A151/A152 OPERATING INSTRUCTIONS

INTRODUCTION

This copier is a desktop plain paper copier carefully manufactured to exacting standards of high performance. It consistently yields high contrast copies with a superior finish.

This manual contains detailed instructions on the operation and maintenance of this copier. To get maximum versatility from this copier, all operators should carefully read and follow the instructions in this manual. Please keep this manual in a handy place near the machine.

Please read the next section before using this copier. It contains important information related to USER SAFETY and PREVENTING EQUIPMENT PROBLEMS.

SAFETY INFORMATION

When using your copier, the following safety precautions should always be followed.

Safety During Operation

In this manual, all safety messages are identified by the words "WARNING" and "Caution". These words mean the following:

WARNING:

Important information to alert you to a situation that might cause serious injury and damage to your property if instructions are not followed.

Caution:

Important information that tells how to prevent damage to equipment, or how to avoid a situation that might cause minor injury.

WARNING:

Since some parts of the copier are supplied with high electrical voltage, touch only the parts specified in this manual.
Do not modify or replace any parts other than the ones specified in this manual.
Do not incinerate toner or toner containers. Toner dust might ignite when exposed to open flame.
Do not store toner where it will be exposed to heat.
Do not eat or swallow toner, and keep it out of reach of children.
The fusing section can be very hot. Be careful when handling it.

Ca	aution:
	While copying, do not turn off the main switch.
	While copying, do not open the front cover.
	While copying, do not lift the platen cover, or the optional document feeder.
	While copying, do not unplug the power cord.
	Do not lay anything weighing more than 10 kg (22 lb) on the exposure glass.
	Do not place tools or other hard objects on the exposure glass.
	Keep corrosive liquids, such as acid, off the machine.
	Do not allow paper clips, staples, or other small metallic objects to fall inside the machine.
G	eneral Safety Information
	Always turn the copier off when you have finished copying for the day, but leave it plugged in.
	When the copier will not be used for a long period, disconnect the power cord.
	If the copier must be transported by vehicle, please contact your service representative.
	When the main switch is in the Stand-by position, the optional anticondensation heaters are on. In case of emergency, unplug the machine's power cord.
	To disconnect the power source, the main plug must be pulled.

INSTALLATION REQUIREMENTS

Copier Environment

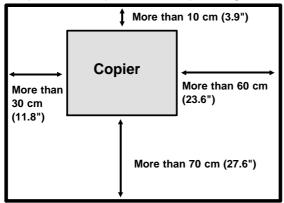
Optimum Environmental Conditions

The installation location should be carefully chosen because environmental conditions greatly affect the performance of a copier.

1
☐ Temperature: 10 - 30°C (50 - 86°F)
☐ Humidity: 15 - 90%
☐ A strong and level base.
$\hfill\Box$ The copier must be level within 5 mm (0.2") both front to rear and left to right.
☐ To avoid a possible build-up of ozone, make sure to locate this copier in a large well ventilated room that has air turnover of more than 30 m³/hr/person.
Environments To Avoid
☐ Locations exposed to direct sunlight or strong light (more than 1,500 lux.)
☐ Locations directly exposed to cool air from an air conditioner or heated air from a heater. (Sudden temperature changes might cause condensation within the copier.)
☐ Places where the copier might be subjected to frequent strong vibration.
☐ Dusty areas.
☐ Areas with corrosive gases.
☐ Places higher than 2,000 m (6,500 ft) above sea level.
Power Connection
☐ Avoid multiwiring.
☐ Make sure that the wall outlet is near the copier and easily accessible.
☐ Make sure the plug is firmly inserted in the outlet.
☐ Voltage must not fluctuate more than 10%.
□ Do not set anything on the power cord.

Access To Copier

☐ Place the copier near the power source, providing clearance as shown.



USE AND STORAGE OF SUPPLIES

Copy Paper

- Copy paper of the types or in the conditions listed below are not recommended for this copier.
 - Folded, curled, creased, or damaged paper
 - Torn paper
 - · Damp paper
 - Perforated paper
 - Paper with conductive or low electrical resistance such as carbon or sliver coating.
 - Wavy paper
- ☐ The following cannot be used in the paper tray. Use the bypass feed entrance. One sheet should be inserted into the bypass feed entrance at one time.
 - Post cards
 Translucent paper
 OHP sheets
 Adhesive labels
- ☐ If multi-feeding occurs with recycled paper, fan the sheets, or feed them one at a time using the bypass feed entrance.
- ☐ Do not touch copy paper if your fingers are wet or oily; finger prints may appear on the copy.

Paper Storage

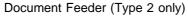
poor image reproduction, creased copies, and paper misfeeds. Generally, avoid curling and absorption of moisture.
Avoid storing paper in humid areas. Under high temperature and high humid- ity conditions, store paper in a vinyl bag.
□ Do not store paper where it will be exposed to heat.
☐ Store on a flat surface.
☐ Use older stock first.
☐ Do not lay heavy objects on paper.
☐ Keep open reams of paper in the package, and store as you would unopened paper.
Toner Storage
☐ Store horizontally in a cool, dark place.
☐ Store toner cartridge flat.
☐ Never store toner where it will be exposed to heat.
☐ Do not lay heavy objects on toner cartridges.

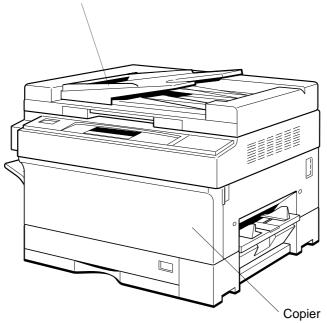
GUIDE TO COMPONENTS

System Overview

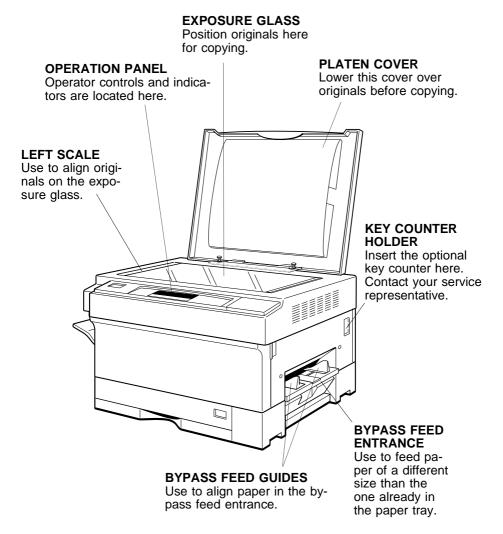
The type 2 copier can be equipped with an optional document feeder as shown:

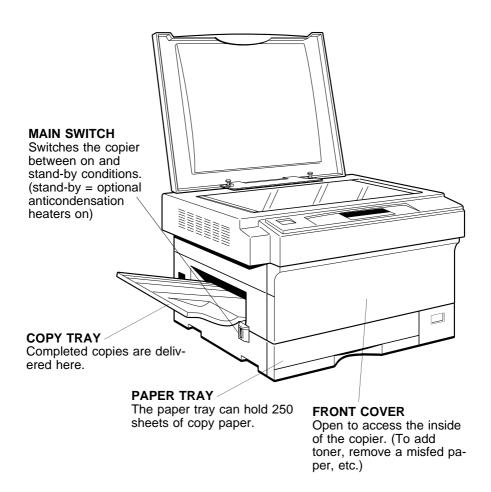
- ☐ For more information about the document feeder, see page 19.
- Regarding the difference between type 1 and 2 operation panels, see pages 4 7.





Copier





Operation Panel

Copy Counter Type 1 Displays the number of copies entered. While copying, it shows the number of copies made. Displays codes that show the copier's condition. See page 32. **Adding Toner** See page 17. **Clearing Misfeeds** See page 24. **Energy Saver Indicator** See pages 8, 14, or 32. ◍◬◍ 1 0 Manual Image Density Indicator Shows the manually selected image Auto Image Density Key density. If this indicator blinks, refer Press to select/cancel the automatic image dento page 34. sity mode. **Manual Image Density Keys** Use to cancel the automatic image Auto Image Density Indicator

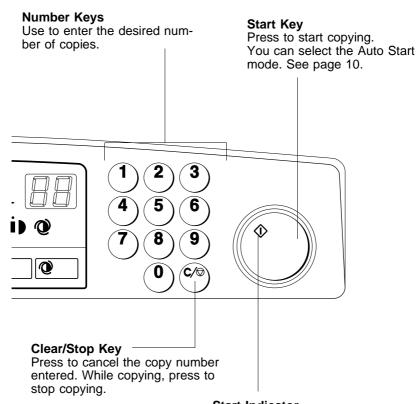
Lights when the copier is auto-

matically controlling image density. If this indicator blinks, see

page 34.

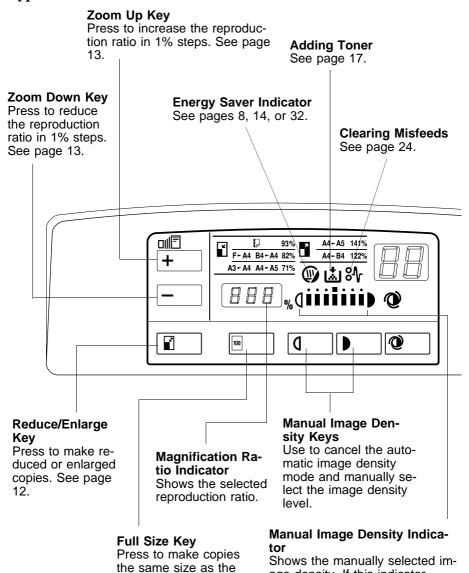
density mode and manually select

the image density level.



When the Start indicator is red, the machine is not ready to copy. When the Start indicator is green, the machine is ready to copy.

Type 2



originals. See page 9.

age density. If this indicator

blinks, refer to page 34.

Copy Counter

Displays the number of copies entered. While copying, it shows the number of copies made.

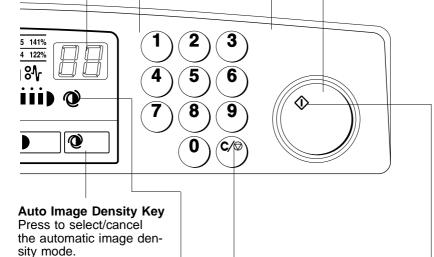
Displays codes that show the copier's condition. See page 32.

Number Keys

Use to enter the desired number of copies.

Start Key

Press to start copying. You can select the Auto Start mode. See page 10.



Clear/Stop Key

Press to cancel the copy number entered. While copying, press to stop copying.

Auto Image Density Indicator Lights when the copier is auto-

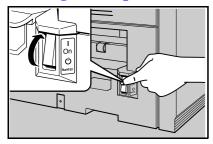
matically controlling image density. If this indicator blinks, see page 34.

Start Indicator

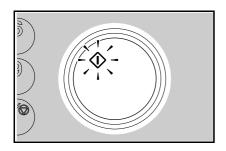
When the Start indicator is red, the machine is not ready to copy. When the Start indicator is green, the machine is ready to copy.

COPYING

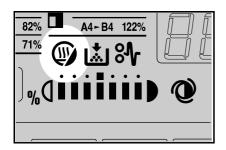
Starting the Copier



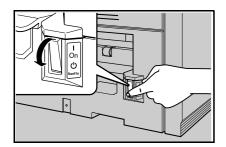
1. Turn on the main switch.



- Wait for the copier to warm up. During the warm-up period (approximately 30 seconds), the **Start** indicator stays red.
- When the warm-up period is completed, the **Start** indicator turns green. The copier is ready to make copies.



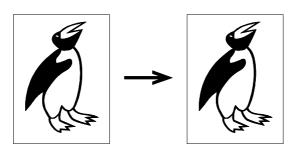
- ☐ If the **Energy Saver** indicator lights, press any key except the **Start** key.
- Opening the optional document feeder, setting originals there, or inserting the copy paper into the bypass feed entrance will also make the copier ready.

