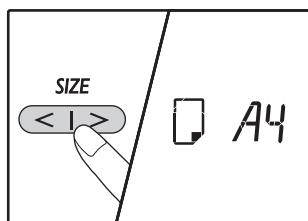
- You can not be set the paper type at the same time.
- If the paper size is EXTRA, numerical can not be registered.

#### 1 Use the [TRAY] key to select the bypass tray.



The bypass tray indicator will light.

#### 2 Use the [SIZE] key to select the paper size.



The bypass tray indicator will blink.

#### 3 Press the [START] key (⏏).

Paper size for the bypass tray is confirmed.

## CHANGING THE PAPER TYPE IN A TRAY

When you change the type of paper used in a tray, always follow the procedure below to change the paper setting of the tray.



- The paper type cannot be set when operation is paused due to running out of paper or a paper misfeed, or during interrupt copy. The paper type cannot be set during printing.
- Change the paper type setting in copy mode. The setting cannot be changed while copying is being executed or in scanner mode.
- Do not load a type of paper that is different from the tray setting. This may cause paper misfeeds.



**1** Perform steps 1 to 5 of **"CHANGING A TRAY'S PAPER SIZE SETTING"** (p.41), and select the tray whose paper type you want to change.

**2** Press the [Copy ratio] key (  ,  ).


The light of the tray selected for the paper type setting will blink, and the ratio display will change as follows.

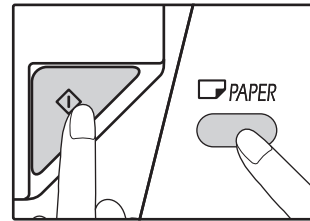
Ratio display	Paper type
Off	Standard paper
<b>AUTO</b> 0	Thin paper
<b>AUTO</b> 1	Heavy paper 1*
<b>AUTO</b> 2	Heavy paper 2*
<b>AUTO</b> 2-1 to <b>AUTO</b> 2-3	Envelopes For the ratio display and envelope types, refer to "Envelope display".
<b>AUTO</b> 3	Labels
<b>AUTO</b> OHP	Transparency film


\* For the difference between Heavy 1 and Heavy 2, refer to **"PAPER"** (p.38).



- Only plain paper, recycled paper and thin paper can be set for paper trays 1 to 2.
- 2-4 to 2-8 are Japanese paper types that cannot be found in China.

**3** After pressing the [START] key (  ), press the [PAPER] key to exit the settings.



To change the paper size setting of another tray, repeat steps 2 to 5 after pressing the [START] key (  ).

## Envelope display

Ratio display	Envelope types
<b>AUTO</b> 2-1	Monarch
<b>AUTO</b> 2-2	Com-10
<b>AUTO</b> 2-3	DL

**2**

# OPERATION IN COPY, PRINTER, AND SCANNER MODES

Some operations cannot be performed simultaneously when the machine is being used in printer mode, copy mode, or scanner mode.

Modes		Copying	Printing	Scanning from a computer	Scanning from the machine
Copy	Copy key input	Yes	Yes	Yes	No
	During copying		No	No	No
Printer	During printing	Yes		Yes	Yes
Scanner	During scan preview/ during scanning	No	Yes		

This chapter explains how to use the copy functions.

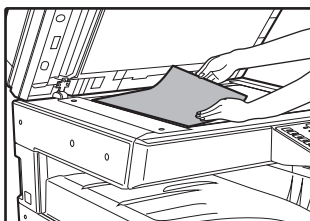
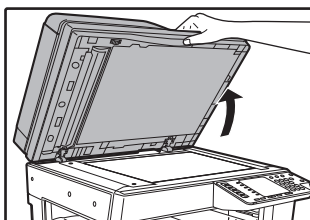
## NORMAL COPYING

This section explains how to make a regular copy.

If "Auditing mode" has been enabled (p.98), enter your 3-digit account number.

### Copying from the document glass

- 1 Open the document cover/RSPF, and place the original.

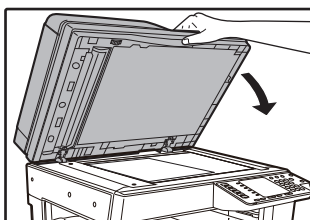


Place the original face down on the document glass.



An original up to A3 can be placed on the document glass.

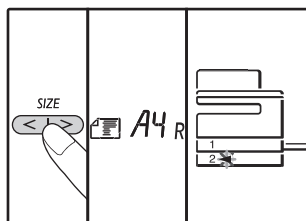
- 2 Close the document cover/RSPF.



After placing the original, be sure to close the document cover/RSPF. If left open, parts outside of the original will be copied black, causing excessive use of toner.

- 3 Press the [ORIGINAL] key.

- 4 Specify the size of the original with the [SIZE] key.

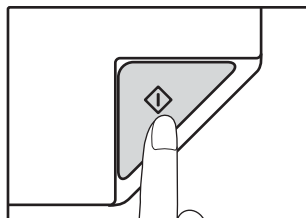


When the original size is selected, the tray with the same size of paper is automatically selected.

- Make sure that the START indicator lights up. If the indicator is not lit, no tray has the same size of paper as the original. Load paper of the required size in a tray.
- To copy on paper of a different size than the original, select the paper with the [PAPER] key and [SIZE] key.
- When you have finished setting the original size, press the [START] (⏏) key.

- 5 Set the number of copies.

- 6 Press the [START] key (⏏) to begin copying.



The copy is delivered to the paper output tray.

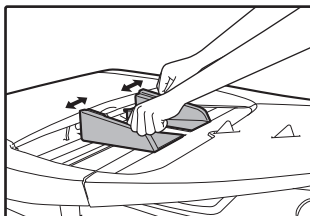


- The paper output tray can hold up to 250 sheets of paper.
- About one minute after copying ends, "Auto clear" activates and restores the copy settings to the initial settings. (p.37) The setting for "Auto clear time" can be changed in the system settings. (p.92)
- Press the [CLEAR] key (⏏) to stop copying in the middle of a run.

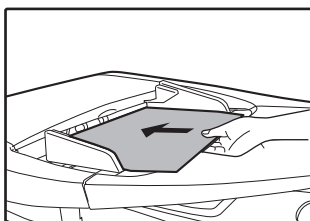
## Copying from the RSPF

- 1** Make sure that an original has not been left on the document glass. Close the RSPF.

- 2** Adjust the original guides to the size of the original(s).



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



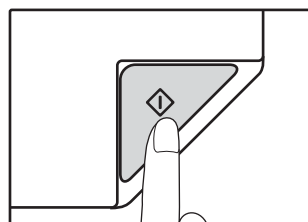
- Insert the original into the document feeder tray as far as it will go. When the original is set, the RSPF indicator will light up.
- The size of the original appears in the size display. 5.5 x 8.5R, A5R, B5 and B5R cannot be detected.
- If the ORIGINAL SIZE indicator is blinking, rotate the original so that it is in the same orientation as the blinking ORIGINAL SIZE indicator.
- Make sure that the START indicator is lit. If the indicator is not lit, no tray has the same size of paper as the original. Load paper of the required size in a tray.
- To copy on paper of a different size than the original, select the paper with the [PAPER] key and [SIZE] key.



Do not place originals of different sizes together in the document feeder tray. This may cause misfeeds.

- 4** Set the number of copies.

- 5** Press the [START] key (▶) to begin copying.



The copy is delivered to the paper output tray. The default output mode for copying from the RSPF is sort mode (p.59). The default output mode can be changed using "Sort auto select" in the system settings (p.94).



- The paper output tray can hold up to 250 sheets of paper.
- About one minute after copying ends, "Auto clear" activates and restores the copy settings to the initial settings. (p.37) The setting for "Auto clear" time can be changed in the system settings. (p.92)
- Press the [CLEAR] key (⊙) to stop copying in the middle of a run.
- If you find it difficult to remove the original from the document feeder tray, open the feeding roller cover first and then remove the original. If you remove the original without opening the feeding roller cover, the original may become dirty.

### Auto paper select mode

When the AUTO PAPER SELECT indicator lights up, "Auto paper select mode" is enabled. This function automatically selects the paper that is the same size as the original A5, A4, A4R, B4, A3, 8K, 16K, 16KR paper.

"Auto paper select mode" can be disabled in the system settings. (p.92)

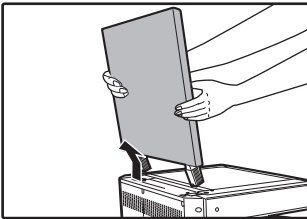
- If a zoom setting is selected after placing the original, the paper size that is appropriate for the zoom setting will be automatically selected.
- "Auto paper select mode" is cancelled if the automatic ratio selection is enabled (p.48) or if a tray is selected with the [PAPER] key. Auto paper select resumes operation when the [CLEAR ALL] key (CA) is pressed or when "Auto clear time" activates.

### Removing the document cover

To copy large originals like newspapers, remove the document cover. To remove it, open the document cover and lift it at a slightly backward angle.

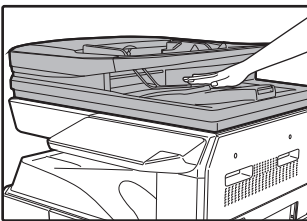
To replace the cover, do the reverse.

The RSPF cannot be removed.



### Copying books or originals with folds or creases

Press down on the document cover/RSPF while copying as shown. If the document cover/RSPF is not completely closed, shadows may appear on the copy or it may be fuzzy. Straighten originals with folds or creases well before placing.



### Originals that can be used in the RSPF

Originals that are A5 to A3, 8K, 16K, 16KR and 50 g/m<sup>2</sup> to 128 g/m<sup>2</sup>.

(2-sided copying or scanning : 50 g/m<sup>2</sup> to 105 g/m<sup>2</sup>) can be used. A maximum of 100 pages can be placed at once (80 g/m<sup>2</sup>).

Insert a number of originals that does not exceed the indicator line on the document feeder tray.



- Make sure that there are no paper clips or staples on the original.
- Straighten curled originals before placing them in the document feeder tray. Curled original may cause misfeeds.
- When you set multiple sheets of thick original, if the original is not fed, reduce the number of the set originals.

### Originals that cannot be used in the RSPF

The following originals cannot be used. These may cause misfeeds or smudging and unclear images.

- Transparencies, tracing paper, other transparent or translucent paper, and photographs.
- Carbon paper, thermal paper.
- Originals that are creased, folded, or torn.
- Glued originals, cut-out originals.
- Originals with binder holes.
- Originals printed using an ink ribbon (thermal transfer printing), originals on thermal transfer paper.

### Stream feeding mode

If "Stream feeding mode" is enabled in the system settings (p.92), the RSPF indicator will blink for about 5 seconds after all originals are fed. If a new original is placed in the RSPF during this time, the original will be automatically fed in and copying will begin.

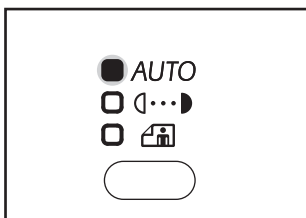
# MAKING A COPY DARKER OR LIGHTER

Automatic exposure adjustment is initially enabled. This function automatically adjusts the copy image according to the original being copied. If you wish to select the exposure level yourself, follow the steps below. (Select from two original types and five exposure levels for each original type.) The exposure level used in automatic exposure adjustment can also be changed. ("ADJUSTING THE AUTOMATIC EXPOSURE LEVEL" (p.90))

## Original types

- **AUTO** ( ) ..... Automatic exposure adjustment is enabled and the exposure is automatically adjusted according to the original being copied. The exposure is lowered for colored areas and background shadows.
- **TEXT** ( ) ..... The exposure is raised for light areas and lowered for dark backgrounds to make text easier to read.
- **PHOTO** ( ) ..... Halftones in the photo are reproduced with greater clarity.

### 1 Press the [AUTO/TEXT/PHOTO] key ( / / ) to select the original type.

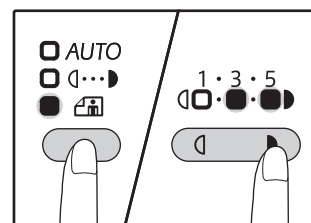


To adjust the exposure of a text original manually, press until the TEXT indicator ( ) lights. To copy a photo, press until the PHOTO indicator ( ) lights.



To return to automatic adjustment, press until the AUTO indicator ( ) lights.

### 2 Press the [Light] key ( ) or [Dark] key ( ) to adjust the exposure.



For a darker image, press the [Dark] key ( ). For a lighter image, press the [Light] key ( ). If exposure level 2 or 4 is selected, the two indicators will light simultaneously.

# 3

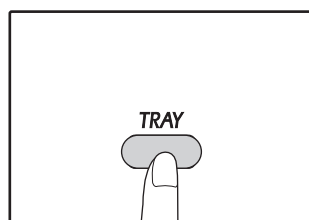


#### Exposure value guidelines

- 1 – 2 Dark originals like newspapers
- 3 Normal originals
- 4 – 5 Colored text or text written in pencil

## SELECTING THE TRAY

Auto paper select mode (p.46) normally operates (unless it has been disabled), and thus when the original is placed on the document glass and the original size is selected, or when the original is placed in the RSPF, the tray with the same size of paper as the original is automatically selected. If you wish to use a tray other than the automatically selected tray (for example you wish to enlarge or reduce the copy), press the [TRAY] key to select the desired tray.



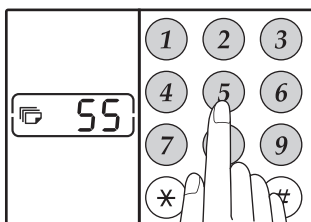
- If the paper size you want to use does not appear, change the paper in a tray to the desired size. (p.41)
- Automatic ratio selection (p.48) does not operate when a special paper size is selected.

## Auto tray switching

If the tray runs out of paper during copying and there is another tray with the same size of paper and the same feeding orientation (horizontal or vertical), the other tray is automatically selected and copying continues. "Auto tray switching" can be disabled in the system settings (p.93).

## SETTING THE NUMBER OF COPIES

Press the numeric keys to set the number of copies.



- The set number of copies appears in the Number of copies display. A maximum of 999 copies (factory default setting) can be set.
- If you wish to make only a single copy, copying is possible with the display showing "0".



If you enter the wrong number, press the [CLEAR] key (C) and enter the correct number.

### Important note when making a large number of copies

When the maximum number of pages (about 250 pages) that can be held in the paper output tray are output, copying will temporarily stop. When this happens, promptly remove the copies and press the [START] key (S) to resume copying. Copying will also stop after about 500 pages and 750 pages. Remove the pages and resume copying in the same way.



The maximum number of copies can be changed in the system settings. (p.93)

## REDUCTION/ENLARGEMENT/ZOOM

The zoom function enables precise copy ratio selection from 25% to 400% in increments of 1%.

There are three ways to enlarge and reduce copies, as explained below.

- **Reduction and enlargement ratios can be selected automatically.**  
"AUTOMATIC RATIO SELECTION" (below)
- **Reduction and enlargement ratios can be selected manually.**  
"MANUAL RATIO SELECTION" (p.49)
- **Separate settings can be selected for the vertical and horizontal ratios.**  
"SELECTING THE VERTICAL AND HORIZONTAL COPY RATIOS SEPARATELY (XY ZOOM Copying)" (p.50)

Ratios that can be selected will vary depending on whether the original is placed on the document glass or in the RSPF.

Original position	Selectable ratios
Document glass	25% – 400%
RSPF	50% – 200%

## AUTOMATIC RATIO SELECTION

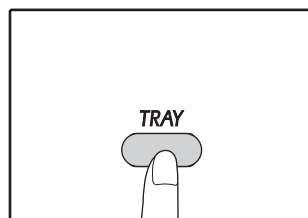
**1** Place the original(s) in the document feeder tray or on the document glass.

**2** If the original is placed on the document glass, select the original size. (p.44)



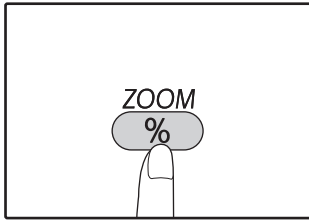
- Automatic ratio selection can be used when the original size is A5, B5, B5R, A4, A4R, B4, A3. It cannot be used for other sizes.
- After placing the original, be sure to close the document cover/RSPF. If left open, parts outside of the original will be copied black, causing excessive use of toner.


**3** Use the [TRAY] key to select the paper tray with the desired paper size.



This feature will not work when using copy paper of non-standard size.

#### 4 Press the [ZOOM] key ( ).



The AUTO IMAGE indicator (  ) lights up and the appropriate ratio for the original size and paper size is selected. (The selected ratio appears.)




- When the ratio is less than 50%, the display will appear 50% and blinking.
- When the ratio is more than 200%, the display will appear 200% and blinking.




#### 5 Set the number of copies and other copy settings, and then press the [START] key ( ).

The copy will be delivered to the paper output tray.



To cancel automatic ratio selection, press the [ZOOM] key (  ) again.

## MANUAL RATIO SELECTION

Copies can be reduced down to 25% or enlarged up to 400%. The [ZOOM] selector keys (  ) can be pressed to quickly select a ratio from among ten preset ratios. In addition, the [Copy ratio] keys (  ,  ) can be pressed to select the ratio in increments of 1%.

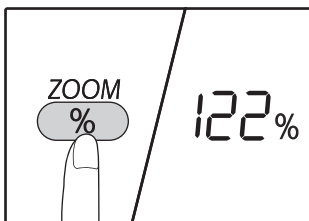
#### 1 Place the original(s) in the document feeder tray or on the document glass.

#### 2 If the original is placed on the document glass, select the original size. (p.44)




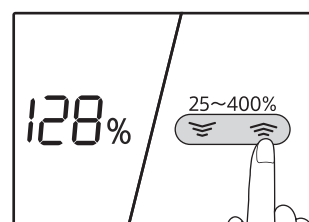
After placing the original, be sure to close the document cover/RSPF. If left open, parts outside of the original will be copied black, causing excessive use of toner.

#### 3 Use the [ZOOM] selector keys ( ) and [Copy ratio] keys ( , ) to select the desired copy ratio.






##### Selecting a preset ratio



Press the [ZOOM] selector key (  ) to select the preset ratios of "AUTO", "25%", "50%", "70%", "81%", "86%", "115%", "122%", "141%", "200%" and "400%".



##### Fine adjustment of the ratio

Any ratio from 25% to 400% can be set in increments of 1%.

Press a [ZOOM] selector key (  ) to set the approximate ratio, then press the [Copy ratio] keys (  or  ) to increase or decrease the ratio.

To decrease or increase the zoom ratio rapidly, hold down the [Copy ratio] keys (  or  ).



If the paper size you want to use does not appear, change the paper in a tray to the desired size and then go to step 4. (p.39)

#### 4 Set the number of copies and other copy settings, and then press the [START] key ( ).

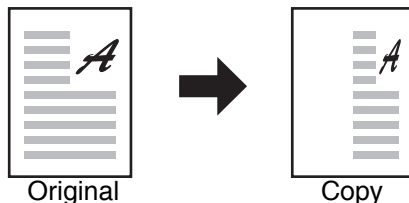
The copy will be delivered to the paper output tray.



# SELECTING THE VERTICAL AND HORIZONTAL COPY RATIOS SEPARATELY (XY ZOOM Copying)

The XY ZOOM feature allows the horizontal and vertical copy ratios to be changed independently.

**Example:** Reduction only in the horizontal direction.



Original

Copy



- This feature cannot be used with ID card copy (p.65) and the 2 IN 1 or 4 IN 1 feature (p.61).
- To use the XY ZOOM feature with the DUAL PAGE COPY feature, set the DUAL PAGE COPY feature first and then the XY ZOOM feature.
- The XY ZOOM feature cannot be used in combination with the AUTO IMAGE function.

Ratios that can be selected will vary depending on the position of the original.

Original position	Selectable ratios
Document glass	25% – 400%
RSPF	50% – 200%

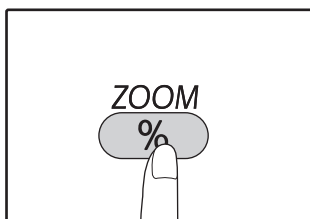
**1** Place the original(s) in the document feeder tray or on the document glass.

**2** If the original is placed on the document glass, select the original size. (p.44)



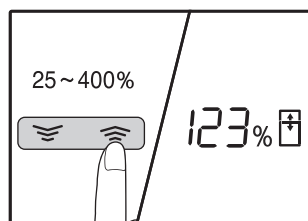
After placing the original, be sure to close the document cover/RSPF. If left open, parts outside of the original will be copied black, causing excessive use of toner.

**3** Hold down the [ZOOM] key (Ⓢ) for more than 5 seconds to set the ratio of original.



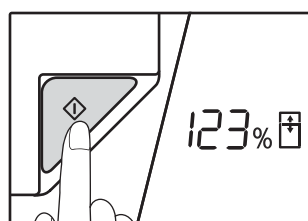
XY-ZOOM Indicator (Ⓢ) blinks.  
The current value for the vertical direction will appear in the ratio display.

**4** Use the [Copy ratio] keys (Ⓢ, Ⓢ) to change the copy ratio in the vertical direction.



Press the [Copy ratio] keys (Ⓢ, Ⓢ) to adjust the ratio in increments of 1%.  
The ratio appears in the ratio display.



**5** Press the [START] key (Ⓢ).



The selected ratio for the vertical direction will be entered.  
XY-ZOOM Indicator (Ⓢ) blinks.  
The current value for the horizontal direction will appear in the ratio display.



## 6 Use the [Copy ratio] keys (, ) to change the copy ratio in the horizontal direction.

Press the [Copy ratio] keys (, ) to adjust the ratio in increments of 1%.

The ratio appears in the display.








## 7 Press the [START] key ().

The selected ratio for the horizontal direction will be entered and the number of copies can be set in the display.

## 8 Set the number of copies and other copy settings, and then press the [START] key ().

The copy will be delivered to the paper output tray.

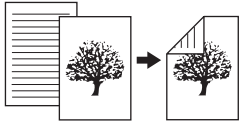
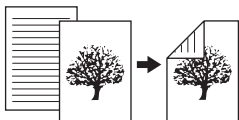

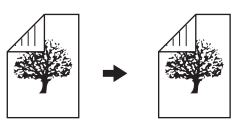


- To verify the copy ratios, press the [Copy ratio] keys (, ) and the selected vertical ratios will be displayed, press the [START] key () after confirming. The selected horizontal ratios will be displayed, press the [START] key () after confirming.
- If you need to change the ratios, press the [Copy ratio] keys (, ), beginning with the vertical ratio. (step 4)
- To cancel XY ZOOM copy, press the [ZOOM] key ().

# AUTOMATIC TWO-SIDED COPYING

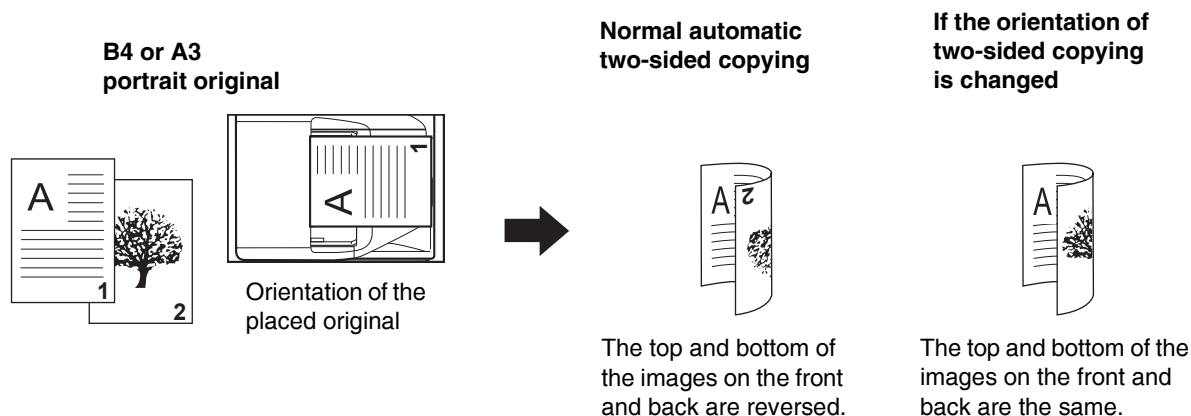
(Model that has the duplex copy print function as standard feature only.)

Two originals placed on the document glass can be copied onto each side of a single sheet of paper. In addition, an RSPF can be used to copy two originals onto one sheet of paper, or one two-sided original onto two sheets of paper, or one two-sided original onto each side of one sheet of paper.

	Original → Paper			Usable paper
Document glass	One-sided original → Two sides			A5R, B5, B5R, A4, A4R, B4, A3, 8K, 16K, 16KR
				
RSPF	One-sided original → Two sides	Two-sided original → One side	Two-sided original → Two sides	A5R, B5, B5R, A4, A4R, B4, A3, 8K, 16K, 16KR Special paper and A5 paper cannot be used.
				



- When performing automatic two-sided copying of a one-sided original, or one-sided copying of a two-sided original, the image on the back can be rotated 180 degrees to reverse the top and bottom (Image rotation in duplex copying). To rotate the image 180 degrees, enable the setting as explained in ["IMAGE ROTATION IN DUPLEX COPYING" \(p.54\)](#) or in the system settings [\(p.92\)](#), and then follow the steps below. In particular, when a one-sided vertical (portrait) original is placed in a horizontal orientation (B4 or A3 size) for two-sided copying, the top and bottom of the images on the front and back of the paper will be reversed, and thus this function can be conveniently used to make the top and bottom of the images agree.
- Automatic two-side copy cannot be used in combination with ID card copy.



