

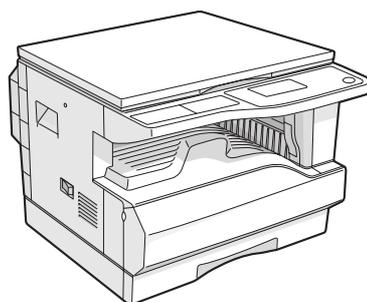
MODEL

AR-M162

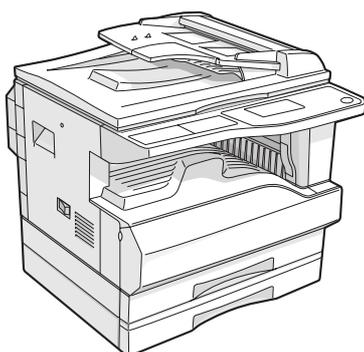
AR-M207

DIGITAL MULTIFUNCTIONAL SYSTEM

OPERATION MANUAL
(for general information and copier)



AR-M162



AR-M207
With the RSPF installed

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Be sure to become thoroughly familiar with this manual to gain the maximum benefit from the product.

Before installing this product, be sure to read the cautions and installation requirements sections.

Be sure to keep all operation manuals handy for reference including this manual, the "Operation manual (for general information and copier)" and operation manuals for any optional equipment which has been installed.

Caution:

For complete electrical disconnection, pull out the main plug.
The socket-outlet should be installed near the equipment and should be easily accessible.

FOR YOUR RECORDS ...

To protect against loss or theft, record and retain for reference the machine's serial number located on the back of the unit.

Model Number _____
Serial Number _____
Date of Purchase _____
Place of Purchase _____
Authorized Sharp Copier _____
Service Department Number _____

WARNING:

FCC Regulations state that any unauthorized changes or modifications to this equipment not expressly approved by the manufacturer could void the user's authority to operate this equipment.

This operation manual is also used for the AR-M162 J / AR-M207 J.

Part 1: General Information

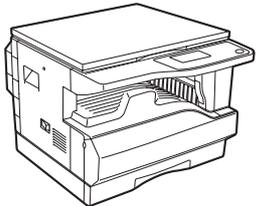
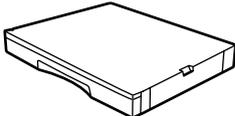
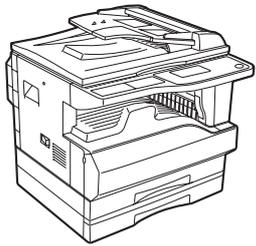
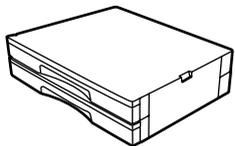
Notes

- Considerable care has been taken in preparing this manual. If you have any comments or concerns about the manual, please contact your nearest SHARP Service Department.
- This product has undergone strict quality control and inspection procedures. In the unlikely event that a defect or other problem is discovered, please contact your dealer or nearest SHARP Service Department.
- Aside from instances provided for by law, SHARP is not responsible for failures occurring during use of the product or its options, or failures due to incorrect operation of the product and its options, or other failures, or for any damage that occurs due to use of the product.

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.

PRODUCT CONFIGURATIONS

This product series consists of the models indicated below. The product configuration varies by model. The explanations and illustrations in this manual generally use the AR-M207 (with the optional RSPF installed).

Model	Appearance	Copying speed	Paper trays	Optional trays
AR-M162		16 copies/min.	One (250 x 1)	250-sheet paper feed unit (AR-D24) 
AR-M207	 With the RSPF installed	20 copies/min.	Two (250 x 2)	2 x 250-sheet paper feed unit (AR-D25) 

(As of the end of June, 2006)

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CAUTIONS

Follow the cautions below when using this machine.

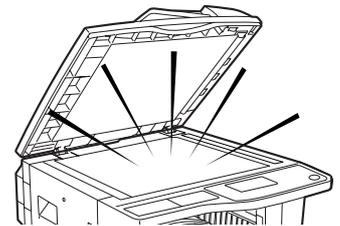
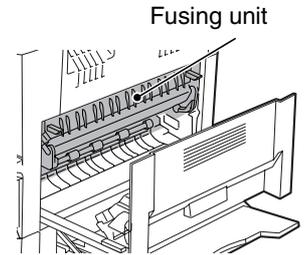
CAUTIONS ON USING

▲ Warning:

- The fusing area is hot. Exercise care in this area when removing misfed paper.
- Do not look directly at the light source. Doing so may damage your eyes.

⚠ Caution:

- Do not switch the machine rapidly on and off. After turning the machine off, wait 10 to 15 seconds before turning it back on.
- Place the machine on a firm, level surface.
- When the machine is not used for a long time, for example, during prolonged holidays, turn the power switch off and remove the power cord from the outlet.
- When moving the machine, be sure to turn the power switch off and remove the power cord from the outlet.
- Do not cover the machine with a dust cover, cloth or plastic film while the power is on. Doing so may prevent heat dissipation, damaging the machine.
- Do not make any modifications to this machine. Doing so may result in personal injury or damage to the machine.
- Do not make copies of anything which is prohibited from copying by law. The following items are normally prohibited from printing by national law. Other items may be prohibited by local law.
 - Money • Stamps • Bonds • Stocks
 - Bank drafts • Checks • Passports • Driver's licenses
- Do not touch the photoconductive drum. Scratches or smudges on the drum will cause dirty prints.
- Store spare toner cartridges in a cool dry place without removing from the package before use.
- If they are exposed to direct sunlight or excessive heat, poor copies may result.



"BATTERY DISPOSAL"

THIS PRODUCT CONTAINS A LITHIUM PRIMARY MEMORY BACK-UP BATTERY THAT MUST BE DISPOSED OF PROPERLY. PLEASE CONTACT YOUR LOCAL SHARP DEALER OR AUTHORIZED SERVICE REPRESENTATIVE FOR ASSISTANCE IN DISPOSING OF THIS BATTERY.

This product utilizes tin-lead solder, and a fluorescent lamp containing a small amount of mercury. Disposal of these materials may be regulated due to environmental considerations.

For disposal or recycling information, please contact your local authorities or the Electronics Industries Alliance: www.eia.org

LASER INFORMATION

Wave length	785 nm +10 nm -15 nm
Pulse times	North America: (3.1 μs ± 3.1 ns)/7 mm Europe: (3.7 μs ± 3.7 ns)/7 mm
Output power	Max 0.8 mW

At the production line, the output power of the scanner unit is adjusted to 0.8 MILLIWATT PLUS 10 % and is maintained constant by the operation of the Automatic Power Control (APC).

Caution

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

For North America:

SAFETY PRECAUTIONS

This Digital Equipment is rated Class 1 and complies with 21 CFR 1040.10 and 1040.11 of the CDRH standards. This means that the equipment does not produce hazardous laser radiation. For your safety, observe the precautions below.

- Do not remove the cabinet, operation panel or any other covers.
- The equipment's exterior covers contain several safety interlock switches. Do not bypass any safety interlock by inserting wedges or other items into switch slots.

For Europe:

CLASS 1 LASER PRODUCT

LASER KLASSE 1

LUOKAN 1 LASERLAITE

KLASS 1 LASERAPPARAT

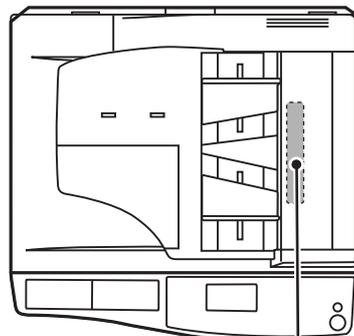
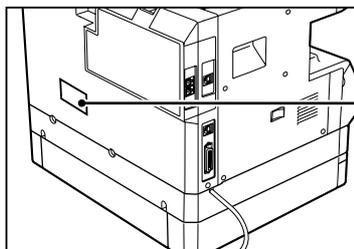
CAUTION
INVISIBLE LASER RADIATION
WHEN OPEN INTERLOCKS
DEFEATED. AVOID EXPOSURE
TO BEAM.

VORSICHT
UNSICHTBARE
LASERSTRAHLUNG WENN
ABDECKUNG GEÖFFNET UND
SICHERHEITSVERRIEGELUNG
ÜBERBRÜCKT. NICHT DEM
STRAHL AUSSETZEN.

ADVARSEL
USYNLIG LASERSTRÅLNING
VED ÅBNING, NÅR
SIKKERHEDSBRYDERE ER
UDE AF FUNKTION. UNDGÅ
UDSAETTELSE FOR
STRÅLNING.

VAROITUS!
LAITTEEN KÄYTTÄMINEN
MUULLA KUIN TÄSSÄ
KÄYTTÖOHJEESSA
MAINITULLA TAVALLA SAATTAA
ALTISTAA KÄYTTÄJÄN
TURVALLISUUSLUOKAN 1
YLITTÄVÄLLE
NÄKYMÄTTÖMÄLLE
LASERSÄTEILYLLE.

VARNING
OM APPARATEN ANVÄNDS PÅ
ANNAT SÄTT ÄN I DENNA
BRUKSANVISNING
SPECIFICERATS, KAN
ANVÄNDAREN UTSÄTTAS FÖR
OSYNLIG LASERSTRÅLNING,
SOM ÖVERSKRIDER GRÄNSEN
FÖR LASERKLASS 1.



		CAUTION INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCKS DEFEATED. AVOID EXPOSURE TO BEAM.	ADVERSEL USYNLIG LASERSTRÅLNING NÅR DEKSEL ÅPNES OG SIKKERHEDSLÅS BRYTES. UNNGÅ EKSPONERING FOR STRÅLEN.
		VORSICHT UNSICHTBARE LASERSTRAHLUNG WENN ABDECKUNG GEÖFFNET UND SICHERHEITSVERRIEGELUNG ÜBERBRÜCKT. NICHT DEM STRAHL AUSSETZEN.	VARNING OSYNLIG LASERSTRÅLNING NÅR DENNA DEL ÄR ÖPPNAD OCH SPÄRRAR ÄR URKOPPLADE. STRÅLEN ÄR FARLIG. BETRÄKTA EJ STRÅLEN.
ADVARSEL USYNLIG LASERSTRÅLNING VED ÅBNING, NÅR SIKKERHEDSBRYDERE ER UDE AF FUNKTION. UNDGÅ UDSAETTELSE FOR STRÅLNING.		VARO! AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTITAIN NÄKYMÄTTÖMÄLLE LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.	

INSTALLATION REQUIREMENTS

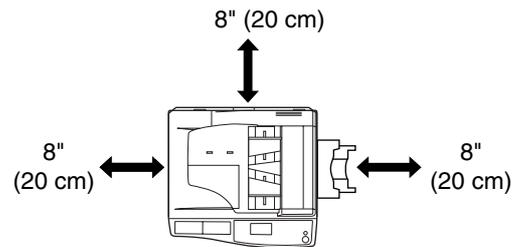
Improper installation may damage this product. Please note the following during initial installation and whenever the machine is moved.

1. The machine should be installed near an accessible power outlet for easy connection.
2. Be sure to connect the power cord only to a power outlet that meets the specified voltage and current requirements. Also make certain the outlet is properly grounded.
 - For the power supply requirements, see the name plate on the back of the main unit.



Connect the machine to a power outlet which is not used for other electric appliances. If a lighting fixture is connected to the same outlet, the light may flicker.

3. Do not install your machine in areas that are:
 - damp, humid, or very dusty
 - exposed to direct sunlight
 - poorly ventilated
 - subject to extreme temperature or humidity changes, e.g., near an air conditioner or heater.
4. Be sure to allow the required space around the machine for servicing and proper ventilation.



A small amount of ozone is produced within the printer during operation. The emission level is insufficient to cause any health hazard.

NOTE:

The present recommended long term exposure limit for ozone is 0.1 ppm (0.2 mg/m³) calculated as an 8 hr. time-weighted average concentration.

However, since the small amount that is emitted may have an objectionable odor, it is advisable to place the copier in a ventilated area.

ENVIRONMENTAL INFORMATION



Products that have earned the ENERGY STAR® are designed to protect the environment through superior energy efficiency.



The Environmental Choice Program guidelines are applied to the products only in Canada. The products that meet the Environmental Choice Program guidelines carry the logo shown to the left. The products without the logo may not meet the Environmental Choice Program guidelines.

MANUALS PROVIDED WITH THE PRODUCT

Multiple manuals are provided for use of the machine. Please read each manual as appropriate for the functions that you wish to use.

Operation manual (for general information and copier) (this manual):

The first half of this manual contains general information on the machine, including safety precautions and the procedures for loading paper, removing misfeeds, and performing regular maintenance.

The second half of the manual contains explanations of how to use the copy function of the machine.

Key operator's guide

This explains key operator programs for machine management and copier related functions.

Explanations of key operator programs related to the fax, printer, and network scanner functions can be found in the respective manuals for those functions.

The key operator programs are used by the administrator of the machine to enable or disable functions to suit the needs of your workplace.

Software setup guide

This explains how to install and configure the printer driver.

Operation manual (for facsimile)*1:

This explains how to use the fax function of the machine. To use the fax function, the optional facsimile expansion kit (AR-FX11) must be installed.

Operation manual (for printer and scanner)*2:

This explains how to use the machine as a printer and a scanner when it is connected to a computer.

Operation manual (for network printer)*2:

This explains how to use the machine as a network printer.

To use the machine as a network printer, the optional network expansion kit (AR-NB3) must be installed.

Operation manual (for network scanner)*2:

This explains how to use the machine as a network scanner when it is connected to a computer. To use the machine as a network scanner, the optional network expansion kit must be installed.

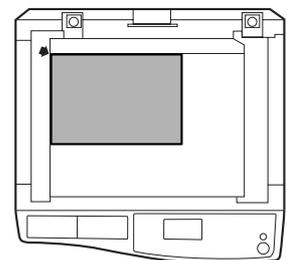
*1 The "Operation manual (for facsimile)" is contained in the optional facsimile expansion kit.

*2 The "Operation manual (for printer and scanner)" is contained in the accompanying CD-ROM in PDF format. The "Operation manual (for network printer)" and the "Operation manual (for network scanner)" are contained in PDF format in the CD-ROM that accompanies the network expansion kit. (These manuals are not provided in printed form.)

The meaning of "R" in original and paper size indications

An "R" appearing at the end of an original or paper size (8-1/2" x 11"R, 5-1/2" x 8-1/2"R (A4R, B5R), etc.) indicates that the original or paper is oriented horizontally as shown below.

Sizes that can be placed only in the horizontal (landscape) orientation (11" x 17", 8-1/2" x 14" (A3, B4)) 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.

This manual refers to the Reversing single pass feeder as the "RSPF" and the single pass feeder as the "SPF". Unless specific mention is made, both the RSPF and the SPF are referred to simply as "SPF".

MAIN FEATURES

High-speed laser copying

- First-copy time*1 at 300 dpi*2 is only 7.2 seconds.
- Copying speed is 20 (AR-M207) or 16 (AR-M162) copies per minute. This provides a big boost to workplace productivity.

*1 Measured after the machine has warmed up following power-on, copying using the document glass (8-1/2" x 11" (A4) paper fed from machine tray 1). The first-copy time may vary depending on machine operating conditions and ambient conditions such as temperature and power voltage.

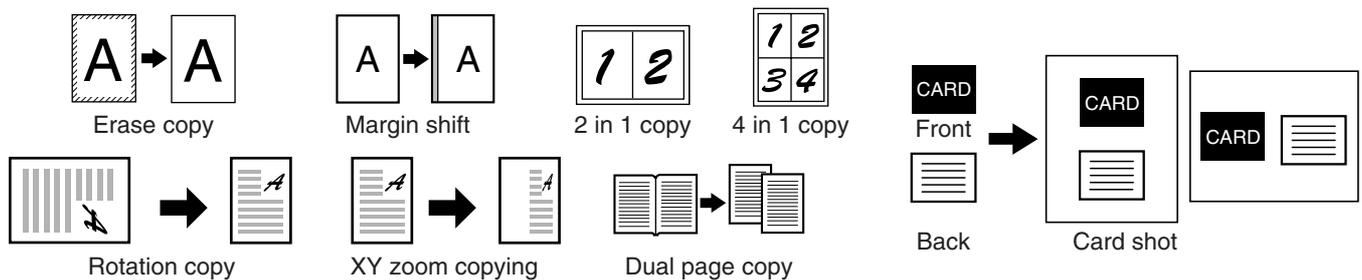
*2 "dpi" ("dots per inch") is a unit that is used to measure resolution. Resolution indicates how much detail can be reproduced in a printed or scanned image.

High-quality digital image

- High-quality copying at 600 dpi is performed.
- In addition to automatic exposure adjustment, two exposure modes can be selected: "TEXT" for text-only originals, and "PHOTO" for photographs. The exposure can be adjusted to five levels in each mode.
- Photo mode allows clear copying of originals with delicate halftones such as monochrome photos and color photos.

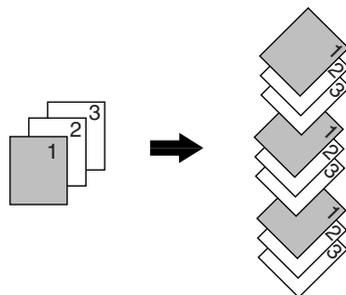
Enhanced copying features

- The zoom function can be used to reduce or enlarge copies from 25% to 400% in increments of 1%. (When the SPF is used, the zoom copy ratio range is 50% to 200%.)
- Up to 999 copies can be made of an original scanned just once. (This can be changed to a maximum of 99 copies in the key operator programs.)
- The key operator programs allow functions to be selected and managed to meet your specific needs. For example, access to the machine can be controlled by enabling audit mode.
- Rotation copy and other convenient functions are available.



Sort function

Copies of multiple original pages can be sorted into sets.



Laser printer function / color scanner function

- The machine is equipped standard with a USB 1.1 port and a parallel port. A computer can be connected to these ports to use the machine as a printer or a scanner.
- To use the machine as a printer or scanner, the printer driver or scanner driver must first be installed as explained in the "Software setup guide".
- The scanning feature is only available when the computer is connected to the USB port and is running Windows 98/Me/2000/XP. If the computer is running Windows 95/NT 4.0 or is connected to the parallel port, only printing is available.

Fax function (option)

Installation of the optional facsimile expansion kit enables the plain-paper, Super G3 laser fax function to be used.

Network connection (option)

The optional network expansion kit (AR-NB3) can be installed to enable the machine to be used as a network printer and network scanner.

Environment and people friendly design

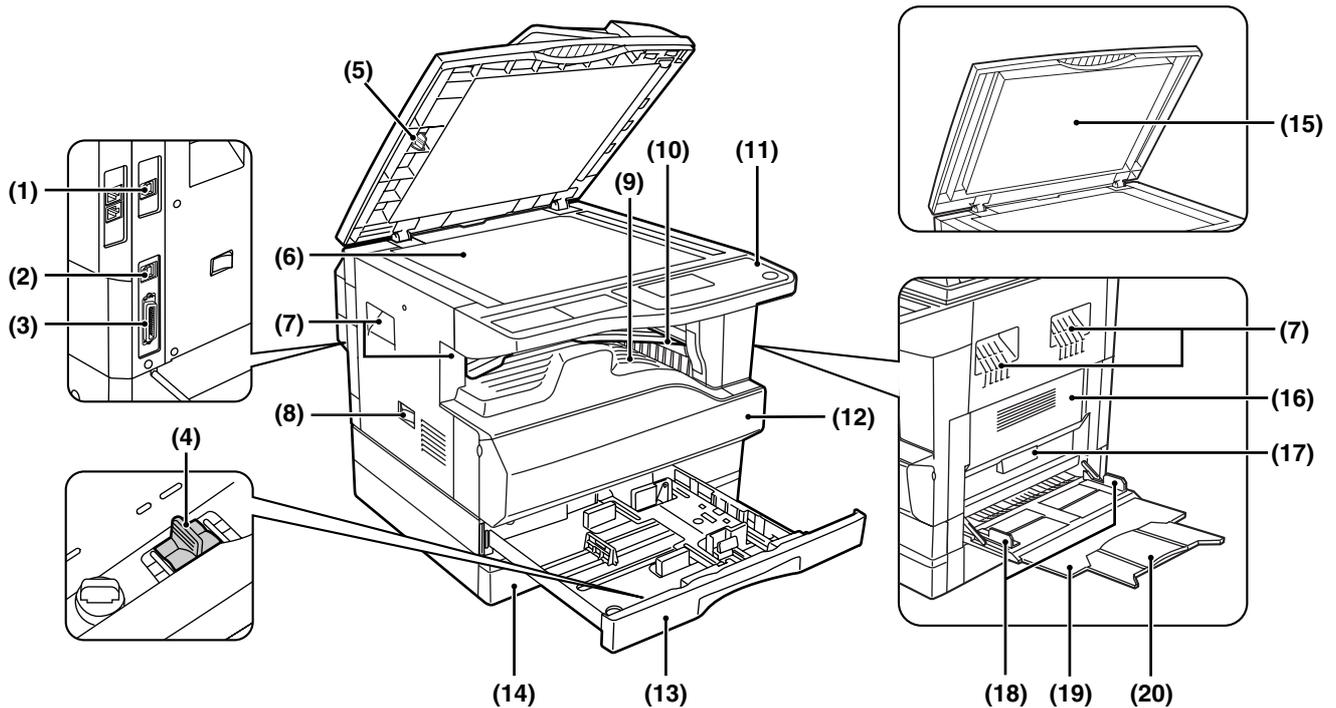
- Preheat and auto power shut-off modes are provided to reduce power consumption when the machine is not in active use.
- A universal design has been implemented in the product whereby the height of the operation panel and shape of the keys are designed to be usable by as many people as possible.

1

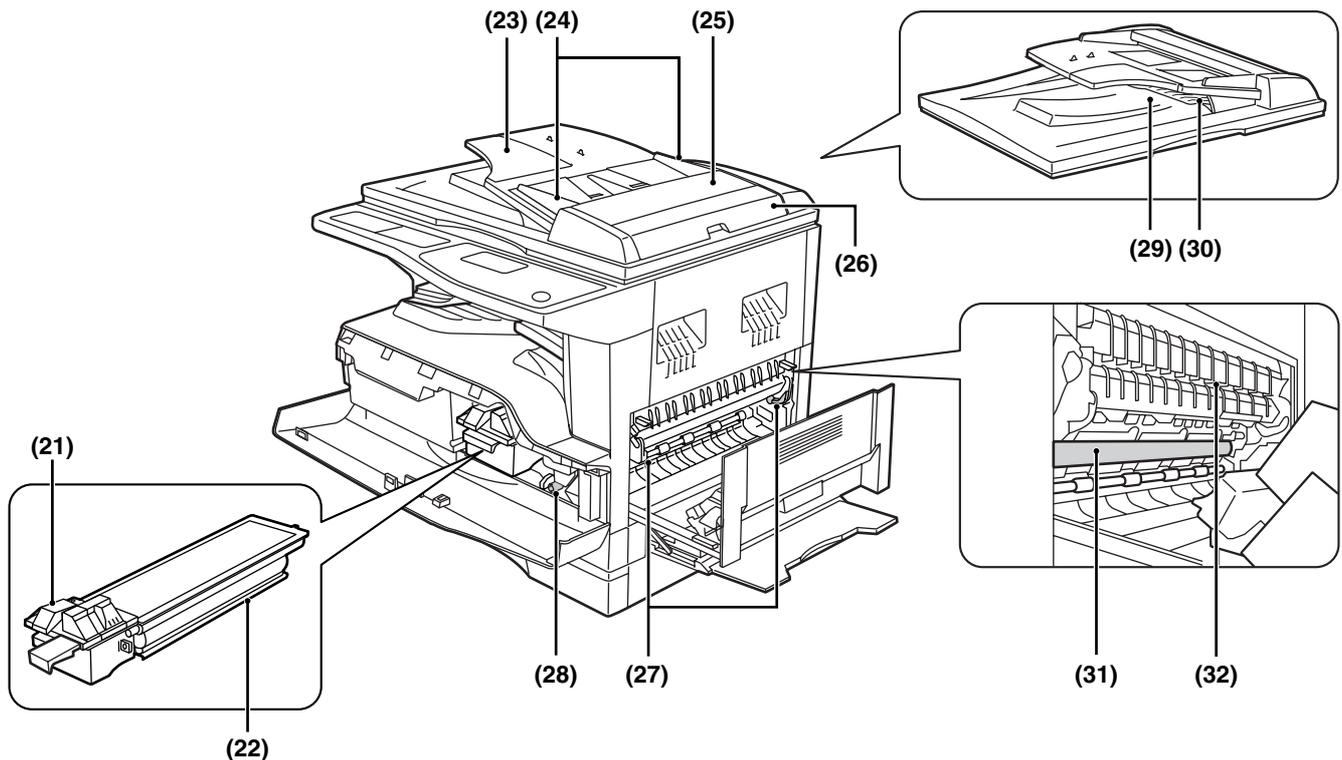
BEFORE USING THE PRODUCT

This chapter contains basic information required for use of the machine. Please read this chapter before using the machine.

PART NAMES AND FUNCTIONS



- (1) USB 2.0 port (USB-2)**
Connect to your computer to this port to use the printer and scanner functions.
- (2) USB 1.1 port (USB-1)**
Connect to your computer to this port to use the printer and scanner functions.
- (3) Parallel port**
Connect to your computer to this port to use the printer function.
- (4) Charger cleaner**
Use to clean the transfer charger.
- (5) Glass cleaner**
Use to clean the original scanning glass.
- (6) Document glass**
Place an original that you wish to scan face down here. (Page 45)
- (7) Handles**
Use to move the machine.
- (8) Power switch**
Press to turn the machine power on and off.
- (9) Center tray**
Copies and printed pages are output to this tray.
- (10) Top tray (when the job separator tray kit is installed)**
Received faxes (when the fax option is installed) and print jobs are delivered to this tray.
- (11) Operation panel**
Contains operation keys and indicator lights.
- (12) Front cover**
Open to remove paper misfeeds or replace the toner cartridge.
- (13) Tray 1**
Tray 1 can hold approximately 250 sheets of copy paper (20 lbs. (80 g/m²)).
For restrictions on paper types and weights, see "PAPER" (page 18).
- (14) Tray 2**
Tray 2 can hold approximately 250 sheets of copy paper (20 lbs. (80 g/m²)).
For restrictions on paper types and weights, see "PAPER" (page 18).



- (15) Document cover (when installed)**
Open to make a copy from the document glass.
- (16) Side cover**
Open to remove misfed paper.
- (17) Side cover handle**
Pull to open the side cover.
- (18) Bypass tray guides**
Adjust to the width of the paper when using the bypass tray.
- (19) Bypass tray**
Special paper (heavy paper or transparency film) can be fed from the bypass tray.
- (20) Bypass tray extension**
Pull out when feeding large paper such as 11" x 17" and 8-1/2" x 14" (A3 and B4).
- (21) Toner cartridge lock release lever**
To replace the toner cartridge, pull out the toner cartridge while pushing on this lever.
- (22) Toner cartridge**
Contains toner.
- (23) Document feeder tray (when the SPF is installed)**
Place the original(s) that you wish to scan face up here. Up to 40 sheets can be placed.
- (24) Original guides (when the SPF is installed)**
Adjust to the size of the originals.
- (25) Feeding roller cover (when the SPF is installed)**
Open to remove misfed originals.

- (26) Right side cover (when the SPF is installed)**
Open to remove misfed originals.
- (27) Fusing unit release levers**
To remove the paper misfed in the fusing unit, push down on these levers and remove the paper.



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

- (28) Roller rotating knob**
Rotate to remove misfed paper.
- (29) Exit area (when the SPF is installed)**
Originals exit the machine here after copying/scanning when the SPF is used.
- (30) Reversing tray (when the RSPF is installed)**
Pull out to remove misfed originals.
- (31) Photoconductive drum**
Images are formed on the photoconductive drum.



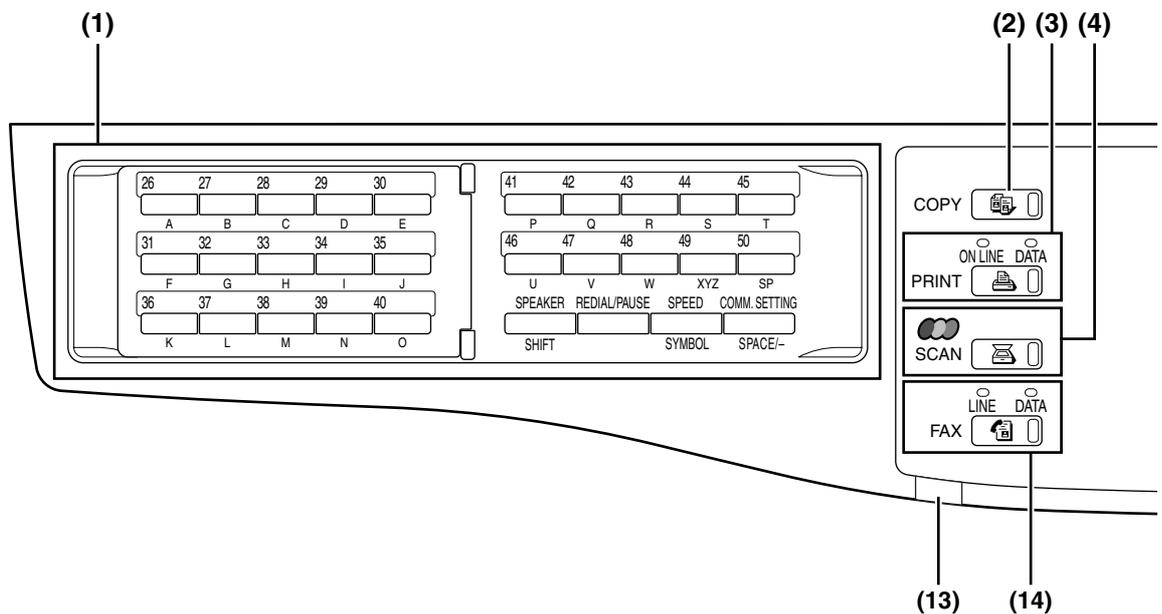
Do not touch the photoconductive drum (green portion) when removing the misfed paper. Doing so may damage the drum and cause smudges on copies.

- (32) Fusing unit paper guide**
Open to remove misfed paper.



The model name is on the front cover of the machine.

OPERATION PANEL



(1) Keys for fax function (when the fax option is installed)

These are used in fax mode. For more information, see the "Operation manual (for facsimile)" that accompanies the optional facsimile expansion kit.

(2) [COPY] key / indicator

Press to select copy mode. If pressed when "Ready to copy." appears or during warm-up, the total number of sheets used (page 36) appears while the key is pressed.

(3) [PRINT] key / indicator

Press to select print mode.

• **ONLINE indicator**

Print jobs can be received when this indicator is lit.

• **DATA indicator**

This lights steadily when there is a print job in memory that has not been printed, and blinks during printing.

(4) [SCAN] key / indicator

Press to select scan mode. (To connect a computer to the USB port on the machine and use the scanner function, see the "Operation manual (for printer and scanner)". To use the machine as a network scanner, see the "Operation manual (for network scanner)" that accompanies the optional network expansion kit.)

(5) Display

Shows various messages. For more information see page 16.

(6) [BACK] key

Press to return the display to the previous screen.

(7) [FAX STATUS] key (when the fax option is installed)

This key is used in fax mode. For more information, see the "Operation manual (for facsimile)" that accompanies the optional facsimile expansion kit.

(8) [OK] key

Press to enter the selected setting.

(9) Copy number display

The selected number of copies appears. During copying, this shows the remaining number of copies.

(10) Numeric keys

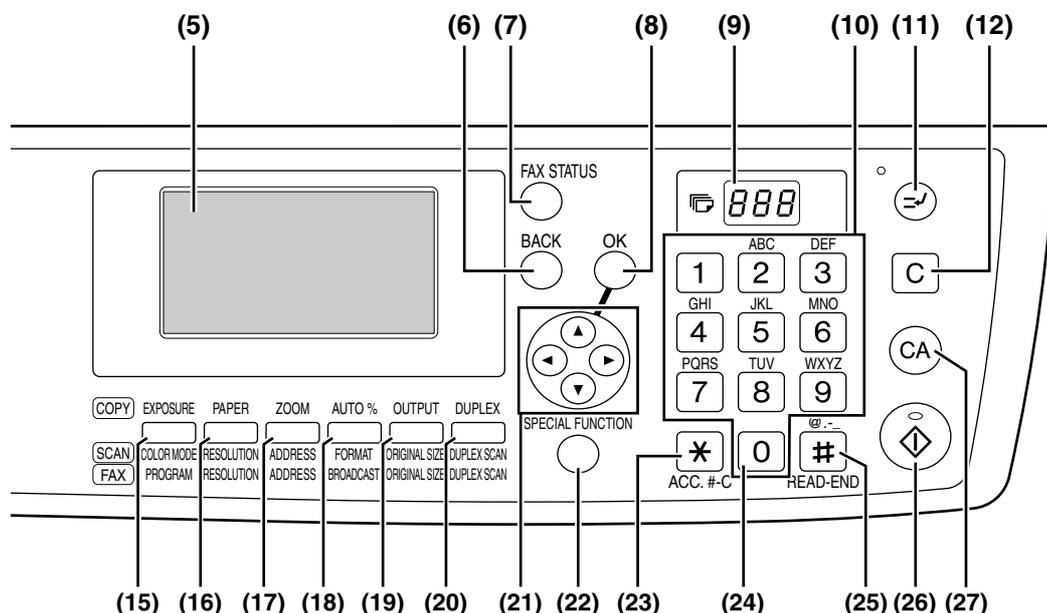
Use to select the number of copies.

(11) [INTERRUPT] key (⊘) / INTERRUPT indicator

Interrupts a copy run to allow an interrupt copy job to be performed. (Page 63)

(12) [C] key

Press to clear the set number of copies or stop a copy run.



(13) LINE STATUS indicator (when the fax option is installed)

This key is used in fax mode. For more information, see the "Operation manual (for facsimile)" that accompanies the optional facsimile expansion kit.

(14) [FAX] key / indicator (when the fax option is installed)

LINE indicator, DATA indicator

This key is used in fax mode. For more information, see the "Operation manual (for facsimile)" that accompanies the optional facsimile expansion kit.

(15) [EXPOSURE] key

Use to select the exposure mode. "AUTO", "TEXT", or "PHOTO" can be selected. (Page 48)

(16) [PAPER] key

Use to manually select a paper tray. (Page 49)

(17) [ZOOM] key

Press to select a reduction or enlargement copy ratio. (Page 52)

(18) [AUTO%] key

Press to have the copy ratio selected automatically. (Page 52)

(19) [OUTPUT] key

Use to select the sort function. (Page 64)

(20) [DUPLEX] key (only on models that support two-sided printing)

Select the two-sided copying mode. (Page 56)

(21) Arrow keys

Press to move the highlighting (which indicates that an item is selected) in the display.

(22) [SPECIAL FUNCTION] key

Press to select special functions.

(23) [ACC.#-C] key (*)

Press the end the use of an account and return the display to the account number entry screen. (Page 23)

(24) [0] key

Press during a continuous copy run to display the number of copies completed.

(25) [READ-END] key (#)

When copying in sort mode from the document glass, press this key when you have finished scanning the original pages and are ready to start copying. (Page 64)

(26) [START] key (Ⓢ) / indicator

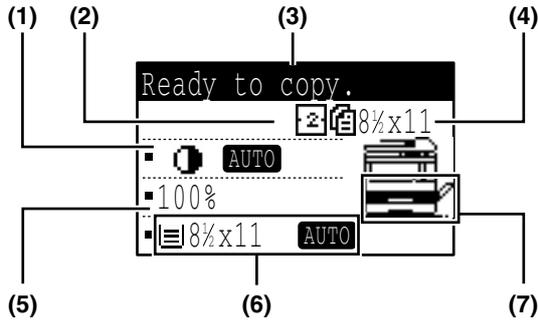
Copying is possible when this indicator is on. Press the key to start copying.

(27) [CA] key

Clears all selected settings and returns the machine to the default settings. (Page 18)

Display (base screen)

Example: Copy mode



* The display shown is the AR-M207 (when the optional RSPF is installed) display.

Icons appearing in the special function icon display

	1-sided to 2-sided copy		Center erase copy
	2-sided to 2-sided copy		Edge + Center erase
	2-sided to 1-sided copy		2 in 1 copy
	Sort function		4 in 1 copy
	Margin shift copy		Dual page copy
	Edge erase copy		Card shot

- (1) **Exposure display**
Indicates the selected exposure mode.
- (2) **Special function icon display**
Icons of enabled special functions will appear.
- (3) **Message display**
Messages are displayed regarding machine status and operation.
- (4) **Original size display**
The size of the placed original and the icon of the original scanning mode will appear.
 - : One-sided scanning in the SPF.
 - : Scanning on the document glass
 - : Two-sided scanning in the RSPF.
- (5) **Copy ratio display**
Displays the copy ratio for reduction or enlargement.
- (6) **Paper size display**
Displays the selected paper size. When "AUTO" appears, the most suitable size of paper is automatically selected.
- (7) **Paper tray display**
The selected paper tray is highlighted.

OPERATION IN COPY, PRINT, SCAN, AND FAX MODES

Some operations in the various modes of the machine cannot take place simultaneously.

Interrupting operation \ Interrupted operation		Copy output	Printing	Scanning	Faxing Scanning originals	Printing faxes
Copying	Output	Yes*1	No	No	No	No
Printing	Output	Yes*2		Yes*4	Yes*5	No
Scanning	Scanning an original	No	No		No	No
Faxing	Scanning an original	No	Yes*3	No		Yes
	Output	Yes*2	No	Yes*2	Yes	

*1 Can be used after pressing the [INTERRUPT] key (⊖).
 *2 After the page that is currently being printed is output, the job is interrupted.
 *3 Only possible when the computer is connected to the USB-2 port.
 *4 Only possible when the computer is connected to the parallel port or USB-1 port; the job is interrupted after the page that is currently being printed is output.
 *5 After output of the page that is currently being printed via the parallel port or USB-1 port, the job is interrupted.



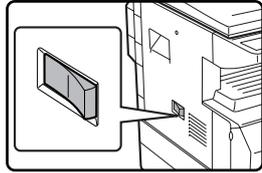
- Printing is not possible when the front or side cover is opened for machine maintenance, or when a misfeed occurs or the machine runs out of paper or toner, or when the drum cartridge reaches its replacement time.
- If an original misfeed occurs in the SPF, printing will not be possible until the misfed original is removed and the SPF is ready for use.

TURNING THE 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



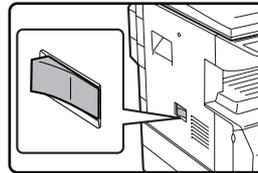
- It will take about 45 seconds for the machine to warm up.
- When the power switch is turned to the "ON" position, the message "System check." will appear in the message display and warm-up will start.

Once the copier has finished warming up, the message display will change to "Ready to copy." and the START indicator will light up to indicate that copying is possible. Copy settings can be selected during warm-up.

- If auditing mode has been enabled (see the "Key operator's guide"), the message "Enter your account number." will appear after warming up. Once a valid account number has been entered, the message display will change to "Ready to copy." and copying will be possible.

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 canceled.

1



- If the fax option is installed, be sure to keep the power turned on. Faxes cannot be received when the power is turned off.
- The machine is set at the factory to return all settings to the default settings one minute after a copy job is finished (auto clear function). When the settings return to the default settings, any functions that were selected are canceled. The auto clear time can be changed in the key operator programs. (See the "Key operator's guide".)

Power save modes

The machine has two power save modes to reduce power consumption, thereby helping to reduce environmental pollution and conserve resources.

Preheat mode

This function automatically switches the machine to a low power consumption state if the duration of time set in the key operator programs elapses without the machine being used when the power is on. In preheat mode the display turns off. Normal operation automatically resumes when a key on the operation panel is pressed, an original is placed, or a print job or fax 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 duration of time set in the key operator programs elapses without the machine being used when the power is on. During auto power shut-off, only the mode key indicators are lit. To restore the machine to normal operation, press any one of the mode keys. Normal operation also resumes automatically when a print job or fax is received or scanning is begun from a computer. While auto power shut-off is in effect, pressing a key other than a mode key will have no effect.



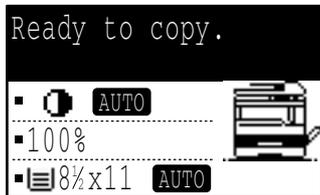
The preheat mode activation time and the "Auto power shut-off timer" can be changed in the key operator programs. (See the "Key operator's guide".)

Default settings

The machine is set at the factory to return all settings to the default settings one minute after a copy job is finished (auto clear function) or when the [CA] key is pressed. When the settings return to the default settings, any functions that were selected are canceled.

The auto clear time can be changed in the key operator programs. (See the "Key operator's guide".)

In the default state the display shown below appears. The default state of the display may vary depending on settings in the key operator programs.



* The screen is that of the AR-M207 (when the RSPF is installed).

LOADING PAPER

The message "TRAY<*>:Add paper." will be displayed when there is no copy paper in the selected paper tray. (<*> is the tray number.) Load paper in the indicated paper tray.

PAPER

The specifications for the types and sizes of paper that can be loaded in the paper trays are shown below.

