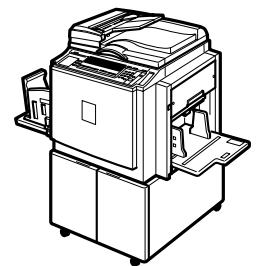

CP6244
LDD145
JP4500
3560DNP

Operating Instructions



- 1** Operation
- 2** Optional Functions
- 3** User Tools
- 4** Replenishing Supplies
- 5** Troubleshooting
- 6** Remarks
- 7** Specifications

Type for CP6244/LDD145/JP4500/3560DNP

Printed in Japan

EN  C249-8697

Introduction

This manual describes detailed instructions on the operation and notes about the use of this machine. To get maximum versatility from this machine all operators are requested to read this manual carefully and follow the instructions. Please keep this manual in a handy place near the machine.

Please read the Safety Information before using this machine. It contains important information related to USER SAFETY and PREVENTING EQUIPMENT PROBLEMS.



Notes:

Some illustrations in this manual might be slightly different from the machine.

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



The model names of the machines do not appear in the following pages. Check the type of your machine before reading this manual.

- LG drum: CP6244, LDD145, JP4500, 3560DNP
- A3 drum: Not Available

Certain types might 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 inch version.

For good print quality, the supplier recommends that you use genuine masters and ink from the supplier.

The supplier shall not be responsible for any damage or expense that might result from the use of parts other than genuine parts from the supplier with your office products.

Power Source

120V, 60Hz, 2.7A or more

Please be sure to connect the power cord to a power source as above. For details about power source, see p.121 "Power Connection".

Note to users in the United States of America

Notice:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

Reorient or relocate the receiving antenna.

Increase the separation between the equipment and receiver.

Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

Consult the dealer or an experienced radio /TV technician for help.

Warning

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note to users in Canada

Note:

This Class B digital apparatus complies with Canadian ICES-003.

Remarque concernant les utilisateurs au Canada

Avertissement:

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

In accordance with IEC 60417, this machine uses the following symbols for the main switch:

| means POWER ON.

○ means POWER OFF.

Introduction

This manual describes detailed instructions on the operation and notes about the use of this machine. To get maximum versatility from this machine all operators are requested to read this manual carefully and follow the instructions. Please keep this manual in a handy place near the machine.

Notes:

Some illustrations in this manual might be slightly different from the machine.

Certain options might 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 inch version.

For good copy quality, Standard recommends that you use genuine Standard masters and ink.

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

Power Source

120V, 60Hz, 2.7A or more

Please be sure to connect the power cord to a power source as above. For details about power source, see p.121 "Power Connection".

Note to users in the United States of America

Notice:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

Reorient or relocate the receiving antenna.

Increase the separation between the equipment and receiver.

Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

Consult the dealer or an experienced radio /TV technician for help.

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In accordance with IEC 60417, this machine uses the following symbols for the main switch:

| means POWER ON.

○ means POWER OFF.

Safety Information

When using this machine, the following safety precautions should always be followed.

Safety During Operation

In this manual, the following important symbols are used:

⚠ WARNING:

Indicates a potentially hazardous situation which, if instructions are not followed, could result in death or serious injury.

⚠ CAUTION:

Indicates a potentially hazardous situation which, if instructions are not followed, may result in minor or moderate injury or damage to property.

⚠ WARNING:

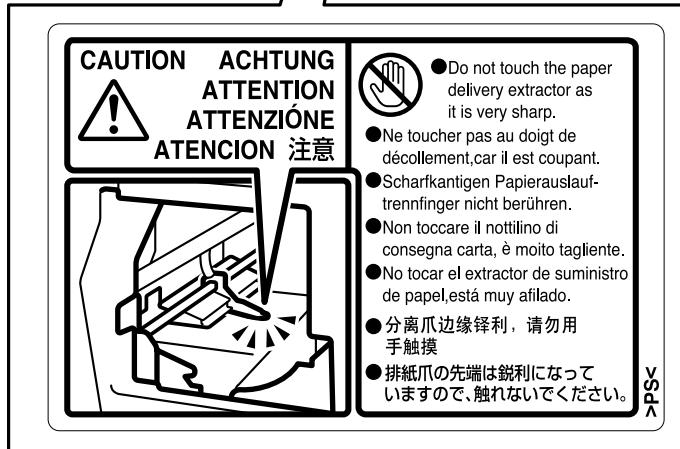
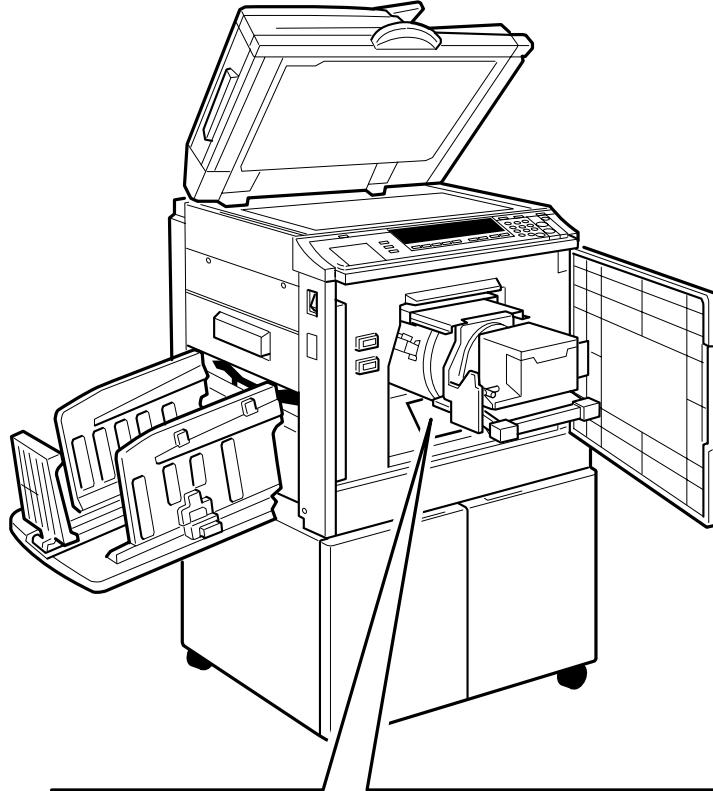
- *Connect the power cord directly into a wall outlet and never use an extension cord.*
- *Disconnect the power plug (by pulling the plug, not the cable) if the power cable or plug becomes frayed or otherwise damaged.*
- *To avoid hazardous electric shock, do not remove any covers or screws other than those specified in this manual.*
- *Turn off the power and disconnect the power plug (by pulling the plug, not the cable) if any of the following occurs:*
 - *You spill something into the machine.*
 - *You suspect that your machine needs service or repair.*
 - *The external housing of your machine has been damaged.*

⚠ CAUTION:

- *Protect the machine from dampness or wet weather, such as rain, snow.*
- *Unplug the power cord from the wall outlet before you move the machine. While moving the machine, you should take care that the power cord will not be damaged under the machine.*
- *When you disconnect the power plug from the wall outlet, always pull the plug (not the cable).*
- *Do not allow paper clips, staples, or other small metallic objects to fall inside the machine.*
- *For environmental reasons, do not dispose of the machine or expended supply waste at household waste collection points. Disposal can take place at an authorized dealer.*
- *Be careful not to cut yourself on any sharp edges when you reach inside the machine to remove misfed sheets of paper or masters.*
- *Our products are engineered to meet high standards of quality and functionality, and we recommend that you use only the expendable supplies available at an authorized dealer.*

Position of Label for CAUTION

This machine has a  CAUTION label at the position indicated below. For your own safety, always adhere to the instructions on the label.



ZJ1VH060E

How to Read This Manual

Symbols

In this manual, the following symbols are used:

⚠ WARNING:

This symbol indicates a potentially hazardous situation that might result in death or serious injury when you misuse the machine without following the instructions under this symbol. Be sure to read the instructions, all of which are described in the Safety Information section.

⚠ CAUTION:

This symbol indicates a potentially hazardous situation that might result in minor or moderate injury or property damage that does not involve personal injury when you misuse the machine without following the instructions under this symbol. Be sure to read the instructions, all of which are described in the Safety Information section.

* The statements above are notes for your safety.

❗ Important

If this instruction is not followed, paper might be misfed, originals might be damaged, or data might be lost. Be sure to read this.

📋 Preparation

This symbol indicates the prior knowledge or preparations required before operating the machine.

📝 Note

This symbol indicates precautions for operation, or actions to take after misoperation.

❗ Limitation

This symbol indicates numerical limits, functions that cannot be used together, or conditions in which a particular function cannot be used.

🔗 Reference

This symbol indicates a reference.

[]

Keys that appear on the machine's display panel.

[]

Keys built into the machine's control panel.

What You Can Do with this Machine

Below is a quick summary of this machine's features and where to look for more information.

◆ Standard Printing

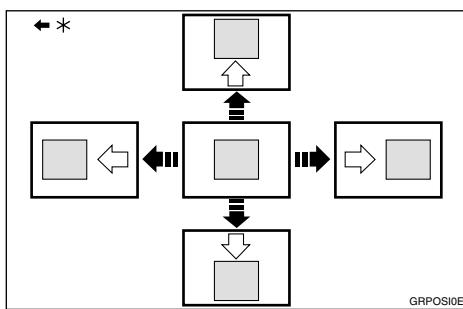
See p.16 "Standard Printing".

◆ Saving Energy

See p.19 "Energy Saver Mode".

◆ Adjusting the Print Image Position

See p.21 "Adjusting the Print Image Position".



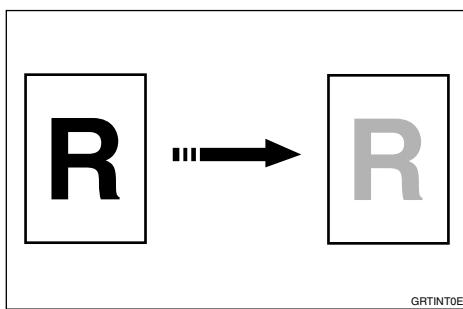
* Paper feed direction

◆ Adjusting the Print Image Density

See p.23 "Adjusting the Print Image Density".

◆ Making Halftone Prints

See p.24 "Tint Mode".

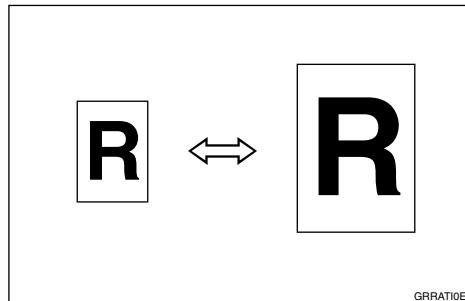


◆ Changing the Printing Speed

See p.25 "Changing the Printing Speed".

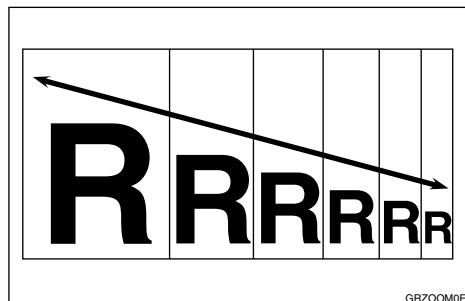
◆ Reducing and Enlarging by Preset Ratios

See p.27 "Preset Reduce/Enlarge".



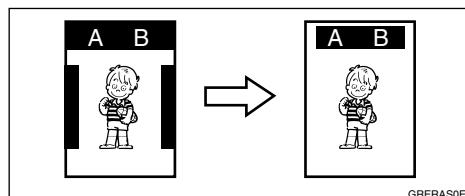
◆ Fine-tuning the Reproduction Ratio

See p.29 "Zoom".



◆ Erasing Margins

See p.30 "Edge Erase".



◆ Printing on Thick or Thin Paper

See p.31 "Printing on Thick or Thin Paper".

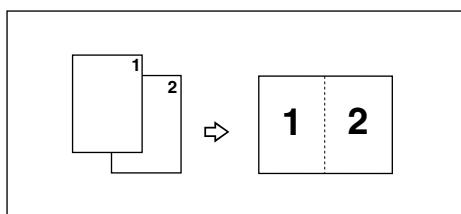
◆ Selecting the Type of Original

See p.32 "Type of Original".

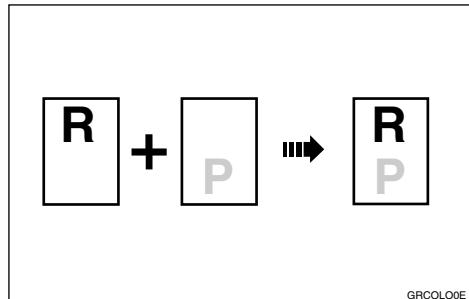
◆ Saving Ink

See p.33 "Economy Mode".

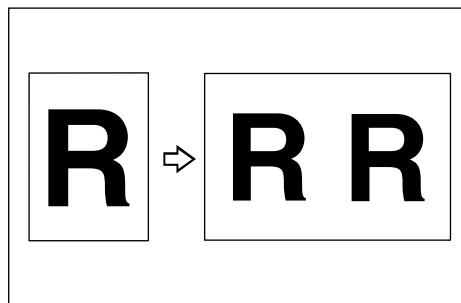
- ❖ **Making Masters and Prints at One Go**
See p.34 "Auto Cycle".
- ❖ **Memory/Class Modes**
See p.35 "Memory/Class".
- ❖ **Combining Two Originals onto One Print**
See p.49 "Combine".



- ❖ **Making Color Prints**
See p.67 "Making Color Prints".
- ❖ **Printing in Two Colors**
See p.68 "Printing in Two Colors".



- ❖ **Repeating Images**
See p.51 "Repeat".

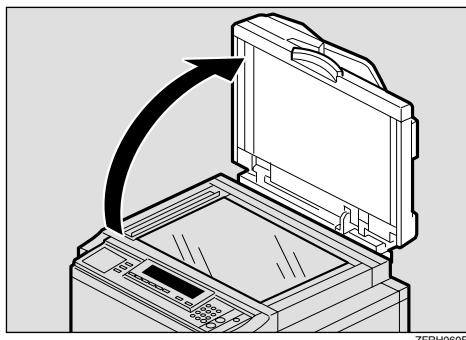


- ❖ **Skip Feed Printing**
See p.52 "Skip Feed Printing".
- ❖ **Storing Print Settings**
See p.53 "Program".
- ❖ **Printing Confidential Documents**
See p.55 "Security Mode".
- ❖ **Entering a User Code to Use the Machine**
See p.56 "Entering a User Code to Use the Machine".
- ❖ **Restoring Image Quality**
See p.57 "Quality Start Mode".
- ❖ **On Line Printing**
See p.58 "On Line Printing".

Making Prints

This section explains the basic procedure for making prints.

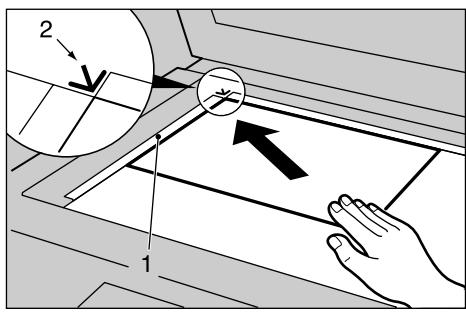
1 Lift the exposure glass cover.



Reference

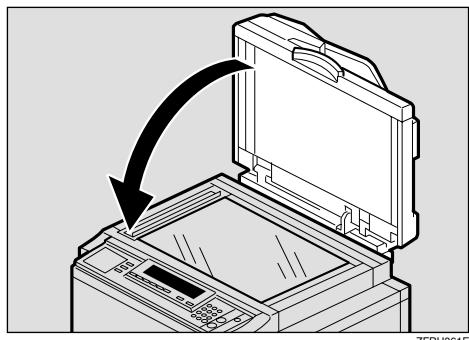
For details on how to place originals in the optional document feeder, see p.62 "Placing Originals in the Document Feeder".

2 Place the original face down on the exposure glass. The original should be aligned with the reference mark and the left corner scale.



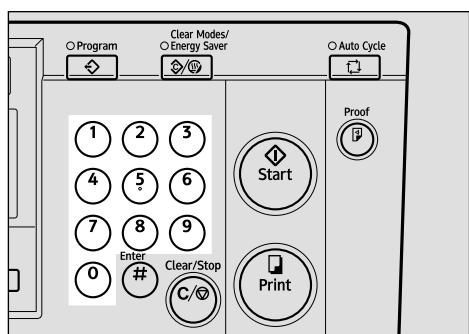
- ① Left corner scale
- ② Reference mark

3 Lower the exposure glass cover.

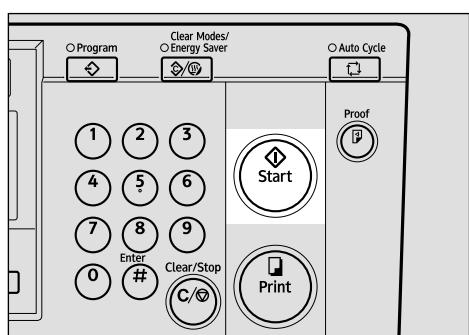


4 Specify your print settings.

5 Enter the number of prints with the number keys.



6 Press the [Start] key.

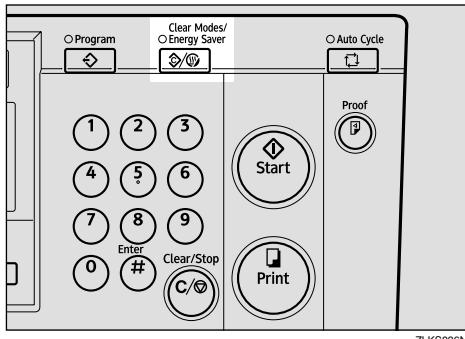


Printing starts automatically after the trial print.

 **Note**

If you wish to check the image before printing, press the **[Auto Cycle]** key before pressing the **[Start]** key, in order to disable Auto Cycle mode. See p.17 "When Auto Cycle mode is off".

7 When the print job is finished, press the **[Clear Modes/Energy Saver]** key.



Your print settings are cleared and the machine returns to its initial condition.

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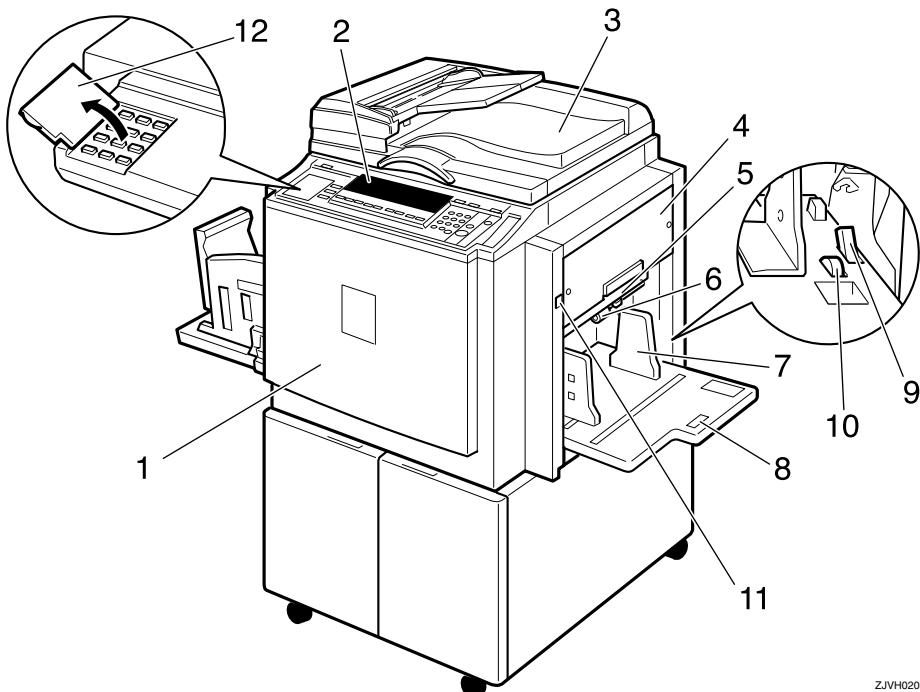
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Machine Exterior



1. Front door

Open for access to the inside of the machine.

2. Control panel

Operator controls and indicators are located here. See p.4 "Control Panel".

3. Exposure glass cover or document feeder (option)

When using the exposure glass, lower its cover over an original before master making.

When using the optional document feeder, place a stack of originals in the feeder.

4. Master tray

Open to replace the master roll or to clear a master misfeed.

5. Lower master tray

Pull out this tray to clear a master misfeed.

6. Feed roller pressure lever

Use to adjust the contact pressure of the paper feed roller according to paper thickness.

7. Paper feed side plates

Use to prevent paper skew.

8. Paper feed tray

Set paper on this tray for printing.

9. Paper feed side plate lock lever

Use to lock or unlock the paper feed side plates.

10. Side tray fine adjusting dial

Use to shift the paper feed tray sideways.

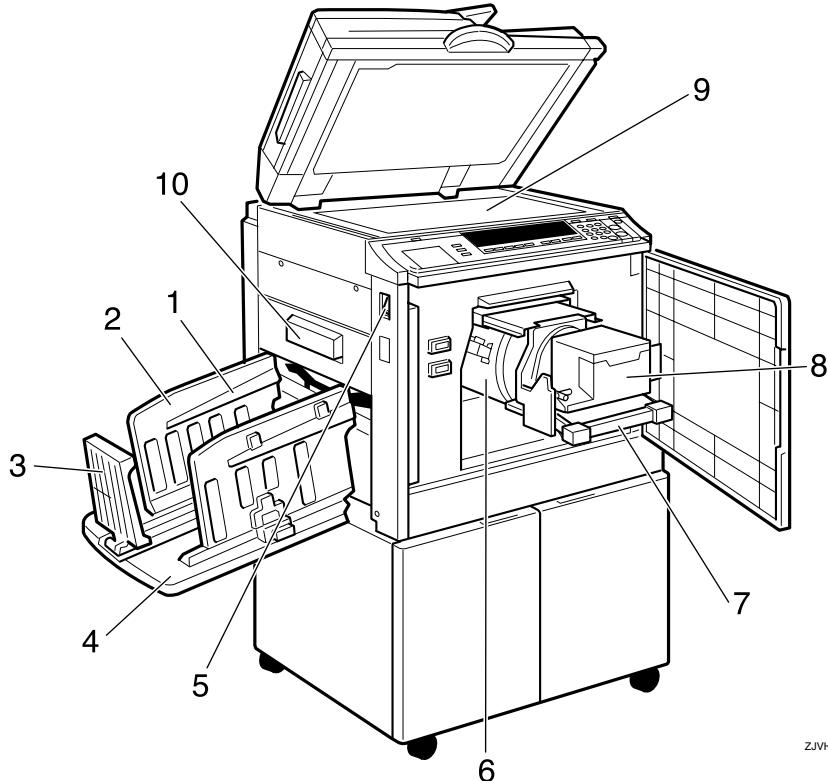
11. Paper feed tray down key

Press to lower the paper feed tray.

12. Behind cover

Flip up to use the keys underneath.

Machine Interior



1. Paper alignment wings

Lift or lower the wings according to the type of paper used.

2. Paper delivery side plates

Use to align the prints on the paper delivery tray.

3. Paper delivery end plate

Use to align the leading edge of the prints.

4. Paper delivery tray

Completed prints are delivered here.

5. Main switch

Use to turn the power on or off.

6. Drum unit

The master is wrapped around this unit.

7. Drum unit lock lever

Lift to unlock and pull out the drum unit.

8. Ink holder

Set the ink cartridge in this holder.

9. Exposure glass

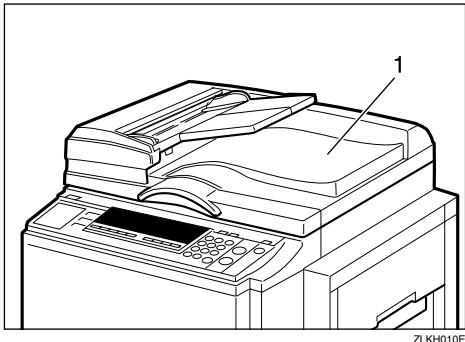
Position originals face down on the exposure glass.

10. Master eject box

Used masters are stored here.

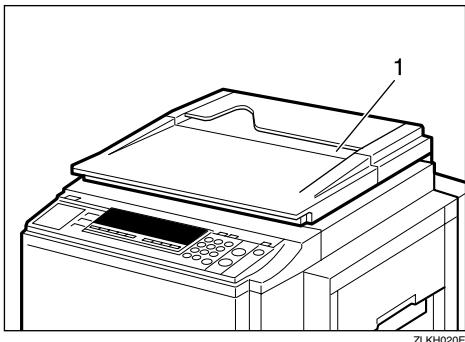
Options

❖ Document feeder



1. Document feeder

❖ Exposure glass cover



1. Exposure glass cover

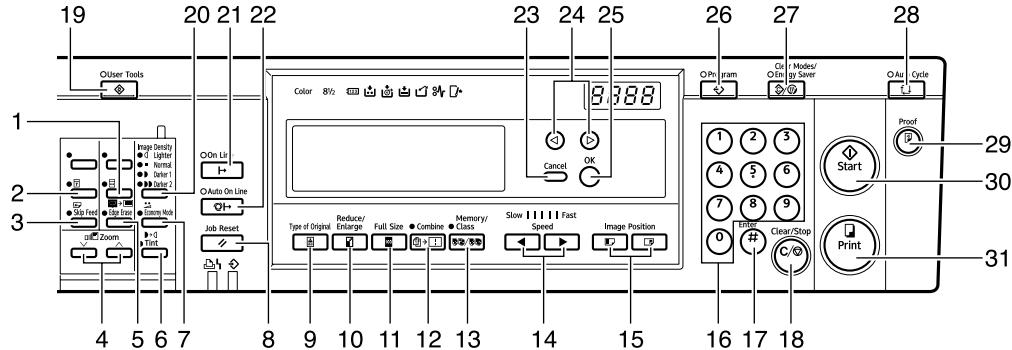
Note

Other options:

- A3, 11" × 17" Color Drum
- A4, 8¹/₂" × 17" Black Drum
- Tape Dispenser
- Key Counter
- PC Controller

Control Panel

Keys



1. **【Quality Start】 key**

Press to have the machine perform a few idle spins before printing. See p.57 "Quality Start Mode".