## Using the document glass

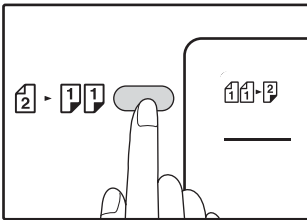
- 1 Place the original that you wish to copy onto the front side of the paper on the document glass and close the document cover.



After placing the original, be sure to close the document cover/RSPF. If left open, parts outside of the original will be copied black, causing excessive use of toner.

- 2 Select the original size. (p.44)

- 3 Press the [ORIGINAL TO COPY] key (2 - 1 1), and make sure that the (1 1 - 2) indicator is lit.



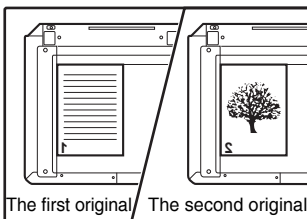
- 4 Set the number of copies and other settings, and then press the [START] key (⏏).

The data notification indicator (DATA) blinks, and the original is scanned into memory.



- If you need to clear the data scanned into memory, press the [CLEAR] key (C).
- If you wish to cancel two-sided copying and just make a copy of the first original, press the [READ-END] key (#).

- 5 When the start indicator lights, remove the first original and then place the original that you wish to copy onto the back side of the paper on the document glass. Close the document cover.



Place the second original in the same orientation as the first original.

- 6 Press the [START] key (⏏).

The copy will be delivered to the paper output tray.

## Using the RSPF

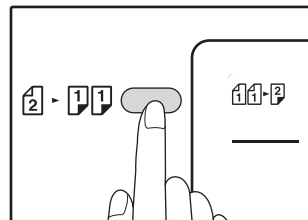
- 1 Place originals in the RSPF. (p.45)

If you place an odd number of originals for one-sided to two-sided copying, the last page will be one-sided.



When the machine is selected two-sided copies from two-sided originals mode or one-sided copies from two-sided originals mode, A5 size paper cannot be used. (This is because a A5 paper cannot be reversed.)

- 2 Press the [ORIGINAL TO COPY] key (2 - 1 1) and select the two-sided copy mode that you wish to use.



- Two-sided copies from one-sided originals (1 1 - 2)
- Two-sided copies from two-sided originals (2 - 2)
- One-sided copies from two-sided originals (2 - 1 1)

- 3 Set the number of copies and other copy settings, and press the [START] key (⏏).

The copy will be delivered to the paper output tray.

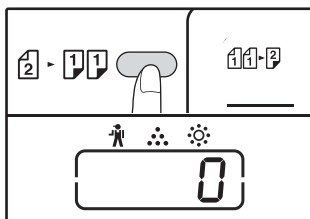


To cancel automatic two-sided copying, press the [CLEAR ALL] key (CA).

# IMAGE ROTATION IN DUPLEX COPYING

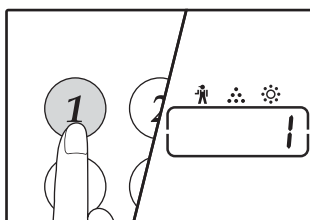
This function is used to invert the top and bottom of the image on the front side of the paper during two-sided copying.

- 1 Hold down the [ORIGINAL TO COPY] key (2 - 11) until the (11-2) indicator blinks.**



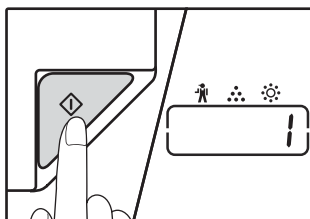
The currently set setting code blinks in the first digit of the number of copies display.

- 2 Press a numeric key to enter the setting code.**



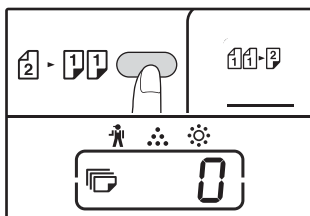
To enable the setting, press [1] key. To disable the setting, press [0] key. The factory default setting is "0". The entered number appears in the first digit of the number of copies display.

- 3 Press the [START] key (1/2).**



The selected setting code stops blinking and lights steadily. This completes the setting.

- 4 Press the [ORIGINAL TO COPY] key (2 - 11) to exit the setting.**



The display returns to the normal number of copies display.

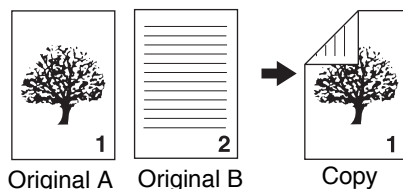


"Image rotation in duplex copying" can also be enabled or disabled in the system settings. (p.93)

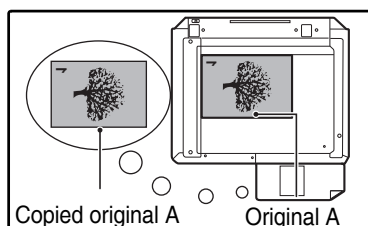
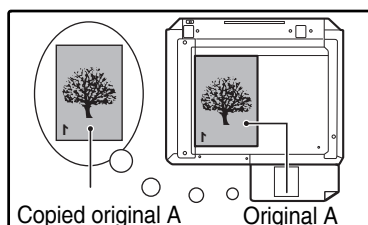
# TWO-SIDED COPYING USING THE BYPASS TRAY (FOR AR-2048SV/AR-2348SV)

To perform manual two-sided copying, follow these steps.

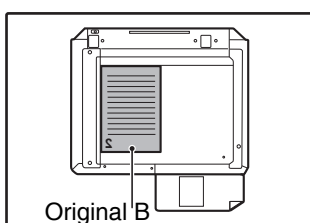
**Example:** Copying originals A and B onto each side of one sheet of paper



## 1 Copy original A.

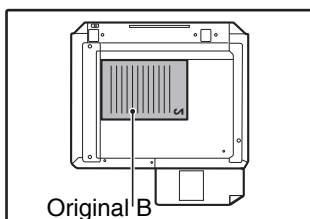


## 2 Place original B as shown below.



### Vertically-oriented original:

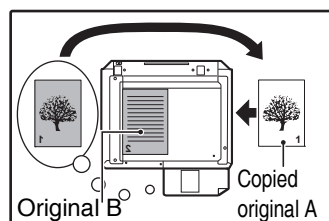
If the original is oriented vertically, place it in the same orientation as original A.



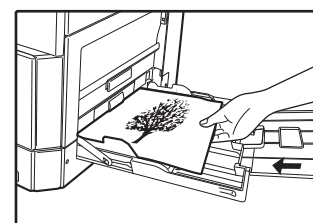
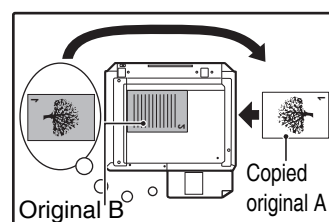
### Horizontally-oriented original:

If the original is oriented horizontally, place it with the top and bottom and left and right sides reversed with respect to the placement of original A.

## 3 Turn the copy of original A over, and without changing the position of the edge closest to you, insert it in the bypass tray.



Insert the paper all the way in.



### Note

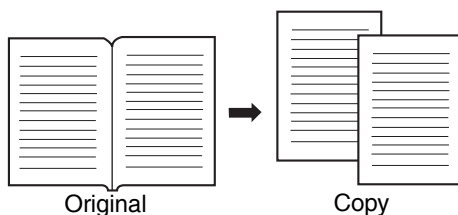
- Copies made on the back side of paper should always be made one sheet at a time using the bypass tray.
- Straighten curled or wavy paper before using it. Curled paper may cause misfeeds, creases, or a poor-quality image.
- After placing the original, be sure to close the document cover/RSPF. If left open, parts outside of the original will be copied black, causing excessive use of toner.

## 4 Select the bypass tray with the [TRAY] key, and then press the [START] key (⏏).

The copy is delivered to the paper output tray.

# DUAL PAGE COPYING

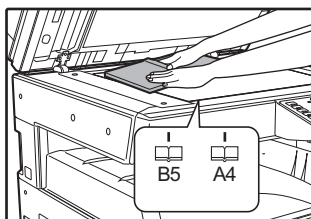
A dual page original can be automatically separated into two pages during copying. This feature is convenient for making copies of books and other dual page originals on individual sheets of paper.



## Note

- A4 paper is used for dual page copying.
- When rotation copy is enabled, A4R paper can also be used.
- Dual page copying can be enabled when Sort/Group copy (p.59).
- When used in combination with XY ZOOM copying, enlargement is not possible.
- Dual page copying cannot be used in combination with the following functions:
  - Enlargement
  - 2 IN 1 / 4 IN 1 copying
  - Centre erase
- Automatic ratio selection cannot be used when dual page copying is used.
- Dual page copying cannot be selected when an original is placed in the RSPF.

- 1 Place the original on the document glass, aligning the division between the pages with the size marker (B5 / A4). Close the document cover/RSPF.**



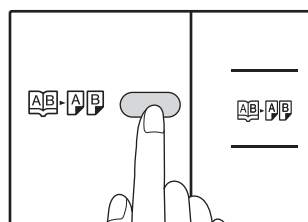
Copying will begin from the page to the right of the size marker.

## Note

- To keep the copies in the correct page order when performing dual page copying over multiple pages, make sure that the original is always placed on the document glass with the smaller page number to the right.
- After placing the original, be sure to close the document cover/RSPF. If left open, parts outside of the original will be copied black, causing excessive use of toner.

- 2 Set the original size to A3.**

- 3 Press the [DUAL PAGE COPY] key (AB-A/B).**



The dual page copy indicator lights.

- 4 Make sure that a paper tray with A4 size paper is selected.**

- 5 Set the number of copies and other copy settings, and press the [START] key (⏏).**

The copy will be delivered to the paper output tray.

## Note

To cancel dual page copying, press the [DUAL PAGE COPY] key (AB-A/B). The DUAL PAGE COPY indicator (AB-A/B) will go off, indicating that the function is cancelled.

# INTERRUPTING A COPY RUN

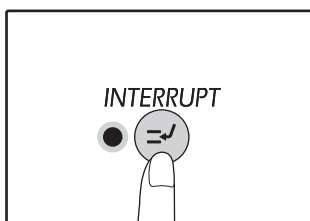
## (Interrupt Copying)

A copy run can be temporarily interrupted to allow another copy job to be performed. When the other job is finished, the copy run will resume using the original copy settings.



Sort/group/rotate sort copying, 2 IN 1 / 4 IN 1 copying, two-sided copying, or ID card copying cannot be performed as an interrupt copy job. System settings and scanning function are also not available when interrupt copying.

### 1 Press the [INTERRUPT] key (⏏) to interrupt the copy run.



The INTERRUPT indicator will light up and the machine will revert to the initial settings. (p.37)  
The INTERRUPT indicator will blink until the current copy run stops.



#### If "Auditing mode" is enabled:

"- - -" will appear in the number of copies display. Enter your 3-digit account number. Copying will not be possible unless a correct account number is entered. (p.93)

### 2 Remove the previous original(s) and place the original(s) of the interrupt copy job.

### 3 Set the number of copies and other copy settings and then press the [START] key (⏏).

### 4 When the copy job is finished, press the [INTERRUPT] key (⏏) and remove the original(s).

The INTERRUPT indicator will go off, indicating that the interrupt function is no longer operating. The copy settings will automatically revert to the settings selected for the copy run before the run was interrupted.

### 5 Replace the previous original(s) and press the [START] key (⏏).

The interrupted copy run will resume.

3

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# CONVENIENT COPY FUNCTIONS

This section explains major convenient copy functions.

## ROTATING THE IMAGE 90 DEGREES (Rotation Copy)

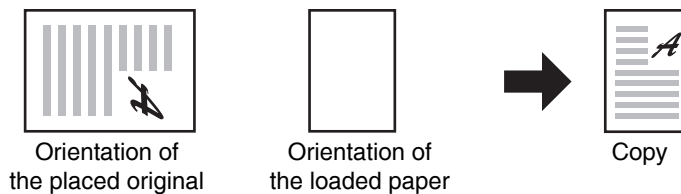
When "Auto paper select mode" or "automatic ratio selection" are in operation and the original is placed in a different orientation (vertical or horizontal) than the paper, the original image will be automatically rotated 90 degrees to enable correct copying onto the paper.

This function is convenient for copying B4 or A3 originals, which can only be placed horizontally, onto paper that is loaded vertically.

The rotation copy function is initially enabled. It can be disabled in the system settings. [\(p.92\)](#)




- Rotation copy will not operate when a copy is enlarged to a paper size greater than A4. In this case, place the original in the same orientation as the paper.
- When 2 IN 1 / 4 IN 1 copy is used [\(p.61\)](#), rotation copy will operate even if disabled in the system settings.





# SORT COPY/GROUP COPY/ROTATE SORT

When copying a multi-page original, you can select the output method.




- The machine can scan standard originals (A4) with approximately 160 pages, however, the number will vary for photos and other types of originals. Less pages can be scanned for interrupt copying.
- Only A4, B5 and 16K paper sizes can be used for rotation sort.

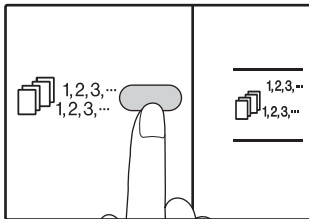
Function name	Description	Icon
Sort copy	Copies of multiple original pages can be sorted into sets. <div></div>	<div></div>
Group copy	Copies of multiple original pages can be grouped by page. <div></div>	<div></div>
rotate sort	A multi-page document can be sorted into sets and rotated before output. <div></div>	<div></div>





## Paper for rotation sort

To use rotation sort, the same size of paper must be loaded in the vertical orientation in one tray, and in the horizontal orientation in another tray.  
For example, load A4 size paper vertically in tray 1, and load A4 size paper horizontally in the bypass tray.


## Using the document glass


- 1 Place the first original. (p.44)**
- 2 Select the original size. (p.44)**
- 3 Press the [SORT/GROUP/ROTATE SORT] key (  ) to select the desired mode.**



- **SORT/GROUP**  
The modes are selected in the order "SORT" (  ), "GROUP" (  ), "Off".
- **ROTATE SORT**  
Hold down the [ROTATE SORT] key (  ) for more than 5 seconds until the ROTATE SORT indicator (  ) appears, and set the selected paper tray.


- 4 Set the number of copies and other settings, and then press the [START] key (  ).**


The data notification indicator (  ) blinks, and the original is scanned into memory.

- 5 When the start indicator lights, replace the original with the next original, and then press the [START] key (  ).**

Repeat step 5 until all originals have been scanned into memory.







To clear the data in memory, press the [CLEAR] key (  ).

- 6 When all originals have been scanned, and then press the [READ-END] key (  ).**

The copies are delivered to the paper output tray.



- To cancel the Sort/Group copy job, press the [CLEAR] key (  ).
- To cancel Sort or Group mode, press the [SORT/GROUP] key (  ) repeatedly until the SORT/GROUP indicators (  /  ) are both off.


## Using the RSPF

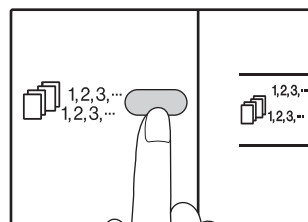
- 1 Place the originals. (p.45)**





Sort mode is normally the default output mode, and thus the RSPF and SORT indicators light up.



- If "Sort auto select" has been set to "1: OFF" in the system settings, follow the steps below to select sort mode.
- "Sort auto select" can also be used to change the default output mode (p.94).

- 2 Press the [SORT/GROUP/ROTATE SORT] key (  ) to select the desired mode.**







- **SORT/GROUP**  
The modes are selected in the order "SORT" (  ), "GROUP" (  ), "Off".
- **ROTATE SORT**  
Hold down the [ROTATE SORT] key (  ) for more than 5 seconds until the ROTATE SORT indicator (  ) appears, and set the selected paper tray.





- 3 Set the number of copies and other settings, and then press the [START] key (  ).**

The copies are delivered to the paper output tray.




- To cancel the Sort/Group copy job, press the [CLEAR] key (  ).
- To cancel Sort or Group mode, press the [SORT/GROUP] key (  ) repeatedly until the SORT/GROUP indicators (  /  ) are both off.

### If the memory becomes full

- If the memory becomes full while scanning the originals, the ERROR indicator (  ) will light up, "FUL" will appear in the number of copies display, and the machine will stop copying.
- To copy the originals that have been scanned up to that point, press the [START] key (  ).
- To clear the data that has been scanned into memory, press the [CLEAR ALL] key (  ) or the [CLEAR] key (  ).

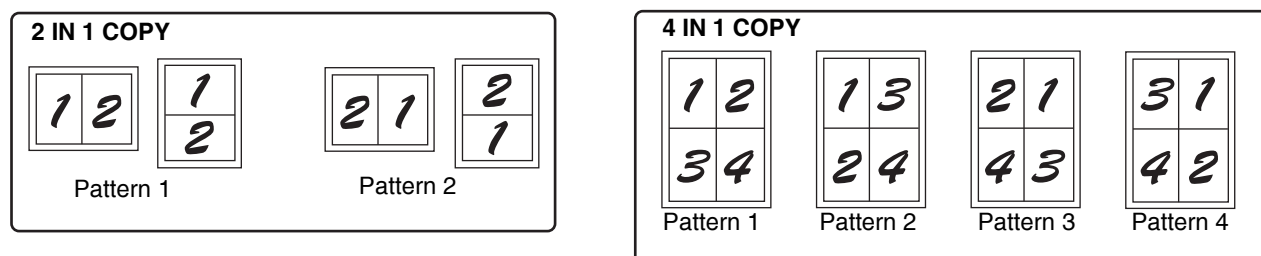
### If the paper output tray becomes full

When the maximum number of pages (about 250 pages) that can be held in the paper output tray are output, copying will temporarily stop. When this happens, promptly remove the copies and press the [START] key (  ) to resume copying.

# COPYING MULTIPLE ORIGINALS ONTO A SINGLE SHEET OF PAPER (2 IN 1 / 4 IN 1 Copy)

Multiple originals can be copied onto a single sheet of paper in a selected layout pattern.

This function is convenient for compiling multi-page reference materials into a compact format, or for providing an overview of all pages of a document on a single page.



## Note

- First select the layout pattern as explained in "Setting the layout pattern" (p.62), and "Border line for 2 IN 1 / 4 IN 1" (solid line or broken line) in the system settings (p.92). When finished, follow the steps below.
- An appropriate ratio setting will be automatically selected based on the size of the originals, the size of the paper, and the selected number of originals. When using the document glass, reduction is possible to 25%. When using the RSPF, reduction is possible to 50%. Certain combinations of original size, paper size, and number of images may result in images being cut off.
- Even if "Rotation copy" is disabled in the system settings, the original images may be rotated if necessary depending on their orientation and the orientation of the paper.
- 2 IN 1 / 4 IN 1 copy cannot be used in combination with dual page copying (p.56), XY Zoom (p.50), margin shift (p.63), or erase copy. (p.64)

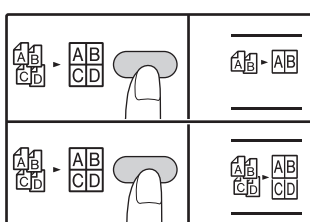
## Using the document glass

### 1 Place the first original. (p.44)

### 2 Select the original size. (p.44)

If the original size was not selected, 2 IN 1 / 4 IN 1 copy cannot be used.

### 3 Press the [2 IN 1 / 4 IN 1] key ( ) to select the desired mode.



The mode is selected in the order "2 IN 1" ( ), "4 IN 1" ( ), "Off".

### 4 Set the number of copies and other settings, and then press the [START] key ( ).

The data notification indicator ( ) blinks, and the original is scanned into memory.

### 5 When the start indicator lights, replace the original with the next original, and then press the [START] key ( ).

Repeat step 5 until all originals have been scanned into memory.

## Note

To clear the data in memory, press the [CLEAR] key ( ).

### 6 When all originals have been scanned, press the [READ-END] key ( ).

The copy is delivered to the paper output tray.

## Note

- To cancel 2 IN 1 / 4 IN 1 copying, press the [CLEAR] key ( ).
- To cancel 2 IN 1 / 4 IN 1 copy mode, press the [2 IN 1 / 4 IN 1] key ( ) repeatedly until the 2 IN 1 / 4 IN 1 indicators ( / ) are both off.

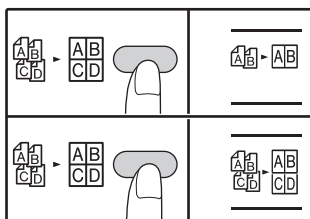
## Using 2 IN 1 / 4 IN 1 copy in combination with sort copy



- When 2 IN 1 / 4 IN 1 copying is used, the group function (p.59) is automatically selected for output.
- If 2 IN 1 / 4 IN 1 copying is selected after sort copying is selected, the copies will be sorted into sets.

## Using the RSPF

### 1 Place the originals. (p.45)

### 2 Press the [2 IN 1 / 4 IN 1] key () to select the mode.







The mode is selected in the order "2 IN 1" () , "4 IN 1" () , "Off".





### 3 Set the number of copies and other settings, and press the [START] key () .

The copy is delivered to the paper output tray.



- To cancel 2 IN 1 / 4 IN 1 copying, press the [CLEAR] key () .
- To cancel 2 IN 1 / 4 IN 1 copy mode, press the [2 IN 1 / 4 IN 1] key () repeatedly until the 2 IN 1 / 4 IN 1 indicators () / () are both off.

#### If the memory becomes full

- If the memory becomes full while scanning the originals, the ERROR indicator () will light up, "FUL" will appear in the display, and the machine will stop copying.
- To copy the originals that have been scanned up to that point, press the [START] key () .
- To clear the data that has been scanned into memory, press the [CLEAR ALL] key () or the [CLEAR] key () .

## Setting the layout pattern



You can select the layout pattern for copying 2 original pages or 4 original pages onto one sheet of paper. The available layout patterns are shown on the first page of this section.

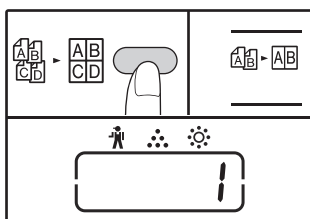


The layout pattern can also be selected in the system settings. (p.93)

### 1 Use the [2 IN 1 / 4 IN 1] key () to access the setting.




#### Selecting the layout for 2 IN 1 copy

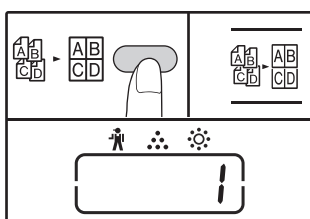
With the 2 IN 1 / 4 IN 1 indicators off, hold down the [2 IN 1 / 4 IN 1] key () until the 2 IN 1 indicator () blinks.



The setting code of the currently selected pattern will blink in the first digit of the number of copies display.

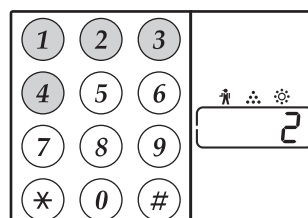
#### Selecting the layout for 4 IN 1 copy

With the 2 IN 1 indicator lit () , hold down the [2 IN 1 / 4 IN 1] key () until the 4 IN 1 indicator () blinks.



The setting code of the currently selected pattern will blink in the first digit of the number of copies display.

### 2 Select the setting code by pressing a numeric key.



To select "Pattern 2", press the [2] key.

Function	Setting code (p.93)
2 IN 1 layout	* 1 (Pattern 1) 2 (Pattern 2)
4 IN 1 layout	* 1 (Pattern 1) 2 (Pattern 2) 3 (Pattern 3) 4 (Pattern 4)

See page 61 for layout pattern.

The factory default settings are indicated by " \* " .

The entered number blinks in the first digit of the number of copies display.

### 3 Press the [START] key () .

The selected setting code stops blinking and lights steadily. This completes the setting.

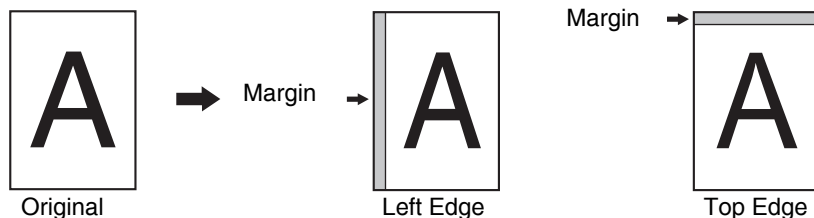
### 4 Press the [2 IN 1 / 4 IN 1] key () to exit the setting.

The display returns to the number of copies display.

## CREATING MARGINS WHEN COPYING (Margin Shift)

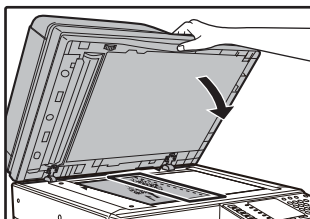
The MARGIN SHIFT feature, in its initial setting, automatically shifts the text or image to increase the margin by approximately 10mm.

The location of the margin to be increased can be selected to be either at the left edge or the top of the page.