Paper tray	Tray No.*4	Paper type	Paper size	Weight	Capacity
Tray 1	1	Standard paper Recycled paper	5-1/2" x 8-1/2"*1 (Invoice), 8-1/2" x 11" (Letter), 8-1/2" x 11"R, 8-1/2" x 13" (Foolscap), 8-1/2" x 14" (Legal), 11" x 17" (Ledger) (A5*1, B5, B5R, A4, A4R, B4, A3)	15 lbs. to 24 lbs.*2 (56 g/m ² to 90 g/m ²)*2	250 sheets (20 lbs. (80 g/m ²))*3 (Load paper lower than the line on the tray)
Tray 2	2				
Tray of 250-sheet paper feed unit	2 or 3				
Tray of 2 x 250-sheet paper feed unit	2 or 3 3 or 4				
Bypass tray		Standard paper Recycled paper	5-1/2" x 8-1/2" (Invoice) to 11" x 17" (Ledger) (A6R to A3)	15 lbs. to 20 lbs. (56 g/m ² to 80 g/m ²)	100 sheets*3
		Thick paper		Max. 54 lbs. (200 g/m ²)	Load one sheet of these papers at a time to the bypass tray.
		Transparency film Labels			
		Envelopes	Commercial 9 (3-7/8" x 8-7/8"), Commercial 10 (4-1/8" x 9-1/2") International DL (110 mm x 220 mm), International C5 (162 mm x 229 mm)		5 sheets

*1 5-1/2" x 8-1/2" (A5) can be used in tray 1 but cannot be used in other trays (including trays in optional paper feeding unit).

*2 When making a large number of copies or prints using 24 lbs. (90 g/m²) 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.

*3 The number of sheets of the paper which can be set changes with the weight of a paper. (The indicated numbers are for 20 lbs. (80 g/m²) paper.)

*4 The trays are numbered 1, 2, 3, and 4 from the top.

Paper that can be used for automatic 2-sided printing

Paper used for automatic two-sided printing must meet the following conditions:

Paper type: Plain paper (special paper cannot be used.)

Paper size: Standard sizes (11" x 17", 8-1/2" x 14", 8-1/2" x 13", 8-1/2" x 11", 8-1/2" x 11"R, A3, B4, A4, A4R, B5, B5R, A5)

Paper weight: 15 lbs. to 24 lbs. (56 g/m² to 90 g/m²)

Special paper

Follow these guidelines when using special paper.

- Use SHARP recommended transparency film and label sheets. Using other than SHARP recommended paper may result in misfeeds or smudges on the output.
- There are many varieties of special paper available on the market, and some cannot be used with this machine. Before using special paper, contact a SHARP service center.
- Before using other than SHARP recommended paper, make a test copy to see if the paper is suitable.

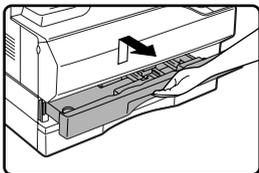
LOADING PAPER

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

1

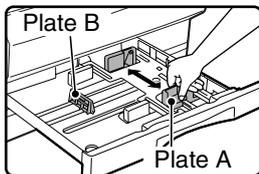
Loading paper in a tray

1 Gently lift and pull out the paper tray.

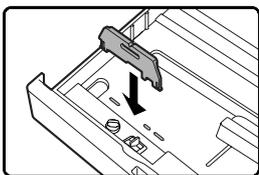


If you are adding the same size of paper, go to step 3. If you are loading a different size of paper, go to the next step.

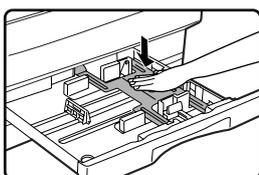
2 Adjust the plates in the tray to the length and width of the paper.



- The plate A is a slide-type guide. Grasp the locking knob on the guide and slide the guide to the indicator line of the paper to be loaded.
- The plate B is an insert-type guide. Remove it and then insert it at the indicator line of the paper to be loaded.
- When using 11" x 17" sized paper store the plate B in the slot at the left front of the paper tray.

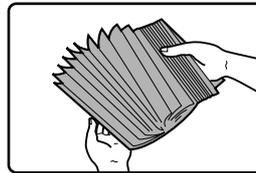


3 Push the pressure plate down.



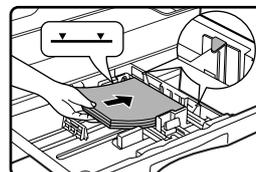
Push the center of the pressure plate down until it locks into place.

4 Fan the paper.



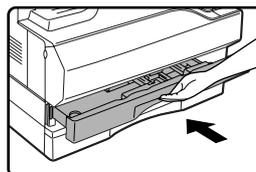
Fan the paper well before loading it. If the paper is not fanned, double-feeds or misfeeds may occur.

5 Place the paper in the tray.



- Do not load paper higher than the line on the tray (up to 250 sheets).
- Make sure that the paper fits under the tab on the right side of the tray.
- Make sure the stack of paper is straight before loading it. When adding paper, take the remaining paper out and combine it into a single stack with the new paper.

6 Push the paper tray back in.



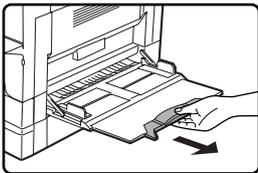
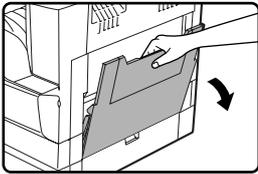
Push the upper paper tray in completely.



If the size of the loaded paper is different from the size shown in the display, be sure to follow the procedure in "CHANGING THE PAPER SIZE SETTING OF A TRAY" (page 21) to change the paper size setting of the tray.

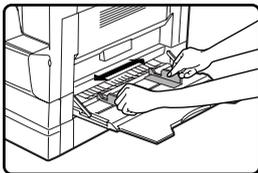
Loading paper in the bypass tray

1 Open the bypass tray.

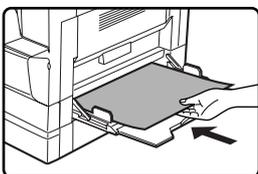


Pull out the bypass tray extension to load 8-1/2" x 14" and 11" x 17" (B4 and A3) size paper.

2 Set the bypass tray guides to the paper width.



3 Insert the copy paper (print side down) all the way into the bypass tray.



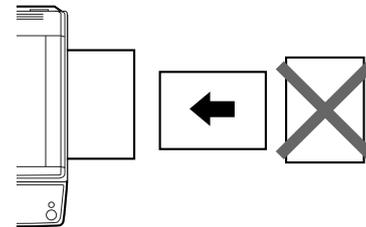
Make sure that the print side of the paper is face down. To prevent a misfeed, verify once more that the bypass tray guides are adjusted to the width of the paper.



If you loaded paper in the bypass tray, press the [PAPER] key to select the bypass tray.

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 5-1/2" x 8-1/2" (A6 and B6) size paper and 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 unclean images.
- Do not use paper that has already been printed on by a laser printer or plain paper fax machine. This may cause smudges or unclean images.

Envelopes

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

- Envelopes with metal tabs, clasps, strings, holes, or windows.
- Envelopes with rough fibers, 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 THE PAPER SIZE SETTING OF A TRAY

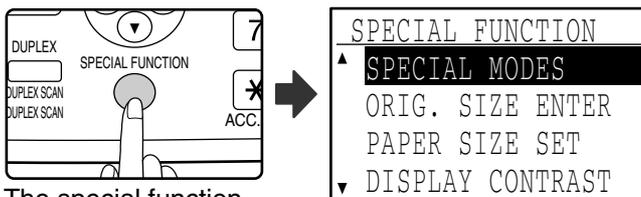
If the size of the loaded paper is different from the size shown in the display, follow the steps below to change the paper size setting of the tray.

The paper size setting cannot be changed during copying, printing, fax printing (when the fax option is installed), or interrupt copying, or when a misfeed has occurred. However, if the machine is out of paper or out of toner, the paper size setting can be changed during copying, printing, and fax printing.

See "PAPER" (page 18) for information on the specifications for the types and sizes of paper that can be loaded in the paper trays.

The paper size cannot be set for the bypass tray.

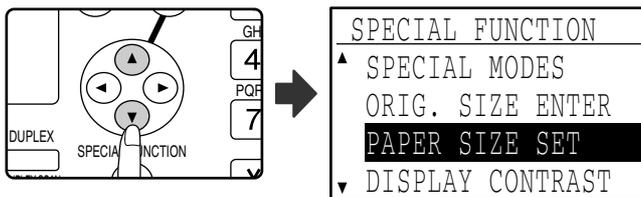
1 Press the [SPECIAL FUNCTION] key.



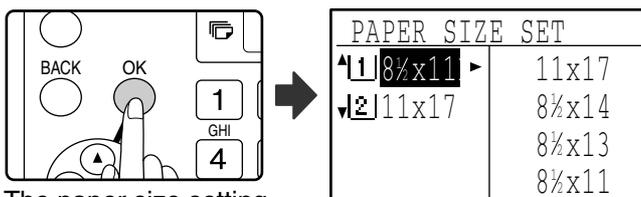
The special function screen will appear.

The screen shown above is the copy mode screen.

2 Press the [▼] or [▲] key to select "PAPER SIZE SET".



3 Press the [OK] key.



The paper size setting screen will appear.



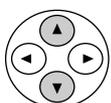
1: Shows tray "1".

2: Shows tray "2".

For the paper trays and tray numbers, see "PAPER" on page 18.

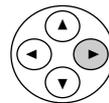
4 Press the [▼] or [▲] key to select the paper tray for which the paper size is being changed.

Example: Tray 2



PAPER SIZE SET			
▲	1 8 1/2 x 11		11x17
▼	2 11x17	▶	8 1/2 x 14
			8 1/2 x 13
			8 1/2 x 11

5 Press the [▶] key.

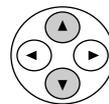


The cursor moves to the paper size selection position on the right.

PAPER SIZE SET			
1	8 1/2 x 11	▲	11x17
2	11x17	◀	8 1/2 x 14
			8 1/2 x 13
			8 1/2 x 11

6 Press the [▼] or [▲] key to select the paper size.

Example: Selecting 8-1/2" x 14" size



PAPER SIZE SET			
1	8 1/2 x 11	▲	11x17
2	11x17	◀	8 1/2 x 14
			8 1/2 x 13
			8 1/2 x 11

To change the size of another paper tray, press the [◀] key and then repeat steps 4 to 6.

7 Press the [OK] key.



A message asking you to confirm the new paper size setting will appear.

8 Press the [OK] key.



The selected paper size will be stored and the display will return to the base screen.

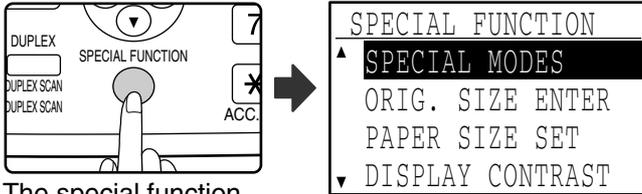


Affix the paper size label for the paper size selected in step 6 to the label position on the right end of the tray.

DISABLING (ENABLING) AUTO TRAY SWITCHING

When auto tray switching is enabled and paper runs out during copying or printing, the job will continue using paper from a different tray if that tray has the same size of paper in the same orientation. (This function does not operate when using the bypass tray or when a fax is being printed.) This function has been enabled at the factory. If you prefer to disable the function, follow the steps below.

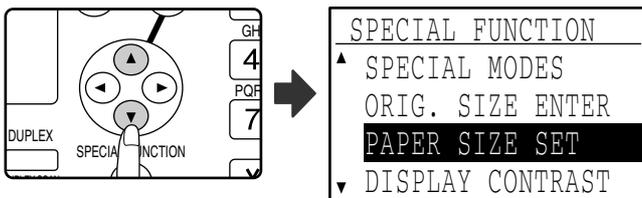
1 Press the [SPECIAL FUNCTION] key.



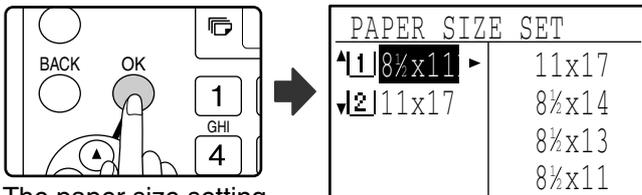
The special function screen will appear.

The above screen appears in copy mode.

2 Select "PAPER SIZE SET" with the [▼] or [▲] key.

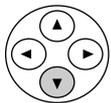


3 Press the [OK] key.



The paper size setting screen will appear.

4 Press the [▼] key repeatedly until "AUTO TRAY SWITCHING" appears.



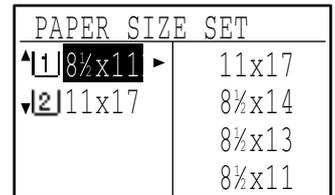
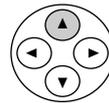
Move the cursor to the lowest tray and then press the [▼] key again. The above screen will appear.

5 Press the [OK] key.



When a checkmark does not appear in the checkbox, the auto tray switching function will not operate.

6 Press the [▲] key.



You will return to the paper size setting screen.

To re-enable auto tray switching, press the [OK] key in the screen of step 5 so that a checkmark appears.

AUDITING MODE

When auditing mode is enabled, a count is kept of the pages printed by each account. The page counts can be viewed in the display.

This function is enabled in the key operator programs. (For the counts in copy, print, and scan modes, see the "Key operator's guide". For the counts in fax mode, see the "Operation manual (for facsimile)" that accompanies the optional facsimile expansion kit.)

NUMBER OF ACCOUNTS IN AUDITING MODE

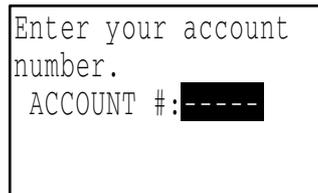
	Mode	Number of accounts	Remarks
(1)	Same for copy, print, and scan modes	50 maximum	Copying, printing, and scanning counts are managed under one account number.
(2)	Fax	50 maximum	Fax counts are managed under one account number.



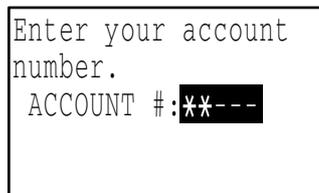
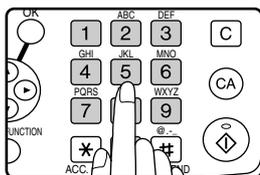
The same account number can be assigned to (1) and (2).

USING AUDITING MODE

When auditing mode is turned on, the account number entry screen is displayed. Enter your account number (five-digit identification number) as explained below before performing a copy, fax, or scan operation.



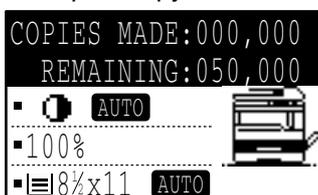
1 Enter your account number (five digits) with the numeric keys.



- As the account number is entered, the hyphens (-) change to asterisks (*). If you enter an incorrect digit, press [C] key and re-enter the correct digit.
- When a valid account number is entered, the current count of the account will appear in the message display of the base screen. After 6 seconds (factory default setting), the base screen appears. (Page 18)

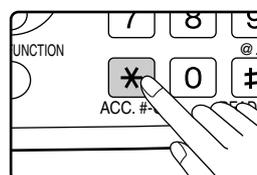
* In copy mode and print mode, the number of sheets remaining until the limit is reached is also shown if "ACCOUNT LIMIT" (see the "Key operator's guide") is enabled in the key operator programs.

Example: Copy mode



- If you enter a account number for copy mode that has also been programmed for fax mode, you can change to fax mode after completing the copy operation and continue with the fax operation without re-entering your account number. If you enter an account number for copy mode that has not been programmed for fax mode, enter your account number for fax mode after you press the [FAX] key to change to fax mode.
- If an invalid account number is entered in step 1, the account number entry screen reappears.
- When "ACC. # SECURITY" (see the "Key operator's guide") in the key operator programs is enabled, a warning message will appear and operation will not be permitted for 1 minute if an invalid account number is entered 3 times in a row.

2 When the copy job is finished, press the [ACC.#-C] key (*).



If you are performing an interrupt copy job (page 63) when auditing mode is enabled, be sure to press the [INTERRUPT] key (⊖), [CA] key, or [ACC.#-C] key (*) when finished to exit interrupt mode.

2

TROUBLESHOOTING AND MAINTENANCE

This chapter explains general troubleshooting and maintenance procedures such as removing misfeeds, replacing the toner cartridge, and cleaning the machine, as well as troubleshooting for the copy function. For troubleshooting for the fax function, printer function, and scanner function, see the respective manuals for each function.

TROUBLESHOOTING

MACHINE/COPYING PROBLEMS

The machine does not operate.	25
Power is on but copying is not possible.	25
Copies are too dark or too light.	25
Text is not clear in a copy.	25
Blank copies.	25
The paper size used for the copy is different from the selected paper size (part of the image is cut off or too much of the page is blank).	26
Wrinkles appear in the paper or the image disappears in places.	26
Paper misfeed.	26
The original size is not automatically selected or the copy is not made on paper that matches the size of the original.	27
Copies are smudged or dirty.	27
White or black lines appear on copies.	27
A tray's paper size setting cannot be set.	27
A copy job stops before it is finished.	27
Scanning of the original stops before it is completed.	27
A light in the room flickers.	27

INDICATORS AND DISPLAY MESSAGES28

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REPLACING THE TONER CARTRIDGE.....35

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TROUBLESHOOTING

MACHINE/COPYING PROBLEMS

Check the following troubleshooting list before requesting service as many problems can be fixed by the user. If you are unable to solve the problem by checking the list, turn off the power switch, unplug the power cord.

Problems related to general use of the machine and copying are described below.

If a problem occurs in printer or scanner mode, see the "Operation manual (for printer and scanner)". If a problem occurs in fax mode, see the "Operation manual (for facsimile)" that accompanies the optional facsimile expansion kit.

If the message "Call for service. **-*" appears in the display, turn off the power switch, wait about 10 seconds, and then turn the power switch back on. If the message still appears after switching the power on and off several times, a failure may have occurred. In this case, promptly unplug the power cord and contact your dealer.

Note: Letters and numbers appear in **-* above. When you contact your Sharp dealer, please tell your dealer what numbers appear.

The following problems are related to the general operation of the machine and copying.

Problem	Cause and solution	Page
The machine does not operate.	The power cord is not plugged into a power outlet. → Plug the power cord into a grounded outlet.	–
	The power switch is turned off. → Turn the power switch on.	17
	The machine is warming up. → The machine requires about 45 seconds to warm up after the power switch is turned on. While the machine is warming up, copy settings can be selected but copying is not possible. Wait until "Ready to copy." appears.	17
	The front cover or the side cover is not completely closed. → Close the front cover or the side cover.	–
	The machine is in auto power shut-off mode. → When auto power shut-off mode has activated, only mode key indicators are lit; all other indicators and the display are off. The machine returns to normal operation when any of the mode keys are pressed, a print job is received, a fax is received, or when scanning from a computer is started. * Except when print hold for the fax function is enabled.	17
Power is on but copying is not possible.	The COPY indicator is off. → Press the [COPY] key to set the machine to copy mode.	14
Copies are too dark or too light.	An appropriate exposure for the original has not been selected. → Select a suitable exposure mode with the [EXPOSURE] key. If "TEXT" or "PHOTO" is selected, set an appropriate exposure level with the [◀] or [▶] key. → If the copy is too light or too dark even though "AUTO" was selected with the [EXPOSURE] key, adjust the automatic exposure level. The automatic exposure level is adjusted in "EXPOSURE ADJUST" (see the "Key operator's guide") in the key operator programs.	48
Text is not clear in a copy.	The correct original type has not been selected in the copy exposure setting screen. → Change the exposure setting to "TEXT" with the [EXPOSURE] key.	48
Blank copies	The original is not placed face up in the SPF or face down on the document glass. → Place the original face up in the SPF or face down on the document glass.	45

Problem	Cause and solution	Page
<p>The paper size used for the copy is different from the selected paper size (part of the image is cut off or too much of the page is blank).</p>	<p>The original was placed in the wrong position. → Place the original correctly.</p>	45
	<p>An appropriate ratio was not used for the size of the original and the size of the paper. → Press the [AUTO%] key to select the appropriate copy ratio based on the original and copy sizes.</p>	52
	<p>The size of paper loaded in the tray was changed without changing the tray's paper size setting. → The size of the paper loaded in the tray is different from the tray's paper size setting. Set the tray's paper size setting to the same orientation/size as the paper loaded in the tray.</p>	21
<p>Wrinkles appear in the paper or the image disappears in places.</p>	<p>The size or weight of the paper being used is not within the specified range. → Use copy paper within the specified range.</p>	18
	<p>The paper is curled or damp. → Replace it 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.</p>	-
<p>Paper misfeed.</p>	<p>A paper misfeed has occurred. → See "REMOVING MISFEEDS" to remove the paper misfeed.</p>	29
	<p>The size or weight of the paper being used is not within the specified range. → Use copy paper within the specified range.</p>	18
	<p>The paper is curled or damp. → Replace it 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.</p>	-
	<p>Paper is not loaded properly. → Make sure the paper is properly loaded.</p>	18
	<p>A piece of paper remains in the machine (after a paper misfeed was removed) → Remove all pieces of misfed paper.</p>	29
	<p>Too much paper is loaded in the tray. → 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.</p>	19
	<p>Several sheets of paper stick together. → Fan the paper well before loading it.</p>	19
	<p>The guides on the bypass tray do not match the width of the paper. → Adjust the bypass guides to the size of the loaded paper.</p>	20
	<p>The bypass tray extension is not pulled out. → When loading a large size of paper, pull out the bypass tray extension.</p>	20
	<p>The bypass paper feed roller is dirty. → Clean the roller.</p>	37
<p>5-1/2" x 8-1/2" (A5) paper is loaded in tray 2 or in the 250-sheet or 2 x 250-sheet paper feed unit. → 5-1/2" x 8-1/2" (A5) size paper must be loaded in tray 1 or the bypass tray.</p>	18	

Problem	Cause and solution	Page
The original size is not automatically selected or the copy is not made on paper that matches the size of the original.	Was the SPF (or document cover) opened completely when the original was placed on the document glass? → Open the SPF completely and then place the original on the document glass. Close the SPF (or document cover).	45
	The original is curled or folded. → The original size cannot be correctly detected if the original is curled or folded. Straighten the original.	–
	The original has many solid black areas. → If the original includes solid black areas, the original size may not be detected automatically. Press the [SPECIAL FUNCTION] key and select "ORIG. SIZE ENTER" to specify the original size.	–
	The machine is directly exposed to sunlight. → Install in a location that is not exposed to sunlight.	–
	The original is smaller than 5-1/2" x 8-1/2" (A5) size. → If the original is smaller than 5-1/2" x 8-1/2" (A5), the size cannot be detected. Follow the procedure in "USING THE BYPASS TRAY TO COPY A SPECIAL SIZE ORIGINAL" to make the copy.	51
	The original is not a standard size. → If the original is a small non-standard size, the size cannot be detected. Manually select a size close to the original size, or follow the procedure in "USING THE BYPASS TRAY TO COPY A SPECIAL SIZE ORIGINAL" to make the copy.	51
Copies are smudged or dirty.	The document glass or the underside of the document cover/SPF is dirty. → Clean these regularly.	37
	The original is smudged or blotchy. → Use a clean original.	–
White or black lines appear on copies.	The scanner glass for the SPF is dirty. → Clean the long, narrow scanning glass.	37
	The transfer charger is dirty. → Clean the transfer charger.	38
A tray's paper size setting cannot be set.	The COPY indicator is off. → Press the [COPY] key to select copy mode.	14
	A copy, print job, or received fax is being printed. → Set the paper size after copying or printing is complete.	16
	The machine has stopped temporarily due to a paper misfeed. → Remove the misfeed and then set the paper size.	29
	An interrupt copy job is in progress. → Set the paper size after the interrupt copy job is finished.	63
A copy job stops before it is finished.	The paper output tray is full. → Copying stops temporarily during a copy each time 250 sheets (150 sheets when a job separator tray kit is installed) are output. Remove the copies from the tray and press the [OK] key to resume copying.	–
	The tray is out of paper. → Load paper.	18
Scanning of the original stops before it is completed.	The display shows "Memory is full." → See "INDICATORS AND DISPLAY MESSAGES".	28
A light in the room flickers.	The same outlet is being used for the light and the machine. → Connect the machine to a dedicated power outlet which is not shared with other electric appliances.	–

INDICATORS AND DISPLAY MESSAGES

If one of the following messages appears in the display, take prompt action as instructed by the message.

Message	Action
 (Maintenance icon)	It is time for regular maintenance. Contact your SHARP service center.
 (Developer replacement required icon)	Developer is required. Contact your SHARP service center as soon as possible.
 Maintenance required. Call for service.	Maintenance required soon. Contact your SHARP service center.
 Call for service. **-**	Turn off the power and then turn it back on. If this does not clear the message, write down the 2-digit main code and 2-digit sub-code ("**-**"), turn off the power, and promptly contact your SHARP service center.
 (Toner cartridge replacement required icon)	The toner cartridge must be replaced soon.
 Check the toner cartridge.	Check to see if the toner cartridge has been installed properly.
Remove paper from the output tray and press [OK].	The number of sheets in the output tray (center tray or top tray) has reached the limit. Remove the paper.
 Load <*> paper into tray <*>.	The paper size specified for the tray is different from the actual size. (Page 21)
Memory is full.	The memory became full while scanning the originals. Press the [START] key () to copy only the originals that have been scanned, or press the [CA] key to cancel the job.

<*>: Tray number

<*>: Size of paper that should be loaded

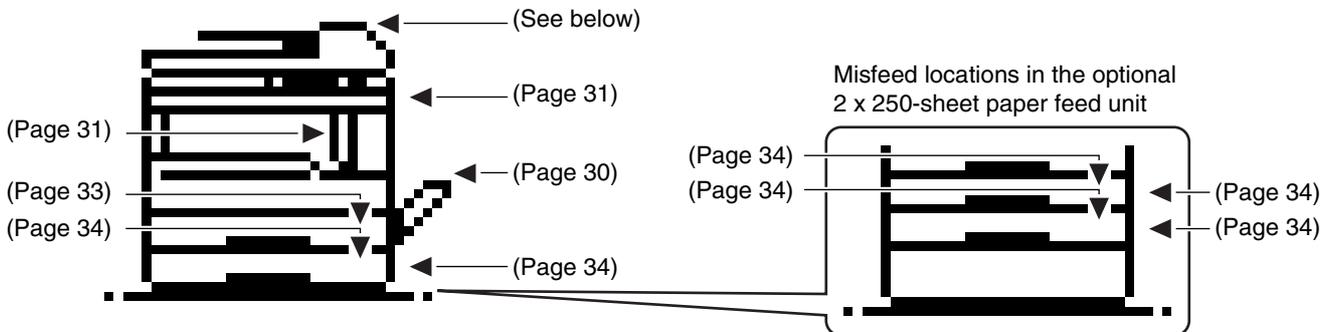
REMOVING MISFEEDS

When a misfeed occurs during copying, the message " ⚠ Clear paper path." and the location of the misfeed will appear. Check the location and remove the misfeed.



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.

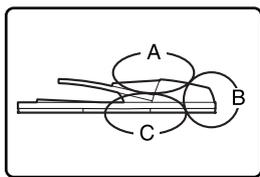
First check the misfeed location.



* The illustration shows misfeed locations in the AR-M207 (when the RSPF is installed).

ORIGINAL MISFEED IN THE SPF

If an original misfeeds in the SPF, follow the steps below to remove the misfed original.



Check locations A, B, and C in the diagram at left to remove the original.

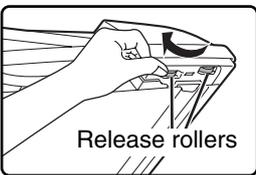
1 Removing original misfeeds from each location.

• Check location A

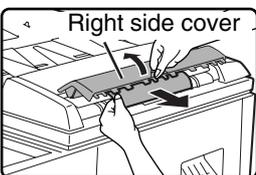


Open the feeding roller cover and gently remove the misfed original from the document feeder tray. Close the feeding roller cover.

• Check location B



Open the SPF and rotate the two release rollers in the direction of the arrow to feed the original out.

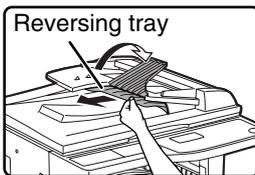


If the misfed original is small (such as a 5-1/2" x 8-1/2" (A5) original), or if the misfeed occurred in the reversing tray, open the right side cover and gently remove the original. Close the right side cover.

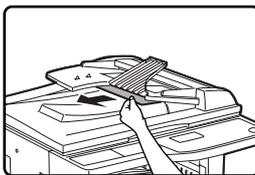
• Check location C



Carefully remove the misfed original from the exit area.

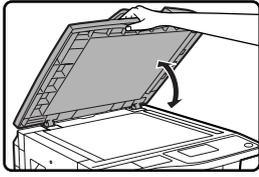


[When using the RSPF:]
If the misfed original cannot be easily removed from the exit area, open the moveable part of the document feeder tray, remove the reversing tray, and then remove the original.



After removing a misfed original from the exit area, be sure to replace the reversing tray and moveable part of the document feeder tray.

2 Open and close the SPF.

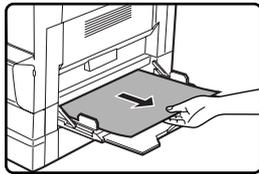


Opening and closing the cover clears the misfeed display. Copying cannot be resumed until this step is performed.

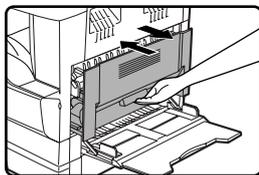
A message may appear indicating the number of originals which must be returned to the document feeder tray. Return the originals to the document feeder tray and press the [START] key (Ⓢ).

MISFEED IN THE BYPASS TRAY

1 Carefully remove the misfed paper from the bypass tray.



2 Grasp the side cover handle and gently open and close the side cover.



The message " ⚠ Clear paper path." will be cleared and copying will be possible.

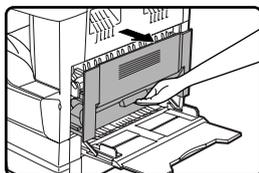


Note If the message does not clear, check again to make sure that no pieces of paper remain.

MISFEED IN THE MACHINE

To remove a paper misfeed from the machine, the bypass tray and then the side cover must be opened. Check whether the misfeed occurred in A, B, or C below and then follow the misfeed removal procedure for that location.

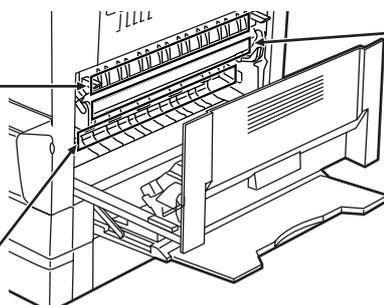
1 Open the bypass tray and then the side cover.



2 Determine where the misfeed occurred.

Location C
If paper is misfed here, go to "Misfeed in C" (page 33).

Location A
If paper is misfed here, go to "Misfeed in A" (below).

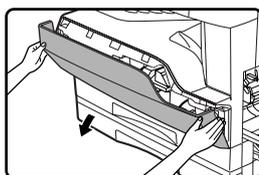


Location B
If paper is misfed here, go to "Misfeed in B" (page 32).

2

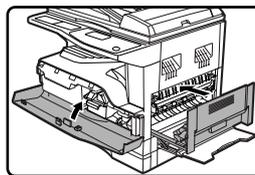
Misfeed in A

1 Open the front cover.



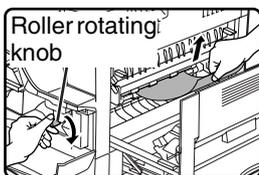
Push gently on both ends of the front cover to open it.

3 Close the front cover and the side cover.



The message " ⚠ Clear paper path." will be cleared and copying will be possible.

2 Turn the roller rotating knob in the direction of the arrow to remove the misfed paper.



Be careful not to tear the misfed paper during removal.

Note

- When closing the front cover, gently hold both ends.
- When closing the side cover, hold the handle.
- If the message does not clear, check again to make sure that no pieces of paper remain.

Warning

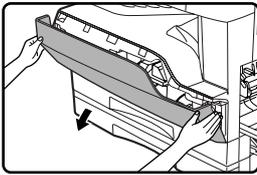
The fusing unit is hot. Do not touch the fusing unit when removing misfed paper. Doing so may cause a burn or injury.

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.

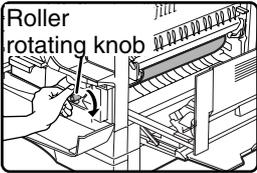
Misfeed in B

1 Open the front cover.



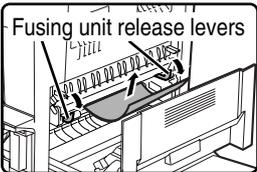
Push gently on both ends of the front cover.

2 Turn the roller rotating knob in the direction of the arrow.



Roller rotating knob

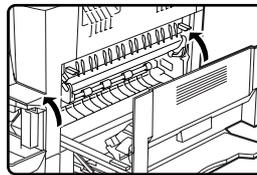
3 Lower the right and left fusing unit release levers and remove the misfed paper.



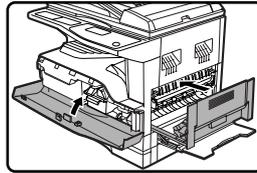
Fusing unit release levers

Be careful not to tear the misfed paper during removal.

4 Lift the fusing unit release levers.



5 Close the front cover and the side cover.



The message " ⚠ Clear paper path." will be cleared and copying will be possible.

Note

- When closing the front cover, gently hold both ends.
- When closing the side cover, hold the handle.
- If the message does not clear, check again to make sure that no pieces of paper remain.

Warning

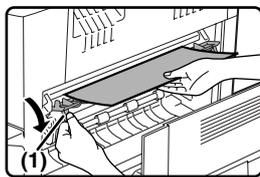
The fusing unit is hot. Do not touch the fusing unit when removing misfed paper. Doing so may cause a burn or injury.

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.
- Take care not to allow unfixed toner on the misfed paper to soil your hands or clothes.

Misfeed in C

- 1 Lower (1) in the illustration, open the fusing unit paper guide, and remove the misfed paper.**

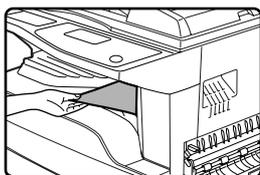


Be careful not to tear the misfed paper during removal.



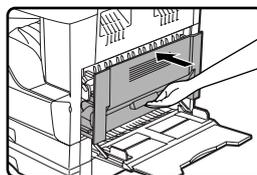
The fusing unit is hot. Do not touch the fusing unit when removing misfed paper. Doing so may cause a burn or injury.

- 2 If the misfed paper cannot be removed by the previous step, remove it from the paper output area.**



Be careful not to tear the misfed paper during removal.

- 3 Close the side cover.**



The message " ⚠ Clear paper path." will be cleared and copying will be possible.



- When closing the side cover, hold the handle.
- If the paper was torn, make sure that no torn pieces remain in the machine.
- If the message does not clear, check again to make sure that no pieces of paper remain.

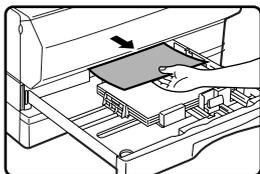
2

MISFEED IN TRAY 1



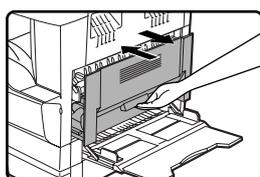
Make sure that there is no misfed paper in the tray before pulling it out. (Page 31)

- 1 Pull out tray 1 and remove the misfed paper.**



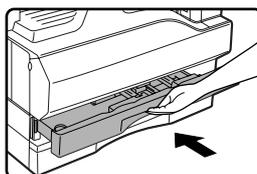
Be careful not to tear the misfed paper during removal.

- 2 Open and close the side cover.**



The message " ⚠ Clear paper path." will be cleared and copying will be possible.

- 3 Gently push tray 1 into the machine.**



Push the tray in completely.



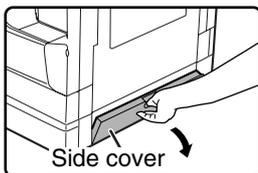
- When closing the side cover, hold the handle.
- If the message does not clear, check again to make sure that no pieces of paper remain.

MISFEED IN TRAY 2



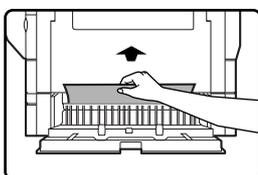
- Make sure that there is no misfed paper in the tray before pulling it out. (Page 31)
- Also use the following procedure to remove misfeeds that occur in the 250-sheet paper feed unit and the 2 x 250-sheet paper feed unit.

1 Open the side cover.



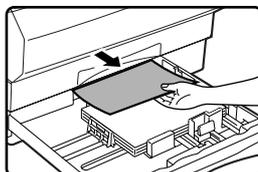
Grasp the handle to open the side cover.

2 Remove the misfed paper.



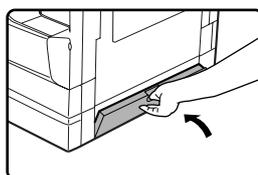
Be careful not to tear the misfed paper during removal.

3 If there was no misfed paper in step 2, pull out tray 2 and remove the misfed paper.



Be careful not to tear the misfed paper during removal.

4 Gently close the side cover.

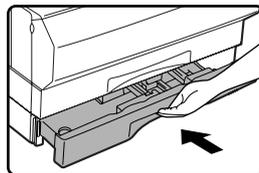


The message " ⚠ Clear paper path." will be cleared and copying will be possible.



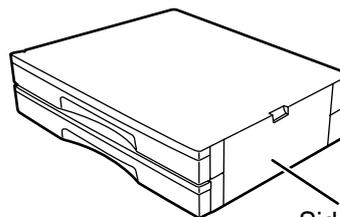
If the message does not clear, check again to make sure that no pieces of paper remain.

5 Gently push tray 2 into the machine.



Push the tray in completely.

2 x 250-sheet paper feed unit (AR-D25)



Side cover

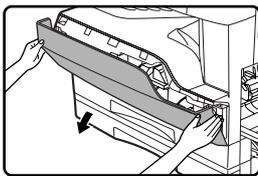
REPLACING THE TONER CARTRIDGE

When the toner replacement icon (⚡) appears, little toner remains. Obtain a replacement cartridge as soon as possible. When the message " ⚠ Add toner. Can not copy or print." appears in the display, the toner cartridge must be replaced before copying can be resumed. Follow the steps below to replace the toner cartridge.



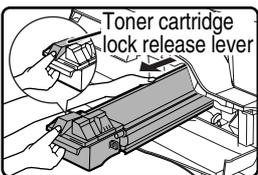
- During a long copy run or when copying originals with many dark areas, the message "Toner replenishment in progress." may appear and copying will stop even though toner remains. The machine will feed toner for about 2 minutes. When the START indicator lights up, press the [START] key (Ⓢ) to resume copying.
- When the toner cartridge replacement required icon (⚡) appears in the display, little toner remains and thus copies may be faint.

1 Open the front cover.



Push gently on both ends of the front cover to open it.

2 Pull the toner cartridge out while pressing on the toner cartridge lock release lever.



When pulling out the toner cartridge, place one hand on the green part of the cartridge.

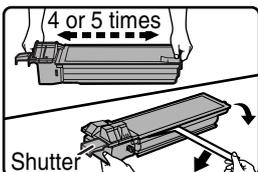


- After removing the toner cartridge, do not shake it or tap it. Doing so may cause toner to leak from the cartridge.
- Put the old cartridge immediately in the bag contained in the box of the new cartridge.



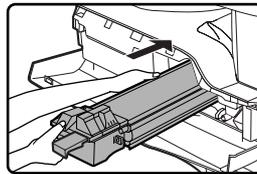
- Do not throw the toner cartridge into a fire. Toner may fly and cause burns.
- Store toner cartridges out of the reach of small children.

3 Remove the new toner cartridge from the bag. Grasp the cartridge on both sides and shake it horizontally four or five times. After shaking the cartridge, remove the tape.



- Do not hold the cartridge by the shutter. It may fall. Grasp the hand grip when holding the cartridge.
- Be sure to shake the cartridge only before the tape is removed.

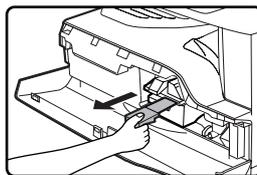
4 While pressing down on the toner cartridge lock release lever, insert the toner cartridge along the guides all the way in.



If there is any dirt or dust on the toner cartridge, remove it before installing the cartridge.

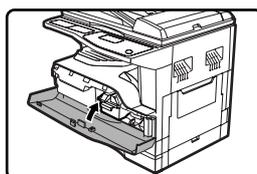
2

5 Remove the tape and then pull the shutter out of the toner cartridge.



Discard the shutter.

6 Close the front cover.



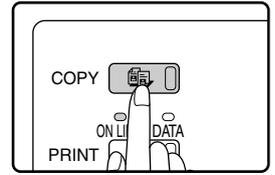
The toner cartridge replacement required icon (⚡) will no longer appear and copying will be possible.



- Even after a new toner cartridge is installed, the toner cartridge replacement required indicator (⚡) may still appear, 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.