2. **【Security】 key**

Press to make prints from confidential documents. See p.55 "Security Mode".

3. **【Skip Feed】 key**

Press to select skip feed printing. See p.52 "Skip Feed Printing".

4. **【√】 and **【^】 keys (Zoom keys)****

Press to fine-tune the reproduction ratio. See p.29 "Zoom".

5. **【Edge Erase】 key**

Press to select erase margins on the prints. See p.30 "Edge Erase".

6. **【Tint】 key**

Press to make halftone prints. See p.24 "Tint Mode".

7. **【Economy Mode】 key**

Press to save ink. See p.33 "Economy Mode".

8. **【Job Reset】 key**

Press to stop the optional PC controller.

9. **【Type of Original】 key**

Press to select Letter, Photo or Letter/Photo mode. See p.32 "Type of Original".

10. **【Reduce/Enlarge】 key**

Press to reduce or enlarge the image by preset ratios. See p.27 "Preset Reduce/Enlarge".

11. **【Full Size】 key**

Press to make full size prints.

12. **【Combine/Repeat】 key**

Press to combine two originals onto one print. See p.49 "Combine".

Press to repeat the image of an original on one print. See p.51 "Repeat".

13. **【Memory/Class】 key**

Press to select Memory or Class modes. See p.35 "Memory/Class".

14. **【◀】 and **【▶】 keys (Speed keys)****

Press to adjust the printing speed. See p.25 "Changing the Printing Speed".

15. **【Image Position】 key**

Press to shift the image forwards or backwards. See p.21 "Adjusting the Print Image Position".

16. Number keys

Press to enter the desired number of prints as well as data for certain modes.

17. [#] key

Press to confirm an entry that you have made.

18. [Clear/Stop] key

Press to cancel a number that you have entered or to stop printing.

19. [User Tools] key

Press to change the default settings to suit your requirements. See p.71 "User Tools".

20. [Image Density] key

Press to make prints darker or lighter. See p.23 "Adjusting the Print Image Density".

21. [On Line] key

See p.58 "On Line Printing".

22. [Auto On Line] key

See p.59 "Auto On Line".

23. [Cancel] key

Press to cancel a selection or an entry, and to return to the previous display.

24. [\blacktriangleleft][\triangleright] keys

Press to select an item on the panel display.

25. [OK] key

Press to confirm a selection or an entry.

26. [Program] key

Press to store print settings, or to recall stored print settings. See p.53 "Program".

27. [Clear Modes/Energy Saver] key

- **Clear Modes**

Press to clear previously entered print settings.

- **Energy Saver**

Press to switch to and from Energy Saver mode. See p.19 "Energy Saver Mode".

28. [Auto Cycle] key

Press to make masters and prints in a single operation. See p.34 "Auto Cycle".

29. [Proof] key

Press to make a proof print.

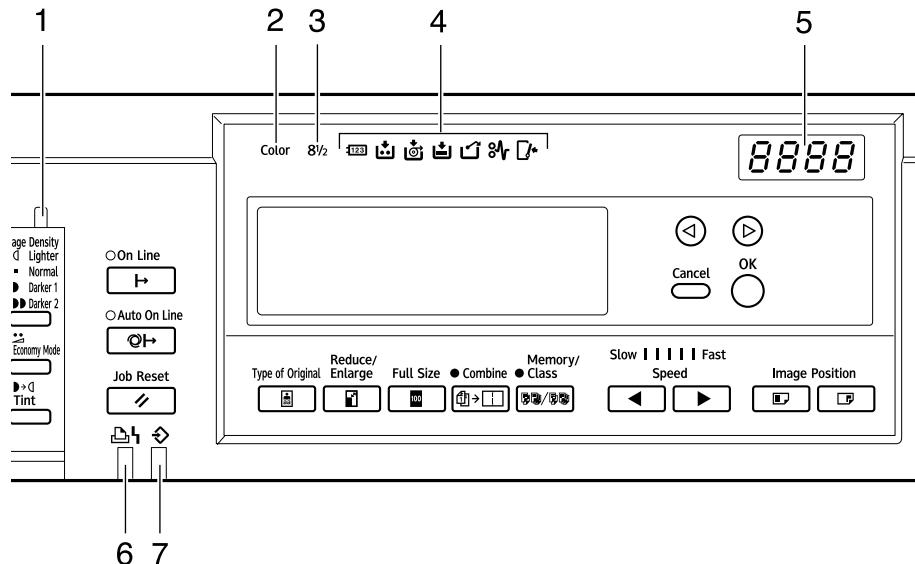
30. [Start] key

Press to make a master.

31. [Print] key

Press to start printing.

Indicators



ZLKS020N

1. Special feature indicator

Lets you know when one or more of the keys under the behind cover has been selected.

2. Color drum indicator

Lets you know that a color drum is installed, and that the machine is ready for color printing.

3. 8 1/2" drum indicator

Lets you know that an A4, 8 1/2" x 17" drum is installed.

4. Monitor indicators

Let you know the status of the machine.

Set Key Counter indicator

See p.108 "When Other Indicators Light".

Add Ink indicator

See p.85 "When the Add Ink Indicator () Lights".

Master End indicator

See p.88 "When the Master End Indicator () Lights".

See p.106 "When the Master End Indicator () Lights and a Message is Displayed".

Master Eject indicator

See p.107 "When the Master Eject Indicator () Lights".

Open Cover/Unit indicator

See p.105 "When the Open Cover/Unit Indicator () Lights and a Message is Displayed".

Misfeed indicator

See p.94 " Clearing Misfeeds".

Load Paper indicator

See p.83 "Replenishing Paper".

5. Counter

Shows the number of prints entered. While printing, it shows the remainder that is to be printed.

6. Printer error indicator

7. Data In indicator

Panel Display

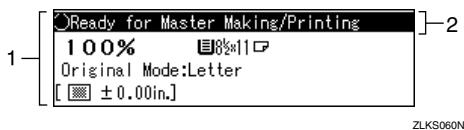
The panel display shows the machine status, error messages, and function menus.

Important

- Do not subject the panel display to strong impact or a force equivalent to 30N or more, otherwise it could be damaged.

Note

- When you select an item on the panel display, it is highlighted (e.g. **100**).



1. Menu for the function selected

2. Machine status or messages

❖ Common keys

【OK】 key	Press to confirm a selection or an entry.
【Cancel】 key	Press to cancel a selection or entry, and to return to the previous display.
【◀】【▶】 keys	Press to select items on the panel display.

Panel Display Layout

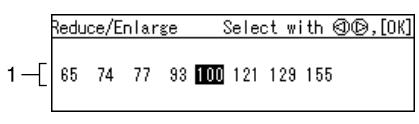
The basic elements of the panel display are explained below. Understanding their meaning helps you use this machine's features quickly and easily.

❖ Sample display when selecting the **【Reduce/Enlarge】** key



1. Machine status or messages

When the **【Reduce/Enlarge】** key is pressed, the following display is shown.



1. Functions and settings available:

- Press the **【◀】【▶】** keys to select an item.
- Press the **【OK】** key to confirm your settings.
- Press the **【Cancel】** key to return to the previous display.

1. Operation

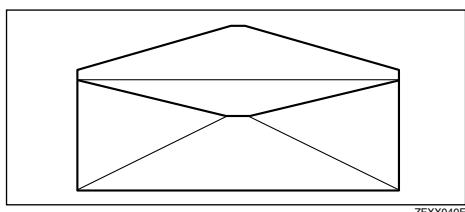
Print Paper

The following limitations apply:

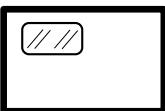
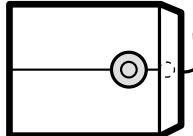
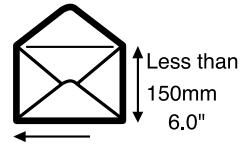
	Paper Size		Paper Weight
	Metric	Inch	
Paper feed tray	A3 □, B4 JIS (Japanese Industrial Standard) □, A4 □ □, B5 JIS □ □, A5 □, B6 JIS □, A6 □, Others (Vertical: 70 - 297mm, Horizontal: 148 - 432mm)	11" × 17" □, 8 ¹ / ₂ " × 14" □, 8 ¹ / ₂ " × 11" □ □, 5 ¹ / ₂ " × 8 ¹ / ₂ " □ □, Others (Vertical: 2.76" - 11.7", Horizontal: 5.83" - 17")	47.1 - 209.3g/m ² , 12.5 - 55.6 lb

The following types of paper are not recommended for this machine:

- Roughly-cut paper
- Paper of different thickness in the same stack
- Envelopes heavier than 85g/m², 22 lb.
- Folded, curled, creased, or damaged paper
- Damp paper
- Torn paper
- Slippery paper
- Rough paper
- Paper with any kind of coating (such as carbon)
- Short grain paper
- Thin and flimsy paper
- Paper that is prone to generate a lot of paper dust
- Grained paper loaded with the direction of the grain perpendicular to the feed direction
- Certain types of long thin envelopes e.g. international mail envelopes



- The following types of envelopes:

Envelopes with glue or gum	Envelopes with windows	Envelopes with round tags	Open envelopes
			 Less than 150mm 6.0" Paper feed direction

If you print on rough grained paper, the copy image might be blurred.

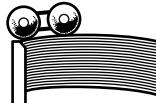
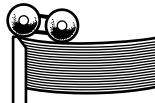
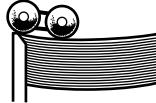
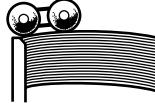
You can use A3 (297 × 420mm) or 11" × 17" originals or printing paper. However, use the Reduce mode to ensure that the entire image is printed. This is because the maximum print areas are as follows:

- Metric version: 290 × 410mm, 11.4" × 16.1"
- Inch version: 290 × 420mm, 11.4" × 16.5"

When you use A3, 11" × 17" and 209.3g/m², 55.6 lb paper, slow the printing speed down to Setting 1, 2 or 3.

Important

Correct curls in the paper before placing it in the machine. When you are unable to correct the paper curl, stack the paper with the curl either face up or face down as shown below. If paper is curled, it might wrap around the drum or cause the prints to be stained.

	Right	Wrong
Thin Paper		
Thick Paper		

TPEY990E

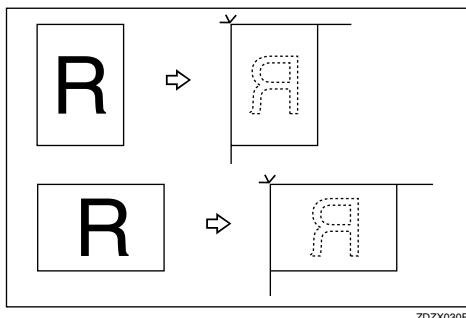
Originals

The maximum original size that you can place on the exposure glass is 304.8 × 432mm, 12" × 17".

If your originals have bold letters or solid images at the leading edges, you might get prints with dirty edges. In this case, place the original face down on the exposure glass, with its widest margin toward the paper delivery tray.

Place originals on the exposure glass only after the ink or correction fluid on them is completely dry. Not taking this precaution could stain the exposure glass and cause the stains to be printed.

As a general rule, place originals on the exposure glass as shown below.



The first 5mm, 0.2", of the leading edge cannot be printed. When using the optional document feeder, the first 5mm, 0.2", of the leading edge as well as the last 2mm, 0.08", of the trailing edge cannot be printed.

Original	Print

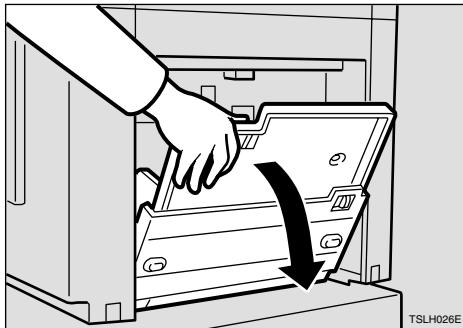
$a = 5\text{mm, } 0.2"$

Printing Preparations

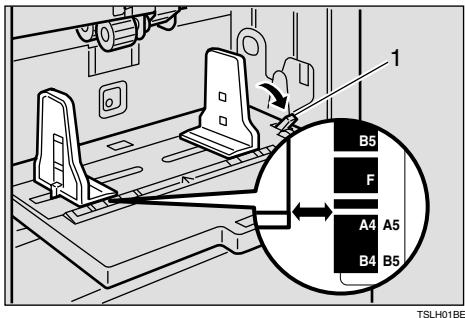
1

Loading Paper

1 Gently open the paper feed tray.

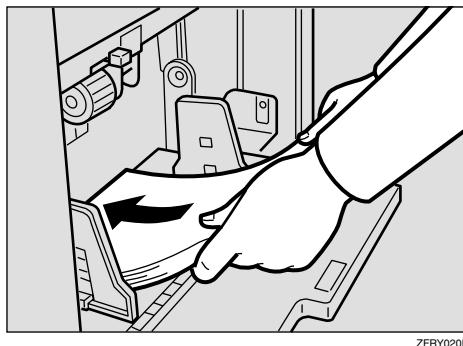


2 Release the paper feed side plate lock lever and adjust the side plates to match the paper size.

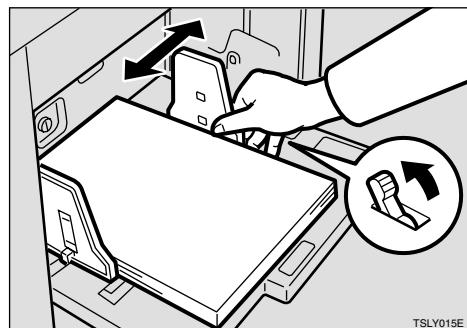


1: Paper feed side plate lock lever

3 Load paper onto the paper feed tray.

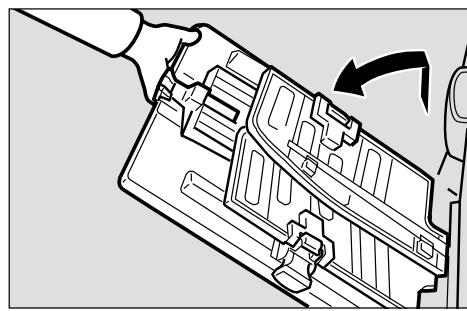


4 Make sure that the paper feed side plates touch the paper lightly. Shift the lock lever back to its original position.

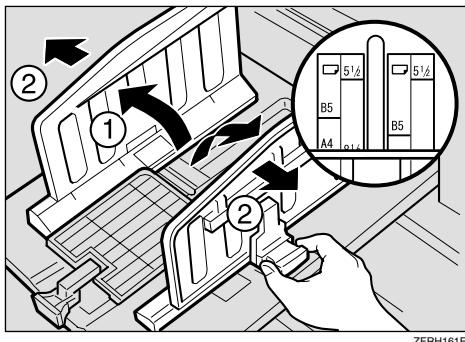


Setting Up the Paper Delivery Tray

1 Raise the paper delivery tray slightly before lowering it down gently.

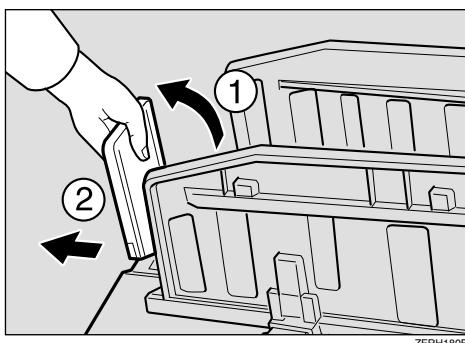


2 Lift the paper delivery side plates and adjust them to match the paper size.



ZFRH161E

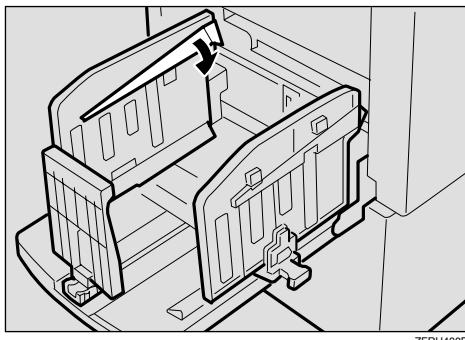
3 Lift the paper delivery end plate and adjust it to match the paper size.



ZFRH180E

When printing on 81.4 g/m², 21.6 lb or thicker paper

1 Lower the paper alignment wings.

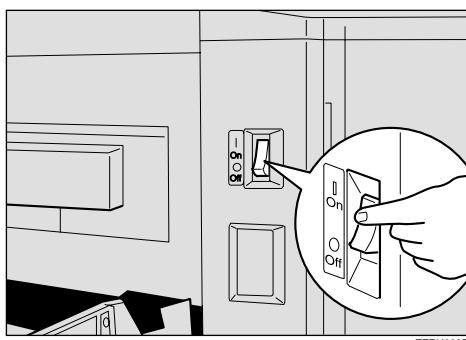


ZFRH480E

Note

- Depending on the type of paper that you are using, you might not be able to load up to full capacity (1,000 sheets) when the wings are lifted.
- Lift the paper alignment wings when B5 JIS or A4 prints are delivered curled up.

4 Turn on the main switch.



ZFRH090E

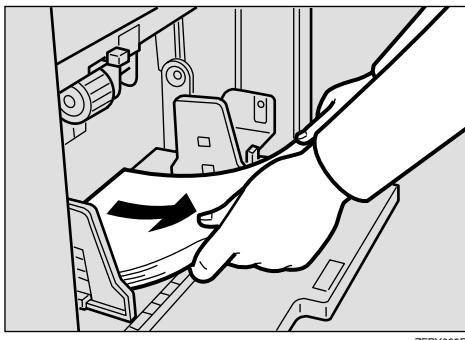
Reference

When the prints are not delivered in a neat stack, see p.109 "When the Prints are Thrown Over the Paper Delivery Tray".

After Printing

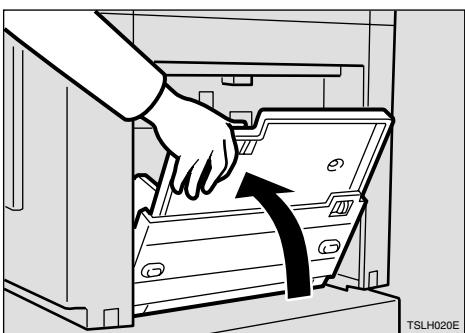
1

1 Remove the paper from the paper feed tray.

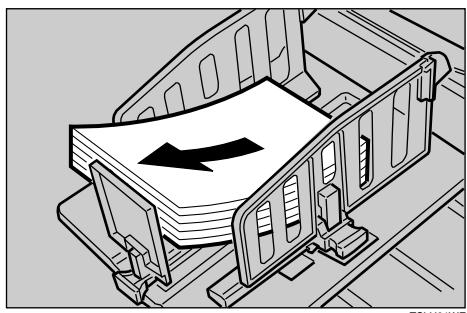


The paper feed tray will lower.

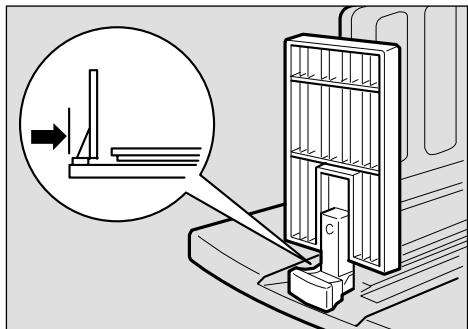
2 Gently close the paper feed tray.



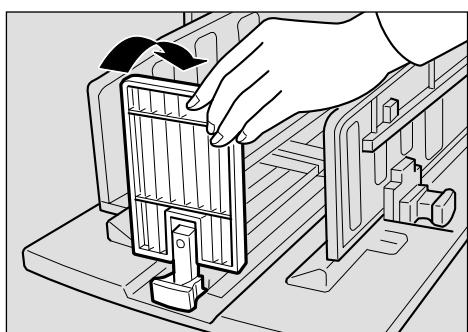
3 Remove the prints from the paper delivery tray.



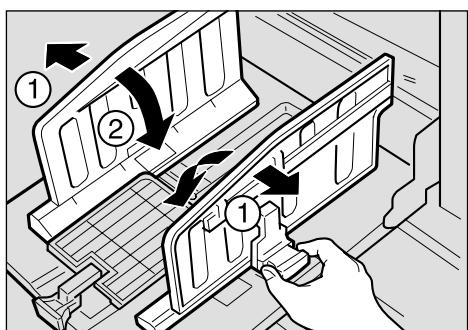
4 Move the paper delivery end plate until its handle is flush with the end of the tray.



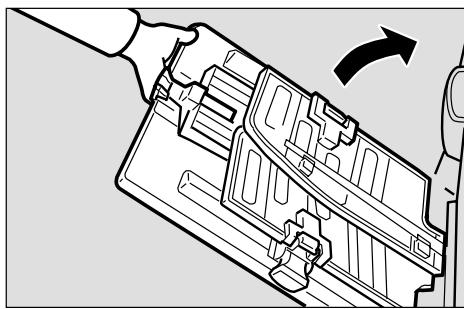
5 Lower the paper delivery end plate.



6 Move the side plates to each side, and then lower them.



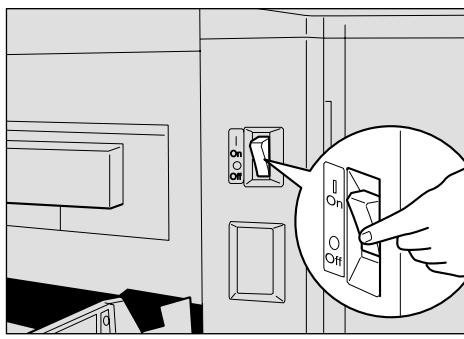
7 Close the paper delivery tray.



ZBHH051E

1

8 Turn off the main switch.



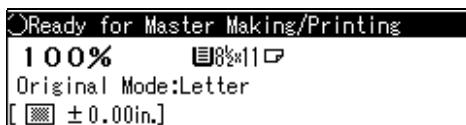
ZFRH100E

Standard Printing

This section explains the basic procedure for making prints. The procedure differs depending on whether or not the machine is in Auto Cycle mode.

With Auto Cycle mode, you can process masters and make prints in a single operation. The default is On, but you can change the setting using the user tools. To do so, see “1 Auto Cycle ON/OFF” on p.75 “4 Mode Setting”.

1 Check that the machine is ready for printing.



2 If User Code mode has been set to “On”, enter your user code with the number keys, and then press the [OK] key.

Reference

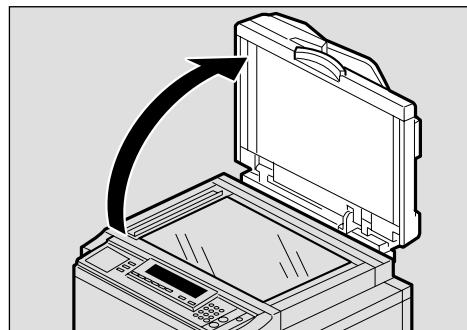
See p.56 “Entering a User Code to Use the Machine”.

3 Make sure that previous print settings have been cleared.

Note

- To clear previous print settings, press the **[Clear Modes/Energy Saver]** key.

4 Lift the exposure glass cover.

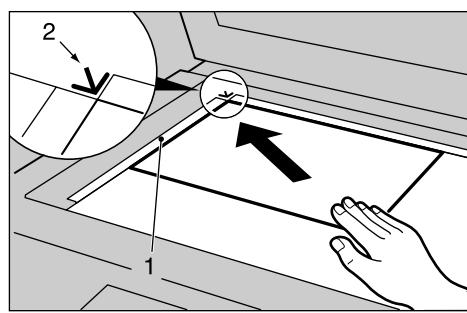


ZFRH060E

Reference

For details on how to place originals in the optional document feeder, see p.62 “Placing Originals in the Document Feeder”.

5 Place the original face down on the exposure glass. The original should be aligned with the reference mark and the left corner scale.

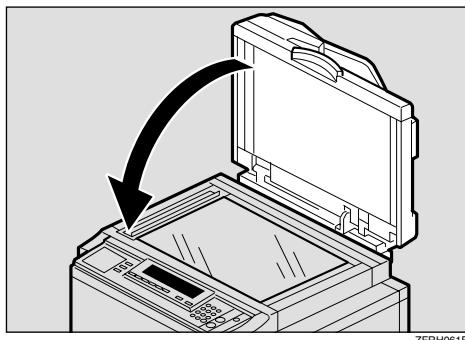


ZGKH040E

① Left corner scale

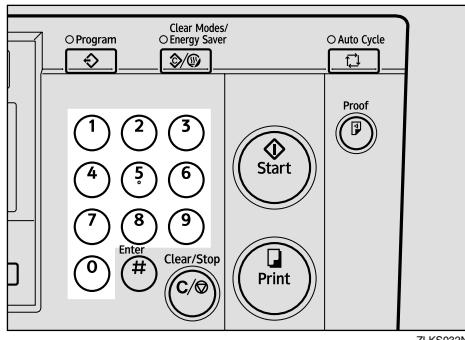
② Reference mark

6 Lower the exposure glass cover.



7 Specify the print settings.

8 Enter the number of prints with the number keys.

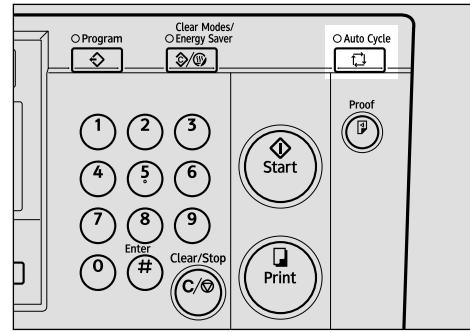


Note

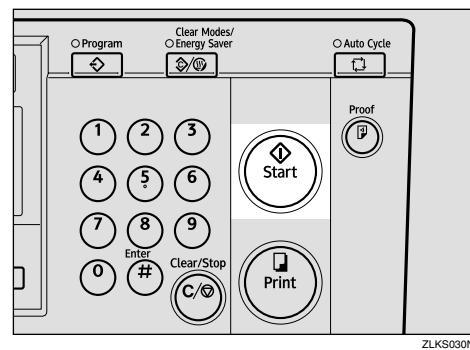
- If you have made a wrong entry, press the **【Clear/Stop】** key and then enter the number again.