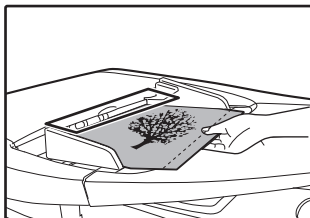


- The margin width can be changed in the system settings. (p.93)
- Note that a margin is created by shifting the image, and thus if the image is shifted too far, the edge of the image may be cut off.
- If the ORIGINAL SIZE indicator blinks when margin shift is selected, rotate the original so that it is in the same orientation as the blinking ORIGINAL SIZE indicator.
- Top Edge can not be used in AR-2048SV/AR-2348SV.

### 1 Place the original(s).



If you are using the document glass, place the side of the original where you wish to create the margin on the right.

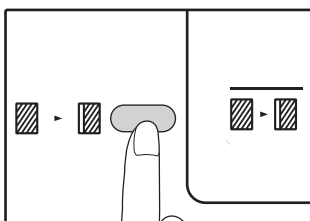


If you are using the RSPF, place the side of the original where you wish to create the margin on the right.

### 2 If the original is placed on the document glass, select the original size. (p.44)

When using the RSPF, make sure that the same size as the size of the placed original appears in the size display.

### 3 Press the [MARGIN SHIFT] key (■-■).



The margin indicator lights.

### 4 Set the number of copies and other settings, and then press the [START] key (▶).

The copy is delivered to the paper output tray.



To cancel margin shift, press the [MARGIN SHIFT] key (■-■) repeatedly until the MARGIN SHIFT indicator (■-■) is off.

## Select the location of the margin

### 1 Hold down the [MARGIN SHIFT] key (■-■) until the MARGIN SHIFT indicator (■-■) blinks.

The currently selected setting code for the margin position blinks in the number of copies display.

1: Left edge 2: Top edge

### 2 Press the [1] key or the [2] key, and then press the [START] key (▶).

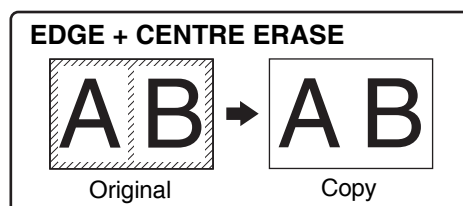
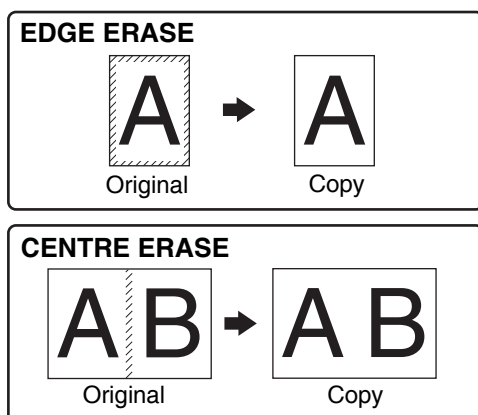
The selected setting code for the margin position lights.

### 3 Press the [MARGIN SHIFT] key (■-■).

The MARGIN SHIFT indicator (■-■) stops blinking.

# ERASING SHADOWS AROUND THE EDGES OF A COPY (Erase Copy)

- This feature is used to erase shadows that appear around the edges of copies of books and other thick originals. (EDGE ERASE)
- The feature can also erase the shadow that appears down the centre of books and other originals that open up. (CENTRE ERASE)
- The factory default setting for the width of the erasure is approximately 10 mm. The width can be changed in the system settings. (p.93)



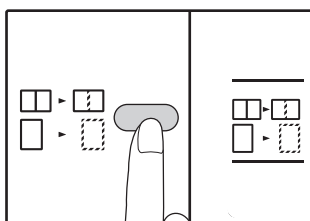
- Centre erase cannot be used in combination with dual page copy.
- Erase copy cannot be used in combination with 2 IN 1 / 4 IN 1 copy. (p.61)
- Erase copy cannot be used when the paper is a special size or copying from the bypass tray.
- Note that if the width of the erasure is too large, the edge of the image may be partially erased.

## 1 Place the original(s). (p.44)

## 2 If the original is placed on the document glass, select the original size. (p.44)

When using the RSPF, make sure that the same size as the size of the placed original appears in the size display.

## 3 Press the [ERASE] key ( ) to select the desired erase mode.



To select the "EDGE + CENTRE ERASE" mode, press the [ERASE] key ( ) repeatedly until the ERASE indicators ( ) lights up.

## 4 Set the number of copies and other settings, and then press the [START] key ( ).

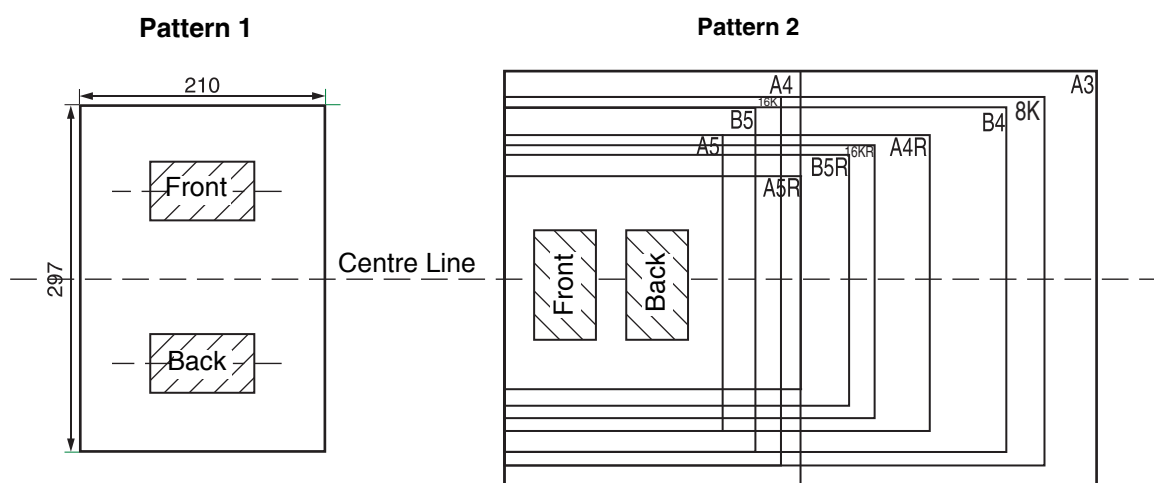
The copy is delivered to the paper output tray.



- To cancel erase copy, press the [ERASE] key ( ) repeatedly until the ERASE indicators ( ) are both off.
- If the original size was not selected in step 2, erase copy cannot be used.

# ID CARD COPY

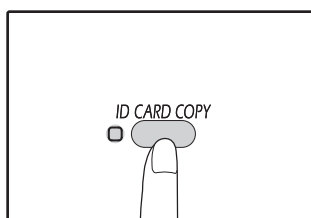
You can copy the front and back sides of ID card onto a page through this function. The specified patterns of ID card copy are shown as follows.



- Select the layout patterns as explained in "ID card" of SYSTEM SETTINGS (p.94) first, then follow the steps below to perform the copy. For changing a system setting, refer to "SELECTING A SETTING FOR A SYSTEM SETTING" (p.95).
- ID card copy feature cannot be used in combination with interrupt copy, two-sided copy, dual page copy, XY-zoom, margin shift, edge + centre erase, 2 in 1/4 in 1, sort/group and rotation copy functions.
- The following paper sizes can be used:  
Pattern 1: A4 is recommended.  
Pattern 2: A5 to A3. (A5 can only be used in bypass tray.)
- The default system setting of the layout patterns as explained in "ID card" is "0: Auto Select", when using A4/B5/16K/B4/8K/A3 paper, pattern 1 can be performed automatically, when using other than the above paper size, pattern 2 can be performed automatically.
- When using Pattern 1, the image may cut off even if using standard paper size.
- In ID card mode, refer to "CUSTOMISING SETTINGS (System Settings)" (p.92), if you want to limit the number of copies. Scan area is: X: 98mm, Y: 66mm.
- Auto paper selection and auto tray switch are invalid in ID card copy mode. Please select paper and tray manually.
- The ID card should be placed 5mm from the original size scale in order that the image will not be cut off when copying.

3

## 1 Press the [ID CARD COPY] key.



The ID CARD COPY indicator will light up.

## 3 Turn the ID card to the other side, and press the [START] key (⏏).

When scan finished, Copy will begin.



To cancel ID card copy, press the [CLEAR ALL] key (⏏) and make sure the ID CARD COPY indicator is off.

## 2 Place the ID card on the document glass, align with the ID card mark, and press the [START] key (⏏).

When scanning, ORIGINAL DATA indicator will blink, when scan is finished, ORIGINAL DATA indicator will go off and one side of the ID card is scanned into memory. (In this case, print will start if pressing [READ-END] key (⏏).)



# 4

## Chapter 4

# 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 ["LOADING PAPER" \(p.38\)](#).



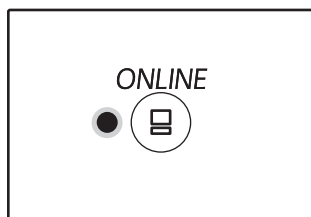
- Print jobs received while the machine is copying or scanning will be stored in memory. When the copy job is finished, the print jobs will begin printing.
- Printing is not possible when the front or side cover is opened for machine maintenance, or when a misfeed occurs or the machine runs out of paper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


## 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 ONLINE indicator on the operation panel is lit.



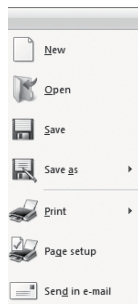
If the ONLINE indicator is not lit, press the [ONLINE] key (  ).

When the indicator is:

- Lit, the machine is online and ready to print, or is printing.
- Off, the machine is off-line and cannot print.

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

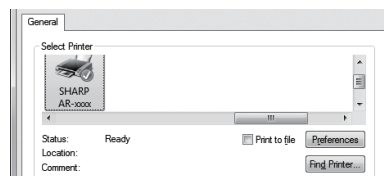
### 3 Select "Print" from the application's "File" menu.



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.

["PRINTER DRIVER SETTING SCREEN" \(p.69\)](#)  
["SETTING ADVANCED PRINT FUNCTIONS" \(p.70\)](#)

### 5 Click the "Print" button.

Printing begins. When the machine is connected USB and the print job starts, print status window will appear.

["OUTLINE OF THE PRINT STATUS WINDOW" \(p.76\)](#)

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 [TRAY] key to select a different tray, and then press the [ONLINE] key (⏻) to resume printing.

Note that if the "Auto tray switching" in the system settings is enabled 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 [ONLINE] key (⏻) on the operation panel to switch the machine off-line. Printing will be paused and the ONLINE indicator will blink.

- To cancel a print job, press the [CLEAR] key (⏻) or the [CLEAR ALL] key (⏻).
- To resume printing, press the [ONLINE] 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 (p.93).

## When "Use close paper size" is disabled

You can press the [TRAY] key to select a tray manually, and press the [ONLINE] key (⏻) to begin printing.

## 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.






- For limitations on copying in print mode, scanner mode limitations, and print mode limitations in copy and scanner mode, see "OPERATION IN COPY, PRINTER, AND SCANNER MODES" (p.43).
- The print image is automatically rotated to fit the paper in the event that the paper is loaded in an orientation different from the print image.

# OPENING THE PRINTER DRIVER FROM THE "Start" BUTTON

You can open the printer driver and change the printer driver settings from the Windows "Start" button. Settings adjusted in this way will be the initial settings when you print from an application. (If you change the settings from 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 ( ), click "Control Panel", and then click "Devices and Printers" (or "View devices and printers").


- In Windows Server 2012, right-click in the Start screen (or swipe upward from the bottom edge), then click the App Bar → "All apps" → "Control Panel" → "Hardware and Sound" → "Devices and Printers" → "Printers".
- In Windows 8.1, click the (  ) icon in the start screen, then click the "Control Panel" → "Hardware and Sound" → "Devices and Printers" → "Printers".
- In Windows 10, right-click the "Start" button (  ), then click the "Control Panel" → "Hardware and Sound" → "Devices and Printers".
- In Windows Server 2016, right-click the "Start" button (  ), then click the "Control Panel" → "View Devices and Printers".

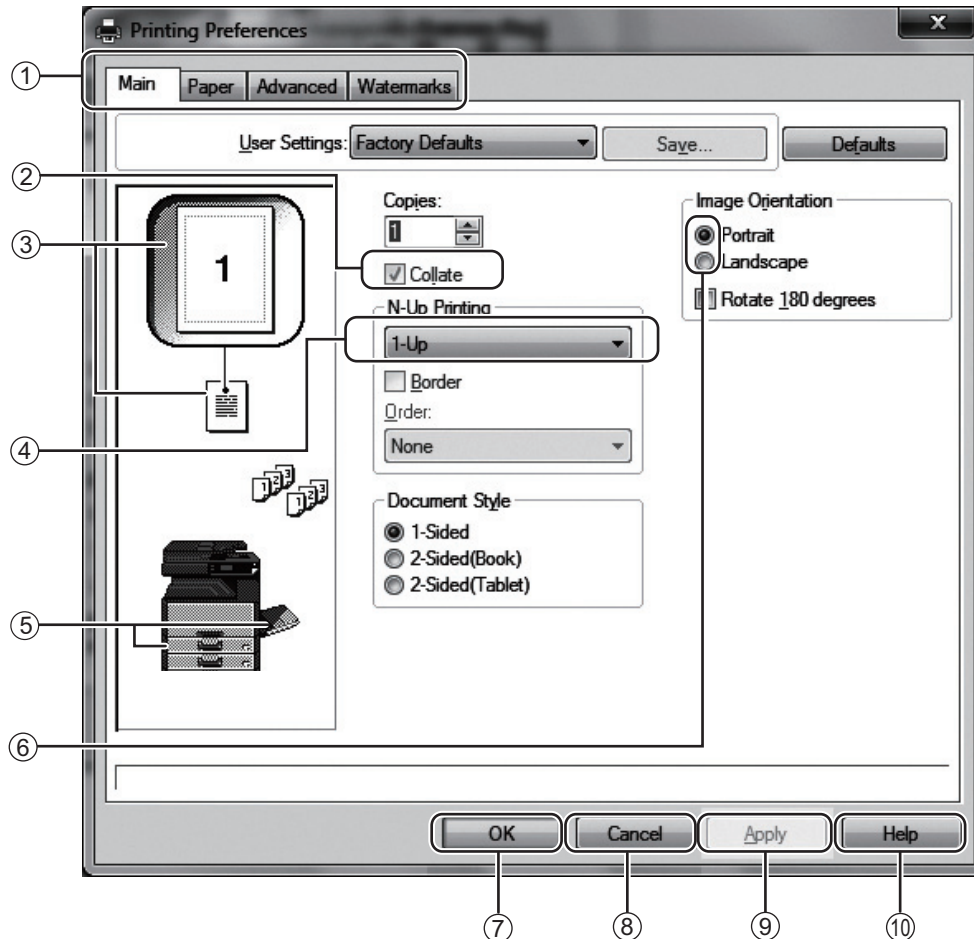
## 2 Right-click the "SHARP AR-xxxx" printer driver icon, and then click "Printer properties".

## 3 Click the "Preferences" button in the "General" tab.

The printer driver setup screen will appear.  
["PRINTER DRIVER SETTING SCREEN" \(p.69\)](#)

# PRINTER DRIVER SETTING SCREEN

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 (  ) will appear next to the setting. Click the icon to view an explanation of the restriction.



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The settings and the image of the machine will vary depending on the model.

## ① Tab

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

## ② Checkbox

Click on a checkbox to activate or deactivate a function.

## ③ Print setting image

This shows the effect of the selected print settings.

## ④ Drop-down list

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

## ⑤ Image of paper trays

The tray selected in "Paper Selection" in the "Paper" tab appears in blue. 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.

## ⑩ "Help" button

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

# SETTING ADVANCED PRINT FUNCTIONS

This section explains major advanced print functions.

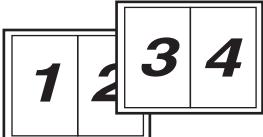
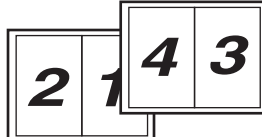
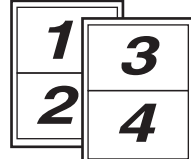
The explanations assume that the paper size and other basic settings have already been selected. For the basic procedure for printing and the steps for opening the printer driver, see ["BASIC PRINTING" \(p.66\)](#).





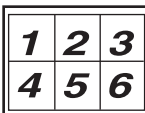
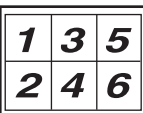
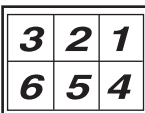
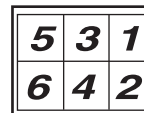
## PRINTING MULTIPLE PAGES ON ONE PAGE (N-Up Printing)

This function can be used to reduce the print image and print multiple pages on a single sheet of paper.

This is convenient when you want to print multiple images such as photos on a single sheet of paper, and when you want to conserve paper. This function can also be used in combination with two-sided printing for maximum conservation of paper.

The following print results will be obtained, depending on the order selected.

N-Up (Pages per sheet)	Print results		
	Left To Right	Right To Left	Top To Bottom (when the print orientation is landscape)
2-Up (2 pages per sheet)			

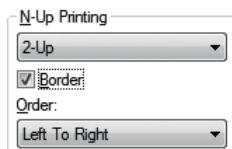
N-Up (Pages per sheet)	Right, and Down	Down, and Right	Left, and Down	Down, and Left
4-Up (4 pages per sheet)				
6-Up (6 pages per sheet)				



In PCL6 or PS printer driver, 8-Up, 9-Up, and 16-Up can be selected. The page orders are the same as for 4-Up. In a Windows environment, the page order can be viewed in the print image in the printer driver properties window.

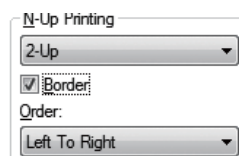
**1** Click the "Main" tab in the printer driver setup screen.

**2** Select the number of pages per sheet.



If you wish to print borderlines, check the "Border" box.

**3** Select the order of the pages.



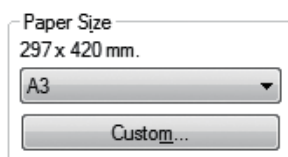
# FITTING THE PRINTED IMAGE TO THE PAPER

## (Fit To Paper Size)

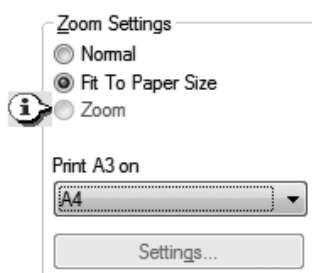
The printer driver can adjust the size of the printed image to match the size of the paper loaded in the machine. Follow the steps shown below to use this function. The explanation below assumes that you intend to print an A3 or Ledger size document on A4 or Letter size paper.

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

**2** Select the original size (A3 or Ledger) of the print image in "Paper Size".



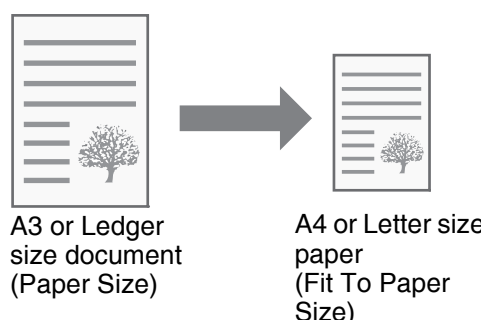
**3** Check the "Fit To Paper Size" button.



**4** Select the actual size of paper to be used for printing (A4 or Letter).

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

Paper Size: A3 or Ledger  
Fit To Paper Size: A4 or Letter

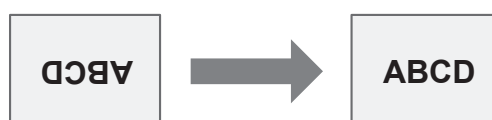


4

# ROTATING THE PRINT IMAGE 180 DEGREES

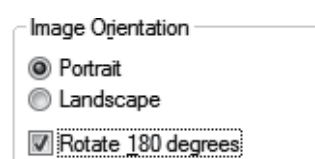
## (Rotate 180 degrees)

The feature rotates the image 180 degrees so that it can be printed correctly on paper that can only be loaded in one orientation (such as envelopes).



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

**2** Check the "Rotate 180 degrees" box.

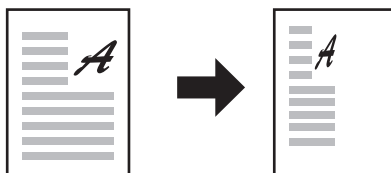


## ENLARGING/REDUCING THE PRINT IMAGE (Zoom)

This function is used to enlarge or reduce the image to a selected percentage. This allows you to enlarge a small image or add margins to the paper by slightly reducing an image.

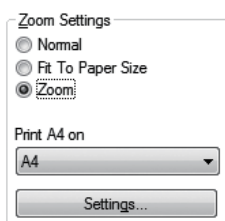


The "Zoom" setting is not available when "N-Up Printing" is selected.



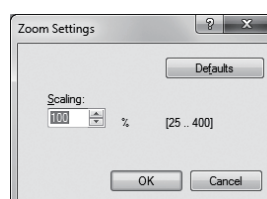
**1** Click the "Paper" tab in the printer driver setup screen.


**2** Select "Zoom" and click the "Settings" button.



The actual paper size to be used for printing can be selected from the pop-up menu.

**3** Select the zoom ratio.



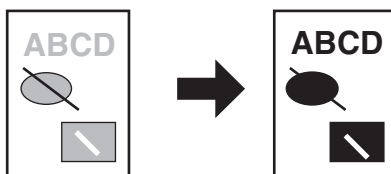
Directly enter a number or click the  button to change the ratio in increments of 1%.



- You can also select [Upper Left] or [Centre] for the base point on the paper.
- When using the PS printer driver (Windows), you can set the width and length percentages separately to change the proportions of the image. (XY-Zoom)

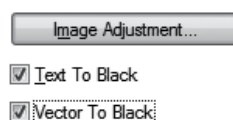
## PRINTING FAINT TEXT AND LINES IN BLACK (Text To Black/Vector To Black)

When printing a colour image, colour text and lines that are faint can be printed in black. (Raster data such as bitmap images cannot be adjusted.) This allows you to bring out colour text and lines that are faint and difficult to see.



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

**2** Check the "Text To Black" box and/or the "Vector To Black" box.



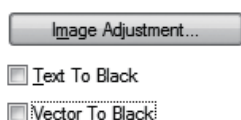
- "Text To Black" can be selected to print all text other than white text in black.
- "Vector To Black" can be selected to print all vector graphics other than white lines and areas in black.

# ADJUSTING THE BRIGHTNESS AND CONTRAST OF THE IMAGE (Image Adjustment)

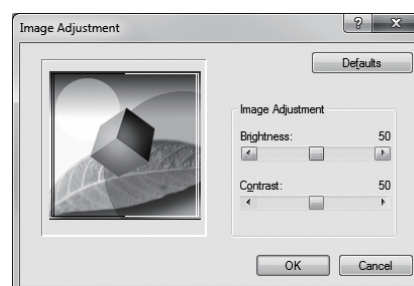
The brightness and contrast can be adjusted in the print settings when printing a photo or other image. These settings can be used for simple corrections when you do not have image editing software installed on your computer.




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

**2** Click the "Image Adjustment" button.



**3** Adjust the image settings.

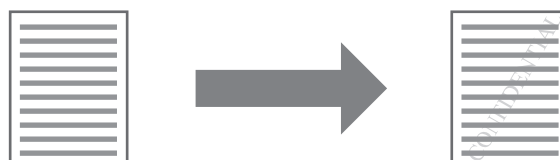


To adjust a setting, drag the slide bar  or click the  or  button.

# ADDING A WATERMARK TO PRINTED PAGES (Watermark)

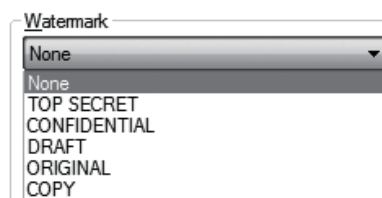
Faint shadow-like text can be added to the background of the printed image as a watermark. The size, density, and angle of the watermark text can be adjusted. The text can be selected from a pre-stored list, or entered to create an original watermark.

4



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

**2** Select the watermark settings.



Select a stored watermark from the pull-down menu. You can click the "Edit" button to edit the font and select other detailed settings.




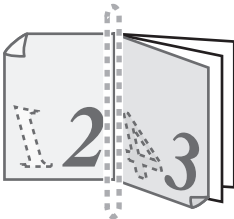
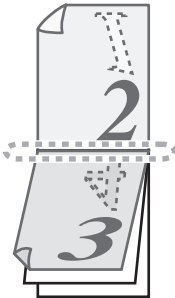
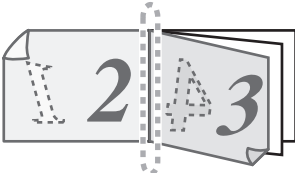
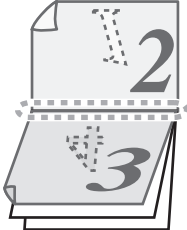
If you wish to create a new watermark, enter the text of the watermark in the "Text" box and click the "Add" button.

# TWO-SIDED PRINTING

(Model that has duplex copy / print function as standard feature only)

The machine can print on both sides of the paper. This function is useful for many purposes, and is particularly convenient when you want to create a simple pamphlet. Two-sided printing also helps conserve paper.