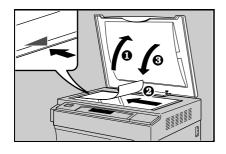


At the end of the day, turn off the main switch.

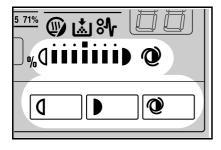
COPYING

Full Size Copying

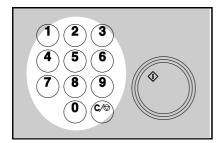




- Place the original face down on the exposure glass, and lower the platen cover.
 - The original should be centered according to the size marks on the left scale.
 - Narrow margins at the leading and side edges of the original are not copied.

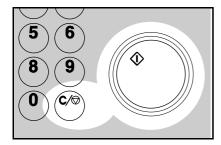


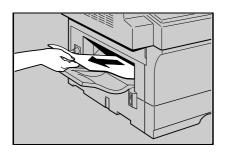
- 2. Set the image density level to match the type and quality of the original.
 - ☐ This is not necessary if Auto Image Density is on.



- 3. Enter the number of copies required using the **Number** keys.
 - Up to 99 copies can be entered.
 - To change the number entered, press the Clear/Stop key and then enter the new number.

COPYING Full Size Copying





- 4. Press the **Start** key.
 - If you press the Start key during the warm-up period, the red Start indicator will blink, then the copier will automatically start copying after the warm-up period (Auto Start mode).
 - □ To stop the machine during a multicopy run, press the Clear/Stop key.
 - ☐ Press the **Start** key to resume copying or press the **Clear/Stop** key again to clear the copy counter.
- Remove the copies from the copy tray and the original from the exposure glass.
 - The copy tray can hold approximately 100 copies.

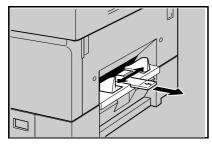
Bypass Feed Copying

Use the bypass feed entrance to copy onto paper of a different size than the one already in the paper tray.

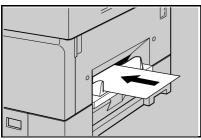
- One sheet should be inserted into the bypass feed entrance at a time.
- ☐ Bypass feed copying also may be used for OHP transparencies, adhesive labels, translucent paper, or post cards.
- Regarding the bypass feed copying with the optional document feeder, see page 23
- ☐ Do not insert the copy paper into the bypass feed entrance before turning on the main switch. If you do, J1 and % will light. In this case, take out the paper from the bypass feed entrance, then reinsert it.



- Place the original face down on the exposure glass, and lower the platen cover.
 - The original should be centered according to the size marks on the left scale.

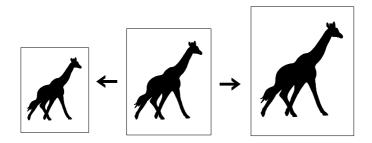


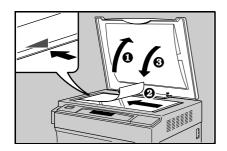
- 2. Slide the bypass feed guides to the proper width.
 - Pull out the extender to support copy paper larger than A4, 81/2" x 11".



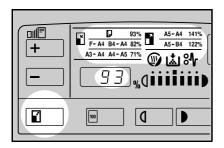
- Insert the copy paper into the bypass feed entrance.
 - Whenever an OHP transparency is delivered to the copy tray, it should be taken out right away. Place the OHP transparency on a flat surface.
- After the **Start** key turns green, insert the next copy paper into the bypass feed entrance.
- 5. Repeat step 4 until your copying is completed.

Reduced and Enlarged Copying (Type 2 only)





- 1. Place the original face down on the exposure glass, and lower the platen cover.
 - The original should be centered according to the size marks on the left scale.

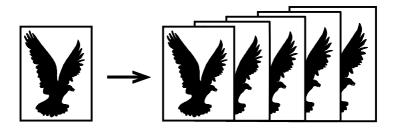


- Press the Reduce/Enlarge key to reduce or increase the reproduction ratio. The reduction ratio will change as follows:
- A4 version -

- Letter version -

3. Set other settings and make your copies.

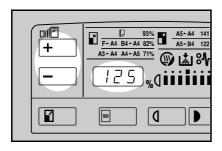
Zoom Copying (Type 2 only)



In this mode, the reproduction ratio can be changed from 61% to 141% in 1 percent steps.



- Place the original face down on the exposure glass, and lower the platen cover.
 - The original should be centered according to the size marks on the left scale.



- Press the Zoom Down key repeatedly to reduce the ratio in 1% steps.
 Or, press the Zoom Up key repeatedly to increase the ratio in 1% steps.
- 3. Set other settings, and make your copies.

SPECIAL FEATURES

Some of this copier's features can be adjusted by your service representative to suit your application needs. This section gives a brief description of these features. If you wish to get more information or use the following features, contact your service representative.

Energy Saver Function

With this function, all input modes are reset and the copier uses less electricity. If you select this function, the copier can automatically turn the energy saver function on at the same time the automatic reset is turned on. Also, you can select one of four levels for the saving ratio. The greater the saving ratio, the more time the copier will need to return to the ready condition.

Automatic Reset Time

1 minute after the final copy is made, all input modes are reset to default modes. If a 1 minute reset time is not appropriate, 3 minutes or no automatic reset can be selected.

Copy Counter UP/DOWN

The copy counter can be set to show the number of copies made (count up) or the number of copies remaining to be made (count down).

Auto Image Density Priority

Auto Image Density mode is selected when the main switch is turned on, or after auto reset. However, a service representative can select the Manual Image Density mode as the standard mode.

Auto Image Density Level

The auto image density level can be made lighter or darker.

Maximum Copy Quantity

The maximum copy quantity can be set from 1 to 99. (99 is the standard setting.)

Reduction/Enlargement Ratio Priority

With the default setting, the reduction ratios are selected at first when pressing the Reduce/Enlarge key. (Ex.: A4 version machine: $93\% \rightarrow 82\% \rightarrow 71\% \rightarrow 141\% \rightarrow 121\%$. See page 12.) You can cancel this setting and give priority to the enlargement ratios.

Optional Key Counter

To use the key counter, additional service parts are required. Please contact your service representative.

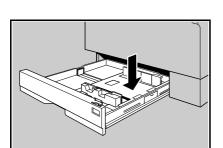
REPLENISHING

REPLENISHING SUPPLIES

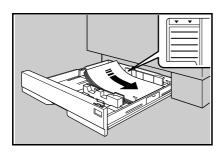
Loading Paper

PE is displayed on the copy counter when the paper tray runs out of paper. Load paper as follows.

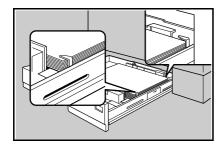
Regarding copy paper, see page iv.



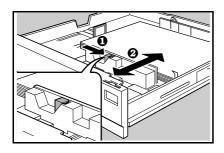
- Pull out the paper tray.
 - If there is already paper in the tray, there is a paper misfeed. See page 24.
- Push the bottom plate down until it locks.



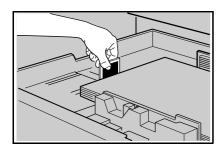
- 3. Load paper in the paper tray.
 - Make sure not to stack paper above the limit marks inside the paper tray.
 - Maximum capacity: 250 sheets



Make sure that the leading corners of the paper are under the corners as shown in the illustration.

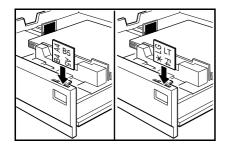


4. While pressing the release lever of the front side guide, push the guide until the front and rear guides securely hold the paper.



- 5. Insert the end guide plate in the slot to hold the paper.
- 6. Reinsert the paper tray.

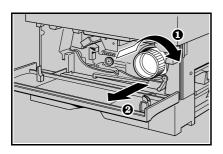
Changing Paper Size



- 1. Pull out the paper tray and remove the paper.
- 2. Change the paper size plate.
- Load paper following the steps in the "Loading Paper" section (See page 15).

Adding Toner

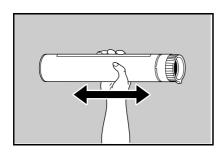
When the **Add Toner** indicator blinks, it is time to supply toner. When the **Add Toner** indicator is continuously on, copies cannot be made until the toner cartridge is replaced.



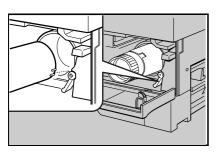
- 1. Open the front cover.
- 2. Push in the old toner cartridge, turn it clockwise until it stops, and pull it out.

WARNING: Do not incinerate the used toner cartridge. Toner dust might ignite when exposed to open flames.

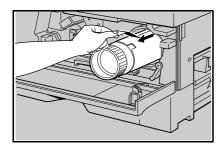
WARNING: Dispose of the used toner cartridge according to local regulations.



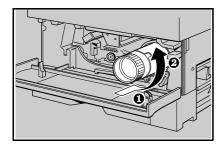
3. Shake the new toner cartridge well.



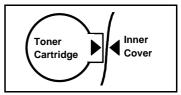
4. Insert the new toner cartridge as shown in the illustration.



5. Strip off the seal by pulling it while inserting the new cartridge.



- Push in the toner cartridge completely. Turn it counterclockwise until it stops.
 - Make sure to push the cartridge in until the arrows of the cartridge and inner cover are aligned as shown in the illustration.

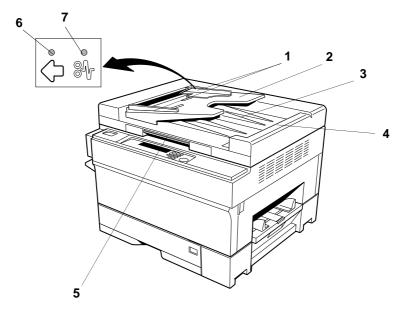


7. Close the front cover.

OPTIONAL DOCUMENT FEEDER

Guide To Components

☐ The document feeder can be added only to type 2 copiers.



Original Guides
 Adjust these guides to center the originals so that they are correctly fed onto the exposure glass.

2. Original Table Place originals here face up.

3. Original Stacker Originals are stacked here after exiting from the document feeder.

4. Exit Unit Transports the originals from the belt unit to the original stacker.

5. Grip Grip this part to lift the document feeder.

6. Insert Original Insert the originals into the document feeder until this indicator goes out.

7. Original Misfeed Lights when an original misfeeds in the document feeder.

Recommended Originals

For this document feeder, the following types of originals can be used.

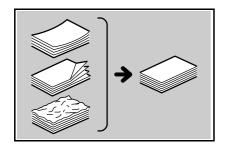
	Weight	53 ~ 82 g/m ²	83 ~ 105 g/m ²
Size		14 ~ 22 lb	23 ~ 28 lb
	A3 lengthwise	30 sheets can be set at a time.	20 sheets can be set at a time.
sion	A4 lengthwise & sideways		
version	A5 lengthwise & sideways		
A 4	B4 lengthwise		
	B5 lengthwise & sideways		
5	11" x 17" lengthwise		
version	81/2" x 14" lengthwise	30 sheets can	20 sheets can
Ϋ́	81/2" x 11" lengthwise & sideways	be set at a time.	be set at a time.
	51/2" x 81/2" lengthwise & sideways		

Non-Recommended Originals

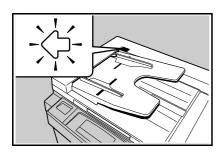
aution: The following types of originals are not recommended for use with the document feeder. Place them directly on the exposure glass.
☐ Originals larger than A3 lengthwise, 11" x 17" lengthwise
☐ Originals smaller than A5 lengthwise, 51/2" x 81/2" lengthwise
☐ Originals thicker than 105 g/m², 28 lb
☐ Originals thinner than 53 g/m², 14 lb
☐ Folded, curled, creased, or damaged originals
☐ Paper with any kind of coating (such as carbon paper) on the back, or originals that are taped together
☐ Mailing labels, perforated originals, or pasted originals
☐ Bound, stapled, or clipped originals
☐ OHP transparencies or translucent paper
☐ Wavy originals
☐ Damp originals
☐ Sticky originals
☐ Originals written in pencil on both sides, or 2 sided carbon copies
☐ Originals that are not made of paper

Automatic Document Feed (ADF)

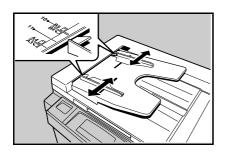
In this mode, the operator inserts a stack of originals into the original table. These originals are individually fed onto and removed from the exposure glass.