When Auto Cycle mode is on

① Check that Auto Cycle mode is on.



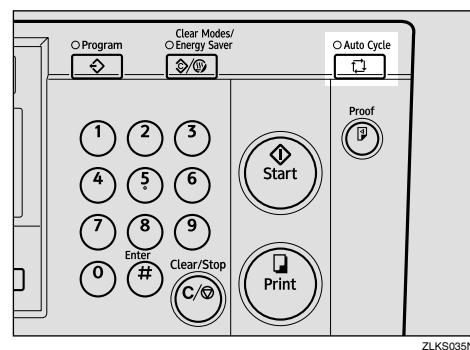
② Press the **【Start】** key.



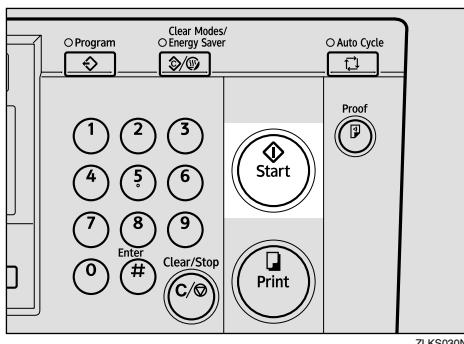
Printing starts automatically after the trial print.

When Auto Cycle mode is off

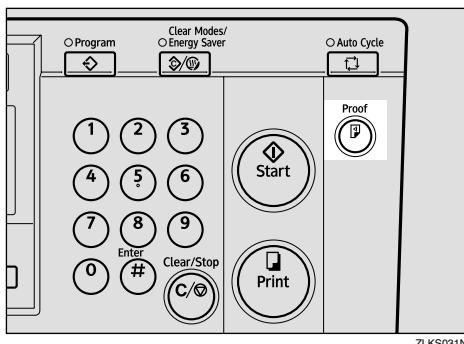
① Check that Auto Cycle mode has been disabled.



2 Press the **【Start】** key.



3 Press the **【Proof】** key.

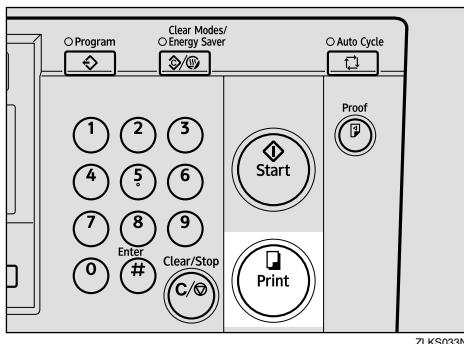


Check the print image.

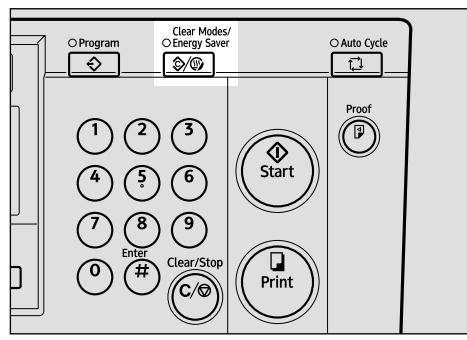
Reference

If the image position is not correct, adjust it using the **【Image Position】** key. See p.21 “Adjusting the Print Image Position”.

4 Press the **【Print】** key.



9 When the print job is finished, press the **【Clear Modes/Energy Saver】** key.



Your print settings are cleared and the machine returns to its initial condition.

Energy Saver Mode

If the machine has not been operated for a certain period of time after printing, or when you press and hold the **【Clear Modes/Energy Saver】** key for 3 seconds, the panel display goes off and the machine enters Energy Saver mode. In Energy Saver mode, the machine consumes less electricity. Press the **【Clear Modes/Energy Saver】** key again, and the machine will return to the ready condition.

Note

- By default, the time taken for the machine to shift to Energy Saver mode is 3 minutes.
- You can change the waiting time within a range of 1 to 120 minutes. See "6 Energy Saving" on p.72 "1 System".
- In the following cases, the machine will not shift automatically to Energy Saver mode.
 - If there is no ink
 - If originals are or paper is jammed
 - If the machine has not finished making masters or prints
 - If the machine is printing the second page of a Combine print
 - If there is no master
 - If the master eject box is full
 - If there is an original in the optional document feeder
 - If the "cover open" indicator is lit
 - If you are in the process of making changes to the user tools
 - If the screen for entering a user code is displayed

Auto Reset

This machine can be set to return automatically to its initial condition if it has not been operated for a certain period of time. This is called "Auto Reset".

Note

- The Auto Reset time can be set from 1 to 5 minutes, or to "Off". See "1 Auto Reset" on p.72 "1 System".
- The default for Auto Reset is Off.
- In the following cases, Auto Reset will not take place.
 - If there is no ink
 - If originals are or paper is jammed
 - If the machine has not finished making masters or prints
 - If the machine is printing the second page of a Combine print
 - If there is no paper
 - If there is no master
 - If the master eject box is full
 - If there is an original in the optional document feeder
 - If the "cover open" indicator is lit
 - If you are in the process of making changes to the user tools
 - If you have set Auto Reset to "Off"

Adjusting the Print Image Position

You can adjust the print image position in two ways:

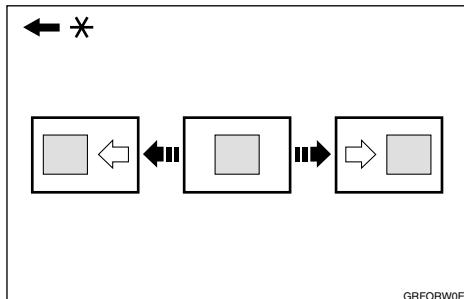
◆ Forwards or Backwards

Use the **【Image Position】** keys.

◆ Right or Left

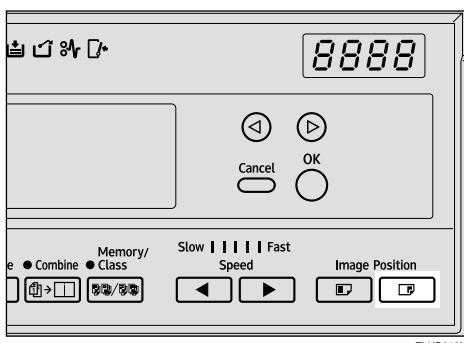
Use the side tray fine adjusting dial.

Forwards or Backwards



* Paper feed direction

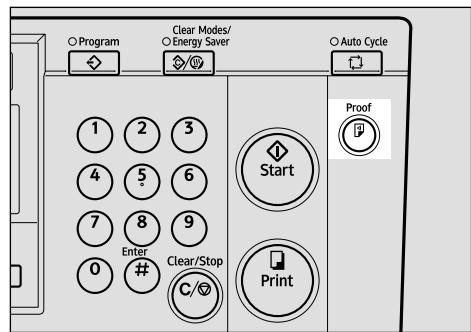
1 Press the left **【Image Position】** key to move the image forwards, the right key to move it backwards.



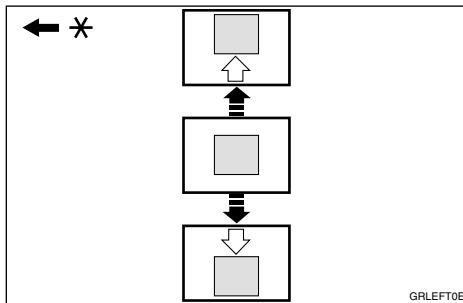
Note

- One push of either **【Image Position】** key shifts the image position by 0.5mm, 0.02", up to a maximum of 15mm, 0.6" in each direction.
- When you shift the image forwards, leave a margin of more than 5mm, 0.2" on the leading edge. If there is no margin, paper might wrap around the drum and cause a misfeed.

2 Press the **【Proof】** key to check the image position.

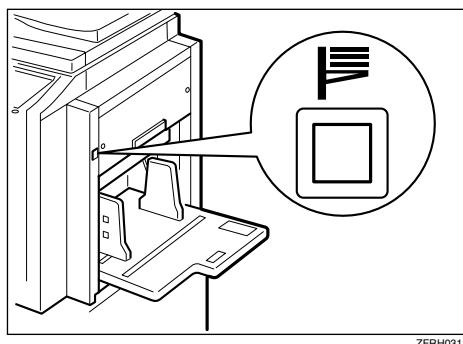


Right or Left



* Paper feed direction

1 Press the paper feed tray down key to lower the paper feed tray.



2 Turn the side tray fine adjusting dial as shown below.

❖ Shifting the image to the right



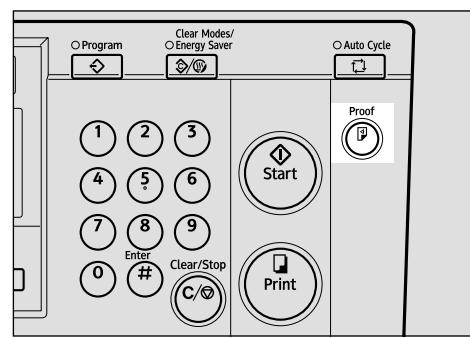
❖ Shifting the image to the left



>Note

- The image position can be shifted up to 10mm, 0.4" in each direction. Each division on the scale represents a shift of 2mm, 0.08".
- Adjust the paper delivery side plates to match the new image position.

3 Press the [Proof] key to check the image position.



ZLKS031N

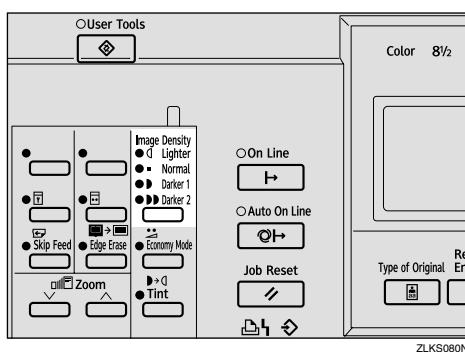
Adjusting the Print Image Density

You can adjust the print image density to suit your needs.

Note

- You can specify the image density that is selected by default when the power is turned on. See "1 MSTR Makg.Density" on p.74 "3 Initial Setting".

1 Press the [Image Density] key.



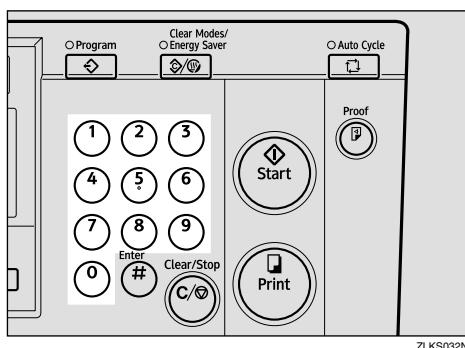
ZLKS080N

Note

- If your original has a colored background such as red or blue, select a lighter image density to prevent the prints from appearing dirty.

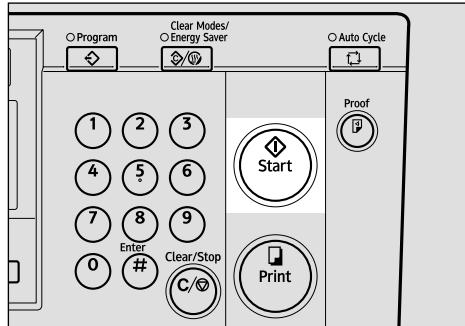
2 Set your original.

3 Enter the number of prints with the number keys.



ZLKS032N

4 Press the [Start] key.



ZLKS030N

Printing starts automatically after the trial print.

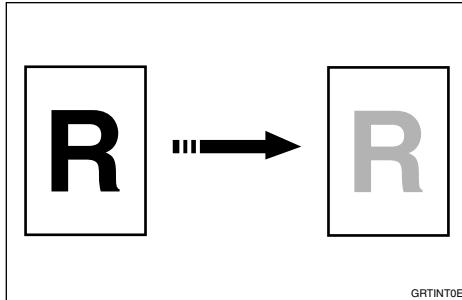
Note

- If you wish to check the image before printing, press the [Auto Cycle] key before pressing the [Start] key, in order to disable Auto Cycle mode. See p.17 "When Auto Cycle mode is off".

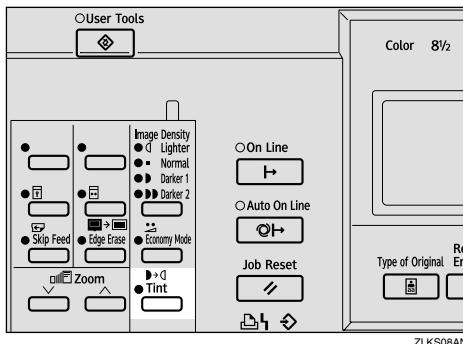
Tint Mode

1

Use this function to make halftone prints.

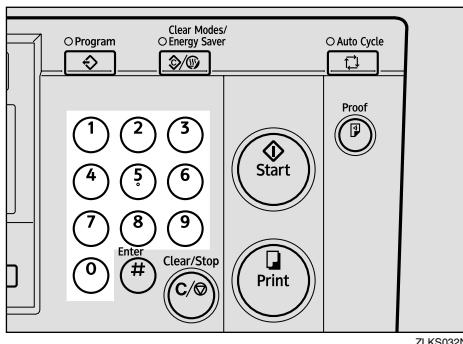


1 Press the **[Tint]** key.

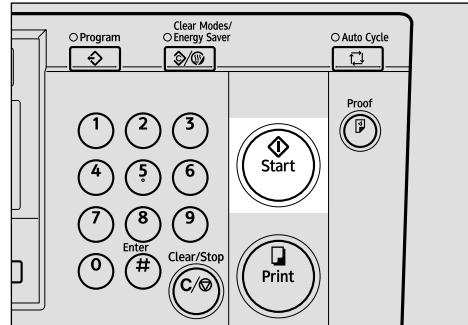


2 Set your original.

3 Enter the number of prints with the number keys.



4 Press the **[Start]** key.



Printing starts automatically after the trial print.

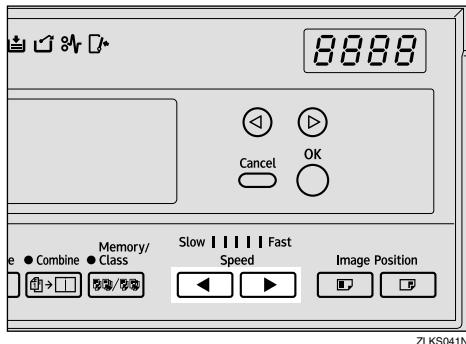
Note

If you wish to check the image before printing, press the **[Auto Cycle]** key before pressing the **[Start]** key, in order to disable Auto Cycle mode. See p.17 "When Auto Cycle mode is off".

Changing the Printing Speed

Use the **[◀][▶]** keys (Speed keys) to adjust the printing speed to suit the type of printing paper.

1 Press the **[▶]** key to increase the speed, or the **[◀]** key to reduce the speed.



Note

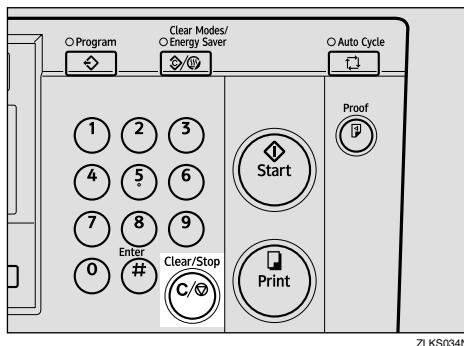
- The following speeds are available:
 - Setting 1: 60 sheets/minute
 - Setting 2: 75 sheets/minute
 - Setting 3: 90 sheets/minute
 - Setting 4: 105 sheets/minute
 - Setting 5: 120 sheets/minute
- The default is Setting 3.

Stopping a Multi-print Run

1

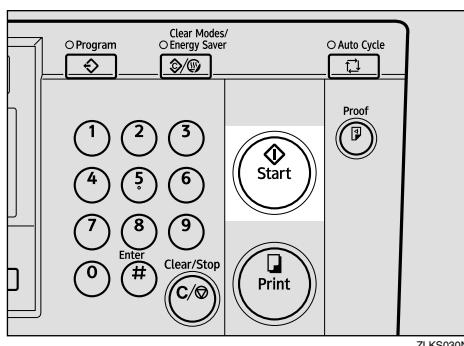
Stopping a Multi-print Run to Print Another Original

1 Press the **【Clear/Stop】** key.



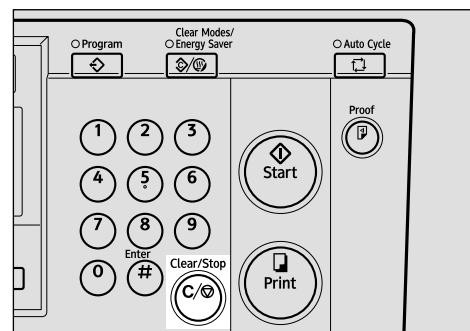
2 Set the new original.

3 Enter the number of prints and press the **【Start】** key.



Changing the Number of Prints and Checking the Completed Prints

1 Press the **【Clear/Stop】** key.

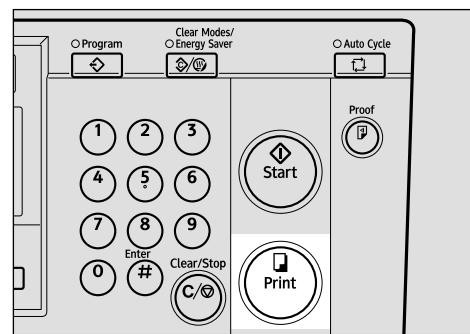


2 Change the number of prints or check the completed prints.

Note

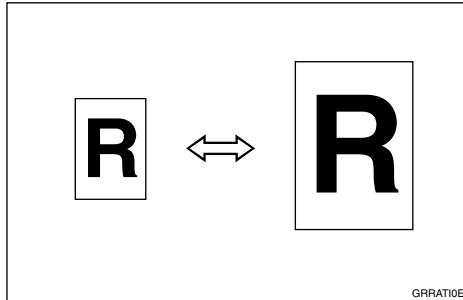
To change the number of prints, press the **【Clear/Stop】** key, and then enter the new number with the number keys.

3 Press the **【Print】** key to resume printing.



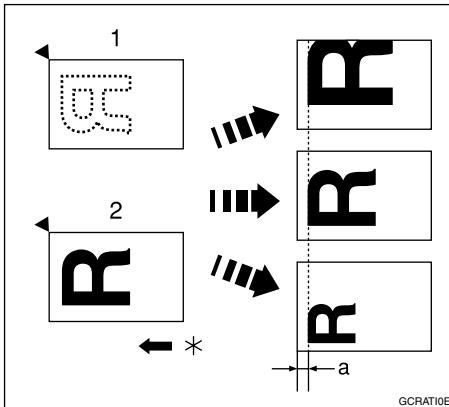
Preset Reduce/Enlarge

Use this function to reduce or enlarge originals by a preset ratio.



Note

- The leading edge of the print image remains constant even when the image itself is enlarged or reduced.



1. When using the exposure glass
2. When using the optional document feeder

* Paper feed direction

a = 5mm, 0.2"

- You can select a ratio regardless of the size of the original or the printing paper. However, with some ratios, parts of the image might not be printed or margins will appear on prints.

- You can choose from 7 preset ratios (3 enlargement ratios and 4 reduction ratios).

◆ Metric version

Ratio (%)	Original → Print paper size
141	A4 → A3, A5 → A4, B5 JIS → B4 JIS
122	A4 → B4 JIS, A5 → B5 JIS
115	B4 JIS → A3, B5 JIS → A4
93	—
87	A3 → B4 JIS, A4 → B5 JIS
82	B4 JIS → A4, B5 JIS → A5
71	A3 → A4, A4 → A5, B4 JIS → B5 JIS

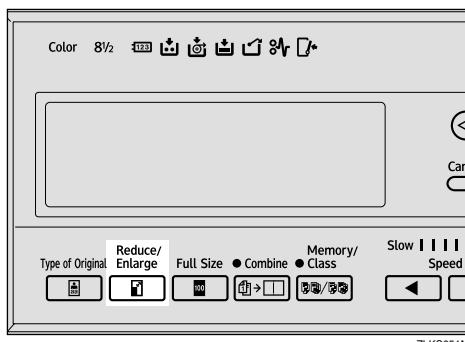
◆ Inch version

Ratio (%)	Original → Print paper size
155	5 1/2" × 8 1/2" → 8 1/2" × 14"
129	8 1/2" × 11" → 11" × 17", 5 1/2" × 8 1/2" → 8 1/2" × 11"
121	8 1/2" × 14" → 11" × 17"
93	—
77	8 1/2" × 14" → 8 1/2" × 11"
74	11" × 15" → 8 1/2" × 11"
65	11" × 17" → 8 1/2" × 11", 8 1/2" × 11" → 5 1/2" × 8 1/2"

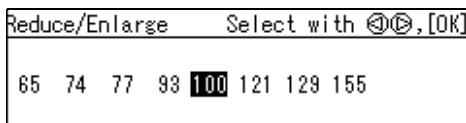
- You can specify the reproduction ratio that is selected by default when the power is turned on. See "3 Ratio Priority" on p.74 "3 Initial Setting".

1

1 Press the [Reduce/Enlarge] key.



2 Use the [\blacktriangleleft][\triangleright] keys to select your desired reproduction ratio, and press the [OK] key.

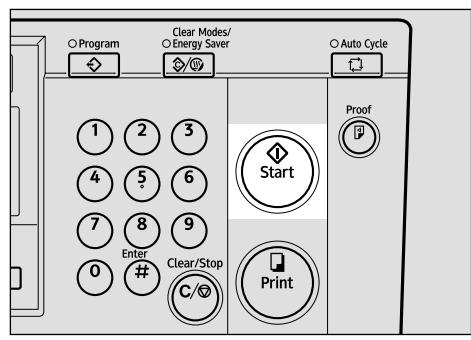


3 Check that the original and the print paper are of the correct size.

4 Set your original.

5 Enter the number of prints with the number keys.

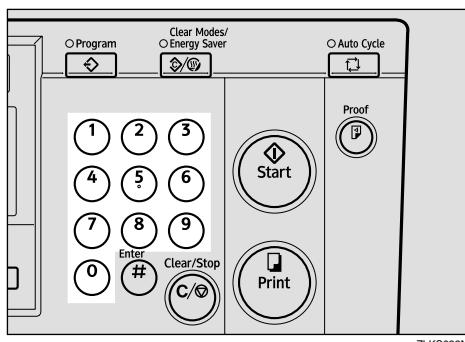
6 Press the [Start] key.



Printing starts automatically after the trial print.

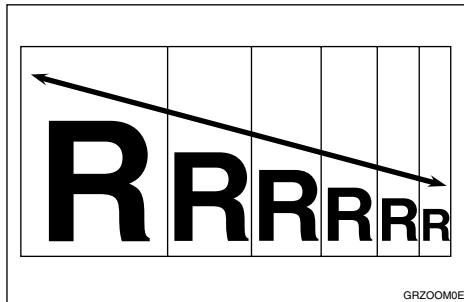
Note

If you wish to check the image before printing, press the [Auto Cycle] key before pressing the [Start] key, in order to disable Auto Cycle mode. See p.17 "When Auto Cycle mode is off".



Zoom

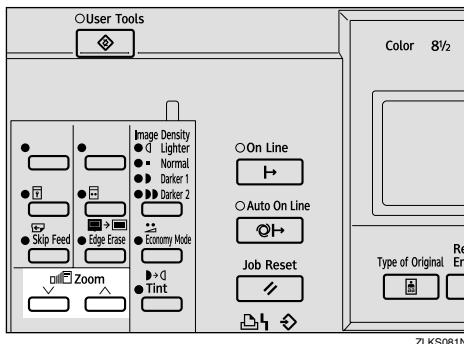
Use this function to fine-tune the reproduction ratio in 1% steps.



Note

- You can select from a range of 50–200%.

1 Specify the reproduction ratio with the ∇ [\wedge] keys (Zoom keys).

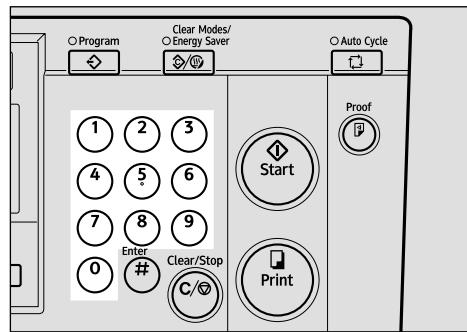


Note

- Alternatively, you can first select a preset ratio which is near to your desired ratio, then fine-adjust it with the ∇ or \wedge key.