CHECKING THE TOTAL OUTPUT COUNT

To check the total number of pages output in copy, print, and fax modes and the total scan count in scanner mode, hold down the [COPY] key when the machine is in the standby state. The counts will appear while the key is held down. The total output count and the total scan count can be used as a guideline for cleaning. When the total output count and the total scan count exceed "999,999", the counts return to "0".

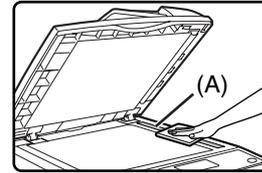
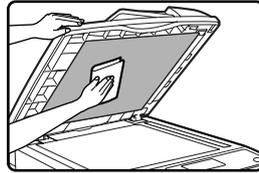
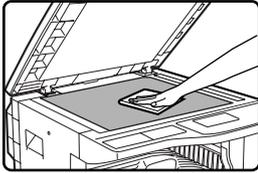


- An 11" x 17" or A3 page is counted as two pages.
- Each two-sided sheet that is output is counted as two pages. (An 11" x 17" or A3 sheet is counted as four pages.)
- Blank copies and blank prints are included in the count.
- If the last page of a two-sided printing job is blank, it is not included in the count.

CLEANING THE MACHINE

CLEANING THE DOCUMENT GLASS AND SPF/DOCUMENT COVER

If the document glass, SPF, underside of the document cover, or the scanner for originals coming from SPF (A) (the long narrow glass surface on the right side of the document glass) become dirty, the dirt may appear on copies. Always keep these parts clean.



Wipe with a clean, soft cloth. If necessary, moisten the cloth with water or a small amount of neutral detergent. When finished, wipe dry with a clean cloth. Do not use thinner, benzene, or similar volatile cleaning agents.



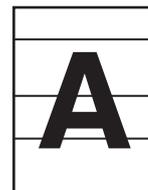
Do not spray flammable cleaner gas. Gas from the spray may come in contact with the internal electrical components or hot parts of the fusing unit, creating a risk of fire or electrical shock.

2

Cleaning the original scanning glass (only when a SPF is installed)

If white or black lines appear in copies made with using the SPF, use the provided glass cleaner to clean the original scanning glass. (If white or black lines appear in copies, printed pages, or printed fax pages when the SPF is not used, see "CLEANING THE TRANSFER CHARGER" on page 38.)

Example of dirty print image

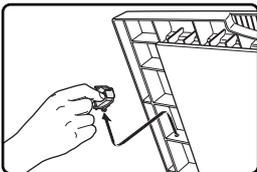


Black lines

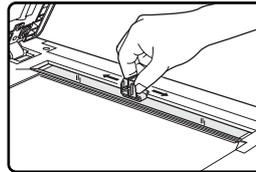


White lines

1 Open the SPF and take out the glass cleaner.



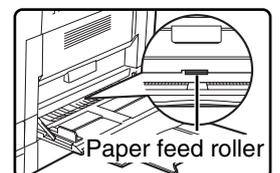
2 Clean the original scanning glass with the glass cleaner.



3 Return the glass cleaner to its original position.

CLEANING THE BYPASS TRAY PAPER FEED ROLLER

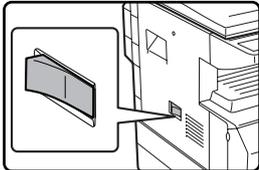
If misfeeds occur frequently when feeding postcards, envelopes, or heavy paper through the bypass tray, wipe the surface of the paper feed roller with a soft, clean cloth dampened with alcohol or water.



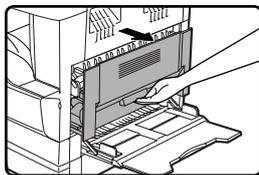
CLEANING THE TRANSFER CHARGER

If white or black lines appear in copies or the image is blotchy, the transfer charger may be dirty. Follow the steps below to clean the charger.

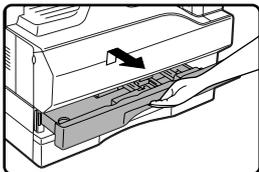
1 Turn the power switch off.



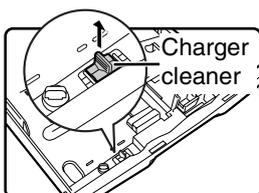
2 Open the bypass tray and the side cover.



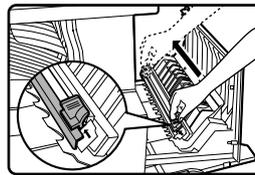
3 While lifting the handle, gently pull out tray 1.



4 Take out the charger cleaner.



5 Place the charger cleaner on the transfer charger and gently slide the cleaner in the direction indicated by the arrow two or three times.

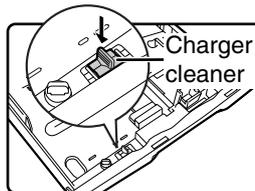


If the sheet metal on the transfer charger is smudged with toner, wipe it with a soft, clean cloth.

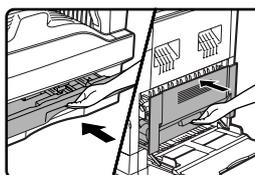
Note

Slide the charger cleaner from one end to the other end along the groove of the transfer charger. If the cleaner is stopped it reaches the other end or if the direction of movement is reversed, smudges may appear on copies.

6 Return the charger cleaner to its original position.



7 Close the tray and side cover.

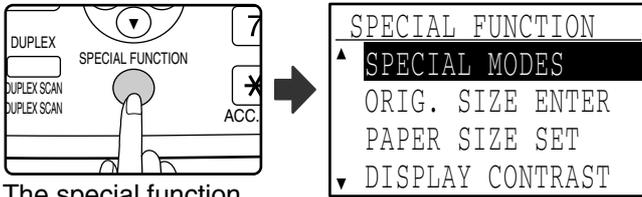


8 Turn the power switch to the "ON" position.

ADJUSTING THE DISPLAY CONTRAST

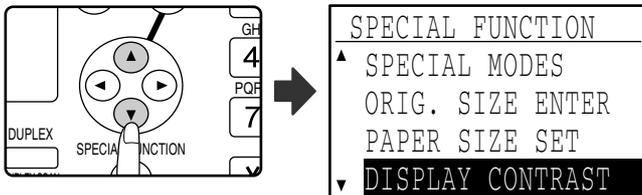
The contrast of the display can be adjusted as explained below.

1 Press the [SPECIAL FUNCTION] key.

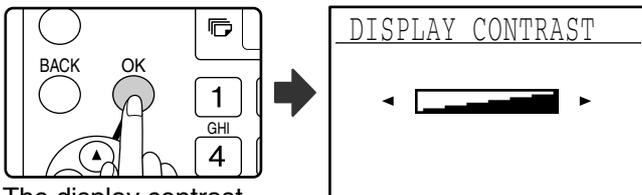


The special function screen will appear.

2 Select "DISPLAY CONTRAST" with the [▼] or [▲] key.

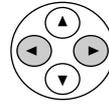


3 Press the [OK] key.



The display contrast adjustment screen will appear.

4 Adjust the contrast with the [◀] or [▶] key.



To reset the contrast to the default setting, press the [C] key.

5 Press the [SPECIAL FUNCTION] key.

SPECIAL FUNCTION



You will return to the base screen.

2

3

PERIPHERAL DEVICES AND SUPPLIES

Optional equipment and supplies are explained in this chapter. To purchase optional equipment and supplies, contact your dealer or SHARP service.

OPTIONAL EQUIPMENT

Convenient optional equipment can be installed on the machine as needed.



- 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.
- Peripheral devices are normally optional, but are incorporated in some models as standard equipment.

	AR-M162	AR-M207
Reversing single pass feeder (AR-RP6N)	No	Yes
Single pass feeder (AR-SP6N)	Yes	Yes
Document cover (AR-VR5)	Standard	Yes
250-sheet paper feed unit (AR-D24)	Yes	Yes
2 x 250-sheet paper feed unit (AR-D25)	Yes	Yes
Job separator tray kit (AR-TR4)	Yes	Yes
256MB expansion memory board (AR-SM5)	Yes	Yes
Facsimile expansion kit (AR-FX11)	Yes	Yes
8MB fax memory (AR-MM9)	Yes*2	Yes*2
Network expansion kit (AR-NB3)	Yes	Yes
PS3 expansion kit (AR-PK1/N)	Yes*1	Yes*1
Barcode font kit (AR-PF1)	Yes*1	Yes*1
Flash memory kit (AR-PF2)	Yes*1	Yes*1

Yes: Can be installed. No: Cannot be installed.

*1 The network expansion kit (AR-NB3) must be installed.

*2 The facsimile expansion kit (AR-FX11) must be installed.

REVERSING SINGLE PASS FEEDER / SINGLE PASS FEEDER

For the names of the parts of the RSPF / SPF, see "PART NAMES AND FUNCTIONS" (page 12).

Specifications

Model		AR-SP6N	AR-RP6N
Acceptable originals	Weight	15 lbs. to 24 lbs. (56 g/m ² to 90 g/m ²)	
	Original sizes	5-1/2" x 8-1/2" to 11" x 17" (A5 to A3)	
	Capacity	Up to 40 sheets (thickness 11/64" (4 mm) or less) (for 8-1/2" x 14" (B4) or larger originals, up to 30 sheets)	
Detectable original sizes		5-1/2" x 8-1/2"*1, 8-1/2" x 11", 8-1/2" x 11"R, 8-1/2" x 14", 11" x 17" (A5, B5, B5R, A4, A4R, B4, A3)	
Original exchange speed*2		When installed on AR-M162: 16 pages/min. When installed on AR-M207: 20 pages/min.	
Weight		11.1 lbs. (5.0 kg)	12.0 lbs. (5.4 kg)
Dimensions		22-61/64" (W) x 17-9/64" (D) x 5-1/4" (H) (583 mm (W) x 435 mm (D) x 133 mm (H))	

*1 Two-sided scanning is not possible.

*2 During one-sided copying

3

250-SHEET PAPER FEED UNIT / 2 X 250-SHEET PAPER FEED UNIT

- The 250-sheet paper feed unit provides a tray that can hold 250 sheets (20 lbs. (80 g/m²)) of plain paper.
- The 2 x 250-sheet paper feed unit provides two trays that can each hold 250 sheets (20 lbs. (80 g/m²)) of plain paper.

Loading paper in the 250-sheet paper feed unit / 2 x 250-sheet paper feed unit

The method of loading paper is the same as for the paper trays on the machine (see the explanation on page 18).



If you change the size of paper loaded in the tray, you must change the tray's paper size setting. Change the setting as explained in "CHANGING THE PAPER SIZE SETTING OF A TRAY" on page 21.

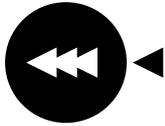
Specifications

Model	AR-D24	AR-D25
Paper size	8-1/2" x 11"R, 8-1/2" x 11, 8-1/2" x 13", 8-1/2" x 14", 11" x 17", B5, B5R, A4, A4R, B4, A3	
Paper capacity	Approximately 250 sheets (20 lbs. (80 g/m ²)) x 1 tray	Approximately 250 sheets (20 lbs. (80 g/m ²)) x 2 trays
Paper weight	15 lbs. to 24 lbs. (56 g/m ² to 90 g/m ²)	
Power supply	Supplied from the machine	
Dimensions	23-15/64" (W) x 16-27/64" (D) x 3-15/32" (H) (590 mm (W) x 471 mm (D) x 88 mm (H))	23-15/64" (W) x 16-27/64" (D) x 6-27/32" (H) (590 mm (W) x 471 mm (D) x 173.5 mm (H))
Weight	11.0 lbs. (5.0 kg)	22.0 lbs. (10.0 kg)

STORAGE OF SUPPLIES

Standard supplies for this product that are to be replaced by the user are paper and toner cartridge.

SHARP



GENUINE SUPPLIES

For best copying results, be sure to use only SHARP Genuine Supplies which are designed, engineered and tested to maximize the life and performance of SHARP copiers. Look for the Genuine Supplies label on the toner package.

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 and Consumables

The supply of spare parts for a repair of the appliance is guaranteed for at least 7 years following the termination of production. Spare parts are those parts of the apparatus 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.

Part 2: Copier Operation

4

COPY FUNCTIONS

This chapter explains the basic procedures for making copies, including selection of the copy ratio and other copy settings.

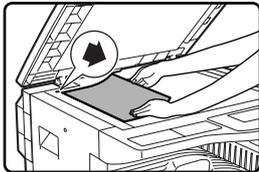
NORMAL COPYING

This section explains how to make a regular copy.

If "Auditing mode" has been enabled (page 23), enter your 5-digit account number.

Copying from the document glass

1 Open the SPF and place the original face down on the document glass.

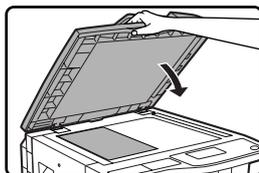


Align the upper left-hand corner of the original with the tip of the ▲ mark.
The original size is automatically detected.



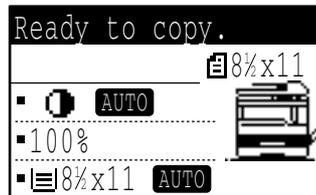
An original up to 11" x 17" (A3) can be placed on the document glass.

2 Close the SPF.



If the original is a non-standard size or the size was not detected correctly, see "SELECTING THE ORIGINAL SIZE" (page 50).

3 Make sure that the desired paper tray is selected.



To load paper, see "LOADING PAPER" (page 18).



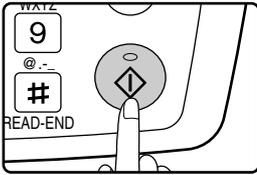
- If the auto paper select function has been disabled in the key operator programs (see the "Key operator's guide"), use the [PAPER] key to select the desired paper size.
- If you wish to use a size of paper different from the size automatically selected by the machine, use the [PAPER] key to select the desired paper size.
- Paper in a different orientation from the original can be selected if the auto paper select or auto image function has been selected. In this case, the image of the original will be rotated.
- To make a copy of a small original such as a card, follow the procedure in "USING THE BYPASS TRAY TO COPY A SPECIAL SIZE ORIGINAL" (page 51).
- To use the bypass tray, select it manually.

4 Set the number of copies.



If you are making two or more copies each of multiple original pages, you can select the sort function to collate the copies into sets. (Page 64)

5 Press the [START] key (⏻) to begin copying.



The copy will be delivered to the center tray.

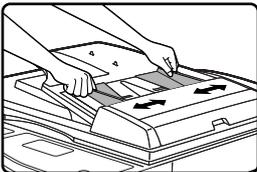
Note

- The center tray can hold a maximum of 250 sheets (150 sheets when the job separator tray kit is installed).
- About one minute after copying ends, "Auto clear" (page 18) activates and restores the copy settings to the default settings. The setting for "Auto clear" can be changed in the key operator programs. (See the "Key operator's guide".)
- To cancel a copy job in progress, press the [C] key.
- Differences in copy conditions may cause the position of the printed copy image to vary even the copies are of the same original on the same paper. For more information, see "Points concerning the position of the printed copy image" on page 47.

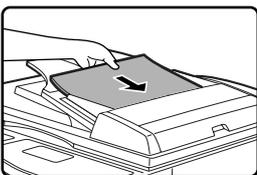
Copying from the SPF

1 Open the SPF and make sure that an original has not been left on the document glass. Gently close the SPF.

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



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



The original size appears in the display and the most suitable paper size is automatically selected.

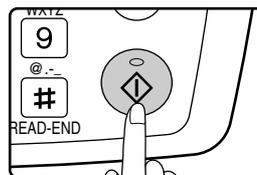
Insert the stack into the document feeder tray until it stops.

Note

- If the original is a non-standard size or the size was not detected correctly, see "SELECTING THE ORIGINAL SIZE" (page 50).
- If the auto paper select function has been disabled in the key operator programs (see the "Key operator's guide"), use the [PAPER] key to select the desired paper size.
- To copy onto paper of a different size, press the [PAPER] key and select the desired paper size.
- Paper in a different orientation from the original may be selected if the auto paper select or auto image function has been selected. In this case, the image of the original will be rotated.
- To use the bypass tray, select it manually.
- 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 copies are delivered to the center tray.

The default output mode for copying from the SPF is sort mode. (Page 64)

The output mode can be changed using the automatic sort selection setting in the key operator programs. (See the "Key operator's guide".)

Note

- The center tray can hold a maximum of 250 sheets (150 sheets when the job separator tray kit is installed).
- About one minute after copying ends, "Auto clear" (page 18) activates and restores the copy settings to the initial settings. The duration of time after which "Auto clear" clears the copy settings can be changed in the key operator programs. (See the "Key operator's guide".)
- To stop copying in the middle of a run, press the [C] key. If you find it difficult to remove the original from the document feeder tray, open the feeding roller cover before removing the original. If you pull out the original without opening the feeding roller cover, the original may become dirty.

Stream feeding mode

If stream feeding mode has been enabled in the key operator programs (see the "Key operator's guide"), the message "Set originals for stream feeding." will appear in the display for 5 seconds after all originals have been fed from the SPF. Any new originals placed in the SPF while this message appears will be fed and copied automatically.

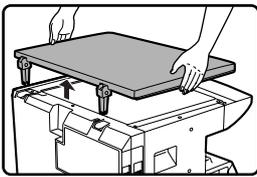
Auto paper select mode

When auto paper select mode is enabled, "AUTO" appears in the paper size display. This function automatically selects paper that is the same size as the original (5-1/2" x 8-1/2", 8-1/2" x 11", 8-1/2" x 11"R, 8-1/2" x 13", 8-1/2" x 14", 11" x 17", A5, B5, B5R, A4, A4R, B4, A3 paper).

- 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 canceled if the auto zoom select function (page 52) is enabled or if a paper tray is selected with the [PAPER] key. Auto paper select resumes operation when the [CA] key is pressed or when "Auto clear" activates. Auto paper select mode can be disabled in the key operator programs. (See the "Key operator's guide".)

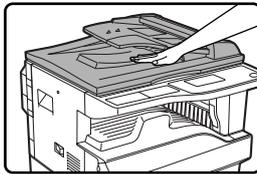
Removing the document cover

To copy large originals like newspapers, remove the document cover. To remove the cover, lift it straight up as shown. To replace the cover, do the reverse. The SPF cannot be removed.



Copying books or originals with folds or creases

Press down on the SPF (or document cover) while copying as shown. If the SPF (or document cover) 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 SPF

Originals from 5-1/2" x 8-1/2" to 11" x 17" (A5 to A3) in size and 15 lbs. to 24 lbs. (56 g/m² to 90 g/m²) in weight can be used. A maximum of 40 pages can be placed at once. For originals that are 8-1/2" x 14" or larger (B4 or larger), a maximum of 30 pages can be placed at once.



- 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 originals may cause misfeeds.
- If the margin shift function is being used, the margin shift settings may need to be changed. (Page 68)

Originals that cannot be used in the SPF

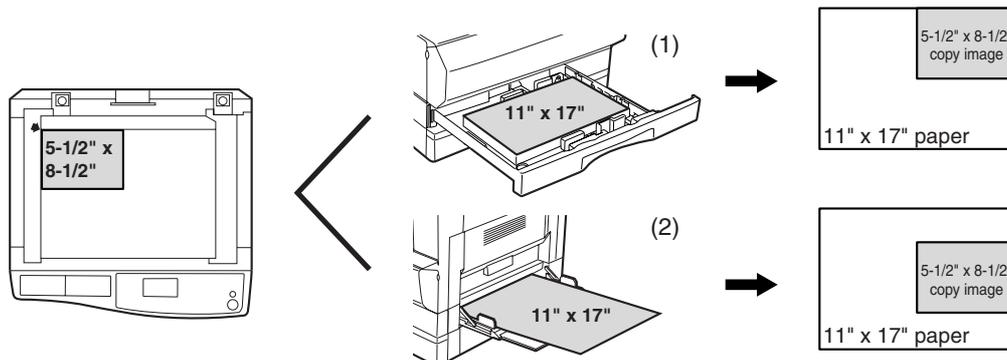
The following originals cannot be used: These may cause misfeeds or smudging and unclear images.

- 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.

Points concerning the position of the printed copy image

Even if the same original is copied onto the same type of paper, differences in the original size, scanning location (document glass or document feeder tray), selected paper tray, enlargement/reduction ratio, and other conditions may cause the position of the printed copy image on the paper to vary.

As shown in the following example, when an original smaller than the paper size (for example, 5-1/2" x 8-1/2" original and 11" x 17" paper) is copied from the document glass, the position of the printed copy image on the paper is different when paper from tray 1 is used (1) and paper from the bypass tray is used (2).

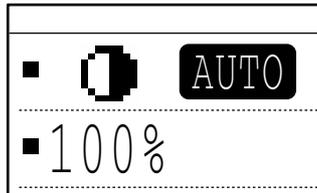


MAKING A COPY DARKER OR LIGHTER

The copy exposure can be adjusted as needed to the original. Three exposure modes are available: "AUTO", "TEXT" and "PHOTO". When "TEXT" or "PHOTO" is selected, the exposure can be manually adjusted to 5 levels.

Auto

This is the default exposure mode. In this mode, the characteristics of an original being copied are "read" by the exposure system and exposure adjustments are made automatically. The exposure level is lowered for colored areas and background shadows.

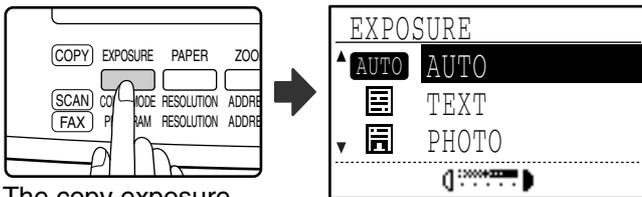


Text/photo

TEXT: This mode enhances low density areas of an original and suppresses high-density background areas to make text more legible.

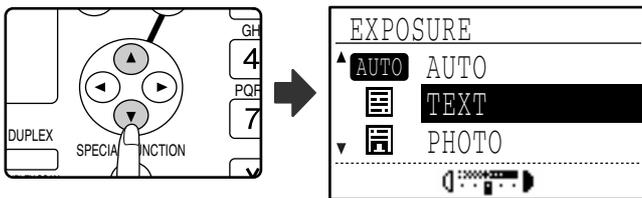
PHOTO: This mode provides clearer reproduction of halftones in photos.

1 Press the [EXPOSURE] key.



The copy exposure screen will appear.

2 Select the exposure mode that best suits the original with the [▼] or [▲] key.

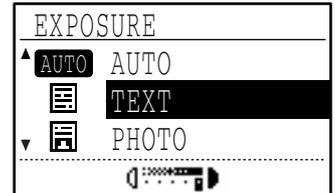
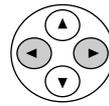


The [EXPOSURE] key can also be pressed to select the exposure mode.



When "PHOTO" is selected, "PHOTO MODE DEFAULT" in the key operator programs can be used to select the method for expressing halftones. (See the "Key operator's guide".)

3 Adjust the exposure level as needed with the [◀] or [▶] key.



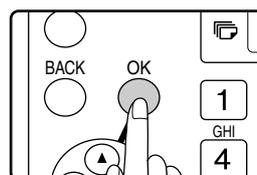
- The exposure level cannot be adjusted when "AUTO" is selected.
- For a darker image, press the [▶] key. For a lighter image, press the [◀] key.
- The default exposure levels for "TEXT" and "PHOTO" can be set in the key operator programs.



Exposure level guidelines

- 1 to 2: Dark originals such as newspapers
- 3: Normal density originals
- 4 to 5: Text written in pencil or light color text

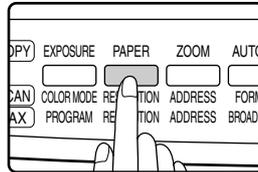
4 Press the [OK] key.



To return to AUTO mode, press the [EXPOSURE] key, select "AUTO" with the [▲] key, and press the [OK] key.

SELECTING THE TRAY

By default the auto paper select function (page 47) operates, and thus the appropriate tray is automatically selected when the original is placed on the document glass or in the document feeder tray, or when the original size is specified. If you wish to use a tray other than the automatically selected tray (for example you wish to enlarge or reduce the copy or use the bypass tray), press the [PAPER] key to select the desired tray.



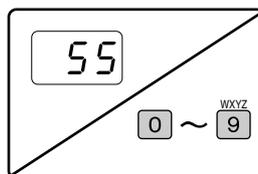
- If the desired paper size does not appear, change the paper in a tray to the desired paper size. (Page 21)
- Automatic ratio selection (page 47) does not operate when the bypass tray is selected.

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 if needed. (Page 22)

SETTING THE NUMBER OF COPIES

Press the numeric keys to set the number of copies.



- The set number of copies appears in the display. A maximum of 999 copies (factory default setting) can be set.
- A single copy can be made even if "0" is displayed.



- If you enter the wrong number, press the [C] key and enter the correct number.
- The limit for the number of copies can be changed in the key operator programs. (See the "Key operator's guide".)

Important note when making a large number of copies

If the number of sheets output to the center tray exceed its maximum capacity (250 sheets when a job separator tray kit is not installed, 150 sheets when a job separator tray kit is installed) during a copy job, the copy job will stop temporarily. If this happens, promptly remove the copies and press the [OK] key to resume copying. The copy job will step each time the number of sheets in the center tray reach its maximum capacity.

Before starting a long copy run, remove any sheets that remain in the center tray. During output of the copy job, exercise care as the job may stop frequently due to the center tray becoming full.

SELECTING THE ORIGINAL SIZE

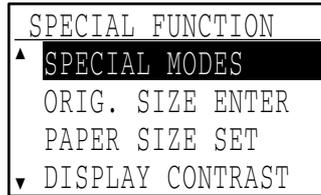
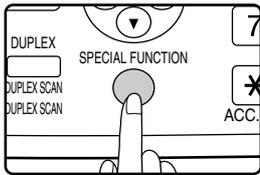
If you loaded a non-standard size* original or the original size was not correctly detected, set the original size manually. Perform the following steps after placing the document in the document feeder tray or on the document glass.



*** Standard sizes:**

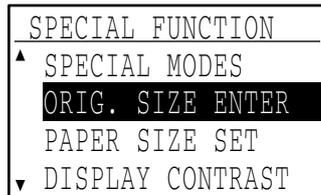
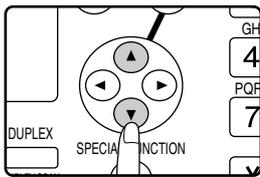
The following sizes can be detected correctly: 11" x 17", 8-1/2" x 14", 8-1/2" x 11", 8-1/2" x 11"R, 5-1/2" x 8-1/2" (A3, B4, A4, A4R, A5). If a non-standard size original is placed (including special sizes), the closest standard size may be displayed, or the original size may not appear.

1 Press the [SPECIAL FUNCTION] key.

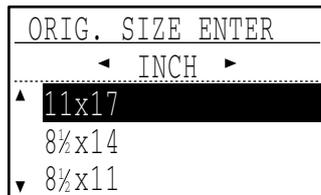
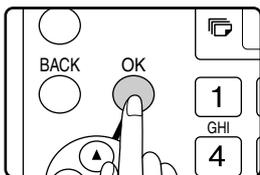


The special function screen will appear.

2 Select "ORIG. SIZE ENTER" from the menu with the [▼] or [▲] key.

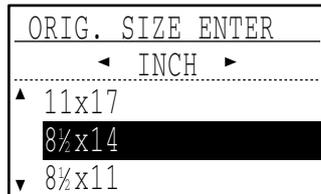
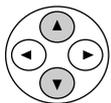


3 Press the [OK] key.



The original size selection screen will appear.

4 Select the original size with the [▼] or [▲] key.



The selected original size is highlighted.

- To select an AB original size, press the [▶] key and go to step 6.
- If you selected "SIZE INPUT", follow steps 4 through 6 of the procedure in "USING THE BYPASS TRAY TO COPY A SPECIAL SIZE ORIGINAL" (page 51) to set the horizontal and vertical dimensions of the original.

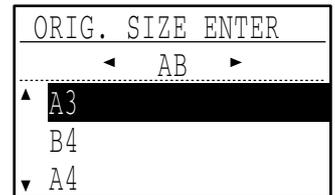
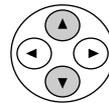
5 Press the [OK] key.



You will return to the base screen and the selected original size will appear in the original size display.

Selecting an AB original size

6 Select the original size with the [▼] or [▲] key.



To return to selection of inch original sizes, press the [◀] key to return to step 4.

7 Press the [OK] key.



You will return to the base screen and the selected original size will appear in the original size display.



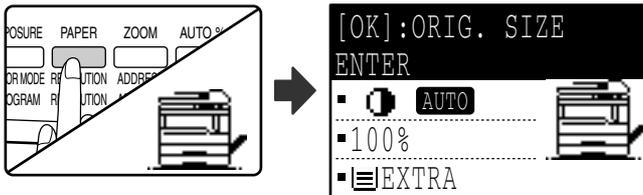
To cancel an original size selection, press the [CA] key.

USING THE BYPASS TRAY TO COPY A SPECIAL SIZE ORIGINAL

When the bypass tray is being used for copying and an original that is placed on the document glass is detected as being a special size, the display will prompt the user to set the original size. To make a copy in this type of situation, follow the steps below.

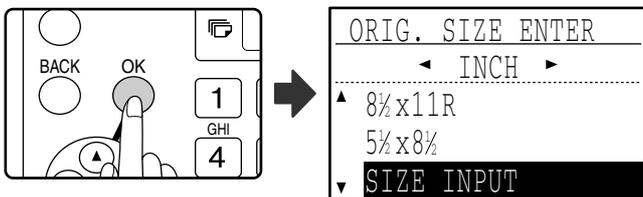
1 Load paper in the bypass tray and place the original on the document glass.

2 Touch the [PAPER] key and then select the bypass tray.



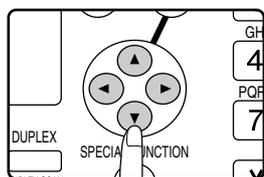
A message will appear asking you whether you wish to set the original size or make the copy without setting it. To make a copy without setting the original size, press the [START] key (Ⓢ). To set the original size, go to step 3.

3 Press the [OK] key.



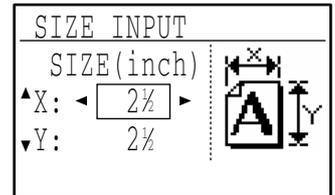
The original size selection screen appears with "SIZE INPUT" selected.

4 Select inches or AB with the [◀] or [▶] key, and then select the original size with the [▼] or [▲] key.



5 Press the [OK] key.

If "SIZE INPUT" was selected in step 4:



The size entry screen appears and is ready for entry of the width of the original.

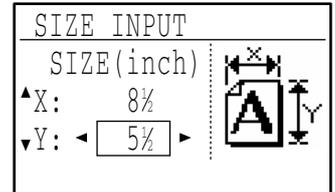
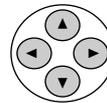


If you selected AB in step 4, the screen will be ready for you to enter the width in AB.

If other than "SIZE INPUT" was selected in step 4:

You will return to the base screen. Go to step 8.

6 Select "X" (width) with the [▼] or [▲] key and enter the width with the [◀] or [▶] key, and then do the same for the length (Y).



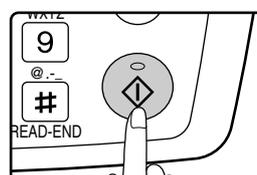
- Any number from 2-1/2" to 17" (64 mm to 432 mm) can be entered for the width, and any number from 2-1/2" to 11-5/8" (64 mm to 297 mm) can be entered for the length.
- The entered size is retained until the power is turned off, even if "SIZE INPUT" is selected again and the entry screen of step 5 is displayed.

7 Press the [OK] key.



You will return to the base screen.

8 Press the [START] key (Ⓢ).



Copying begins.

4

REDUCING OR ENLARGING A COPY

There are three ways to enlarge and reduce copies:

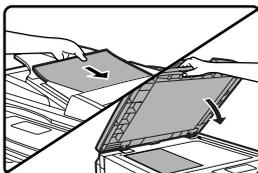
- Automatic selection of a ratio according to the paper size: Auto ratio selection
- Specifying a ratio from 25% to 400%: Preset ratios/zoom
- Selecting the vertical and horizontal ratios separately: XY zoom



When the SPF is being used, the zoom copy ratio range is 50% to 200%.

AUTOMATIC RATIO SELECTION

1 Place the original in the document feeder tray or on the document glass.

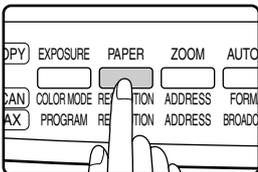


The original size will appear in the display. If the correct size does not appear, see "SELECTING THE ORIGINAL SIZE" (page 50).



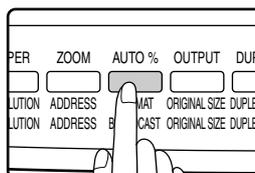
Automatic ratio selection can be used when the original size is 11" x 17", 8-1/2" x 14", 8-1/2" x 13", 8-1/2" x 11", 8-1/2" x 11"R, 5-1/2" x 8-1/2", A3, B4, A4, A4R and A5. It cannot be used for other sizes.

2 Press the [PAPER] key to select the desired tray.



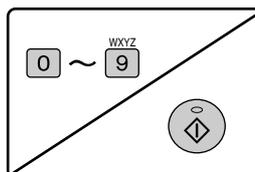
If the bypass tray is selected, automatic ratio selection cannot be used.

3 Press the [AUTO%] key.



- The copy ratio will be automatically set.
- If the original and paper are in different orientations, the image is automatically rotated to match the paper orientation (rotation copy). However, if enlargement is selected for copying onto a paper size larger than 8-1/2" x 11" (A4), the image will not be rotated.
- Rotation of the image can be disabled in the key operator programs when reducing or enlarging a original. (See the "Key operator's guide".)
- If the message "Image edge loss." is displayed, part of the original image may be cut off.

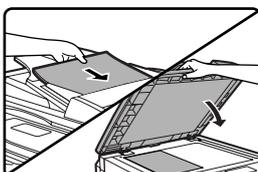
4 Set the number of copies and press the [START] key (⏻).



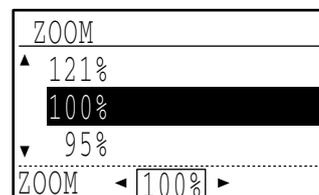
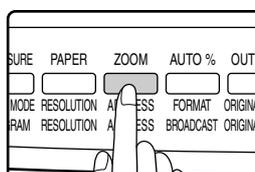
- To cancel automatic ratio selection, press the [AUTO%] key again.
- When copying from the SPF, automatic ratio selection mode will automatically disable after the [START] key is pressed and the original is scanned.

MANUAL RATIO SELECTION (PRESET COPY RATIOS/ZOOM)

1 Place the original in the document feeder tray or on the document glass.

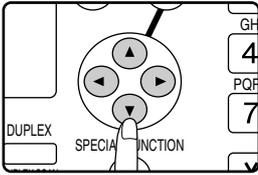


2 Press the [ZOOM] key.



Copy ratios that can be selected will appear.

3 Select a preset ratio with the [▼] or [▲] key, or set the ratio (zoom) with the [◀] or [▶] key.



[▲] key: Select a larger preset ratio

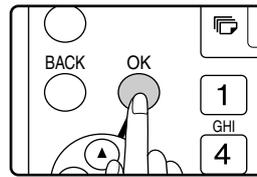
[▼] key: Select a smaller preset ratio

[◀] key: Decrease the ratio in increments of 1%

[▶] key: Increase the ratio in increments of 1%

- Preset reduction ratios are: 95%, 77%, 64%, 50% and 25% (86%, 81%, 70%, 50% and 25%). 25% can only be selected when the original is placed on the document glass.
- Preset enlargement ratios are: 121%, 129%, 141%, 200% and 400% (115%, 122%, 141%, 200% and 400%). 400% can only be selected when the original is placed on the document glass.
- Zoom ratios: Any ratio from 25% to 400% (50% to 200% when the original is placed in the document feeder tray) can be set in increments of 1%. You can use the [▼] or [▲] key to set the approximate ratio and then press the [◀] key to decrease the ratio or the [▶] key to increase the ratio.
- To decrease or increase the zoom ratio rapidly, hold down the [◀] or [▶] key. However the value will stop at the preset reduction or enlargement ratios. To move beyond these ratios, release the key and then hold it down again. (Note that if the key auto repeat function has been disabled in the key operator programs, the ratio will not change when the key is held down. (See "DISABLE AUTO KEY REPEAT" in the "Key operator's guide".))
- To cancel a ratio setting, return the ratio to 100% with the [▼] or [▲] key.
- The [ZOOM] key can be pressed to return the ratio to 100%.

4 Press the [OK] key.

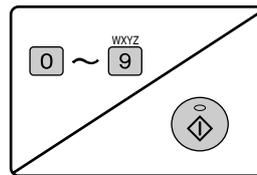


You will return to the base screen.

5 Make sure that the desired paper tray is selected.

If the auto paper select function has been enabled, the appropriate copy paper size will have been automatically selected based on the original size and the selected copy ratio. If the auto paper select function has been canceled or if you are copying onto a different size paper, use the [PAPER] key to select the paper tray with the desired paper size.

6 Set the number of copies and press the [START] key (Ⓢ).

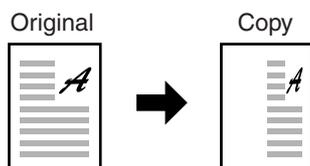


4

SELECTING THE VERTICAL AND HORIZONTAL COPY RATIOS SEPARATELY (XY zoom copying)

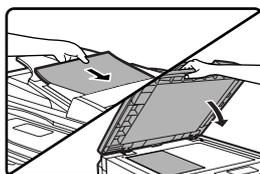
Separate ratio settings can be selected for the length and width of a copy.

Example: Reduction only in the horizontal direction

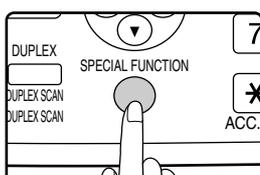


- This feature cannot be used with the 2 in 1 / 4 in 1 feature or card shot feature.
- To use the XY zoom feature and the dual page copy feature simultaneously, set the dual page copy feature first and then the XY zoom feature. (Enlargement cannot be set.)
- If automatic ratio selection has been selected, the XY zoom feature cannot be selected. If the XY zoom feature is selected, automatic ratio selection cannot be selected.
- Ratios that can be selected are 25% to 400% (50% to 200% when the SPF is used).

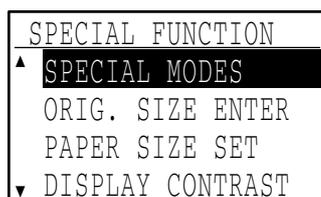
1 Place the original in the document feeder tray or on the document glass.



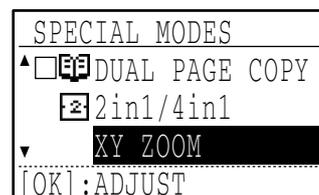
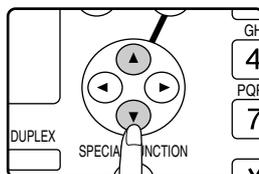
2 Press the [SPECIAL FUNCTION] key.



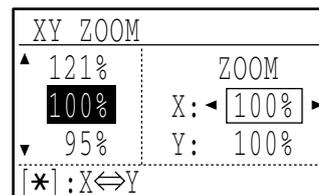
The special function screen will appear.



4 Select "XY ZOOM" with the [▼] or [▲] key.

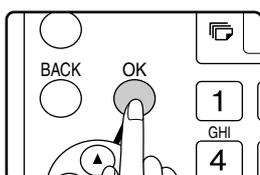


5 Press the [OK] key.

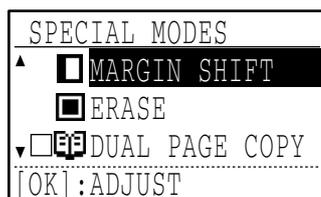


The XY zoom screen will appear, ready for selection of the X (horizontal) ratio.

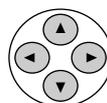
3 Press the [OK] key.



The special modes screen will appear.

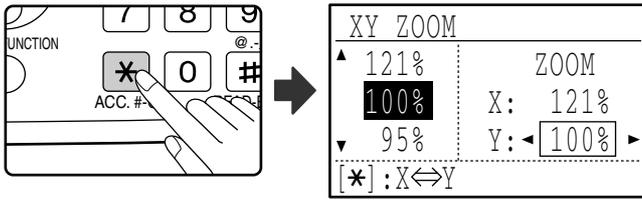


6 Set the horizontal ratio with the [▼], [▲], [◀], or [▶] keys.



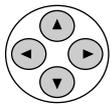
A preset ratio can be selected with the [▼] or [▲] keys. The ratio can be adjusted in increments of 1% with the [◀] or [▶] keys.

7 Press the **[*]** key.



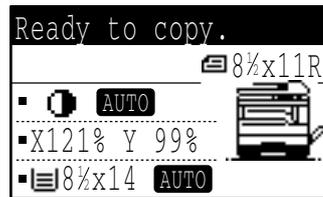
The vertical ratio can now be selected.

8 Set the vertical ratio with the **[▼]**, **[▲]**, **[◀]**, or **[▶]** keys.



A preset ratio can be selected with the **[▼]** or **[▲]** keys. The ratio can be adjusted in increments of 1% with the **[◀]** or **[▶]** keys. To change the copy ratio in the horizontal direction again, press the **[*]** key.