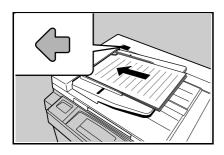
1. Correct any curl, fold, or crease in the originals before setting. Square the stack of originals.



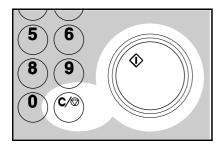
- Confirm that the **Insert Original** indicator is lit before setting.
- Confirm that no previous originals remain on the exposure glass or in the document feeder.



4. Adjust the original guides to the original size.



- Insert the originals face up into the original table until the Insert Original indicator turns off. (ADF mode is automatically selected.)
 - The last page should be on the bottom.
 - ☐ The guides must fit snugly against both sides of the stack.



6. Set other settings and press the **Start** key.

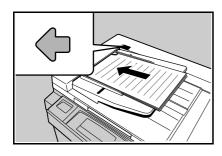


7. The bottom sheet of the original stack (the last page) is copied first.

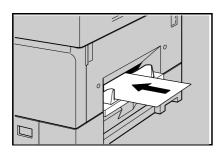
Bypass Feed Copying with the Document Feeder

You can use the document feeder with the bypass feed entrance. Follow these steps.

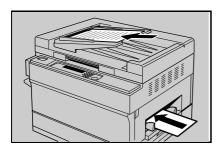
☐ Do not insert the copy paper into the bypass feed entrance before turning on the main switch. If you do, J1 and ¾ will light. In this case, take out the paper from the bypass feed entrance, then reinsert it.



1. Set the stack of originals into the original table following steps 1 to 5 on pages 21 and 22.



2. Insert a sheet of copy paper into the bypass feed entrance following steps 2 and 3 on page 11.



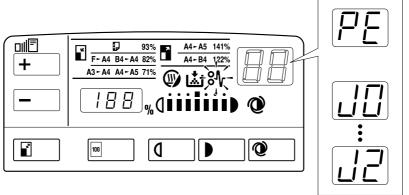
When the sheet of paper is completely in, the original will also be fed in, and copied.

- After the **Start** key turns green, insert the next copy paper into the bypass feed entrance.
- 4. Repeat step 3 until your copying is completed.

TROUBLESHOOTING

Clearing Misfeeds

When there is a paper misfeed, a misfeed location number (**PE**, **J0**, **J1**, or **J2**) is displayed in the copy counter. If **J0**, **J1** or **J2** is displayed, the **Check Paper Path** ($\l) indicator will also light. Remove misfed paper as follows.



PE: See page 25.

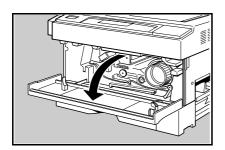
*Illustration shows type 2.

J1: See page 27.J2: See page 28.J0: See page 31.

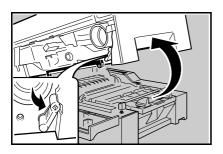
- $\hfill\square$ Do not leave any torn scraps of paper within the copier.
- ☐ After removing the misfed paper, make sure that all units are returned to their original positions and the top unit and front cover are closed.
- ☐ When a paper misfeed occurs, the copier keeps track of the selected copy modes and how many originals have been completed. It is not necessary to reset the copy modes and the copy quantity after removing misfed paper.
- ☐ Repeat the procedures described in this section until the Check Paper Path indicator and misfeed location number (PE, J0, J1, or J2) go out. (The indicators do not function unless the front cover is closed.)
- □ Do not open the front cover after the misfeed condition is cleared. (The copier's memory will be erased if you do.)
- If you have a document feeder, make sure to use the top unit stand to keep the top unit open.

When PE is displayed:

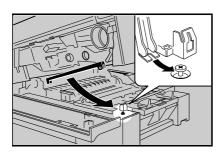
☐ If there is no misfed paper, it is time to load paper. See page 15.



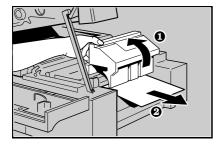
1. Open the front cover.



2. Press the release lever, and lift the top unit.

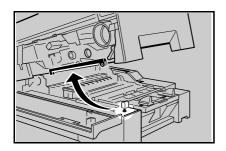


With the document feeder, make sure to use the top unit stand to keep the top unit open, as shown in the illustration.

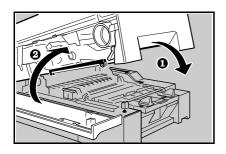


3. While holding up the bypass feed entrance, remove the misfed paper.

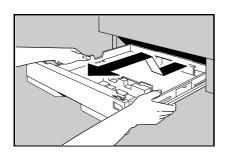
TROUBLESHOOTING Clearing Misfeeds



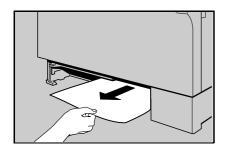
☐ If you have used the top unit stand, replace it in its original position.



4. Press down the top unit until it locks in place. Close the front cover.

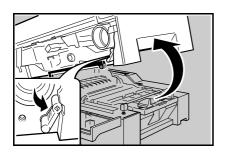


5. If you cannot find any misfed paper, take out the paper tray.

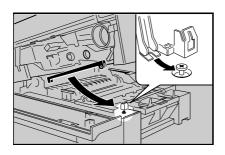


6. Remove the misfed paper, and reinsert the paper tray.

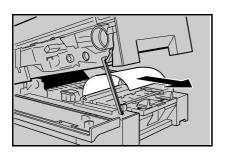
When % and J1 are displayed:



- 1. Open the front cover.
- Press the release lever, and lift the top unit.

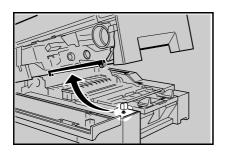


With the document feeder, make sure to use the top unit stand to keep the top unit open, as shown in the illustration.



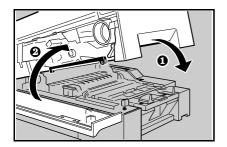
Pull the misfed paper toward the right side. Do not leave any torn scraps of paper.

WARNING: The fusing section is hot. Be careful not to touch any hot component.



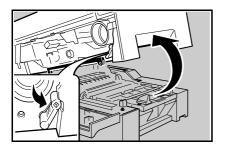
☐ If you have used the top unit stand, replace it in its original position.

TROUBLESHOOTING Clearing Misfeeds

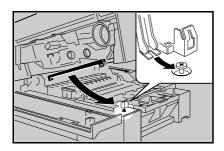


4. Press down the top unit until it locks in place. Close the front cover.

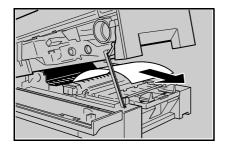
When ⁸√ and J2 are displayed:



- Open the front cover.
- Press the release lever, and lift the top unit.

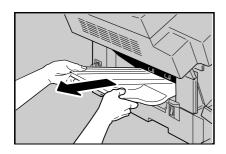


With the document feeder, make sure to use the top unit stand to keep the top unit open, as shown in the illustration.

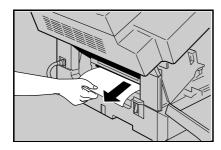


3. Pull the misfed paper toward the right side carefully. Do not leave any torn scraps of paper.

WARNING: The fusing section is hot. Be careful not to touch any hot component.

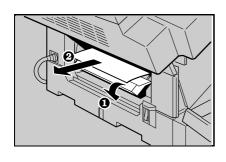


4. If the misfed paper cannot be removed, take out the copy tray.

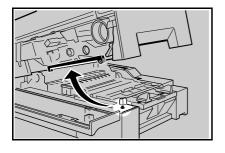


5. Remove the misfed paper carefully.

WARNING: The fusing section is hot. Be careful not to touch any hot component.

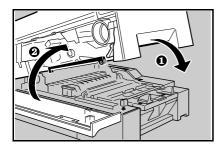


6. If no paper can be found, open the exit cover, and remove the misfed paper.

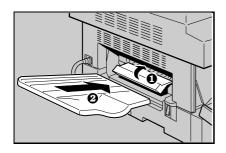


After using the top unit stand, replace it in its original position.

TROUBLESHOOTING Clearing Misfeeds

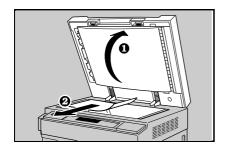


7. Press down the top unit until it locks in place. Close the front cover.

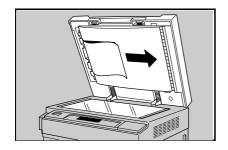


8. Close the exit cover and reset the copy tray.

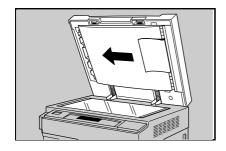
When was and J0 are displayed:



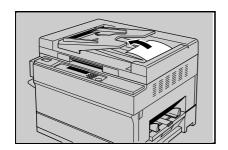
1. Lift the document feeder until it stops and remove the original.



- 2. If the original is in the feed-in unit, pull the misfed original carefully.
 - ☐ Be careful not to damage the original.



- 3. If the original is in the feed-out unit, pull the misfed original carefully.
 - Be careful not to damage the original.



- 4. If the leading edge of the original sticks out of the feed-out unit, pull the misfed original carefully.
 - Be careful not to damage the original.

Troubleshooting Guide

Problem	Action	
Nothing happens when the switch is turned on.	Check the power cord. Is it properly plugged into the outlet? Plug it in firmly.	
	Is the front cover completely closed? Close the front and/or exit covers completely.	
The Start indicator does not turn to green within about 30 seconds after	Is the Check Paper Path indicator on? (⁸ √r) Clear misfed paper. See page 24.	
turning main switch on, or when the machine stops during a copy run.	Is PE displayed in the copy counter? Load paper. See page 15. Or, clear misfed paper. See page 24.	
	Is the Add Toner indicator on? (Load a new toner cartridge. See page 17.	
Does the Energy Saver indicator blink? ()	See page 37.	
The copy counter shows "U2".	Insert the optional key counter correctly.	
The copy counter shows "E" codes.	See page 34.	
The Auto Image Density or Manual Image Density indicator blinks.	See page 34.	
Copies appear dirty.	Does the original have a gray or colored background? Press the left Manual Image Density key to lower the contrast.	
	Is the platen cover, exposure glass, or document feeder belt dirty? Clean them as shown on pages 35 and 36.	
	Is the image density level set correctly? Press the left Manual Image Density key to decrease the image density.	

Problem	Action	
Copies are too light.	Is the image density set correctly? Press the right Manual Image Density key to increase the image density.	
	Does the original have a low contrast image? Press the right Manual Image Density key to increase the image density.	
Copies have white streaks.	Clean the corona wire. See page 35.	
Copy image density is uneven.	Clean the corona wire. See page 35.	
Copies are blank.	Is the original placed face down on the exposure glass or face up on the document feeder? Set the original properly. See page 9, or 21. Is the charge corona unit inserted all the way in? Push the charge corona unit in all the way in. See page 35.	
Misfeeds occur frequently.	Is the right kind of paper in the paper tray? Paper size and weight must be within the minimum and maximum standards set for this copier.	
	Is folded, wrinkled, damp,or curled paper in the paper tray? Always use dry, undamaged paper.	
	Is the paper properly set in the paper tray? Always load paper correctly.	
	Are there any pieces of misfed paper or other foreign objects in the machine? Make sure that the paper path is completely clear of paper and other material after a misfeed.	

[☐] If you cannot correct the problem by taking the above actions, please contact your service representative.