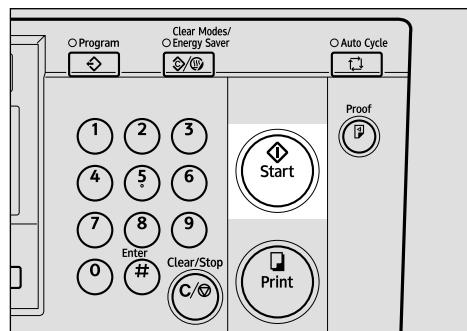
2 Set your original.

3 Enter the number of prints with the number keys.



ZLKS032N

4 Press the [Start] key.



ZLKS030N

Printing starts automatically after the trial print.

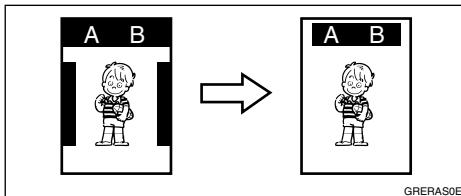
Note

- If you wish to check the image before printing, press the [Auto Cycle] key before pressing the [Start] key, in order to disable Auto Cycle mode. See p.17 "When Auto Cycle mode is off".

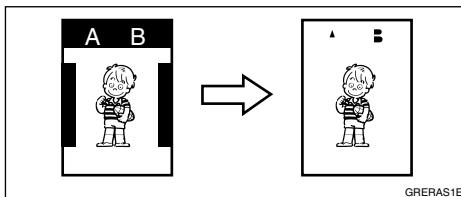
Edge Erase

When printing from thick books, or similar originals, a shadow caused by the binding may show up on the prints. If you print using the Edge Erase mode, such shadows will be erased automatically.

❖ With Edge Erase mode



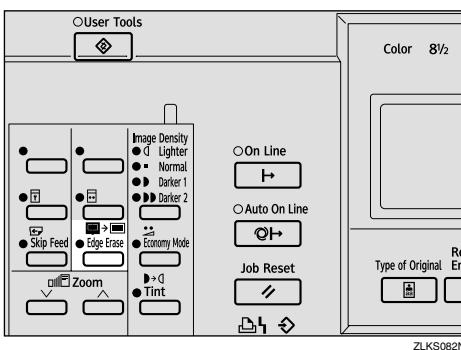
❖ Without Edge Erase mode



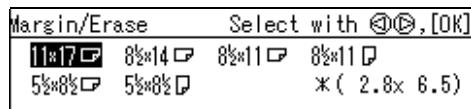
>Note

- You can specify within a range of 0 to 20mm, 0" to 0.8", the width of the margin to be erased. See "5 Margin Eras.Area" on p.74 "3 Initial Setting".
- The default is 5mm, 0.2".

1 Press the [Edge Erase] key.

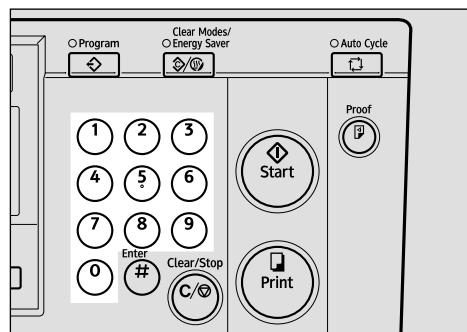


2 Use the [\blacktriangleleft][\triangleright]keys to select the original size and orientation, and then press the [OK] key.



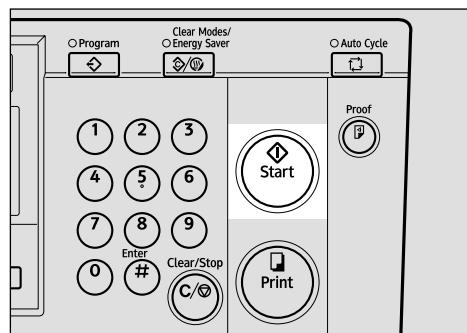
3 Set your original.

4 Enter the number of prints with the number keys.



ZLKS032N

5 Press the [Start] key.



ZLKS030N

Printing starts automatically after the trial print.

Note

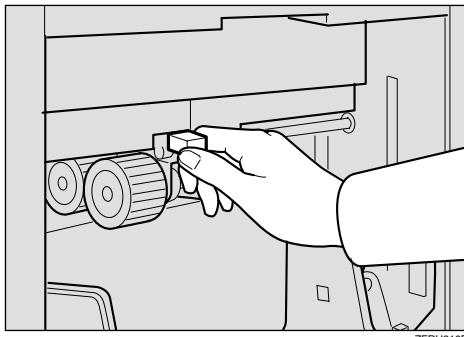
- If you wish to check the image before printing, press the [Auto Cycle] key before pressing the [Start] key, in order to disable Auto Cycle mode. See p.17 "When Auto Cycle mode is off".

Printing on Thick or Thin Paper

Perform the following steps when you make prints on thick (127.9 to 209.3g/m², 34.0 to 55.6 lb), standard (52.3 to 127.9g/m², 13.9 to 34.0 lb) or thin (47.1 to 52.3g/m², 12.5 to 13.9 lb) paper.

Pressure Lever Position

1 Shift the feed roller pressure lever to either Thick, Standard, or Thin paper position.



ZFRH210E

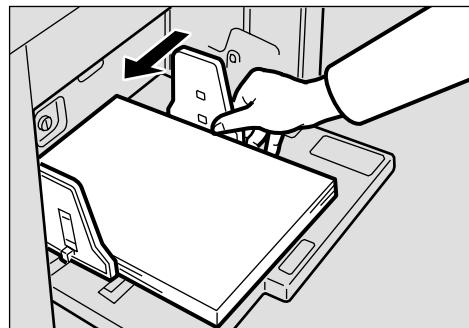
Note

Choose the correct lever position according to the paper weights as shown in the following table.

	Metric Version	Inch Version
Thick	127.9 — 209.3g/m ²	34.0 — 55.6 lb
Standard	52.3 — 127.9g/m ²	13.9 — 34.0 lb
Thin ^{*1}	47.1 — 52.3g/m ²	12.5 — 13.9 lb

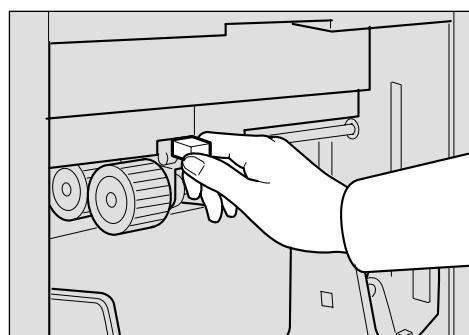
^{*1} When the paper is smaller than B5 JIS, 5¹/₂" × 8¹/₂" and heavier than 81.4g/m² (21.6 lb), use the Thin paper position.

2 Make sure that paper feed side plates touch the paper lightly.



ZCTH150E

3 After you have finished printing, return the feed roller pressure lever to the Standard paper position.



ZFRH210E

Type of Original

1

Select from the following original types to match your originals:

◆ Letter mode

Use this mode when the original contains only text (no pictures).

◆ Letter/Photo mode

Use this mode when the original contains photographs or text with pictures.

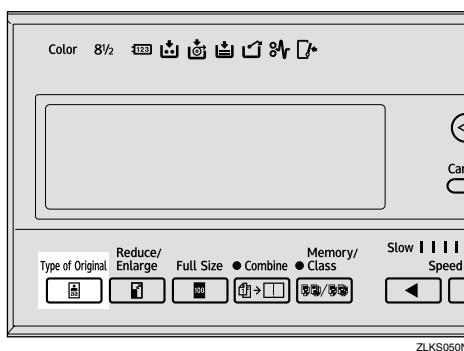
◆ Photo mode

Delicate tones of photographs and pictures can be reproduced with this mode.

Note

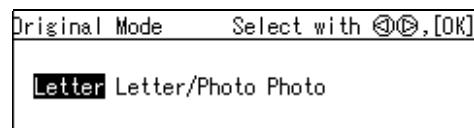
- You can specify the original type that is selected by default when the power is turned on. See "2 Original Priority" on p.74 "3 Initial Setting".
- The default is Letter mode.
- Moire patterns may occur when you are printing from screened originals.
- When using Photo mode to print originals with both text and photographs, the text might appear faint. To avoid this, use Letter/Photo mode instead.

1 Press the [Type of Original] key.



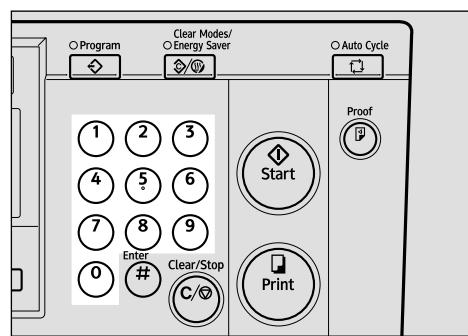
ZLKS050N

2 Use the [\leftarrow][\rightarrow] keys to select the type of original, and then press the [OK] key.



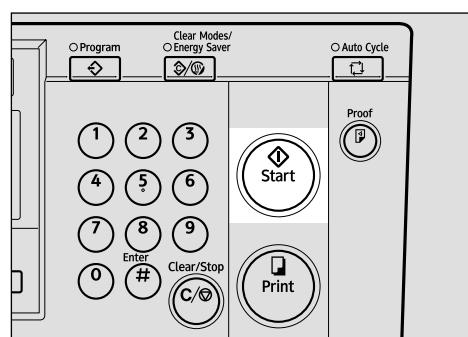
3 Set your original.

4 Enter the number of prints with the number keys.



ZLKS032N

5 Press the [Start] key.



ZLKS030N

Printing starts automatically after the trial print.

Note

- If you wish to check the image before printing, press the [Auto Cycle] key before pressing the [Start] key, in order to disable Auto Cycle mode. See p.17 "When Auto Cycle mode is off".

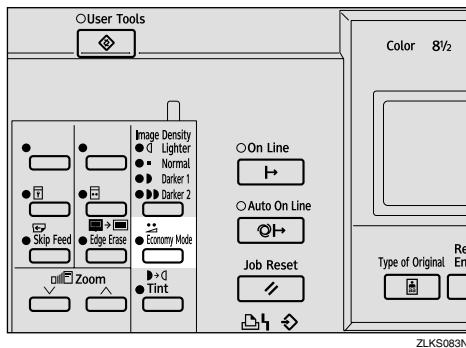
Economy Mode

Use this function to save ink.

>Note

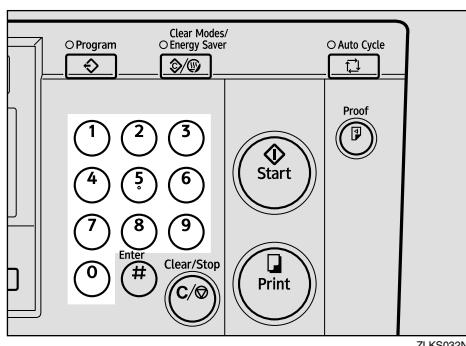
- Prints will appear lighter when Economy mode is used.
- The default is Off. To select either "On" or "Off" for Economy mode, see "4 Eco. Mode ON/OFF" on p.74 "3 Initial Setting".

1 Press the [Economy Mode] key.

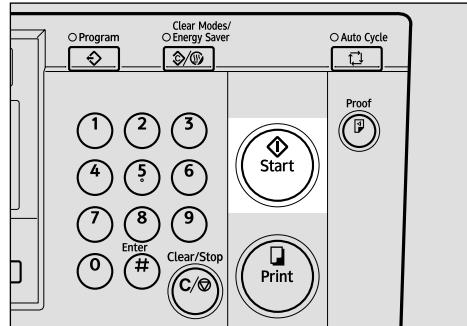


2 Set your original.

3 Enter the number of prints with the number keys.



4 Press the [Start] key.



Printing starts automatically after the trial print.

Note

- If you wish to check the image before printing, press the [Auto Cycle] key before pressing the [Start] key, in order to disable Auto Cycle mode. See p.17 "When Auto Cycle mode is off".

Auto Cycle

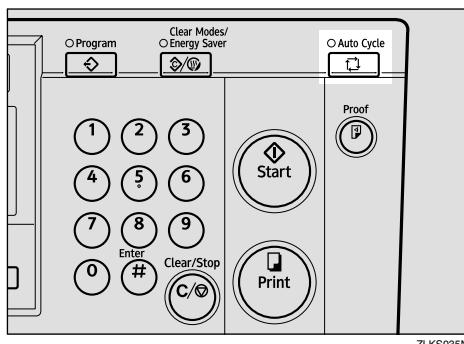
1

Use this function to process masters and make prints in a single operation.

Note

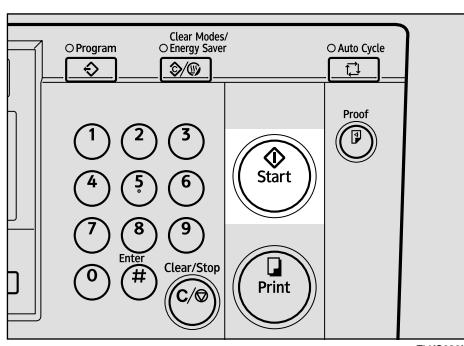
- The default is On.
- You can specify whether Auto Cycle mode is enabled or not when the power is turned on. See “1 Auto Cycle ON/OFF” on p.75 “4 Mode Setting”.

1 If Auto Cycle is Off, press the **【Auto Cycle】** key to enable it.



2 Set the original and enter the number of prints.

3 Press the **【Start】** key.



Printing starts immediately after the master is made.

Memory/Class

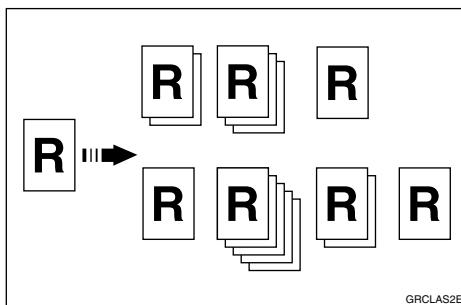
The Memory/Class function is useful especially for people such as teachers, who often have to make different numbers of prints from the same original for different classes or have to make the same number of prints from a number of different originals for the same class.

Under the Memory/Class function, the following modes are available:

❖ Select Class/Year Mode

🔍 Reference

If the use of this machine is not limited to school or college, you can choose to have this mode displayed as "Select Department" displayed instead of "Select Class/Year". See "5 Class Display" on p.73 "2 Set Operat'n Mode".

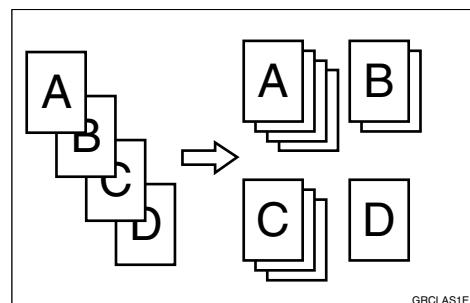


- All
Use to make prints from the same original for all the registered classes in all the school years.
- Class
Select to make prints from the same original for only the classes selected.
- Households
Use to make prints from the same original for all the registered student households in the school.

❖ Memory Mode

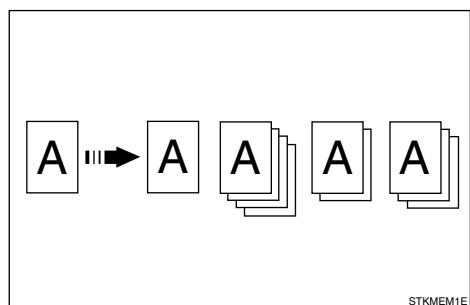
You can choose from the following two types of Memory mode:

- Normal Memory Mode
Use to make prints from a number of different originals. A different number of prints is made from each original.



- Stack Memory Mode

Use to make prints from one original, with a different number of prints for each class.

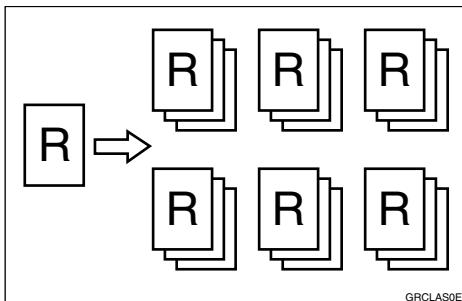


📝 Note

- You can specify either Normal Memory Mode or Stack Memory Mode as the default. See "12 Memory Mode" on p.75 "4 Mode Setting".

❖ **Class Mode**

Use to make prints from one original for multiple classes, with the same number of prints for each class.



❖ **Recall**

Use to recall settings that you have stored under the Memory Mode and Class Mode.

Select Class/Year

Preparation

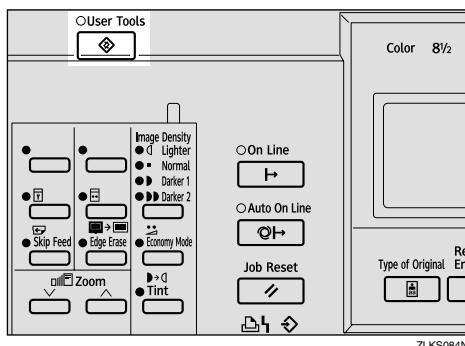
To use this mode, you need to first register the number of prints required for each class.

Registering Class/Year

Note

- You can register for up to 108 classes (up to 12 classes per school year for a maximum of 9 school years).

1 Press the [User Tools] key.



2 Use the [\blacktriangleleft][\triangleright] keys to select 3 Initial Setting, and then press the [OK] key.

User Tools 1/1 Select with $\textcircled{1}$ – $\textcircled{6}$, [OK]	
1 System	2 Set Operat'n Mode
3 Initial Setting	4 Mode Setting
5 Admin. Mode	6 Online Paramet's

3 Use the [\blacktriangleleft][\triangleright] keys to select 9 ProgChnge:Clss/Yr, and then press the [OK] key.

Initial Setting 2/2 With $\textcircled{1}$ – $\textcircled{8}$, [OK]	
7 Prog./Change:Clss	8 Prog./Change:Mem.
9 ProgChnge:Clss/Yr	

4 Use the [\blacktriangleleft][\triangleright] keys to select the desired school year, and then press the [OK] key.

Prog/Chnge:Clss/Yr 1/2 With $\textcircled{1}$ – $\textcircled{6}$, [OK]	
1 Households	2 Year1
3 Year2	4 Year3
5 Year4	6 Year5

5 With the number keys, enter the number of prints for a class, and then press the [$\#$] key.

Year 1 Enter with Hard Keys then $\textcircled{#}$			
1:---10	2:----	3:----	4:----
5:----	6:----	7:----	8:----
9:----	10:----	11:----	12:----

Note

- Repeat Steps 4 and 5 to register all your classes.

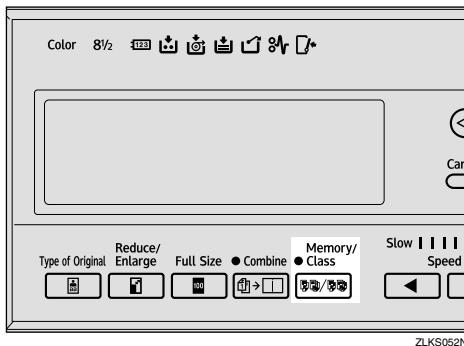
6 Press the [OK] key.

7 Press the [Clear Modes/Energy Saver] key.

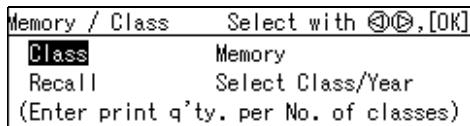
The contents that you have registered are now effective.

Printing for All Years

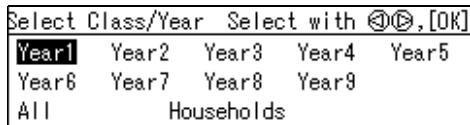
1 Press the [Memory/Class] key.



2 Use the [\blacktriangleleft][\triangleright] keys to select Select Class/Year, and then press the [OK] key.

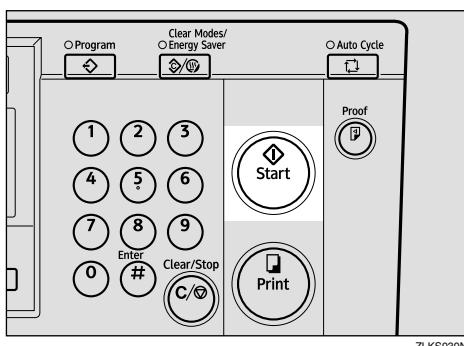


3 Use the [\blacktriangleleft][\triangleright] keys to select All, and then press the [OK] key.



4 Set your original.

5 Press the [Start] key.



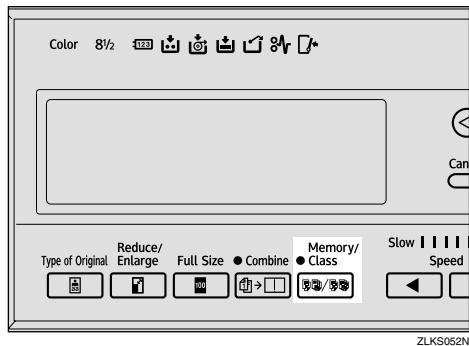
Printing starts automatically after the trial print.

Note

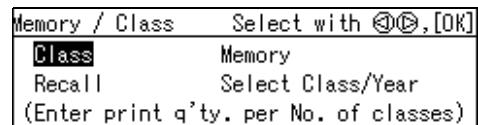
□ If you wish to check the image before printing, press the [Auto Cycle] key before pressing the [Start] key, in order to disable Auto Cycle mode. See p.17 "When Auto Cycle mode is off".

Printing for Selected Classes

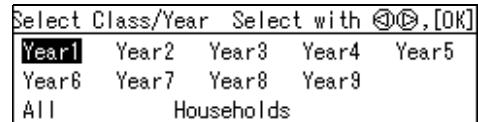
1 Press the [Memory/Class] key.



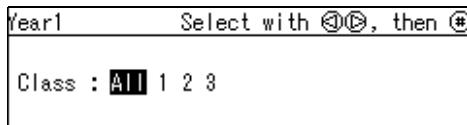
2 Use the [\blacktriangleleft][\triangleright] keys to select Select Class/Year, and then press the [OK] key.



3 Use the [\blacktriangleleft][\triangleright] keys to select the school year, and then press the [OK] key.



4 Use the [\blacktriangleleft][\triangleright] keys to select the class that you wish to print for, and then press the [$\#$] key.



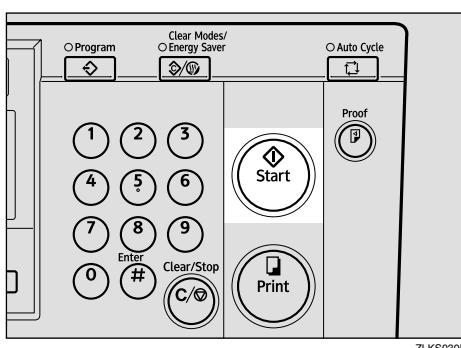
 **Note**

- Repeat Step **4** to select more classes.
- You can only select classes from the same school year.
- If you have selected the wrong class, indicate it again using the [\blacktriangleleft][\triangleright] keys, and then press the [$\#$] key to cancel its selection.

5 Press the [OK] key.

6 Set your original.

7 Press the [Start] key.



Printing starts automatically after the trial print.

 **Note**

- If you wish to check the image before printing, press the [Auto Cycle] key before pressing the [Start] key, in order to disable Auto Cycle mode. See p.17 "When Auto Cycle mode is off".

Memory Mode

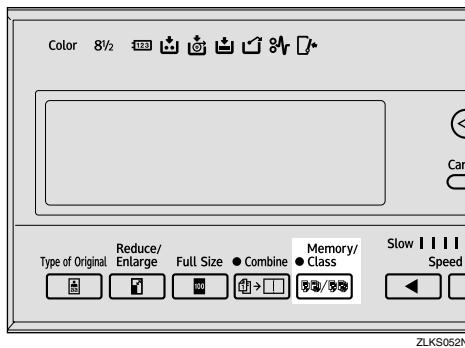
1

Normal Memory Mode

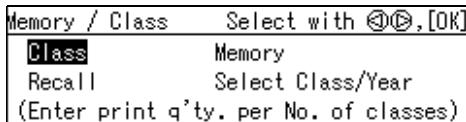
Note

- You can make prints from up to 30 originals at one time.

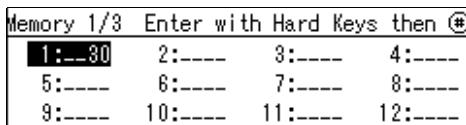
1 Press the [Memory/Class] key.



2 Use the [\leftarrow][\rightarrow] keys to select Memory, and the press the [OK] key.



3 With the number keys, enter the desired number of prints for each original, and then press the [$\#$] key.

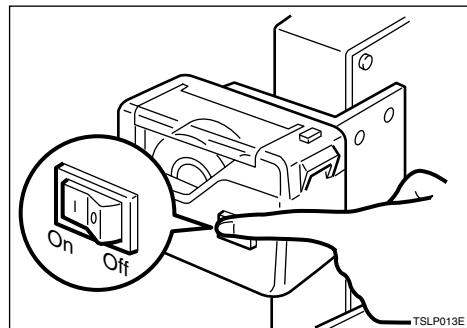


Note

- Repeat this step until you have entered for all the originals.

4 Press the [OK] key.

5 If you are using the optional tape dispenser, turn on the tape dispenser switch.



Note

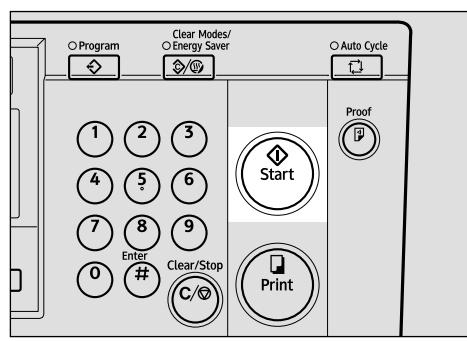
- The optional tape dispenser automatically feeds out strips of paper to separate the prints made from each original.