9 Press the **[OK]** key.

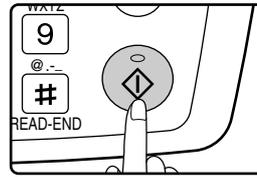


You will return to the base screen.

10 Make sure that the desired paper tray is selected.

If the auto paper select function has been enabled, the appropriate copy paper size will be automatically selected based on the original size and the selected copy ratios. Image rotation will take place if necessary.

11 Select any other copy settings as needed and press the **[START]** key **(⏻)**.



Note

If the **[ZOOM]** key is pressed when XY zoom ratios are set, the following screen appears.



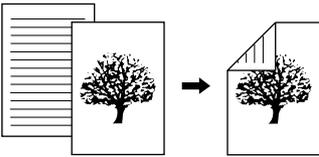
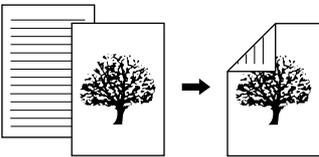
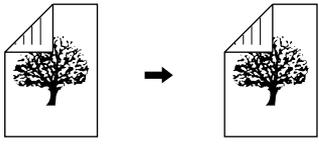
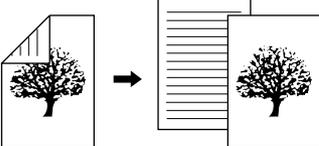
To cancel the XY zoom ratio settings, select "OFF" and press the **[OK]** key.

To adjust the XY zoom copy ratios, select "ADJUST" and press the **[OK]** key.

TWO-SIDED COPYING

TWO-SIDED COPYING

The machine is capable of the following types of automatic two-sided copying. The copy paper is turned over automatically, allowing two-sided copying to be accomplished with ease.

Two-sided copy type	Model	AR-M162	AR-M207	Page
One-sided originals to two-sided copies (using the SPF) 		No	Yes* ¹	57
One-sided originals to two-sided copies (using the document glass) 		No	Yes	58
Two-sided originals to two-sided copies (using the RSPF) 		No	Yes* ²	59
Two-sided originals to one-sided copies (using the RSPF) 		No	Yes* ²	60

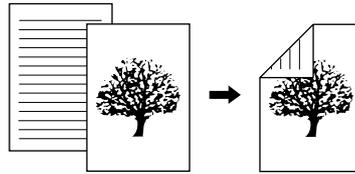
*1 The optional single pass feeder (AR-SP6N) or reversing single pass feeder (AR-RP6N) is required.

*2 The optional reversing single pass feeder (AR-RP6N) is required.



- If you are using the AR-M162, see "TWO-SIDED COPIES USING THE BYPASS TRAY" on page 61.
- There are restrictions on the paper that can be used for automatic two-sided copying. See "Paper that can be used for automatic 2-sided printing" on page 18.
- Automatic two-sided copying is not possible when the bypass tray is used.

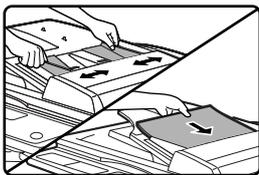
TWO-SIDED COPYING OF ONE-SIDED ORIGINALS



- Paper sizes that can be used are 11" x 17", 8-1/2" x 14", 8-1/2" x 13", 8-1/2" x 11", 8-1/2" x 11"R, A3, B4, A4, A4R, B5, B5R and A5.
- Automatic two-sided copying is not possible when the bypass tray is used.

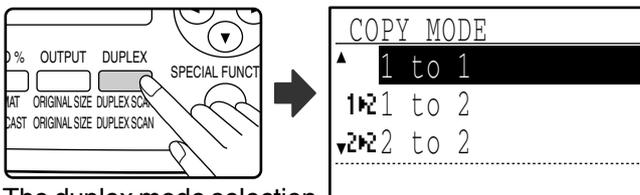
Copying from the SPF

- 1** Make sure that an original does not remain on the document glass, and then adjust the original guides to the width of your originals and place the originals face up in the document feeder tray.



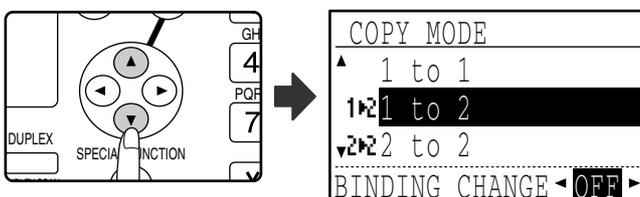
If you placed an odd number of originals, the last copy will be one-sided.

- 2** Press the [DUPLEX] key.

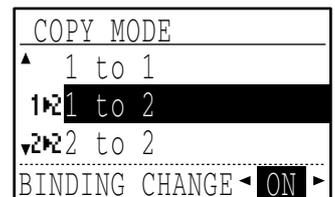
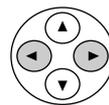


The duplex mode selection screen appears.

- 3** Select "1 to 2" with the [▼] or [▲] key, or with the [DUPLEX] key.



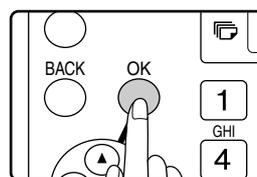
- 4** If you wish to have the orientation of the image on the back of the copy paper be opposite the orientation of the image on the front, set "BINDING CHANGE" to "ON" with the [◀] or [▶] key.



4

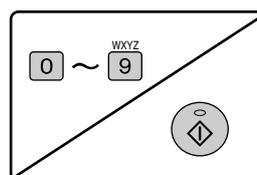
If the copies are to be bound at the top, reversing the orientations of the images on the front and back sides of each copy will result in a uniform orientation when the bound copies are viewed (note that this may depend on the orientation of the originals).

- 5** Press the [OK] key.



You will return to the base screen.

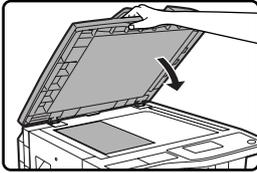
- 6** Set the number of copies and press the [START] key (Ⓢ).



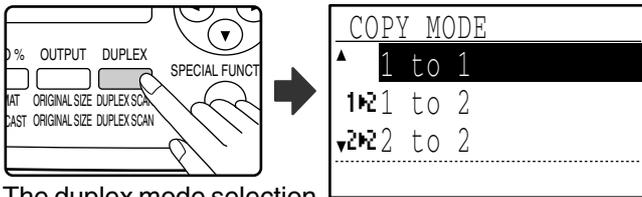
To stop copying in the middle of a run, press the [C] key.

Copying from the document glass

1 Place the original for the front side of the copy on the document glass, and close the SPF.

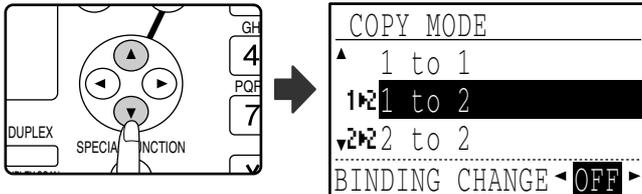


2 Press the [DUPLEX] key.

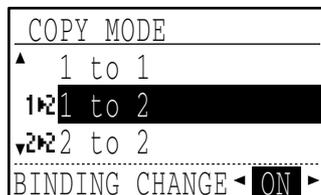
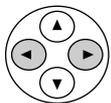


The duplex mode selection screen appears.

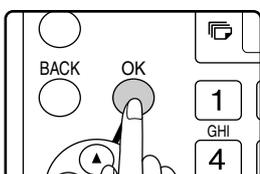
3 Select "1 to 2" with the [▼] or [▲] key, or with the [DUPLEX] key.



4 If you wish to have the orientation of the image on the back of the copy paper be opposite the orientation of the image on the front, set "BINDING CHANGE" to "ON" with the [◀] or [▶] key.



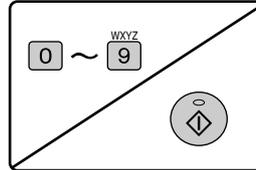
5 Press the [OK] key.



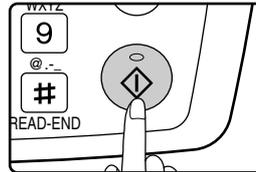
You will return to the base screen.

6 Make sure that the desired paper tray is selected.

7 Set the number of copies and press the [START] key (Ⓢ).

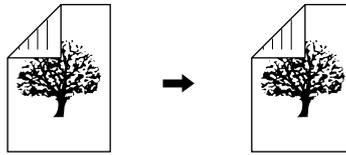


8 Remove the first original and then place the original for the back side of the copy on the document glass. Close the SPF and press the [START] key (Ⓢ).



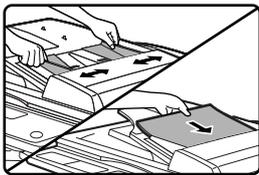
- The copy will be delivered to the center tray.
- To cancel two-sided copying, press the [C] key.
- To cancel two-sided (duplex) copy mode, press the [DUPLEX] key to select "1 to 1" and then press the [OK] key.
- When making two-sided copies of an odd number of originals, touch the [READ-END] key (Ⓢ) after scanning the last original.

TWO-SIDED COPIES OF TWO-SIDED ORIGINALS (ONLY WHEN USING THE RSPF)

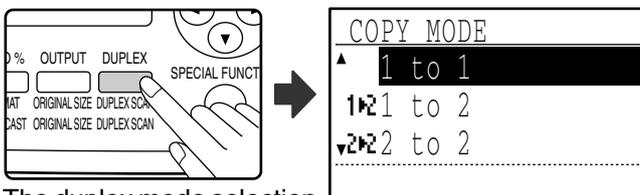


- Paper sizes that can be used are 11" x 17", 8-1/2" x 14", 8-1/2" x 13", 8-1/2" x 11", 8-1/2" x 11"R, A3, B4, A4, A4R, B5, B5R and A5.
- Automatic two-sided copying is not possible when the bypass tray is used.
- This copy function cannot be used in combination with dual page copy.

1 Make sure that an original does not remain on the document glass, and then adjust the original guides to the width of your originals and place the originals face up in the document feeder tray.

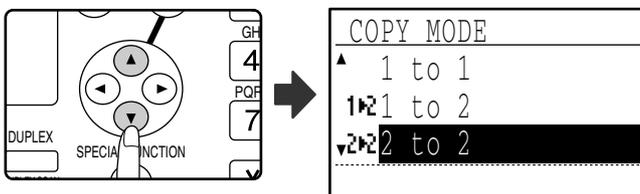


2 Press the [DUPLEX] key.

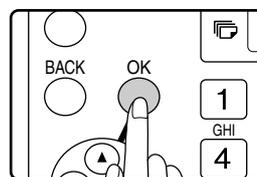


The duplex mode selection screen appears.

3 Select "2 to 2" with the [▼] or [▲] key, or with the [DUPLEX] key.

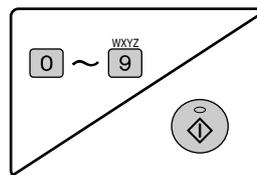


4 Press the [OK] key.



You will return to the base screen.

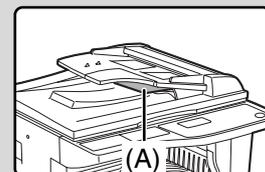
5 Set the number of copies and press the [START] key (Ⓢ).



To stop copying in the middle of a run, press the [C] key.

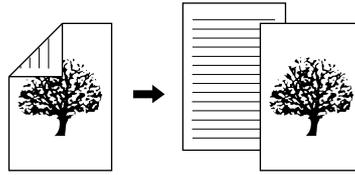


Note Do not touch an original (A) that is on the reversing tray. Doing so may cause a misfeed.



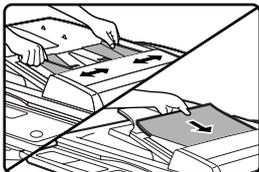
4

ONE-SIDED COPIES OF TWO-SIDED ORIGINALS (ONLY WHEN USING THE RSPF)

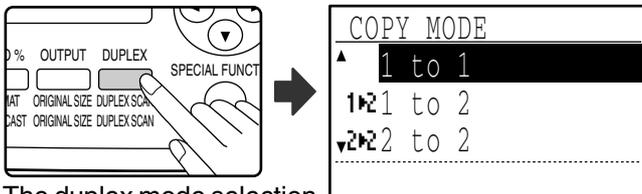


- Paper sizes that can be used are 11" x 17", 8-1/2" x 14", 8-1/2" x 13", 8-1/2" x 11", 8-1/2" x 11"R, A3, B4, A4, A4R, B5, B5R and A5.
- Automatic two-sided copying is not possible when the bypass tray is used.
- This copy function cannot be used in combination with dual page copy.

1 Make sure that an original does not remain on the document glass, and then adjust the original guides to the width of your originals and place the originals face up in the document feeder tray.

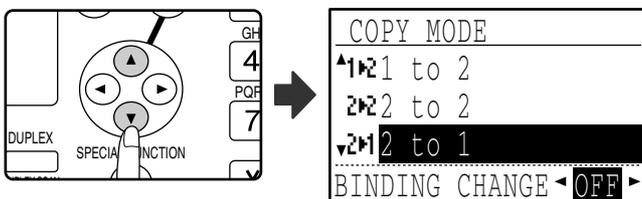


2 Press the [DUPLEX] key.

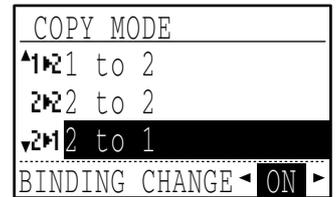
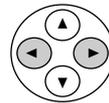


The duplex mode selection screen appears.

3 Select "2 to 1" with the [▼] or [▲] key, or with the [DUPLEX] key.

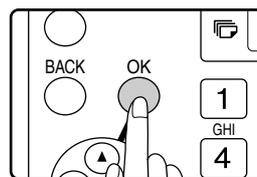


4 If you wish to have the orientation of the back image be opposite the orientation of the front image, set "BINDING CHANGE" to "ON" with the [◀] or [▶] key.



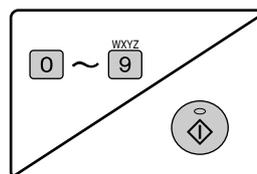
If the copies are to be bound at the top, reversing the orientations of the front and back images will result in a uniform orientation when the bound copies are viewed (note that this may depend on the orientation of the originals).

5 Press the [OK] key.



You will return to the base screen.

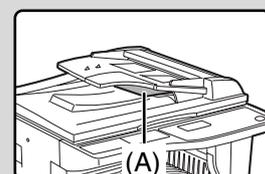
6 Set the number of copies and press the [START] key (Ⓢ).



To stop copying in the middle of a run, press the [C] key.



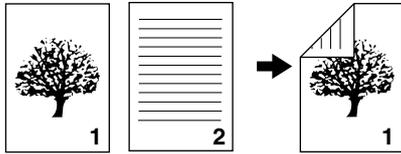
Do not touch an original (A) that is on the reversing tray. Doing so may cause a misfeed.



TWO-SIDED COPIES USING THE BYPASS TRAY

Follow the steps below to perform two-sided copying manually.

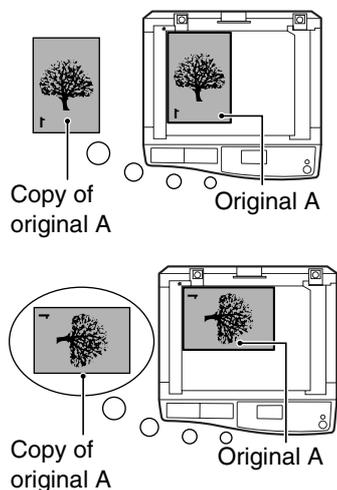
Example: Copying original A and original B onto both sides of the paper



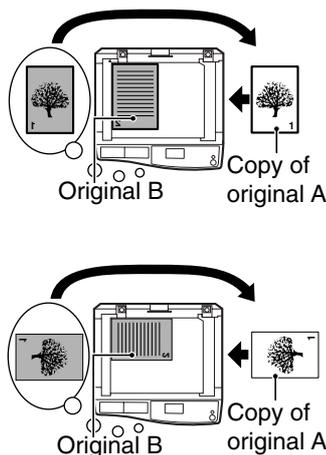
If you are using the AR-M207

The AR-M207 is equipped standard with an automatic two-sided copying function that automatically turns over the paper. If paper in "Paper that can be used for automatic 2-sided printing" on page 18 is used, this enables easier two-sided copying than using the bypass tray. See "TWO-SIDED COPYING" on page 56.

1 Copy original A.

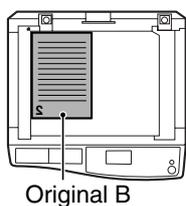


3 Turn the copy of original A over, and without changing the position of the edge closest to you, insert it in the bypass tray.



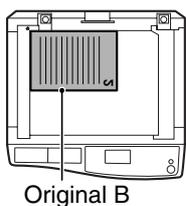
Insert the paper all the way in.

2 Place original B as shown below.



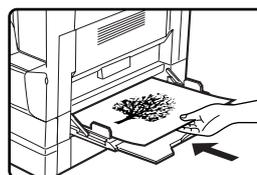
Vertically-oriented original:

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



Horizontally-oriented original:

Place in the opposite orientation (rotated 180 degrees) to that of original A.



- 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.

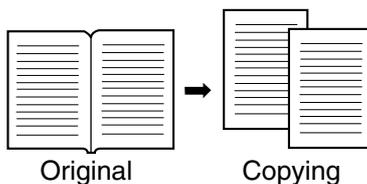
4 Select the bypass tray with the [PAPER] key and then press the [START] key (⏻).

The copies are delivered to the center tray.

DUAL PAGE COPY

(Dual page copy)

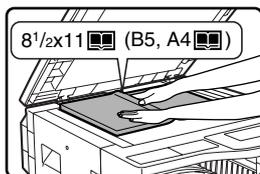
The dual page copy function produces separate copies of open bound original pages. This function is convenient when you wish to make a separate copy of each page of a book or other bound document.



Note

- 8-1/2" x 11" (A4) paper can be used for dual page copying.
- When rotation copy is enabled, 8-1/2" x 11"R (A4R) paper can also be used.
- When used in combination with XY zoom copying, enlargement is not possible.
- Dual page copying cannot be used in combination with the following functions:
 - 2 in 1 / 4 in 1 copying
 - Center erase / Edge + Center erase
 - Enlargement
 - Automatic ratio selection
 - Card shot
 - 2-sided to 2-sided copy, 2-sided to 1-sided copy
- Dual page copying cannot be selected when an original is placed in the SPF.

1 Place the original on the document glass, aligning the division between the pages with the size marker (see below). Close the SPF.

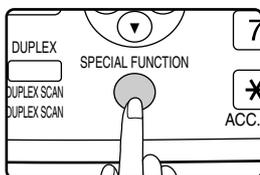


Copying will begin from the page to the right of the size marker.

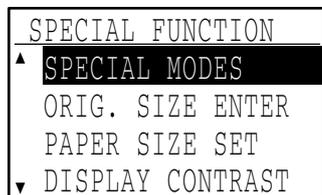
Note

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.

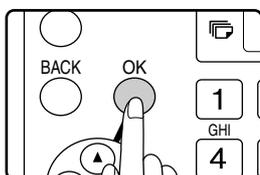
2 Press the [SPECIAL FUNCTION] key.



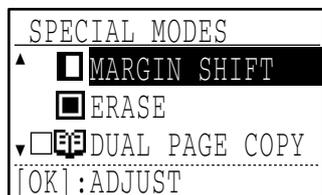
The special function screen will appear.



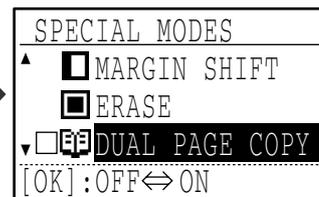
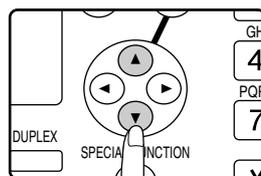
3 Press the [OK] key.



The special modes screen will appear.



4 Select "DUAL PAGE COPY" with the [▼] or [▲] key.



5 Press the [OK] key.

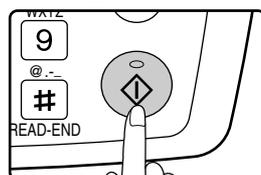


A checkmark appears in the "DUAL PAGE COPY" checkbox in the special modes screen and you return to the base screen.

6 Make sure that the paper tray with 8-1/2" x 11" (A4) paper is selected.

8-1/2" x 11"R (A4R) paper can also be used if rotation copying is possible in auto paper select mode.

7 Select any other copy settings as needed and press the [START] key (⏻).



To cancel dual page copy, select "DUAL PAGE COPY" (which has a checkmark) in the special modes screen once again and press the [OK] key.

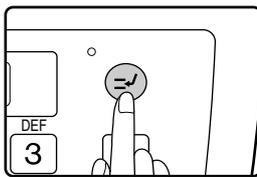
INTERRUPTING A COPY RUN

(Interrupt copying)

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

- Interrupt copying is not possible when the document glass is being used for a copy job and "NO SORT" is selected.
- When 2 in 1 or 4 in 1 is selected, interrupt copying is not possible.
- Sort copying, 2 in 1, and 4 in 1 and automatic two-sided copying cannot be used for an interrupt copy job. Configuring settings in the key operator programs, use as a scanner, and fax transmission are also not possible.

1 Press the [INTERRUPT] key (⊖).



If the [INTERRUPT] key (⊖) is pressed, copying will stop and the settings will temporarily return to the default settings after the copy in progress has been completed.

The INTERRUPT indicator will blink until the current copy run stops.

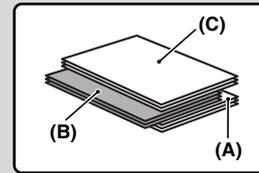
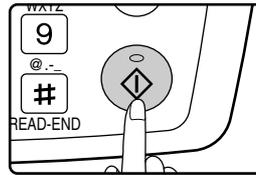


Note If you press the [INTERRUPT] key (⊖) when auditing mode is enabled, "Enter your account number." will appear in the display. Enter your account number using the numeric keys. The pages copied during interrupt copying will be added to the count of the entered account number. (See the "Key operator's guide".)

2 When the copy run stops, remove the previous original(s) and place the original(s) of the interrupt copy job.

3 Select copy settings as needed.

4 Set the number of copies and then press the [START] key (Ⓢ).



The interrupt copies will be offset from the previous copies. (Offset function)

The offset function can be disabled in the key operator programs. (See the "Key operator's guide".)

(A): Copies made before the interrupt copy job

(B): Interrupt copies

(C): Copies made after the interrupt copy job

5 When the copy job is finished, press the [INTERRUPT] key (⊖) to end interrupt mode and remove the original(s).

The INTERRUPT indicator will turn 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.

6 Replace the previous original(s) and press the [START] key (Ⓢ).

The interrupted copy run will resume.

5

CONVENIENT COPY FUNCTIONS

This chapter explains convenient copy functions.

Select convenient copy functions after pressing the [COPY] key to select copy mode.

ROTATING THE IMAGE 90 DEGREES

(Rotation copy)

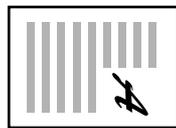
When "Auto paper select mode" or "automatic ratio selection" are in operation and the original is placed in a different orientation (vertical or horizontal) from the paper, the original image will be automatically rotated 90 degrees to enable correct copying onto the paper.

This function is convenient for copying 8-1/2" x 14" or 11" x 17" (B4 or A3) originals, which can only be placed horizontally, onto paper that is loaded vertically.

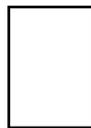
The rotation copy function is initially enabled. It can be disabled in the key operator programs. (See the "Key operator's guide".)



- The rotation copy function cannot be used in combination with the margin shift function.
- Rotation copy will not operate when a copy is enlarged to a paper size greater than 8-1/2" x 11" (A4). In this case, place the original in the same orientation as the paper.
- Even if rotation copy is disabled in the key operator programs, rotation copy will function when the 2 in 1 or 4 in 1 function is selected (page 66).



Orientation of the original



Orientation of the original



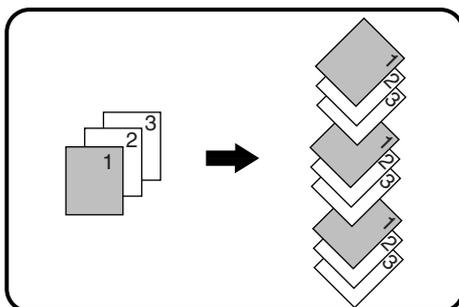
Copy

SORT MODE

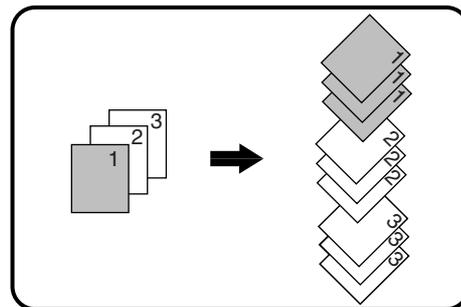
Copies of multiple original pages can collated into sets.



The machine can scan approximately 100 standard originals (8-1/2" x 11" (A4)), however, the number will vary for photos and other types of originals.

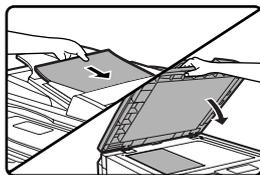


Sort



No sort

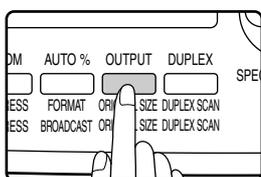
1 Place the originals in the document feeder tray or the first original on the document glass.



If the originals are placed in the document feeder tray, sort mode will be automatically selected. This can be changed to no sort in the key operator programs. (See the "Key operator's guide".)

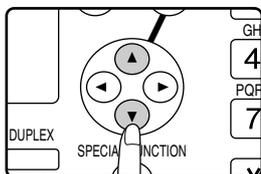
If the first original is placed on the document glass, no sort mode will be automatically selected.

2 Press the [OUTPUT] key.

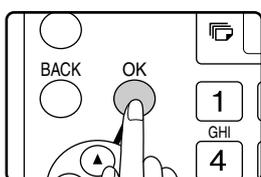


The output mode selection screen will appear.

3 Select "NO SORT" or "SORT" with the [▼] or [▲] key, or with the [OUTPUT] key.

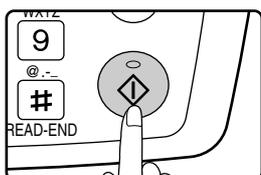


4 Press the [OK] key.



You will return to the base screen.

5 Select other copy settings as needed and press the [START] key (Ⓢ).



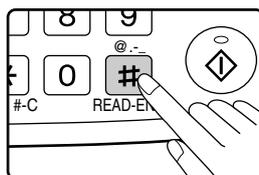
If you placed the originals in the document feeder tray in step 1, copying will start. If you selected "SORT" in step 3 and placed the first original on the document glass, follow steps 6 and 7. Note that if you selected "NO SORT" in step 3, copying will begin.

6 When the START indicator lights, replace the original with the next original and press the [START] key (Ⓢ).



Repeat step 6 until all originals have been scanned.

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

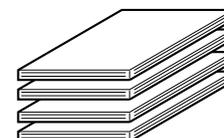
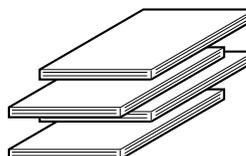


- Copying will start.
- If the memory becomes full while the originals are being scanned, "Memory is full." will appear in the display. To start copying the originals that have been scanned to that point, press the [START] key (Ⓢ). To cancel the copy job, press the [CA] key.
- The optional memory board (AR-SM5) can be installed to increase the number of originals that can be scanned. The memory can be expanded up to a maximum of 272 MB (the amount expanded is 256 MB).

Offset function

This function offsets each set of copies from the previous set in center tray, making it easy to separate sets of copies. The offset function can be disabled in the key operator programs. (See the "Key operator's guide".)

Offset function enabled Offset function disabled



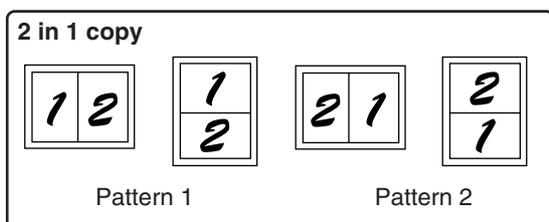
COPYING MULTIPLE ORIGINALS ONTO A SINGLE SHEET OF PAPER (2 in 1 / 4 in 1 copy)

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

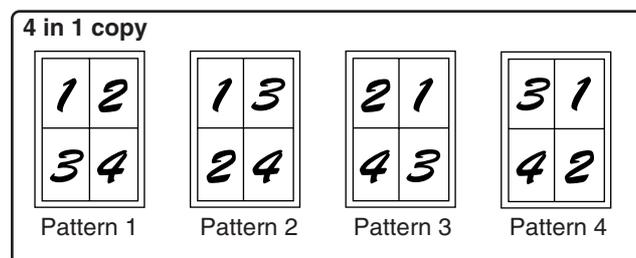
This function is convenient when you wish to present multiple pages in a compact format, or show a view of all pages in a document.

One of two layouts can be selected for 2 in 1 copy, and one of four layouts can be selected for 4 in 1 copy.

Border line selections are solid line, broken line, or none.



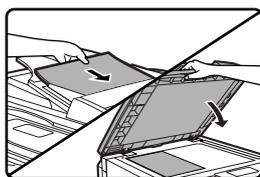
2 in 1 copy layouts



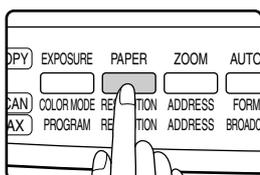
4 in 1 copy layouts

- 2 in 1 / 4 in 1 copy cannot be used in combination with the following functions. The function selected first will take precedence. However, 2 in 1 / 4 in 1 copy will take precedence over XY zoom.
Dual page copy, XY zoom, edge erase, margin shift, card shot
- A special paper size cannot be used for 2 in 1 / 4 in 1 copy.
- 2 in 1 / 4 in 1 copy cannot be selected for an interrupt copy job. Interrupt copying is not possible during a 2 in 1 / 4 in 1 copy job.
- An appropriate ratio setting will be automatically selected based on the original size, the paper size, and the selected number of images. When using the document glass, reduction is possible to 25%. When using the SPF, 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 key operator programs, the images may be rotated if needed depending on the orientation of the originals and the orientation of the paper.

1 Place the originals in the document feeder tray or the first original on the document glass.

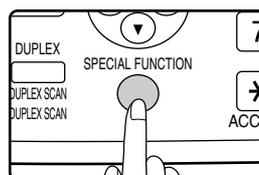


2 Press the [PAPER] key to select the desired paper tray.

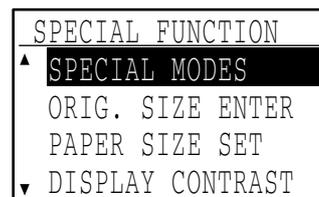


The bypass tray cannot be selected.

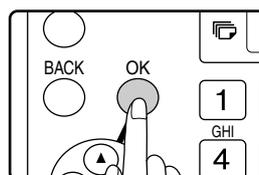
3 Press the [SPECIAL FUNCTION] key.



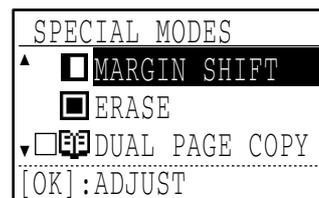
The special function screen will appear.



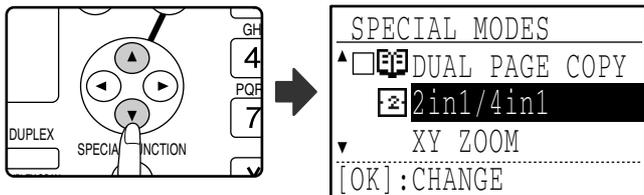
4 Press the [OK] key.



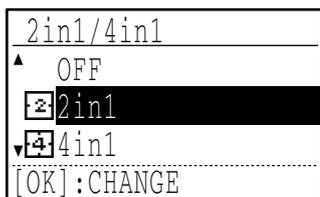
The special modes screen will appear.



5 Select "2in1/4in1" with the [▼] or [▲] key.

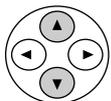


6 Press the [OK] key.

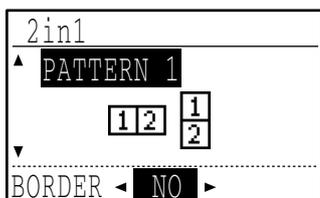


The 2 in 1 / 4 in 1 selection screen will appear.

7 Select "2in1" or "4in1" with the [▼] or [▲] key.

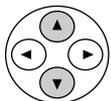


8 Press the [OK] key.



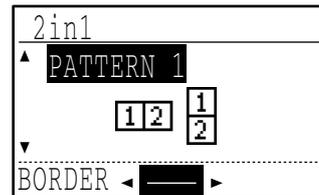
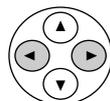
The settings for 2 in 1 or 4 in 1 will appear.

9 Select the layout with the [▼] or [▲] key.



For the layouts that can be selected, see "2 in 1 copy layouts" or "4 in 1 copy layouts" on page 66.

10 Select the borderline setting with the [◀] or [▶] key.



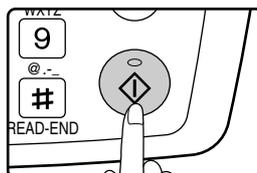
Select solid line, broken line, or none.

11 Press the [OK] key.



You will return to the base screen.

12 Select other copy settings as needed and then press the [START] key (Ⓢ).



- The copy ratio will be set automatically.
- If you placed the originals in the document feeder tray, copying will start after all originals are scanned.
- If you placed the first original on the document glass, go to the next step.

13 When the START indicator lights, replace the original with the next original and then press the [START] key (Ⓢ).



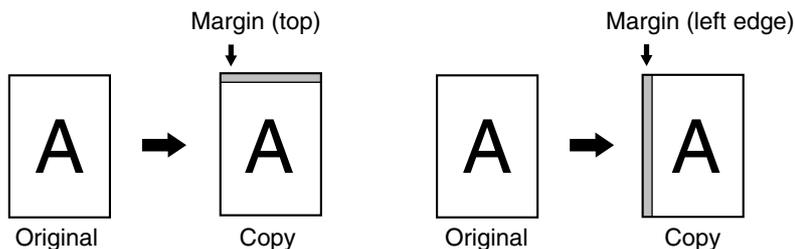
Repeat step 13 until all originals have been scanned.

- Copies will be output each time two originals for 2 in 1 copy or four originals for 4 in 1 copy have been scanned.
- To start copying before all originals have been scanned (after only one original has been scanned for 2 in 1 or after three originals or less have been scanned for 4 in 1), press the [READ-END] key (#).
- To cancel the 2 in 1 or 4 in 1 settings, select "OFF" in step 7.

5

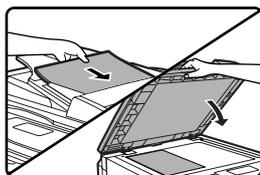
CREATING MARGINS WHEN COPYING (Margin shift)

The margin shift function shifts the image to create a margin at the edge of the paper. By default the function creates a 1/2" (10 mm) margin at the left edge of the paper.



- You can select whether to create a margin at the top edge or at the left edge of the paper.
- Five selections are available for the margin width: 0", 1/4", 1/2", 3/4", 1" (0 mm, 5 mm, 10 mm, 15 mm, 20 mm). (The default setting is 1/2" (10 mm).)
- When making two-sided copies, a margin is created at the selected edge on the front side of the paper, and a margin is created on the back side of the paper.
- Margin shift cannot be used in combination with 2 in 1 / 4 in 1 copy (page 66).
- Margin shift cannot be used in combination with card shot (page 71).
- When margin shift is selected, rotating copying will not operate even if the condition for rotate copying is met.
- The default margin shift setting can be changed in the key operator programs. (See the "Key operator's guide".)

1 Place the original in the document feeder tray or on the document glass.

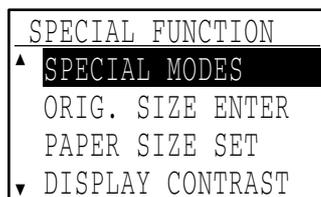
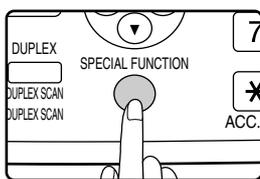


- When a left-edge margin is selected and you are copying from the document feeder tray, place the original face up so that the margin edge is to the left.

When a left-edge margin is selected and you are copying from the document glass, set the original face down so that the margin edge is to the right.

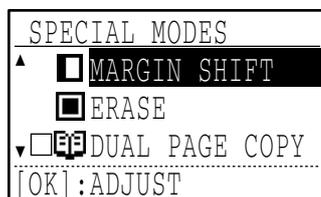
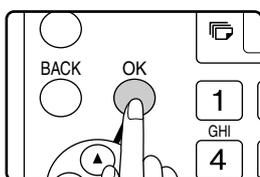
- When a top-edge margin is selected, place the original with the margin edge toward the rear of the document feeder tray or the document glass.

2 Press the [SPECIAL FUNCTION] key.



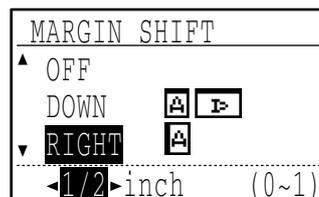
The function screen appears with "SPECIAL MODES" selected.

3 Press the [OK] key.



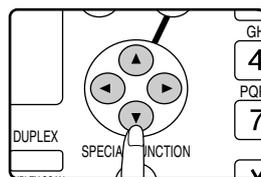
The special modes screen will appear with "MARGIN SHIFT" selected.

4 Press the [OK] key.



The settings for margin shift will appear.

5 Select the margin location with the [▼] or [▲] key and select the width with the [◀] or [▶] key.



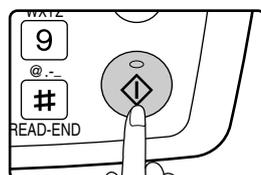
- Select "DOWN" or "RIGHT" for the margin location.
- If you select 0" (0 mm), the printed result is the same as when "OFF" is selected.

6 Press the [OK] key.



You will return to the base screen.

7 Select other copy settings as needed and press the [START] key (Ⓢ).



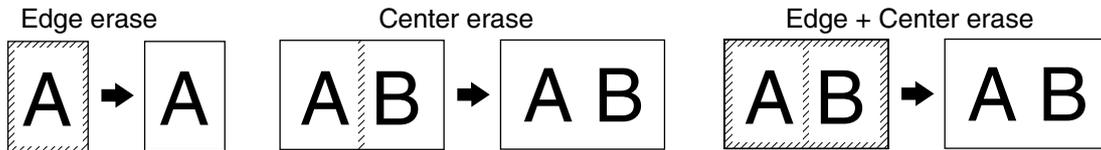
To turn off the margin shift function, select the margin shift feature again and select "OFF".

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)

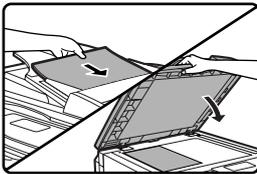
The feature can also erase the shadow that appears down the center of books and other originals that open up. (Center erase)

Both the shadow lines around the edges of copies and the shadow at the center can be erased. (Edge + Center erase)

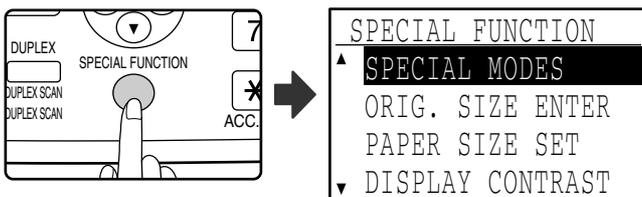


- Five selections are available for the erasure width: 0", 1/4", 1/2", 3/4", 1" (0 mm, 5 mm, 10 mm, 15 mm, 20 mm). (The default setting is 1/2" (10 mm).)
- Center erase / Edge + Center erase cannot be used in combination with dual page copy (page 62).
- Edge erase cannot be used in combination with 2 in 1 / 4 in 1 copy (page 66).
- Edge erase cannot be used when paper is fed from the bypass tray.
- Edge erase cannot be used in combination with card shot (page 71).
- Edge erase cannot be used when copying a special size original.
- Note that if the width of the erasure is too large, the edge of the image may be partially erased.
- The default setting for the erasure width can be changed. (See the "Key operator's guide".)

1 Place the original in the document feeder tray or on the document glass.

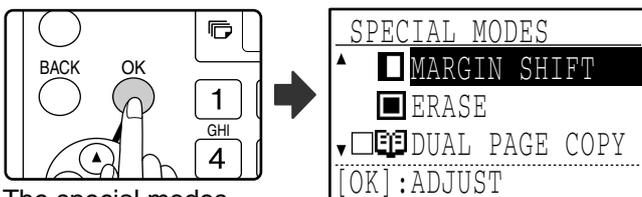


2 Press the [SPECIAL FUNCTION] key.



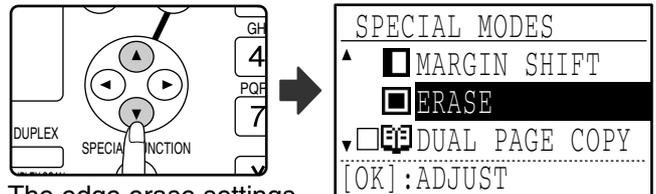
The function screen appears with "SPECIAL MODES" selected.