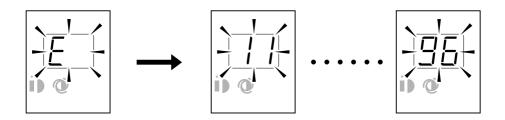
Service Codes



The copier's microcomputer constantly monitors mechanical and electrical functions. If a malfunction occurs, **E** and service code numbers will blink in the copy counter. If that happens, turn the main switch off, wait a few seconds, and then turn it on. If the service code appears again, call your service representative.

E70

When the used toner tank is full, **E** and **70** will start to blink in the copy counter. Only 250 copies can be made after this. Call your service representative.

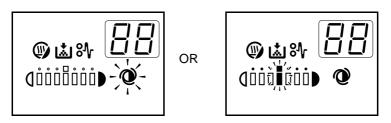


"E" blinks.

Service code number blinks.

Others

If either the **Auto Image Density** indicator or the **Manual Image Density** indicator starts to blink, turn the main switch off and on again. Call your service representative and explain the problem if this condition re-occurs. (However, you can still make copies.)



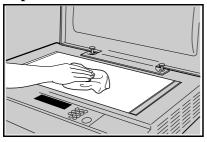
*Illustrations show type 1.

DAILY MAINTENANCE

To maintain high copy quality, clean the following parts and units regularly.

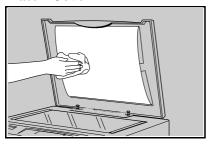
Copier

Exposure Glass



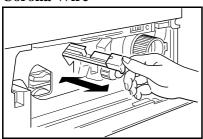
Clean the exposure glass with a damp cloth and wipe it with a dry cloth.

Platen Cover



Clean the platen cover with a damp cloth and wipe it with a dry cloth.

Corona Wire

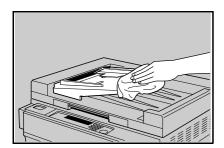


Do the following when white streaks appear on the copy or when image density becomes uneven.

- 1. Open the front cover.
- Pull the corona wire out fully extened, then push it back in until it locks. Repeat the above procedure several times.
- 3. Push the corona unit back in. Make sure it locks into place.
- 4. Close the front cover.

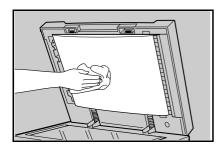
Document Feeder

Feed-in Unit



Clean the original table and original guides with a damp cloth. Use a weak cleaning solution if stains do not come off.

Belt



Lift the document feeder. Clean the belt with a damp cloth and wipe it with a dry cloth.

If stains do not come off, use alcohol.

DO'S AND DON'TS

Copier

the second side. Use the bypass feed entrance.	, , .,
Copies may be slightly curled after coming out sary, uncurl the paper before inserting it in th make a duplex copy.	
After pulling out the paper tray, remove any paper feed entrance.	er that remains in the paper
Document Feeder	
☐ Do not press down on or hold originals after inser	rting them in the feed unit.
Do not lift the document feeder unit until the leaderly fed out to the original stacker. If you do occur.	
pletely fed out to the original stacker. If you do	o, an original misfeed might

☐ When making duplex copies do not load paper in the paper tray to copy on

USER REMARKS

During a long continuous run, type 1 copiers might stop to let the optics cool. In this case, the Energy Saver indicator blinks and the Start key turns red. Please wait for a few minutes. After the Energy Saver indicator stops blinking and the Start key turns green, press the Start key to resume copying.

NOTE: To keep your job settings, do not turn off the main switch, open the front or exit cover, or touch any key.

SPECIFICATIONS Main Copier

SPECIFICATIONS

Main Copier

Configuration: Desktop

Copy Process: Dry electrostatic transfer system

Originals: Sheet/Book

Original Size: Type 1 Maximum: B4 lengthwise

10" x 14" lengthwise

Type 2 Maximum: A3 lengthwise

11" x 17" lengthwise

Copy Paper Size: Maximum: B4 lengthwise

10" x 14" lengthwise

Minimum:

Paper Tray: A5 lengthwise

51/2" x 81/2" lengthwise

Bypass Feed: A6 lengthwise

51/2" x 81/2" lengthwise

Copy Paper Weight : Paper tray feed: $64 \sim 90 \text{ g/m}^2 (17 \sim 24 \text{ lb})$

Bypass feed: $52 \sim 105 \text{ g/m}^2 (14 \sim 28 \text{ lb})$

Reproduction Ratios

(Type 2 only):

2 Enlargement and 3 Reduction

	A4 version	Letter version
Enlargement	141% 122%	129% 121%
Full size	100%	100%
Reduction	93% 82% 71%	93% 74% 65%

Zoom (Type 2 only): From 61% to 141% in 1% steps

Copying Speed: 13 copies/minute

(A4 lengthwise or 81/2" x 11" lengthwise)

10 copies/minute

(B4 lengthwise or 81/2" x 14" lengthwise)

Warm-up Time: less than 30 seconds (at 20°C or 68°F)

First copy Time: less than 9 seconds

(A4 lengthwise or 81/2" x 11" lengthwise)

Copy Number Input: Number keys, 1 to 99

(count up or count down)

Manual Image Density

Selection:

7 steps

Automatic Reset: 1 minute standard setting; can also be set to 3

minutes or no auto reset.

Paper Capacity: Paper tray: 250 sheets

Bypass feed entrance: 1 sheet

Toner Replenishment : Cartridge exchange (320g/cartridge)

Copy Tray Capacity: 100 sheets (B4 or 10" x 14" and smaller)

Power Source : See the inside of the front cover of this manual.

Power Consumption:

	Copier only	Copier with document feeder
Maximum	1.4 kVA	1.5 kVA
Copy cycle condition	0.81 kVA	0.86 kVA
Warm up condition	0.62 kVA	0.64 kVA
Stand by condition	0.16 kVA	0.18 kVA

Noise Emission:

(Sound pressure level*) *= The measurements are to be made according to ISO 7779.

	Copier only	Copier with document feeder
Maximum	less than 58 dB	less than 60 dB
Copy cycle condition	less than 55 dB	less than 55 dB
Stand by condition	less than 39 dB	less than 39 dB

SPECIFICATIONS Main Copier

Dimensions:

	Width	Depth	Height
Copier with platen cover and copy tray	713 mm	592 mm	400 mm
	(28.1")	(23.3")	(15.7")
Copier with document feeder and copy tray	713 mm	592 mm	463 mm
	(28.1")	(23.3")	(18.2")

Weight: Copier with platen cover and copy tray:

Approximately 43 kg (94.8 lb)

Copier with document feeder and copy tray: Approximately 50 kg (110.2 lb)

Optional Equipment : Document feeder

Key counter

☐ Specifications are subject to change without notice.

SPECIFICATIONS

Document Feeder

Original Size : See page 20.

Original Weight: See page 20.

Number of Originals That Can Be Set:

See page 20.

Original Feed : Automatic Feed - ADF mode

Original Set: Face up - First sheet on top

Original Transport : One flat belt

Copying Speed: 13 copies/minute

(A4 lengthwise or 81/2" x 11" lengthwise)

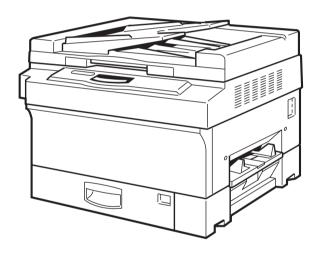
Power Consumption: 35 W

Dimensions 590 x 443 x 100 mm (W x D x H): (23.3" x 17.5" x 4.0")

Weight: Approximately 7 kg (15.5 lb)

☐ Specifications are subject to change without notice.

FT3513/3713



Operating Instructions

Notes: The model names of the machines do not appear in the following pages.

Check the type of your machine before reading this manual.

(For details, see page 1.)

Type 1: FT3513

Type 1 : F13513

Certain types may not be available in some countries. For details, please contact your local dealer.

Two kinds of size notation are employed in this manual. With this machine refer to the metric version.

For good copy quality, Ricoh recommends that you use genuine Ricoh toner.

Ricoh shall not be responsible for any damage or expense that may result from the use of parts other than genuine Ricoh parts in your Ricoh office product.

Note: Some illustrations may be slightly different from your machine.

Note: Certain options may not be available in some countries. For details, please contact your local dealer.

Power Source: 220 - 240 V, 50 Hz, 8 A or more

Please make sure to connect the power cord to a power source as above. For details about power source, see page ν .



Declaration of Conformity

"The Product complies with the requirements of the EMC Directive 89/336/EEC and the Low Voltage Directive 73/23/EEC."

In accordance with ISO Standard 7001, this machine uses the following symbols for the main switch:

means POWER ON.

means STAND BY.

Overseas Affiliates

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Germany RICOH DEUTSCHLAND GMBH Mergenthalerallee 38-40, 65760 Eschborn (TEL) (06196) 906-0 France RICOH FRANCE S.A. 383 Avenue de General de Gaulle, B.P. 307, 92143 Clamart Cedex (TEL) 01-4094-3838

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Italy RICOH ITALIA S.p.A. Via della Metallurgia, 12 (zona Basson) - 37139 VERONA (TEL) 045-851 00 44

Hong Kong RICOH BUSINESS MACHINES, LTD. 23/F., China Overseas Building, 139, Hennessy Road, Wan Chai, Hong Kong (TEL) 862-2888

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INTRODUCTION

This manual contains detailed instructions on the operation and maintenance of this copier. To get maximum versatility from this copier, all operators should carefully read and follow the instructions in this manual. Please keep this manual in a handy place near the machine.

Please read the next section before using this copier. It contains important information related to USER SAFETY and PREVENTING EQUIPMENT PROBLEMS.

SAFETY INFORMATION

When using your copier, the following safety precautions should always be followed.

Safety During Operation

In this manual, the following important symbols are used:

MARNING: Ignoring this warning could cause serious injury or

even death.

⚠ CAUTION: Ignoring this caution could cause injury or damage

to property.

Examples Of Indications

- riangle Symbols riangle means a situation that requires you take care.
- S Do NOT carry out the operation represented by the symbol S. This example means "Do not take apart".
- Symbols means you MUST perform this operation.

 This example means "You must remove the wall plug".

<u>^</u>

WARNINGS:



- Only connect the machine to the power source described on the inside front cover of this manual.
- Avoid multi-wiring.
- Do not damage, break or make any modifications to the power cord. Do not place heavy objects on it, pull it hard or bend it more than necessary. These actions could cause an electric shock or fire.
- Do not plug or unplug the power cord with your hands wet.
 Otherwise, an electric shock might occur.



 Make sure the wall outlet is near the machine and freely accessible so that in event of an emergency it can be unplugged easily.



- Do not remove any covers or screws other than those specified in this manual. Some parts of the machine are at a high voltage and could give you an electric shock. When the machine needs to be checked, adjusted, or repaired, contact your service representative.
- Do not take apart or attempt any modifications to this machine. There is a risk of fire, electric shock, explosion or loss of sight.



- If the machine looks damaged or breaks down, smoke is coming out, there is a strange smell or anything looks unusual, immediately turn off the main switch then unplug the power cord from the wall. Do not continue using the machine in this condition. Contact your service representative.
- If metal, liquid or foreign matter falls into the machine, turn
 off the main switch and unplug the main power cord. Contact your service representative. Do not keep using the machine with a fault or defect.



 Do not put any metal objects or containers holding water (e.g. vases, flowerpots, glasses) on the machine. If the contents fall inside the machine, a fire or electric shock could occur.



 Do not incinerate used toner or toner containers. Toner dust might ignite when exposed to an open flame. Dispose of the used toner containers according to local regulations for plastics.

riangle CAUTIONS:



- Keep the machine away from humidity and dust. A fire or an electric shock might occur.
- Do not place the machine on an unstable or tilted surface. If it topples over, it could cause injury.



- When you move the machine, unplug the power cord from the wall outlet to avoid fire or electric shock.
- When the machine will not be used for a long time, unplug the power cord.



When you pull out the plug from the socket, grip the plug to avoid damaging the cord and causing fire or electric shock.