-  **Note**
- When using two-sided printing, select a source for the "Paper Source" in the "Paper" tab.
  - When using PCL6 or SPLC printer driver, Two-Sided printing can only be taken place by using bypass tray.

Paper orientation	Printing result	
Vertical	2-Sided (Book)	2-Sided (Tablet)
		
Horizontal	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.

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

**2** Select "2-Sided(Book)" or "2-Sided(Tablet)".

Document Style

☐ 1-Sided

☒ 2-Sided(Book)

☐ 2-Sided(Tablet)

-  **Note**
- In PCL6 or PS printer driver, you can also select [Pamphlet Style].



# 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 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

### (User Settings)

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.66).

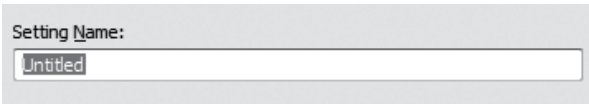
1


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).



Note

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

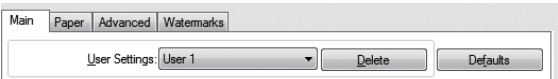
3

Click the "OK" button.

4

### Using saved settings

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



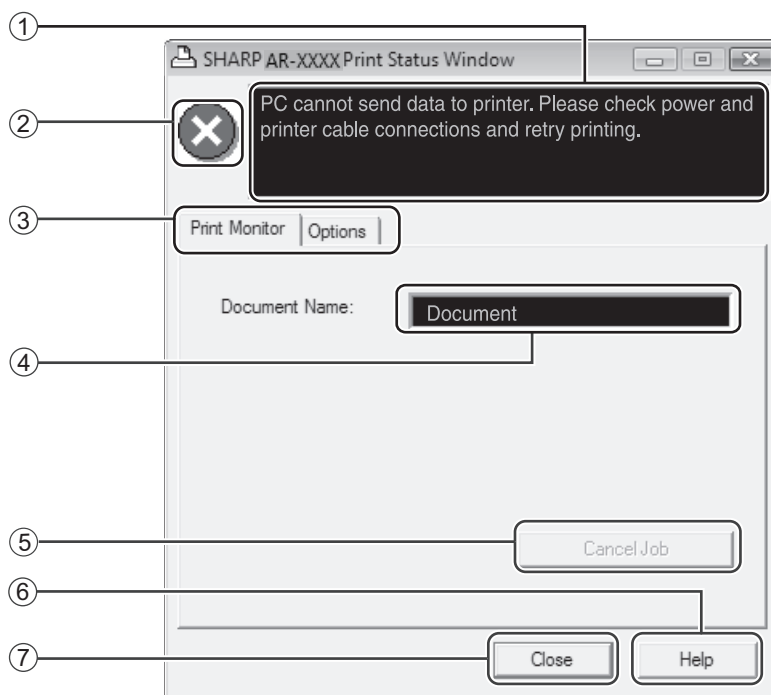
### Deleting saved settings

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

# OUTLINE OF THE PRINT STATUS WINDOW

When printing begins, the Print Status Window automatically opens.

The Print Status Window is a utility that monitors the machine and shows the name of the document being printed and any error messages that occur.





## ① Status window

Provides information on the current status of the printer.

## ② Status icon

The status icons appear to alert you to printer errors. Nothing appears when printing is taking place normally.

The icons are explained below. Follow the instructions in the status window to solve the problem.

Icon	Print Status
	An error has occurred that requires immediate attention.
	An error has occurred that requires attention soon.

## ③ Tab

Click a tab to bring it to the front. The "Options" tab allows you to select display options for the Print Status Window.

## ④ Document Name

Shows the name of the document currently being printed.

## ⑤ "Cancel Job" button

Printing can be cancelled by clicking this button before the machine receives the job.

## ⑥ "Help" button

Click this button to display the help file for the Print Status Window.

## ⑦ "Close" button

Click this button to close the Print Status Window.



The Print Status Window can be used only when the machine is connected with a USB cable. When the machine is connected to a network, use the print status monitor downloaded from the Web site.

# BASIC PRINTING (MACINTOSH)

## ● AR-2048SV/AR-2048DV/AR-2348DV/AR-2348SV

The network expansion kit and the PS3 expansion kit must be installed and the machine must be connected to a network.

## ● AR-2048NV/AR-2348NV/AR-2648NV/AR-3148NV

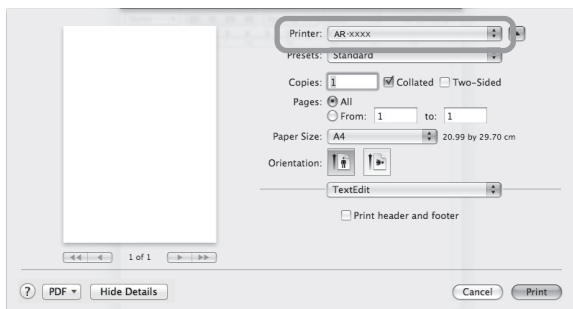
The printer expansion kit and the PS3 expansion kit must be installed and the machine must be connected to a network.

Before printing, make sure that the correct size of paper for your document has been loaded in the machine.

### 1 Start the application and open the document that you wish to print.


### 2 Select "Print" from the application's "File" menu.

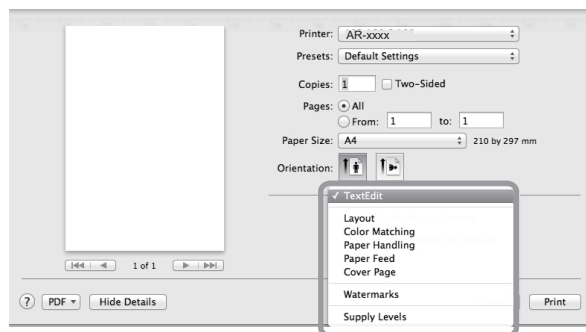
### 3 Make sure that the correct printer is selected.



- The machine name that appears in the "Printer" menu is the name that was entered when the settings were configured from the "Software CD-ROM". Unless the name was changed when configuring the settings, it will be "AR-xxxx" (where "xxxx" is a sequence of characters that varies depending on your machine).
- The Print window varies depending on the operating system version, the printer driver version, and the application.

### 4 Select print settings.

Click  and select the settings that you wish to configure from the pull-down menu. The corresponding setting screen will appear.

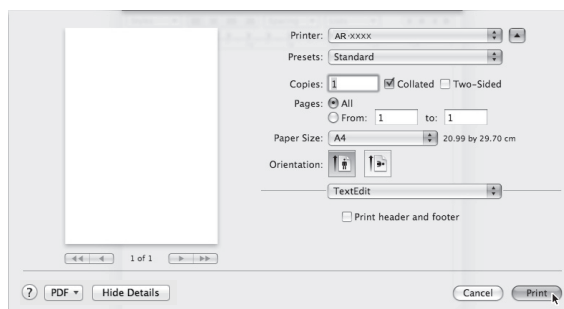


4



The settings vary depending on the operating system version, the printer driver version, and the application.

### 5 Click the "Print" button.



Printing begins.

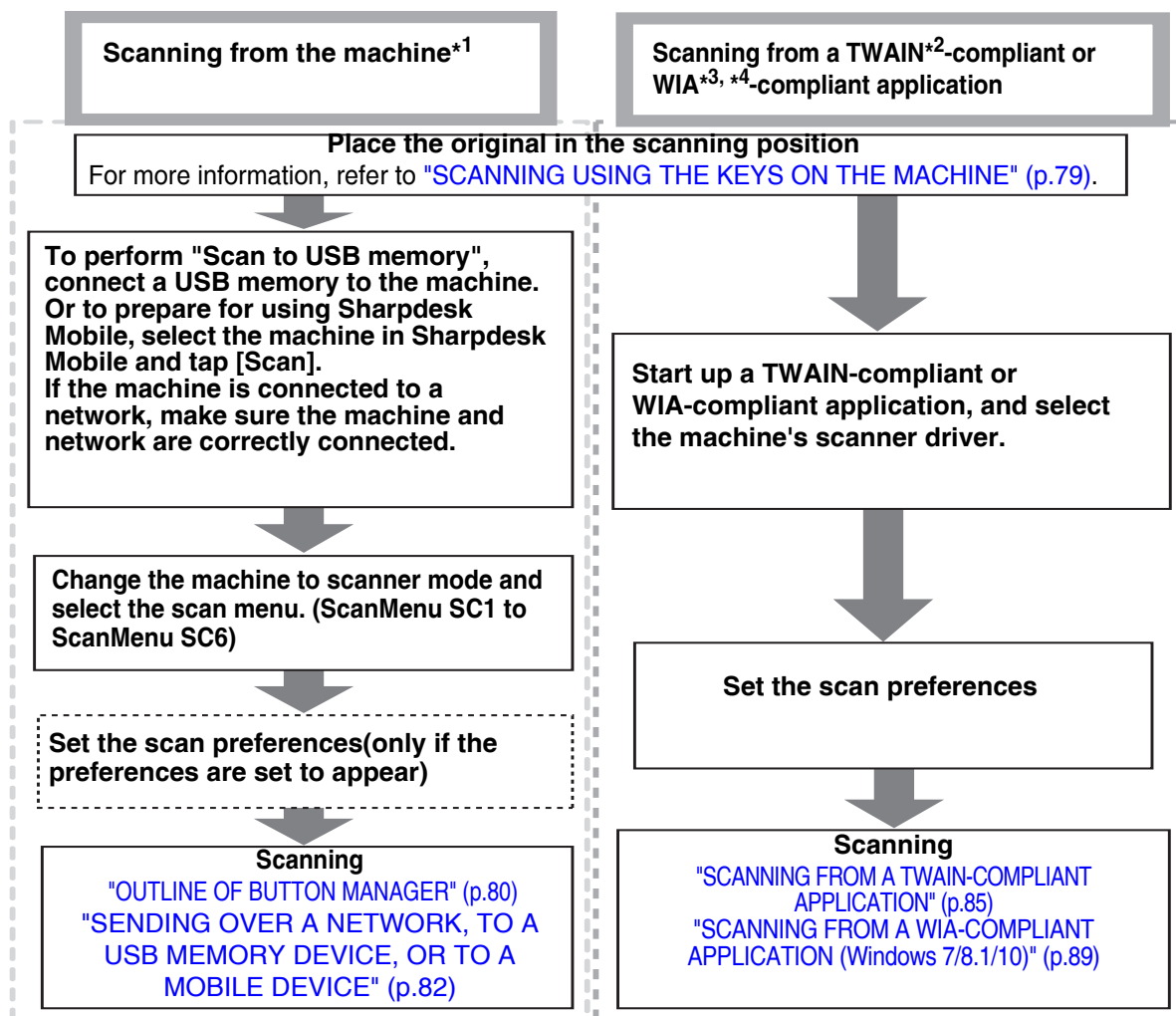
This chapter explains how to use the scanner functions.



- Scanning 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 RSPF, scanning will not be possible until the misfed original is removed and the RSPF is restored to a usable state.

## SCANNING OVERVIEW

The flow chart shown below provides an overview of scanning.



\*1 When using the AR-2048SV/AR-2348SV/AR-2048DV/AR-2348DV, to scan using the machine's operation panel, you must first install Button Manager and establish the appropriate settings in the Control Panel. For details, see ["SETTING UP BUTTON MANAGER" \(p.24\)](#). Button Manager cannot be used when the network function can be used. To use Scan to e-mail/Scan to FTP/Scan to USB/Scan to Desktop (Sharpdesk)/Sharpdesk Mobile, set on the Web page.

\*2 TWAIN is an international interface standard for scanners and other image acquisition devices. By installing a TWAIN driver on your computer, you can scan and work with images using a variety of TWAIN-compliant applications.

\*3 WIA (Windows Imaging Acquisition) is a Windows function that allows a scanner, digital camera or other imaging device to communicate with an image processing application. The WIA driver for this machine can only be used in Windows 7/8.1/10.

\*4 WIA cannot be used on network function standard models and on models with the network expansion kit installed.

# SCANNING USING THE KEYS ON THE MACHINE

## USING BUTTON MANAGER

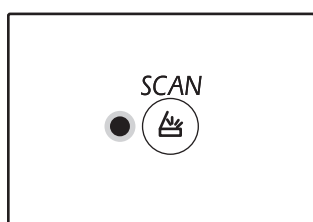
When scanning is performed by this method, the application that has been set in Button Manager will automatically start and the scanned image will be pasted into the application. For the steps to allocate applications using the Button Manager or other settings, see ["BUTTON MANAGER SETTINGS" \(p.81\)](#).



- If the machine is in copy mode, press the [SCAN] key ( ) to switch to scanner mode and clear the previously set copy settings.
- When the network expansion kit is installed or the machine is equipped standard with the network function, you can save a scanned data in a USB memory device (Scan to USB memory), save scanned data in a mobile device using Sharpdesk Mobile (Scan to Sharpdesk Mobile), or send scanned data over the network (Scan to E-mail, Scan to FTP, Scan to Desktop). For details, see ["SENDING OVER A NETWORK, TO A USB MEMORY DEVICE, OR TO A MOBILE DEVICE" \(p.82\)](#).

### Scanning from the operation panel of the machine

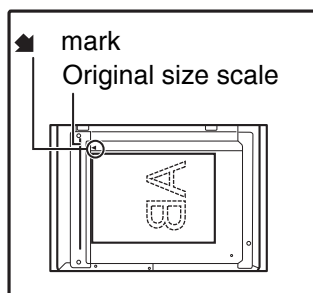
#### 1 Press the [SCAN] key ( ).



When the SCAN indicator lights up, the machine enters scanner mode.

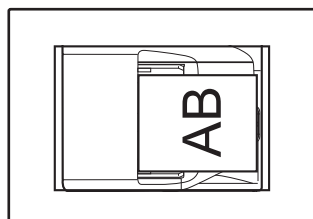
#### 2 Place the original(s) that you wish to scan on the document glass/RSPF.

**[When scanning from the document glass]**



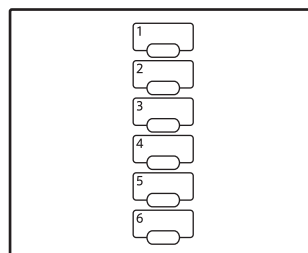
Place the original face down on the document glass. Align the corner of the original with the tip of the arrow mark ( ) on the document glass scale.

**[When scanning from the RSPF]**



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

#### 3 Press the [SCAN MENU] key to begin scanning.

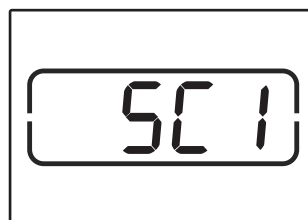


Scanning will start and the scanned data will be transferred to the application.

The target application can be selected by the [SCAN MENU] key.

For the default application allocated to each key, see ["BUTTON MANAGER SETTINGS" \(p.81\)](#).

The number of copies display will show the number of the [SCAN MENU] key that you pressed, and the number will light and the DATA indicator will be blinking.




- To return to copy mode from scanner mode, press the [SCAN] key ( ) or [CLEAR ALL] key ( ).
- For limitations on copying and printing in scanner mode, and scanner mode while copying or printing, see ["OPERATION IN COPY, PRINTER, AND SCANNER MODES" \(p.43\)](#).

5

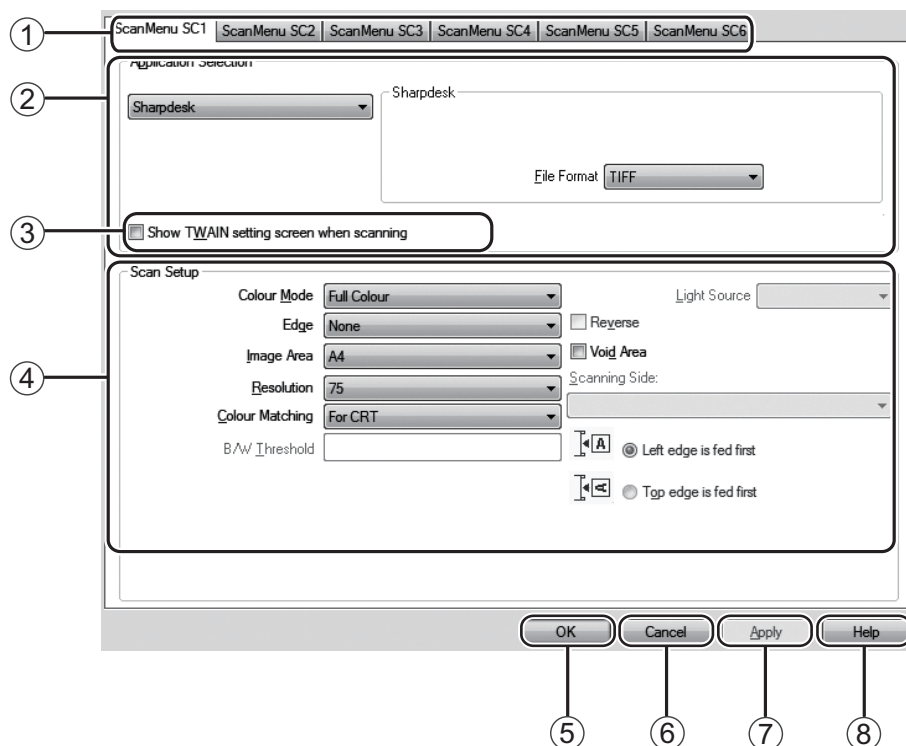
# OUTLINE OF BUTTON MANAGER

Button Manager is a software utility that allows you to use the scanner function at the machine. Button Manager allows you to configure six sets of scanning settings as a scan menu on the machine.

To view Help for a setting, click the  button in the upper right-hand corner of the window and then click the setting.

To begin scanning using the machine's operation panel, settings must be established in the Control Panel after Button Manager is installed. For information on installing Button Manager and establishing the Control Panel settings, see ["SETTING UP BUTTON MANAGER" \(p.24\)](#). For information on scanning using the machine's operation panel, see ["SCANNING USING THE KEYS ON THE MACHINE" \(p.79\)](#).

You can use Button Manager to select and change the functions of the six scan menus. Refer to ["BUTTON MANAGER SETTINGS" \(p.81\)](#).



## ① Tab

Click to set scan menu options. Each tab contains scan settings for the scan menu.

## ② "Application Selection" area

Select the start-up application here.

## ③ "Show TWAIN setting screen when scanning" Checkbox

You can select whether or not the TWAIN screen is shown. When the checkbox is selected, the TWAIN screen appears when scanning is executed to let you adjust the scanning conditions.

## ④ "Scan Setup" area

Set the scan conditions.

## ⑤ "OK" button

Click to save your settings and exit the dialog box.

## ⑥ "Cancel" button

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

## ⑦ "Apply" button

Click to save your settings without closing the dialog box.

## ⑧ "Help" button

Click this button to display the help file for Button Manager.




**Note** Some applications may limit your choice of settings.

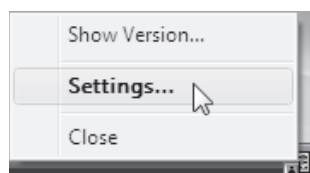
# BUTTON MANAGER SETTINGS

Once installed, Button Manager normally runs in the background in the Windows operating system. If you need to change Button Manager settings, follow the steps below.

For details on Button Manager settings, see Button Manager Help.

["OUTLINE OF BUTTON MANAGER" \(p.80\)](#)

- 1 Right-click the Button Manager icon (  ) on the task bar, and select "Settings" from the pop-up menu.**



The setting screen of Button Manager will open.

- 4 Set up the "Colour Mode", "Edge" and other scan settings in the "Scan Setup" area.**

- 5 Click the "OK" button.**

This completes the settings.



If the Button Manager icon does not appear on the task bar, click the "Start" button, select "All Programs", select "Sharp Button Manager AC", and then click "Button Manager" to start Button Manager.

- 2 Click the tab of the scan menu that you want to set up.**

ScanMenu SC1 ScanMenu SC2 ScanMenu SC3 ScanMenu SC4 ScanMenu SC5 ScanMenu SC6

- 3 Select the start-up application in the "Application Selection" area.**



When the "Show TWAIN setting screen when scanning" checkbox is selected, the scan setting screen appears when scanning is executed to let you adjust the scanning conditions.

## Button Manager scan menu (factory default)

Display/Button Manager menu	Application that starts
ScanMenu SC1	Sharpdesk
ScanMenu SC2	Email
ScanMenu SC3	FAX
ScanMenu SC4	OCR
ScanMenu SC5	Microsoft Word
ScanMenu SC6	Filing



The start-up application must be installed before using.

## SENDING OVER A NETWORK, TO A USB MEMORY DEVICE, OR TO A MOBILE DEVICE

If the network expansion kit is installed on the machine or the machine is equipped standard with the network function, you can send scanned data over the network (Scan to E-mail, Scan to FTP, Scan to Desktop), save scanned data in a USB memory device (Scan to USB memory) or save scanned data in a mobile device using Sharpdesk Mobile (Scan to Sharpdesk Mobile).

To assign scan settings to a SCAN MENU key, use the machine's Web page. For details, see ["Scan mode settings" \(p.83\)](#).

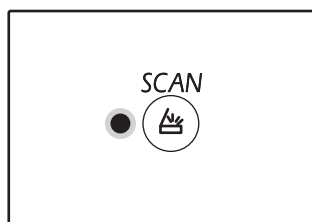
### Using Scan to E-mail, Scan to FTP, or Scan to USB memory

When you use Scan to E-mail, Scan to FTP, or Scan to USB memory, use [SCAN MENU] keys 1 to 5.

To use Scan to Sharpdesk Mobile or Scan to Desktop, refer to ["Using Scan to Sharpdesk Mobile or Scan to Desktop" \(p.82\)](#).

**1** When using Scan to USB memory, connect the USB memory device to the USB connector on the machine.

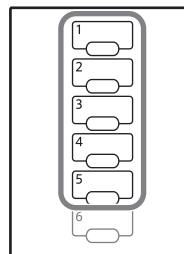
**2** Press the [SCAN] key (  ).



The scanner mode selection indicator lights up and the machine enters scanner mode.

**3** Place the original on the document glass or in the RSPF.

**4** Press the [SCAN MENU] key (1 to 5) that has the settings you want to use.



"SCx" appears in the number of copies display, and the number from 1 to 5 that was pressed appears in "x".

**5** Press the [START] key (  ).

The original is scanned and the image data is saved in the USB memory device or sent to the destination.

**6** When using Scan to USB memory, remove the USB memory device from the machine.

### Using Scan to Sharpdesk Mobile or Scan to Desktop

In order to use Scan to Sharpdesk Mobile, the machine must be connected to a network that has a wireless LAN access point, and you must install the "Sharpdesk Mobile" application on your mobile device and register the machine. For details, see the Sharpdesk Mobile manual. You can install Sharpdesk Mobile from the store of your mobile device.

You can also send scanned data directly to a specified computer. To use this function, the Sharpdesk Network Scanner Tool must be installed. For details on the installation procedure and settings, refer to the Sharpdesk Network Scanner Tool manual or Help.

Use the SCAN MENU key 6 to save scanned images to your mobile device or your computer.

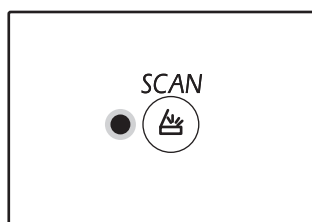


- If multiple mobile devices execute "Scan" from Sharpdesk Mobile on each device at the same time, scanned image can be sent only to the device that executed lastly.
- When using Scan to Desktop, only one profile can be registered in the network scanner tool. If multiple profiles are registered, only the settings of last profile registered are enabled.
- In the case of executing Scan to Desktop, an error will occur on the machine if the network scanner tool profile is deleted before Scan to Desktop is used.  
If scanning is executed using Sharpdesk Mobile on the mobile device after a network scanner tool profile is registered, the network scanner tool profile will be deleted.  
If you need to use Scan to Desktop, re-register the network scanner tool profile.

**1** In Sharpdesk Mobile on your mobile device, select the machine and tap [Scan] to ready the device for reception.



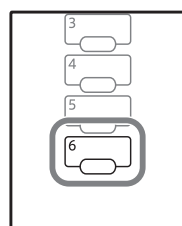
## 2 Press the [SCAN] key ( ).



The scanner mode selection indicator lights up and the machine enters scanner mode.

## 3 Place the original on the document glass or in the RSPF.

## 4 Press the [SCAN MENU] key (6).



"Shd" appears in the number of copies display, and the number of the pressed [SCAN MENU] key "6" appears in the ratio display.

## 5 Press the [START] key ( ).

The document is scanned and the scanned image is sent to your mobile device or your computer.

## Scan mode settings

This section explains how to store scan settings in a SCAN MENU key. The resolution, color mode, and image format can be set in the machine's Web page. Access the machine's Web page with administrator rights, and configure the settings.

## 1 Enter the IP address of the machine in your Web browser to access the Web page.

## 2 Click "Administrator mode", and then open the administrator's Web screen.

For the administrator's account and password, see the Start Guide.

## 3 Click "Scan setup" in "Image Send Management".

The settings appear.

## 4 Click one of [SC1] to [Sharpdesk 6], and set the resolution, color mode, and format.

Configure settings for Scan to USB memory, Scan to E-mail, Scan to FTP, Scan to Desktop and Sharpdesk mobile.

For information on scan mode settings, see "Settings" below.