3 Press the [OK] key.



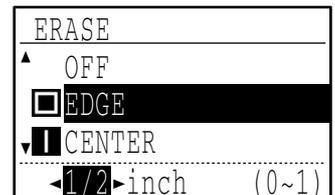
The special modes screen will appear.

4 Select "ERASE" with the [▼] or [▲] key.



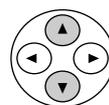
The edge erase settings screen will appear.

5 Press the [OK] key.



The edge erase settings screen will appear.

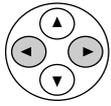
6 Select the desired erase mode with the [▼] or [▲] key.



"EDGE", "CENTER" or "EDGE+CENTER" can be selected.

5

7 Select the erasure width with the [◀] or [▶] key.



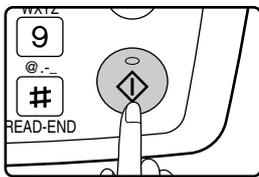
If you select 0" (0 mm), the printed result is the same as when "OFF" is selected.

8 Press the [OK] key.



You will return to the base screen.

9 Select other copy settings as needed and press the [START] key (Ⓢ).

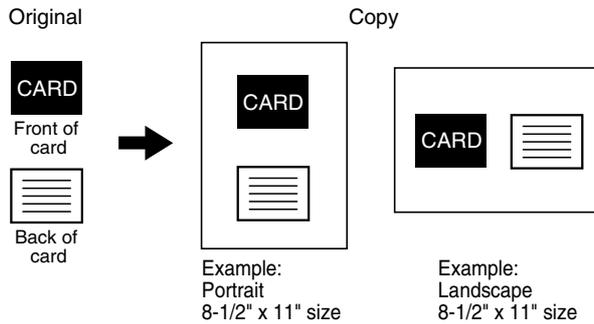


To cancel an edge erase setting, return to the edge erase settings screen and select "OFF".

CARD SHOT

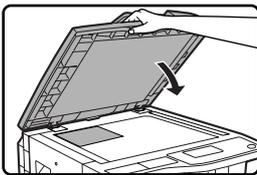
When copying a card, this function allows you to print the front and back sides of the card next to each other on a single sheet of paper.

This function creates 2 in 1 images of the front and back side of the card and centers them on the paper.

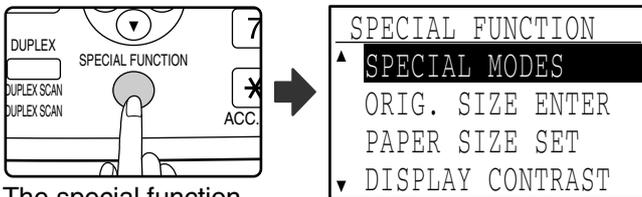


- Paper cannot be fed from the bypass tray.
- The card shot function cannot be used in combination with margin shift, edge erase, dual page copy, 2 in 1 / 4 in 1 copy, and XY zoom copy.
- When card shot is used, the rotation copy function does not operate.

1 Place the original on the document glass.

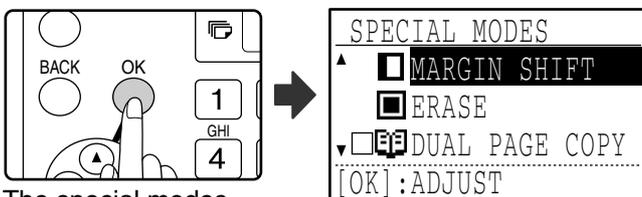


2 Press the [SPECIAL FUNCTION] key.



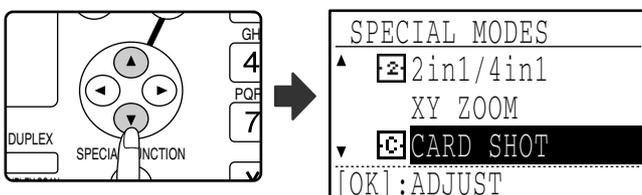
The special function screen will appear.

3 Press the [OK] key.

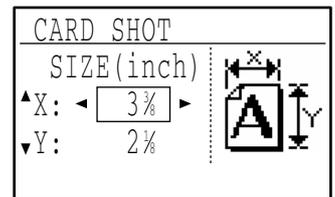


The special modes screen will appear.

4 Select "CARD SHOT" with the [▼] or [▲] key.



5 Press the [OK] key.

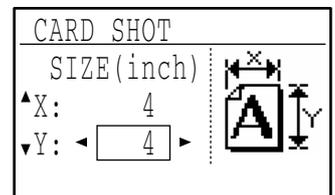
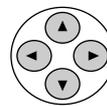


The card shot screen appears.



The default values for the length and width that initially appear when this screen is displayed can be set in the key operator programs "CARD SHOT DEFAULT" in the "Key operator's guide".

6 Select "X" (width) with the [▼] or [▲] key and enter the width with the [◀] or [▶] key, and then do the same for the length (Y).



Any number from 1" to 8-1/2" (25 mm to 210 mm) can be entered for the width, and any number from 1" to 8-1/2" (25 mm to 210 mm) can be entered for the length.

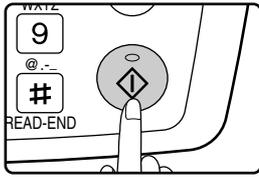
7 Press the [OK] key.



You will return to the base screen.

5

8 Press the [START] key (⏏).



The front side of the card is scanned.

9 Turn the original over on the document glass.

10 Press the [START] key (⏏).



Copying will start after both sides of the original have been scanned.

6

APPENDIX

SPECIFICATIONS

Name	Digital Multifunctional System	
	AR-M162	AR-M207
Type	Desktop	
Photoconductive type	OPC drum	
Document glass type	Fixed	
Copy system	Laser electrostatic method	
Originals	Sheets, bound documents, max. original size 11" x 17" (A3)	
Copy sizes	Max. 11" x 17" (A3), min. 5-1/2" x 8-1/2" (A5) (5-1/2" x 8-1/2" (A5) can only be fed from tray 1 and the bypass tray)	
Image loss:	Max. 5/32" (4 mm) at top edge and bottom edge, combined maximum of approximately 11/64" (6 mm)	
Copying speed	9 copies/min. 11" x 17" (A3) 10 copies/min. 8-1/2" x 14" (B4) 11 copies/min. 8-1/2" x 13" 12 copies/min. 8-1/2" x 11"R (A4R) 14 copies/min. B5R 16 copies/min. 8-1/2" x 11", 5-1/2" x 8-1/2" (A4, B5, A5)	10 copies/min. 11" x 17" 11 copies/min. A3 12 copies/min. 8-1/2" x 14", 8-1/2" x 13" (B4) 14 copies/min. A4R 15 copies/min. 8-1/2" x 11"R 16 copies/min. B5R 20 copies/min. 8-1/2" x 11", 5-1/2" x 8-1/2" (A4, B5, A5)
Continuous copying	1-999 copies (decrement type) (can be changed to 1- 99 in the key operator programs)	
First-copy time*1, *2	Approx. 7.2 s	
Warm-up time*2	Approx. 45 sec.	
Copy ratios	Variable: 25% to 400%, in 1% increments (total 376 steps) (50% to 200% when the SPF is used) Fixed preset: 25%, 50%, 64%, 77%, 95%, 100%, 121%, 129%, 141%, 200%, 400% (25%, 50%, 70%, 81%, 86%, 100%, 115%, 122%, 141%, 200%, 400%) (25% and 400% only when the SPF is used)	
Paper feeding	One automatic feeding paper tray (250 sheets) + bypass tray (100 sheets)	Two automatic feeding paper trays (250 sheets each) + bypass tray (100 sheets)
Fusing system	Heat rollers	
Developer system	Dry development	
Resolution	Scanning: 600 x 300 dpi, output: 600 x 600 dpi (AUTO/TEXT mode) Scanning: 600 x 600 dpi, output: 600 x 600 dpi (PHOTO mode)	
Gradation	Scanning: 256 halftones, printing: 2 halftones	
Power supply	AC 120V, 60 Hz, 10A	
Power consumption	Max. 1.2 kW	

*1 Measured when copying is started after warm-up following power on, using the document glass. (Exposure set to "AUTO". "RESOLUTION IN AUTO/TEXT MODE" set to 300 dpi and "WAITING COPY LAMP SETTING" set to "ON" in the key operator programs. Paper fed from tray 1 on machine, 8-1/2" x 11" (A4) original and paper oriented horizontally, no reduction or enlargement.)

*2 May vary depending on machine operating conditions and ambient conditions such as power voltage and humidity.

Overall dimensions	23-15/64" (W) x 23-7/16" (D) (590 mm (W) x 595 mm (D)) (with bypass tray folded)	
Weight	Approx. 65.5 lbs. (29.7 kg) (Not including toner cartridge)	Approx. 74.6 lbs. (33.8 kg) (Not including toner cartridge)
Dimensions	23-15/64" (W) x 23-7/16" (D) x 18-15/32" (H) (590 mm (W) x 595 mm (D) x 469 mm (H))	23-15/64" (W) x 23-7/16" (D) x 20-31/64" (H) (590 mm (W) x 595 mm (D) x 520 mm (H))
Operating conditions	Temperature: 59°F to 86°F (15°C to 30°C), Humidity: 20% to 85%	
Noise level	Sound Power Level LwA (1B=10dB) Copying: 6.3[B] or less Standby: 4.0[B] or less Noise emission measurement in accordance with ISO 7779.	
Emission concentration (measured according to RAL-UZ62: Edition Jan. 2002)	Ozone: 0.02 mg/m ³ or less Dust: 0.075 mg/m ³ or less Styrene: 0.07 mg/m ³ or less	

Output tray specifications

Output method	Face-down output
Output tray capacity (20 lbs. (80 g/m ²))	250 sheets*

* When the job separator tray kit is installed, 150 sheets in center tray, 100 sheets in top tray.
The maximum number of pages that can be held varies depending on ambient conditions in the installation location, the type of paper, and the storage conditions of the paper.

Printer function / scanner function / fax function specifications

See the "Operation manual (for printer and scanner)" and the "Operation manual (for facsimile)".

Some discrepancies may exist in the illustrations and content due to improvements to the machine.

Date Revised : Aug.18, 2003

Date Issued : Jun. 1, 2003

MSDS No. F-01211

1.PRODUCT AND COMPANY IDENTIFICATION

Product Name : AR-202NT / AR-202T / AR-202ST / AR-202FT / AR-202ST-C / AR-203ST-C / AR-016T/ AR-016ST / AR-016FT / AR-016RT (Black Toner)

Supplier Identification : Sharp Corporation
22-22 Nagaike-cho, Abeno-ku, Osaka, Japan

Local suppliers are listed below. Please contact the nearest supplier for additional information.

Area	(Country)	(Name and Telephone Number)
North America	U.S.A.	Sharp Electronics Corporation Sharp Plaza, Mahwah, NJ Telephone number for information : 1-800-237-4277 Emergency telephone number : 1-800-255-3924
	Canada	Sharp Electronics of Canada Ltd. Telephone number for information : 905-890-2100 Emergency telephone number : 1-800-255-3924
Oceania	Australia	Sharp Corporation of Australia PTY. Ltd. No1 Huntingwood Drive Huntingwood Blacktown N.S.W. Telephone number for information : 1300-13-50-22
Europe	Germany	Sharp Electronics (Europe) GMBH Sonninstrasse 3, 20097 Hamburg Telephone number to access MSDS : 040-2376-2185 For more information : 040-2376-2613
	United Kingdom	Sharp Electronics (U. K.) Ltd. Telephone number for information : 08705-274-277
	France	Sharp Electronics France S.A. Telephone number for information : 01-49-90-34-00
	Austria	Sharp Electronics GMBH Telephone number for information : 01-727-19-0
	Italy	Sharp Electronics (Italy) S.P.A. Telephone number for information : 02895951
	Spain	Sharp Electronics (Espana) S.A. Telephone number for information : 93-581-97-00
	Netherlands	Sharp Electronics Benelux B.V. Telephone number for information : 30-6359500
	Sweden	Sharp Electronics Nordic AB Telephone number for information : 08-634-36-00
Middle East	U.A.E.	Sharp Electronics (Schweiz)AG Telephone number for information : 01-846-6111
		Sharp Middle East FZE P.O.Box 17115 Jebel Ali, Dubai Telephone number for information : 04-815311

2.COMPOSITION / INFORMATION ON INGREDIENTS

Substance[] Ingredient	Preparation[X] CAS No.	Proportion	OSHA PEL	ACGIH TLV	MAK-TWA	NOHSC-TWA
Styrene-Acrylate copolymer	29497-14-1	85-95 %	Not listed	Not listed	Not listed	Not listed
Carbon black	1333-86-4	5-10 %	3.5mg/m ³	3.5mg/m ³	Not listed	3mg/m ³
Iron oxide	1309-38-2	1-5 %	Not listed	Not listed	Not listed	Not listed
Metal Complex dye*	109125-51-1 84179-66-8	} < 2 %	0.5mg/m ³	0.5mg/m ³	Not listed	Not listed

* EC NO. : 400-110-2, Symbol letter : F, R Phrase : R11

Date Revised : Aug.18, 2003

Date Issued : Jun. 1, 2003

MSDS No. F-01211

3.HAZARDS IDENTIFICATION

Most Important Hazards and Effects of the Products

Human Health Effects : There are no anticipated carcinogenic effects from exposure based on animal tests performed using toner. When used as intended according to instructions, studies do not indicate any symptoms of fibrosis will occur.

Environmental Effects : No data are available.

Specific Hazards : Dust explosion (like most finely divided organic powders)

Directive 1999/45/EC(Europe) : Not classified as dangerous

4.FIRST-AID MEASURES

Route(s) of Entry : <u>Inhalation?</u>	<u>Skin?</u>	<u>Ingestion?</u>
Yes	No	Possible but very unusual.

Inhalation : Remove to fresh air. If symptoms occur, consult medical personnel.

Skin Contact : Wash with soap and water for 15 minutes or until particle is removed.
If irritation does occur, consult medical personnel.

Eye Contact : Flush eyes immediately with water for 15 minutes. If irritation does occur, consult medical personnel.

Ingestion : Rinse with water and drink several glasses of water. If irritation or discomfort does occur, consult medical personnel.

5.FIRE-FIGHTING MEASURES

Extinguishing Media : Water, CO₂, foam and dry chemicals

Special Fire Fighting Procedures : None

Fire and Explosion Hazards : Toner material, like most finely divided organic powders, may form an explosive mixture.

6.ACCIDENTAL RELEASE MEASURES

Personal Precautions : None

Environmental Precautions : None

Methods for Cleaning Up : Wipe off with paper or cloth. Do not use vacuum cleaner when a large amount is released. It, like most finely divided organic powders, is capable of creating a dust explosion.

7.HANDLING AND STORAGE

Handling

Technical Measures : None

Precautions : None

Safe Handling Advice : Use of a dust mask is recommended when handling a large quantity of toner or during long term exposure, as with any non-toxic dust. Try not to disperse the particles.

Storage

Technical Measures : None

Storage Conditions : Keep container closed and Store in a cool and dry place.
Keep out of the reach of children.

Incompatible Products : None

8.EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Measures

Ventilation : Not required under intended use.

Date Revised : Aug.18, 2003

Date Issued : Jun. 1, 2003

MSDS No. F-01211

Exposure Limit ValuesOSHA-PEL(USA) : 15mg/m³ (Total Dust), 5mg/m³ (Respirable Dust)ACGIH-TLV(USA) : 10mg/m³ (Total Dust), 3mg/m³ (Respirable Dust)**Personal Protective Equipment**

Respiratory Protection : Not required under intended use.

Hand Protection : Not required under intended use.

Eye Protection : Not required under intended use.

Skin Protection : Not required under intended use.

Other Protective Equipment : Use of a dust mask and goggles are recommended when handling a large quantity of toner or during long term exposure, as with any non-toxic dust.

9. PHYSICAL AND CHEMICAL PROPERTIES**Appearance**

Physical State : Solid Form : Powder Color : Black Odor : odorless

Ph : Not applicable**Boiling / Melting Point** : Not applicable**Softening Point(°C)** : 100 - 130**Flash Point(°C)** : Not applicable**Ignition Point(°C)** : > 350**Explosion Properties** : No data**Density(g/cm³)** : 1.1 (bulk density : 0.35)**Solubility in Water** : Negligible**10. STABILITY AND REACTIVITY****Stability** : Stable**Hazardous Reactions** : Dust explosion, like most finely divided organic powders.**Conditions to Avoid** : Electric discharge, throwing into fire.**Materials to Avoid** : Oxidizing Materials**Hazardous Decomposition Products** : CO, CO₂ and NO_x**Further Information** : None**11. TOXICOLOGICAL INFORMATION****Acute Toxicity**Ingestion(oral) : LD₅₀ > 2500mg/kg (Rats)

Inhalation : No Data

Eye irritation : Not an irritant (Rabbits)

Skin irritation : Not an irritant (Rabbits)

Skin sensitizer : No sensitization

Mutagenicity : Negative (Ames Test)**Carcinogenicity** : In 1996 the IARC reevaluated carbon black as a Group 2B carcinogen (possible human carcinogen). This classification is given to chemicals for which there is inadequate human evidence, but sufficient animal evidence on which to base an opinion of carcinogenicity. The classification is based upon the development of lung tumors in rats receiving chronic inhalation exposures to free carbon black at levels that induce particle overload of the lung. Studies performed in animal models other than rats did not show any association between carbon black and lung tumors. Moreover, a two-year cancer bioassay using a typical toner preparation containing carbon black demonstrated no association between toner exposure and tumor development in rats.

Date Revised : Aug.18, 2003

Date Issued : Jun. 1, 2003

MSDS No. F-01211

Chronic Effect : In a study in rats of chronic inhalation exposure to a typical toner, a mild to moderate degree of lung fibrosis was observed in 92% of the rats in the high concentration (16mg/m³) exposure group, and a minimal to mild degree of fibrosis was noted in 22% of the animals in the middle (4mg/m³) exposure group, but no pulmonary change was reported in the lowest (1mg/m³) exposure group, the most relevant level to potential human exposures.

12.ECOLOGICAL INFORMATION

No data are available.

13.DISPOSAL CONSIDERATIONS

Waste from Residues : Waste material may be dumped or incinerated under conditions which meet all federal, state and local environmental regulations.

Contaminated Packaging : Waste may be disposed or incinerated under conditions which meet all federal, state and local environmental regulations.

14.TRANSPORT INFORMATION

UN Classification : None

Not classified as hazardous for transport.

15.REGULATORY INFORMATION

US Information

TSCA(Toxic Substances Control Act) :

All chemical substances in this product comply with all applicable rules or order under TSCA.

SARA(Superfund Amendments and Reauthorization Act) Title III

302 Extreme Hazardous Substance : None

311/312 Hazard Classification : None

EU Information

1999/45/EC and 67/548/EEC

Symbol & Indication : Not required

R-Phrase : Not required

76/769/EEC : All chemical substances in this product comply with all applicable rules or order under 76/769/EEC.

16.OTHER INFORMATION

NFPA Rating (USA) : Health=1 Flammability=1 Reactivity=0

WHMIS Legislation (Canada) : This product is not a controlled product.

List of R phrases : R11 : Highly flammable

References

IARC(1996) : IARC monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Humans, Vol. 65, Printing Process And Printing Inks, Carbon Black and Some Nitro Compounds, Lyon, pp.149-261

H.Muhle, B.Bellmann, O.Creutzenberg, C.Dasenbrock, H.Ernst, R.Kilpper, J.C.MacKenzie, P.Morrow, U.Mohr, S.Takenaka, and R.Mermelstein(1991) Pulmonary Response to Toner upon Chronic Inhalation Exposure in Rats.

Fundamental and Applied Toxicology 17, pp.280-299.

The information on this data sheet represents our current data and best opinion as to the proper use in handling of this product under normal conditions. However, all materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we do not guarantee that these are the only hazards which exist.

Date Issued : Jun. 1, 2003
MSDS No. F-31211

1.PRODUCT AND COMPANY IDENTIFICATION

Product Name : AR-202ND / AR-202DV / AR-202SD / AR-202SD-C (Black Developer)
Supplier Identification : Sharp Corporation
22-22 Nagaike-cho, Abeno-ku, Osaka, Japan

Local suppliers are listed below. Please contact the nearest supplier for additional information.

Area	(Country)	(Name and Telephone Number)
North America	U.S.A.	Sharp Electronics Corporation Sharp Plaza, Mahwah, NJ Telephone number for information : 1-800-237-4277 Emergency telephone number : 1-800-255-3924
	Canada	Sharp Electronics of Canada Ltd. Telephone number for information : 905-890-2100 Emergency telephone number : 1-800-255-3924
Oceania	Australia	Sharp Corporation of Australia PTY. Ltd. No1 Huntingwood Drive Huntingwood Blacktown N.S.W. Telephone number for information : 1300-13-50-22
Europe	Germany	Sharp Electronics (Europe) GMBH Sonninstrasse 3, 20097 Hamburg Telephone number to access MSDS : 040-2376-2185 For more information : 040-2376-2613
	United Kingdom	Sharp Electronics (U. K.) Ltd. Telephone number for information : 08705-274-277
	France	Sharp Electronics France S.A. Telephone number for information : 01-49-90-34-00
	Austria	Sharp Electronics GMBH Telephone number for information : 01-727-19-0
	Italy	Sharp Electronics (Italy) S.P.A. Telephone number for information : 02895951
	Spain	Sharp Electronics (Espana) S.A. Telephone number for information : 93-581-97-00
	Netherlands	Sharp Electronics Benelux B.V. Telephone number for information : 30-6359500
	Sweden	Sharp Electronics Nordic AB Telephone number for information : 08-634-36-00
	Switzerland	Sharp Electronics(Schweiz)AG Telephone number for information : 01-846-6111
Middle East	U.A.E.	Sharp Middle East FZE P.O.Box 17115 Jebel Ali, Dubai Telephone number for information : 04-815311

2.COMPOSITION / INFORMATION ON INGREDIENTS

Substance[]	Preparation[X]					
<u>Ingredient</u>	<u>CAS No.</u>	<u>Proportion</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>	<u>MAK-TWA</u>	<u>NOHSC-TWA</u>
Iron powder	7439-89-6	> 90 %	Not listed	Not listed	Not listed	Not listed
Styrene-Acrylate copolymer	29497-14-1	5-10 %	Not listed	Not listed	Not listed	Not listed
Carbon black	1333-86-4	< 1 %	3.5mg/m ³	3.5mg/m ³	Not listed	3mg/m ³

Date Issued : Jun. 1, 2003
MSDS No. F-31211

3. HAZARDS IDENTIFICATION

Most Important Hazards and Effects of the Products

Human Health Effects : There are no anticipated carcinogenic effects from exposure based on animal tests performed using toner. When used as intended according to instructions, studies do not indicate any symptoms of fibrosis will occur.

Environmental Effects : No data are available.

Specific Hazards : Dust explosion (like most finely divided organic powders)

Directive 1999/45/EC(Europe) : Not classified as dangerous

4. FIRST-AID MEASURES

Route(s) of Entry : Inhalation?

No

Skin?

No

Ingestion?

Possible but very unusual.

Inhalation : Remove to fresh air. If symptoms occur, consult medical personnel.

Skin Contact : Wash with soap and water for 15 minutes or until particle is removed.
If irritation does occur, consult medical personnel.

Eye Contact : Flush eyes immediately with water for 15 minutes. If irritation does occur, consult medical personnel.

Ingestion : Rinse with water and drink several glasses of water. If irritation or discomfort does occur, consult medical personnel.

5. FIRE-FIGHTING MEASURES

Extinguishing Media : Water, CO₂, foam and dry chemicals

Special Fire Fighting Procedures : None

Fire and Explosion Hazards : Toner material, like most finely divided organic powders, may form an explosive mixture.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions : None

Environmental Precautions : None

Methods for Cleaning Up : Wipe off with paper or cloth. Do not use vacuum cleaner when a large amount is released. It, like most finely divided organic powders, is capable of creating a dust explosion.

7. HANDLING AND STORAGE

Handling

Technical Measures : None

Precautions : None

Safe Handling Advice : Use of a dust mask is recommended when handling a large quantity of toner or during long term exposure, as with any non-toxic dust. Try not to disperse the particles.

Storage

Technical Measures : None

Storage Conditions : Keep container closed and Store in a cool and dry place.
Keep out of the reach of children.

Incompatible Products : None

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Measures

Ventilation : Not required under intended use.

Date Issued : Jun. 1, 2003
MSDS No. F-31211**Exposure Limit Values**OSHA-PEL(USA) : 15mg/m³ (Total Dust), 5mg/m³ (Respirable Dust)
ACGIH-TLV(USA) : 10mg/m³ (Total Dust), 3mg/m³ (Respirable Dust)**Personal Protective Equipment**Respiratory Protection : Not required under intended use.
Hand Protection : Not required under intended use.
Eye Protection : Not required under intended use.
Skin Protection : Not required under intended use.
Other Protective Equipment : Use of a dust mask and goggles are recommended when handling a large quantity of toner or during long term exposure, as with any non-toxic dust.**9. PHYSICAL AND CHEMICAL PROPERTIES****Appearance**

Physical State : Solid Form : Powder Color : Black Odor : odorless

Ph : Not applicable**Boiling / Melting Point** : Not applicable**Flash Point(°C)** : Not applicable**Ignition Point(°C)** : No data**Explosion Properties** : No data**Density(g/cm³)** : 7.3 (bulk density : 2.0)**Solubility in Water** : Negligible**10. STABILITY AND REACTIVITY****Stability** : Stable**Hazardous Reactions** : Dust explosion, like most finely divided organic powders.**Conditions to Avoid** : Electric discharge, throwing into fire.**Materials to Avoid** : Oxidizing Materials**Hazardous Decomposition Products** : CO, CO₂ and NO_x**Further Information** : None**11. TOXICOLOGICAL INFORMATION****Acute Toxicity**Ingestion(oral) : LD₅₀ > 2500mg/kg (Rats)

Inhalation : No data

Eye irritation : No data

Skin irritation : Not an irritant (Rabbits)

Skin sensitizer : No sensitization

Mutagenicity : Negative (Ames Test)**Carcinogenicity** : In 1996 the IARC reevaluated carbon black as a Group 2B carcinogen (possible human carcinogen). This classification is given to chemicals for which there is inadequate human evidence, but sufficient animal evidence on which to base an opinion of carcinogenicity. The classification is based upon the development of lung tumors in rats receiving chronic inhalation exposures to free carbon black at levels that induce particle overload of the lung. Studies performed in animal models other than rats did not show any association between carbon black and lung tumors. Moreover, a two-year cancer bioassay using a typical toner preparation containing carbon black demonstrated no association between toner exposure and tumor development in rats.

Date Issued :Jun. 1, 2003

MSDS No. F-31211

Chronic Effect : In a study in rats of chronic inhalation exposure to a typical toner, a mild to moderate degree of lung fibrosis was observed in 92% of the rats in the high concentration (16mg/m³) exposure group, and a minimal to mild degree of fibrosis was noted in 22% of the animals in the middle (4mg/m³) exposure group, but no pulmonary change was reported in the lowest (1mg/m³) exposure group, the most relevant level to potential human exposures.

12.ECOLOGICAL INFORMATION

No data are available.

13.DISPOSAL CONSIDERATIONS

Waste from Residues : Waste material may be dumped or incinerated under conditions which meet all federal, state and local environmental regulations.

Contaminated Packaging : Waste may be disposed or incinerated under conditions which meet all federal, state and local environmental regulations.

14.TRANSPORT INFORMATION

UN Classification : None

Not classified as hazardous for transport.

15.REGULATORY INFORMATION

US Information

TSCA(Toxic Substances Control Act) :

All chemical substances in this product comply with all applicable rules or order under TSCA.

SARA(Superfund Amendments and Reauthorization Act) Title III

302 Extreme Hazardous Substance : None

311/312 Hazard Classification : None

EU Information

1999/45/EC and 67/548/EEC

Symbol & Indication : Not required

R-Phrase : Not required

76/769/EEC : All chemical substances in this product comply with all applicable rules or order under 76/769/EEC.

16.OTHER INFORMATION

NFPA Rating (USA) : Health=1 Flammability=1 Reactivity=0

WHMIS Legislation (Canada) : This product is not a controlled product.

References

IARC(1996) : IARC monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Humans, Vol. 65, Printing Process And Printing Inks, Carbon Black and Some Nitro Compounds, Lyon, pp.149-261

H.Muhle, B.Bellmann, O.Creutzenberg, C.Dasenbrock, H.Ernst, R.Kilpper, J.C.MacKenzie, P.Morrow, U.Mohr, S.Takenaka, and R.Mermelstein(1991) Pulmonary Response to Toner upon Chronic Inhalation Exposure in Rats. Fundamental and Applied Toxicology 17, pp.280-299.

The information on this data sheet represents our current data and best opinion as to the proper use in handling of this product under normal conditions. However, all materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we do not guarantee that these are the only hazards which exist.

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For users in the USA

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

WARNING:

FCC Regulations state that any unauthorized changes or modifications to this equipment not expressly approved by the manufacturer could void the user's authority to operate this equipment.

Note:

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the operation manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Shielded cables must be used with this equipment to maintain compliance with standard.

NOTICE for users in the USA

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AR-M162 Digital Multifunctional System
AR-M207 Digital Multifunctional System

In the event that this authorized dealer does not honor its warranty commitments, please contact the General Manager, Business Products Group, Sharp Electronics Corporation, Sharp Plaza, Mahwah, NJ 07430-1163, so that Sharp can try to help assure complete satisfaction of all the warranty rights to which you are entitled from the authorized dealer.

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SOFTWARE SETUP GUIDE

DIGITAL MULTIFUNCTIONAL SYSTEM

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Warranty

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Note

- This manual assumes that the personnel who are installing this product and the users of the product have a working knowledge of Windows and Macintosh computers.
- For information on the operating system, please refer to your operating system manual or the online Help function.
- Some of the windows that appear in this manual may vary depending on your computer type and settings.

- In some regions the "Key operator's guide" cited in this manual is a separate manual, and in other regions the "Key operator's guide" is included in the "Operation manual (for general information and copier)".
- The dual function board mentioned in this manual can be installed as an option on some models and is installed standard on other models. For more information, see "3. PERIPHERAL DEVICES AND SUPPLIES" of the "Operation manual (for general information and copier)".

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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.

INTRODUCTION

Thank you for purchasing this product. This manual explains how to install the printer driver and utilities that are required for the printer and scanner functions.

The optional network expansion kit (AR-NB3) enables the machine to be used as a network scanner and network printer. The optional PS3 expansion kit (AR-PK1/N) enables the machine to be used as a PostScript compatible printer. When the machine is used as a PostScript printer, printing is possible in both a Windows and a Macintosh environment. Note that printing in a Macintosh environment is only possible via a network connection. (Parallel and USB ports cannot be used in a Macintosh environment.)



Where "AR-XXXX" appears in this manual, please substitute the name of your model for "XXXX". For the name of the model that you are using, see "PRODUCT CONFIGURATIONS" in the "Operation manual (for general information and copier)".

Software setup guide (this manual)

Explains the procedures for installing the software in the "Software" CD-ROMs that accompany the machine and the optional network expansion kit (AR-NB3).

To use the machine as a printer or scanner, see this manual and the online manuals.

Using the standard printer function and scanner function

- **Operation manual (for printer and scanner)**

This is an online manual that can be found in the "Software CD-ROM (1)" that accompanies the machine.

This manual contains information necessary for using the machine as a printer and scanner, including printing by means of the standard printer driver, printing by means of the SPLC printer driver that can be used when the dual function board is installed, scanning using Button Manager, troubleshooting, and key operator programs for the printer and scanner functions.

Using the network printer function

- **Operation manual (for network printer)**

This is an online manual that can be found in the "Software CD-ROM (1)" that accompanies the network expansion kit.

This manual contains information necessary for using the machine as a printer, including printing condition settings, printing using the PCL5e and PCL6 printer drivers, and the PS printer driver, troubleshooting, and key operator programs for the printer and network functions.

Using the network scanner function

- **Operation manual (for network scanner)**

This is an online manual that can be found in the "Software CD-ROM (1)" that accompanies the network expansion kit.

Read this manual for information on using Scan to FTP, Scan to E-mail, and other network scanner functions.

The following help files are installed when the software on the "Software CD-ROM (1)" that accompanies the network expansion kit is installed:

- **Printer Status Monitor Help file**
- **Printer Administration Utility Help file**

Online manual contained in the "Network Utilities CD-ROM"

- **Print Server Card Online Manual**

SOFTWARE LICENSE

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

The explanations in this manual are based on American English and the North American version of the software. Software for other countries and regions may vary slightly from the North American version.

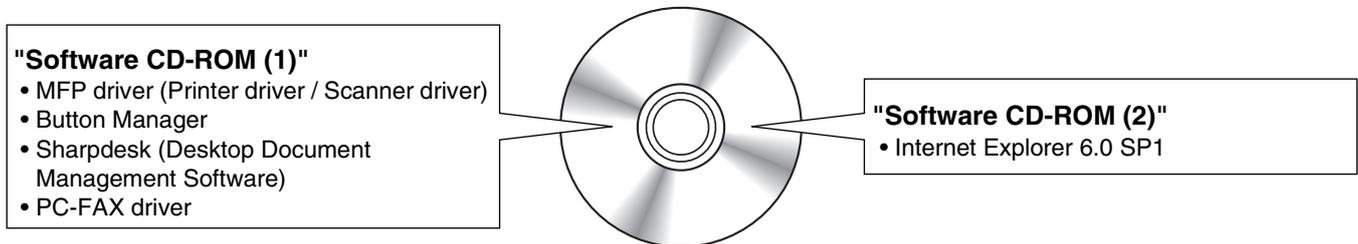
ABOUT THE CD-ROMS

This product includes CD-ROMs that are provided standard with the machine and CD-ROMs that are provided with the optional network expansion kit (AR-NB3).

For Windows

■ CD-ROM provided standard with the machine

There are two CD-ROMs that are provided with the machine.



Software CD-ROM (1)

This CD-ROM contains a wizard-type installer for installation of the software below and the online manual "Operation Manual (for printer and scanner)".

For the procedure for installing the software, see page 7 of this manual.

MFP Driver

• Printer driver

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

There are two types of printer drivers for the machine: a standard printer driver and a printer driver* that is used when the dual function board is installed.

* When the dual function board is installed, "(EB)" appears in the name of the installed printer driver. Furthermore, the printer driver for the dual function board enables a faster printing speed.

• 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 is a software utility that allows you to use the [SCAN] key on the machine to scan a document.

Acrobat Reader 5.0

This program is used to view the online manuals on your computer screen. To install Acrobat Reader, see page 42 of this manual.

Sharpdesk

Sharpdesk is an integrated software environment that makes it easy to manage document and image files and launch applications.

PC-FAX driver*1

This enables you to send a fax from your computer to a fax machine via the machine (when the fax option is installed).

Online Manual

This is a manual in PDF format that is viewed using Adobe Acrobat Reader. To view the online manual "Operation Manual (for printer and scanner)" on the CD-ROM, specify the following path. (Note that "R" represents the letter of your CD-ROM drive.)

R:\Manual\EnglishA*2\AR_161_162_163.pdf

*1 To use the PC-FAX driver, Internet Explorer 4.0 or later must be installed on your computer.

*2 "EnglishA" in North America. "English" in Europe.



The scanning feature can only be used with computers that are running Windows 98/Me/2000/XP and are connected to the machine by a USB cable. If you are running Windows 95/NT 4.0 or are connected by a parallel cable, only printing is available.

Software CD-ROM (2)

This CD-ROM contains a minimal version of Internet Explorer 6.0 SP1. For the installation procedure, double-click "Readme.txt" in the root folder of the "Software CD-ROM (2)" to view the Readme file.

■ CD-ROMS in the network expansion kit (AR-NB3)

The optional network expansion kit includes the following four CD-ROMs:

1. "Software CD-ROM (1)" included in the network expansion kit

- PCL5e and PCL6 drivers, and PS driver
- Printer Status Monitor
- Printer Administration Utility
- NICManager
- PC-FAX driver
- Macintosh PPD File

2. "Network Utilities" CD-ROM

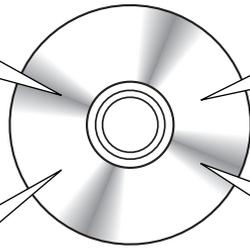
This CD-ROM contains utilities for using the machine as a network printer and an online manual.

3. "Sharpdesk" CD-ROM

- Sharpdesk (Desktop Document Management Software)
- Network Scanner Tool
- SHARP TWAIN AR/DM (TWAIN driver)
- OmniPage Pro Trial (ScanSoft, inc.)

4. "Software CD-ROM (2)"

- Internet Explorer 6.0 SP1



1. "Software CD-ROM (1)" included in the network expansion kit

This CD-ROM contains a wizard-type installer for installation of the following software, and online manuals. For the procedure for installing the software, see page 20 of this manual.

Printer driver

Contains the PCL5e and PCL6 printer drivers, and the PS printer driver that are needed to use this product.

Printer Status Monitor*1

When using the printer in a network environment, this provides messages and displays that allow you to monitor the status of the printer.

Printer Administration Utility*1

When using the printer in a network environment, this administration utility makes it possible to configure printer settings and monitor the printer from a computer. (This utility is for use by system administrators.)

NICManager

Use this program to configure and check the IP address when the machine is connected to a network.

PC-FAX driver*2

This enables you to send a fax from your computer to a fax machine via the machine (when the fax option is installed).

Acrobat Reader 5.0

This program is used to view the online manuals on your computer screen.

To install Acrobat Reader, see page 42 of this manual.

Online Manuals

Manuals in PDF format that are viewed using Adobe Acrobat Reader. To view the online manuals on the CD-ROM, specify the following paths. (Note that "R" represents the letter of your CD-ROM drive.)

- For network printer: R:\Manual\EnglishA*3\OnlineManual\AR_NB3_Prn.pdf
- For network scanner: R:\Manual\EnglishA*3\OnlineManual\AR_NB3_Scn.pdf

*1 In order to use the Printer Status Monitor and Printer Administration Utility, the machine must be connected to a network.

*2 To use the PC-FAX driver, Internet Explorer 4.0 or later must be installed on your computer.

*3 "EnglishA" in North America. "English" in Europe.

2. "Network Utilities" CD-ROM

This CD-ROM contains an online manual and utilities for using the machine as a network printer.

Please read before using (Readme):

This contains information on the contents of the "Network Utilities" CD-ROM, how to use the utilities, how to view the online manual, and limitations.

Print Server Card Quick Setup:

This is a wizard-type utility for Windows 95, Windows 98, Windows Me, Windows NT 4.0, Windows 2000, Windows XP, and Windows Server 2003 that allows you to conveniently configure the print server.

Print Server Card Standard Setup:

This installs and launches "NICManager", which enables administration and configuration of advanced print server settings.

Online Manual:

This manual in PDF format explains how to use the "Network Utilities" CD-ROM.

3. "Sharpdesk" CD-ROM

Sharpdesk is an integrated software environment that makes it easy to manage document and image files, and launch applications.

For information on the "Sharpdesk" CD-ROM and how to install Sharpdesk, see the "Sharpdesk installation guide" that accompanies the network expansion kit.

Sharpdesk (Desktop Document Management Software)

Sharpdesk is used to manage images scanned from the machine and files created in various software programs.

Network Scanner Tool

This is a utility that helps you use Scan to Desktop. The utility allows you to configure settings to receive scanned images from the machine to your computer. You can have Sharpdesk launch automatically when your computer receives a scanned image from the machine.

SHARP TWAIN AR/DM

This is used to acquire black and white images from a TWAIN interface into TWAIN-compliant software applications.

OmniPage Pro Trial (ScanSoft, inc.)

This is used to scan text printed on paper and convert the image data into text data by means of OCR (Optical Character Recognition).

4. "Software CD-ROM (2)"

This CD-ROM contains a minimal version of Internet Explorer 6.0 SP1. For the installation procedure, double-click "Readme.txt" in the root folder of the "Software CD-ROM (2)" to view the Readme file.

Using the machine in a Macintosh environment

To use the machine as a printer for the Macintosh, the PS3 expansion kit (AR-PK1/N) must be installed. Install the PPD file needed to use the machine as a printer from the "Software CD-ROM (1)" that accompanies the network expansion kit (AR-NB3).

1. "Software CD-ROM (1)" that accompanies the network expansion kit

This CD-ROM contains the software that is needed to use the machine in a Macintosh environment and the online manuals "Operation Manual (for network printer)" and "Operation Manual (for network scanner)". For the procedure for installing the software, see page 32 of this manual.

To view the online manuals on the CD-ROM, double click the CD-ROM icon and then double-click in the following order:

- **For network printer: [AR-NB3 Printer Manual] folder - [EnglishA]* folder - [Printer Manual] icon**
- **For network scanner: [AR-NB3 Scanner Manual] folder - [EnglishA]* folder - [Scanner Manual] icon**

*"EnglishA" in North America. "English" in Europe.

PPD file

This file contains printer information necessary for printing.

Acrobat Reader 4.05

This program is used to view the online manuals on your computer screen.