 If you use the machine in a confined space, make sure there is a continuous air turnover.



• Do not use stapled paper. Do not use aluminum foil, carbon-containing paper or other conductive paper. Otherwise, a fire might occur.



When removing misfed paper, do not touch the fusing section because it could be very hot.



 This machine has been tested for safety using this supplier's parts and consumable. We recommend you only use these specified supplies.

INSTALLATION REQUIREMENTS

Copier Environment

The installation location should be carefully chosen because environmental conditions greatly affect the performance of a copier.

Optimum Environmental Conditions

☐ Temperature: 10 - 30°C (50 - 86°F)

than 2,500 m (8,200 ft) above sea level.

CAUTIONS:

□ Humidity: 15 - 90%

- Keep the machine away from humidity and dust. A fire or an electric shock might occur.
- Do not place the machine on an unstable or tilted surface. If it topples over, it could cause injury.

	A strong and level base.
	The copier must be level within 5 mm (0.2") both front to rear and left to right.
	To avoid a possible build-up of ozone, make sure to locate this copier in a large well ventilated room that has air turnover of more than 30 m³/hr/person.
Eı	nvironments To Avoid
	Locations exposed to direct sunlight or strong light (more than 1,500 lux.)
□	Locations directly exposed to cool air from an air conditioner or heated air from a heater. (Sudden temperature changes might cause condensation within the copier.)
	Places where the copier might be subjected to frequent strong vibration.
	Dusty areas.
	Areas with corrosive gases.
	This machine may need some adjustments when it is used at altitudes higher

Power Connection

MARNINGS:

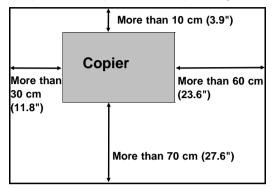
- Only connect the machine to the power source described on the inside front cover of this manual.
- Avoid multi-wiring.
- Do not damage, break or make any modifications to the power cord. Do not place heavy objects on it, pull it hard or bend it more than necessary. These actions could cause an electric shock or fire.
- Do not plug or unplug the power cord with your hands wet. Otherwise, an electric shock might occur.
- Make sure the wall outlet is near the machine and freely accessible so that in event of an emergency it can be unplugged easily.

CAUTIONS:

- When you move the machine, unplug the power cord from the wall outlet to avoid fire or electric shock.
- When the machine will not be used for a long time, unplug the power cord.
- When you pull out the plug from the socket, grip the plug to avoid damaging the cord and causing fire or electric shock.
- □ When the main switch is in the Stand-by positions, the optional anti-condensation heaters are on. In case of emergency, unplug the machine's power cord.
- When you unplug the power cord, the anti-condensation heaters turn off.
- Make sure the plug is firmly inserted in the outlet.
- □ Voltage must not fluctuate more than 10%.

Access To Copier

□ Place the copier near the power source, providing clearance as shown.



USE AND STORAGE OF SUPPLIES

Copy Paper

- Copy paper of the types or in the conditions listed below are not recommended for this copier.
 - · Folded, curled, creased, or damaged paper
 - Torn paper
 - Damp paper
 - Perforated paper
 - Paper with conductive or low electrical resistance such as carbon or sliver coating
 - Wavy paper
- ☐ The following cannot be used in the paper tray. Use the bypass feed entrance. One sheet should be inserted into the bypass feed entrance at one time.
 - Post cards
 - Translucent paper
 - OHP sheets
 - Adhesive labels
- ☐ If multi-feeding occurs with recycled paper, fan the sheets, or feed them one at a time using the bypass feed entrance.
- Do not touch copy paper if your fingers are wet or oily; finger prints may appear on the copy.

Paper Storage

Paper should always be stored properly. Improperly stored paper might result in poor image reproduction, creased copies, and paper misfeeds. Generally, avoid curling and absorption of moisture.

☐ Avoid storing paper in humid areas. Under high temperature and high humidity

	conditions, store paper in a vinyl bag.
	Do not store paper where it will be exposed to heat.
	Store on a flat surface.
	Use older stock first.
	Do not lay heavy objects on paper.
□	Keep open reams of paper in the package, and store as you would unopened paper.

Toner Storage

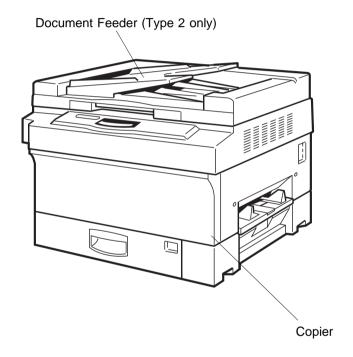
Store horizontally in a cool, dark place.
Store toner cartridge flat.
Never store toner where it will be exposed to heat.
Do not lav heavy objects on toner cartridges.

GUIDE TO COMPONENTS

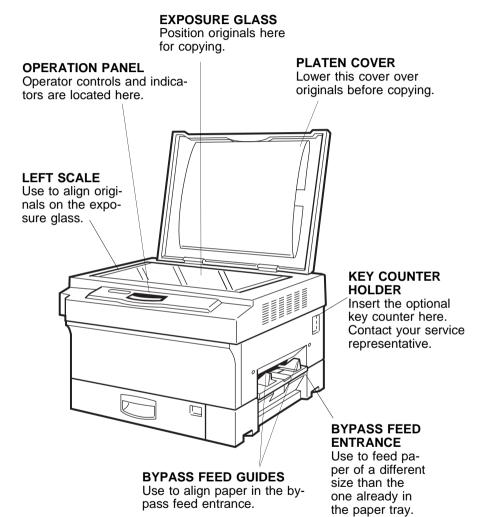
System Overview

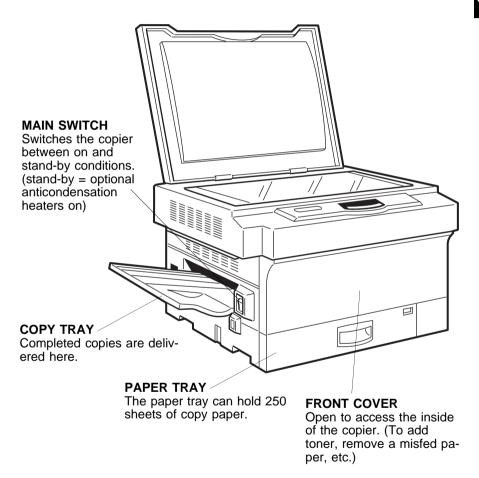
The type 2 copier can be equipped with an optional document feeder as shown:

- ☐ For more information about the document feeder, see page 21.
- \square Regarding the difference between type 1 and 2 operation panels, see pages 4 ~ 7.



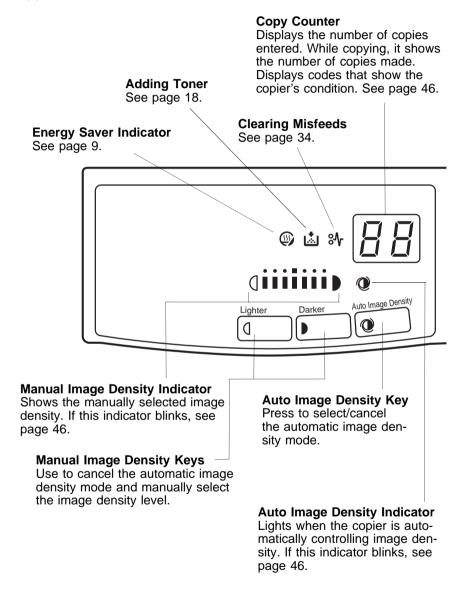
Copier

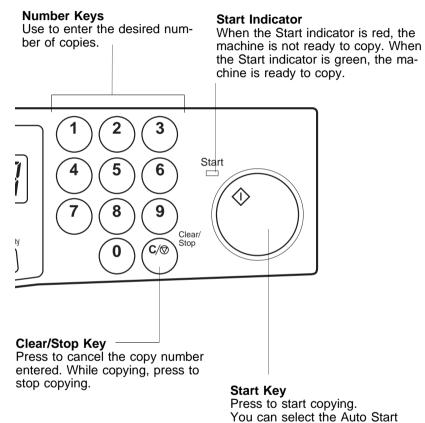




Operation Panel

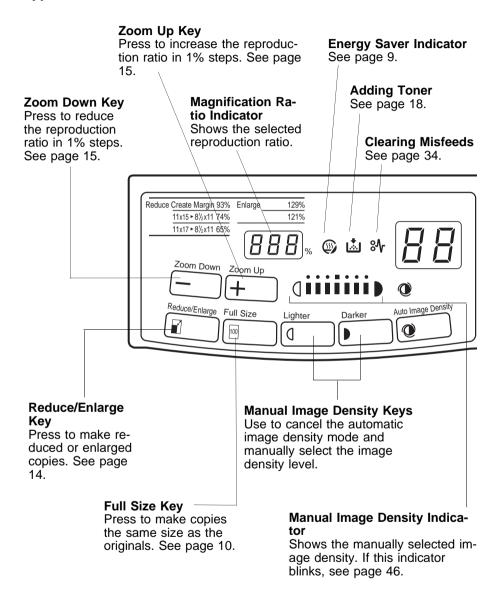
Type 1





mode. See page 11.

Type 2



Copy Counter

Displays the number of copies entered. While copying, it shows the number of copies made.

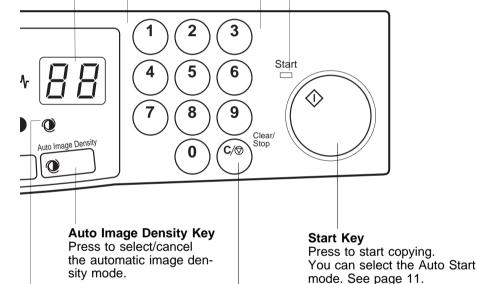
Displays codes that show the copier's condition. See page 46.

Number Keys

Use to enter the desired number of copies.

Start Indicator

When the Start indicator is red, the machine is not ready to copy. When the Start indicator is green, the machine is ready to copy.



Auto Image Density Indicator Lights when the copier is automatically controlling image density. If this indicator blinks, see page 46.

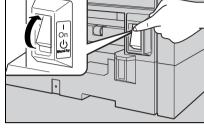
Clear/Stop Key

Press to cancel the copy number entered. While copying, press to stop copying.

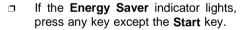
COPYING

Starting the Copier

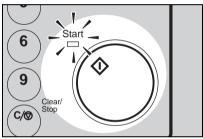
Turn on the main switch.

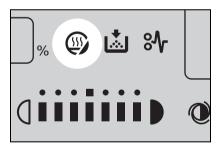


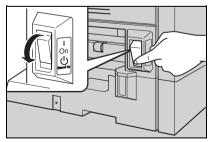
- Wait for the copier to warm up. During the warm-up period (approximately 30 seconds), the **Start** indicator stays red.
- When the warm-up period is completed, the **Start** indicator turns green. The copier is ready to make copies.



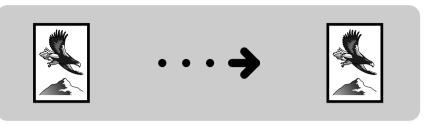
- Opening the optional document feeder, setting originals there, or inserting the copy paper into the bypass feed entrance will also make the copier ready.
- At the end of the day, turn off the main switch.



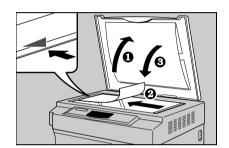


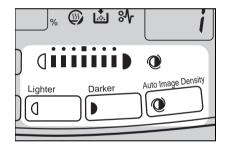


Full Size Copying

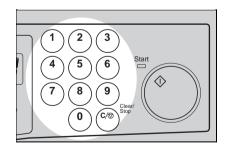


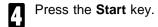
- Place the original *face down* on the exposure glass, and lower the platen cover.
- The original should be centered according to the size marks on the left scale.
- Narrow margins at the leading and side edges of the original are not copied.
- 2 Set the image density level to match the type and quality of the original.
- ☐ This is not necessary if Auto Image Density indicator is on.