[SC1] to [Sharpdesk6] correspond to each of the scan menu key numbers. For example, select [SC1] to store settings in [SCAN MENU] key "1".

## 5 When you have finished storing settings, click the [Submit] key.

The settings are saved. Close your Web browser.

## Settings

Item	Selections (factory default setting appears in bold)	Description
Scan Type*	<b>USB Memory Scan</b> , Network Scan	Select USB Memory scan or Network Scan (Scan to E-mail, Scan to FTP).
Resolution	75dpi, 100dpi, 150dpi, 200dpi, <b>300dpi</b> , 400dpi, 600dpi	Set the resolution used for scanning.
Color mode	Mono, Grayscale, <b>Full Color</b>	Select the colour mode used for scanning.
Compression Mode (mono)	<b>None</b> , MH(G3), MMR(G4)	Select the type of compression used for the scanned file. This can be set when "Mono" is selected in "Colour mode".
File Format	TIFF, <b>PDF</b> , JPEG	Select the format used to save the scanned file.
Destination Type*	<b>E-mail</b> , FTP	Set the destination. Select "E-mail" to send by Scan to E-mail, or "FTP" to send by Scan to FTP. This can be set when "Network Scan" is selected in "Scan Type".

\* This item cannot be configured in Sharpdesk6.

**Destination settings**

Configure settings for the destination. The settings configured depend on the "Destination Type" setting.

**When "E-mail" is selected**

Item	Selections (factory default setting appears in bold)	Description
E-mail Address (Required)	-	Enter a maximum of 64 characters for the destination e-mail address.

**When "FTP" is selected**

Item	Selections (factory default setting appears in bold)	Description
Hostname or IP Address (Required)	-	Enter a maximum of 127 characters for the host name or IP address of the destination FTP server.
User Name (Optional)	-	Enter a maximum of 32 characters for the user name used to log in to the destination FTP server.
Password (Optional)	-	Enter a maximum of 32 characters for the password used to log in to the destination FTP server.
Directory (Optional)	-	Enter a maximum of 200 characters for the destination directory of the destination FTP server.
Enable SSL	Enable, <b>Disable</b>	Enable this setting to use SSL-encrypted communication.

# SCANNING FROM YOUR COMPUTER

The machine supports the TWAIN standard, making it possible to scan from TWAIN-compliant applications. The machine also supports WIA (Windows Image Acquisition), making it possible to scan from WIA-compliant applications. For information on TWAIN and WIA settings, see the help file for the scanner driver or Windows Help.



WIA cannot be used on network function standard models and on models with the network expansion kit installed.

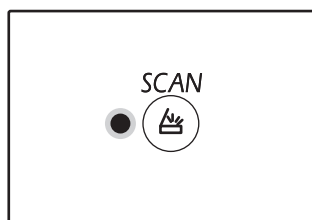
## SCANNING FROM A TWAIN-COMPLIANT APPLICATION

The SHARP scanner driver is compatible with the TWAIN standard, allowing it to be used with a variety of TWAIN-compliant applications.

### 1 Place the original(s) that you wish to scan on the document glass/RSPF.

For information on setting an original for scanning, refer to ["SCANNING USING THE KEYS ON THE MACHINE"](#) (p.79).

### 2 Press the [SCAN] key (.



The scanner mode selection indicator lights up and the machine enters scanner mode.



When the machine is connected to a network, the scanner driver cannot be used if the machine is in copy mode.

### 3 After starting TWAIN-compliant application, click the "File" menu and select a menu to scan.



The method for accessing the menu to select the scanner depends upon the application. For more information, refer to the manual or the help file of your application.

### 4 Select "SHARP MFP TWAIN AC" ([SHARP MFP TWAIN K] on a network connection), and click the "Select" button.

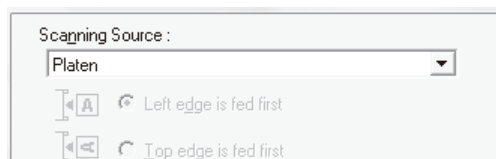


- Depending on your system, "SHARP MFP TWAIN 1.0 (32-32)" and "WIA-SHARP AR-xxxx 1.0 (32-32)" may appear in the above "Select Source" screen.
- The machine is connected to a USB, "u-2" is display on the number of copies display. And also the machine is connected to a network, "n-t" is display on the number of copies display.

### 5 Select the menu to acquire an image from the application's "File" menu.

The scanner driver setup screen will appear. ["Scanner driver settings"](#) (p.87)

### 6 In the "Scanning Source" menu, select the location where you placed the original in Step 1.



- If you placed a one-sided original in the RSPF, select "SPF (Simplex)".
- If you placed a two-sided original in the RSPF, select "SPF (Duplex-Book)" or "SPF (Duplex-Tablet)" according to the binding position of the original.



If you selected "SPF (Duplex-Book)" or "SPF (Duplex-Tablet)" in the "Scanning Source" menu, select whether the orientation of the placed original is "Left edge is fed first" or "Top edge is fed first".

5

### 7 Click the "Preview" button.

The preview image will appear.



#### Note

- If the angle of the image is not correct, reset the original, and click the "Preview" button again.
- If the preview image is not oriented correctly, click the "Rotate" button in the preview screen. This rotates the preview image 90 degrees clockwise, allowing you to correct the orientation without resetting the original. ["Preview screen" \(p.88\)](#)
- If you set multiple pages in the RSPF, the machine previews only the top page of the originals, and then sends it to the original exit area. Return the previewed original to the RSPF before starting the scanning job.

### 8 Specify the scanning area and set the scan preferences.

For information on specifying the scan area and setting the scan preferences, see scanner driver Help.

["Scanner driver settings" \(p.87\)](#)



#### Caution

Scanning a large area at high resolution results in a large quantity of data and a prolonged scanning time. It is recommended that you set appropriate scanning preferences for the type of original being scanned, i.e., Web page (monitor), Photo, FAX, or OCR.

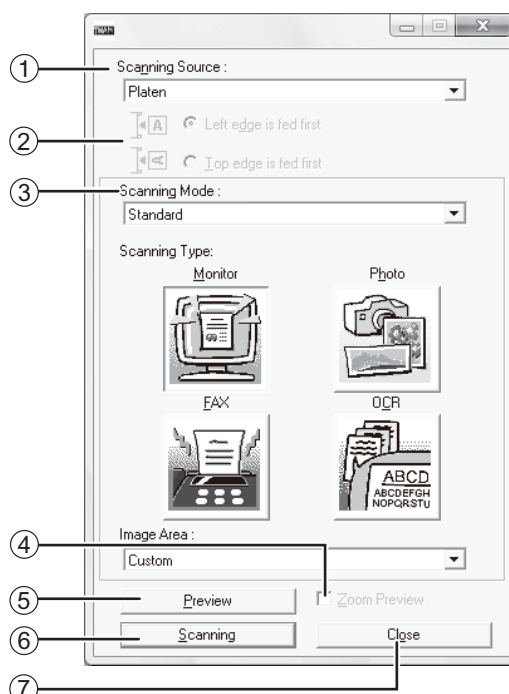
### 9 When you are ready to begin scanning, click the "Scanning" button.

To cancel a scanning job after clicking the "Scanning" button, press the [Esc] key on your keyboard.

## Scanner driver settings

The scanner driver setup screen consists of the "Set-up screen", which lets you select scan settings, and the "Preview screen", which shows the scanned image. For details on the scan settings, click the "Help" button in the preview screen to display Help.

### Set-up screen



#### ① "Scanning Source" menu

Select the location where the original is placed. Selections are "Platen" (document glass), "SPF (Simplex)", "SPF (Duplex-Book)" or "SPF (Duplex-Tablet)".

["SCANNING FROM A TWAIN-COMPLIANT APPLICATION" \(p.85\)](#)

#### ② Scan side menu

If you placed a two-sided original in the RSPF, select "Left edge is fed first" or "Top edge is fed first" from the scan side menu according to the orientation of the placed original.

#### ③ "Scanning Mode" menu

Select "Standard" or "Professional" for the scanning mode. For details on the settings, click the "Help" button in the preview screen to display Help.

#### ④ "Zoom Preview" Checkbox

When this is selected, the selected part of the preview image will be enlarged when the "Preview" button is clicked. To return to the regular view, remove the checkmark.



"Zoom Preview" can be used when "Platen" is selected in the "Scanning Source" menu.

#### ⑤ "Preview" button

Previews the document.



If "Preview" is cancelled by immediately pressing the [Esc] key on your keyboard, or the [CLEAR] key (C) or [CLEAR ALL] key (CA) on the machine, nothing will appear in the preview screen.

#### ⑥ "Scanning" button

Click to scan an original using the selected settings. Before clicking the "Scanning" button, make sure the settings are correct.

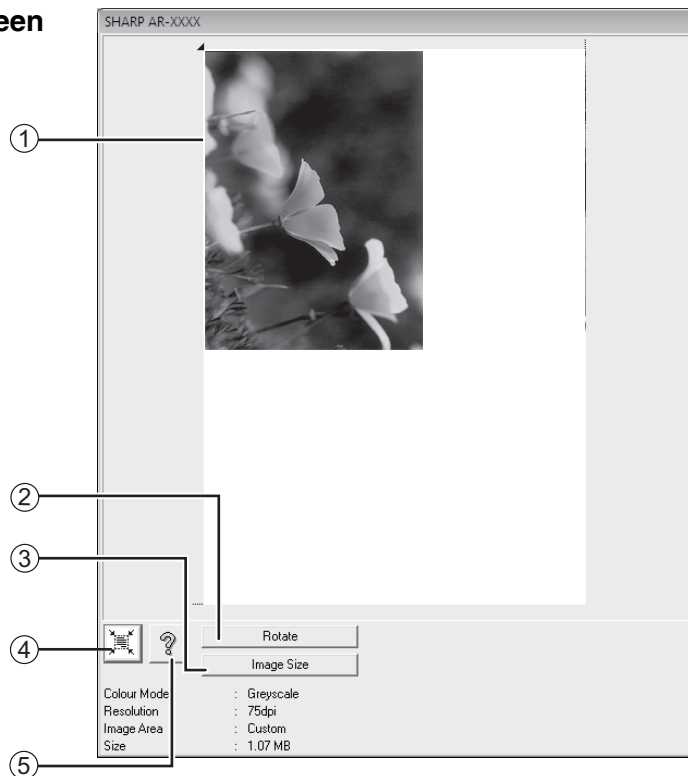


To cancel a scanning job after clicking the "Scanning" button, press the [Esc] key on your keyboard, or the [CLEAR] key (C) or [CLEAR ALL] key (CA) on the machine.

#### ⑦ "Close" button

Click to close the scanner driver setup screen.

## Preview screen



### ① Preview screen

Click the "Preview" button in the Set-up screen to display the scanned image. You can specify the scanning area by dragging the mouse inside the window. The inside of the frame that is created when you drag the mouse will be the scanning area. To cancel a specified scanning area and clear the frame, click anywhere outside the frame.

### ② "Rotate" button

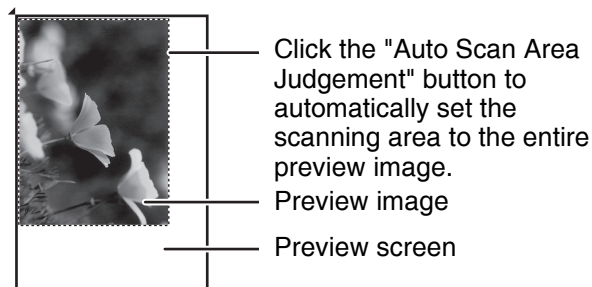
Click to rotate the preview image 90 degrees clockwise. This allows the orientation to be corrected without resetting the original. Upon scanning, the image file is created in the orientation shown in the preview screen.

### ③ "Image Size" button

Click to open a dialog box that allows you to specify the scanning area by entering numbers. Pixels, mm, or inches can be selected for the units of the numbers. By initially specifying a scanning area, numbers can be entered to change that area relative to the top left corner as a fixed origin.

### ④ "Auto Scan Area Judgement" button

Click when the preview screen is displayed to automatically set the scanning area to the entire preview image.



### ⑤ "Help" button

Click to display the help file for the scanner driver.

# SCANNING FROM A WIA-COMPLIANT APPLICATION (Windows 7/8.1/10)

If you are using Windows 7/8.1/10, you can use the WIA driver to scan from Paint and other WIA-compliant applications. The procedure for scanning using Paint is explained in the following.



WIA cannot be used on network function standard models and on models with the network expansion kit installed.

## 1 Place the original that you wish to scan on the document glass/RSPF.

For information on setting an original for scanning, refer to ["SCANNING USING THE KEYS ON THE MACHINE"](#) (p.79).

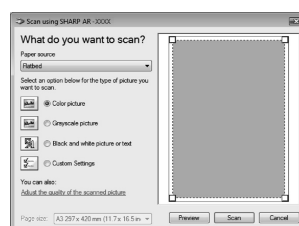
## 2 Start Paint and then click the "File" menu and select "From Scanner or Camera".

The scan screen of the WIA driver will appear.



If you have WIA drivers for other devices installed in your computer, the "Select Device" screen will open. Select "SHARP AR-xxxx" and click the "OK" button.

## 3 Select the paper source and picture type, and click the "Preview" button.



The preview image will appear.

If you placed the original on the document glass, select "Flatbed" for the "Paper source".

If you placed the original in the RSPF, select "Document Feeder" for the "Paper source" and specify the original size in "Page size".



If you select "Document Feeder" for the "Paper source" and click the "Preview" button, the top original in the RSPF is previewed. The previewed original is sent to the original exit area, so you will need to return it to the RSPF before starting the scanning job.

# 5

## 4 Click the "Scan" button.

Scanning begins and the image is acquired into Paint.

Use "Save" in your application to specify a file name and folder for the scanned image, and save the image.

To cancel a scanning job after clicking the "Scan" button, click the "Cancel" button.

This chapter explains how to set the automatic exposure level, toner save mode/high image quality mode, network settings through your web browser, and the system settings, which are custom settings that control fine points of the machine's operation.

## ADJUSTING THE AUTOMATIC EXPOSURE LEVEL

The exposure level used in automatic exposure adjustment, which automatically adjusts the copy exposure according to the original, can be adjusted. If copies tend to be too dark or too light when automatic exposure adjustment is used, follow the steps below to adjust the automatic exposure level.

The automatic exposure level can be adjusted separately for the document glass and the RSPF.






The copy, scanner and printer functions cannot be used while the automatic exposure level is being adjusted.




- 1 To adjust the automatic exposure level in the RSPF, place the original in the RSPF. (p.45)**

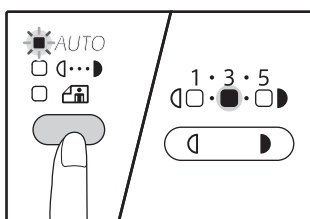
Make sure that the RSPF indicator is lit.



To adjust the automatic exposure level for copies made from originals placed on the document glass, proceed to step 2.

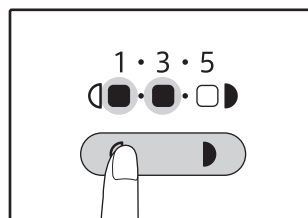
- 2 Press the [AUTO/TEXT/PHOTO] key (  /  ) to select "PHOTO" (  ).**

- 3 Hold down the [AUTO/TEXT/PHOTO] key (  /  ) until the AUTO indicator (  ) blinks.**




The exposure level indicators show the current setting.

- 4 Press the [Light] key (  ) or [Dark] key (  ) to lighten or darken the automatic exposure level as desired.**



- 5 Press the [AUTO/TEXT/PHOTO] key (  /  ) to complete the setting.**

The AUTO indicator (  ) stops blinking and lights steadily.



After adjusting the automatic exposure level, it is recommended that you make a test copy to check the new level.



# TONER SAVE MODE AND HIGH IMAGE QUALITY MODE

Toner save mode can be enabled to reduce toner consumption by about 10%. (The amount of the saved toner varies depending on the type of original.)

The high image quality mode improves copy image quality in the automatic and manual exposure modes by increasing copy density with a slight increase of toner consumption.

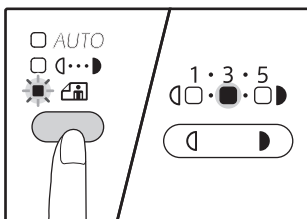
To switch between toner save mode and high image quality mode, follow the steps below.



Toner save mode is initially selected.

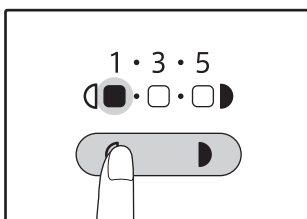
**1 Press the [AUTO/TEXT/PHOTO] key**  
( / / ) to select "TEXT"  
().

**2 Hold down the [AUTO/TEXT/PHOTO] key**  
( / / ) until the PHOTO indicator ( ) blinks.



The exposure level indicators show the current setting.

**3 To enable toner save mode, press the [Light] key** ( ). To enable high image quality mode, press the [Dark] key ( ).



When enabling toner save mode, make sure that "1" is lit.  
When enabling high image quality mode, make sure that "5" is lit.

**4 Press the [AUTO/TEXT/PHOTO] key**  
( / / ) to complete the setting.



The PHOTO indicator ( ) stops blinking and lights steadily.


# CUSTOMISING SETTINGS (System Settings)

The system settings allow you to customise the machine to match your needs.

## SYSTEM SETTINGS

Program number	Program name	Setting codes (factory default setting appears in bold)	Explanation
1	Auto clear time	1: OFF 2: 10 sec. 3: 20 sec. <b>4: 60 sec.</b> 5: 90 sec. 6: 120 sec.	<ul style="list-style-type: none"> <li>"Auto clear time" automatically returns the copy settings to the initial settings (p.37) when a certain period of time elapses after a copy is made. This program is used to select the period of time. "Auto clear time" can also be disabled.</li> </ul>
2	Preheat mode	<b>1: 1 min.</b> 2: 5 min. 3: 15 min. 4: 30 min. 5: 60 min. 6: 120 min. 7: 240 min.	<ul style="list-style-type: none"> <li>This function automatically switches the machine to a low power consumption state if the set duration of time elapses without the machine being used when the power is on. The POWER SAVE indicator (☉) lights up, however, the keys on the operation panel can be used. Normal operation automatically resumes when a key on the operation panel is pressed, a print job is received or an original is placed.</li> </ul>
3	Auto power shut-off timer	1: 5 min. <b>2: 15 min.</b> 3: 30 min. 4: 60 min. 5: 120 min. 6: 240 min.	<ul style="list-style-type: none"> <li>This function automatically switches the machine to a state that consumes even less power than preheat mode if the set duration of time elapses without the machine being used when the power is on. The POWER SAVE indicator (☉) will only blink. To resume normal operation, press the [POWER SAVE] key (☉). Normal operation also resumes automatically when a print job is received. While in auto power shut-off mode, no keys (except the [POWER SAVE] key (☉)) can be used.</li> </ul>
4	Stream feeding mode <sup>*1</sup>	<b>0: OFF</b> 1: ON	<ul style="list-style-type: none"> <li>When copying using the RSPF, during the period of time that the RSPF indicator blinks after an original has been scanned (about 5 seconds), a subsequent original can be placed and automatically fed into the machine.</li> </ul>
5	Auto power shut-off setting	0: OFF <b>1: ON</b>	<ul style="list-style-type: none"> <li>Use this setting to enable or disable auto power shut-off.</li> </ul>
6	Border line for 2 IN 1 / 4 IN 1	<b>1: OFF</b> 2: Solid line 3: Broken line	<ul style="list-style-type: none"> <li>When copying multiple originals onto a single sheet of paper (2 IN 1 / 4 IN 1 copy), this function can be used to print a solid or broken borderline around each original image.</li> </ul>
7	Rotation copy	0: OFF <b>1: ON</b>	<ul style="list-style-type: none"> <li>When the auto paper select function is enabled and there is no paper that is the same size as the original and loaded in the same orientation, this function will automatically select paper of the same size that is loaded in the opposite orientation, and rotate the image 90 degrees so that it is copied on the paper in the correct orientation.</li> <li>When the auto ratio select function is operating and the original and paper are loaded in opposite orientations, this function rotates the image so that it is copied on the paper in the correct orientation.</li> </ul>
8	Auto paper select mode <sup>*2</sup>	0: OFF <b>1: ON</b> 2: Bypass off	<ul style="list-style-type: none"> <li>This function automatically selects paper that is the same size as the original placed in the RSPF, or the same size as that selected with the [ORIGINAL] key (☐ORIGINAL). The function can be disabled.</li> </ul>

Program number	Program name	Setting codes (factory default setting appears in bold)	Explanation
9	Auto tray switching <sup>*2</sup>	0: OFF <b>1: ON</b> 2: Bypass off	<ul style="list-style-type: none"> <li>If the paper runs out during printing and there is paper of the same size and orientation in another tray, this function automatically switches to that tray. The function can be disabled.</li> </ul>
10 to 15	Auditing mode	—	See <a href="#">"AUDITING MODE SETTINGS" (p.98)</a> .
16	Erase width adjustment	1: 0 mm 2: 5 mm <b>3: 10 mm</b> 4: 15 mm 5: 20 mm	<ul style="list-style-type: none"> <li>Use this setting to set the width of erasure of shadows that appear around the edges and at the binding margin when a book or similar original is copied.</li> </ul>
17	Layout in 2 IN 1 copy	<b>1: Pattern 1</b> 2: Pattern 2	<ul style="list-style-type: none"> <li>Use this setting to select the layout pattern when two original pages are copied onto a single sheet of paper (see page 62 for the layout patterns).</li> </ul>
18	Layout in 4 IN 1 copy	<b>1: Pattern 1</b> 2: Pattern 2 3: Pattern 3 4: Pattern 4	<ul style="list-style-type: none"> <li>Use this setting to select the layout pattern when four original pages are copied onto a single sheet of paper (see page 62 for the layout patterns).</li> </ul>
20	Image rotation in duplex copying <sup>*3</sup>	<b>0: OFF</b> 1: ON	<ul style="list-style-type: none"> <li>When a one-sided vertical (portrait) original is placed in a horizontal orientation (8K, B4 or A3 ) size) for two-sided copying, the top and bottom of the images on the front and back of the paper will be opposite to each other.</li> </ul>
21	Location of the margin <sup>*1</sup>	<b>1: Left edge</b> 2: Top edge	<ul style="list-style-type: none"> <li>Use this setting to switch between the margin at the top edge and the margin at the left edge.</li> </ul>
22	Margin width	1: 0 mm 2: 5 mm <b>3: 10 mm</b> 4: 15 mm 5: 20 mm	<ul style="list-style-type: none"> <li>Use this setting to set the margin width.</li> </ul>
24	Memory allocated to printer mode <sup>*3</sup>	1: 30% 2: 40% <b>3: 50%</b> 4: 60% 5: 70%	<ul style="list-style-type: none"> <li>Use this to change the proportion of machine memory used for printer mode.</li> </ul>
25	Key auto repeat	0: OFF <b>1: ON</b>	<ul style="list-style-type: none"> <li>Use this setting to select whether or not holding down a key causes repeated input of the key. For keys that normally cause a set value to increase when held down (for example, holding down the [Copy ratio] key (  ,  )), this program can be used to have the set value not change when the key is held down.</li> </ul>
26	Key press time	<b>1: Minimum</b> (current response speed) 2: 0.5 sec. 3: 1.0 sec. 4: 1.5 sec. 5: 2.0 sec.	<ul style="list-style-type: none"> <li>Use this setting to select how long a key must be pressed for the input to be accepted. By selecting a longer time, you can prevent settings from being changed by the accidental pressing of a key.</li> </ul>
27	Audible signals volume	<b>1: Short beep</b> 2: Long beep 3: OFF	<ul style="list-style-type: none"> <li>This sets the volume of beep signals. (p.95)</li> </ul>
28	Base setting beep signal	<b>0: OFF</b> 1: ON	<ul style="list-style-type: none"> <li>Use this to sound a beep when a base setting is selected. (p.95)</li> </ul>
29	Number of copies limit	1: 99 copies <b>2: 999 copies</b>	<ul style="list-style-type: none"> <li>Use this setting to select 99 or 999 for the maximum number of copies.</li> </ul>
30	Use close paper size	<b>0: OFF</b> 1: ON	<ul style="list-style-type: none"> <li>When this function is enabled, printing in printer mode will automatically continue using a different size of paper if the specified size of paper runs out in all trays. This feature does not function in copy mode.</li> </ul>


Program number	Program name	Setting codes (factory default setting appears in bold)	Explanation
31	Default tray setting <sup>*2</sup>	<b>1: Tray1</b> 2: Tray2 5: Bypass tray	• Use this program to select a default tray. This tray is automatically selected each time the power is turned on or each time the machine reverts to the initial settings.
32	Default exposure mode	<b>1: AUTO</b> 2: TEXT 3: PHOTO	• Use this program to set "AUTO", "TEXT", or "PHOTO" as the default exposure mode.
33	USB 2.0 mode switching	1: Full-Speed <b>2: Hi-Speed</b>	• This sets the USB 2.0 data transfer speed. If your computer is not compatible with USB 2.0 (Hi-Speed), use this program to change the USB 2.0 mode to "Full-Speed".
34	Sort auto select <sup>*1</sup>	1: OFF <b>2: Sort</b> 3: Group	• Use this setting to select the default output mode for copying from the RSPF.
35	ID card	<b>0: Auto Select</b> 1: Pattern 1 2: Pattern 2	• Use this setting to copy the front and back sides of ID card onto a page.
36	Auto power shut-off switching immediately after print job finishes	0: OFF <b>1: ON</b>	• This function automatically switches the machine to auto power shut-off mode immediately after a print job finishes. If "OFF" is set, the duration of time for the Auto power shut-off timer set in the program number (3) is enabled.
37	IP ADDRESS SETTING <sup>*4</sup>	ENABLE DHCP - <b>YES</b> - 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 <a href="#">"ENABLING/DISABLING DHCP" (p.96)</a> .
		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 <a href="#">"SETTING THE IP ADDRESS" (p.97)</a> .
38	Status display pattern switching	<b>1: Pattern 1</b> 2: Pattern 2	• This sets the display pattern of the data notification indicator (  ).
39	The number of ID Card copy setting	1: Single <b>2: Multi</b>	• This function is used to set the number of copies when copying ID card.
40	The memory method of paper type on bypass tray settings	0: Memory <b>1: No memory</b> <sup>*5</sup>	• This function is used to set the paper type on bypass tray.
54	Default exposure setting of ID Card copy	<b>0: Text 3.0</b> 1: Auto 2: Photo 3.0	• This function is used to set default exposure of ID Card copy.