6 Set your original.

Note

- Set the originals in the same order as you have registered them in Step 3.

7 Press the [Start] key.



Printing starts automatically after the trial print.

Note

If you wish to check the image before printing, press the **[Auto Cycle]** key before pressing the **[Start]** key, in order to disable Auto Cycle mode. See p.17 "When Auto Cycle mode is off".

Reference

For details on how to use the optional document feeder when printing in Memory mode, see p.64 "Using the Document Feeder in Normal Memory Mode".

Stack Memory Mode

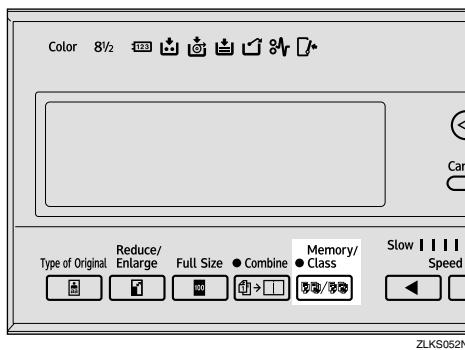
Limitation

To use Stack Memory mode, you need to first set Memory Mode to "Stack" using the user tools. See "12 Memory Mode" on p.75 "4 Mode Setting".

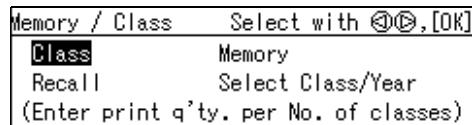
Note

You can make prints for up to 30 classes at one time.

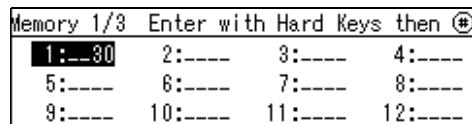
1 Press the **[Memory/Class]** key.



2 Use the **[<][>]** keys to select **Memory**, and then press the **[OK]** key.



3 With the number keys, enter the desired number of prints for each class, and then press the **[#]** key.



Note

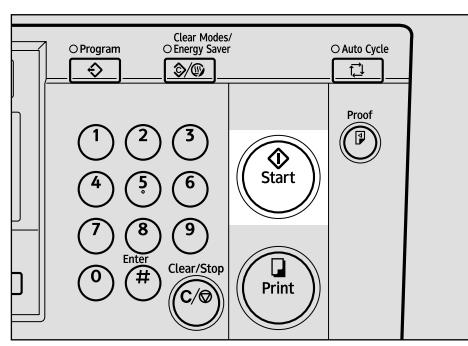
Repeat this step until you have entered for all your classes.

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

5 If you are using the optional tape dispenser, turn on the tape dispenser switch.

6 Set your original.

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



Printing starts automatically after the trial print.

 **Note**

- If you wish to check the image before printing, press the **【Auto Cycle】** key before pressing the **【Start】** key, in order to disable Auto Cycle mode. See p.17 "When Auto Cycle mode is off".

 **Reference**

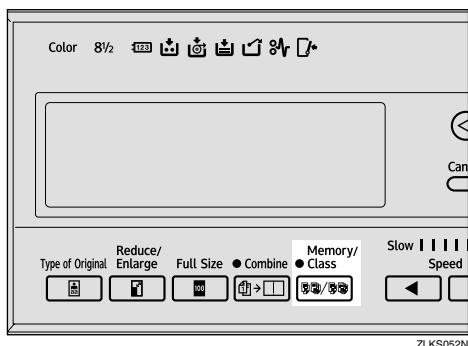
For details on how to use the optional document feeder when printing in Stack Memory mode, see p.65 "Using the Document Feeder in Stack Memory Mode".

Class Mode

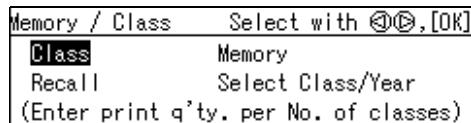
Note

- You can print for up to 24 combinations of number of prints and number of classes.
- The maximum possible number of classes in one combination is 99.

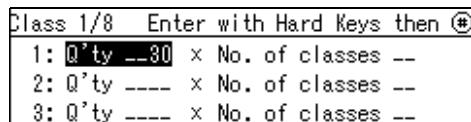
1 Press the [Memory/Class] key.



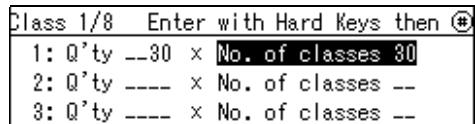
2 Use the [\blacktriangleleft][\triangleright] keys to select Class, and then press the [OK] key.



3 With the number keys, enter the desired number of prints, and then press the [$\#$] key.



4 With the number keys, enter the desired number of classes, and then press the [$\#$] key.

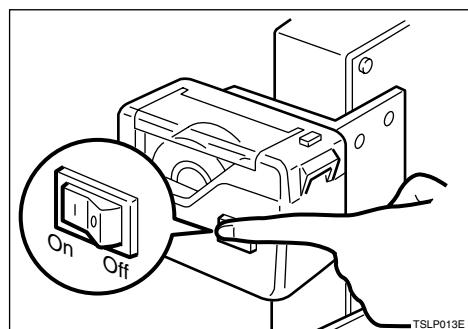


Note

- Repeat Steps 3 to 4 as desired.

5 Press the [OK] key.

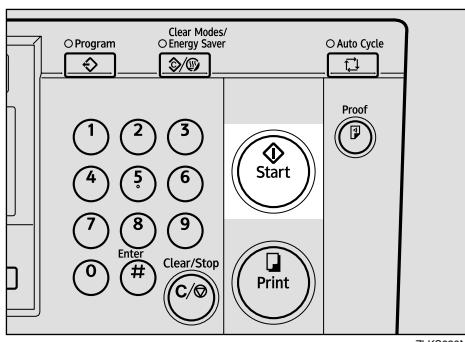
6 If you are using the optional tape dispenser, turn on the tape dispenser switch.



Note

- The optional tape dispenser automatically feeds out strips of paper to separate each group of prints.

7 Set your original.

8 Press the **[Start]** key.

Printing starts automatically after the trial print.

Note

- If you wish to check the image before printing, press the **[Auto Cycle]** key before pressing the **[Start]** key, in order to disable Auto Cycle mode. See p.17 "When Auto Cycle mode is off".

Recall

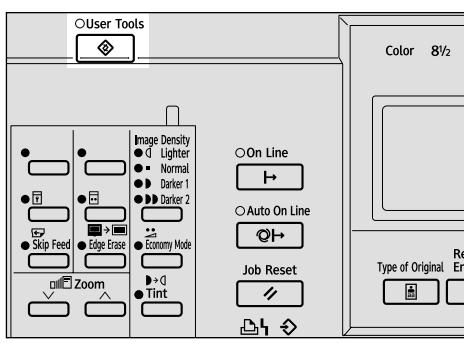
Note

- You can store up to 10 entries for Memory mode with each entry containing settings for up to 30 originals (Normal Memory mode), or settings for up to 30 classes (Stack Memory mode).
- You can store up to 10 entries for Class mode with each entry containing settings for up to 24 combinations of classes and numbers of prints.

Storing Memory Mode Settings

Storing Normal Memory Mode Settings

1 Press the [User Tools] key.



2 Use the [\blacktriangleleft][\triangleright] keys to select 3 Initial Setting, and then press the [OK] key.

User Tools 1/1 Select with \textcircled{OK} , [OK]	
1 System	2 Set Operat'n Mode
3 Initial Setting	4 Mode Setting
5 Admin. Mode	6 Online Paramet's

3 Use the [\blacktriangleleft][\triangleright] keys to select 8 Prog./Change:Mem., and then press the [OK] key.

Initial Setting 2/2 With \textcircled{OK} , [OK]
 7 Prog./Change:Class 8 Prog./Change:Mem.
 9 ProgChnge:Class/Yr

4 Use the [\blacktriangleleft][\triangleright] keys to select a number, and then press the [OK] key.

Prog./Change Mem. Select with \textcircled{OK} , [OK]
 Prog. No.: 1 2 3 4 5 6 7 8 9 10

Note

- If the number is already in use, a message will be displayed asking if you wish to overwrite the settings stored. To overwrite, press the [OK] key. Otherwise press the [Cancel] key to return to the previous display, and then select another number.

5 With the number keys, enter the number of prints for each original, and then press the [#] key.

Memory 1/3 Enter with Hard Keys then \textcircled{OK}
 1:--- 10:--- 2:--- 8:--- 4:---
 5:--- 6:--- 7:--- 8:---
 9:--- 10:--- 11:--- 12:---

Note

- Repeat Steps 4 and 5 to register all your originals.

6 Press the [OK] key.

7 Press the [Clear Modes/Energy Saver] key.

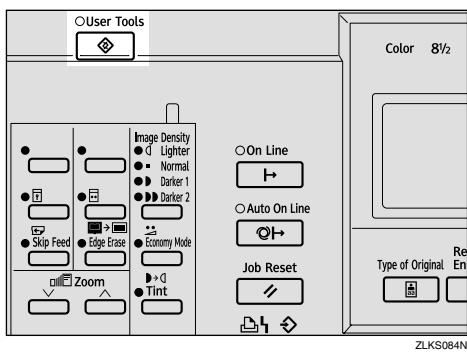
The contents that you have stored are now effective.

Storing Stack Memory Mode Settings

! Limitation

□ To use Stack Memory mode, you need to first set Memory Mode to "Stack" using the user tools. See "12 Memory Mode" on p.75 "4 Mode Setting".

1 Press the [User Tools] key.



2 Use the [\blacktriangleleft][\triangleright] keys to select 3 Initial Setting, and then press the [OK] key.

User Tools 1/1 Select with $\textcircled{1}$, [OK]	
1 System	2 Set Operat'n Mode
3 Initial Setting	4 Mode Setting
5 Admin. Mode	6 Online Paramet's

3 Use the [\blacktriangleleft][\triangleright] keys to select 8 Prog./Change:Mem., and then press the [OK] key.

Initial Setting 2/2 With $\textcircled{1}$, [OK]	
7 Prog./Change:Cls	8 Prog./Change:Mem.
9 ProgChnge:Cls/Yr	

4 Use the [\blacktriangleleft][\triangleright] keys to select a number, and then press the [OK] key.

Prog./Change Mem. Select with $\textcircled{1}$, [OK]	
Prog. No.: 1 2 3 4 5 6 7 8 9 10	

Note

□ If the number is already in use, a message will be displayed asking if you wish to overwrite the settings stored. To overwrite, press the [OK] key. Otherwise press the [Cancel] key to return to the previous display, and then select another number.

5 With the number keys, enter the number of prints for each class, and then press the [$\#$] key.

Memory 1/3 Enter with Hard Keys then $\textcircled{1}$			
1:—10	2:----	3:----	4:----
5:----	6:----	7:----	8:----
9:----	10:----	11:----	12:----

Note

□ Repeat Steps 4 and 5 to register all your classes.

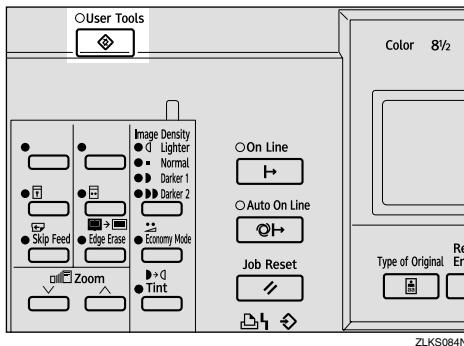
6 Press the [OK] key.

7 Press the [Clear Modes/Energy Saver] key.

The contents that you have stored are now effective.

Storing Class Mode Settings

1 Press the [User Tools] key.



2 Use the [\blacktriangleleft][\triangleright] keys to select 3 Initial Setting, and then press the [OK] key.

User Tools 1/1 Select with $\textcircled{1}\textcircled{2}$, [OK]	
1 System	2 Set Operat'n Mode
3 Initial Setting	4 Mode Setting
5 Admin. Mode	6 Online Paramet's

3 Use the [\blacktriangleleft][\triangleright] keys to select 7 Prog./Change:Clss, and then press the [OK] key.

Initial Setting 2/2 With $\textcircled{1}\textcircled{2}$, [OK]	
7 Prog./Change:Clss	8 Prog./Change:Mem.
9 ProgChnge:Clss/Yr	

4 Use the [\blacktriangleleft][\triangleright] keys to select a number, and then press the [OK] key.

Prog./Change Class With $\textcircled{1}\textcircled{2}$, [OK]	
Prog. No.: 1 2 3 4 5 6 7 8 9 10	

Note

□ If the number is already in use, a message will be displayed asking if you wish to overwrite the settings stored. To overwrite, press the [OK] key. Otherwise press the [Cancel] key to return to the previous display, and then select another number.

5 With the number keys, enter the number of prints, and then press the [$\#$] key.

Class 1/8	Finally press [Ok]
1: Q'ty --30 x No. of classes --	
2: Q'ty ---- x No. of classes --	
3: Q'ty ---- x No. of classes --	

6 With the number keys, enter the number of classes, and then press the [$\#$] key.

Class 1/8	Finally press [Ok]
1: Q'ty --30 x No. of classes 30	
2: Q'ty ---- x No. of classes --	
3: Q'ty ---- x No. of classes --	

Note

□ Repeat Steps 4 to 6 to register all your classes.

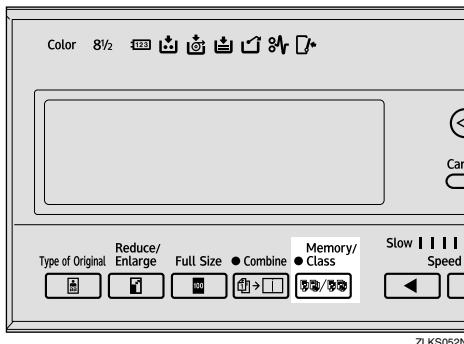
7 Press the [OK] key.

8 Press the [Clear Modes/Energy Saver] key.

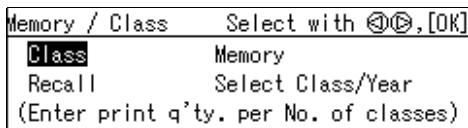
The contents that you have stored are now effective.

Recalling the Stored Settings

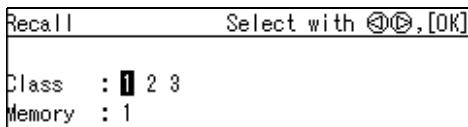
1 Press the [Memory/Class] key.



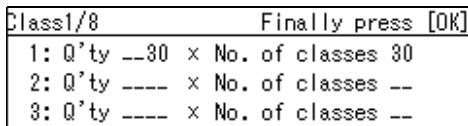
2 Use the [\blacktriangleleft][\triangleright] keys to select Recall, and the press the [OK] key.



3 Use the [\blacktriangleleft][\triangleright] keys to select the number to recall, and then press the [OK] key.



4 Confirm that the settings are correct, and then press the [OK] key.

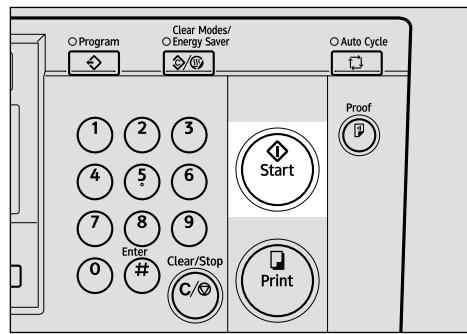


Note

- To change the stored settings, use the [\blacktriangleleft][\triangleright] keys to select the item that you wish to change, and then overwrite using the number keys.

5 Set your original.

6 Press the [Start] key.



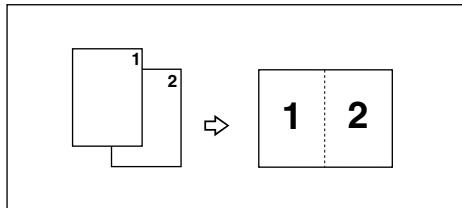
Printing starts automatically after the trial print.

Note

- If you wish to check the image before printing, press the [Auto Cycle] key before pressing the [Start] key, in order to disable Auto Cycle mode. See p.17 "When Auto Cycle mode is off".

Combine

Use this function to combine two originals onto one sheet of paper.



Note

- When the two originals are combined, their sizes would be reduced or enlarged as follows:

❖ Metric version

		Original Size			
		A4	B5	A5	B6
Paper Size	A3	100 %	115 %	141 %	163 %
	B4	87%	100 %	122 %	141 %
	A4	71%	82%	100 %	115 %
	B5	61%	71%	87%	100 %
	A5	50%	58%	71%	82%
	B6	—	50%	61%	71%

❖ Inch version

		Original Size	
		8 ¹ / ₂ " × 11"	5 ¹ / ₂ " × 8 ¹ / ₂ "
Paper Size	11" × 17"	100%	129%
	8 ¹ / ₂ " × 14"	77%	100%
	8 ¹ / ₂ " × 11"	65%	100%
	5 ¹ / ₂ " × 8 ¹ / ₂ "	50%	65%

- If the length of the first original is shorter than 91mm, 3.6", Combine mode will be disabled.

- You can set the machine to automatically cancel Combine/Repeat mode once you have finished using it. See "7 Cancel Comb." on p.75 "4 Mode Setting".

- Any image closer than 5mm, 0.2" to the leading edge of the first original will not be printed. Also, any image closer than 4mm, 0.16" to the leading edge of the second original will not be printed. When the image is too close to the leading edge, make duplicates of the originals with the image shifted away from the leading edge, and then print from the duplicates.

- You can select different image settings for the first and second originals.

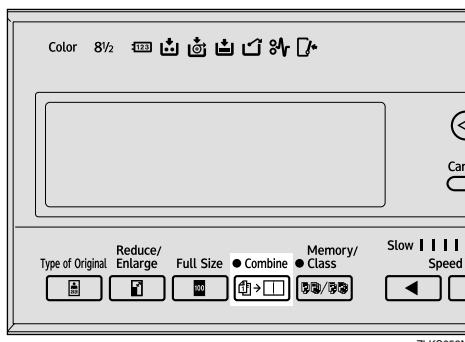
- Make sure that the paper feed side plates touch the paper lightly. If they do not, then the two images will not be properly aligned on the prints.

Reference

For details on how to use the optional document feeder when combining originals, see p.63 "Using the Document Feeder when Combining Originals".

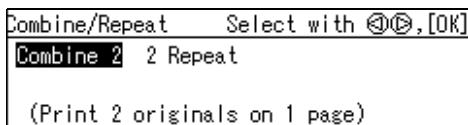
1

1 Press the **[Combine/Repeat]** key.

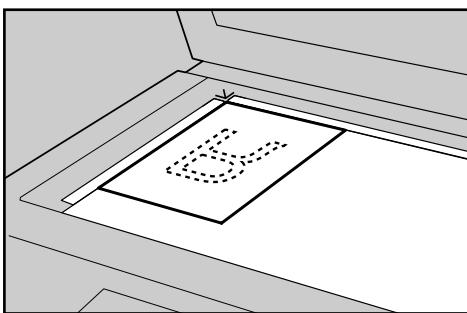


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2 Use the **[<][>]** keys to select Combine 2, and then press the **[OK]** key.



3 Place the first original face down on the exposure glass.

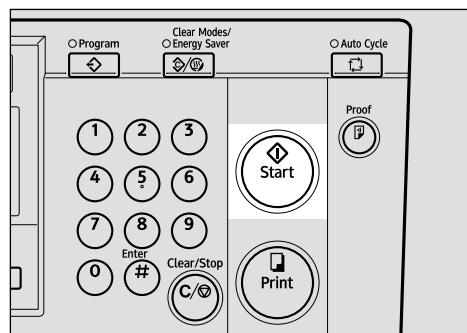


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Note

- When combining originals, place the original face down on the exposure glass with its leading edge towards you, as shown above.

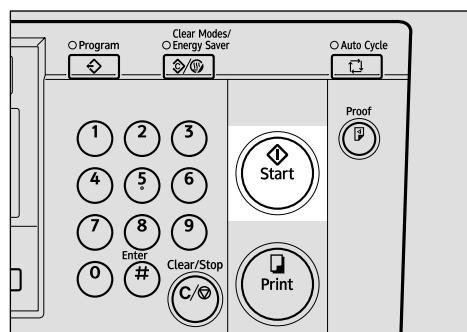
4 Press the **[Start]** key.



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5 After the first original has been scanned, place the second original in the same way.

6 Press the **[Start]** key.



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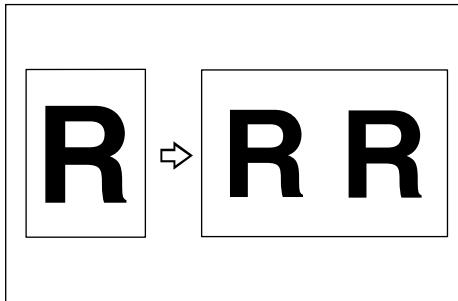
Printing starts automatically after the trial print.

Note

- If you wish to check the image before printing, press the **[Auto Cycle]** key before pressing the **[Start]** key, in order to disable Auto Cycle mode. See p.17 "When Auto Cycle mode is off".

Repeat

Use this function to repeat the image twice on the same sheet of paper.



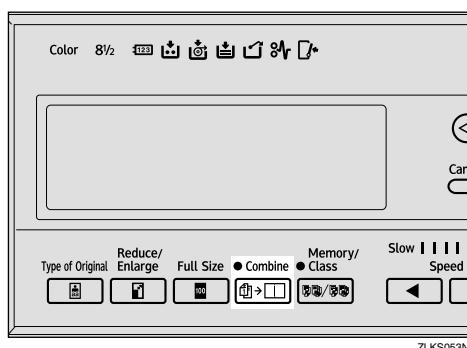
! Limitation

You cannot use the optional document feeder with the Repeat function.

Note

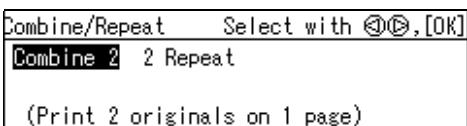
You can choose to have either Combine or Repeat selected by default when the power is turned on. See "6 Combine/Repeat" on p.75 "4 Mode Setting".

1 Press the [Combine/Repeat] key.



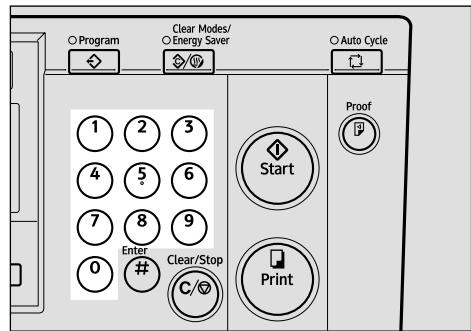
ZLKS053N

2 Use the [\leftarrow][\rightarrow]keys to select 2 Repeat, and then press the [OK] key.



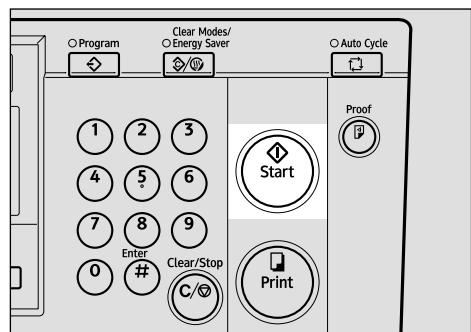
3 Set your original.

4 Enter the number of prints with the number keys.



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5 Press the [Start] key.



ZLKS030N

Printing starts automatically after the trial print.

Note

If you wish to check the image before printing, press the [Auto Cycle] key before pressing the [Start] key, in order to disable Auto Cycle mode. See p.17 "When Auto Cycle mode is off".

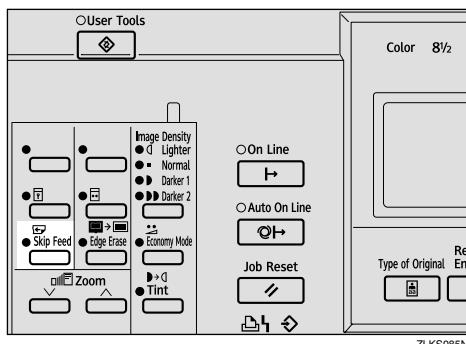
Skip Feed Printing

If the backs of prints are dirty, you can use the **[Skip Feed]** key to make the drum rotate twice instead of once with every sheet of paper fed. This gives you time to remove prints one by one from the paper delivery tray, or to insert a sheet of paper between two prints.

Note

- You can specify how many times that the drum rotates when the power is turned on. Alternatively, you can also choose whether or not to change the number of rotations temporarily when the **[Skip Feed]** key is pressed. See "8 No. of Skip Feed" on p.75 "4 Mode Setting".
- The number of rotations can be set from 2 to 9.
- The default is 2.

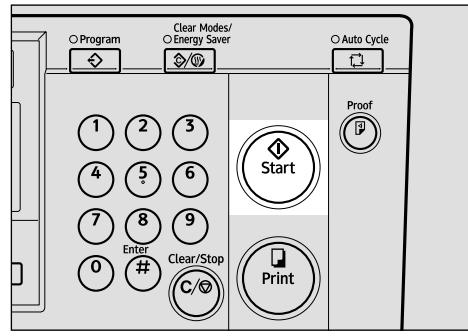
1 Press the **[Skip Feed]** key.



2 Set your original.

3 Enter the number of prints with the number keys.

4 Press the **[Start]** key.



Printing starts automatically after the trial print.