To install Acrobat Reader, see page 42 of this manual.



The PPD file on the "Software CD-ROM (1)" that accompanies the network expansion kit cannot be used when the machine is connected to your computer with a USB or parallel cable.

2. "Network Utilities" CD-ROM

This CD-ROM contains utilities required when using the machine as a printer in a Macintosh environment.

PSC Setup Utility

This is a utility that lets you configure the machine's network settings from a Macintosh.

Online Manual

This manual in PDF format explains how to use the "Network Utilities" CD-ROM.

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1

INSTALLING THE SOFTWARE (THAT ACCOMPANIES THE MACHINE)

BEFORE INSTALLATION

HARDWARE AND SOFTWARE REQUIREMENTS

Before installing the software, see "HARDWARE AND SOFTWARE REQUIREMENTS" on page 43 to make sure your computer meets the hardware and software requirements.

INSTALLATION ENVIRONMENT AND USEABLE SOFTWARE

The software that can be installed varies depending on your operating system version and type of connection to the machine.

	MFP Driver		Button Manager	Sharpdesk	PC-FAX driver
	Printer driver	Scanner driver			
Windows 98/Me/2000/XP USB 2.0 connection*1	Available*2,3	Available	Available	Available	Available*5
Windows 95/98/Me/NT 4.0/2000/XP Parallel connection		Not Available	Not Available	Available*4	Not Available

*1 Windows 98/Me does not support USB 2.0. A USB 2.0 connection can be used in Windows 98/Me, however, the performance will be the same as USB 1.1. The print speed based on USB 2.0 specifications can only be attained if your computer is running Windows 2000/XP, you are using a cable that supports USB 2.0, and the cable is connected to a USB 2.0 port on your computer. If the connection is made through a hub, the hub must support USB 2.0. USB 2.0 (Hi-Speed) can be used when the dual function board is installed.

*2 When the machine is connected using a parallel cable, the Print Status Window can only be used when the parallel port is set to ECP mode.

*3 The printer driver that is installed varies depending on the type of connection between the machine and your computer.

*4 Sharpdesk can be installed when using a parallel cable, however, the machine's scanner function cannot be used. Windows 95, Windows NT 4.0 and Windows 98FE are not supported.

*5 This can only be used when the fax option is installed. In addition, Internet Explorer 4.0 or later must be installed on your computer.

INSTALLING THE SOFTWARE



- The scanner feature only works when using a USB cable.
- If an error message appears, follow the instructions on the screen to solve the problem. After the problem is solved, continue the installation procedure. Depending on the problem, you may have to exit the installer. In this case, click the [Cancel] button to quit the installer and then reinstall the software from the beginning after solving the problem.
- When installing Sharpdesk, if Internet Explorer 5.5 or later is not installed on your computer, see the Internet Explorer installation procedure in the Readme file (Readme.txt) in the root folder of the "Software CD-ROM (2)". If you are only going to install Sharpdesk after installing Internet Explorer (for example, when the other components have already been installed), perform a custom installation (follow steps 2 through 7 in "INSTALLATION METHOD 2" and then install only Sharpdesk in steps 11 and 12).

INSTALLATION USING THE INSTALLER

The software programs installed and the steps for installation vary depending on the version of Windows you are running and the type of connection to your computer. Refer to the following table for the appropriate procedure for your environment.

Windows version	Windows XP	Windows 2000/98/Me	Windows 95/NT 4.0
USB cable connection* (standard installation)	INSTALLATION METHOD 1 (pages 8 to 9)		
USB cable connection* (custom installation)	INSTALLATION METHOD 2 (pages 10 to 11)	INSTALLATION METHOD 3 (pages 12 to 13)	
Parallel cable connection (custom installation)		INSTALLATION METHOD 4 (pages 14 to 15)	

* Windows 95 and Windows NT 4.0 are not supported.

INSTALLATION METHOD 1

Use this procedure to install the software in the following environments:

1. The printer is connected by USB cable.
2. Windows version: Windows 98/Windows Me/Windows 2000*/Windows XP*

The following procedure uses Windows XP as an example. Follow the same steps to install the software on other operating systems.



* To install the software, you must have administrator's rights.

Standard installation (only when using a USB cable)

The procedure for a standard installation of the software is explained below.

The standard installation procedure is normally used when the machine is connected by a USB cable and you wish to install all the software components.



If the machine is used as a shared printer via a server or is connected by a parallel cable and you only wish to install certain components, select "Custom installation". (Pages 10 to 17)

1 Make sure that the USB cable is not connected to the machine.

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 9.

2 Insert the "Software CD-ROM (1)" that accompanies the machine into your computer's CD-ROM drive.

3 Click the [start] button, click [My Computer] (), and then double-click the [CD-ROM] icon ().

In Windows 98/Me/2000, double-click [My Computer], and then double-click the [CD-ROM] icon.

4 Double-click the [Setup] icon ().



If the language selection screen appears after you double click the [Setup] icon, select the language that you wish to use and click the [Next] button. (Normally the correct language is selected automatically.)

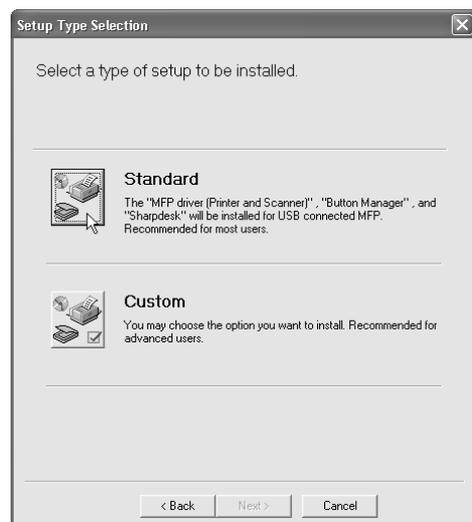
5 The "SOFTWARE LICENSE" window will appear. Make sure that you understand the contents of the license agreement and then click the [Yes] button.

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

7 Click the [Standard] button.

After the "Integrated Installer is preparing..." message appears, the software components below will be automatically installed. Follow the on-screen instructions.

- MFP Driver
- Button Manager
- Sharpdesk



8 When the "Finish" screen appears, click the [Close] button.

When "Now connect the MFP interface cable to the PC." appears, click the [OK] button.

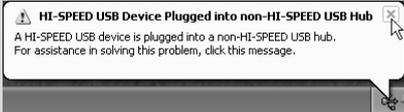
! Caution **If you are using Windows 2000/XP**
 If a warning message regarding the Windows logo test or digital signature appears, be sure to click the [Continue Anyway] or [Yes] button.

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.

9 Connect the machine to your computer with the USB cable. (Page 44)

Make sure that the machine is powered on. The machine is found and a plug and play window appears. Follow the on-screen instructions.

! Caution • **If the following message appears on your computer screen, close it.**



A window regarding "HI-SPEED USB Device" will then appear. Close the window.

This message appears when the machine's USB 2.0 mode is not set to "Hi-Speed". For information on switching the USB 2.0 mode, see the "Key operator's guide".

• **If you are using Windows 2000/XP**
 If a warning message regarding the Windows logo test or digital signature appears, be sure to click the [Continue Anyway] or [Yes] button.

Note If the dual function board is installed, the "AR-XXXX (EB)" printer driver and scanner driver will be installed.

This completes the installation.

- After installing the MFP Driver, see "CONFIGURING THE PRINTER DRIVER (Windows environment)" (page 42) to configure the printer driver settings.
- After installing Button Manager, see "SETTING UP BUTTON MANAGER" (page 18) to set up Button Manager.

INSTALLATION METHOD 2

Use this procedure to install the software in the following environments:

1. The printer is connected by USB cable or parallel cable.
2. Windows version: Windows XP

Note To install this software, you must have administrator's rights.

Custom installation

Installation methods 2 through 4 are for custom installations of the software. If the machine is used as a shared printer via a server or is connected by a parallel cable and you only wish to install required software components, select "Custom installation".

1 Make sure that the USB or parallel cable is not connected to the machine and your computer.

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

Note The cable will be connected in step 14.

2 Insert the "Software CD-ROM (1)" that accompanies the machine into your computer's CD-ROM drive.

3 Click the [start] button, click [My Computer] (), and then double-click the [CD-ROM] icon ().

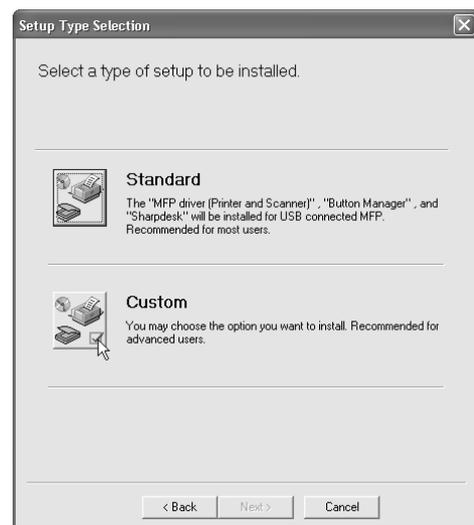
4 Double-click the [Setup] icon ().

Note If the language selection screen appears after you double click the [Setup] icon, select the language that you wish to use and click the [Next] button. (Normally the correct language is selected automatically.)

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

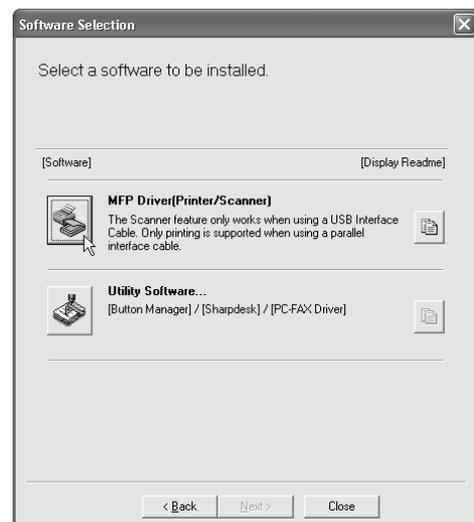
6 Read the message in the "Welcome" window and then click the [Next] button.

7 Click the [Custom] button.



8 If you wish to install the MFP driver, click the [MFP Driver (Printer/Scanner)] button.

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

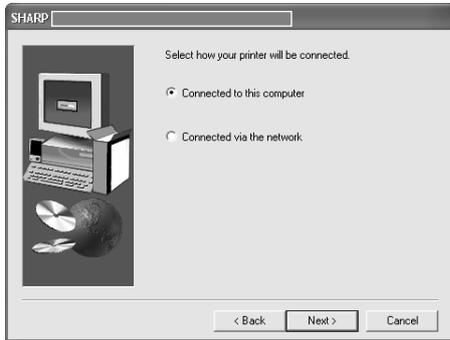


9 Click the [Next] button.

10 The files required for installation of the MFP driver are copied (if "MFP Driver" was selected in Step 8).

Follow the on-screen instructions.

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



! Caution

If a warning message regarding the Windows logo test appears while the MFP driver files are being copied (the warning message may appear several times), be sure to click the [Continue Anyway] button.

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

11 If you wish to install Button Manager, Sharpdesk, or the PC-FAX driver, click the [Utility Software] button in step 8.

12 Click the [Button Manager] button, the [Sharpdesk] button, or the [PC-FAX Driver] button.

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

Note

- If you are using a parallel cable, do not select "Button Manager" or "PC-FAX Driver". These features are not supported when a parallel cable is used.
- When a message appears prompting you to connect the USB cable, click the [OK] button. For the software that can be installed, see "INSTALLATION ENVIRONMENT AND USEABLE SOFTWARE" (page 7).

13 Click the [Close] button.

Note

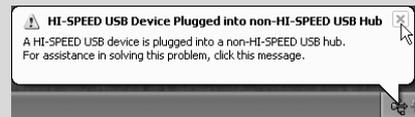
After the installation, a message prompting you to restart your computer may appear. In this case, click the [Yes] button to restart your computer.

14 Connect the machine to your computer with the interface cable. (Page 44)

- If you are using a USB cable, make sure the machine power is turned on and then connect the cable.
- If you are using a parallel cable, turn off both the machine power and the computer power and then connect the cable. Turn the machine power on first and then turn on your computer. The machine is found and a plug and play window appears. If you are using a parallel cable, go to step 16.

! Caution

If the following message appears on your computer screen, close it.



A window regarding "HI-SPEED USB Device" will then appear. Close the window. This message appears when the machine's USB mode is not set to "Hi-Speed" mode. For information on switching the USB 2.0 mode, see the "Key operator's guide".

15 Installation of the scanner driver begins. (only when using a USB cable).

"SHARP AR-XXXX" will appear in the "Found New Hardware Wizard" dialog box. Select [Install the software automatically (Recommended)], click the [Next] button, and follow the on-screen instructions.

! Caution

If a warning window appears regarding the "Windows logo test", be sure to click the [Continue Anyway] button.

16 Installation of the printer driver begins.

"SHARP AR-XXXX" will appear in the "Found New Hardware Wizard" dialog box. Select [Install the software automatically (Recommended)], click the [Next] button, and follow the on-screen instructions.

! Caution

If a warning window appears regarding the "Windows logo test", be sure to click the [Continue Anyway] button.

Note

If the dual function board is installed, the "AR-XXXX (EB)" printer driver and scanner driver will be installed.

This completes the installation.

- If you installed the MFP Driver, see "CONFIGURING THE PRINTER DRIVER (Windows environment)" (page 42) to configure the printer driver settings.
- If you installed Button Manager, see "SETTING UP BUTTON MANAGER" (page 18) to set up Button Manager.
- If you installed the PC-FAX driver, see "USING THE PC-FAX TRANSMISSION FUNCTION (when the fax option is installed in the Windows environment)" (page 45).

INSTALLATION METHOD 3

Use this procedure to install the software in the following environments:

- 1. The printer is connected by USB cable.
- 2. Windows version: Windows 98/Windows Me/Windows 2000*

Note * To install this software, you must have administrator's rights.

1 Make sure that the USB cable is not connected to the machine.

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

Note The cable will be connected in step 11.

2 Insert the "Software CD-ROM (1)" that accompanies the machine into your computer's CD-ROM drive.

3 Double-click [My Computer] and then double-click the [CD-ROM] icon.

4 Follow steps 4 through 7 in "INSTALLATION METHOD 2".

5 If you wish to install the MFP driver, click the [MFP Driver (Printer/Scanner)] button.

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

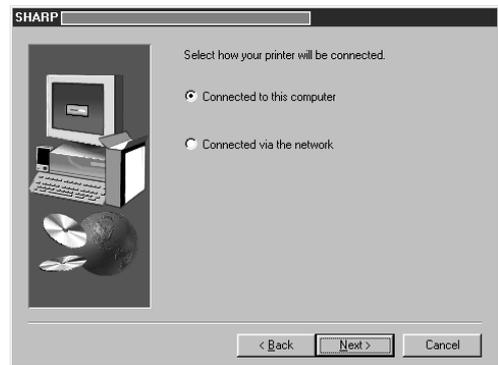


6 Click the [Next] button.

7 The files required for installation of the MFP driver are copied (if "MFP Driver" was selected in Step 5).

Follow the on-screen instructions.

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



When the interface selection screen appears, select [USB].



Caution If you are using Windows 2000 If you are using Windows 2000 and a warning message regarding the digital signature appears while the MFP driver files are being copied (the warning message may appear several times), be sure to click the [Continue Anyway] button.

When "The MFP driver installation is complete." appears, click the [OK] button.

8 If you wish to install **Button Manager, Sharpdesk, or the PC-FAX driver, click the [Utility Software] button in step 5.**

If you do not wish to install any of the above software components, go to step 10.

9 Click the **[Button Manager] button, the [Sharpdesk] button, or the [PC-FAX Driver] button.**

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

10 Click the **[Close] button.**



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 Connect the machine to your computer with the USB cable. (Page 44)

Make sure that the machine is powered on. The machine is found and a plug and play window appears. Follow the on-screen instructions.



If you are using Windows 2000
If a warning message regarding the digital signature appears, be sure to click the [Yes] button.



If the dual function board is installed, the "AR-XXXX (EB)" printer driver and scanner driver will be installed.

This completes the installation.

- If you installed the MFP Driver, see "CONFIGURING THE PRINTER DRIVER (Windows environment)" (page 42) to configure the printer driver settings.
- If you installed Button Manager, see "SETTING UP BUTTON MANAGER" (page 18) to set up Button Manager.
- If you installed the PC-FAX driver, see "USING THE PC-FAX TRANSMISSION FUNCTION (when the fax option is installed in the Windows environment)" (page 45).

INSTALLATION METHOD 4

Use this procedure to install the software in the following environments:

1. The printer is connected by parallel cable.
2. Windows version: Windows 95/Windows 98/Windows Me/Windows NT 4.0*/Windows 2000*

Note * To install this software, you must have administrator's rights.

1 Make sure that the parallel cable is not connected to the machine and your computer before proceeding.

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

Note The cable will be connected in step 17.

2 Insert the "Software CD-ROM (1)" that accompanies the machine into your computer's CD-ROM drive.

3 Double-click [My Computer] and then double-click the [CD-ROM] icon.

4 Follow steps 4 through 7 in "INSTALLATION METHOD 2".

5 If you wish to install the MFP driver, click the [MFP Driver (Printer/Scanner)] button.

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

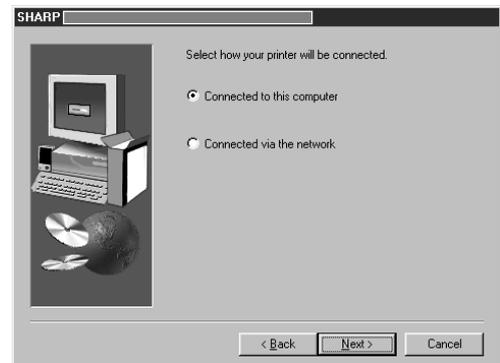


6 Click the [Next] button.

7 Installation of the MFP driver (printer driver) begins (if "MFP Driver" was selected in Step 5).

Follow the on-screen instructions. If you are using Windows 95/NT 4.0, go to step 10.

8 When you are asked how the printer is connected, select [Connected to this computer] and click the [Next] button.

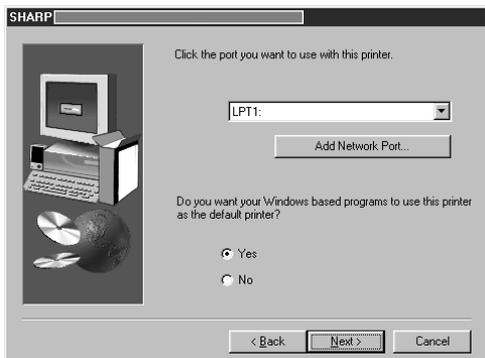


9 When the interface selection screen appears, select [Parallel] and click the [Next] button.



10 Select the printer port and click the [Next] button.

Select [LPT1] for the printer port.



If [LPT1] does not appear, another printer or peripheral device is using [LPT1]. In this case continue the installation, and after the installation is finished, change the port setting so that the machine can use [LPT1]. This procedure is explained in "Another printer is using the parallel port (when using a parallel cable)" (page 41).

11 When asked to select the printer driver to install, select the appropriate printer driver based on whether or not the dual function board is installed, and then click the [Next] button.

If the dual function board is not installed, be sure to select [For standard model].



If the dual function board is not installed and you select the printer driver for the dual function board, printing will not be possible.

12 When the model selection window appears, select model name of your machine and click the [Next] button.

13 Click the [Yes] button.

14 When "The MFP driver installation is complete." appears, click the [OK] button.

15 If you wish to install Sharpdesk, click the [Utility Software] button in step 5.

If you do not wish to install Sharpdesk, go to step 18.



In Windows 95/NT 4.0, the [Utility Software] button does not appear.

16 Click the [Sharpdesk] button.

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



- In Windows 95/NT 4.0, the [Button Manager] button and the [PC-FAX Driver] button do not appear.
- In Windows 98/Me/2000, do not select the [Button Manager] button or the [PC-FAX Driver] button (Button Manager and the PC-FAX driver are not supported when a parallel cable is used).

17 When the "Finish" screen appears, click the [Close] button.

When "Now connect the MFP interface cable to the PC." appears, click the [OK] button.



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

18 Turn off the power of the machine and your computer, and connect the machine to your computer with the parallel cable. (Page 44)

After connecting the machine to your computer, turn on the power of the machine and then start up your computer.

This completes the installation.

If you installed the MFP driver, see "CONFIGURING THE PRINTER DRIVER (Windows environment)" (page 42) to configure the printer driver settings.

USING THE MACHINE AS A SHARED PRINTER VIA A SERVER

The machine can be used as a shared printer in a Windows 95/98/Me/NT 4.0/2000/XP network environment. Note that the Windows network environment must already be established.

Follow these steps to install the printer driver in the client computer.

Ask your network administrator for the server name and printer name of the machine on the network.



For the procedure for configuring settings in the printer server, see the "Operation manual (for printer and scanner)".

The "printer server" explained here is a computer that is connected to the machine, and "clients" are other computers connected to the same network as the printer server.

1 Insert the "Software CD-ROM (1)" that accompanies the machine into your computer's CD-ROM drive.

2 Click the [start] button, click [My Computer] (), and then double-click the [CD-ROM] icon ().

In Windows 95/98/Me/NT 4.0/2000, double-click [My Computer] and then double-click the [CD-ROM] icon.

3 Follow steps 4 through 7 in "INSTALLATION METHOD 2".

4 Click the [MFP Driver (Printer/Scanner)] button.

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

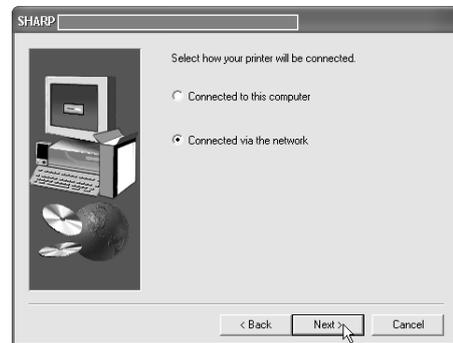


5 Click the [Next] button.

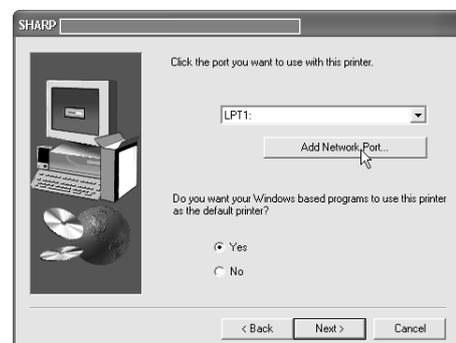
6 The files required for installation of the MFP driver are copied (if "MFP Driver" was selected in Step 4).

Follow the on-screen instructions.

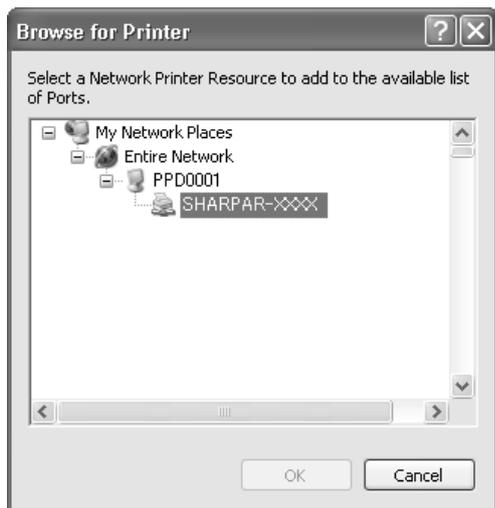
When you are asked how the printer is connected, select [Connected via the network] and click the [Next] button.



7 When you are asked to select the printer port to be used, click the [Add Network Port] button.



8 Select the network printer that is shared and click the [OK] button.



Ask your network administrator for the server name and printer name of the machine on the network.

9 In the printer port selection window, verify the network printer that is shared and click the [Next] button.

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

Follow the on-screen instructions.



Caution If you are using Windows 2000/XP.

If a warning message regarding the Windows logo test or digital signature appears, be sure to click the [Continue Anyway] or [Yes] button.

11 Click the [Close] button.

This completes the installation.

SETTING UP BUTTON MANAGER

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

To scan using the operation panel of the machine, Button Manager must be linked with the destination that appears in the display. Follow the steps below to link Button Manager to machine scanner events.



If computers are connected to both of the USB ports on the machine, separate Button Manager settings are required for USB-1 and USB-2. (when the dual function board is installed.)

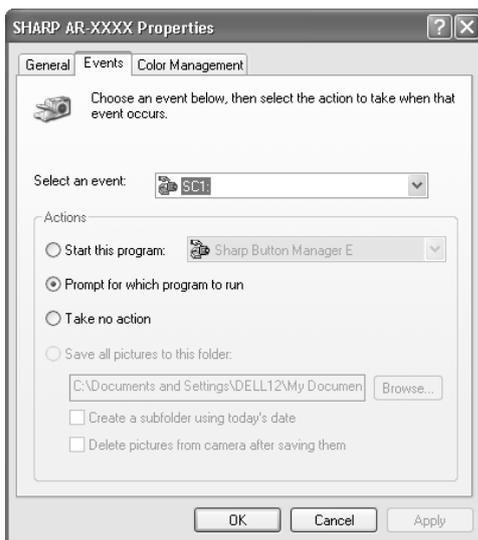
WINDOWS XP

1 Click the [start] button, click [Control Panel], click [Printers and Other Hardware], and then click [Scanners and Cameras].

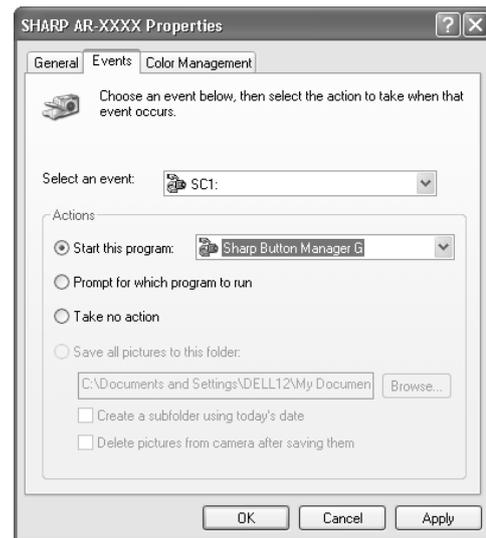
2 Click the [SHARP AR-XXXX] icon and select [Properties] from the [File] menu.

3 In the "Properties" screen, click the [Events] tab.

4 Select [SC1:] from the "Select an event" pull-down menu.



5 Select [Start this program] and then select [Sharp Button Manager G] from the pull-down menu.



6 Click the [Apply] button.

7 Repeat Steps 4 through 6 to link Button Manager to [SC2:] through [SC6:].

- Select [SC2:] from the "Select an event" pull-down menu. Select [Start this program], select [Sharp Button Manager G] from the pull-down menu, and then click the [Apply] button. Do the same for each ScanMenu through [SC6:].
- When the settings have been completed, click the [OK] button to close the screen.

Button Manager is now linked to the machine scan destinations SC1 to SC6.

- The scan settings for each of scan destinations SC1 through SC6 can be changed in the setting window of Button Manager.
- For the default settings for destinations SC1 to SC6 and the procedures for configuring Button Manager settings, see "SCANNING USING THE KEYS ON THE MACHINE" and "BUTTON MANAGER SETTINGS" in "Operation Manual (for printer and scanner)" in the "Software CD-ROM (1)" that accompanies the machine.

WINDOWS 98/ME/2000

1 Click the [Start] button, select [Settings], and then click [Control Panel].

2 Double-click the [Scanners and Cameras] icon.



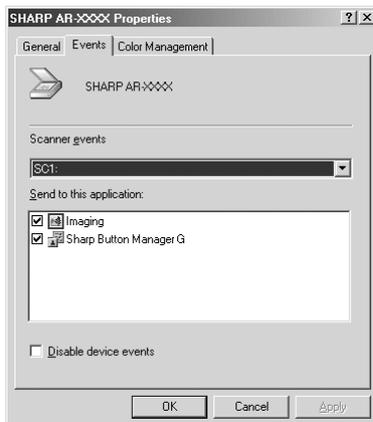
If the [Scanners and Cameras] icon does not appear in Windows Me, click [view all Control Panel options].

3 Select [SHARP AR-XXXX] and click the [Properties] button.

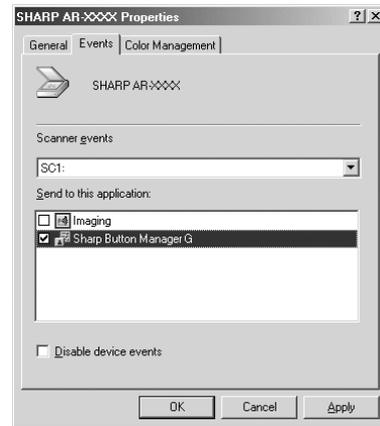
In Windows Me, right click [SHARP AR-XXXX] and click [Properties] in the menu that appears.

4 In the "Properties" screen, click the [Events] tab.

5 Select [SC1:] from the "Scanner events" pull-down menu.



6 Select [Sharp Button Manager G] in "Send to this application".



If other applications are shown, deselect the checkboxes for the other applications and leave only the Button Manager checkbox selected.

7 Click the [Apply] button.

8 Repeat Steps 5 through 7 to link Button Manager to [SC2:] through [SC6:].

- Select [SC2:] from the "Scanner events" pull-down menu. Select [Sharp Button Manager G] in "Send to this application" and click the [Apply] button. Do the same for each scan destination through [SC6:].
- When the settings have been completed, click the [OK] button to close the screen.



In Windows 2000, restart your computer.

Button Manager is now linked to the machine scan destinations SC1 to SC6.

- The scan settings for each of scan destinations SC1 through SC6 can be changed in the setting window of Button Manager.
- For the default settings for destinations SC1 to SC6 and the procedures for configuring Button Manager settings, see "SCANNING USING THE KEYS ON THE MACHINE" and "BUTTON MANAGER SETTINGS" in "Operation Manual (for printer and scanner)" in the "Software CD-ROM (1)" that accompanies the machine.

1

2

INSTALLING THE SOFTWARE (FOR OPTIONS)

INSTALLATION FOR A NETWORK CONNECTION

The procedures for installing the software when the machine is used as a network printer using the optional network expansion kit (AR-NB3) are explained in this chapter. Refer to the following table for the installation procedure to follow depending on whether you are using a Windows environment (TCP/IP network) or a Macintosh environment.

Operating system	Procedure to follow
Windows	(1) SETTING THE IP ADDRESS OF THE MACHINE (page 21) (2) INSTALLING THE SOFTWARE (page 24)
Macintosh	(1) INSTALLING THE PPD FILE (page 32) (2) CONFIGURING THE PRINTER DRIVER (page 35)

About network environments

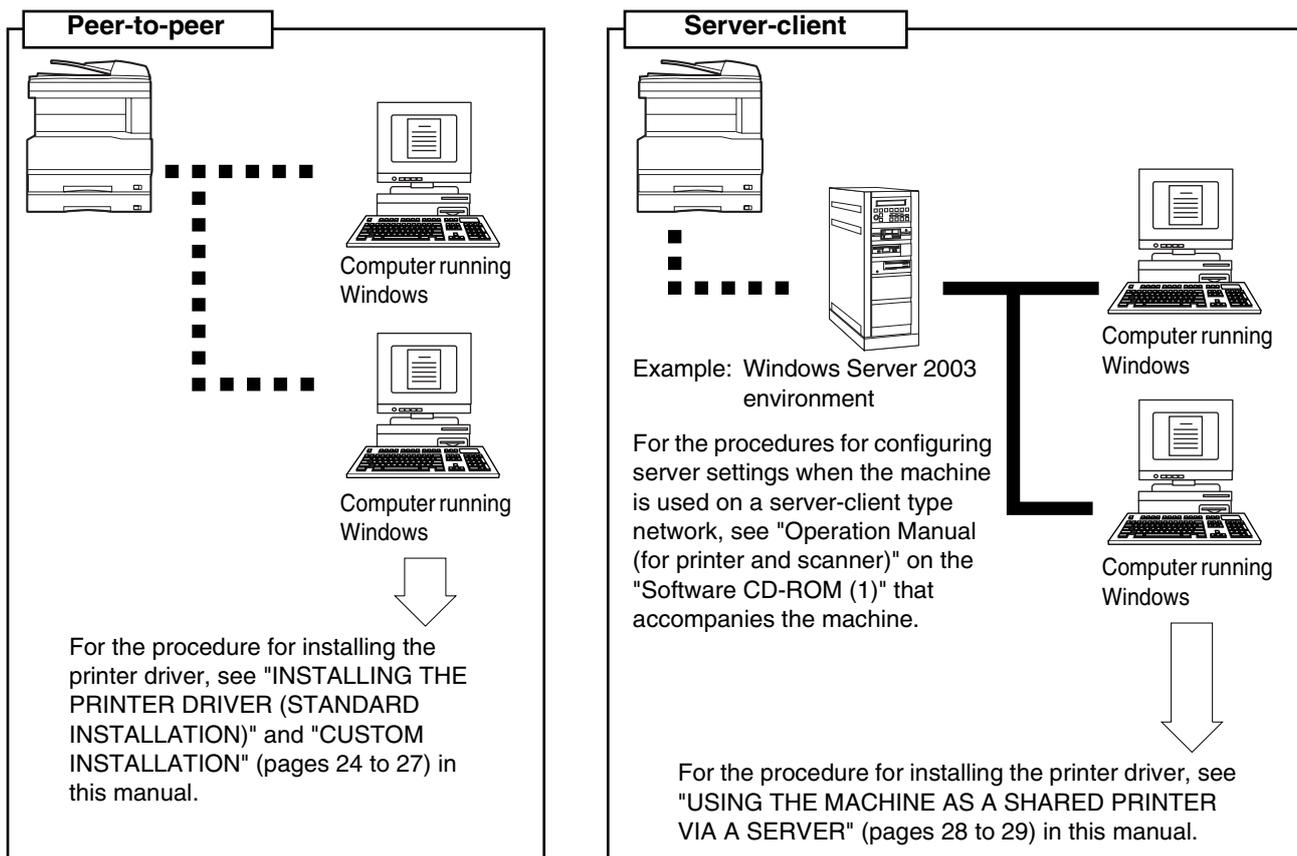
There are several types of network environments. Typical environments include the following:

- Windows network environment
- NetWare network environment
- UNIX network environment
- Macintosh network environment

This manual explains peer-to-peer and server-client network connections in a Windows environment.

If the machine is used in a different network environment, see the online manual ("Print Server Card User's Manual") on the "Network Utilities" CD-ROM.

Network connection examples



- ■ ■ ■ ■ ■ ■ ■ TCP/IP protocol
- Microsoft Printing Protocol

SETUP IN A WINDOWS ENVIRONMENT

HARDWARE AND SOFTWARE REQUIREMENTS

Before installing the software, see "HARDWARE AND SOFTWARE REQUIREMENTS" on page 43 to make sure your computer meets the hardware and software requirements.

SETTING THE IP ADDRESS OF THE MACHINE

Before installing the printer driver, be sure to set the IP address of the machine. Consult your network administrator for the correct IP address, subnet mask, and default gateway to be entered. **If a DHCP server will automatically assign an IP address to the machine, the following procedure is not necessary.** (To check the IP address assigned to the machine by DHCP, see "CHECKING THE IP ADDRESS" (page 43).)



Caution If the machine is used in a DHCP environment, the machine's IP address may change automatically. If this happens, printing will no longer be possible. In this event, use a WINS server or do not use the machine in a DHCP environment.

- 1** Make sure that the LAN cable is connected to the machine and then power on the machine.
- 2** Insert the network expansion kit "Software CD-ROM (1)" into your computer's CD-ROM drive.
- 3** Click the [start] button, click [My Computer] () , and then double-click the [CD-ROM] icon ().
In Windows 95/98/Me/NT 4.0/2000, double-click [My Computer] and then double-click the [CD-ROM] icon.

- 4** Double-click the [Setup] icon ().



Note If the language selection screen appears after you double click the [Setup] icon, select the language that you wish to use and click the [Next] button. (Normally the correct language is selected automatically.)

- 5** The "SOFTWARE LICENSE" window will appear. Make sure that you understand the contents of the license agreement and then click the [Yes] button.
- 6** Read the message in the "Welcome" window and then click the [Next] button.

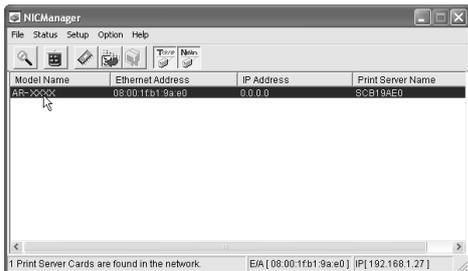
7 Click the [Administrator Tools] button.



8 Click the [NICManager] button.



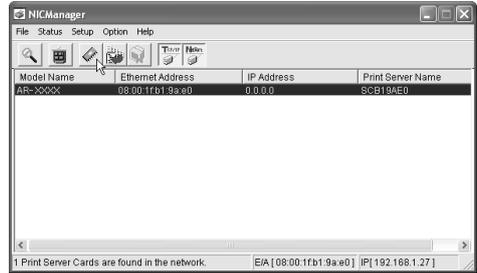
9 The printer or printers connected to the network will be detected. Click the printer to be configured (the machine). Select [AR-XXXX] here.



If the machine is not found, make sure that the machine is powered on and that your computer and the machine are connected to the network, and then search again.

10 Click the [Print Server Card Setup] button.

If the machine is being used in a DHCP environment or the IP address has otherwise already been set, go to step 15.



11 If the IP address has not been set (the IP address is set to "0.0.0.0"), a message will appear prompting you to set the IP address. Click the [Yes] button.

12 Enter the IP address and click the [OK] button.

- The machine's IP address is changed.
- If a password entry screen appears while the IP address is being changed, enter the password and click the [OK] button.
- The password for this machine has been initially set to "Sharp".

13 Restart the machine.

Power off the machine and then power it back on.

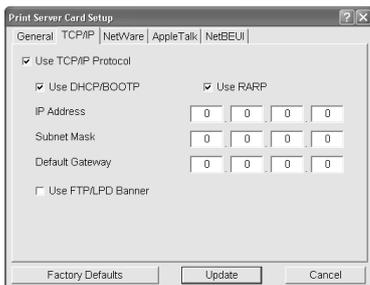
14 Select [Search] from the [File] menu, select the machine, and then click the [Print Server Card Setup] button.

15 Enter your password in the password entry screen and click the [OK] button.

- The Print Server Card Setup window will appear.
- The password for the machine has been initially set to "Sharp".
- If the [Guest user] checkbox is selected, the settings can be viewed but not configured.

16 Click the [TCP/IP] tab.

17 Configure the settings and then click the [Update] button.



Be sure to ask your network administrator for the correct IP address, subnet mask, and default gateway to be entered.

18 Your changes to the settings appear. Make sure that the changes are correct and then click the [OK] button.

19 Restart the machine.

Power off the machine and then power it back on.

20 Select [Search] from the [File] menu.

The IP address that you entered will appear. Make sure that it is correct.

This completes the procedure for setting the IP address.

INSTALLING THE SOFTWARE

INSTALLING THE PRINTER DRIVER (STANDARD INSTALLATION)



If you wish to install the display font or specify the machine's IP address by direct entry when installing the printer driver, select [Custom installation]. (Page 26)



To use the machine as a network printer in Windows NT 4.0, "TCP/IP Protocol" must be installed on your computer. If this is not installed, see Windows NT 4.0 Help to install them.

1 Insert the network expansion kit "Software CD-ROM (1)" into your computer's CD-ROM drive.

2 Click the [start] button, click [My Computer] (), and then double-click the [CD-ROM] icon ().

In Windows 95/98/Me/NT 4.0/2000, double-click [My Computer] and then double-click the [CD-ROM] icon.

3 Double-click the [Setup] icon ().



If the language selection screen appears after you double click the [Setup] icon, select the language that you wish to use and click the [Next] button. (Normally the correct language is selected automatically.)

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

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

6 Click the [Printer Driver] button.

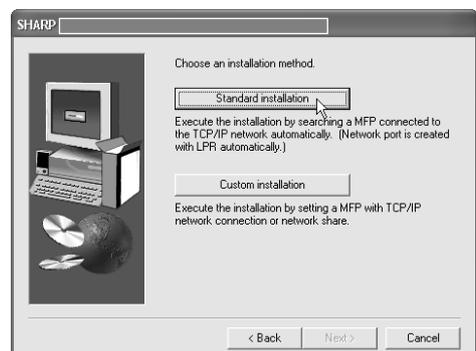
To view information on the software, click the [Display Readme] button.



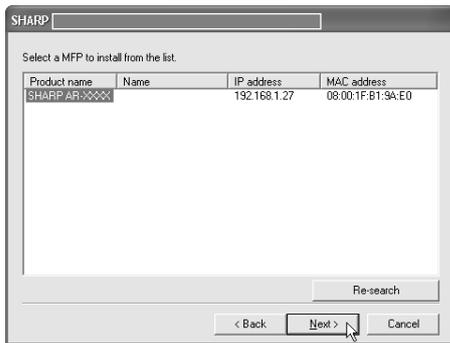
- If you wish to install the printer status monitor or the PC-FAX driver, click the [Utility Software] button in this window and then click the [Printer Status Monitor] button or the [PC-FAX Driver] button. Follow the on-screen instructions.
- If you wish to install the printer administration utility, click the [Administrator Tools] button in this window and then click the [Printer Administration Utility] button and follow the on-screen instructions.