<sup>\*1</sup> When the RSPF is installed.

<sup>\*2</sup> When the 500-sheet paper feed units are installed.

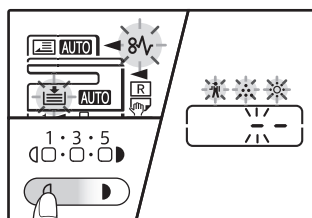
<sup>\*3</sup> AR-2048DV/2348DV/2048NV/2348NV/2648NV/3148NV.

<sup>\*4</sup> When the network expansion kit is installed or with the AR-2048NV/2348NV/2648NV/3148NV.

<sup>\*5</sup> When pressed [CLEAR ALL] key(  ), exceeding the auto clear time, resumed auto-power shut-off mode, or power on and off, the paper type on bypass tray will resume to plain paper.

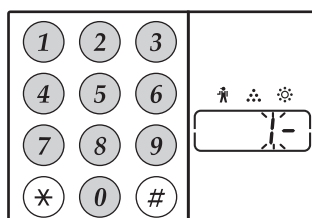
# SELECTING A SETTING FOR A SYSTEM SETTING

- 1** Hold down the [Light] key (  ) until the alarm indicators ( , , , ,  ) blink.




The number of copies display shows "- -" with the left hyphen blinking.

- 2** Enter the program number with the numeric keys.

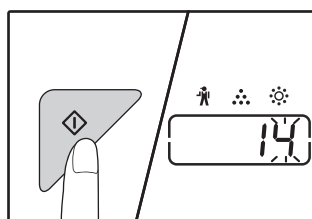


- See "SYSTEM SETTINGS" (p.92 to p.94) for the program numbers.
- The selected program number blinks.
- For example, to select "Auto clear timer", press the [1] key.



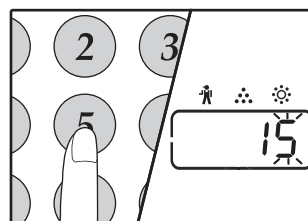
If you enter the wrong number, press the [CLEAR] key (  ) and then enter the correct number.

- 3** Press the [START] key (  ).




- The selected program number stops blinking and lights steadily.
- The currently selected setting code blinks on the right side of the display.

- 4** Enter the desired setting code by pressing a numeric key.

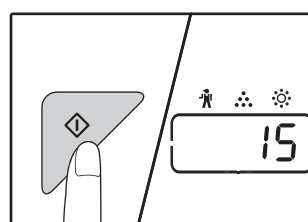


- For the setting codes, see "SYSTEM SETTINGS". (p.92 to p.94).
- The selected setting code blinks.
- For example, to select 90 seconds, press the [5] key.




If you enter the wrong number, press the [CLEAR] key (  ) and return to step 2.

- 5** Press the [START] key (  ).








The selected setting code stops blinking and lights steadily.



To select a setting for another system setting, press the [CLEAR] key (  ) and then return to step 2.

- 6** Press the [Light] key (  ) to complete the settings.

The alarm indicators ( , , , ,  ) go off and the display returns to the number of copies display.

## Audible signals (key entry beep, invalid key beep, base setting beep)

The machine sounds three different types of beep signals: a key entry beep that sounds when a valid key is pressed, an invalid key beep that sounds when an invalid key is pressed, and a base setting beep that sounds when a setting is the same as the base setting (base settings are explained below). The base setting beep is initially disabled. If you wish to enable the base setting beep, see "Base setting beep signal" on page 93. If you wish to change the volume of the beep signals or disable them, see "Audible signals volume" on page 93. The beep patterns of each type of beep signal are as follows:

Key entry beep ..... One beep  
Invalid key beep ..... Two beeps

Base setting beep ..... Three beeps

## Base settings

The base settings are preset standard selections for each copy setting. The base settings are as follows:

Copy ratio ..... 100%  
Light and Dark indicator ..... 3  
Paper feed location ..... Upper paper tray

ORIGINAL SIZE ..... A4  
AUTO/TEXT/PHOTO (  /  /  ) ..... AUTO

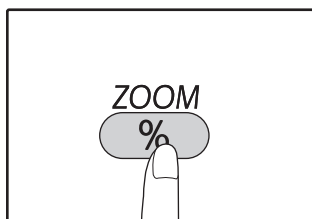
# SETTING THE IP ADDRESS OF THE MACHINE BY SYSTEM SETTINGS


To set the IP address of the machine, perform the program number (37) in the system settings (p.92).

## 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 [ZOOM] key ( ).



- Every press of [ZOOM] 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.



**When the ZOOM indicator is lit:**

DHCP is enabled.

**When the ZOOM indicator is off:**


DHCP is disabled.

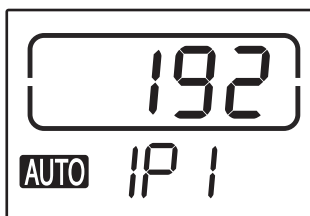


If DHCP is used, the IP address assigned to the machine may change automatically. If the IP address changes, printing will not be possible.

# SETTING THE IP ADDRESS


This section explains how to set the IP address on the machine.

- 1 Refer to the system settings procedure on page 89 to enter setting code "37", and press the [START] key (  ).**




The left 3 digits of the IP address appear in the number of copies display. "IP1" appears in the ratio display.

- 2 Press the [ZOOM] key (  ).**

- The ratio auto select indicator (  ) turns off, and the leftmost 3 digits of the IP address can be entered.
- The ratio auto select indicator lights up for factory default settings. It is necessary to press the [ZOOM] key when you set the IP address for the first time. When you change the IP address, go to step 3.

- 3 Enter the IP address with the numeric keys.**

To return the display to 0, press the [Clear] key (  ).

- 4 Press the [START] key (  ).**

The leftmost 3 digits of the IP address are finalized.

"IP2" appears in the ratio display, and the second 3 digits from the left can be entered.


- 5 Repeat steps 3 and 4 to enter the remaining digits of the IP address.**

Enter the second 3 digits from the left, the third 3 digits from the left, and the rightmost 3 digits of the IP address in the same way.

- 6 Press the [Copy ratio] key (  ).**

"SU1" appears in the ratio display, and the subnet mask can be entered.

- 7 Enter the subnet mask with the numeric key.**

To return the display to 0, press the [Clear] key (  ).

- 8 Press the [START] key (  ).**

The leftmost 3 digits of the subnet mask are finalized.

"SU2" appears in the ratio display, and the second 3 digits from the left can be entered.


- 9 Repeat steps 8 and 9 to enter the remaining digits of the subnet mask.**

Enter the second 3 digits from the left, the third 3 digits from the left, and the rightmost 3 digits of the subnet mask in the same way.

- 10 Press the [Copy ratio] key (  ).**

"dE1" appears in the ratio display, and the default gateway can be entered.

- 11 Enter the default gateway with the numeric key.**

To return the display to 0, press the [Clear] key (  ).






- 12 Press the [START] key (  ).**

"dE2" appears in the ratio display, and the second 3 digits from the left can be entered.

- 13 Repeat steps 13 and 14 to enter the remaining digits of the default gateway.**

Enter the second 3 digits from the left, the third 3 digits from the left, and the rightmost 3 digits of the default gateway in the same way.

- 14 Press the [Light] key (  ) to complete the settings.**

The alarm indicators (  ,  ,  ,  ,  ) go off and the display returns to the number of copies display.

Complete the setting, restart the machine.



# SETTINGS FOR AUDITING MODE

## AUDITING MODE

When "Auditing mode" is enabled, a count is kept of the number of copies made by each account (up to 20 accounts can be established), and the counts can be displayed and totalled as necessary. In "Auditing mode", the number of copies display shows "- - -", and this indicates that a 3-digit account number must be entered in order to use the machine for copying.



The administrator of the machine should complete the following settings:

- Enable "Auditing mode" ([p.100](#))
- Account number entry ([p.100](#))

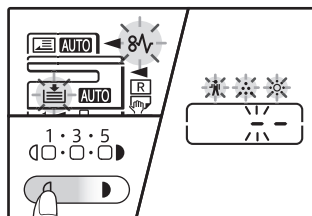
## AUDITING MODE SETTINGS

Program number	Program name	Setting codes (factory default settings are indicated in bold)	Explanation
10	Auditing mode	<b>0: OFF</b> 1: ON	Use to enable or disable "Auditing mode". "Auditing mode" is initially disabled.
11	Account number entry	None	Use to set up account numbers. Up to 20 accounts can be established.
12	Account number change	None	Use to change an account number.
13	Account number deletion	<b>0: Delete single account</b> 1: Delete all accounts	Use to delete an account number. A single account number can be deleted, or all account numbers at once.
14	Number of copies per account	None	This displays the number of copies made by each account. The maximum count is 49,999. If this number is exceeded, the count will start over from 0.
15	Resetting account	<b>0: Reset single account</b> 1: Reset all accounts	Use to reset the copy count of an account to 0. The copy count of a single account or of all accounts can be reset.








# SELECTING AUDITING MODE SETTINGS

- 1 Hold down the [Light] key (  ) until the alarm indicators ( , , , ,  ) blink.**

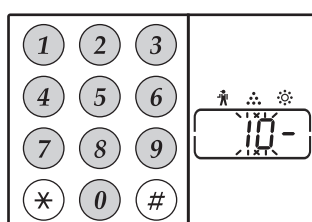


The number of copies display shows "- -" with the left hyphen blinking.

- 5 Press the [Light] key (  ) to complete the settings.**


The alarm indicators ( , , , ,  ) go off and the display returns to the number of copies display.

- 2 Enter the program number with the numeric keys.**

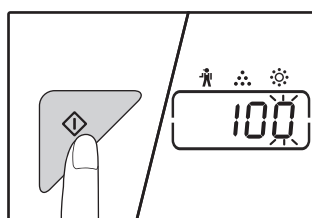


- See ["AUDITING MODE SETTINGS" \(p.98\)](#) for the program numbers.
- The selected program number blinks.
- For example, to select "Auditing mode", enter "10".



If you enter the wrong number, press the [CLEAR] key (  ) and then enter the correct number.

- 3 Press the [START] key (  ).**





- The selected program number stops blinking and lights steadily.
- The currently selected setting code blinks on the right side of the display.

- 4 Enter the desired setting code for the program as explained in the detailed procedures on the following pages.**

For the setting codes, see ["AUDITING MODE SETTINGS" \(p.98\)](#).



- If you enter the wrong number, press the [CLEAR] key (  ) and return to step 2.
- If "E" (error code) blinks in the first digit of the display, press the [CLEAR] key (  ) and return to step 2.

## Auditing mode (program No.10)

- 1 Press the [1] key to enable "Auditing mode" or the [0] key to disable it, and then press the [START] key (↵).



After enabling "Auditing mode", use "Account number entry" to establish account numbers for each account (up to 20 accounts can be established).

- 2 Press the [CLEAR] key (C).

## Account number entry (program No.11)

If 20 accounts have already been established, the error code "11E" will appear in the number of copies display.

- 1 Use the numeric keys to enter a 3-digit number (any number except "000") and then press the [START] key (↵).



- If you enter "000" or a number that has already been stored, the number will blink in the display. Enter a different number. (Up to 20 accounts can be established.)
- Repeat the same procedure to enter any other account numbers that you wish to establish.
- Keep a record of what group is using each account number (account names cannot be stored, so keep a record to prevent confusion when totalling account values).

- 2 Press the [CLEAR] key (C).

## Account number change (program No.12)

Use this procedure to change an account number. If no account numbers have been established, the error code "12E" will appear in the number of copies display.

- 1 Press the [ZOOM] key (⌂) to select the account number that you wish to change, and then press the [START] key (↵).  
The number of copies display will show 3 blinking hyphens "- - -".
- 2 Press the numeric keys to enter a new account number (any 3-digit number except "000"), and then press the [START] key (↵).



- If you enter "000" or a number that has already been stored, the number will blink in the display. Enter a different number.
- To change another account number, repeat steps 1 and 2.

- 3 When finished, press the [CLEAR] key (C).

## Account number deletion (program No.13)

Use this procedure to delete account numbers.

A single account number can be deleted, or all account numbers at once.

If no account numbers have been established, the error code "13E" will appear in the display.

### [Deleting all accounts at once]

Press the [1] key and then press the [START] key (↵).

All account numbers will be deleted.

### [Deleting a single account]

- 1 Press the [0] key, and then press the [START] key (↵).
- 2 Select the account number to be deleted with the [ZOOM] key (⌂) and then press the [START] key (↵).



To delete another account number, enter the program number (13) for account number deletion and then repeat the procedure for "Deleting a single account".

## Number of copies per account (program No.14)

Use this procedure to display the copy count of each account. If no account numbers have been established, the error code "14E" will appear in the display.

- 1 Select the account number with the [ZOOM] key (⌂).
- 2 Hold down the [0] key.

The copy count of the selected account will appear in the number of copies display while you hold down the [0] key. The count is displayed sequentially as shown below.

Example: 12,345 copies

- 12 → 345



- Each A3 size page is counted as two pages.
- To view the copy count of another account, repeat steps 1 and 2.

- 3 When finished, press the [CLEAR] key (C).

## Resetting account (program No.15)

The copy count of a single account or all accounts can be reset to 0. If no account numbers have been established, the error code "15E" will appear in the display.

### [Resetting all accounts]

Press the [1] key and then press the [START] key (⏏).

The copy counts of all accounts will be deleted.

### [Resetting a single account]

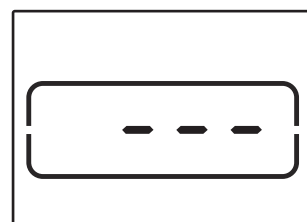
- 1 Press the [0] key, and then press the [START] key (⏏).
- 2 Select the account number to be reset with the [ZOOM] key (⏏) and then press the [START] key (⏏).



To reset another account number, enter the program number (15) for account number deletion and then repeat the procedure for "Resetting a single account".

## Copying when "Auditing mode" is enabled

When "Auditing mode" is enabled, "- - -" appears in the number of copies display.



### 1 Enter your 3-digit account number with the numeric keys.

When you enter your account number, "0" appears in the number of copies display to indicate that copying is possible.



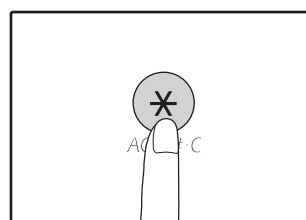
If you enter an incorrect number, press the [CLEAR] key (⏏) and then enter the correct number.

### 2 Follow the appropriate steps to make the copy.



If you are performing an interrupt copy (p.57), be sure to press the [INTERRUPT] key (⏏) when finished to exit interrupt mode.

### 3 When finished, press the [\*] key (ACC.#-C).



If a misfeed occurs or the paper runs out during copying, your session will not end even if the [\*] key (ACC.#-C) is pressed.

If you experience difficulty using the machine, check the following troubleshooting guide before calling for service. Many problems can be easily resolved by the user. If you are unable to solve the problem using the troubleshooting guide, turn off the power switch and unplug the machine, and contact your authorised service representative.

## TROUBLESHOOTING

### MACHINE/COPYING PROBLEMS

The machine does not operate. ....	103
Copies are too dark or too light. ....	103
Blank copies. ....	103
Part of the image is cut off or there is too much blank space. ....	103
Wrinkles appear in the paper or the image disappears in places. ....	103
Paper misfeed. ....	104
Original size not selected automatically. (When the RSPF is installed.) ....	104
Copies are smudged or dirty. ....	104
White or black lines appear on copies. ....	104
Paper size for a paper tray cannot be set. ....	104
A copy job stops before it is finished. ....	105
The POWER SAVE indicator (☾) is lit or blinking. ....	105
Any one of the alarm indicators (⚠, ⚡, ⚡, ⚡, ⚡) is lit or blinking. ....	105
Lighting fixture flickers. ....	105

### PRINTING AND SCANNING PROBLEMS

The machine does not print. (Data notification indicator does not blink.) ....	106
The machine does not print. (Data notification indicator was blinking.) ....	106
A Notice Page (NP-001) has been printed, but the print data has not been printed completely. ....	107
Printing is slow. ....	107
The printed image is light and uneven. ....	107
The printed image is dirty. ....	107
The printed image is skewed or it runs off the paper. ....	107
The printed image is darker or lighter than expected. ....	107
Any one of the alarm indicators (⚠, ⚡, ⚡, ⚡, ⚡) is lit or blinking. ....	107
Poor scanning quality. ....	108
Unable to scan the image. ....	109

### NETWORKING PROBLEMS

Cannot connect to the network. ....	110
Print jobs are not received. ....	110
Printing does not take place. ....	110
The scanned image data cannot be opened. ....	110
Transmission takes a long time. ....	110
The START indicator is not lit in the USB Memory Scan mode. ....	111
"ERR" appears in the display during Scan to Desktop mode. ....	111
"ERR" appears in the display during USB Memory Scan. ....	111
"ERR" appears during Scan to Sharpdesk Mobile. ....	111
"FUL" appears in the display during USB Memory Scan. ....	111

### INDICATORS AND DISPLAY MESSAGES..... 112

### MISFEED REMOVAL..... 113

### REPLACING THE TONER CARTRIDGE..... 120

# TROUBLESHOOTING

## MACHINE/COPYING PROBLEMS

The following problems are related to the general operation of the machine and copying.







Problem	Cause and solution	Page
The machine does not operate.	<b>The machine is not plugged into a power outlet.</b> → Plug the machine into a grounded outlet.	–
	<b>Power switch OFF.</b> → Turn the power switch ON.	37
	<b>The START indicator ( ) is blinking.</b> → Indicates that the machine is warming up. Copies cannot be made until the machine has finished warming up.	37
	<b>The front cover or the side cover is not completely closed.</b> → Close the front cover or the side cover.	–
	<b>The machine is in auto power shut-off mode.</b> → In auto power shut-off mode, all lights are off except the POWER SAVE indicator ( ) is blinking. Press the [POWER SAVE] key ( ) to resume normal operation.	37
	<b>PAPER SIZE indicator in the display is blinking.</b> → A blinking PAPER SIZE indicator means that the size of paper loaded in the tray is different from the paper size setting for the tray. Change the paper size setting. To clear the display, do one of the following: • Use the [TRAY] key to change the tray selection. • Open and close the tray. • Press the [CLEAR ALL] key ( ).	41, 47
Copies are too dark or too light.	<b>Select the correct original type for the original.</b> → Select AUTO with the [AUTO/TEXT/PHOTO] key or press the [Light] key ( ) and [Dark] key ( ) to manually select an appropriate exposure.	47
	→ If the copy is too light or too dark even though AUTO was selected with the [AUTO/TEXT/PHOTO] key ( AUTO / ), adjust the automatic exposure level.	90
Blank copies.	<b>The original is not placed face up in the RSPF or face down on the document glass.</b> → Place the original face up in the RSPF or face down on the document glass.	44, 45
Part of the image is cut off or there is too much blank space.	<b>The original was not placed in the correct position.</b> → Place the original correctly.	44, 45
	<b>An appropriate ratio was not used for the size of the original and the size of the paper.</b> → Press the [ZOOM] key ( ) to have the copy made using the appropriate ratio for the original and paper.	48
	<b>The size of paper loaded in the tray was changed without changing the tray's paper size setting.</b> → Be sure to change the tray's paper size setting whenever you change the size of paper loaded in the tray.	41
Wrinkles appear in the paper or the image disappears in places.	<b>The paper is outside of the specified size and weight range.</b> → Use copy paper within the specified range.	38
	<b>Paper curled or damp.</b> → 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.	–

Problem	Cause and solution	Page
<b>Paper misfeed.</b>	<b>Misfeed occurs.</b> → To remove the misfeed, see "MISFEED REMOVAL".	113
	<b>The paper is outside of the specified size and weight range.</b> → Use copy paper within the specified range.	38
	<b>Paper curled or damp.</b> → 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.	—
	<b>Paper is not loaded properly.</b> → Make sure the paper is properly installed.	39
	<b>Pieces of paper inside machine.</b> → Remove all pieces of misfed paper.	113
	<b>Too much paper is loaded in the tray.</b> → If the stack of paper is higher than the indicator line on the tray, remove some of the paper and reload so that the stack does not exceed the line.	39
	<b>The guides on the bypass tray do not match the width of the paper.</b> → Adjust the guides to match the width of the paper.	40
	<b>The bypass tray extension is not pulled out.</b> → When loading a large size of paper, pull out the extension.	40
	<b>The bypass paper feed roller is dirty.</b> → Clean the roller.	124
<b>Original size not selected automatically.</b> (When the RSPF is installed.)	<b>Original(s) curled.</b> → The original size cannot be correctly detected if the original is curled or folded. Straighten the original.	—
	<b>The machine is directly exposed to sunlight.</b> → Install in a location that is not exposed to sunlight.	—
<b>Copies are smudged or dirty.</b>	<b>The document glass or the underside of the document cover/RSPF is dirty.</b> → Clean regularly.	123
	<b>Original smudged or blotchy.</b> → Use a clean original.	—
<b>White or black lines appear on copies.</b>	<b>The scanner glass for the RSPF is dirty.</b> → Clean the long, narrow scanning glass.	123
<b>Paper size for a paper tray cannot be set.</b>	<b>Copying or printing is performed.</b> → Set the paper size after copying or printing is complete.	—
	<b>The machine has stopped temporarily due to running out of paper or a misfeed.</b> → Load paper or remove the misfeed, and then set the paper size.	39, 113
	<b>An interrupt copy job is in progress.</b> → Set the paper size after the interrupt copy job is finished.	57
	<b>The number of copies display is blinking.</b> → Data is being held in memory. Print the data in memory or clear it from memory.	60, 62

Problem	Cause and solution	Page
A copy job stops before it is finished.	<b>The paper output tray is full.</b> → Long copy runs are automatically paused every 250 copies. Remove the copies in the paper output tray and press the [START] key (⏏) to resume copying.	48
	<b>"FUL" appear in the number of copies display.*</b> → The memory became full during sort/group/rotate sort copy or 2 IN 1 / 4 IN 1 copy. Copy only the originals that have been scanned to that point, or cancel the job and clear the data from memory.	60, 62
	<b>The tray is out of paper.</b> → Load paper.	39
The POWER SAVE indicator (Ⓢ) is lit or blinking.	<b>Any other indicators are lit.</b> → If other indicators are lit, the machine is in "Preheat mode". Press any key on the operation panel to resume normal operation.	37
	<b>The POWER SAVE indicator (Ⓢ) is only blinking.</b> → If only the POWER SAVE indicator (Ⓢ) is blinking, the machine is in auto power shut-off mode. Press the [POWER SAVE] key (Ⓢ) to resume normal operation.	37
Any one of the alarm indicators (⚠, 🔥, ⚡, ⚠, ⚠) is lit or blinking.	<b>See "INDICATORS AND DISPLAY MESSAGES" to check the meaning of the alarm indicator and error message in the display, and take appropriate action.</b>	112
Lighting fixture flickers.	<b>The same power outlet being used is for the lighting fixture and the machine.</b> → Connect the machine to a power outlet which is not used for other electric appliances.	—

## PRINTING AND SCANNING PROBLEMS

In addition to this section, troubleshooting information can also be found in the README files for each of the software programs. To view a README file, see ["INSTALLING THE SOFTWARE" \(p.10\)](#).