Note

- If you wish to check the image before printing, press the **[Auto Cycle]** key before pressing the **[Start]** key, in order to disable Auto Cycle mode. See p.17 "When Auto Cycle mode is off".

Program

Use this function to store up to nine frequently used print job settings and to recall them for future use.

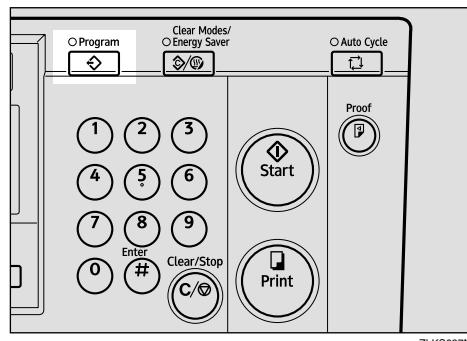
Note

- The stored contents will not be cleared even when you turn off the main switch.
- The stored contents cannot be deleted. To change the contents of a program, overwrite it with new print settings.
- You can store settings for the following functions:
 - Memory/Class
 - Edge Erase
 - Preset Reduce/Enlarge
 - Type of Original
 - Printing Speed
 - Auto Cycle
 - Combine/Repeat
- You cannot store settings for Security mode, nor for the Program function itself.

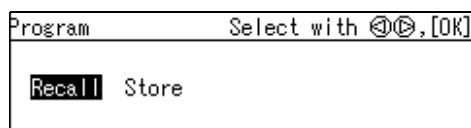
Storing Print Settings

1 First specify the print settings that you wish to store.

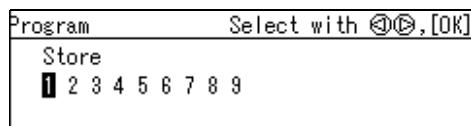
2 Press the **[Program]** key.



3 Use the **[<][>]** keys to select **Store**, and then press the **[OK]** key.



4 Use the **[<][>]** keys to select a number.



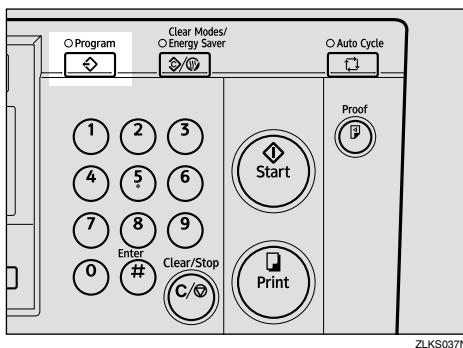
Note

- If the number is already in use, a message will be displayed asking whether you wish to overwrite the settings stored. To overwrite, press the **[OK]** key. Otherwise press the **[Cancel]** key to return to the previous display, and then select another number.

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

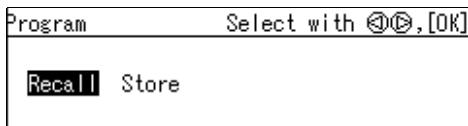
Recalling a Program

1 Press the [Program] key.

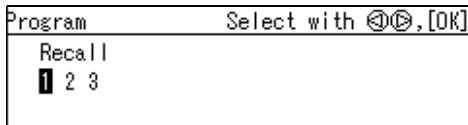


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2 Use the [\blacktriangleleft][\triangleright] keys to select Recall, and then press the [OK] key.



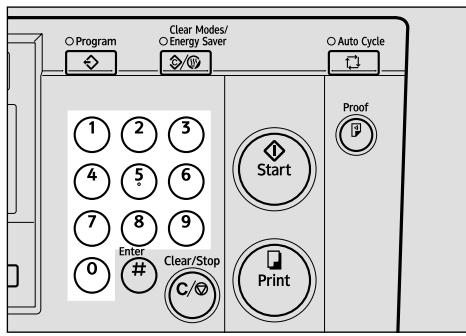
3 Use the [\blacktriangleleft][\triangleright] keys to select the number to recall, and then press the [OK] key.



The stored settings are displayed.

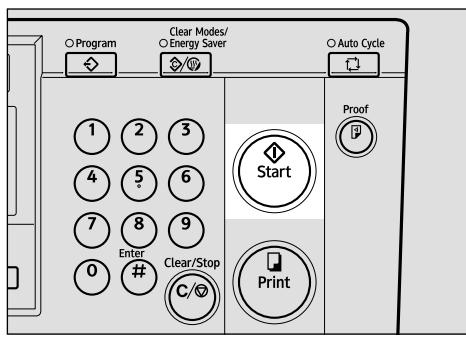
4 Confirm that the settings are correct, and then set your original.

5 Enter the number of prints with the number keys.



ZLKS032N

6 Press the [Start] key.



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Printing starts automatically after the trial print.

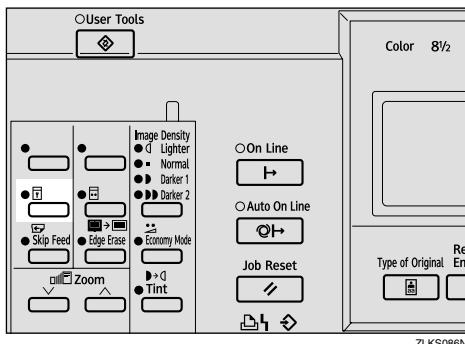
Note

- If you wish to check the image before printing, press the [Auto Cycle] key before pressing the [Start] key, in order to disable Auto Cycle mode. See p.17 "When Auto Cycle mode is off".

Security Mode

Use this function to prevent others from accessing your masters and making prints of confidential documents after you have done so.

1 After you have made your prints, press the **[Security]** key.



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

Press **[OK]** to set the security mode, or **[Cancel]** to exit.

>Note

- Once Security mode is set, you will not be able to press the **[Proof]** key or the **[Print]** key, nor will you be able to pull out the drum unit.
- Security mode cannot be cleared by turning off the main switch.
- Security mode will be cancelled when you set a new original and press the **[Start]** key.

Entering a User Code to Use the Machine

Under the User Code mode, users need to enter a user code before they can use the machine. The machine keeps count of the number of copies made under each user code.

Note

- To use this feature, User Code mode must be set to "On". See "3 Set User Code" on p.77 "5 Admin. Mode".
- When the User Code mode is on, the machine will prompt you for your user code when you turn on the main switch, or after the machine has been reset.
- The following user codes are available:
 - 000, 019, 028, 037, 046, 055, 064, 073, 082, 091, 100, 119, 128, 137, 146, 155, 164, 173, 182, 191, 200, 219, 228, 237, 246, 255, 264, 273, 282, 291, 300, 319, 328, 337, 346, 355, 364, 373, 382, 391, 400, 419, 428, 437, 446, 455, 464, 473, 482, 491, 500, 519, 528, 537, 546, 555, 564, 573, 582, 591, 600, 619, 628, 637, 646, 655, 664, 673, 682, 691, 700, 719, 728, 737, 746, 755, 764, 773, 782, 791, 800, 819, 828, 837, 846, 855, 864, 873, 882, 891, 900, 919, 928, 937, 946, 955, 964, 973, 982, 991

1 Enter your 3-digit user code with the number keys.

Please enter user code,
then press [OK].
User Code : ---

Note

- The user code will not displayed on the panel display.
- If you have made a wrong entry, press the **[Clear/Stop]** key and enter the number again.

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

Ready for Master Making/Printing
100% 
Original Mode:Letter
[ ± 0.00in.]

3 After printing, hold down the **[Clear Modes/Energy Saver]** key, and then press the **[Clear/Stop]** key.

Please enter user code,
then press [OK].
User Code : ---

The User Code mode is once again set. Other users will not be able to make prints using your user code.

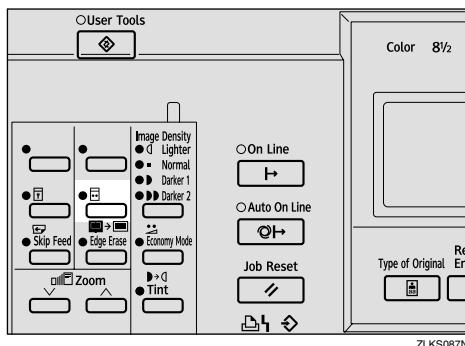
Quality Start Mode

If the machine is not used for a long time, or when you change to a color drum that has not been used recently, the ink on the drum may dry up. This might affect the print quality. To solve this problem, you can have the machine carry out a few idle spins of the drum before a print run.

Note

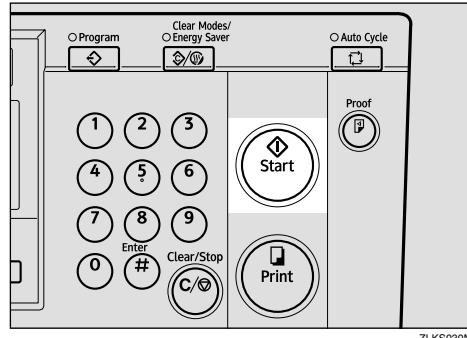
- You can change the number of spins. See "9 Idling for Q.Mode" p.75 "4 Mode Setting".
- The number of spins can be set from 1 to 5.
- The default is 2.

1 Press the [Quality Start] key.



2 Set your original.

3 Press the [Start] key.



Printing starts automatically after the trial print.

Note

- If you wish to check the image before printing, press the [Auto Cycle] key before pressing the [Start] key, in order to disable Auto Cycle mode. See p.17 "When Auto Cycle mode is off".

Auto Quality Start

You can program the machine to automatically carry out idle spins. This is called Auto Quality Start.

Note

- To use this function, you need to set Auto Quality Start to "On" using the user tools. See "10 Setting Q.Mode" on p.75 "4 Mode Setting".
- To specify the number of idle spins according to the length of time for which the machine is not used, see p.80 "4-14 No. of Q.Start".

On Line Printing

On Line printing allows you to use this machine as a PC printer.

1

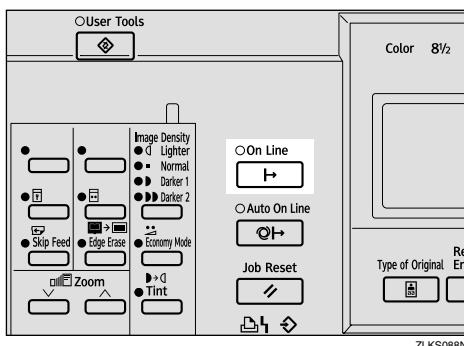
• Limitation

□ The optional PC controller is required.

• Note

□ When printing onto sizes other than A5□, 5¹/₂" × 8¹/₂" □, or custom sizes, refer to the manual for the PC controller.

1 Press the [On Line] key.

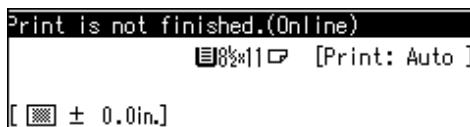


When a print job is still in progress

If a print job is still in progress, it has to be cancelled before the machine can accept the data coming from the PC.

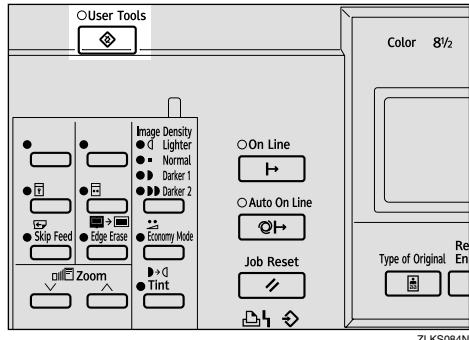
1 Press the [OK] key.

The messages "Print is not finished. (Online)" and "Press [OK] to start the next master" are displayed alternately.



When printing on A5□, 5¹/₂" × 8¹/₂" □ paper

1 Press the [User Tools] key.



2 Use the [◀][▶] keys to select 6 Online Paramet's, and then press the [OK] key.

User Tools 1/1 Select with ◀▶, [OK]	
1 System	2 Set Operat'n Mode
3 Initial Setting	4 Mode Setting
5 Admin. Mode	6 Online Paramet's

3 Use the [◀][▶] keys to select 2 Print Size, and then press the [OK] key.

Set O/L Paramet's Select with ◀▶, [OK]	
1 Auto Online	2 Print Size
3 List/Test Print	4 Print PS Errors
5 IP Address	6 Ethernet Speed

4 Use the [◀][▶] keys to select A5□, 5¹/₂" × 8¹/₂" □.

Print Size 1/2 Select with ◀▶, [OK]	
Auto	A3□
B5□	A4□
A5□	B6□
11×17□	A4□
8½×14□	B6□
8½×11□	Card□
8½×11□	8½×11□

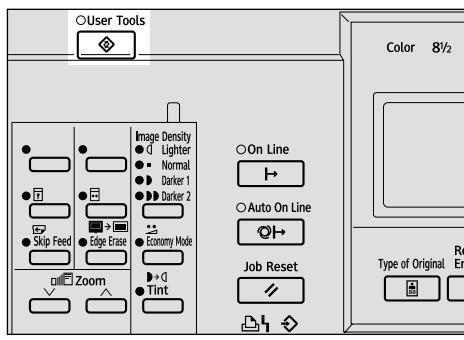
5 Press the [OK] key.

When printing on custom size paper

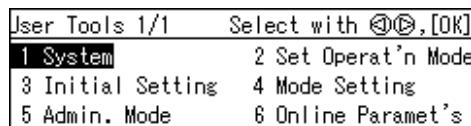
● Limitation

- When printing on custom sizes, always set the paper in the  direction.

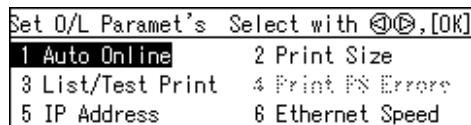
① Press the [User Tools] key.



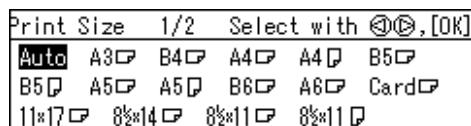
② Use the [][] keys to select 6 Online Paramet's, and then press the [OK] key.



③ Use the [][] keys to select 2 Print Size, and then press the [OK] key.



④ Use the [][] keys to select a paper size that is one size larger than the custom size.



Example: If you are printing on paper of a size 200 × 280mm, 7.9" × 11", the nearest size would be A4, 8½" × 11".

⑤ Press the [OK] key.

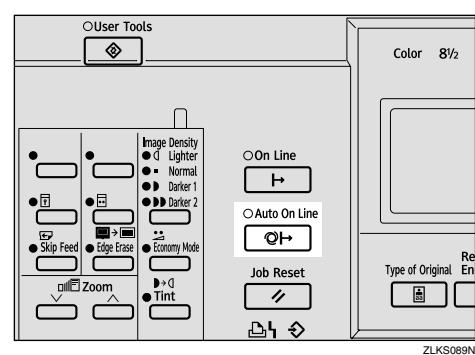
Auto On Line

You can select whether or not the machine automatically switches to On Line mode when it receives data from a PC.

● Preparation

- The default is On. If the Auto On Line indicator is lit, then Auto On Line is active.
- Press the [Auto On Line] key to switch it on or off.
- When the Auto On Line mode is on, the machine gives priority to data received from a PC. If you are making prints and do not wish to have your print job interrupted by a PC, press the [Auto On Line] key to turn it off.

① Press the [Auto On Line] key.



2. Optional Functions

Optional Document Feeder

Place a stack of originals in the optional document feeder. They will be fed into the machine automatically.

Originals

Placing the following originals in the document feeder might damage the originals or cause misfeeds. Use the exposure glass instead.

- Originals heavier than $127.9\text{g}/\text{m}^2$, 34 lb
- Originals lighter than $52.3\text{g}/\text{m}^2$, 14 lb
- Originals smaller than 148mm \times 210mm, 5.9" \times 8.3"
- Originals larger than 297mm \times 864mm, 11.7" \times 34.0"
- Stapled or clipped originals
- Perforated or torn originals
- Curled, folded, or creased originals
- Originals with any kind of coating, such as thermal fax paper, art paper, aluminum foil, carbon paper, or conductive paper
- Bound originals such as books
- Damaged originals
- Originals with glue on them
- Pasted originals
- Originals written in pencil
- Thin and flimsy originals
- Originals with index tabs
- Transparent originals such as OHP transparencies or translucent paper

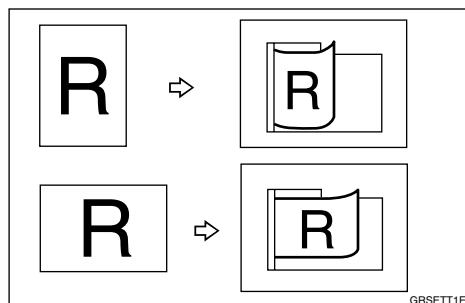
This machine can detect the following original sizes when the original is placed in the optional document feeder.

Metric version	A3 <input type="checkbox"/> , B4 JIS <input type="checkbox"/> , A4 <input type="checkbox"/> <input type="checkbox"/> , B5 JIS <input type="checkbox"/> <input type="checkbox"/> , A5 <input type="checkbox"/> <input type="checkbox"/>
Inch version	11" \times 17" <input type="checkbox"/> , 8 $\frac{1}{2}$ " \times 14" <input type="checkbox"/> <input type="checkbox"/> , 8 $\frac{1}{2}$ " \times 11" <input type="checkbox"/> <input type="checkbox"/> , 5 $\frac{1}{2}$ " \times 8 $\frac{1}{2}$ " <input type="checkbox"/> <input type="checkbox"/>

Note

- Set originals only after the ink or correction fluid on them is completely dry. Not taking this precaution could stain the exposure glass and cause the stains to be printed.

For standard printing, set originals as shown below.



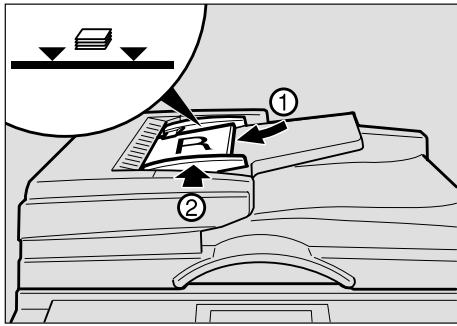
You cannot place originals of different sizes at the same time.

For thin originals, place them in the document feeder one at a time, or use the exposure glass instead.

The first 5mm, 0.2", of the leading edge and the last 2mm, 0.08" of the trailing edge cannot be printed. Make sure the leading edge margin is at least 5mm, 0.2", and the trailing edge margin is at least 2mm, 0.08".

Placing Originals in the Document Feeder

- 1** Adjust the guides to match the original size.
- 2** Align the originals and place them in a stack facing up.



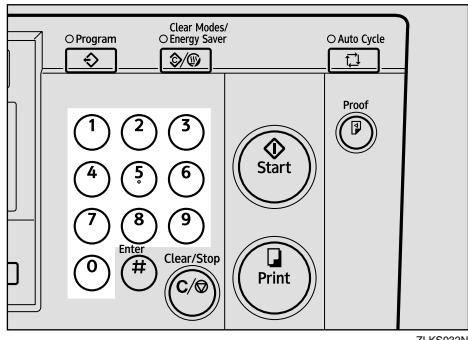
● Limitation

- Approximately 50 originals (80g/m², 21 lb) can be placed in the document feeder at one time. The first (top) original will be fed in first.

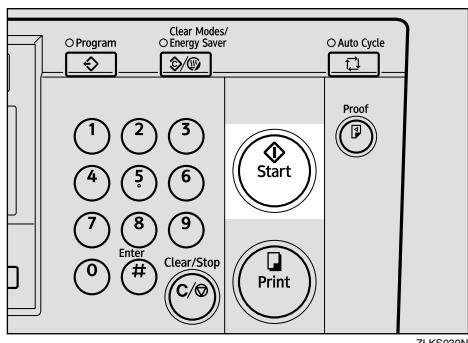
>Note

- Do not stack originals above the limit mark.
- To prevent a double feed or an original misfeed, fan the originals before placing them in the document feeder.
- Both guides should touch the originals lightly.

- 3** Specify the print settings, and then enter the number of prints with the number keys.



- 4** Press the [Start] key.



Printing starts automatically after the trial print.

Note

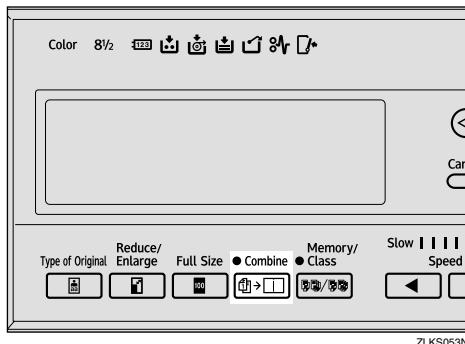
- If you wish to check the image before printing, press the [Auto Cycle] key before pressing the [Start] key, in order to disable Auto Cycle mode. See p.17 "When Auto Cycle mode is off".

Using the Document Feeder when Combining Originals

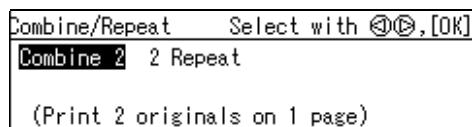
Reference

For details on combining originals, see p.49 "Combine".

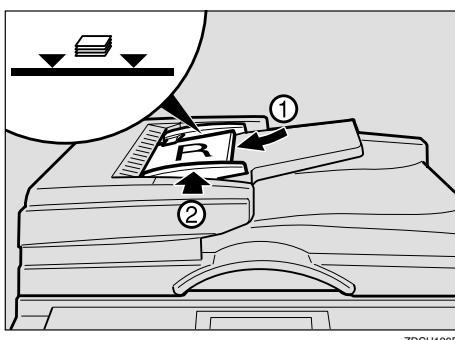
1 Press the [Combine/Repeat] key.



2 Use the [\leftarrow][\rightarrow] keys to select Combine 2, and then press the [OK] key.



3 Place the originals face up in the document feeder.

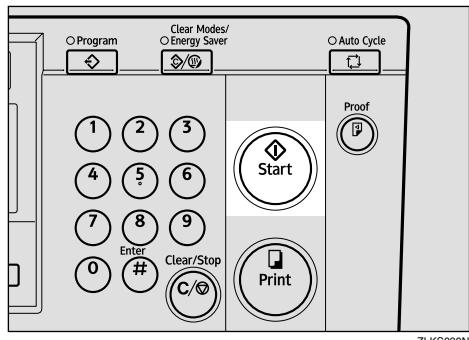


Note

- The first (top) original will be printed on the left side of the print.

4 Enter the number of prints with the number keys.

5 Press the [Start] key.



Printing starts automatically after the trial print.

Note

- If you wish to check the image before printing, press the [Auto Cycle] key before pressing the [Start] key, in order to disable Auto Cycle mode. See p.17 "When Auto Cycle mode is off".

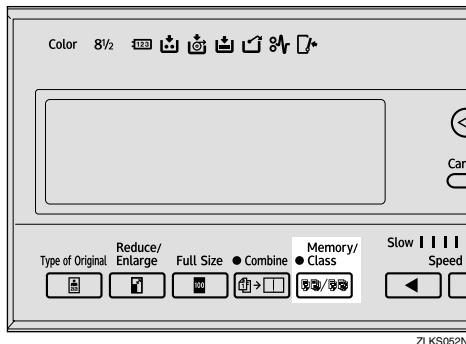
Using the Document Feeder in Memory Mode

Using the Document Feeder in Normal Memory Mode

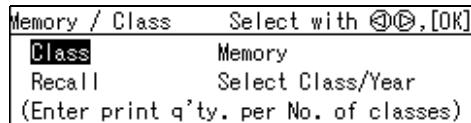
Reference

For details of the Memory mode, see p.40 "Memory Mode".

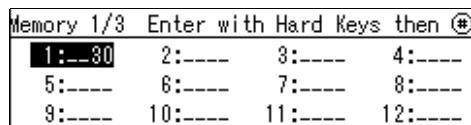
1 Press the [Memory/Class] key.



2 Use the [◀][▶] keys to select Memory, and then press the [OK] key.



3 With the number keys, enter the desired number of prints for each original, and then press the [#] key.

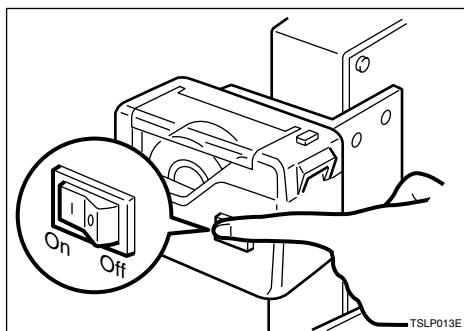


Note

□ Repeat this step until you have entered for all the originals.

4 Press the [OK] key.

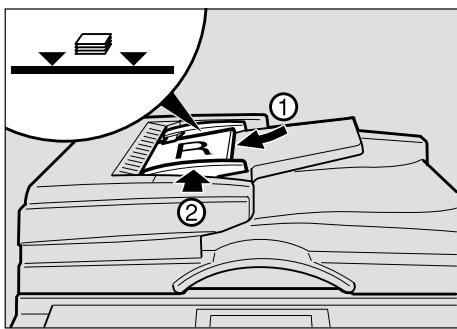
5 If you are using the optional tape dispenser, turn on the tape dispenser switch.



Note

□ The optional tape dispenser automatically feeds out strips of paper to separate the prints made from each original.

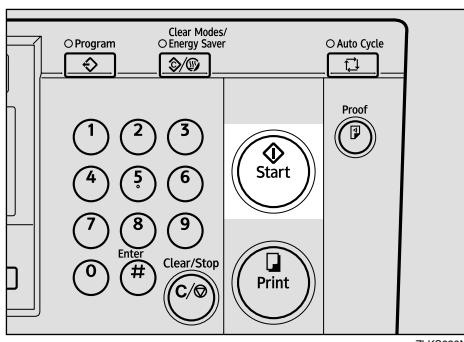
6 Place the originals face up in the document feeder.