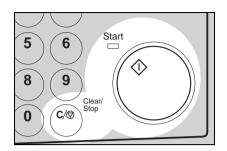


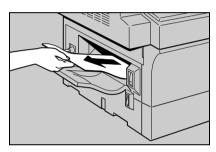
- Enter the number of copies required using the **Number** keys.
- □ Up to 99 copies can be entered.
- To change the number entered, press the Clear/Stop key and then enter the new number.





- If you press the Start key during the warm-up period, the red Start indicator will blink, then the copier will automatically start copying after the warm-up period (Auto Start mode).
- ☐ To stop the machine during a multicopy run, press the **Clear/Stop** key.
- Press the Start key to resume copying or press the Clear/Stop key again to clear the copy counter.
- Remove the copies from the copy tray and the original from the exposure glass.

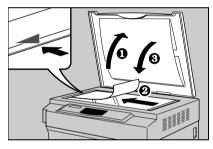




Bypass Feed Copying

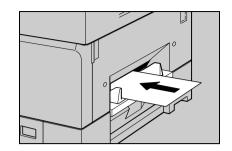
Use the bypass feed entrance to copy onto paper of a different size than the one already in the paper tray.

- One sheet should be inserted into the bypass feed entrance at a time.
- □ Bypass feed copying also may be used for OHP transparencies, adhesive labels, translucent paper, or post cards.
- □ When you copy onto OHP transparencies or post cards, remove copied sheet one by one.
- □ When you copy onto OHP transparencies, insert them with the copy side up.
- Regarding the bypass feed copying with the optional document feeder, see page 27.
- □ Do not insert the copy paper into the bypass feed entrance before turning on the main switch. If you do, J1 and ⁸√r will light. In this case, take out the paper from the bypass feed entrance, then open the front cover and close it.
- Place the original face down on the exposure glass, and lower the platen cover.
- The original should be centered according to the size marks on the left scale.
- 2 Slide the bypass feed guides to the proper width.
- Pull out the extender to support copy paper larger than B4, 81/2" x 14".





- Insert the copy paper into the bypass feed entrance.
- ☐ The copy paper will be automatically fed in and copied.
- ☐ Whenever an OHP transparency is delivered to the copy tray, it should be taken out right away. Place the OHP transparency on a flat surface.
- After the **Start** key turns green, insert the next copy paper into the bypass feed entrance.
- Repeat step 4 until your copying is completed.



Reduced and Enlarged Copying (Type 2 only)

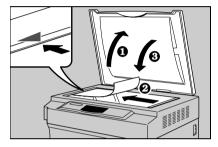


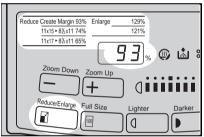
- Place the original face down on the exposure glass, and lower the platen cover.
- The original should be centered according to the size marks on the left scale.
- Press the **Reduce/Enlarge** key to reduce or increase the reproduction ratio. The reduction ratio will change as follows:

- Metric version -

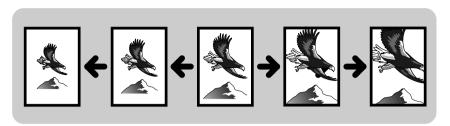
- Inch version -

Set other settings and make your copies.



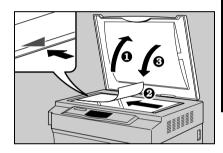


Zoom Copying (Type 2 only)



In this mode, the reproduction ratio can be changed from 61% to 141% in 1% steps.

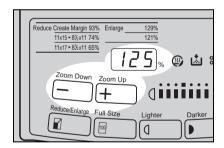
- Place the original face down on the exposure glass, and lower the platen cover.
- The original should be centered according to the size marks on the left scale.



Press the **Zoom Down** key repeatedly to reduce the ratio in 1% steps.

Or, press the **Zoom Up** key repeatedly to increase the ratio in 1% steps.

Set other settings, and make your copies.

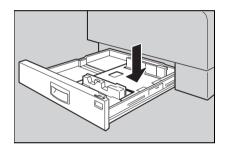


REPLENISHING SUPPLIES

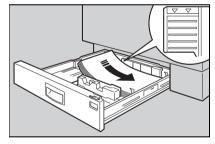
Loading Paper

PE is displayed on the copy counter when the paper tray runs out of paper. Load paper as follows.

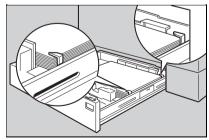
- □ Regarding copy paper, see page vi.
- Pull out the paper tray.
- If there is already paper in the tray, there is a paper misfeed. See page 35.
- Push the bottom plate down until it locks.



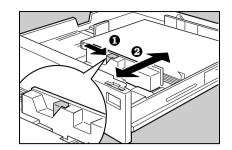
- Load paper in the paper tray.
- Make sure not to stack paper above the limit marks inside the paper tray.



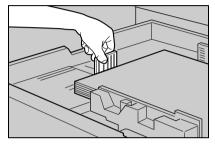
Make sure that the leading corners of the paper are under the corners as shown in the illustration.



While pressing the release lever of the front side guide, push the guide until the front and rear guides securely hold the paper.



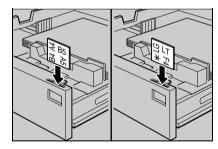
Insert the end guide plate in the slot to hold the paper.



Reinsert the paper tray.

Changing Paper Size

- Pull out the paper tray and remove the paper.
- Change the paper size plate.



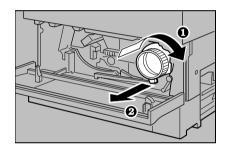
Load paper following the steps in the "Loading Paper" section (See page 16).

Adding Toner 🕹

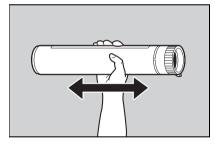
When the **Add Toner** indicator blinks, it is time to supply toner. When the **Add Toner** indicator is continuously on, copies cannot be made until the toner cartridge is replaced.

↑ WARNINGS:

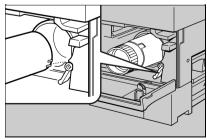
- Do not incinerate used toner or toner containers. Toner dust might ignite when exposed to an open flame. Dispose of the used toner containers according to local regulations for plastics.
- Open the front cover.
- Push in the old toner cartridge, turn it clockwise until it stops, and pull it out.



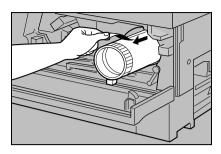
Shake the new toner cartridge well.



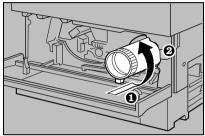
Insert the new toner cartridge as shown in the illustration.



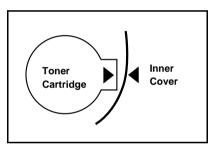
Strip off the seal by pulling it while inserting the new cartridge.



Push in the toner cartridge completely. Turn it counterclockwise until it stops.



Make sure to turn the cartridge until the arrows of the cartridge and inner cover are aligned as shown in the illustration.



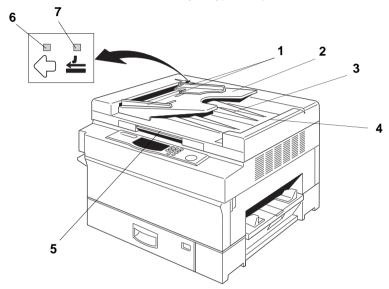
Close the front cover.

JPIIONAL DOCUMENI FFFDFD

OPTIONAL DOCUMENT FEEDER

Guide To Components

☐ The document feeder can be added only to type 2 copiers.



1. Original Guides

Adjust these guides to center the originals so that they are correctly fed onto the exposure glass.

2. Original Table

Place originals here face up.

3. Original Stacker

Originals are stacked here after exiting from the document feeder.

4. Exit Unit

Transports the originals from the belt unit to the original stacker.

5. Grip

Grip this part to lift the document feeder.

6. Insert Original Indicator

Insert the originals into the document feeder until this indicator goes out.

7. Auto Feed Indicator

When setting one original at a time, set the next original while this indicator is lit. The original is automatically fed and copied

Recommended Originals

Regarding originals that the optional document feeder can handle, see page 54.

Note: The following types of originals are not recommended for use with the

Non-Recommended Originals

document feeder. Place them directly on the exposure glass.

□ Originals larger than A3, 11" x 17"

□ Originals smaller than B5 □, 51/2" x 81/2" □

□ Originals thicker than 105 g/m², 28 lb

□ Originals thinner than 52 g/m², 14 lb

□ Folded, curled, creased, or damaged originals

□ Paper with any kind of coating (such as carbon paper) on the back, or originals that are taped together

□ Mailing labels, perforated originals, or pasted originals

□ Bound, stapled, or clipped originals

□ OHP transparencies or translucent paper

□ Wavy originals

Originals written in pencil on both sides, or 2 sided carbon copies

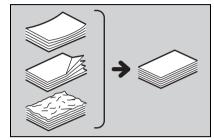
Damp originalsSticky originals

Originals that are not made of paper

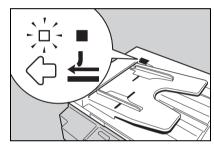
Setting A Stack Of Originals (ADF mode)

In this mode, the operator inserts a stack of originals into the original table. These originals are individually fed onto and removed from the exposure glass.

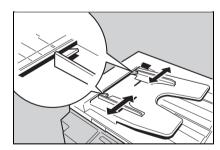
Correct any curl, fold, or crease in the originals before setting. Square the stack of originals.



2 Confirm that the **Insert Original** indicator is lit before setting.



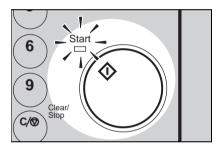
- Confirm that no previous originals remain on the exposure glass or in the document feeder.
- Adjust the original guides to the original size.



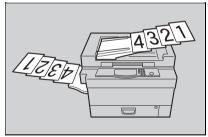
OPTIONAL DOCUMENT FEEDER

- Insert the originals face up into the original table until the Insert Original indicator turns off. (ADF mode is automatically selected.)
- The last page should be on the bottom.
- The guides must fit snugly against both sides of the stack.
- Set the original stack so that the leading edge is at an angle with the bottom of stack forward, and the top back as shown in the illustration.
- Do not stack originals above the limit mark.

Set other settings and press the Start key.



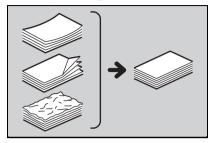
The bottom sheet of the original stack (the last page) is copied first.



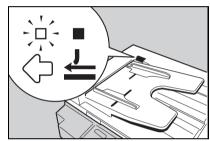
Setting One Original At A Time (SADF mode)

You can insert one original at a time into the document feeder. The original is automatically fed onto and removed from the exposure glass.

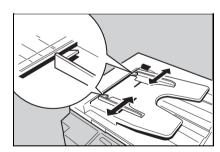
Correct any curl, fold, or crease in the originals before setting.



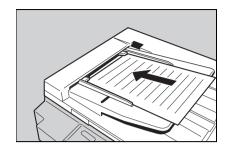
2 Confirm that the **Insert Originals** indicator is lit before setting.

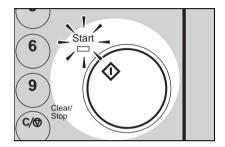


- Confirm that no previous originals remain on the exposure glass or in the document feeder.
- Adjust the original guides to the original size.

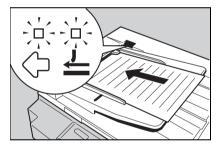


- Insert original *face up* into the original table until the **Insert**Original indicator turns off.
- If you are copying a stack of originals one sheet at a time and you want to keep them in order, start with the last page of the originals.
- ☐ The guides must fit snugly against both sides of the original.
- Set other settings and press the Start key.