7 Click the [Next] button.

8 Click the [Standard installation] button.



9 Printers connected to the network are detected. Select the machine and click the [Next] button.

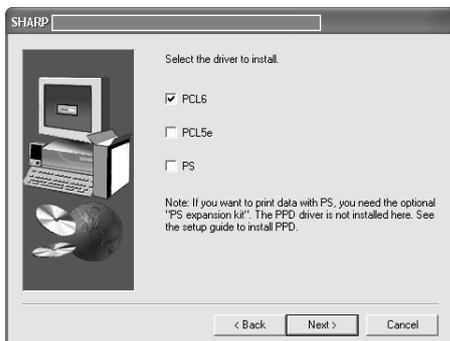


If the machine is not found, make sure that the machine is powered on and that the machine and your computer are connected to the network, and then search again. If the machine is still not found, use the custom installation procedure to directly specify the IP address. (Page 26)

10 A confirmation window will appear. Check the contents and then click the [Next] button.

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

Select the checkboxes of the printer drivers to be installed.



To use the PS printer driver, the PS3 expansion kit must be installed.

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

If you are installing multiple printer drivers, select the printer that you wish to use as your default printer.

If you do not wish to set either printer driver as the default printer, select [No].

13 Check the contents of the window and click the [Next] button.

Installation of the printer driver begins.



Caution If you are using Windows 2000/XP/Server 2003

If a warning message regarding the Windows logo test or digital signature appears, be sure to click the [Continue Anyway] or [Yes] button.

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

15 Click the [Close] button.



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

This completes the installation of the software.

- After installation, see "CONFIGURING THE PRINTER DRIVER (Windows environment)" (page 42) to check the printer driver settings.
- If you installed the PC-FAX driver, see "USING THE PC-FAX TRANSMISSION FUNCTION (when the fax option is installed in the Windows environment)" (page 45).



If you installed the PS printer driver, the PS display font can be installed from the "PRINTER UTILITIES" CD-ROM that accompanies the PS3 expansion kit. (Page 30)

CUSTOM INSTALLATION

If you wish to install the display font or specify the machine's IP address by direct entry when installing the printer driver, select [Custom installation].

1 Insert the network expansion kit "Software CD-ROM (1)" into your computer's CD-ROM drive.

2 Click the [start] button, click [My Computer] (), and then double-click the [CD-ROM] icon ().

In Windows 95/98/Me/NT 4.0/2000, double-click [My Computer] and then double-click the [CD-ROM] icon.

3 Double-click the [Setup] icon ().



If the language selection screen appears after you double click the [Setup] icon, select the language that you wish to use and click the [Next] button. (Normally the correct language is selected automatically.)

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

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

6 Click the [Printer Driver] button.

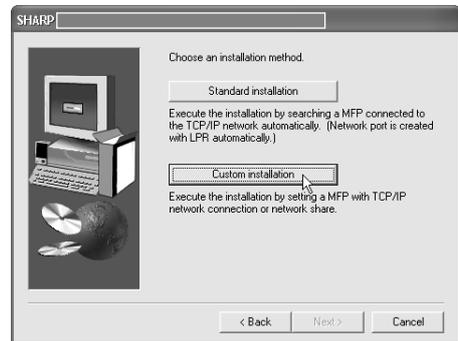
To view information on the software, click the [Display Readme] button.



- If you wish to install the printer status monitor or the PC-FAX driver, click the [Utility Software] button in this window and then click the [Printer Status Monitor] button or the [PC-FAX Driver] button. Follow the on-screen instructions.
- If you wish to install the printer administration utility, click the [Administrator Tools] button in this window and then click the [Printer Administration Utility] button and follow the on-screen instructions.

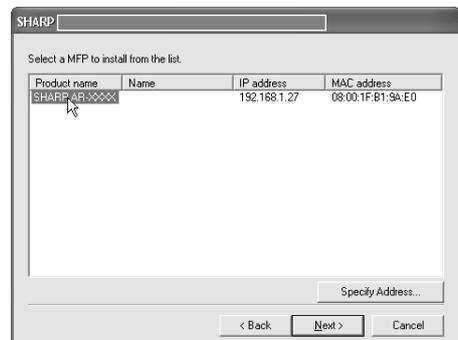
7 Click the [Next] button.

8 Click the [Custom installation] button.



9 Select [LPR Direct Print] and click the [Next] button.

10 Printers connected to the network are detected. Select the machine and click the [Next] button.

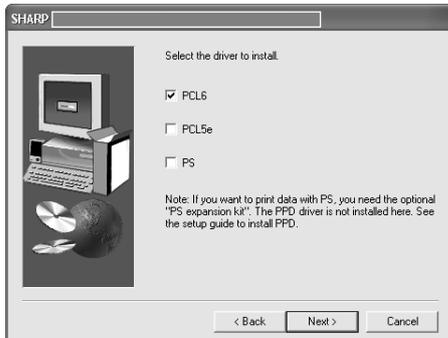


If you wish to directly specify the IP address, click the [Specify Address] button, enter the IP address, and click the [Search] button.

11 A confirmation window appears. Check the contents and then click the [Next] button.

12 When the printer driver selection window appears, select the printer driver to be installed and click the [Next] button.

Select the checkboxes of the printer drivers to be installed.



Note To use the PS printer driver, the PS3 expansion kit must be installed.

13 Select whether or not you wish the printer to be your default printer and click the [Next] button.

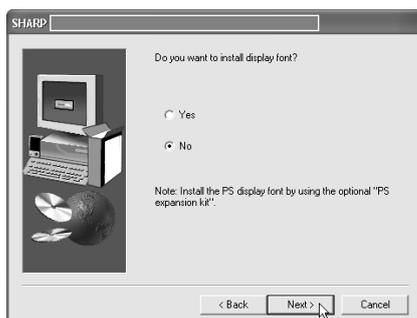
If you are installing multiple printer drivers, select the printer that you wish to use as your default printer.

If you do not wish to set either printer driver as the default printer, select [No].

14 When the printer name window appears, click the [Next] button.

If you wish to change the printer name, enter the desired name.

15 Select whether or not you wish to install the display font and click the [Next] button.



16 Check the contents of the window and click the [Next] button.

Installation of the printer driver begins.

Caution If you are using Windows 2000/XP/Server 2003

If a warning message regarding the Windows logo test or digital signature appears, be sure to click the [Continue Anyway] or [Yes] button.

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

18 Click the [Close] button.

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

This completes the installation.

- After the installation, see "CONFIGURING THE PRINTER DRIVER (Windows environment)" (page 42) to check the printer driver settings.
- If you installed the PC-FAX driver, see "USING THE PC-FAX TRANSMISSION FUNCTION (when the fax option is installed in the Windows environment)" (page 45).

Note If you installed the PS printer driver, the PS display font can be installed from the "PRINTER UTILITIES" CD-ROM that accompanied the PS3 expansion kit. (Page 30)

USING THE MACHINE AS A SHARED PRINTER VIA A SERVER

If the printer server in a Windows NT server environment, NetWare server environment, or other environment is configured to share the printer (the machine), follow the steps below to install the printer driver in each client computer. Ask your network administrator for the server name and printer name of the machine on the network.



For the procedures for configuring settings on the printer server, see "Operation Manual (for printer and scanner)" on the "Software CD-ROM (1)" that accompanies the machine. "Print server" as explained here is a computer that is directly connected to the machine, and a "Client" is any other computer that is connected to the same network.

1 Insert the network expansion kit "Software CD-ROM (1)" into your computer's CD-ROM drive.

2 Click the [start] button, click [My Computer] (), and then double-click the [CD-ROM] icon ().

In Windows 95/98/Me/NT 4.0/2000, double-click [My Computer] and then double-click the [CD-ROM] icon.

3 Double-click the [Setup] icon ().



If the language selection screen appears after you double click the [Setup] icon, select the language that you wish to use and click the [Next] button. (Normally the correct language is selected automatically.)

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

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

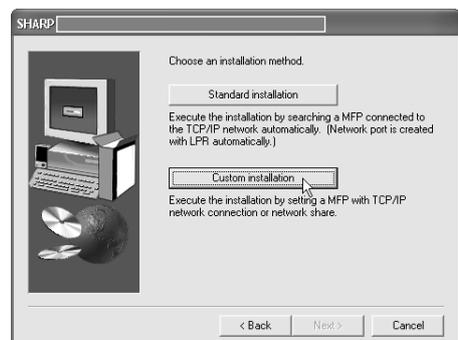
6 Click the [Printer Driver] button.

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



7 Click the [Next] button.

8 Click the [Custom installation] button.



9 Select [Shared Printer] and click the [Next] button.

10 For the port to be used, select the machine (configured as a shared printer), and click the [Next] button.

You can also click the [Add Network Port] button and select the printer to be shared (the machine) by browsing the network in the window that appears.

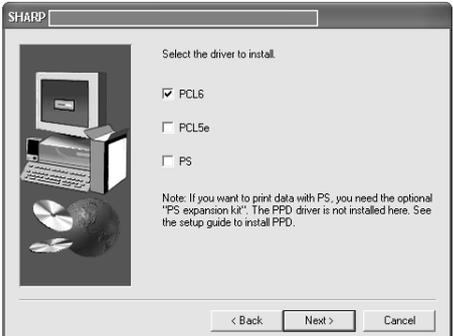


Note If the shared printer does not appear in the list, check the settings on the printer server.

11 When the model selection window appears, select model name of your machine and click the [Next] button.

12 When the printer driver selection window appears, select the printer driver to be installed and click the [Next] button.

Be sure to select the same printer driver as that of the shared printer (the machine).



13 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.

This completes the installation. After installation, see "CONFIGURING THE PRINTER DRIVER (Windows environment)" (page 42) to check the printer driver settings.

Note If you installed the PS printer driver, the PS display font can be installed from the "PRINTER UTILITIES" CD-ROM that accompanied the PS3 expansion kit. (Page 30)

INSTALLING THE PS DISPLAY FONTS

The fonts used by the PS printer driver are contained in the "PRINTER UTILITIES" CD-ROM that accompanied the PS3 expansion kit (AR-PK1/N). Install these fonts as needed for the PS printer driver.

1 Insert the PS3 expansion kit (AR-PK1/N) "PRINTER UTILITIES" CD-ROM into your computer's CD-ROM drive.

If your computer is configured for CD-ROM auto start, the installation window appears. Go to step 4.

2 Click the [start] button, click [My Computer] (), and then double-click the [CD-ROM] icon ().

In Windows 95/98/Me/NT 4.0/2000, double-click [My Computer] and then double-click the [CD-ROM] icon.

3 Double-click the [Setup] icon ().



If the language selection screen appears after you double click the [Setup] icon, select the language that you wish to use and click the [Next] button. (Normally the correct language is selected automatically.)

4 Select [PS Display Font] and click the [Next] button.



- Do not select [PS Printer Driver].
- The PS printer driver for the machine is installed from the "Software CD-ROM (1)" that accompanies the network expansion kit (AR-NB3).



5 Follow the on-screen instructions.

USING THE PPD FILE

The PPD file enables the machine to print using the standard PS driver of the operating system. Install the PPD file as needed.

Use the Add Printer Wizard in Windows to install the PPD file.

Be sure to read the Readme file (Readme.txt) before installing the PPD file. The Readme file is in the "EnglishA" or "English" folder. For the location of the folder, see step 4.

1 Click the [start] button, click [Control Panel], click [Printers and Other Hardware], and then click [Printers and Faxes].

- In Windows 95/98/Me/NT 4.0/2000, click the [Start] button, select [Settings], and then click [Printers].
- In Windows Server 2003, click the [Start] button and then click [Printers and Faxes].

2 Insert the network expansion kit "Software CD-ROM (1)" into your computer's CD-ROM drive.

3 Click [Add a printer] in [Printer Tasks].

- In Windows 95/98/Me/NT 4.0/2000, double-click the [Add Printer] icon.
- The "Add Printer Wizard" will appear.

4 Follow the on-screen instructions.

When you are asked to specify the path of the PPD file, enter the path as follows. (Substitute the letter of your CD-ROM drive for "R" in the following paths.)

Operating system	PPD file path
Windows 95/98/Me	R:\Drivers\Printer \EnglishA*\PPD\9XME
Windows NT 4.0	R:\Drivers\Printer \EnglishA*\PPD\NT40
Windows 2000/XP/Server 2003	R:\Drivers\Printer \EnglishA*\PPD\2KXP

* "EnglishA" in North America. "English" in Europe.

2

Installing the resident font information (only when the PPD file is installed in Windows 95/98/Me)

If you have installed the PPD file in Windows 95/98/Me and will be using the resident fonts, you must install the resident font information. Follow the procedure below to install the resident font information.



- If you are using Windows 2000, Windows XP, Windows Server 2003, the resident font information is automatically installed when the PPD file is installed.
- Before installing the resident font information, be sure to install the PPD file.

1 Insert the network expansion kit "Software CD-ROM (1)" into your computer's CD-ROM drive.

2 Double-click [My Computer] () and then double-click the [CD-ROM] icon ().

3 Double-click the [Drivers] folder, the [Printer] folder, the [EnglishA] folder (for regions other than the U.S., double-click the [English] folder), the [PPD] folder, the [9XME] folder, and then [PFMSetup.exe].

4 Follow the on-screen instructions.

5 After the resident font information has been installed, restart your computer.



If printer resident fonts cannot be specified from an application, the resident font information has not been installed or the information has been corrupted. In this case, reinstall the resident font information.

SETUP IN A MACINTOSH ENVIRONMENT

HARDWARE AND SOFTWARE REQUIREMENTS

Before installing the PPD file for Macintosh, see "HARDWARE AND SOFTWARE REQUIREMENTS" on page 43 to make sure your computer meets the hardware and software requirements.

Operating system	Mac OS 8.6 to 9.2.2, 10.1.5, 10.2.8, 10.3.3 to 10.4
CPU and RAM	The requirements of the operating system must be satisfied.



- If Mac OS X v10.1 has not been updated to version 10.1.5, be sure to update to version 10.1.5 before installing the PPD file. For information on how to update, see the Help file on your Macintosh computer.
- If Mac OS X v10.2 has not been updated to version 10.2.8, be sure to update to version 10.2.8 before installing the PPD file. For information on how to update, see the Help file on your Macintosh computer.

APPLETALK SETTINGS

After connecting the machine to the network, configure AppleTalk settings as required for your network environment. To configure the settings, see the online manual on the "Network Utilities" CD-ROM.

INSTALLING THE PPD FILE

In order to print from a Macintosh, the PPD file must be installed. Follow the steps below to install the PPD file.

INSTALLATION IN MAC OS X

1 Insert the network expansion kit "Software CD-ROM (1)" into your computer's CD-ROM drive.

2 Double-click the [CD-ROM] icon (📀) on the desktop.

3 Double-click the [MacOSX] folder.

4 Double-click the folder of the operating system version you are using.

- In Mac OS X v10.1.5, double-click the [Version 10.1] folder.
- In Mac OS X v10.2.8, double-click the [Version 10.2] folder.
- In Mac OS X v10.3.3 to 10.3.9, double-click the [Version 10.3] folder.
- In Mac OS X v10.4, double-click the [Version 10.4] folder.

5 Double-click the [AR-NB3-1] icon ().



- If the "Authenticate" window appears, enter the password and click the [OK] button.
- If you are using Mac OS X v10.1.5, click the lock icon (), enter the password, and click the [OK] button.

6 Click the [Continue] button.



7 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.



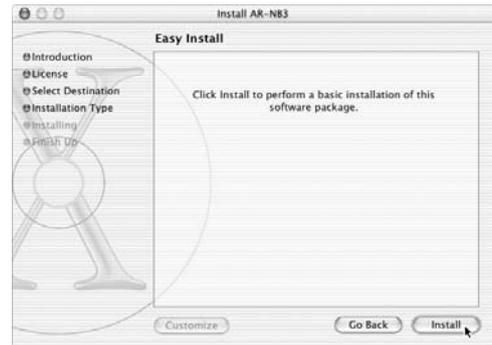
If a different language appears, switch to English.

8 Select the hard disk in which you wish to install the PPD file and click the [Continue] button.

Be sure to select the hard disk in which your operating system is installed.

9 Click the [Install] button.

Installation of the PPD file begins.



If you are using Mac OS X v10.3.3 to 10.4, the "Authenticate" window will appear. Enter the password and click the [OK] button.

2

10 When the message "The software was successfully installed" appears in the installation window, click the [Close] button.

This completes the installation of the software.

INSTALLATION IN MAC OS 8.6 TO 9.2.2

1 Insert the network expansion kit "Software CD-ROM (1)" into your computer's CD-ROM drive.

2 Double-click the [CD-ROM] icon (📀) on the desktop.

3 Double-click the [MacOS] folder.

4 Double-click the [Installer] icon (📦).

The installer window will appear.

5 Click the [Install] button.



6 The License Agreement window will appear. Make sure that you understand the contents of the license agreement and then click the [Yes] button.

7 Read the message in the window that appears and click the [Continue] button.

Installation of the PPD file begins.

After the installation, a message prompting you to restart your computer will appear. Click the [OK] button and restart your computer.

This completes the installation of the software.



If you are using Mac OS 8.6 to 9.2.2, make sure that "LaserWriter8" has been installed and that the "LaserWriter8" checkbox is selected () in "Extensions Manager" in "Control Panels". If not, install it from the system CD-ROM supplied with your Macintosh computer.

INSTALLING THE SCREEN FONTS (MAC OS 8.6 - 9.2.2)

Macintosh screen fonts are contained in the [Font] folder of the "PRINTER UTILITIES" CD-ROM that accompanies the PS3 expansion kit (AR-PK1/N). The screen fonts are installed by copying the required screen font suitcase folders to your Macintosh.

Copy the screen fonts to the following folder:

- Mac OS 8.6 to 9.2.2: [Fonts] folder in the [System Folder]



If you experience problems that may be due to the installed screen fonts, immediately delete the copied font suitcase folder from the system.

CONFIGURING THE PRINTER DRIVER

Follow the steps below to configure the machine's printer driver.

MAC OS X V10.2 TO 10.4

1 Make sure that the machine is powered on.

2 Select [Applications] from the [Go] menu.



3 Double-click the [Utilities] folder.

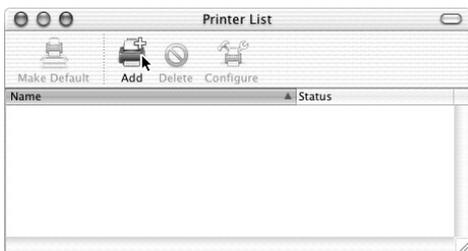
4 Double-click the [Print Center] icon (🖨).

- In Mac OS X v10.3.3 to 10.4, double-click the [Printer Setup Utility] icon.
- The "Printer List" window appears.



If this is the first time you are installing a printer driver on your computer, a confirmation message will appear. Click the [Add] button.

5 Click [Add].



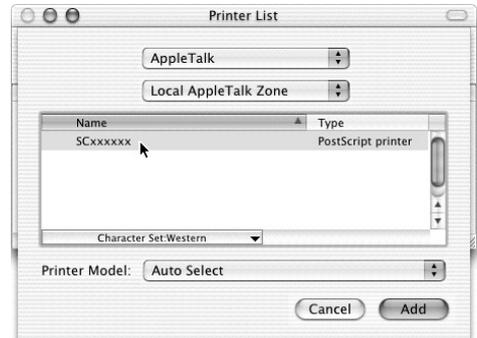
6 Select [AppleTalk] in the menu at the top of the window.

- In Mac OS X v10.4, click the [Default Browser] icon.
- A list of printers connected to the network will appear.



If multiple AppleTalk zones are displayed, select the zone which includes the printer.

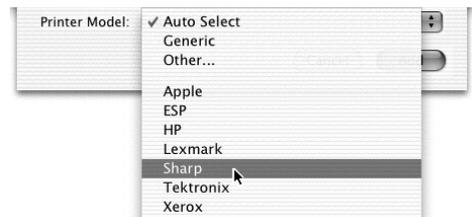
7 Click the machine's model name in the list.



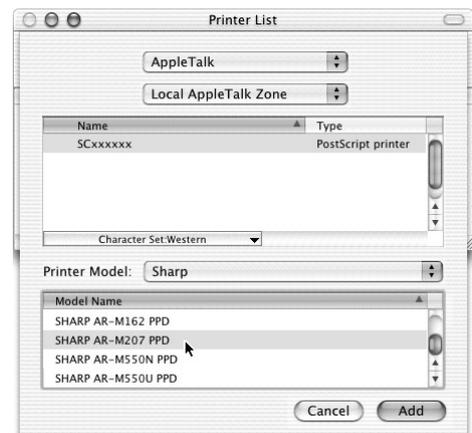
The name of the machine that appears is the name that was entered in the AppleTalk settings when the network settings were configured. Unless the name was changed when configuring the settings, it will be [SCxxxxxx] (where "xxxxxx" is a sequence of characters that varies depending on your machine).

8 Select [Sharp] in the [Printer Model] ([Print Using] in Mac OS X v10.4) menu.

The PPD file selection window appears.



9 Select the PPD file for your model.



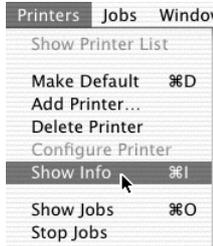
2

10 Click the [Add] button.

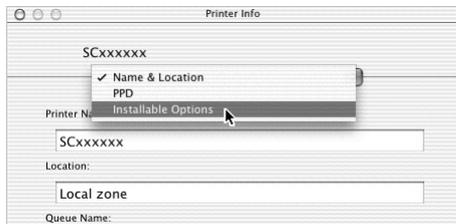
The machine is added to the list of printers.

11 Click the name of the machine in the "Printer List" window, and select [Show Info] from the [Printers] menu.

The "Printer info" window will appear.



12 Select [Installable Options] from the menu.



13 Set the printer configuration based on the options that have been installed, and then click the [Apply Changes] button.

14 Close the window.

This completes the configuration of the printer driver.

MAC OS X v10.1.5

1 Make sure that the machine is powered on.

2 Select [Applications] from the [Go] menu.



3 Double-click the [Utilities] folder.

4 Double-click the [Print Center] icon (🖨).

The "Printer List" window appears.



If this is the first time you are installing a printer driver on your computer, a confirmation message will appear. Click the [Add] button.

5 Click the [Add Printer] button.



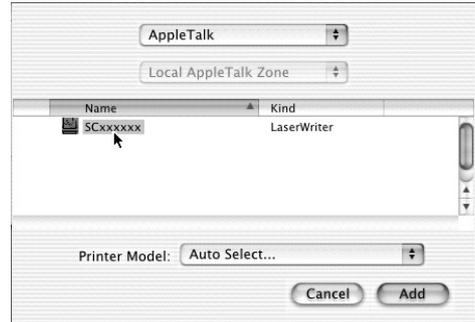
6 Select [AppleTalk] in the menu at the top of the window.

A list of printers connected to the network will appear.



If multiple AppleTalk zones are displayed, select the zone which includes the printer.

7 Click the machine's model name in the list.



The name of the machine that appears is the name that was entered in the AppleTalk settings when the network settings were configured. Unless the name was changed when configuring the settings, it will be [SCxxxxxx] ("xxxxxx" is a sequence of characters that varies depending on your machine).

8 Click the [Printer Model] menu and select [Other] from the list of PPD files.

The PPD file selection window will appear.

9 Click the startup disk name and then [Library], [Printers], [PPDs], [Contents], [Resources], [en.lproj], and select the PPD file of your model.

10 Click the [Choose] button.

11 Click the [Add] button.

This completes the configuration of the printer driver.

2

MAC OS 8.6 TO 9.2.2

1 Select [Chooser] from the Apple Menu.

2 Click the [LaserWriter 8] icon.

- The model name of your network-connected machine ([SCxxxxxx]) appears in the "Select a PostScript Printer" list on the right. The name of the machine that appears is the name that was entered in the AppleTalk settings when the network settings were configured. Unless the name was changed when configuring the settings, it will be [SCxxxxxx] ("xxxxxx" is a sequence of characters that varies depending on your machine).
- If multiple AppleTalk zones are displayed, select the zone which includes the printer.

3 Click the machine's model name ([SCxxxxxx]) in the "Select a PostScript Printer" list.

4 Click the [Create] button.

- If the "Select a PostScript Printer Description File" dialog box appears, select the PPD file of your model and then click the [Select] button.
- If the "Select a PostScript Printer Description File" dialog box does not appear, follow these steps to select the PPD file manually when you return to the "Chooser" dialog box.
 - (1) Verify that the machine is selected in the "Select a PostScript Printer" list, and then click the [Setup] button and the [Select PPD] button.
 - (2) Select the PPD file of your model, and then click the [Open] (or [Select]) button.
 - (3) Click the [OK] button.

5 Verify that the machine is selected in the "Select a PostScript Printer" list, and then click the [Setup] button and the [Configure] button.



6 Configure the printer driver based on the options that have been installed and then click the [OK] button.

7 Click the [OK] button to close the dialog box.

8 Click the Close box (☐) to close the "Chooser".

This completes the configuration of the printer driver.

3

TROUBLESHOOTING AND USEFUL INFORMATION

TROUBLESHOOTING

If the software cannot be installed correctly or if you need to remove the software, check the following items on your computer.

Troubleshooting information can also be found in the README files for each of the software programs. To view a README file for a software program, click the [Display Readme] button in the software selection window that appears during installation.

Removing the software

To remove a printer driver or a software that has been installed using the installer, follow the procedure below.

Windows environment

1 Click the [start] button and then click [Control Panel].

- In Windows 95/98/Me/NT 4.0/2000, click the [Start] button, select [Settings], and then click [Control Panel].

2 Click [Add or Remove Programs].

- In Windows 95/98/Me/NT 4.0/2000, double-click the [Add/Remove Programs] icon.

3 Select the driver or software that you wish to remove from the list, and click the appropriate button to remove it.

- For more information, see the manual or help files for your operating system.

4 Restart your computer.

MACINTOSH ENVIRONMENT(Mac OS 8.6 to 9.2.2)

1 Insert the "Software CD-ROM (1)" into your CD-ROM drive.

2 Double-click the [CD-ROM] icon (📀) on the desktop and double-click the [Mac OS] folder.

3 Double-click the [Installer] icon (📦).

4 Select [Remove] from the Install menu and then click the [Remove] button.**Note**

There is no remove tool for Mac OS X. The PPD file for Mac OS X has been copied to the following folder in the startup disk: [Library] - [Printers] - [PPDs] - [Contents] - [Resources] - [En.lproj]
Delete the SHARP PPD file in this folder.

MFP driver cannot be installed (Windows 2000/XP)

If the MFP driver cannot be installed in Windows 2000/XP, follow these steps to check your computer's settings.

1 Click the [start] button and then click [Control Panel].

In Windows 2000, click the [Start] button, select [Settings], and then click [Control Panel].

2 Click [Performance and Maintenance] and then click [System].

In Windows 2000, double-click the [System] icon.

3 Click the [Hardware] tab and then click the [Driver Signing] button.

4 Check the settings for "What action do you want Windows to take?" ("File signature verification" in Windows 2000).



If the [Block] has been selected, it will not be possible to install the MFP driver. To select [Warn] and then install the MFP driver, see "INSTALLING THE SOFTWARE" (page 7).

Plug and play screen does not appear (when using a USB cable)

If the Plug and Play screen 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, click [Control Panel], and then click [Performance and Maintenance].

In Windows 98/Me/2000, click the [Start] button, select [Settings], and then click [Control Panel].

2 Click [System], click the [Hardware] tab, and click the [Device Manager] button.

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



- In Windows 98/Me, double-click the [System] icon and click the [Device Manager] tab.
- In Windows 2000, double-click the [System] icon, click the [Hardware] tab, and click the [Device Manager] button.
- If the [System] icon does not appear in Windows Me, click [view all Control Panel options].

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 if the above two items do 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, see "INSTALLING THE SOFTWARE" (page 7) to install the MFP driver.

The MFP driver cannot be correctly installed by Plug and Play (Windows 2000/XP)

In Windows 2000/XP, if the MFP driver cannot be correctly installed by Plug and Play (for example, Plug and Play takes place without copying the required files for the MFP driver installation from the installer), follow these steps to remove unneeded devices. To install the MFP driver, see "INSTALLING THE SOFTWARE" (page 7).

1 Click the [start] button, click [Control Panel], and then click [Performance and Maintenance].

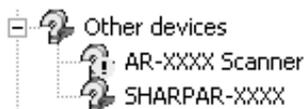
In Windows 2000, click the [Start] button, select [Settings], and then click [Control Panel].

2 Click [System], click the [Hardware] tab, and click the [Device Manager] button.



In Windows 2000, double-click the [System] icon, click the [Hardware] tab, and click the [Device Manager] button.

3 Click the icon () beside "Other devices".



If "AR-XXXX Scanner" and "SHARP AR-XXXX" appear, select and delete both these items.



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

4 To install the MFP driver, see "INSTALLING THE SOFTWARE" (page 7).

Another printer is using the parallel port (when using a parallel cable)

If another printer is using the parallel port and printing is not possible using the machine, follow the steps below to change the port setting of the other printer driver, and make sure that the port of the printer driver for the machine is set to "LPT1".

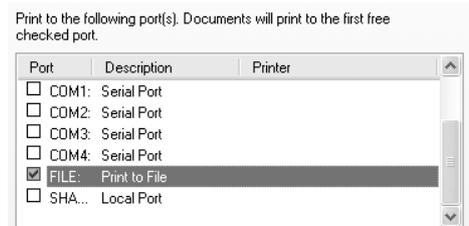
1 Click the [start] button, click [Control Panel], click [Printers and Other Hardware], and then click [Printers and Faxes].

In Windows 95/98/Me/NT 4.0/2000, click the [Start] button, select [Settings], and then click [Printers].

2 Click the icon of the printer driver for which you wish to change the port setting, and select [Properties] from the [File] menu.

3 Click the [Ports] tab. In Windows 95/98/Me, click the [Details] tab.

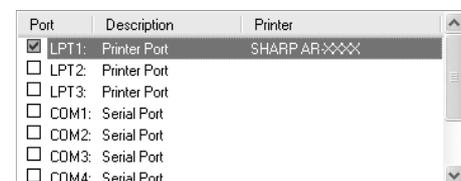
4 Select [FILE:] in the [Print to the following port] list box, and click the [OK] button.



5 Click the [SHARP AR-XXXX] icon and select [Properties] from the [File] menu.

6 Click the [Ports] tab. In Windows 95/98/Me, click the [Details] tab.

7 Select [LPT1] in the "Print to the following port" list and click the [OK] button.



In the event that you need to use the other printer, repeat the above steps to set the port of the machine to [FILE:], and change the port setting of the other printer back to [LPT1].

CONFIGURING THE PRINTER DRIVER (Windows environment)

After installing the MFP driver (printer driver) or the printer driver for an option, make sure that the printer driver is set as the default printer and that the number of trays on the machine and the paper size of each tray are configured in the printer driver.

1 Click the [start] button, click [Control Panel], click [Printers and Other Hardware], and then click [Printers and Faxes].

- In Windows 95/98/Me/NT 4.0/2000, click the [Start] button, select [Settings], and then click [Printers].
- In Windows Server 2003, click the [Start] button and then click [Printers and Faxes].

2 Click the "SHARP AR-XXXX" printer driver icon and select [Set as Default Printer].

3 Click the [SHARP AR-XXXX] printer driver icon and select [Properties] from the [File] menu.

If you are using Windows NT 4.0/2000/XP/Server 2003, go to step 5.

4 In Windows 95/98/Me, click the [Setup] tab.

5 Click the [Configuration] tab and configure the printer driver based on the options that have been installed.

Be sure to select the correct printer configuration. If not, printing may not take place correctly.



To automatically configure the settings based on the detected machine status, click the [Auto Configuration] button. Note that for the MFP driver (printer driver), this is only effective when a USB cable is connected.

6 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.



If the dual function board is not installed, be sure to configure the above "Set Tray Status" settings, and then when printing specify a tray other than [Auto Select] in "Paper Source" in the [Paper] tab of the printer driver setup screen.

- Click the [OK] button in the "Set Tray Status" window.
- Click the [OK] button in the printer properties window.

INSTALLING ACROBAT READER

To view the Online Manual, Acrobat Reader must be installed on your computer. If you do not have Acrobat Reader, follow the steps below to install it.

Windows environment

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

2 Click the [Start] button, click [My Computer] (), and then double-click the [CD-ROM] icon ().

In Windows 95/98/Me/NT 4.0/2000, double-click [My Computer] and then double-click the [CD-ROM] icon.

3 Double-click the [Acrobat] folder and then double-click [ar500enu.exe].

Follow the on-screen instructions to install Acrobat Reader.

Macintosh environment

1 Insert the network expansion kit "Software CD-ROM (1)" into your computer's CD-ROM drive.

2 Double-click the [CD-ROM] icon () on the desktop.

3 Double-click the [Acrobat Reader] folder and then double-click the [English] folder.

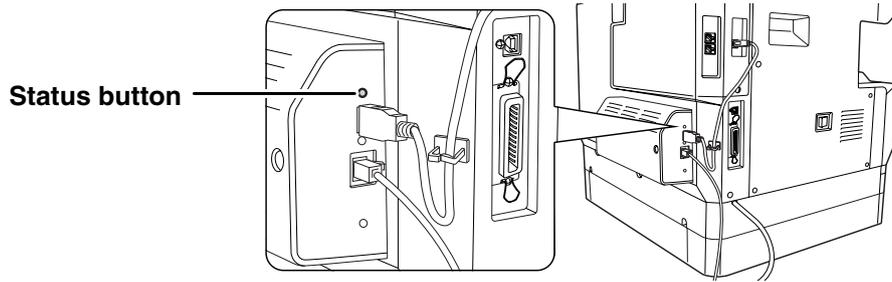
4 Double-click the [Reader Installer] icon.

Follow the on-screen instructions to install the Acrobat Reader.

CHECKING THE IP ADDRESS

There are several settings where the IP address must be entered or checked.

To check the IP address of the machine, hold down the status button on the network expansion kit for at least 2 seconds to print out a Printer Setting List.



HOW TO RESET THE NETWORK EXPANSION KIT

To reset the network expansion kit, power on the machine while holding down the status button on the network expansion kit.

After the network expansion kit is reset, network scanner destination information and scan settings will remain, however, the network settings and network printer settings will revert to the factory default settings.

HARDWARE AND SOFTWARE REQUIREMENTS

3

Before installing the software from the CD-ROM that is provided standard with the machine or the CD-ROM that is provided with the optional network expansion kit (AR-NB3), make sure that your computer satisfies the following requirements.

	Windows (standard machine system)	Windows (options)	Macintosh (options)
Operating system*1	Windows 95*2,3, Windows 98, Windows Me, Windows NT Workstation 4.0 (Service Pack 5 or later)*3,4, Windows 2000 Professional*4, Windows XP Professional*4, Windows XP Home Edition*4, Windows 2000 Server*4,5, Windows Server 2003*4,5		Mac OS 8.6 to 9.2.2, 10.1.5, 10.2.8, 10.3.3 to 10.4
Computer type	IBM PC/AT compatible computer		An environment on which any of the operating systems listed above can fully operate
	Equipped standard with a USB 2.0*6/1.1*7 port or a bi-directional parallel port (IEEE1284 compliant).	Equipped with a 10Base-T/100Base-TX LAN board	
Display	800 x 600 dots (SVGA), 256 colors (or higher)		
Hard disk free space	150 MB or more		
Other hardware requirements	An environment that allows any of the above operating systems to fully operate		

*1 Printing is not available in MS-DOS mode.

*2 If you are installing the PC-FAX driver or Printer Administration Utility in Windows 95, a system file must be updated before the utility can be installed. For more information, click the "Display Readme" button in the Software Selection window of the installer.

*3 USB is not supported.

*4 Administrator's rights are required to install the software.

*5 The MFP driver, Button Manager, and other software on the "Software CD-ROM (1)" that is provided standard with the machine are not supported.

*6 The machine's USB 2.0 port will transfer data at the speed specified by the USB 2.0 (Hi-Speed) standard only if the Microsoft USB 2.0 driver is preinstalled in the computer, or if the USB 2.0 driver for Windows 2000 Professional/XP that Microsoft provides through "Windows Update" is installed.

*7 Compatible with models preinstalled with Windows 98, Windows Me, Windows 2000 Professional, Windows XP Professional or Windows XP Home Edition, Windows Server 2003, and which are equipped standard with a USB interface.

CONNECTING TO A COMPUTER

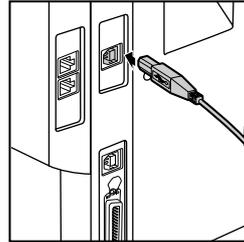
Connecting a usb cable

Please purchase a USB cable (shielded) that complies with the following standard.

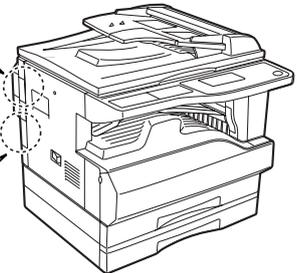
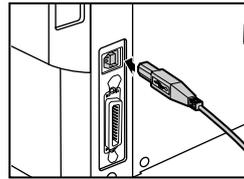
The USB interface on the machine complies with the USB 2.0*/1.1 standard.

* when the dual function board is installed.

USB-2:
USB 2.0 port



USB-1:
USB 1.1 port



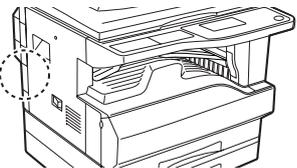
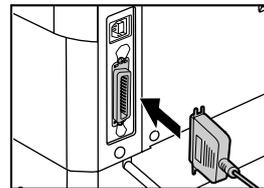
- The machine's USB 2.0 port will transfer data at the speed specified by the USB 2.0 only if the Microsoft USB 2.0 driver is preinstalled in the computer, or if the USB 2.0 driver for Windows 2000 Professional/XP that Microsoft provides through "Windows Update" is installed.
- To obtain the full USB 2.0 data transfer speed, "USB2.0 mode" in the machine's key operator programs must be set to "Hi-Speed". For more information, see the "Key operator's guide".
- Use the machine's "Hi-Speed" mode only when using a computer that is running Windows 2000/XP/Server 2003.
- 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.
- The cable can also be inserted into a USB 1.1 port. However, performance will be the same as USB 1.1.

Connecting a parallel cable

Please purchase a Centronics cable (shielded) that complies with the following standard.

The parallel port on the machine complies with IEEE-STD-1284-1994 ECP.

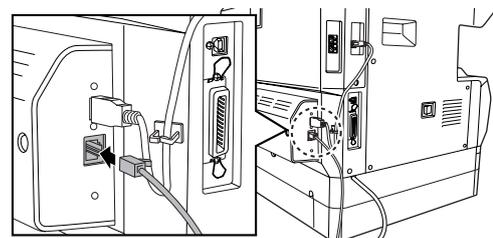
Connector type (on the machine):
36-pin Amphenol female connector



Connecting to a network connector

If the machine will be used as a network computer, read the online manual on the "Network Utilities" CD-ROM that accompanies the network expansion kit (AR-NB3).

Use a network cable that is shielded.



USING THE PC-FAX TRANSMISSION FUNCTION (when the fax option is installed in the Windows environment)

To fax a document using the PC-FAX function, follow the same procedure as when you print the document from an application. First select the installed PC-FAX driver as the "printer" and then begin printing. Image data for fax transmission will be generated and the image will be sent as a fax.

For more information on using the PC-FAX function, see the "Operation manual" that is installed along with the PC-FAX driver.

To open the manual, click the Windows Start button, select "All Programs" ("Programs" in Windows 95/98/Me/NT 4.0/2000), "SHARP PC-FAX Driver V2", and then "Operation manual".

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SHARP CORPORATION

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SHARP®

MODEL

AR-M162

AR-M207

DIGITAL MULTIFUNCTIONAL SYSTEM

KEY OPERATOR'S GUIDE

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• PURPOSE OF THE KEY OPERATOR PROGRAMS.....	1
• PROGRAMMING A KEY OPERATOR CODE.....	2
• KEY OPERATOR PROGRAM LIST.....	3
• USING THE KEY OPERATOR PROGRAMS.....	4

PURPOSE OF THE KEY OPERATOR PROGRAMS

The key operator programs are used by the administrator of the machine to enable or disable functions to suit the needs of your workplace.

This manual explains only the key operator programs that are common to all the functions of the machine, (copy, fax, printer and network scanner functions), as well as key operator programs that are specifically for the copy function. For programs that are specifically for the fax function, printer function, or network scanner function, see the following manuals:

- Fax function: Operation manual (for facsimile), Chapter 8, "KEY OPERATOR PROGRAMS"
- Printer function / scanner function: Operation manual (for printer and scanner), Chapter 4, "KEY OPERATOR PROGRAMS"
- Network printer function: Operation manual (for network printer), Chapter 5 "KEY OPERATOR PROGRAMS"
- Network scanner function: Operation manual (for network scanner), Chapter 3 "KEY OPERATOR PROGRAMS"

To use the key operator programs, the key operator code must be entered.