Note

□ Stack the originals in the same order as you have registered them in Step 3, with the first original on top.

7 Press the [Start] key.



Printing starts automatically after the trial print.

Note

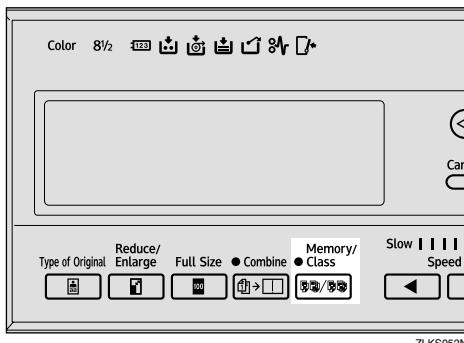
- If you wish to check the image before printing, press the [Auto Cycle] key before pressing the [Start] key, in order to disable Auto Cycle mode. See p.17 "When Auto Cycle mode is off".

Using the Document Feeder in Stack Memory Mode

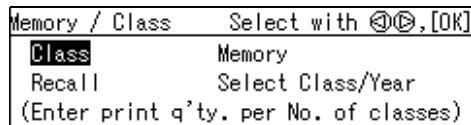
Reference

For details of the Stack Memory mode, see p.41 "Stack Memory Mode".

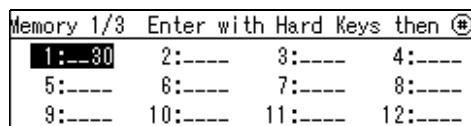
1 Press the [Memory/Class] key.



2 Use the [\triangle][\triangleright] keys to select Memory, and then press the [OK] key.



3 With the number keys, enter the desired number of prints for each class, and then press the [$\#$] key.



Note

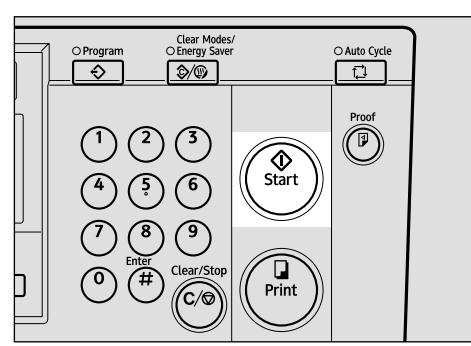
- Repeat this step until you have entered for all your classes.

4 Press the [OK] key.

5 If you are using the optional tape dispenser, turn on the tape dispenser switch.

6 Place the original face up in the document feeder.

7 Press the [Start] key.



Printing starts automatically after the trial print.

Note

- If you wish to check the image before printing, press the [Auto Cycle] key before pressing the [Start] key, in order to disable Auto Cycle mode. See p.17 "When Auto Cycle mode is off".

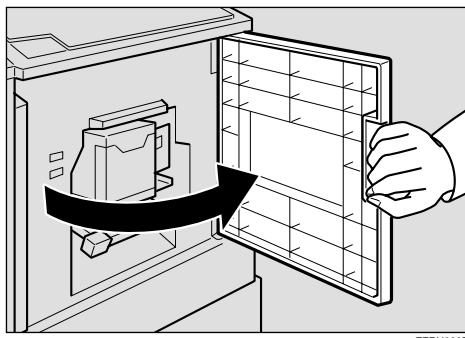
Color Printing Using the Optional Color Drum

2

A3, 11" x 17" color drum units in red, blue, green, brown, yellow, purple, navy, maroon, orange, teal and grey are available as options in addition to the standard black unit. To make color prints, a separate drum unit is needed for each color.

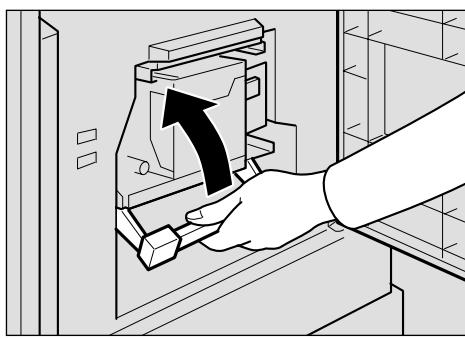
Changing the Color Drum Unit

1 Open the front door.



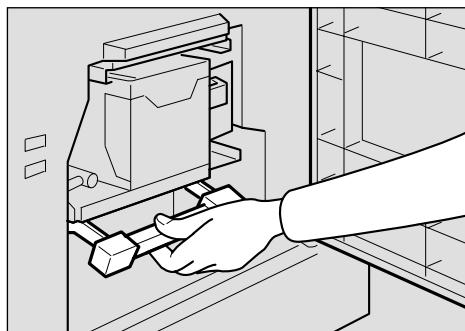
ZFRH280E

2 Lift to unlock the drum unit lock lever.



ZFRH300E

3 Pull out the drum unit by its handle.

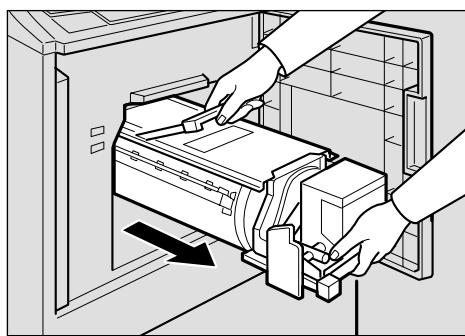


ZFRH320E

Note

- If you cannot pull out the drum unit, push the drum unit handle once before pulling.

4 Hold the upper drum stay and remove the drum unit from the machine.

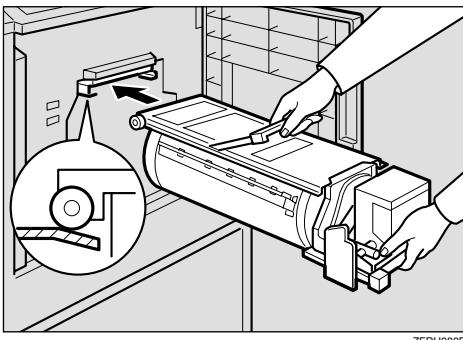


ZFRH360E

Note

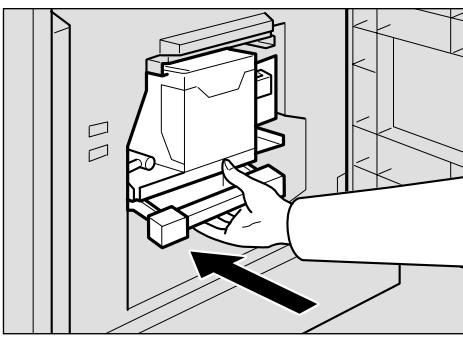
- Be careful not to let the drum unit fall.

5 Set the color drum unit on the guide rail.



ZFRH380E

6 Slide in the drum unit until it locks into position.



ZFRH330E

7 Lower the drum unit lock lever.



ZFRH310E

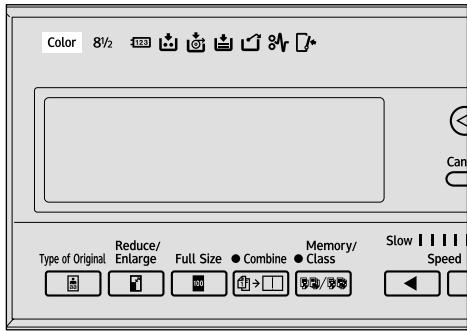
8 Close the front door.

Note

- Make sure that the open cover/unit indicator (□*) goes off, and the color drum indicator on the panel display lights.

Making Color Prints

1 Make sure that the color drum indicator on the panel display is lit.

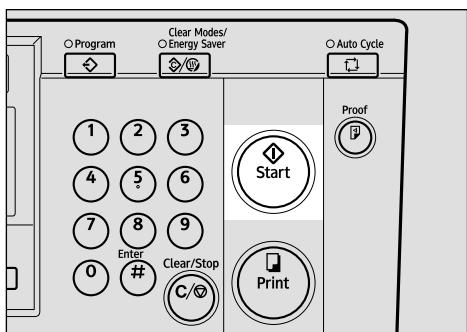


ZLKS054N

2 Set your original.

3 Specify the print settings and enter the number of prints with the number keys.

4 Press the **[Start]** key.



ZLKS030N

Printing starts automatically after the trial print.

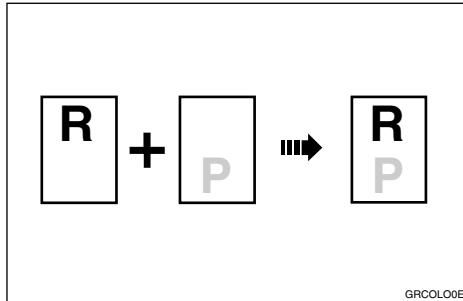
Note

- If you wish to check the image before printing, press the **[Auto Cycle]** key before pressing the **[Start]** key, in order to disable Auto Cycle mode. See p.17 "When Auto Cycle mode is off".

Printing in Two Colors

After printing in one color, you can print in another color on the same side of the print.

2



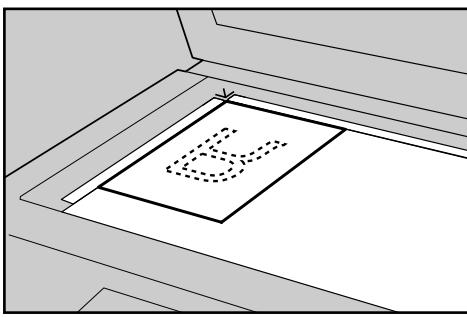
Important

- Let the ink on the prints dry for a while before printing on them again.
- If the prints are still wet when you print on them again, the paper feed roller might become dirty. In this case, wipe the roller with a cloth.

Note

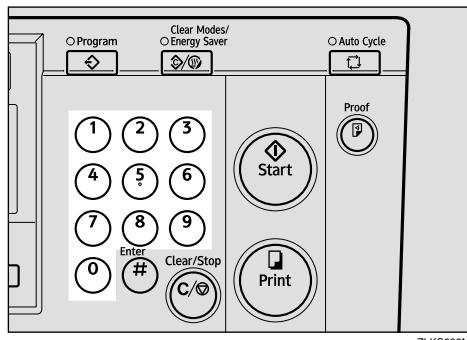
- You cannot print in two colors at a time.

1 Prepare two originals. Place the first on the exposure glass or in the optional document feeder.



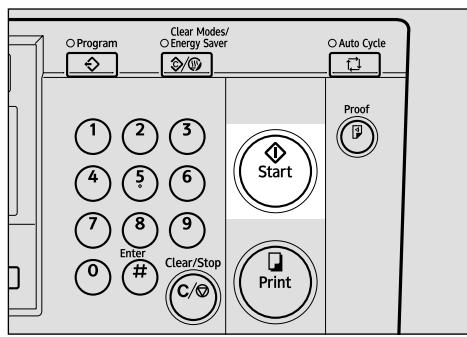
ZDCH110E

2 Enter the number of prints with the number keys.



ZLKS032N

3 Press the [Start] key.



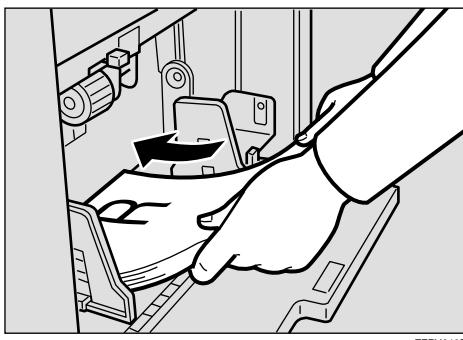
ZLKS030N

Printing starts automatically after the trial print.

Note

- If you wish to check the image before printing, press the [Auto Cycle] key before pressing the [Start] key, in order to disable Auto Cycle mode. See p.17 "When Auto Cycle mode is off".

4 Remove the prints from the paper delivery tray and place them onto the paper feed tray again as shown.

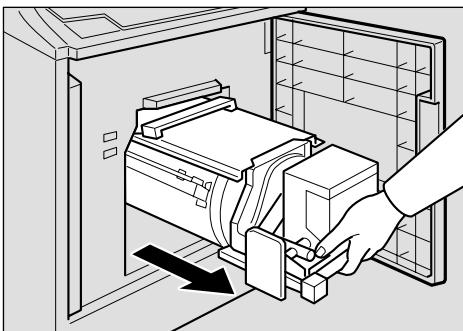


ZFRY040E

 **Note**

- If you wish to check the image before printing, press the **[Auto Cycle]** key before pressing the **[Start]** key, in order to disable Auto Cycle mode. See p.17 "When Auto Cycle mode is off".

5 Change the drum unit.

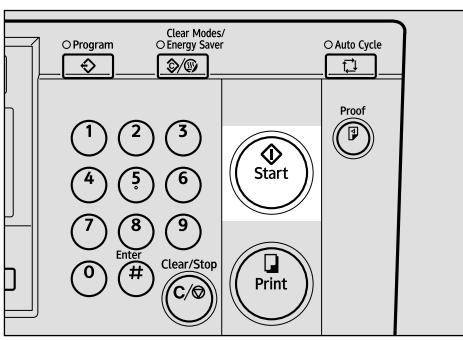


ZFRH340E

 **Reference**

See p.66 "Changing the Color Drum Unit".

6 Place the second original, and then press the **[Start]** key.



ZLKS030N

Printing starts automatically after the trial print.

3. User Tools

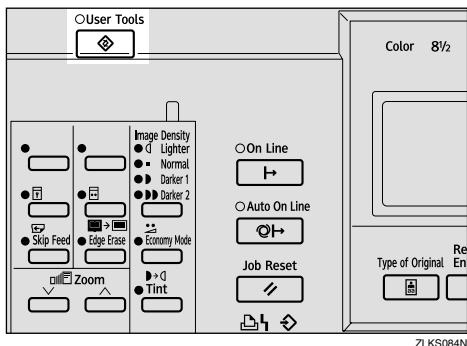
Accessing the User Tools

This section is intended for the machine administrator. The user tools allow the administrator to customize the default settings of this machine.

Reference

For the detailed user tool menu, see p.72 "User Tools Menu".

1 Press the [User Tools] key.



2 Use the [\triangleleft][\triangleright] keys to select the desired user tool.

User Tools 1/1 Select with \triangleleft [\triangleright], [OK]	
1 System	2 Set Operat'n Mode
3 Initial Setting	4 Mode Setting
5 Admin. Mode	6 Online Paramet's

Reference

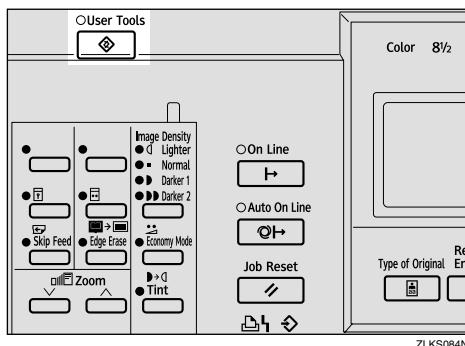
See p.72 "User Tools Menu".

3 Enter a number or select the desired mode using the number keys.

4 Press the [OK] key.

Quitting User Tools

1 To quit the User Tools menu, press the [User Tools] key.



Note

- Changes made to the following user tools become effective when you press the [Clear Modes/Energy Saver] key.
 - Prog./Change:Clss
 - Prog./Change:Mem.
 - ProgChnge:Clss/Yr
 - No. of Skip Feed
- Changes made to the following user tools become effective when the main switch of the machine is turned on again.
 - Print PS Errors
 - IP Address
 - Ethernet Speed
 - Network
 - I/O Buffer
 - Menu Reset

User Tools Menu

1 System

No.	Mode	Description
1	Auto Reset	<p>The machine automatically returns to its initial condition if it has not been operated for a certain period of time.</p> <p> Note</p> <p><input type="checkbox"/> Default: <i>Off</i></p>
2	R.Counter Display	<p>Shows the total number of masters and prints.</p> <p> Note</p> <p><input type="checkbox"/> The trial print will not be counted as part of the total.</p>
3	Reset R. Counter	<p>You can select whether or not to reset the total number of masters and prints.</p> <p> Note</p> <p><input type="checkbox"/> Default: <i>Do not clear</i></p>
4	mm/inch	<p>You can select the units of measurement used on the panel display.</p> <p> Note</p> <p><input type="checkbox"/> Default:</p> <ul style="list-style-type: none"> • Metric version: <i>mm</i> • Inch version: <i>inch</i>
5	Language on LCD	<p>You can select the language for the panel display.</p> <p> Note</p> <p><input type="checkbox"/> Default: <i>English</i></p>
6	Energy Saving	<p>You can specify the time taken for the machine to enter Energy Saver mode.</p> <p> Note</p> <p><input type="checkbox"/> Default: <i>3 mins</i> (minutes)</p>

2 Set Operat'n Mode

No.	Mode	Description
1	Min. quantity	<p>You can set a minimum print quantity between 0 and 9999. Any number below the minimum will not be printed.</p> <p> Note</p> <p><input type="checkbox"/> Default: 0</p>
2	Max. quantity	<p>You can set a maximum print quantity between 0 and 9999.</p> <p> Note</p> <p><input type="checkbox"/> Default: 9999</p>
3	Panel Beeper	<p>You can turn the beeper on or off.</p> <p> Note</p> <p><input type="checkbox"/> Default: STD. (standard)</p> <p><input type="checkbox"/> Available settings:</p> <ul style="list-style-type: none"> • ALL OFF (The beeper does not sound at all.) • STD. (The beeper sounds only when warning messages are shown on the panel display and not when you press a key.) • ALL ON (The beeper sounds either when you press a key or when warning messages are shown on the panel display.)
4	LCD Contrast	<p>You can adjust the brightness of the panel display.</p>
5	Class Display	<p>Under the Memory/Class function, you can select to have "Select Class/Year" displayed as "Select Department" instead, when the machine is not limited to school or college use.</p> <p> Note</p> <p><input type="checkbox"/> Default: School year (Select Class/Year)</p>

3 Initial Setting

No.	Mode	Description
1	MSTR Makg.Density	<p>You can specify the image density that is selected by default when the power is turned on.</p> <p> Note</p> <p><input type="checkbox"/> Default: <i>Std.(Standard)</i></p>
2	Original Priority	<p>You can specify the original type that is selected by default when the power is turned on.</p> <p> Note</p> <p><input type="checkbox"/> Default: <i>Letter</i></p>
3	Ratio Priority	<p>You can specify the reproduction ratio that is selected by default when the power is turned on.</p> <p> Note</p> <p><input type="checkbox"/> Default: <i>100%</i></p>
4	Eco. Mode ON/OFF	<p>You can select to have Economy mode as either "ON" or "OFF" when the power is turned on, or after mode settings have been cleared.</p> <p> Note</p> <p><input type="checkbox"/> Default: <i>OFF</i></p>
5	Margin Eras. Area	<p>You can specify the edge erase margin.</p> <p> Note</p> <p><input type="checkbox"/> Default: <i>5 mm, 0.2"</i></p> <p> Reference</p> <p>To specify the edge erase margin, see p.80 "3-5 Edge Erase Area".</p>
6	Margin Non-S. Size	<p>You can use the number keys to specify the edge erase margin for an original of custom size.</p> <p> Note</p> <p><input type="checkbox"/> Default: <i>70 × 165mm, 2.8" × 6.5"</i></p>
7	Prog./Change: Clss	<p>To store settings of the Class mode, see p.47 "Storing Class Mode Settings".</p>
8	Prog./Change: Mem.	<p>To store settings of the Memory mode, see p.45 "Storing Memory Mode Settings".</p>
9	ProgCh- nge:Clss/Yr	<p>To store settings of the Select Class/Year or All Year modes, see p.37 "Registering Class/Year".</p>

4 Mode Setting

No.	Mode	Description
1	Auto Cycle ON/OFF	<p>You can select to have Auto Cycle mode as either "ON" or "OFF" when the power is turned on.</p> <p> Note</p> <p><input type="checkbox"/> Default: ON</p>
2	Ignore Paper Size	<p>If you are making prints on paper of custom sizes, you can set paper size detection to "Ignore".</p> <p> Note</p> <p><input type="checkbox"/> Default: <i>Do not Ignore</i></p>
3	No Orig. Size(ADF)	<p>If you are setting long originals in the optional document feeder (ADF), you can set original detection to "Ignore".</p> <p> Note</p> <p><input type="checkbox"/> Default: <i>Do not Ignore</i></p>
4	Background ON/OFF	<p>When you make prints in Photo, Letter/Photo, or Tint mode, the background of the prints might appear dirty. In this case, you can select "Back. Correction" to improve the clarity of your prints.</p> <p> Note</p> <p><input type="checkbox"/> Default: <i>W/O back. correction</i></p>
5	Longer Paper	<p>You can select "Use" to allow the use of paper longer than 432mm, 17.0".</p> <p> Note</p> <p><input type="checkbox"/> Default: <i>Do not use</i></p>
6	Combine/Repeat	<p>You can choose to have either Combine or Repeat selected by default when the power is turned on.</p> <p> Note</p> <p><input type="checkbox"/> Default: <i>Use (Combine)</i></p>
7	Cancel Comb.	<p>You can specify whether Combine/Repeat mode will be automatically cleared after you have finished your print job.</p> <p> Note</p> <p><input type="checkbox"/> Default: <i>Do not cancel</i></p>
8	No. of Skip Feed	<p>You can specify the number of times that the drum rotates when in Skip Feed mode. You can also choose whether or not to change the number of drum rotations temporarily when you press the [Skip Feed] key. See p.52 "Skip Feed Printing".</p> <p> Note</p> <p><input type="checkbox"/> Default:</p> <ul style="list-style-type: none"> Number of Skip Feed: 2

No.	Mode	Description
9	Idling for Q.Mode	<p>You can specify the number of times that the drum unit idles when in Quality Start mode.</p> <p> Note</p> <p><input type="checkbox"/> Default: 2</p>
10	Setting Q.Mode	<p>You can select "Yes" to have the machine automatically carry out a few idle spins when the power is turned on. If Auto Quality Start mode is set to "No", you can restore the density by making a few extra prints or by using the Manual Quality Start mode.</p> <p> Note</p> <p><input type="checkbox"/> Default: Yes</p>
11	No. of Q.Start	<p>You can specify the number of times that the drum idles when in Auto Quality Start mode.</p> <p>To increase the print image density, increase the number of drum rotations.</p> <p> Note</p> <p><input type="checkbox"/> Default: See p.80 "4-14 No. of Q.Start"</p> <p> Reference</p> <p>To change the number of idle spins, see p.80 "4-14 No. of Q.Start".</p>
12	Memory Mode	<p>You can choose to have either Memory mode or Stack Memory mode as the default.</p> <p> Note</p> <p><input type="checkbox"/> Default: <i>Normal</i> (Memory mode)</p>
13	Auto Class	<p>Under the Class mode, the machine stops after it is finished a Class print job. When you select Auto Class, the machine stops for 2 seconds and then goes on to the next Class print job.</p> <p> Note</p> <p><input type="checkbox"/> Default: <i>Stop</i></p>

5 Admin. Mode

◆ User Codes

If user codes are turned on, operators must enter their user codes before they can operate the machine. The machine keeps count of the number of copies made under each user code. See “3 Set User Code” below.

1	Check Counter	You can check the number of masters and copies made under each user code.
2	Reset Counters	<p>You can clear each or all user code counters.</p> <p> Note</p> <p><input type="checkbox"/> Default: <i>Single</i></p> <p> Reference</p> <p>To clear the number of masters and copies, see p.81 “5-2 Reset Counters”.</p>
3	Set User Code	<p>You can select whether or not to use User Code mode.</p> <p> Note</p> <p><input type="checkbox"/> Default: <i>Do not use</i></p>
4	Key Counter Adj.	<p>Normally, the optional key counter counts the number of prints regardless of the number of masters used. You can, however, add to the key counter a value between 0 and 50 to the key counter each time a new master is used.</p> <p> Note</p> <p><input type="checkbox"/> Default: <i>0</i></p> <p><input type="checkbox"/> Range of adjustment: <i>0–50</i></p>

6 Online Paramet's

! Limitation

The optional PC controller is required.