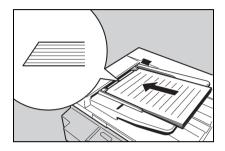
- While the **Auto Feed** indicator is lit after an original is fed, set the next original. The original is automatically fed and copied.
- If you have set more than two originals, the Auto Feed indicator is not lit after the last original is fed. In this case, press the Start key again after setting an original.



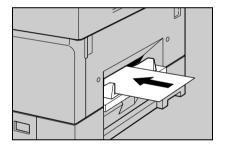
Bypass Feed Copying with the Document Feeder

You can use the document feeder with the bypass feed entrance. Follow these steps.

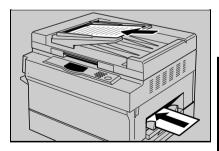
- □ Do not insert the copy paper into the bypass feed entrance before turning on the main switch. If you do, J1 and % will light. In this case, take out the paper from the bypass feed entrance, then open the front cover and close it.
- Set the stack of originals into the original table following steps 1 to 5 on pages 23 and 24.



- Insert a sheet of copy paper into the bypass feed entrance following steps 2 and 3 on pages 12 and 13.
- When the sheet of paper is completely in, the original will also be fed in, and copied.



- After the **Start** key turns green, insert the next copy paper into the bypass feed entrance.
- Repeat step 3 until your copying is completed.

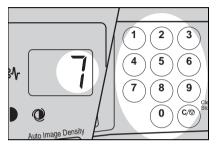


USER TOOLS

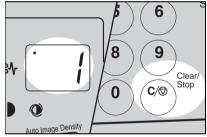
This section is for the key operators in charge of this copier. You can change or set the copier's default setting using the User Tools.

How To Access User Tools

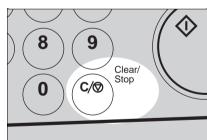
Enter "7" using the **Number** keys.



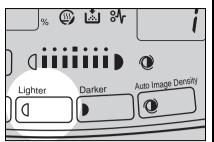
- Press the Clear/Stop key for more than three seconds.
- ☐ The point mark is lit in the upper left corner of the copy counter.



Press the Clear/Stop key.



Press the **Lighter** key.

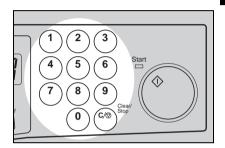


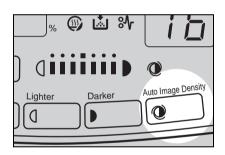
- Enter the required user tool number using the **Number** keys.
- $\hfill\Box$ For the user tool number, refer to pages 31 \sim 33.

Example: 16. Counter up/down

This is the user tool's number.

- If you input the wrong number, press the Clear/Stop key. Then, input the correct number.
- Press the Auto Image Density key.
- The default setting will blink in the copy counter (type 1) or in the **Three Digit** indicator (type 2).

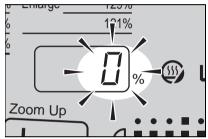




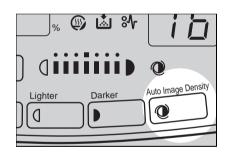
How To Change Adjustment Values Or Modes

- Access the user tool you want to adjust. (See pages 28 and 29.) The number of the user tool you select will be displayed in the copy counter.
- The default setting will be displayed in the copy counter (type 1) or in the **Three Digit** indicator (type 2). Enter the required setting using the **Number** keys.
- For the settings, refer to pages 31 ~33.
- If you input a wrong number, press the Clear/Stop key. Then, enter the correct number.
- Press the **Auto Image Density** key to store the required setting.
- If you want to adjust another user tool, enter the user tool number.

15 7 7



*The illustration shows type 2.



Turn the main switch off and on.

User Tool Menu

☐ For how to change settings, see page 30.

14. Auto off

To conserve energy, this copier automatically turns off 30 minutes after the last copying job has been completed. This time can be changed as follows:

Default: 30 minutes (Setting: 0)

	(
Setting	Definition
0	30 minutes
1	15 minutes
2	60 minutes
3	90 minutes
4	120 minutes

15. Auto reset time set

As a default setting, the copier can reset itself 1 minute after the final copy is made or after the last time any key is pressed. If a 1 minute reset time is not appropriate, you can change this time or cancel this function.

Default: 1 minute (Setting: 0)

Setting	Definition	
0	1 minute	
1	3 minute	
2	Auto reset is turned off.	

16. Counter up/down

The copy counter can be set to show the number of copies made (count up), or the number of copies remaining to be made (count down).

Default: Up (Setting: 0)

Setting	Definition
0	Up
1	Down

18. Reduction/enlargement ratio priority (Type 2 only)

As a default setting, the reduction ratios are selected at first when pressing the **Reduce/Enlarge** key. (e.g. Metric version: 100 % \rightarrow 93 % \rightarrow 82 % \rightarrow 71 % \rightarrow 141 % \rightarrow 122 %. See page 14.) You can cancel this setting and give priority to the enlargement ratios. (e.g. Metric version: 100 % \rightarrow 122 % \rightarrow 141 % \rightarrow 71 % \rightarrow 82 % \rightarrow 93 %)

Default: Reduction ratios (Setting: 0)

Setting	Mode	
0	Reduction ratios priority mode	
1	Enlargement ratios priority mode	

19. Auto image density priority selection

As a default setting, Auto Image Density is selected. You can cancel this setting to set Manual Image Density mode as the default mode.

Default: Yes (Auto Image Density is selected.) (Setting: 0)

Setting	Mode
0	Yes (Auto Image Density is selected.)
1	No (Auto Image Density is not selected.)

22. SADF auto reset (Type 2 only)

When you set one original at a time in the optional document feeder (SADF mode), the Auto Feed indicator lights for a selected time after an original is fed to show that the document feeder is ready for another original. You can adjust this time.

Default: 5 seconds (Setting: 0)

Setting	Definition	
0	5 seconds	
1	60 seconds	

34. Auto image density level

You can adjust the Auto Image Density level to lighter and darker.

Default: Normal (Setting: 0)

	\
Setting	Definition
0	Normal
1	Darker
2	Lighter

78. Auto energy saver set

As a default setting, when the copier is reset by the auto reset, the Energy Saver is not automatically set. You can change this setting.

Default: No (Auto energy saver is not set.) (Setting: 0)

Setting	Modes
0	No (Auto energy saver is not set.)
1	Yes (Auto energy saver is set.)

86. Energy saving ratio selection

You can select one of four energy saving ratios. Note that the higher the saving ratio is, the more time the copier will need to return to the ready condition.

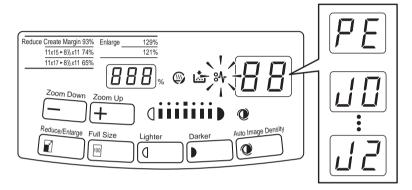
Default: Level 3 (Setting: 2)

Setting	Definition
0	Level 1 (The highest saving ratio)
1	Level 2
2	Level 3
3	Level 4

TROUBLESHOOTING

Clearing Misfeeds

When there is a paper misfeed, a misfeed location number (**PE**, **J0**, **J1**, or **J2**) is displayed in the copy counter. If **J0**, **J1** or **J2** is displayed, the **Check Paper Path** (**%**) indicator will also light. Remove misfed paper as follows.



*Illustration shows type 2.

PE: See page 35.

J1: See page 37.

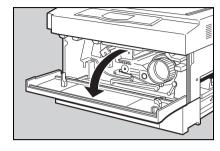
J2: See page 39.

J0: See page 42.

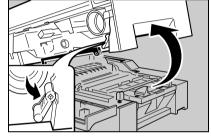
- Do not leave any torn scraps of paper within the copier.
- □ After removing the misfed paper, make sure that all units are returned to their original positions and the top unit and front cover are closed.
- □ When a paper misfeed occurs, the copier keeps track of the selected copy modes and how many originals have been completed. It is not necessary to reset the copy modes and the copy quantity after removing misfed paper.
- Repeat the procedures described in this section until the Check Paper Path indicator and misfeed location number (PE, J0, J1, or J2) go out. (The indicators do not function unless the front cover is closed.)
- Do not open the front cover after the misfeed condition is cleared. (The copier's memory will be erased if you do.)
- ☐ If you have a document feeder, make sure to use the top unit stand to keep the top unit open.

When PE is displayed:

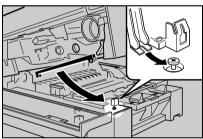
- ☐ If there is no misfed paper, it is time to load paper. See page 16.
- Open the front cover.

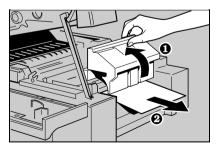


- Press the release lever, and lift the top unit.
- ☐ Hold the top unit to stop it from springing up.



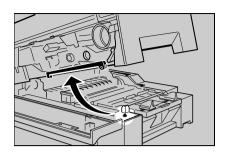
- With the document feeder, make sure you use the top unit stand to keep the top unit open, as shown in the illustration.
- While holding up the bypass feed entrance, remove the misfed paper.



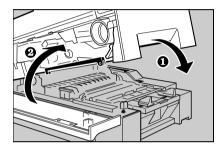


TROUBLESHOOTING

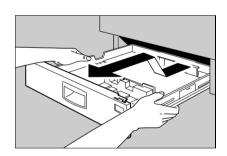
☐ If you have used the top unit stand, replace it in its original position.



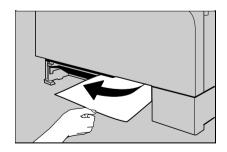
Press down the top unit until it locks in place. Close the front cover.



If you cannot find any misfed paper, take out the paper tray.



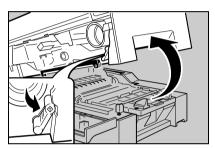
Remove the misfed paper, and reinsert the paper tray.

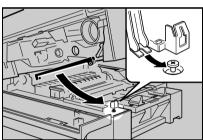


When ³√ and J1 are displayed:

CAUTION:

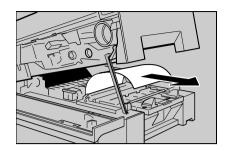
- When removing misfed paper, do not touch the fusing section because it could be very hot.
- Open the front cover.
- Press the release lever, and lift the top unit.
- Hold the top unit to stop it from springing up.
- With the document feeder, make sure to use the top unit stand to keep the top unit open, as shown in the illustration.



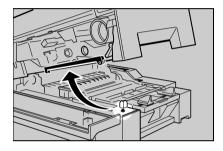


TROUBLESHOOTING

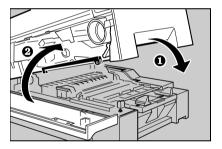
Pull the misfed paper toward the right side. Do not leave any torn scraps of paper.



☐ If you have used the top unit stand, replace it in its original position.



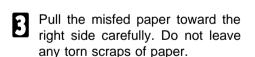
Press down the top unit until it locks in place. Close the front cover.

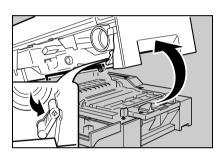


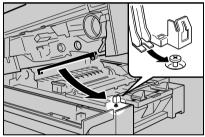
When % and J2 are displayed:

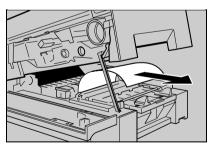
!\ CAUTION:

- When removing misfed paper, do not touch the fusing section because it could be very hot.
- Open the front cover.
- Press the release lever, and lift the top unit.
- Hold the top unit to stop it from springing up.
- With the document feeder, make sure to use the top unit stand to keep the top unit open, as shown in the illustration.



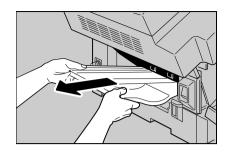




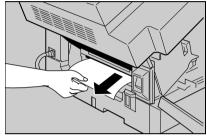


TROUBLESHOOTING

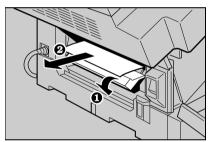
If the misfed paper cannot be removed, take out the copy tray.



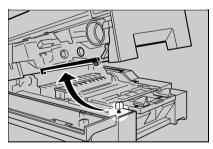
Remove the misfed paper carefully.