Problem	Cause and solution	Page
<b>The machine does not print.</b> (Data notification indicator does not blink.)	<b>The machine is set to off-line mode.</b> → Press the [ONLINE] key (  ) to turn on the ONLINE indicator.	66
	<b>The machine is not correctly connected with your computer.</b> → Check both ends of the printer cable and make sure you have a solid connection. Try a known good cable.	10
	<b>Copy job is performed.</b> → Wait until the copy job is complete.	—
	<b>Your machine is not selected correctly in the current application for the print job.</b> → 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.	—
	<b>The printer driver has not been installed properly.</b> → Follow these steps to check and see if the printer driver is installed. 1 Click the "Start" button (  ), click "Control Panel", and then click "Devices and Printers" (or "View devices and printers"). In Windows Server 2012, right-click in the Start screen (or swipe upward from the bottom edge), then click the App Bar → "All apps" → "Control Panel" → "Hardware and Sound" → "Devices and Printers" → "Printers". In Windows 8.1, click the (  ) icon in the start screen, then click the "Control Panel" → "Hardware and Sound" → "Devices and Printers" → "Printers". In Windows 10, right-click the "Start" button (  ), then click the "Control Panel" → "Hardware and Sound" → "Devices and Printers". In Windows Server 2016, right-click the "Start" button (  ), then click the "Control Panel" → "View Devices and Printers". 2 If the "SHARP AR-xxxx" printer driver icon is shown but you still cannot print, the printer driver may not have been installed correctly. In this case, delete the software and then reinstall it.	—
<b>The machine does not print.</b> (ONLINE indicator, Error indicator, PAPER SIZE indicator and Paper required indicator were blinking.)	<b>The tray size settings are not the same on the machine and in the printer driver.</b> → Make sure that the same tray paper size is set on the machine and in the printer driver. To change the tray's paper size setting on the machine, see "CHANGING A TRAY'S PAPER SIZE SETTING" or see "CONFIGURING THE PRINTER DRIVER" to change it in the printer driver.	23, 41
<b>The machine does not print.</b> (Data notification indicator was blinking.)	<b>The specified size of paper has not been loaded.</b> → Load the specified size of paper in the paper tray.	39
	<b>The PAPER SIZE indicator in the display is blinking.</b> → When "Use close paper size (system setting)" is disabled, the PAPER SIZE indicator in the display will blink. You can press the [TRAY] key to select a tray manually and press the [ONLINE] key (  ) to begin printing. → 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.	41, 47 —



Problem	Cause and solution	Page
<b>A Notice Page (NP-001) has been printed, but the print data has not been printed completely.</b>	<b>A print job containing more data than can be held in the print memory is sent to the machine.</b> → 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".	93
<b>Printing is slow.</b>	<b>Simultaneous use of two or more application software programs.</b> → Start printing after quitting all unused application software programs.	—
<b>The printed image is light and uneven.</b>	<b>The paper is loaded so that printing takes place on the back side of the paper.</b> → 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.	39
<b>The printed image is dirty.</b>	<b>You are using paper that is outside the specified size and weight range.</b> → Use copy paper within the specified range.	38
	<b>Paper curled or damp.</b> → 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.	—
	<b>You did not set sufficient margins in the paper settings of your application.</b> → 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.	—
<b>The printed image is skewed or it runs off the paper.</b>	<b>The paper loaded in the tray is not the same size as that specified in the printer driver.</b> → 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.	—
	<b>The orientation of document setting is not correct.</b> → Click the "Main" tab in the printer driver setup screen, and verify if the "Image Orientation" option is set to your requirements.	—
	<b>Paper is not loaded properly.</b> → Make sure the paper is properly loaded.	39
	<b>You did not correctly specify the margins for the application in use.</b> → Check the layout of the document margins and the paper size settings for the application you are using. Also check if the print settings are specified correctly to suit the paper size.	—
<b>The printed image is darker or lighter than expected.</b>	<b>The setting for the print density is not appropriate.</b> → You can adjust the print density on the printer driver. Click the "Advanced" tab in the printer driver setup screen, and click the "Compatibility" button. Select the "Print Density Level" from 1 (light) to 5 (dark).	—
<b>Any one of the alarm indicators (🔊, 📶, 🌞, ⚡, 📶) is lit or blinking.</b>	<b>See "INDICATORS AND DISPLAY MESSAGES" to check the meaning of the alarm indicator and error message in the display, and take appropriate action.</b>	112

Problem	Cause and solution	Page
Poor scanning quality.	<b>The document glass or the underside of the document cover/RSPF is dirty.</b> → Clean regularly.	123
	<b>Original smudged or blotchy.</b> → Use a clean original.	—
	<b>You have not specified a suitable resolution.</b> → Make sure that the resolution setting in the scanner driver is appropriate for the original.	—
	<b>You are scanning a large area (for example an entire A3) at high resolution.</b> → If you attempt to scan a large area at high resolution and there is insufficient memory in the machine to hold the scanned data, scanning will take place at a lower resolution and the scanner driver will enhance the data to make up for the lower resolution. However, the quality of the enhanced image will not be as high as if scanning took place at the higher resolution. Use a lower resolution setting, or scan a smaller area.	—
	<b>You have not specified a suitable value for the "B/W Threshold" setting.</b> → If you are scanning with a TWAIN-compliant application, make sure that a suitable value is specified for the "B/W Threshold" setting. A larger threshold value makes your output darker, while a small threshold value makes it lighter. To adjust the threshold automatically, click the "Auto Threshold" button on the "Image" tab of the "Professional" screen.	—
	<b>The brightness and contrast settings are not suitable.</b> → If you are scanning with a TWAIN-compliant application and the resulting image has unsuitable brightness or contrast (for example it is too bright), click the "Auto Brightness/Contrast Adjustment" button on the "Colour" tab of the "Professional" screen. Click the "Brightness/Contrast" button to adjust the brightness and the contrast while viewing the scanned output image on the screen. If you are scanning with a WIA-compliant application, click "Adjust the quality of the scanned picture" or the "Custom settings" button, and adjust the brightness and contrast in the screen that appears.	—
	<b>The original is not placed face up in the RSPF or face down on the document glass.</b> → Place the original face up in the RSPF or face down on the document glass.	44, 45
	<b>The original was not placed in the correct position.</b> → Place the original correctly.	44, 45


Problem	Cause and solution	Page
Unable to scan the image.	<b>If scanning is not possible, shut down your computer, turn off the machine's power switch, and unplug the machine's power cord. Next, start your computer, restore power to the machine, and try scanning again. If scanning is still not possible, check the following items.</b>	—
	<b>Your application is not TWAIN/WIA compliant.</b> → If your application is not TWAIN/WIA compliant, scanning will not be possible. Make sure your application is TWAIN/WIA compliant.	—
	<b>You have not selected the scanner driver of the machine in your application.</b> → Make sure that the machine's scanner driver is selected in your TWAIN/WIA-compliant application.	—
	<b>You have not specified all scanning preferences appropriately.</b> → Scanning a large area at high resolution results in a large amount of data and extended scanning times. The scanning preferences should be set appropriately for type of original to be scanned, i.e., Text, Text/Graphics, Photograph.	—
	<b>There is not enough machine memory.</b> → The scan resolution will vary depending on the scanning area and how much memory in the machine is free.	—

# NETWORKING PROBLEMS

## Points to check for connections

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

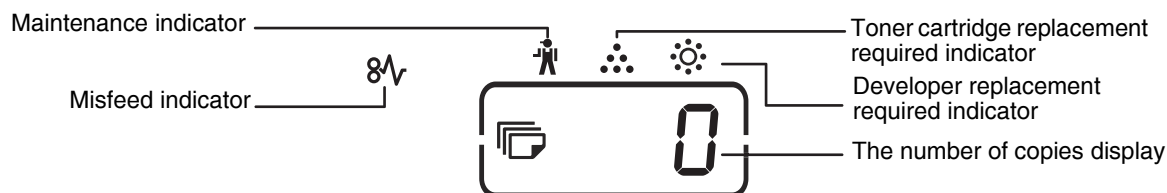
If you are using a port created using Standard TCP/IP Port in Windows environment, printing may not take place correctly if "SNMP Status Enabled" is selected in the port settings of the printer driver. Open the printer driver properties and click the "Configure Port" button on the "Ports" tab. In the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








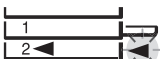
Problem	Cause and solution	Page
<b>Cannot connect to the network.</b>	<b>The LAN cable is disconnected.</b> → Make sure that the LAN cable is firmly inserted in the LAN connectors and your computer.	10
	<b>The machine configured for use is not on the same network as the computer.</b> → The machine cannot 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.	—
<b>Print jobs are not received.</b> (Data notification indicator does not blink.)	<b>The machine is set to off-line mode.</b> → Press the [ONLINE] key (  ) to turn on the ONLINE indicator.	70
	<b>Your machine is not selected correctly in the current application for the print job.</b> → 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.	—
	<b>Copy or scan job is performed.</b> → Wait until the copy or scan job is complete.	—
	<b>The printer driver has not been installed correctly.</b> → Install the proper printer driver.	8
	<b>The port setting is not correct.</b> → Printing is not possible if the printer driver port setting is not correct. Set the port correctly.	8
<b>Printing does not take place.</b> (Data notification indicator is blinking.)	<b>There is no paper in the specified tray.</b> → Load paper in the tray.	38
<b>The scanned image data cannot be opened.</b>	<b>The viewer program does not support the format of the scanned image data.</b> → 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: <a href="http://www.adobe.com/">http://www.adobe.com/</a>	—
<b>Transmission takes a long time.</b>	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 Scan to Desktop mode.	In the case of executing Scan to Desktop, an error will occur on the machine if the network scanner tool profile is deleted before Scan to Desktop is used. → If scanning is executed using Sharpdesk Mobile on the mobile device after a network scanner tool profile is registered, the network scanner tool profile will be deleted. If you need to use Scan to Desktop, re-register the network scanner tool profile.	82
"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.	–
"ERR" appears during Scan to Sharpdesk Mobile.	You have not registered the machine on Sharpdesk Mobile in the mobile devices. → Register the machine on Sharpdesk Mobile.	82
"FUL" appears in the display during USB Memory Scan.	The memory of the USB device became full. → Use the USB device with sufficient memory.	–

# INDICATORS AND DISPLAY MESSAGES

If one of the following indicators lights up or one of the following messages appears in the display, check the meaning of the indicator or message in the following table and take appropriate action.




Indication			Cause and solution	Page
	Maintenance indicator	Steadily lit	Service by an authorised SHARP service technician is required.	–
	Developer replacement required indicator	Steadily lit	Developer is required. Contact your authorised service representative.	–
	Toner cartridge replacement required indicator	Steadily lit	Replacement of toner cartridge will be needed soon. Prepare a new cartridge.	–
		Blinking	<ul style="list-style-type: none"><li>• Toner cartridge must be replaced. Replace it with a new one.</li><li>• Toner is being fed.</li></ul>	120
	Misfeed indicator	Blinking	A paper misfeed has occurred. Remove the misfeed as explained in "MISFEED REMOVAL".	113
	Paper required indicator	Steadily lit	The tray is out of paper. Load paper. It is also possible that the tray is not inserted completely into the machine. Make sure it is inserted correctly.	39
ORIGINAL SIZE indicator		Blinking	The original is not placed in the correct orientation. Rotate the original so that it is in the same orientation as the blinking ORIGINAL SIZE indicator.	44,45
PAPER SIZE indicator		Blinking	A blinking PAPER SIZE indicator means that the size of paper loaded in the tray is different from the paper size setting for the tray. Change the paper size setting. To clear the display, do one of the following: <ul style="list-style-type: none"><li>• Use the [TRAY] key to change the tray selection.</li><li>• Open and close the tray.</li><li>• Press the [CLEAR ALL] key (Ⓢ).</li></ul>	41
[CH] appears in the number of copies display		Steadily lit	The front cover or the side cover is open. Close the front cover or the side cover.	–
		Blinking	The toner cartridge is not installed correctly. Reinstall the toner cartridge. If [CH] still blinks in the display after reinstalling the toner cartridge, contact your authorised service representative.	120
	Letters and numbers appear in the display		Turn off the power switch, wait about 10 seconds, and then turn on the switch again. If this does not clear the message, write down the code (Main code and sub code exists.) that appears and then unplug the power cord and contact your authorised service representative. Tell your authorised service representative what code appeared and the circumstances under which it appeared.	–
	"FUL" appears in the display		Data is being held in memory. Print the data or clear it from memory.	60, 62
When "Use close paper size" is disabled			Press the [TRAY] key to manually select the tray and then press the [ONLINE] key (Ⓢ). Printing will begin.	67
Misfeed location indicator lights up at the optional 500-sheet paper feed unit 			The side cover of the 500-sheet paper feed unit is open. Close the side cover.	–



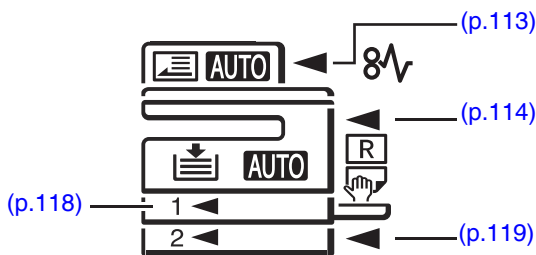
# MISFEED REMOVAL

When a misfeed occurs, the misfeed indicator (8 $\nabla$ ) and a misfeed location indicator (◀) will blink and the machine will automatically stop.

Check the blinking misfeed location indicator to identify the location of the misfeed and remove it.

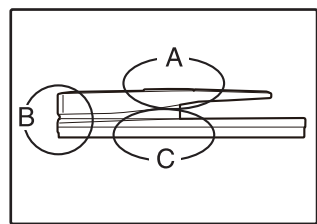
**Note**

The paper may tear when you remove a misfeed. In this event, be sure to remove all torn pieces of paper from the machine, taking care not to touch the photoconductive drum (the green part). Any scratches or damage to the surface of the drum will cause dirty copies.



## MISFEED IN THE RSPF

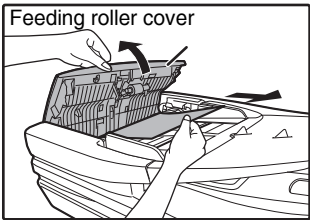
### 1 Remove the misfed original.



Check sections A, B, and C in the left shows the illustration (see the next page), and remove the misfed original.

**Section A**

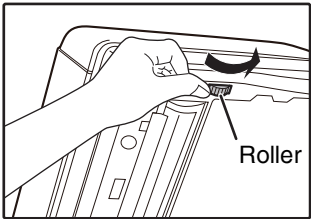
Open the feeding roller cover and remove the misfed original from the document feeder tray. Close the feeding roller cover.



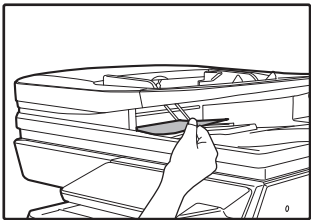
Feeding roller cover

**Section B**

Open the RSPF and rotate the release roller in the direction of the arrow to feed the original out. Close the RSPF and then remove the original.

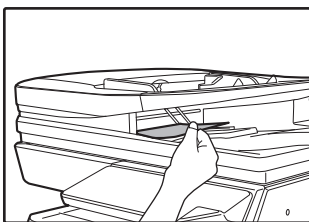


Roller

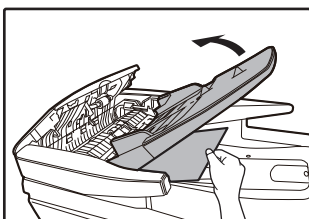


**Section C**

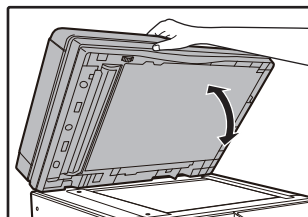
Remove the misfed original from the exit area.



If the misfed original cannot be easily removed from the exit area, open the feeding roller cover, open the document feeder tray, and remove the original.



## 2 Open and close the RSPF to make the misfeed location indicator stop blinking.



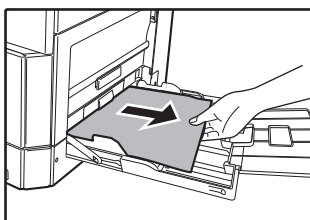
You can also make the misfeed indicator stop blinking by opening and closing the feeding roller cover.

## 3 Return the originals indicated by the minus number in the display to the document feeder tray and press the [START] key (START).

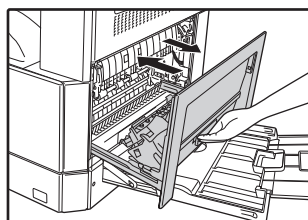
Copying will resume from the originals that still remained when the misfeed occurred.

# MISFEED IN THE BYPASS TRAY

## 1 Gently pull the misfed paper out.



## 2 Open and close the side cover.



The misfeed indicator (8ΛV) will go out.

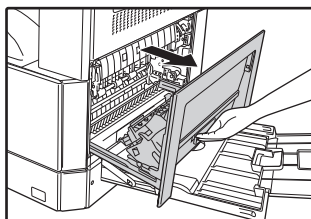
### Note

- When closing the side cover, press down on the handle.
- If the misfeed indicator (8ΛV) does not stop blinking, check for torn pieces of paper in the machine.
- When closing the side cover, remove the paper on the bypass tray first. If not, the front paper will be smudged that cause the lose of image or misfeed.

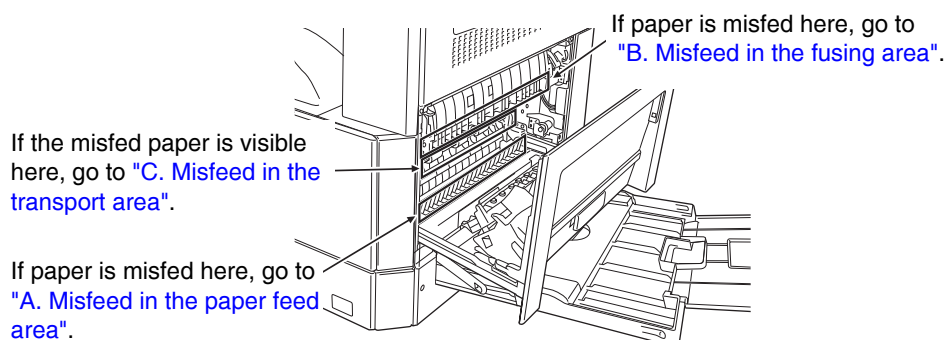


# MISFEED IN THE MACHINE

- 1 Open the bypass tray and the side cover.

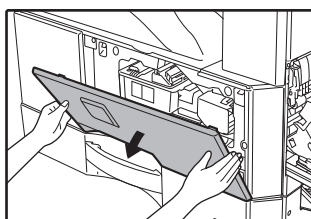


- 2 Check the misfeed location. Remove the misfed paper following the instructions for each location in the illustration below.

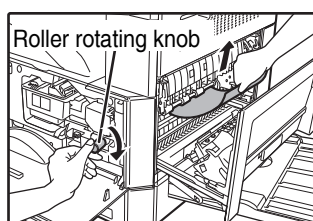


## A. Misfeed in the paper feed area

- 1 Push gently on both ends of the front cover and open it.



- 2 Carefully remove the misfed paper. Turn the roller rotating knob in the direction of the arrow to assist in removing it.



Be careful not to tear the misfed paper during removal.

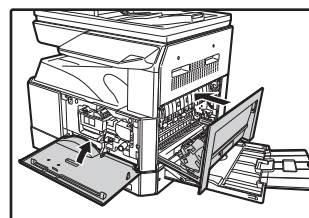


**Warning** The fusing unit is hot. Do not touch the fusing unit when removing misfed paper. Doing so may cause a burn or injury.



**Caution** Do not touch the photoconductive drum (green portion) when removing the misfed paper. Doing so may damage the drum and cause smudges on copies.

- 3 Close the front cover and side cover.



The misfeed indicator (8A\_V) will go out.



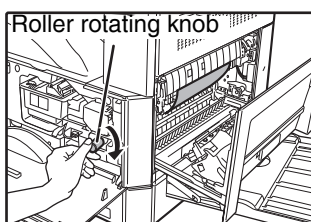
- When closing the front cover, gently hold both ends.
- When closing the side cover, press on the handle.
- If the misfeed indicator (8A\_V) does not stop blinking, check for torn pieces of paper in the machine.

## B. Misfeed in the fusing area

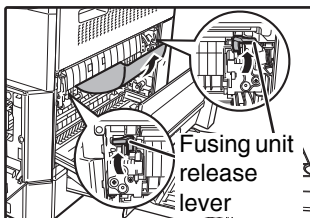
- 1 Push gently on both ends of the front cover and open it.



- 2 Turn the roller rotating knob in the direction of the arrow.



- 3 Carefully remove the misfed paper. Upper the fusing unit release levers to allow easier removal.



Be careful not to tear the misfed paper during removal.

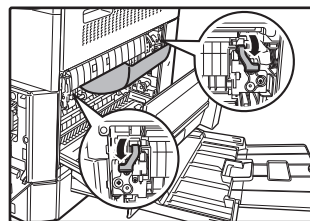


**The fusing unit is hot. Do not touch the fusing unit when removing misfed paper. Doing so may cause a burn or injury.**

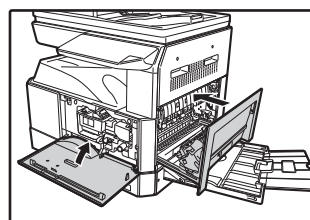


- Do not touch the photoconductive drum (green portion) when removing the misfed paper. Doing so may damage the drum and cause smudges on copies.
- Be careful about unfixed toner on the misfed paper not to soil your hands or clothes.

- 4 Lower the fusing unit release levers, to return them to their operating positions.



- 5 Close the front cover and side cover.



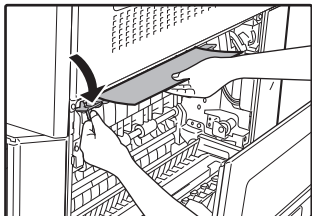
The misfeed indicator (8A\_V) will go out.



- When closing the front cover, gently hold both ends.
- When closing the side cover, press on the handle.
- If the misfeed indicator (8A\_V) does not stop blinking, check for torn pieces of paper in the machine.

## C. Misfeed in the transport area

- 1** Open the fusing paper guide by pressing down the green-labeled projection on the guide and remove the misfed paper.

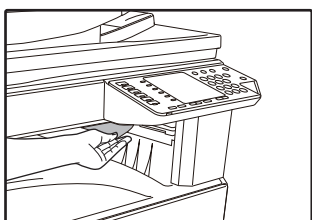


Be careful not to tear the misfed paper during removal.



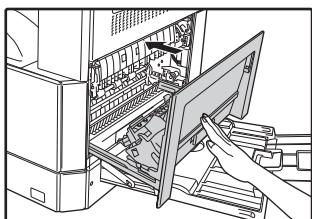
The fusing unit is hot. Do not touch the fusing unit when removing misfed paper. Doing so may cause a burn or injury.

- 2** If the misfed paper cannot be removed by the previous step but is visible in the paper output area, remove the paper by pulling it into the paper output area.



Be careful not to tear the misfed paper during removal.

- 3** Close the side cover.



The misfeed indicator (8 $\sqrt{r}$ ) will go out.



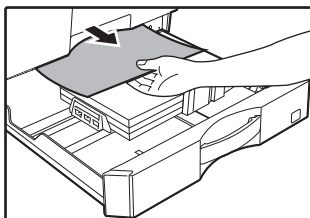
- When closing the side cover, press on the handle.
- If the paper was torn, make sure that no torn pieces remain in the machine.
- If the misfeed indicator (8 $\sqrt{r}$ ) does not stop blinking, check for torn pieces of paper in the machine.

# MISFEED IN THE UPPER PAPER TRAY

**Note**

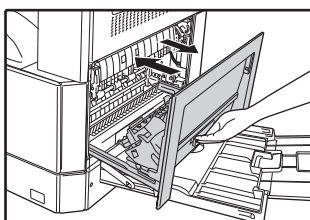
Make sure that there is no misfeed paper in the tray before pulling it out. (p.115)

## 1 Lift and pull out the upper paper tray and remove the misfeed paper.



Be careful not to tear the misfeed paper during removal.

## 2 Open and close the side cover.

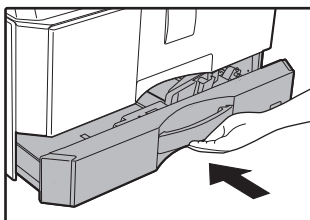


The misfeed indicator (8Λ<sub>r</sub>) will go out.

**Note**

- When closing the side cover, press on the handle.
- If the misfeed indicator (8Λ<sub>r</sub>) does not stop blinking, check for torn pieces of paper in the machine.

## 3 Close the upper paper tray.



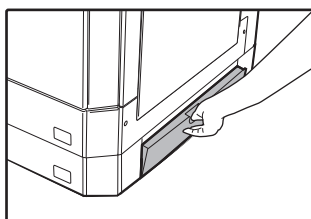
Push the upper paper tray in completely.

# MISFEED IN THE LOWER PAPER TRAY



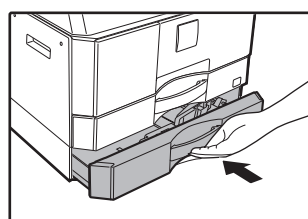
- When 500-sheet paper feed unit is installed.
- Make sure that there is no misfeed paper in the tray before pulling it out. (p.115)

## 1 Open the lower side cover.

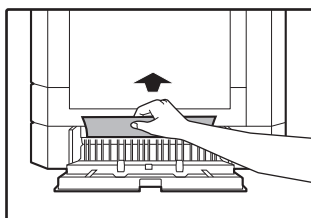


Grasp the handle to open the lower side cover.

## 5 Close the lower paper tray.

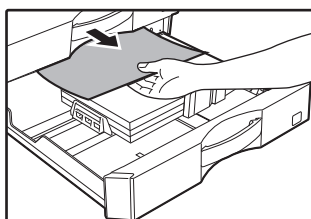


## 2 Remove the misfeed paper.



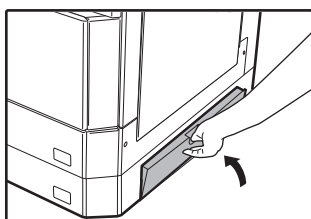
Be careful not to tear the misfeed paper during removal.