PROGRAMS RELATED TO ALL FUNCTIONS OF THE MACHINE (COPY, FAX, PRINTER, AND NETWORK SCANNER FUNCTIONS)

These programs are used to enable auditing mode, adjust power consumption, and manage peripheral devices. Auditing mode can be enabled separately for the copy, network printer, fax, and network scanner functions. When auditing mode is enabled for a function, a valid account number must be entered in order to use the function. (If a valid account number is not entered, the function cannot be used.)

When auditing mode is enabled for the printer function, an account number must be entered at the user's computer when the print command is selected. (Depending on the key operator program settings, a job may be printed even if an incorrect account number is entered, and thus care must be taken when managing printer page counts.) If "CANCEL JOBS OF INVALID ACCOUNTS" is enabled in the key operator programs, printing will be prohibited if an invalid account number is entered.)

PROGRAMS FOR COPY MODE

These programs are used to change the factory default copy settings to settings that better suit the needs of your workplace.

When auditing mode is enabled for the copy function,

- A valid account number must be entered to make copies.
(Copying is not possible unless a valid account number is entered.)
- A count is kept of the number of copies made by each account. This allows you to monitor copier usage by account. (The counts can be totaled.)
 - * The account number is a five-digit number.
- A limit can be set for the number of copies that can be made by each account.

PROGRAMMING A KEY OPERATOR CODE

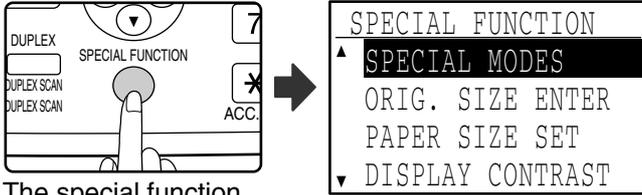
The key operator code is a 5-digit number that must be entered in order to access the key operator programs. The key operator (administrator of the machine) should change the default key operator code that was set at the factory to a new 5-digit number. Be sure to remember the new key operator code, as it must be entered each time the key operator programs are subsequently used. (Only one key operator code can be programmed.)

The key operator code is initially set to "00000" at the factory.
--

To change the key operator code, see "PROGRAMMING A KEY OPERATOR CODE" (page 2).

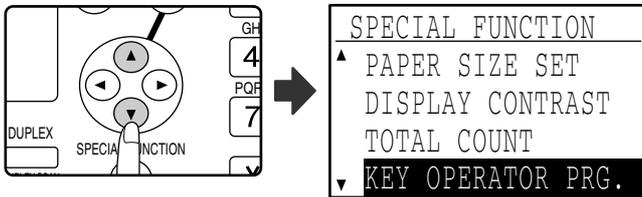
PROGRAMMING A KEY OPERATOR CODE

1 Press the [SPECIAL FUNCTION] key.

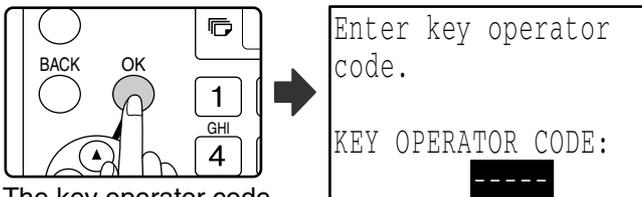


The special function screen will appear.

2 Select "KEY OPERATOR PRG." with the [▼] or [▲] key.

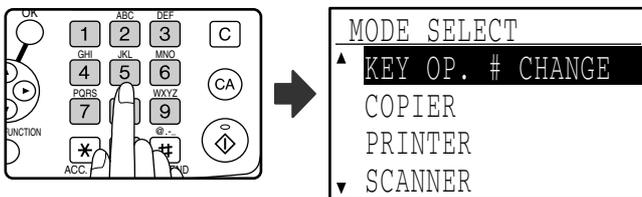


3 Press the [OK] key.



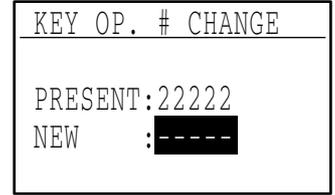
The key operator code entry screen appears.

4 Use the numeric keys to enter the five-digit key operator code.



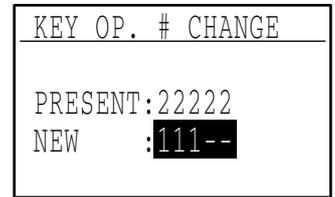
- If this is the first time you are programming the key operator code, enter the factory default code. (Page 1)
- "X" appears for each digit that you enter.
- The special modes screen will appear with "KEY OP. # CHANGE" selected.

5 Press the [OK] key.



The key operator code change screen appears.

6 Enter the new 5-digit key operator code with the numeric keys.



Any 5 digits can be used for the key operator code.

7 Press the [OK] key.



- The previously programmed key operation code is replaced by the new key operator code.
- Press the [CA] key to return to the base screen.

KEY OPERATOR PROGRAM LIST

A list of basic programs used for the machine and a list of programs used for the copy function are shown below.

Programs for general use of the machine

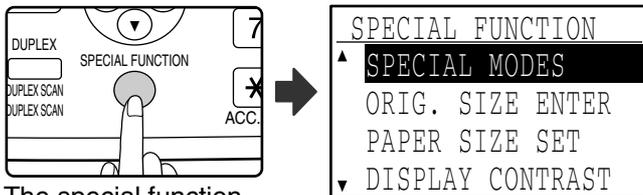
Program name	Page
KEY OPERATOR CODE CHANGE	
KEY OPERATOR CODE CHANGE	2
ACCOUNT CONTROL	
AUDITING MODE	5
TOTAL/ACCOUNT	5
RESET ACCOUNT	5
ACC. # CONTROL	6
ACCOUNT LIMIT	7
ACC. # SECURITY	7
CANCEL JOBS OF INVALID ACCOUNTS	7
DEVICE CONTROL	
WAITING COPY LAMP SETTING	7
OFFSET FUNCTION	8
MEM. FOR PRINTER	8
USB2.0 MODE	8
RETURN FROM COPY MODE TIMING	9
OPERATION SETTING	
AUTO CLEAR	9
DISABLE DISPLAY TIMEOUT	9
LANGUAGE SETTING	9
MESSAGE TIME	9
KEY TOUCH SOUND	10
KEYS TOUCH SOUND AT INITIAL POINT	10
KEY PRESS TIME	10
DISABLE AUTO KEY REPEAT	10
DISABLE PAPER SIZE SET	10
ENERGY SAVE	
AUTO POWER SHUT-OFF	11
AUTO POWER SHUT-OFF TIMER	11
PREHEAT MODE	11
TONER SAVE MODE	11

Programs for Copy Mode

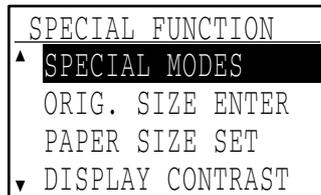
Program name	Page
COPY SETTINGS	
EXPOSURE ADJUST	12
MARGIN DEFAULT	12
ERASE ADJUST	12
CARD SHOT DEFAULT	12
DEFAULT TRAY SET	12
DEFAULT EXPOSURE	13
STREAM FEEDING	13
ROTATION COPY	13
SORT AUTO SELECT	13
RESOLUTION IN AUTO/TEXT MODE	14
PHOTO MODE DEFAULT	14
LIMIT OF COPIES	14
DISABLE AUTO PAPER SELECTION	14
DISABLE DUPLEX COPY	14

USING THE KEY OPERATOR PROGRAMS

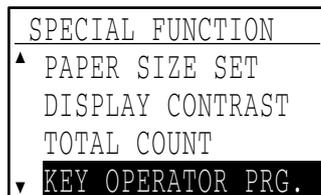
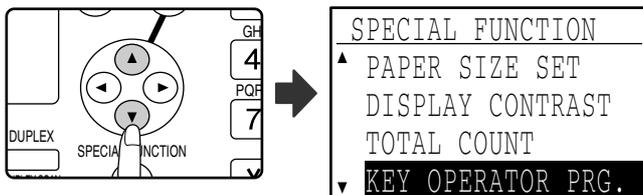
1 Press the [SPECIAL FUNCTION] key.



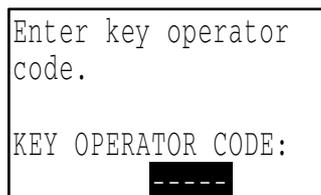
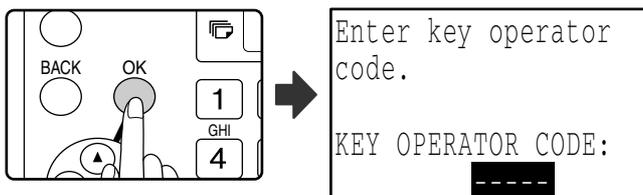
The special function screen will appear.



2 Select "KEY OPERATOR PRG." with the [▼] or [▲] key.

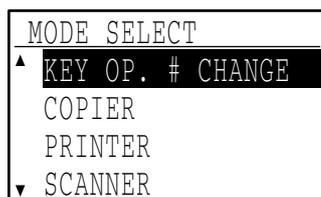
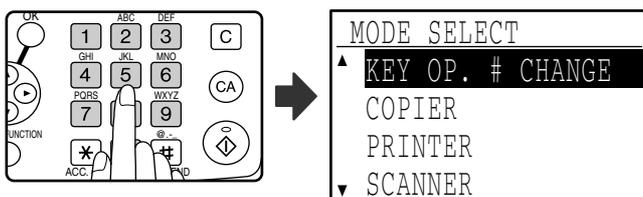


3 Press the [OK] key.



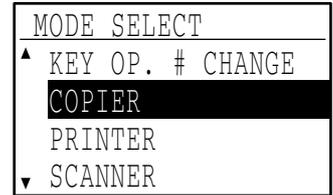
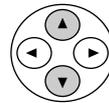
The key operator code entry screen appears.

4 Enter the key operator code with the numeric keys.



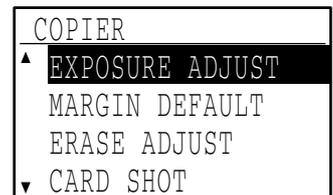
- "✳" appears for each digit that you enter.
- The mode selection screen appears.

5 Select the desired mode with the [▼] or [▲] key.



Example: The screen when "COPIER" is selected.

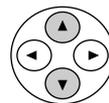
6 Press the [OK] key.



The settings of the selected mode appear.

Several programs will have checkboxes in front of them. To enable a function (make a checkmark appear), press the [OK] key. To disable the function, press the [OK] once again to remove the checkmark. To configure a program that has a checkbox, go to step 9.

7 Select the desired program with the [▼] or [▲] key.



8 Press the [OK] key and follow the instructions in the program screen.



9 To use another program for the same mode, select the desired program with the [▼] or [▲] key.

To use a program for a different mode, press the [BACK] key and select the desired mode. To exit the key operator programs, press the [CA] key.

ACCOUNT CONTROL

These programs are used to control use of the machine by account. To access one of these programs, select "ACCOUNT CONTROL" in the mode selection screen, select the desired program in the account control screen, and press the [OK] key.

AUDITING MODE

This program is used to enable auditing mode for copy, print, and scan mode. To enable auditing mode for fax mode, see the "Operation manual (for facsimile)".

When auditing mode is enabled, a count is kept of the number of pages output by each account (up to 50 accounts can be established), and the counts can be displayed and totaled as necessary. To use the machine, the 5-digit account number programmed for the user's account must be entered.

To enable auditing mode for the printer and scanner functions, the optional network expansion kit is required. If the network expansion kit is not installed, auditing mode cannot be used for printing and scanning that takes place via the parallel port or USB port. Auditing mode for the printer function can only be used for PCL and PS printers. Auditing mode for the scanner function can only be used for network scanning.

Auditing mode is initially disabled for all modes (factory default setting).

Select "AUDITING MODE" and press the [OK] key. The following screen will appear.

```
AUDITING MODE
^ [X] COPIER
  [X] PRINTER
v [X] SCANNER
```

- 1 Select the desired mode with the [▼] or [▲] key.
- 2 To enable auditing mode for the selected mode, press the [OK] key so that a checkmark appears in the checkbox.
Auditing mode is enabled.

To disable auditing mode for the selected mode, press the [OK] key to remove the checkmark from the checkbox.

Auditing mode is disabled.



After enabling "AUDITING MODE", program account numbers as explained in "ACC. # CONTROL" on page 6.

TOTAL/ACCOUNT

This program is used to display the page counts of each account in copy, print, and scan modes, and the usage limits for copy and print modes. Misfed pages are not included in the page counts.

For the network scanner function, the number of transmitted pages is displayed.

When the network expansion kit is installed, pages that were printed or transmitted using the parallel port or USB port in print mode or scan mode are included in the "OTHERS" (account number) counts.

Select "TOTAL/ACCOUNT" and press the [OK] key. The following screen will appear.

```
TOTAL/ACCOUNT
^ ACCOUNT #: 18114
  COPIES      000,222
v COPY LIMIT 02,000
[▶]:NEXT
```

Switch to the page counts in other modes for the same account, as well as the page limits, with the [◀] or [▶] key.

To change to a different account number, press the [▼] or [▲] key.

RESET ACCOUNT

This program is used to reset the copy, print, and scan page counts of an individual account, or all accounts, to zero.

Select "RESET ACCOUNT" and press the [OK] key. The following screen will appear.

```
RESET ACCOUNT
^ RESET 1 ACC.
v RESET ALL ACC.
```

Resetting the page counts of all accounts

- 1 Select "RESET ALL ACC." with the [▼] or [▲] key and then press the [OK] key.
- 2 Select "YES" with the [▼] or [▲] key and then press the [OK] key.

Resetting a single account

- 1 Select "RESET 1 ACC." with the [▼] or [▲] key and then press the [OK] key.
- 2 Select the desired account with the [▼] or [▲] key.
If "---,---" appears for a page limit, a limit has not been set.
- 3 Select the desired mode with the [◀] or [▶] key and then press the [OK] key.
- 4 Press the [▼] or [▲] key to select "YES" and then press the [OK] key.
- 5 If you wish to reset the page counts of another account, repeat steps 2 to 4.
- 6 To exit, press the [BACK] key repeatedly.

ACC. # CONTROL

This program is used to program, delete, and change account numbers.

Select "ACC. # CONTROL" and press the [OK] key. The following screen will appear.

ACC. # CONTROL
▲ ENTER
DELETE
▼ CHANGE

Programming an account number

- 1 Select "ENTER" with the [▼] or [▲] key and then press the [OK] key.
If 50 accounts have already been programmed, a warning message will appear. Delete any unneeded accounts and then program the new account.
- 2 Use the numeric keys to enter a five-digit account number (00000 to 99999).
The key operator code cannot be used as an account number.
- 3 Press the [OK] key.
If you enter an account number that has already been programmed in step 2, a warning message will appear and you will return to step 2. Enter a different number.
- 4 If you wish to program another account number, repeat steps 2 and 3.
- 5 To exit, press the [BACK] key repeatedly.

6

Deleting an account number

- 1 Select "DELETE" with the [▼] or [▲] key and then press the [OK] key.
- 2 If you wish to delete all account numbers, select "DELETE ALL ACC." and press the [OK] key.
When the message "DELETE?" appears, select "YES" with the [▼] or [▲] key to delete all accounts and press the [OK] key. If you do not wish to delete all account numbers, select "NO" and press the [OK] key.
- 3 If you wish to delete an each account number, select "DELETE 1 ACC." and press the [OK] key.
- 4 Enter the account number that you wish to delete with the numeric keys and then press the [OK] key.
- 5 Select "YES" with the [▼] or [▲] key and then press the [OK] key.
If you enter a number that has not been programmed in step 4 and then press the [OK] key, you will return to the number entry screen of step 4.
- 6 If you wish to delete another account number, repeat steps 4 and 5.
- 7 To exit, press the [BACK] key repeatedly.

Changing an account number

- 1 Select "CHANGE" with the [▼] or [▲] key and then press the [OK] key.
- 2 Enter the account number that you wish to change in "PRESENT #".
- 3 Enter the new account number in "NEW #".
- 4 Press the [OK] key.
If you enter an account number that has already been programmed in step 3, a warning message will appear and you will return to step 3. Enter a different number.
- 5 If you wish to change another account number, repeat steps 2 to 4.
- 6 To exit, press the [BACK] key repeatedly.



- When entering an account number, the [OK] key will not be accepted unless 5 digits have been entered.
- If you press the [C] key while entering an account number, the account number display will change to "-----".

ACCOUNT LIMIT

This program is used to set limits for the number of pages that can be printed by each account in print mode and copy mode.

Select "ACCOUNT LIMIT" and press the [OK] key. The following screen appears.

ACCOUNT LIMIT
▲ SINGLE ACC. LIMIT
▼ ALL ACC. LIMIT

Limiting the number of pages used by an account

- 1 Select "SINGLE ACC. LIMIT" with the [▼] or [▲] key and then press the [OK] key.
- 2 Select "COPIER" or "PRINTER" mode with the [▼] or [▲] key.
- 3 Press the [OK] key.
- 4 Enter the desired account number with the numeric keys.
- 5 Enter a page usage limit with the numeric keys (max. 50000).
 - "0" cannot be specified.
 - If you wish to cancel the limit, press the [C] key and go to step 6.
- 6 Press the [OK] key.
- 7 If you wish to set a limit for another account number, repeat steps 4 to 6.

If you press the [BACK] key, you will return to the screen of step 2. If you wish to set a limit for the other mode (copy or printer), select the mode in step 2 and repeat steps 3 to 6. To exit, press the [BACK] key repeatedly.

Setting a limit for all accounts

- 1 Select "ALL ACC. LIMIT" with the [▼] or [▲] key and then press the [OK] key.
- 2 Select "COPIER" or "PRINTER" mode with the [▼] or [▲] key.
- 3 Enter the page usage limit for all accounts with the numeric keys (max. 50000).

If you wish to cancel the limit, press the [C] key and go to step 4.

4 Press the [OK] key.

You will return to the screen of step 2. If you wish to set a limit for the other mode (copy or printer), select the mode in step 2 and repeat steps 3 to 4. To exit, press the [BACK] key repeatedly.

ACC. # SECURITY

When this program is enabled, the machine will not allow operation for one minute if an incorrect account number is entered three times in a row. During this time, "Please see your key operator for assistance." will appear in the display.

To enable this program, select "ACC. # SECURITY" and then press the [OK] key so that a checkmark appears in the checkbox.

To disable this program, select "ACC. # SECURITY" and then press the [OK] key so that a checkmark does not appear in the checkbox.

CANCEL JOBS OF INVALID ACCOUNTS

When enabled, this program cancels a print job if no account number is entered or an invalid account number is entered. This program is only effective when "AUDITING MODE" has been enabled for print mode. The function is initially disabled (factory default setting).

To prohibit printing when a valid account number is not entered, select "CANCEL JOBS OF INVALID ACCOUNTS" and then press the [OK] key so that a checkmark appears in the checkbox.

To allow printing when a valid account number is not entered, select "CANCEL JOBS OF INVALID ACCOUNTS" and then press the [OK] key to remove the checkmark from the checkbox.



Pages printed by invalid account numbers are added to the page count of "OTHERS" (account number).

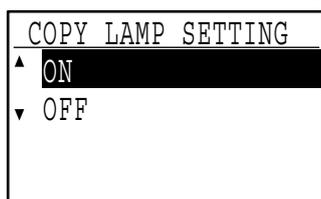
DEVICE CONTROL

These programs are used to configure settings for hardware functions of the machine. To access one of these programs, select "DEVICE CONTROL" in the mode selection screen, select the desired program in the device control screen, and press the [OK] key.

WAITING COPY LAMP SETTING

This program is used to select whether the copy lamp (light source) is on or off when the machine is in standby mode. If the copy lamp (light source) is set to turn off in standby mode, power will be conserved, however, the first copy time will be longer than if the lamp is on. The factory default setting is "ON".

Select "WAITING COPY LAMP SETTING" and press the [OK] key. The following screen will appear.



1 Select "ON" or "OFF" with the [▼] or [▲] key.

2 Press the [OK] key.

OFFSET FUNCTION

When the offset function is enabled, sets of output will be offset from each other for easy separation when copying is performed in sort mode or non-sort mode. The offset function can be enabled separately for the top tray (this only appears if the job separator tray kit has been installed) and center tray. The function is initially enabled (factory default setting) for both the top tray and the center tray.

Select "OFFSET FUNCTION" and press the [OK] key. The following screen will appear.



1 Select "UPPER TRAY" or "CENTER TRAY" with the [▼] or [▲] key.

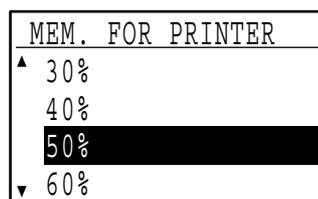
2 Press the [OK] key.

- The setting is enabled and a checkmark appears in the checkbox.
- If this procedure is performed when the setting is already enabled, the checkmark is cleared and the setting is disabled.

MEM. FOR PRINTER

The machine is equipped with memory that stores scanned original image data. Part of this memory is also used to store print data. This program is used to set the percentage of memory that is allocated to the print function. The memory allocation can be set from 30% to 70% in increments of 10%. The factory default setting is "50%"

Select "MEM. FOR PRINTER" and press the [OK] key. The following screen will appear.



1 Select the desired percentage with the [▼] or [▲] key.

2 Press the [OK] key.



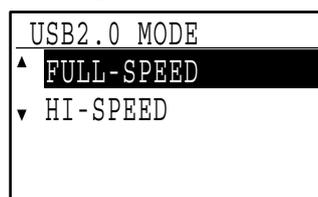
The memory for storing original image data and print data is 16 MB. An optional memory module can be installed to expand memory to 272 MB (the module adds 256 MB).

USB2.0 MODE

This sets the data transfer speed of the USB 2.0 port (USB-2). When this program is set to "HI-SPEED", scanning data is primarily transferred at a higher speed.

The factory default setting is "FULL-SPEED". If you wish to use USB 2.0 (Hi-Speed mode), be sure to read "System requirements for USB 2.0 (Hi-Speed mode)" (page 9) to verify that your system and the machine settings are configured appropriately.

Select "USB2.0 MODE" and press the [OK] key. The following screen will appear.



1 Select the transfer speed with the [▼] or [▲] key.

2 Press the [OK] key.

System requirements for USB 2.0 (Hi-Speed mode)

The USB port (USB-2) on the machine supports USB 2.0 Hi-Speed mode.

The following system is required to use USB 2.0 (Hi-Speed mode):

The computer is running Windows XP/2000 and the Microsoft USB 2.0 driver is pre-installed, or the USB 2.0 driver for Windows XP/2000 that Microsoft provides through Windows Update is installed.

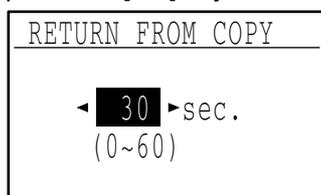
* Even when the Microsoft USB 2.0 driver is installed, some USB 2.0 expansion cards are not capable of attaining the speed stipulated by the Hi-Speed standard. This problem can often be fixed by installing a more recent driver for the card. To obtain the most recent driver for your card, contact the card's manufacturer.

RETURN FROM COPY MODE TIMING

When there are print jobs or fax print jobs waiting to be printed after copy job is finished, this program is used to set a brief wait time until printing of those jobs begins. Setting a brief wait time allows another copy job to be performed following the previous copy job. Time selections are "0 sec.", "10 sec.", "30 sec.", and "60 sec."

The factory default setting is 30 seconds.

Select "RETURN FROM COPY MODE TIMING" and press the [OK] key. The following screen will appear.



- 1 Select the desired time with the [◀] or [▶] key.
- 2 Press the [OK] key.

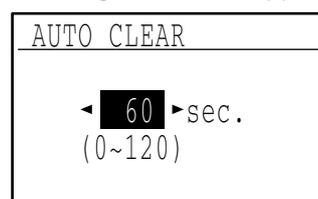
OPERATION SETTING

These programs are used to configure various settings related to the operation panel. To access one of these programs, select "OPERATION SETTING" in the mode selection screen, select the desired program in the operation setting screen, and press the [OK] key.

AUTO CLEAR

This function returns the copy settings to the default settings if the operation panel is not used for the duration of time set with this program following the end of a copy job. Time selections are "0 sec.", "10 sec.", "20 sec.", "60 sec.", "90 sec." and "120 sec.". The factory default setting is 60 seconds.

Select "AUTO CLEAR" and press the [OK] key. The following screen will appear.



- 1 Select the desired time with the [◀] or [▶] key.
If you do not want auto clear to operate, select "0".
- 2 Press the [OK] key.

DISABLE DISPLAY TIMEOUT

This program is used to select whether or not the display will automatically return to the base screen if no keys are pressed on the operation panel for one minute in scan or fax mode.

The factory default setting is automatic return to the base screen.

To disable automatic return to the base screen, select "DISABLE DISPLAY TIMEOUT", and press the [OK] key so that a checkmark appears in the checkbox.

To re-enable automatic return to the base screen, select "DISABLE DISPLAY TIMEOUT" once again and press the [OK] key to clear the checkmark from the checkbox.

LANGUAGE SETTING

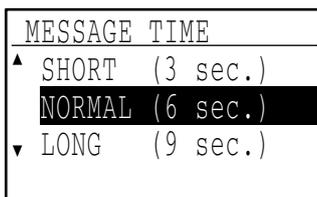
This program is used to select the display language. Select "LANGUAGE SETTING", press the [OK] key, and follow the steps below.

- 1 Select the display language with the [▼] or [▲] key.
- 2 Press the [OK] key.

MESSAGE TIME

This program is used to set the length of time that messages appear in the display (this applies to messages that appear for a certain length of time and then automatically disappear.) Select from "SHORT (3 sec.)", "NORMAL (6 sec.)", or "LONG (9 sec.)". The factory default setting is "NORMAL (6 sec.)".

Select "MESSAGE TIME" and press the [OK] key. The following screen will appear.



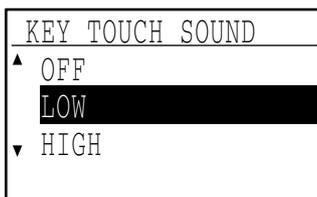
1 Select the desired display time with the [▼] or [▲] key.

2 Press the [OK] key.

KEY TOUCH SOUND

This program is used to set the volume of the key touch sound that is heard each time a key is pressed. The initial factory setting is "LOW".

Select "KEY TOUCH SOUND" and press the [OK] key. The following screen will appear.



1 Select the desired volume with the [▼] or [▲] key.

To turn the key touch sound off, select "OFF".

2 Press the [OK] key.

KEYS TOUCH SOUND AT INITIAL POINT

This program is used to select whether or not a beep will sound at preset base settings as you press a key to select a setting.

The factory default setting is no beep.

If you would like a beep to sound, select "KEYS TOUCH SOUND AT INITIAL POINT" and press the [OK] key so that a checkmark appears in the checkbox.

If you would not like a beep to sound, select "KEYS TOUCH SOUND AT INITIAL POINT" once again and press the [OK] key so that the checkmark is cleared from the checkbox.

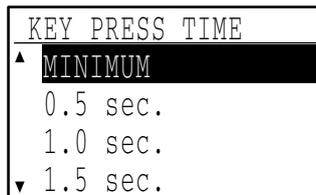
KEY PRESS TIME

This program is used to set the duration of time that a key must be pressed to take effect.

A longer setting can be selected to prevent keys pressed accidentally from taking effect. Keep in mind, however, that when a longer setting is selected more care is required when pressing keys to ensure that the key input is registered.

The initial factory setting is "MINIMUM".

Select "KEY PRESS TIME" and press the [OK] key. The following screen appears.



1 Select the desired time with the [▼] or [▲] key.

2 Press the [OK] key.

DISABLE AUTO KEY REPEAT

This program is used to stop a setting from changing continuously when the [▼] or [▲] key is held down, such as when setting the zoom ratio or the original size (auto key repeat will not operate). When this program is enabled, a key must be pressed repeatedly instead of holding it down.

Auto key repeat is initially set to operate (factory default setting).

To disable auto key repeat, select "DISABLE AUTO KEY REPEAT" and press the [OK] key so that a checkmark appears in the checkbox.

To re-enable auto key repeat, select "DISABLE AUTO KEY REPEAT" once again and press the [OK] key so that the checkmark is cleared from the checkbox.

DISABLE PAPER SIZE SET

This program is used to disable "PAPER SIZE SET" in the special functions menu. When disabled, "PAPER SIZE SET" cannot be used when the [SPECIAL FUNCTIONS] key is pressed, which prevents users other than the administrator from easily changing the paper size setting.

"DISABLE PAPER SIZE SET" is initially disabled (factory default setting).

To enable the setting, select "DISABLE PAPER SIZE SET" and press the [OK] key so that a checkmark appears in the checkbox.

To disable the setting, select "DISABLE PAPER SIZE SET" once again and press the [OK] key so that the checkmark is cleared from the checkbox.

ENERGY SAVE

These programs are used to configure energy saving settings. To access one of these programs, select "ENERGY SAVE" in the mode selection screen, and select the desired program in the energy save screen, and then press the [OK] key.

AUTO POWER SHUT-OFF

This program is used to enable auto power shut-off mode, which automatically turns off the power to the fusing unit if the operation panel is not used for a certain duration of time.

Enabling auto power shut-off mode helps conserve energy, preserve natural resources, and reduce environmental pollution.

The function is initially enabled.



Rather than disabling the auto power shut-off feature, it is recommended that you first try lengthening the time set in "AUTO POWER SHUT-OFF TIMER" (see below). In most cases a suitable timer setting will allow work to proceed with minimal delay and still enable you to enjoy the benefits of power conservation.

To enable auto power shut-off mode, select "AUTO POWER SHUT-OFF", and press the [OK] key so that a checkmark appears in the checkbox.

To disable auto power shut-off mode, select "AUTO POWER SHUT-OFF" once again and press the [OK] key so that the checkmark is cleared from the checkbox.

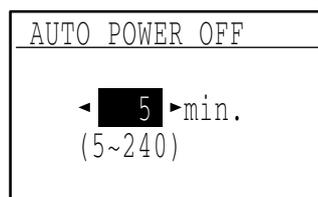
AUTO POWER SHUT-OFF TIMER

This program is used to set the duration of time until auto power shut-off mode activates when the operation panel is not used. Using this function helps conserve energy, preserve natural resources, and reduce environmental pollution.

"5 min.", "30 min.", "60 min.", "120 min." or "240 min." can be selected for the duration of time. Select a setting that suits your work conditions.

The factory default setting is "5 min."

Select "AUTO POWER SHUT-OFF TIMER" and press the [OK] key. The following screen will appear.



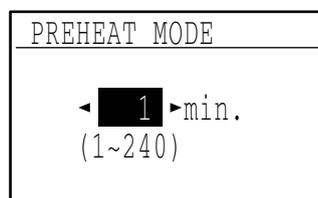
1 Select the desired time with the [◀] or [▶] key.

2 Press the [OK] key.

PREHEAT MODE

This program is used to set the duration of time until preheat mode, which automatically lowers the fusing unit temperature, activates when the operation panel is not used. Using this function helps conserve energy, preserve natural resources, and reduce environmental pollution. "1 min.", "5 min.", "30 min.", "60 min.", "120 min.", or "240 min." can be selected for the duration of time. Select a setting that suits your work conditions. The factory default setting is "1 min."

Select "PREHEAT MODE" and press the [OK] key. The following screen will appear.



1 Select the desired time with the [◀] or [▶] key.

2 Press the [OK] key.

TONER SAVE MODE

The toner save mode will reduce toner consumption by approximately 10% in the automatic and text, exposure modes. Copies will be lighter but still adequate for general use. Selection of this mode has no effect on the photo mode.

The function is initially disabled (factory default setting).

To turn on the toner save mode, highlight "TONER SAVE MODE" and press the [OK] key to display a check mark in the check box.

To turn off the toner save mode, select this program and press the [OK] key again to clear the check mark in the check box.

COPY SETTINGS

These programs are used to enable various copy functions. To access one of these programs, select "COPIER" in the mode selection screen, select the desired program in the copy settings screen, and press the [OK] key.

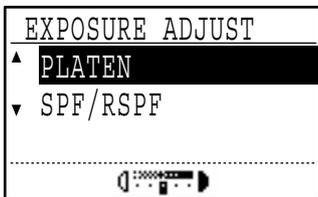
EXPOSURE ADJUST

This program is used to adjust the exposure level when "AUTO" is used for the exposure mode. The auto exposure level can be set separately for the document glass and the SPF.

One of five levels can be selected, with the left end of the scale the lightest level and the right end of the scale the darkest level.

The factory default setting is the middle level.

Select "EXPOSURE ADJUST" and press the [OK] key. The following screen will appear.

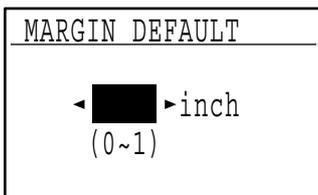


- 1 Select "PLATEN" or "SPF/RSPF" with the [▼] or [▲] key.
- 2 Press the [◀] or [▶] key to adjust the exposure.
- 3 Repeat steps 1 and 2 to adjust the other exposure.
- 4 Press the [OK] key.

MARGIN DEFAULT

This is used to set the default margin width. The factory default setting is "1/2 inch (10 mm)".

Select "MARGIN DEFAULT" and press the [OK] key. The following screen will appear.

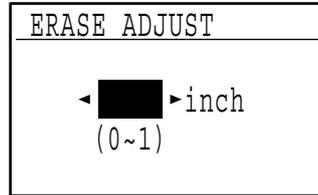


- 1 Adjust the default margin width with the [◀] or [▶] key.
The width can be set from 0" to 1" in increments of 1/4" (0 to 20 mm in increments of 5 mm).
- 2 Press the [OK] key.

ERASE ADJUST

This is used to set the default erasure width. The factory default setting is "1/2 inch (10 mm)".

Select "ERASE ADJUST" and press the [OK] key. The following screen will appear.

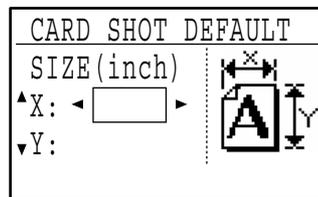


- 1 Adjust the edge erase and center erase width with the [◀] or [▶] key.
The edge erase width and the center erase width share the same default value, which can be set from 0" to 1" in increments of 1/4" (0 to 20 mm in increments of 5 mm).
- 2 Press the [OK] key.

CARD SHOT DEFAULT

This program is used to set the default dimensions that appear when the card shot size entry screen is displayed. The factory default settings are 3-3/8" (86 mm) for the width (X) and 2-1/8" (54 mm) for the length (Y).

Select "CARD SHOT DEFAULT" and press the [OK] key. The following screen will appear.

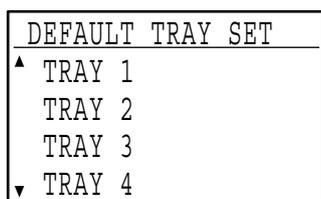


- 1 Select X or Y with the [▼] or [▲] key and adjust the corresponding default value with the [◀] or [▶] key.
- 2 Press the [OK] key.

DEFAULT TRAY SET

This program is used to set which tray is selected by default. Trays that appear for selection will vary depending on the optional trays that have been installed. The factory default setting is "TRAY 1".

Select "DEFAULT TRAY SET" and press the [OK] key. The following screen will appear.

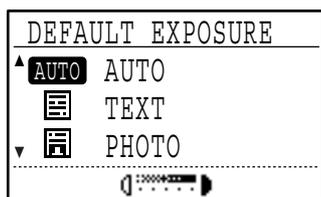


- 1 Select the tray with the [▼] or [▲] key.
- 2 Press the [OK] key.

DEFAULT EXPOSURE

This program is used to select the exposure mode/level that is initially selected when the [EXPOSURE] key is pressed. The factory default setting is "AUTO".

Select "DEFAULT EXPOSURE" and press the [OK] key. The following screen will appear.



- 1 Select the exposure mode with the [▼] or [▲] key.
- 2 If you selected "TEXT" or "PHOTO", set the exposure level with the [◀] or [▶] key.
- 3 Press the [OK] key.

STREAM FEEDING

When stream feeding mode is enabled, additional originals which are placed in the SPF within 5 seconds after the previous original was fed will be copied automatically. (If more than 5 seconds elapse, the [START] key (⊕) must be pressed again.)

This function can be used when scanning originals in copy and scan modes.

The function is initially disabled (factory default setting).

To enable stream feeding, select "STREAM FEEDING" and press the [OK] key so that a checkmark appears in the checkbox.

To disable stream feeding, select "STREAM FEEDING" once again and press the [OK] key so that the checkmark is cleared from the checkbox.

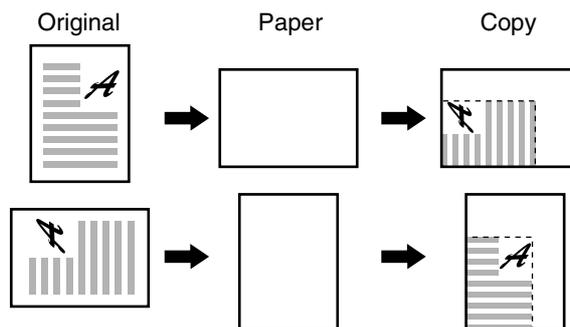
ROTATION COPY

If the orientation of the original does not match that of the paper, the image can be rotated.

Rotation copy operates when automatic paper selection or automatic ratio selection operates. The function is initially enabled (factory default setting).



If the image is both rotated and reduced, the position of the copied image will vary depending on the orientations of the original and the paper.



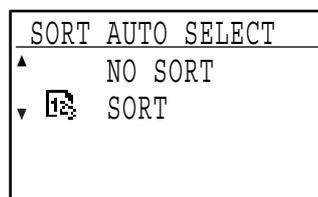
To enable rotation copy, select "ROTATION COPY" and press the [OK] key so that a checkmark appears in the checkbox.

To disable rotation copy, select "ROTATION COPY" once again and press the [OK] key so that the checkmark is cleared from the checkbox.

SORT AUTO SELECT

This program is used to select the default output mode when the SPF is used for copying. The initial factory setting is "SORT".

Select "SORT AUTO SELECT" and press the [OK] key. The following screen will appear.



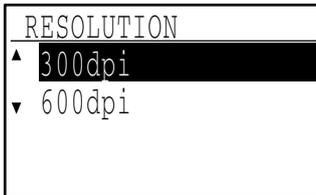
- 1 Select the output mode with the [▼] or [▲] key.
- 2 Press the [OK] key.

RESOLUTION IN AUTO/TEXT MODE

This program is used to set the resolution used when the exposure mode is set to "AUTO" or "TEXT". When "300dpi" is selected, the first copy time is shorter than when "600dpi" is selected.

The factory default setting is "300dpi".

Select "RESOLUTION IN AUTO/TEXT MODE" and press the [OK] key. The following screen will appear.



1 Press the [▼] or [▲] key to select the resolution.

2 Press the [OK] key.

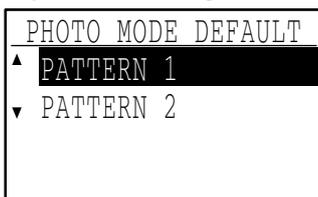
PHOTO MODE DEFAULT

This program is used to select the method of expressing halftones when "PHOTO" is selected with the [EXPOSURE] key for a copy job. Select "PATTERN 1" or "PATTERN 2" for the method of expressing halftones.

"PATTERN 1" is recommended for printed photos, providing sharp images and good expression of outlines.

"PATTERN 2" is recommended for photos on photographic paper, providing a soft image. The factory default setting is "PATTERN 1".

Select "PHOTO MODE DEFAULT" and press the [OK] key. The following screen will appear.



1 Select "PATTERN 1" or "PATTERN 2" with the [▼] or [▲] key.

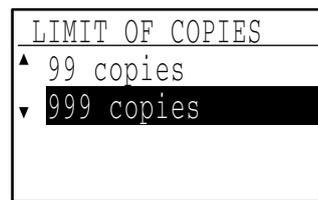
2 Press the [OK] key.

LIMIT OF COPIES

This program is used to set the limit for the number of copies that can be set (and that can appear in the display) for one copy job.

The factory default setting is "999 copies".

Select "LIMIT OF COPIES" and press the [OK] key. The following screen will appear.



1 Select "99 copies" or "999 copies" with the [▼] or [▲] key.

2 Press the [OK] key.

DISABLE AUTO PAPER SELECTION

This program is used to disable automatic paper selection. When automatic paper selection is disabled, the most suitable paper is not selected automatically when an original is placed on the document glass or in the document feeder tray.

This function is initially disabled (factory default setting).

To disable auto paper selection, select "DISABLE AUTO PAPER SELECTION" and press the [OK] key so that a checkmark appears in the checkbox.

To re-enable auto paper selection, select "DISABLE AUTO PAPER SELECTION" once again and press the [OK] key so that the checkmark is cleared from the checkbox.

DISABLE DUPLEX COPY

(Only on models that support two-sided printing)

Use this program when you wish to disable two-sided copying or when the two-sided function has failed. When this program is enabled, only one-sided printing is possible.

The function is initially disabled (factory default setting).

To disable two-sided copying, select "DISABLE DUPLEX COPY" and press the [OK] key so that a checkmark appears in the checkbox.

To re-enable two-sided copying, select "DISABLE DUPLEX COPY" once again and press the [OK] key so that the checkmark is cleared from the checkbox.

SHARP[®]

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