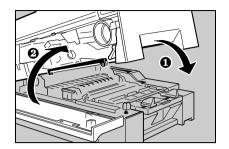
If no paper can be found, open the exit cover, and remove the misfed paper.



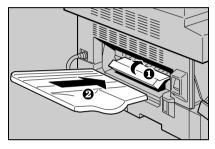
☐ After using the top unit stand, replace it in its original position.



Press down the top unit until it locks in place. Close the front cover.

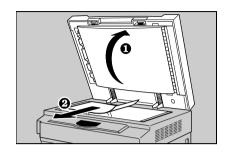


Close the exit cover and reset the copy tray.

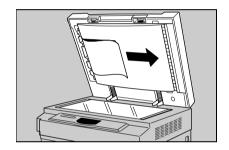


When % and J0 are displayed:

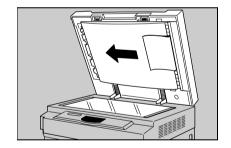
Lift the document feeder until it stops and remove the original.



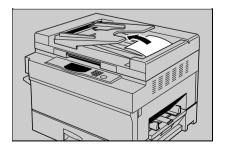
- If the original is in the feed-in unit, pull the misfed original carefully.
- Be careful not to damage the original.



- If the original is in the feed-out unit, pull the misfed original carefully.
- Be careful not to damage the original.



- If the leading edge of the original sticks out of the feed-out unit, pull the misfed original carefully.
- Be careful not to damage the original.



Troubleshooting Guide

Problem	Action
Nothing happens when the switch is turned on.	Check the power cord. Is it properly plugged into the outlet?
	■ Plug it in firmly.
	Is the front cover completely closed?
	Close the front and/or exit covers completely.
The Start indicator does not turn to green within about 30	Is the Check Paper Path indicator (%1r) on?
seconds after turning main	Clear misfed paper. See page 34.
switch on, or when the machine stops during a copy run.	Is PE displayed in the copy counter?
	Load paper. See page 16. Or, clear misfed paper. See page 35.
	Is the Add Toner indicator (🕍) on?
	■ Load a new toner cartridge. See page 18.
The copy counter shows "U2".	■ Insert the optional key counter correctly.
The copy counter shows "E" codes.	■ See page 46.
The Auto Image Density or Manual Image Density indicator blinks.	■ See page 46.

TROUBLESHOOTING

Problem	Action
Copies appear dirty.	Does the original have a gray or colored background?
	Press the left Manual Image Density key to lower the contrast.
	Is the platen cover, exposure glass, or document feeder belt dirty?
	Clean them as shown on pages 47 and 48.
	Is the image density level set correctly?
	Press the left Manual Image Density key to decrease the image density?
Copies are too light.	Is the image density set correctly?
	Press the right Manual Image Density key to increase the image density.
	Does the original have a low contrast image?
	Press the right Manual Image Density key to increase the image density.
Copies have white streaks.	Clean the corona wire. See page 47.
Copy image density is uneven.	Clean the corona wire. See page 47.

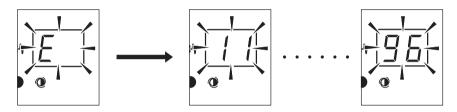
Problem	Action
Copies are blank.	Is the original placed face down on the exposure glass or face up on the document feeder?
	Set the original properly. See page 10, 24 or 26.
	Is the charge corona unit inserted all the way in?
	Push the charge corona unit in all the way in. See page 47.
Misfeeds occur frequently.	Is the right kind of paper in the paper tray?
	Paper size and weight must be within the minimum and maximum standards set for this copier.
	Is folded, wrinkled, damp,or curled paper in the paper tray?
	Always use dry, undamaged paper.
	Is the paper properly set in the paper tray?
	Always load paper correctly.
	Are there any pieces of misfed paper or other foreign objects in the machine?
	Make sure that the paper path is completely clear of paper and other material after a misfeed.

 $[\]hfill \square$ If you cannot correct the problem by taking the above actions, please contact your service representative.

Service Codes

The copier's microcomputer constantly monitors mechanical and electrical functions. If a malfunction occurs, **E** and service code numbers will blink in the copy counter. If that happens, turn the main switch off, wait a few seconds, and then turn it on. If the service code appears again, call your service representative.

When the used toner tank is full, **E** and **70** will start to blink in the copy counter. Only 250 copies can be made after this. Call your service representative.

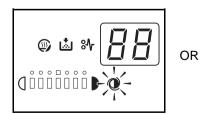


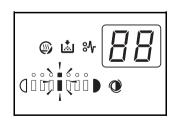
"E" blinks.

Service code number blinks.

Others

If either the **Auto Image Density** indicator or the **Manual Image Density** indicator starts to blink, turn the main switch off and on again. Call your service representative and explain the problem if this condition re-occurs. (However, you can still make copies.)





*Illustrations show type 1.

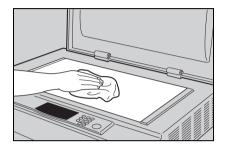
DAILY MAINTENANCE

To maintain high copy quality, clean the following parts and units regularly.

Copier

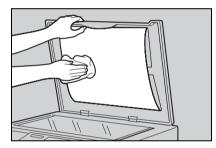
Exposure Glass

Clean the exposure glass with a damp cloth and wipe it with a dry cloth.



Platen Cover

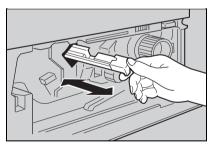
Clean the platen cover with a damp cloth and wipe it with a dry cloth.



Corona Wire

Do the following when white streaks appear on the copy or when image density becomes uneven.

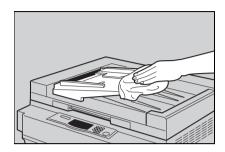
- Open the front cover.
- Pull the corona wire out fully extended, then push it back in until it locks. Repeat the above procedure several times.
- Push the corona unit back in. Make sure it locks into place.
- Close the front cover.



Document Feeder

Feed-in Unit

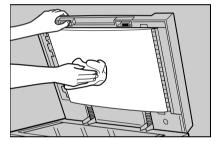
Clean the original table and original guides with a damp cloth. Use a weak cleaning solution if stains do not come off.



Belt

Lift the document feeder. Clean the belt with a damp cloth and wipe it with a dry cloth.

If stains do not come off, use alcohol.



DO'S AND DON'TS

Copier

General operation

After pulling out the paper tray, remove any paper that remains in the paper feed entrance.

When making duplex copies

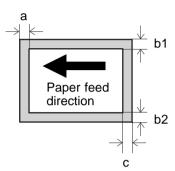
- When making duplex copies, do not load paper in the paper tray to copy on the second side. Use the bypass feed entrance.
- Do not use copy paper that has been copied with other machines.
- Copies may be slightly curled after coming out of the copier. So, if necessary, uncurl the paper before inserting it in the bypass feed entrance to make a duplex copy.
- If copy paper is creased when copying on the second side, change the paper direction.

Document Feeder

- Do not press down on or hold originals after inserting them in the feed unit.
- Do not lift the document feeder unit until the last original has been completely fed out to the original stacker. If you do, an original misfeed might occur.
- When you are not using the document feeder, do not insert anything in the feeder entrance.
- Make sure to use the top unit stand whenever opening the top unit.
- Correct any curl, fold, or crease in the originals before setting.
- □ Before setting the originals, confirm that no previous originals remain on the exposure glass.
- Do not set originals of different sizes at the same time.

USER REMARKS

- □ To avoid problems caused by curled copies, try turning over the paper stack in the paper tray. If there is no improvement, change to copy paper with less curl.
- As a default setting, narrow margins on all four sides will not be copied as shown illustration.



$$a = 2.5 \pm 1.5 \text{ mm}$$

$$b1 = b2 = 2 \pm 2 \text{ mm}$$

$$b1 + b2 \le 4$$

SPECIFICATIONS

Main Copier

Configuration: Desktop

Copy Process: Dry electrostatic transfer system

Originals: Sheet/Book

Original Size: Type 1 Maximum: B4 □, 10" x 14" □

Type 2 Maximum: A3 □, 11" x 17" □

Original weight: Maximum total weight that can be set at a time:

10 kg, 22.0 lb

Copy Paper Size : Maximum: B4 □, 10" x 14" □

Minimum: A5 □, 51/2" x 81/2" □

Copy Paper Weight: Paper tray feed: 64 ~ 90 g/m² (17 ~ 24 lb)

Bypass feed: $52 \sim 105 \text{ g/m}^2 (14 \sim 28 \text{ lb})$

Reproduction Ratios (Type 2 only):

2 Enlargement and 3 Reduction

	Metric version	Inch version
Enlargement	141% 122%	129% 121%
Full size	100%	100%
Reduction	93% 82% 71%	93% 74% 65%

Zoom (Type 2 only): From 61% to 141% in 1% steps

Copying Speed: 13 copies/minute (A4 □ , 81/2" x 11" □)

10 copies/minute (B4 □ , 81/2" x 14" □)

Warm-up Time: Less than 30 seconds (at 20°C or 68°F)

First copy Time: Less than 9 seconds

(A4 \square , 81/2" x 11" \square , feeding from the paper tray)

SPECIFICATIONS

Copy Number Input: Number kevs. 1 to 99

(count up or count down)

Manual Image Density

Selection:

7 steps

Automatic Reset: 1 minute standard setting; can also be set to 3

minutes or no auto reset.

Paper tray: 250 sheets (80 g/m², 20 lb) or less than 28 mm, 1.1" Paper Capacity:

Bypass feed entrance: 1 sheet

Toner Replenishment: Cartridge exchange (320g/cartridge)

100 sheets (80 g/m², 20 lb) **Copy Tray Capacity:**

Power Source: See the inside of the front cover of this manual.

Power Consumption:

	Copier only	Copier with document feeder
Maximum	1.4 kVA	1.5 kVA
Copy cycle condition	0.81 kVA	0.86 kVA
Warm up condition	0.62 kVA	0.64 kVA
Stand by condition	0.16 kVA	0.18 kVA

Noise Emission:

Sound power level (The measurements are made according to ISO 7779.)

	Copier only	Copier with document feeder
Copy cycle condition	less than 64 dB	less than 68 dB
Stand by condition	less than 40 dB	less than 40 dB

Sound pressure level (The measurements are made according to ISO 7779 at the

operator position.)

	Copier only	Copier with document feeder	
Copy cycle condition	less than 58 dB	less than 62 dB	

Dimensions:

	Width	Depth	Height
Copier with platen cover and copy tray	713 mm	592 mm	400 mm
	(28.1")	(23.3")	(15.7")
Copier with document feeder and copy tray	713 mm	592 mm	463 mm
	(28.1")	(23.3")	(18.2")

Weight: Copier with platen cover and copy tray:

Approximately 43 kg (94.8 lb)
Copier with document feeder and copy tray: Approximately 50 kg (110.2 lb)

Optional Equipment: Document feeder

Key counter

☐ Specifications are subject to change without notice.

Document Feeder (Option)

Original Feed: Automatic document feed - ADF mode

Semi-automatic document feed - SADF mode

Original Size, Weight and Tray capacity:

		-		
Original size	A3 🗁, A4 🗗 81/2" x 14" 🖵	,A5 □ ,B ² ,81/2" x 11" □	4 □, B5 □, , 51/2" x 81/2'	11" x 17" □,
Original weight	52.8 g/m ² , 14 lb	64.0 g/m ² , 17 lb	81.4 g/m ² , 22 lb	105 g/m ² , 28 lb
Maximum number of originals to be set	30 sheets	30 sheets	30 sheets	20 sheets

Original Set: Face up, First sheet on top

Original Transport : One flat belt

Power Consumption: 20 W (average)

Weight: Approximately 7.0 kg, 15.4 lb

Dimensions 590 x 443 x 87.5 mm, 23.0" x 17.2" x 3.4"

 $(W \times D \times H)$:

[☐] Specifications are subject to change without notice.

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