## 3 If the misfeed paper is not seen in step 2, lift and pull out the lower paper tray and remove the misfeed paper.



Be careful not to tear the misfeed paper during removal.

## 4 Close the lower side cover.





The misfeed indicator (8ΛV) will go out.




If the misfeed indicator (8ΛV) does not stop blinking, check for torn pieces of paper in the machine.

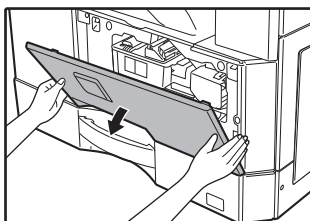
# REPLACING THE TONER CARTRIDGE

When the toner cartridge replacement required indicator (  ) lights up, the toner cartridge will need replacement soon. Obtain a new cartridge. When the toner cartridge replacement required indicator (  ) blinks, the toner cartridge must be replaced before copying can be resumed. Replace the toner cartridge by following the procedure below.

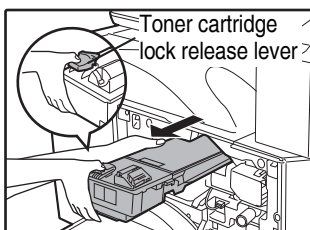


When the toner cartridge replacement indicator (  ) lights up, little toner remains and thus copies may be faint.

- 1 Push on both ends of the front cover and open it.**



- 2 Pull the toner cartridge out while pressing the lock release lever.**

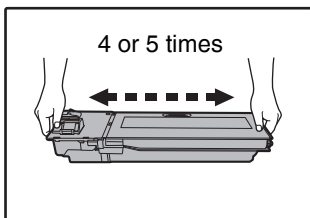


When pulling out the toner cartridge, place your other hand on the indentation of the cartridge.



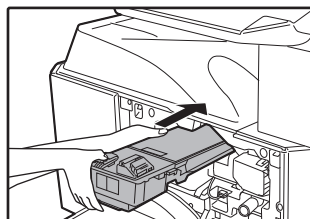
**Caution** After removing the toner cartridge, do not shake it or tap on it. Doing so may cause toner to leak from the cartridge. Put the old cartridge immediately in the bag. Dispose of the old toner cartridge in accordance with local regulations.

- 3 Remove the new toner cartridge. Grasp the cartridge on both sides and shake it horizontally four or five times.**



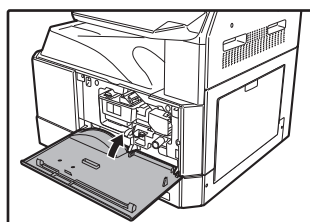
**Caution** Grasp the grip when holding the cartridge.


- 4 Insert the toner cartridge along the guides until it locks in place while pushing the lock release lever.**




If there is any dirt or dust on the toner cartridge, remove it before installing the cartridge.

- 5 Close the front cover.**



The toner cartridge replacement required indicator (  ) will go out.



- Even after a new toner cartridge is installed, the toner cartridge replacement required indicator (  ) may still light up, indicating that copying cannot be resumed (toner is not fed sufficiently). In this case, open and close the front cover. The machine will feed toner again for about two minutes and then copying can be resumed.
- Before closing the front cover, make sure that the toner cartridge is correctly installed.
- When closing the front cover, gently hold both ends.

This chapter explains how to keep the machine operating smoothly, including viewing copy count/scan count/the toner level indicator, cleaning the machine and resetting the network settings of the machine.

# CHECKING THE TOTAL OUTPUT COUNT AND TONER LEVEL

## CHECKING THE TOTAL OUTPUT COUNT

**When "Auditing mode" is "ON":**

From the "- - -" display, you can check the total output count, total copy count, and total scan count as explained below.

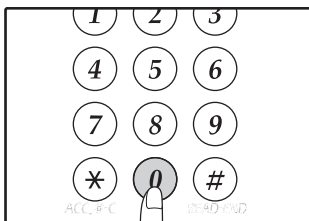
**When "Auditing mode" is "OFF":**

From the " 0" display, you can check the total output count, total copy count, and total scan count as explained below.

The total output count is all pages (for both printing and copying) printed by the machine and the total output count can be counted up to 999,999.

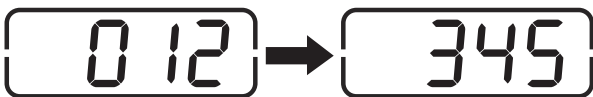
### Total output count

Hold down the [0] key.



The total output count appears sequentially in two parts while you hold down the [0] key.

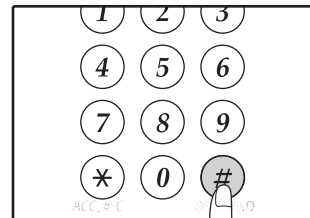
**Example:** Total number of pages output is 12,345.



- Each A3 size page is counted as two pages.
- During a copy run, pressing the [0] key shows the number of completed copy pages, not the total output count.

### Total copy count

Hold down the [READ-END] key (#).



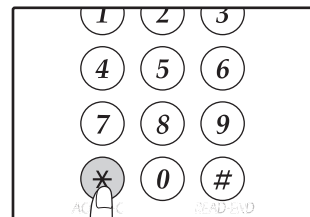
The total copy count appears in the number of copies display while you hold down the key. The count display and counting method are the same as for the total output count.



The total number of pages printed in printer mode can be calculated by subtracting the total copy count from the total output count.

### Total scan count

Hold down the [\*] key.

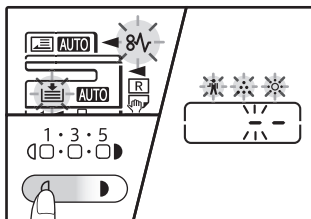


The total scan count appears in the number of copies display while you hold down the key. The count display and counting method are the same as for the total output count.

# CHECKING THE TONER LEVEL

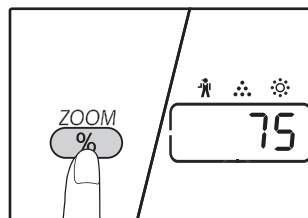
The toner level is indicated by a 6-level display. Use it as a guideline for replacing the toner cartridge.

- 1 Hold down the [Light] key (  ) until the alarm indicators ( , , , ,  ) blink.**








The display will show "100".

- 2 Hold down the [ZOOM] key (  ) for more than 5 seconds.**



The approximate quantity of toner remaining will be indicated in the display as a percentage. ("100", "75", "50", "25", "10" is displayed.) When the percentage is less than 10%, "LO" will be displayed.

- 3 Press the [Light] key (  ) to return to the normal display.**

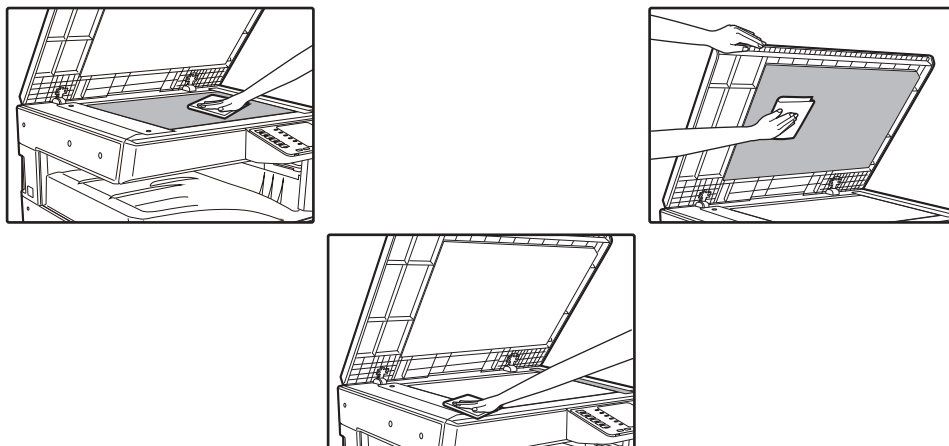
The alarm indicators ( , , , ,  ) go off. The display returns to the number of copies display.



# ROUTINE MAINTENANCE

## CLEANING THE DOCUMENT GLASS AND RSPF/DOCUMENT COVER

If the document glass, underside of the document cover/RSPF, or the scanner for originals coming from the RSPF (the long narrow glass surface on the left side of the document glass) become dirty, the dirt may appear on copies. Always keep these parts clean.



Stains or dirt on the document glass/RSPF will also be copied. Wipe the document glass, underside of the document cover/RSPF and the scanning window on the document glass with a soft, clean cloth.

If necessary, dampen the cloth with water. Do not use thinner, benzene, or similar volatile cleaning agents.

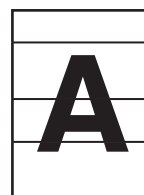


**Do not spray flammable cleaner gas.** Gas from the spray may come in contact with the internal electrical components or high-temperature parts of the fusing unit, creating a risk of fire or electrical shock.

## CLEANING THE ORIGINAL SCANNING GLASS (ONLY WHEN AN RSPF IS INSTALLED)

If white or black lines appear in copies made with using the RSPF, use the provided glass cleaner to clean the original scanning glass.

Example of dirty print image

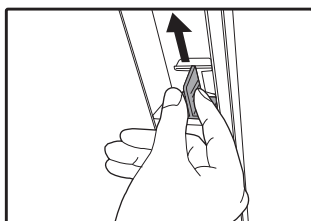


Black lines

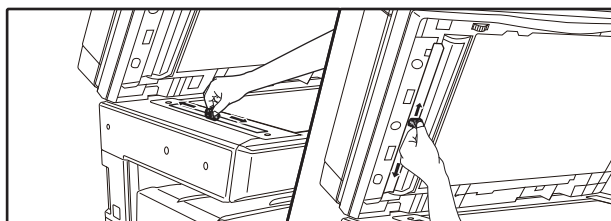


White lines

- 1** Open the RSPF and take out the glass cleaner. (p.31)



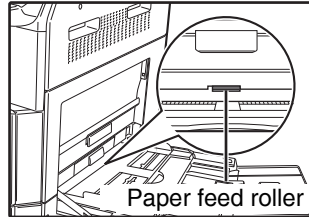
- 2** Clean the original scanning glass with the glass cleaner.



- 3** Return the glass cleaner to its original position.

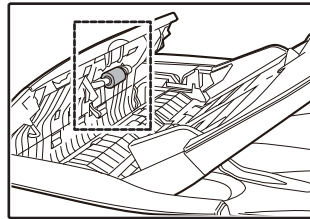
## CLEANING THE BYPASS TRAY PAPER FEED ROLLER

If misfeeds such as those of envelopes, or heavy paper fed from the bypass tray occur frequently, wipe the surface of the bypass tray feeding roller with a soft clean cloth moistened with alcohol or water.



## CLEANING THE ORIGINAL FEED ROLLER

If lines or other dirt appear on the scanned original when the automatic document feeder is used, wipe the surface of the roller with a clean soft cloth moistened with water or a neutral detergent.



Specifications, optional equipment, and supplies are explained in this chapter. To purchase optional equipment and supplies, contact your authorised service representative.

## PERIPHERAL DEVICES



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.

Peripheral devices can be installed on the machine to increase its range of functionality.

(As of Oct, 2017)

Product name	Product number	Description
Reversing single pass feeder	AR-RP11 N	This automatically turns the original over to enable scanning of both sides.
Document cover	MX-VR12	This holds down the original.
500-sheets paper tray	MX-CS12 N	Additional tray. A maximum of 500 sheets of paper can be loaded into the tray.
Network expansion kit	AR-NB7 N	Enables network function.
Printer expansion kit	AR-PB10	Adds a PCL printer function.
PS expansion kit	MX-PK10	Enables the machine to be used as a Postscript compatible printer.
Expansion memory	MX-EB21	This is a memory for expansion of this machine. (The expansion memory is service unit. If you need to install this unit, contact your authorised service representative.)
Stand (large)	AR-DS19	This is the stand to install this machine.
Sharpdesk 5 license kit	MX-USX5	This software enables integrated management of documents and computer files.

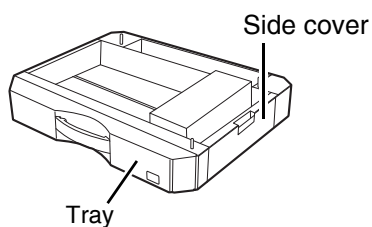
The peripheral devices are generally optional. However, some models include certain peripheral devices as standard equipment.

## 500-SHEET PAPER FEED UNIT

These paper feed units provide the convenience of increased paper capacity for the copier and a greater choice of paper sizes readily available for copying.

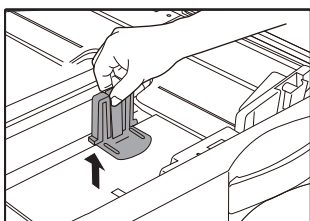
### Part names

500 paper feed unit  
(MX-CS12 N)

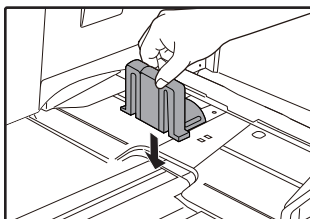


### Setting the plate

- 1** Remove the plate from the tray.



- 2** Set the removed plate.



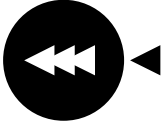
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# STORAGE OF SUPPLIES

Standard supplies for this product that are to be replaced by the user are paper and toner cartridge.

**SHARP®**



For best copying results, be sure to use only SHARP products.  
Only genuine SHARP consumables carry the Genuine Supplies label.

**GENUINE SUPPLIES**

## PROPER STORAGE

- **Store the supplies in a location that is:**  
clean and dry,  
at a stable temperature,  
not exposed to direct sunlight.
- **Store paper in the wrapper and lying flat.**  
Paper stored out of the wrapper or in packages  
standing on end may curl or get damp, resulting in  
paper misfeeds.

### **Supply of spare parts and consumables**

The supply of spare parts for repair of the machine is guaranteed for at least 7 years following the termination of production. Spare parts are those parts of the machine which may break down within the scope of the ordinary use of the product, whereas those parts which normally exceed the life of the product are not to be considered as spare parts. Consumables too, are available for 7 years following the termination of production.

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## ABOUT THE WEB PAGES

This model that has the network function as standard feature or 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.

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### 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®)

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### 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 THE IP ADDRESS" \(p.97\)](#).

When the connection is completed, the Web page will appear in your Web browser.

["ABOUT THE WEB PAGES \(FOR USERS\)" \(p.130\)](#)


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### 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.

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### 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.

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# CHECKING THE IP ADDRESS IN THE WEB PAGE

The settings of the IP address, Subnet Mask, and Default Gateway can be checked in the Web page.



- 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.

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

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

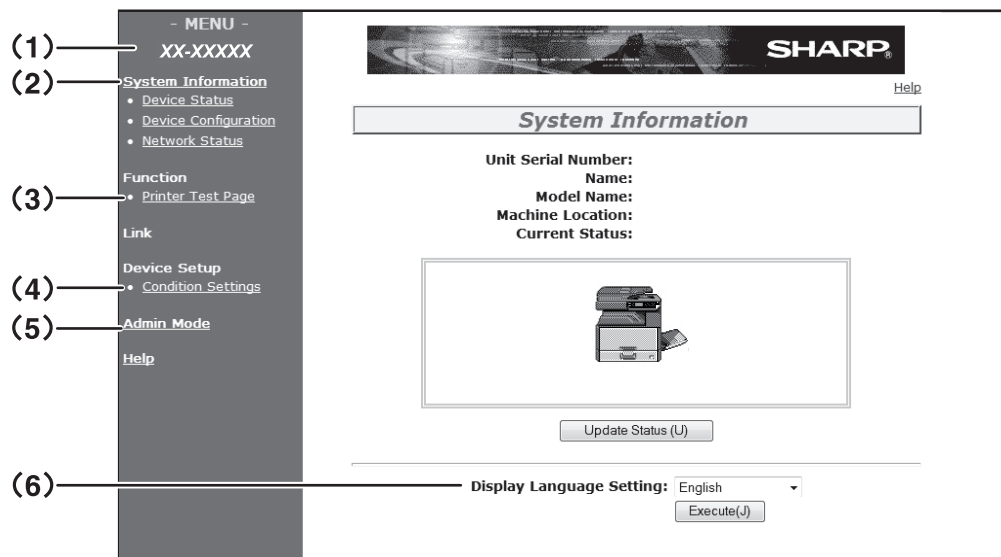
---

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

If you want to enter "IP Address", "Subnet Mask", and "Default Gateway", you can go to the web page of "Protocol Setup" from [Network Setup]→[Protocol] to enter and submit (administrator permission is required).

# 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" \(p.131\)](#)

\* Displays when the network expansion kit or printer expansion kit is installed.

## (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 \(FOR THE ADMINISTRATOR\)" \(p.134\)](#)

["PROTECTING INFORMATION PROGRAMMED IN THE WEB PAGE \(\[Passwords\]\)" \(p.135\)](#)

## (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.132): Basic settings that are mainly used when the printer driver is not used.
- "PCL Settings" (p.133): PCL symbol set, font, line feed code, and other settings.



- 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.
- This function displays when the network expansion kit or printer expansion kit is installed.

## 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.132).

### (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
<a href="#">Copies</a>	1
<a href="#">Orientation</a>	Portrait
<a href="#">Default Paper Size</a>	A4
<a href="#">Default Paper Source</a>	Auto
<a href="#">2-Sided Print</a>	1-Sided
<a href="#">2-sided original type (Scan)</a>	1-Sided
<a href="#">ROP (Rip Once, Print Many)</a>	Enable

Condition Settings	
PCL Settings	Factory default settings
<a href="#">Symbol Set</a>	PC-8
<a href="#">Font</a>	0: Courier (internal font)
<a href="#">Line Feed Code</a>	CR=CR; LF=LF; FF=FF
<a href="#">Wide A4</a>	Disable
PostScript settings	Factory default settings
<a href="#">Print PS Errors</a>	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	<b>Portrait</b> , 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, <b>A4</b> , B5, A5, Ledger, Legal, Foolscap, 8-1/2×13-2/5(216×340), 216×343(8-1/2×13-1/2), Letter, Invoice, 8K, 16K	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	<b>Auto</b> , Tray 1, Tray 2*, Bypass (Manual), Bypass (Auto)	This sets the default paper tray. *Selections available depend on the trays that are installed.
2-Sided Print	<b>1-Sided</b> , 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.)

Item	Selections	Description
2-sided original type (Scan)	<b>1-Sided</b> , 2-Sided	This sets whether or not to allow two-sided original for scan. (Only for models that support two-sided original.)
ROP (Rip Once, Print Many)	<b>Enable</b> , Disable	This enables the ROP 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	<b>CR=CR; LF=LF; FF=FF</b> , 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, <b>Disable</b>	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.

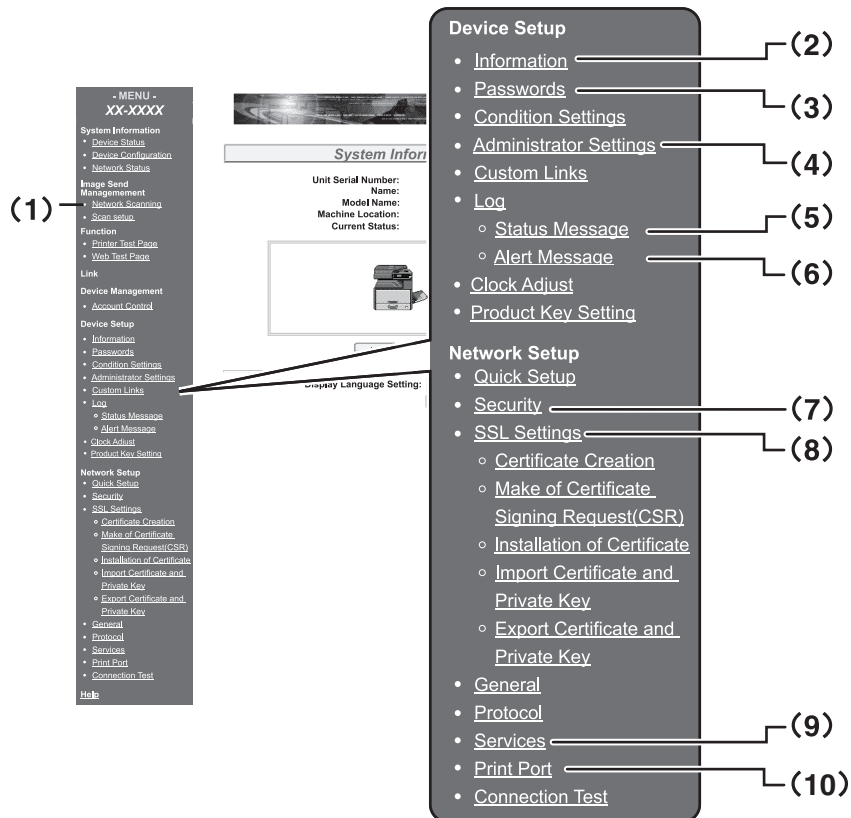
## PostScript settings

Item	Selections	Description
Print PS Errors	Enable, <b>Disable</b>	When this setting is enabled, an error description is printed each time a PostScript error occurs.

# 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) Network Scanning

Set the usage method for sending data scanned using the network scanner function.

["NETWORK SCANNING" \(p.137\)](#)

## (2) Information

Configure machine identification information for the status & alert E-mail function.

["INFORMATION SETUP" \(p.139\)](#)

## (3) 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 \(\[Passwords\]\)" \(p.135\)](#)

## (4) Administrator Settings

Setting changes can be prohibited and interface settings can be configured.

["ADMINISTRATOR SETTINGS" \(p.136\)](#)

## (5) Status Message

Configure parameters required for sending status messages, such as destination addresses and time schedules.

["STATUS MESSAGE SETUP" \(p.140\)](#)

## (6) Alerts Message

Store destination addresses for alert messages.

["ALERTS MESSAGE SETUP" \(p.140\)](#)

## (7) Security

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

## (8) SSL Settings

Configure settings for SSL Settings. [\(p.138\)](#)

## (9) Services

Configure information concerning the e-mail system.

["SMTP SETUP" \(p.139\)](#)

## (10) Print Port

Configure settings for LPD, Raw print, WSD and FTP print.

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# 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".



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.**



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.

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# ADMINISTRATOR SETTINGS

The administrator settings are used to prohibit changes to the [Condition Settings] and to configure interface settings.

- ["Default settings" \(p.136\)](#): Select the setting for which you wish to prohibit changes.
- ["Interface settings" \(p.136\)](#): 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" \(p.136\)](#) 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.
Disabling of Clock Adjustment	YES, NO	This setting is used to prohibit changing of the date and time.

### 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.
Emulation Switching	Auto, PostScript, PCL	Select the printer language. When [Auto] is selected, the language is automatically selected from the data sent to the printer. Unless errors occur frequently, do not change the setting from [Auto] to another setting.
Port Switching Method	Switch at End of Job, Switch after I/O Timeout	Select the method for switching network ports.

# NETWORK SCANNING

Set the usage method for sending data scanned using the network scanner function.

## 1 Click [Network Scanning] in the menu frame.

The "Network Scanning" screen will appear.

## 2 Configure settings for network scanning.

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

## 3 Click [Submit] to store the entered information.

### Settings

Item	Selections (factory default setting appears in bold)	Description
Enable Scanner Delivery to		Set the usage method for sending data scanned using the network scanner function.
USB Memory Scan	<b>YES</b> , NO	Allow sending of scanned data to a USB memory device.
Scan to E-mail	<b>YES</b> , NO	Allow sending of scanned data to an e-mail address.
Scan To FTP & Desktop & Sharpdesk Mobile	<b>YES</b> , NO	Allow sending of scanned data to a file server, desktop, and Sharpdesk Mobile.
Advanced Setup	YES, <b>NO</b>	Set a Bcc destination for a Scan to E-mail job. Select the checkbox and enter the Bcc e-mail address (maximum 100 characters) in the text box.
Maximum Size of E-mail Attachments		Configure settings for the size of files sent by Scan to E-mail.
Upper Limit	-	Do not send if the file size exceeds the set limit.
Unlimited	<b>YES</b> , NO	Send file regardless of the file size.
File Naming		Configure settings for the file name.
Date & Time	<b>YES</b> , NO	Use the date and time of scanning for the file name.
Session Page Counter	YES, <b>NO</b>	Use the total number of pages sent since the machine power was turned on for the file name. (This cannot be used with Scan to USB memory.)
Unique Identifier	YES, <b>NO</b>	Use a special ID number created from the machine ID, serial number, counter, date, and time for the file name.
Default Subject	-	Enter the text string used for the e-mail subject when using Scan to E-mail.

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# SSL SETTINGS

SSL is a protocol that enables the encryption of information transmitted over a network. Encrypting data makes it possible to transmit and receive sensitive information safely.

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## **1** Click [SSL Settings] in the menu frame.

The "SSL Settings" screen will appear.

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## **2** Configure settings for SSL Settings.

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

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## **3** Click [Submit] to store the entered information.



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# 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.

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### **1** Click [Information] in the menu frame.

The "Information Setup" screen will appear.

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### **2** Enter the machine information.

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

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### **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.

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### **1** Click [Services] in the menu frame.

The "Services Setup" screen will appear.

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### **2** Click [SMTP].

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### **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.

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### **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.



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.



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

# OPERATION GUIDE