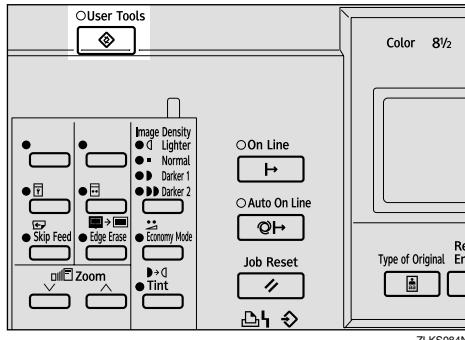
No.	Mode	Description
1	Auto Online	<p>You can select to have Auto On Line mode as either "On" or "Off" when the power is turned on, or after mode settings have been cleared.</p> <p> Note</p> <p><input type="checkbox"/> Default: <i>On</i></p>
2	Print Size	<p>You can specify the paper size that is selected by default when you press the 【On Line】 key.</p> <p> Note</p> <p><input type="checkbox"/> Default: <i>Auto</i></p>
3	List/Test Print	<p>You can print a list of the current settings in this machine.</p> <p> Note</p> <p><input type="checkbox"/> Default: <i>System Print</i></p>
4	Print PS Errors	<p>You can select whether or not to print an error report when a PostScript error occurs.</p> <p> Note</p> <p><input type="checkbox"/> Default: <i>On</i></p>
5	IP Address	<p>You can set the IP address.</p> <p> Reference For further details, see Printer Reference 1.</p>
6	Ethernet Speed	<p>You can set the Ethernet communication speed.</p> <p> Note</p> <p><input type="checkbox"/> Default: <i>Auto</i></p>
7	Network	<p>You can set the Network boot.</p> <p> Note</p> <p><input type="checkbox"/> Default: <i>None</i></p> <p> Reference For further details, see Printer Reference 1.</p>

No.	Mode	Description
8	I/O Timeout	<p>You can specify the time for which the interface remains enabled even after it is finished receiving data. When the time set has elapsed, it becomes possible for this machine to receive data from another interface.</p> <p>Important</p> <ul style="list-style-type: none"> <input type="checkbox"/> If the time that you set is too short, time might run out while data is still being received. As a result, data from another interface may cut in, or the emulation detector may be activated to switch to a different emulation. <p>Note</p> <ul style="list-style-type: none"> <input type="checkbox"/> Default: 30Sec.
9	I/O Buffer	<p>You can specify the capacity of the reception buffer.</p> <p>Note</p> <ul style="list-style-type: none"> <input type="checkbox"/> Default: 32KB
10	Menu Reset	<p>You can reset the Online Print settings back to their defaults. However, settings for "IP Address", "Network", and the "Ethernet Speed" cannot be changed using "Menu Reset".</p>

User Tool Menus in Detail

3-5 Edge Erase Area

1 Press the [User Tools] key.



2 Use the [\blacktriangleleft][\triangleright] keys to select 3 Initial Setting, and then press the [OK] key.

User Tools 1/1 Select with $\odot\odot$, [OK]	
1 System	2 Set Operat'n Mode
3 Initial Setting	4 Mode Setting
5 Admin. Mode	6 Online Paramet's

3 Use the [\blacktriangleleft][\triangleright] keys to select 5 Margin Eras.Area, and then press the [OK] key.

Initial Setting 1/2 With $\odot\odot$, [OK]	
1 MSTR Makg.Density	2 Original Priority
3 Ratio Priority	4 Eco. Mode ON/OFF
5 Margin Eras.Area	6 Margin Non-S.Size

4 Enter the margin to be erased using the number keys.

Enter with Hard Keys, then press [OK]	
Width to erase: 0.2in. (0.0~0.8)	

5 Press the [OK] key.

4-14 No. of Q.Start

Note

□ The defaults are as follows:

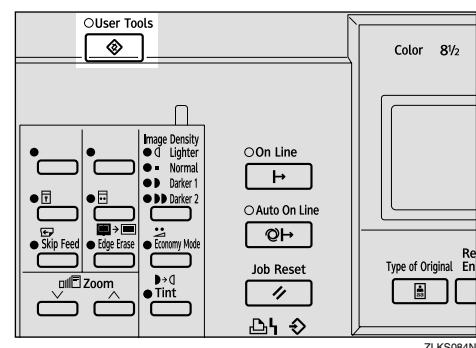
Temperature	Low Tmp. *1	Time interval			
		0 - 2 hours	2 - 4 hours	4 - 24 hours	More than 24 hours
Normal Tmp. *2	0	0	2	3	3
High Tmp. *3	0	0	2	3	3

*1 (10 – 18°C, 50 – 64.4°F)

*2 (18 – 28°C, 64.4 – 82.4°F)

*3 (28°C – , 82.4°F –)

1 Press the [User Tools] key.



2 Use the [\blacktriangleleft][\triangleright] keys to select 4 Mode Setting, and then press the [OK] key.

User Tools 1/1 Select with $\odot\odot$, [OK]	
1 System	2 Set Operat'n Mode
3 Initial Setting	4 Mode Setting
5 Admin. Mode	6 Online Paramet's

3 Use the [\blacktriangleleft][\triangleright] keys to select 11 No. of Q.Start, and then press the [OK] key.

Mode Setting 1/3 Select with $\odot\odot$, [OK]	
1 Auto Cycle ON/OFF	2 Ignore Paper Size
3 No Orig.Size(ADF)	4 Background ON/OFF
5 Longer Paper	6 Combine/Repeat

4 Use the [\blacktriangleleft][\triangleright] keys to select the temperature range in which you are using this machine, and then press the [OK] key.

No. of Idling Rot. Select with $\odot\odot$, [OK]		
Low Tmp.	Normal Tmp.	High Tmp.

5 Use the [\blacktriangleleft][\triangleright] keys to select the length of time for which the machine has not been used, and then press the [OK] key.

No. of Idling Rot. Select with $\odot\odot$, [OK]	
Interval: 0~2 2~4 4~24 24~ (hours)	

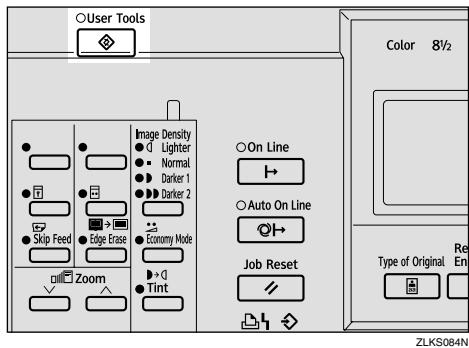
6 Use the [\blacktriangleleft][\triangleright] keys to select the number of times that the drum unit idles.

No. of Idling Rot. Select with $\odot\odot$, [OK]	
0	1 2 3

7 Press the [OK] key.

5-2 Reset Counters

1 Press the [User Tools] key.



2 Use the [\blacktriangleleft][\triangleright] keys to select 5 Admin. Mode, and then press the [OK] key.

User Tools 1/1 Select with $\odot\odot$, [OK]	
1 System	2 Set Operat'n Mode
3 Initial Setting	4 Mode Setting
5 Admin. Mode	6 Online Paramet's

3 Use the [\blacktriangleleft][\triangleright] keys to select 2 Reset Counters, and then press the [OK] key.

Admin. Mode 1/1 Select with $\odot\odot$, [OK]	
1 Check Counter	2 Reset Counters
3 Set User Code	4 Key Counter Adj.

To clear only one counter

1 Use the [\blacktriangleleft][\triangleright] keys to select Single.

Reset Counters Select with $\odot\odot$, [OK]	
Single	All

② Use the **【<】【>】** keys to select the user code that you wish to clear.

Check Counter	1/100	Press [OK] to quit
User Code:	0	(@Prev. @Next)
Black	Mstr:	0 Print: 0
Color	Mstr:	0 Print: 0

③ Press the **【OK】** key.

Press [OK] to reset the counter of the selected user code.

3

 **Note**

- If you have selected the wrong user code, press the **【Cancel】** key to return to the previous display.

④ Press the **【OK】** key.

To clear all counters

① Use the **【<】【>】** keys to select All.

Reset Counters	Select with @①②, [OK]
Single	All

② Press the **【OK】** key.

Caution!!!
Press [OK] if you are sure you want to reset the counters of all user codes.

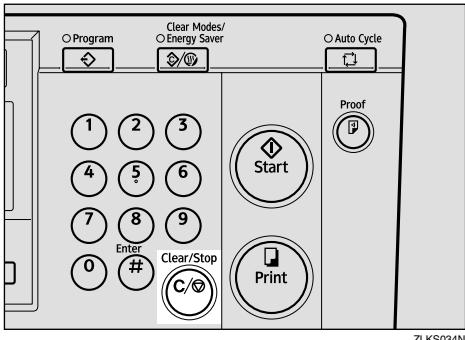
4. Replenishing Supplies

Loading Paper on the Paper Feed Tray

The load paper indicator (⌚) lights when the paper feed tray runs out of paper.

Replenishing Paper

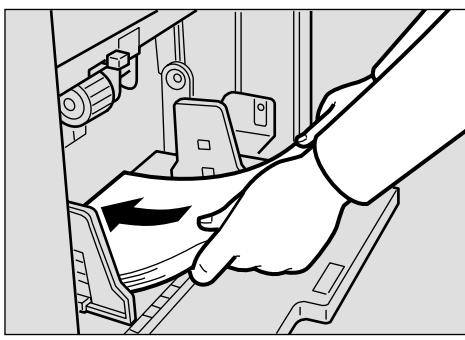
1 Press the [Clear/Stop] key.



Note

- This step is necessary only if you wish to pause a print run to replenish paper.

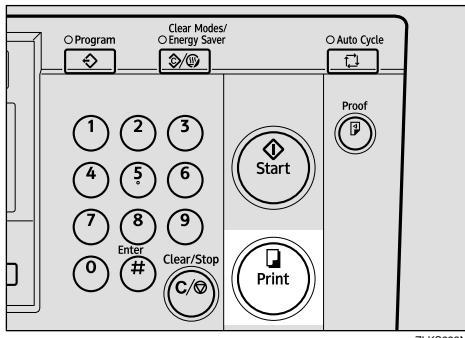
2 Load paper on the paper feed tray.



Note

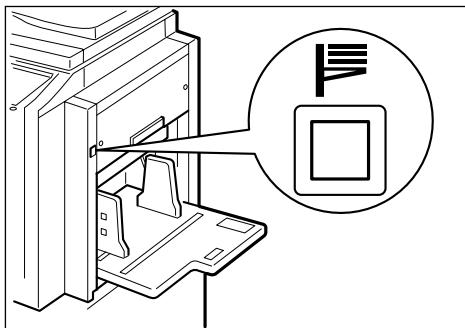
- Correct paper curl before setting the paper.

3 Press the [Print] key to resume printing.

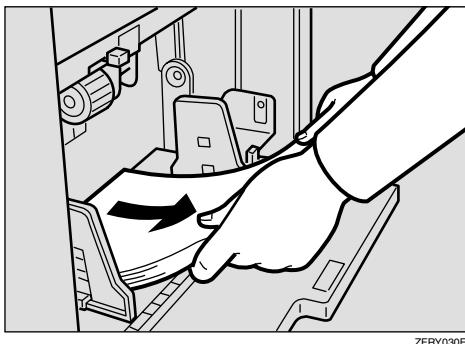


Changing the Paper Size

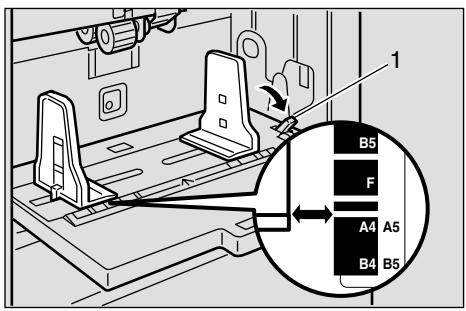
1 Press the paper feed tray down key.



2 Remove the paper from the paper feed tray.

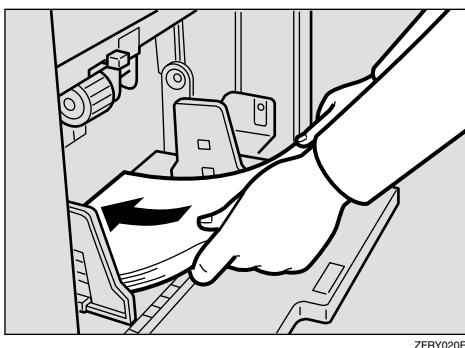


3 Shift the paper feed side plate lock lever forward. Adjust the paper feed side plates to match the paper size.

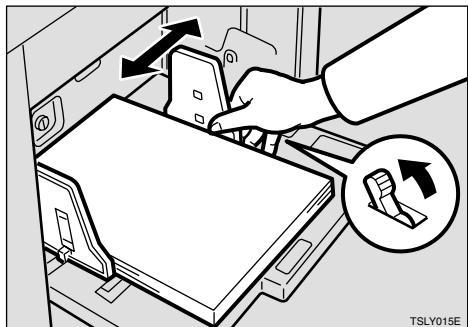


1: Paper feed side plate lock lever

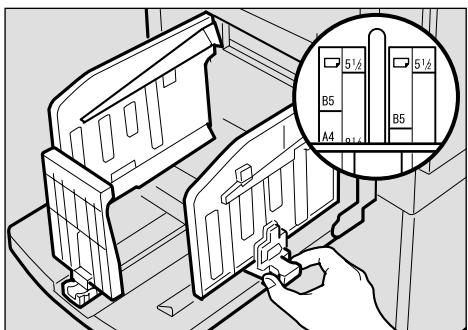
4 Load paper onto the paper feed tray.



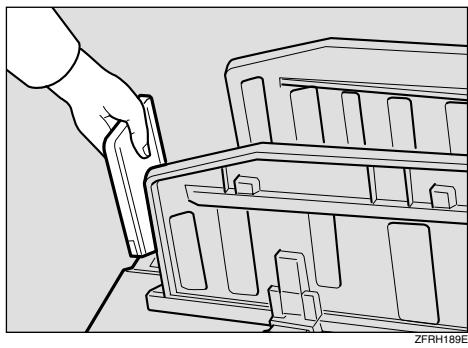
5 Make sure that the paper feed side plates touch the paper lightly. Shift the lock lever back to its original position.



6 Adjust the side plates of the paper delivery tray to match the new paper size.



7 Adjust the end plate to match the new paper size.



 **Note**

- Correct any paper curl before setting the paper.

When the Add Ink Indicator (■) Lights

The add ink indicator (■) lights up when it is time to supply ink.

⚠ CAUTION:

- *If ink comes into contact with your eyes, rinse immediately in running water. For other symptoms, consult a doctor.*

⚠ CAUTION:

- *Keep the ink or ink container out of reach of children.*

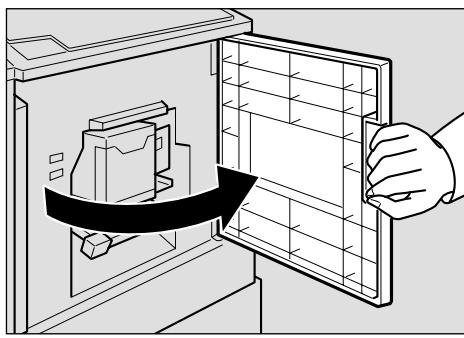
⚠ CAUTION:

- *If ink is ingested, induce vomiting by drinking a strong saline solution. Consult a doctor immediately.*

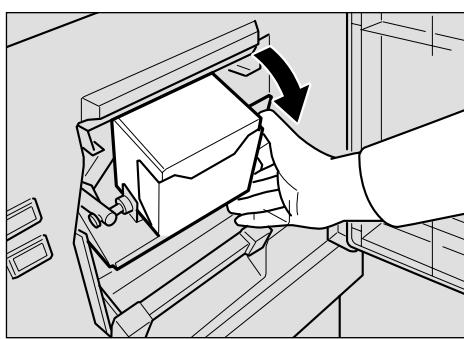
⚠ CAUTION:

- *Our products are engineered to meet high standards of quality and functionality, and we recommend that you use only the expendable supplies available at an authorized dealer.*

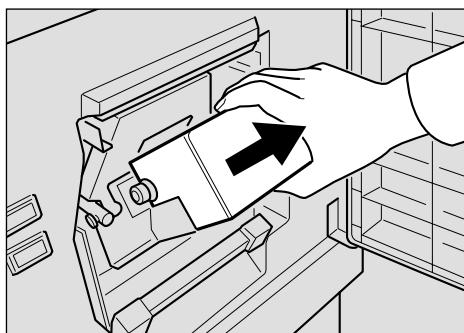
1 Open the front door.



2 Lift out the ink holder.

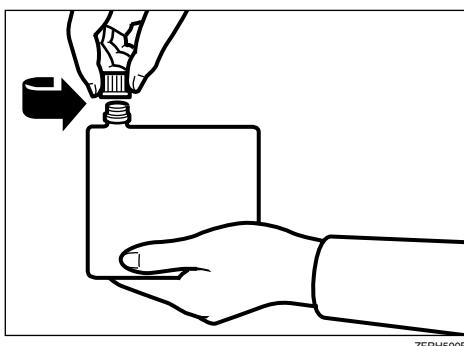


3 Remove the used ink cartridge.



4

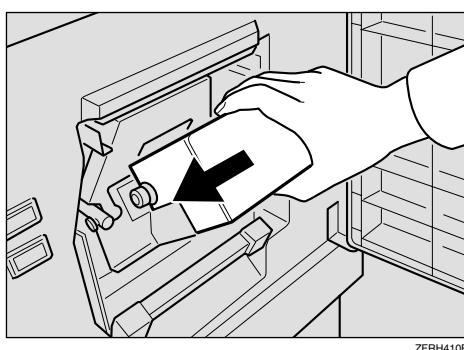
4 Remove the cap of the new ink cartridge.



 **Note**

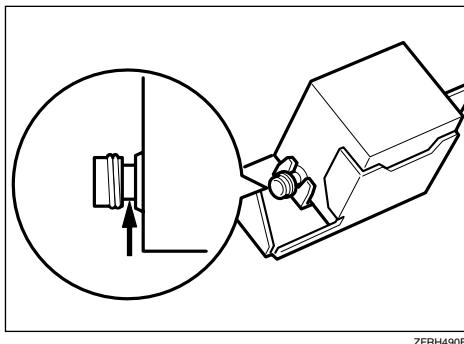
- Hold the cartridge upright to prevent ink from spilling out.

5 Insert the new cartridge into the ink holder.



6 Return the ink holder to its original position until it clicks. **Note**

- Always supply ink of the same color.
- Make sure to firmly insert the part indicated by the arrow mark into the guide.



4

7 Close the front door.

The machine will start idling to supply ink to the drum.

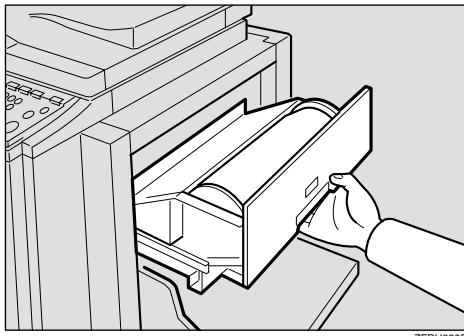
 **Note**

- It will stop when a sufficient amount of ink reaches the drum.

When the Master End Indicator (⌚) Lights

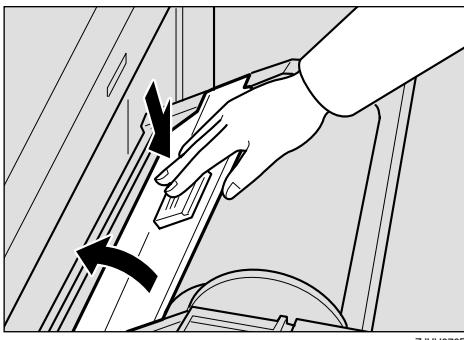
The master end indicator (⌚) lights up when it is time to replace the master roll.

1 Pull out the master tray.

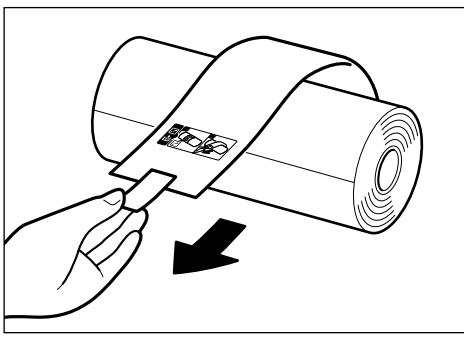


4

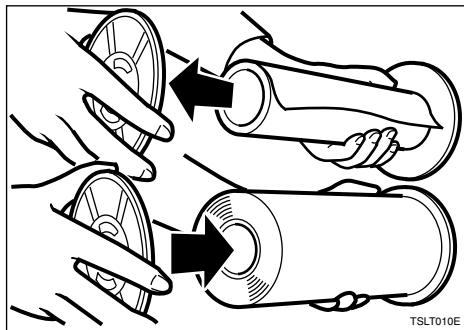
2 Press the release button to open the master feeding cover.



3 Unwrap the tape from the new master roll.



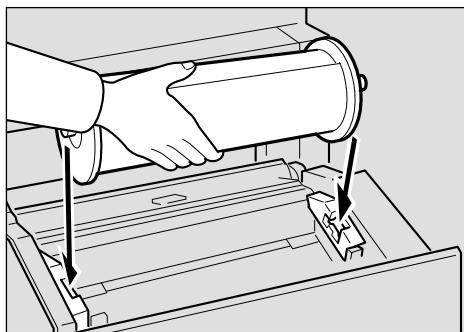
4 Remove the used master roll and pull out both spools. Then, insert both spools into a new master roll.



Note

- It is necessary to replace the master roll even if some master remains on the old roll.

5 Set the new master roll in the master tray.



6 Insert the master until its leading edge hides the indicators completely.



ZJVH080E

 **Note**

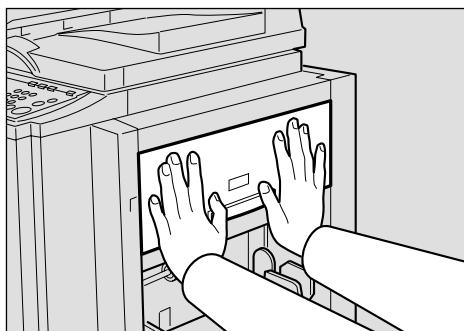
- Rotate the spools backward to take up any slack in the master.

7 Close the master feeding cover firmly.



ZFRH250E

8 Close the master tray.



ZFRH230E

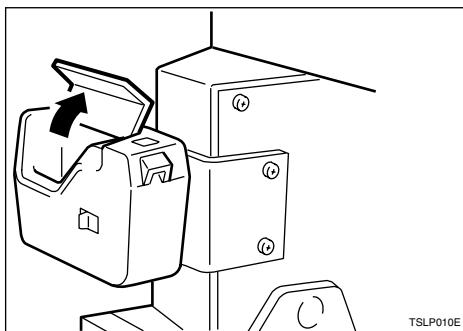
Placing a New Roll of Tape in the Optional Tape Dispenser

Note

- Make sure that the main switch is turned on and the power switch of the tape dispenser is off.

1 Open the cover of the tape dispenser.

4



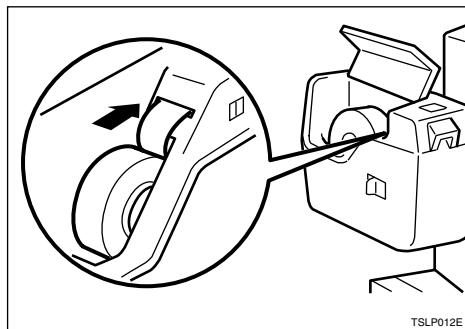
2 Set the roll in the dispenser.



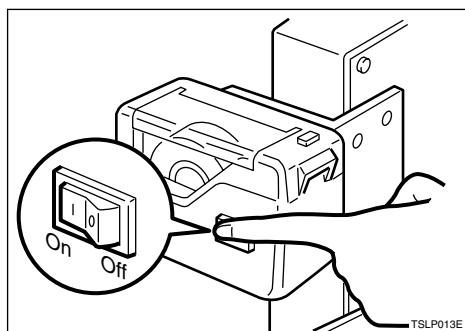
Note

- Make sure that the tape is in the correct direction. If not, the tape dispenser will not work properly.

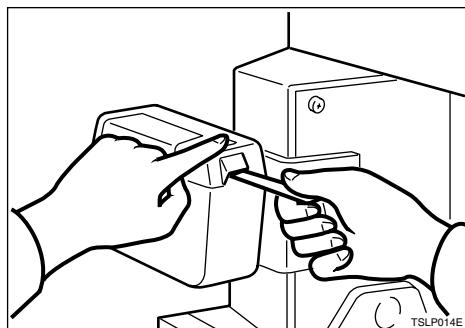
3 Insert the tape into the slot as far as it can go. Close the cover of the tape dispenser.



4 Turn on the power of the tape dispenser.



5 Press the manual cut button to trim off the leading edge of the tape.



5. Troubleshooting

Machine Operation Problems

If a malfunction or a misfeed occurs within the machine, the following indicators will be shown on the display.

❖ When the misfeed indicator (⚠) lights and the location indicators are displayed

Indicator	Page
⚠ and "P"	p.94 "When ⚠ lights and "P" is indicated"
⚠ and "A"	p.96 "When ⚠ lights and "A" is indicated"
⚠ and "B"	p.97 "When ⚠ lights and "B" is indicated"
⚠ and "C"	p.98 "When ⚠ lights and "C" is indicated"
⚠ and "D"	p.101 "When ⚠ lights and "D" is indicated"
⚠, "A" and "B"	p.102 "When ⚠ lights and "A", "B" are indicated"
⚠, "B" and "E"	p.103 "When ⚠ lights and "B", "E" are indicated"

⚠ CAUTION:

- *Be careful not to cut yourself on any sharp edges when you reach inside the machine to remove misfed sheets of paper or masters.*

>Note

- Do not leave any torn scraps of paper within the machine.
- Misfeeds may occur at more than one location at the same time. Check the location indicators and ensure that all the misfeeds are thoroughly cleared.
- When clearing misfeeds, do not turn off the main switch. If you do, your copy settings are cleared.
- If misfeeds occur repeatedly, contact your service representative.

❖ When the open cover/unit indicator (⚠) lights and a message is displayed

Indicator	Message	Page
⚠	Doors/Covers open. Close Front cover.	p.105 "When the Open Cover/Unit Indicator (⚠) Lights and a Message is Displayed"
⚠ and "P"	Doors/Covers open. Close ADF cover.	

❖ When the master end indicator (⌚) lights and a message is displayed

Indicator	Message	Page
⌚	Cover Open. Feeding cover is open. Please close.	p.106 "When the Master End Indicator (⌚) Lights and a Message is Displayed"
⌚	Master tray is not set. Set master tray.	
⌚	Cover Open. Close Lower master Tray.	

❖ When the supply/exchange indicators light

Indicator	Meaning	Page
▮	Load more paper.	p.83 "Replenishing Paper"
▮	Load new ink cartridge.	p.85 "When the Add Ink Indicator (▮) Lights"
⌚	Load new master roll.	p.88 "When the Master End Indicator (⌚) Lights"
☒	Remove the used masters.	p.107 "When the Master Eject Indicator (☒) Lights"

❖ When other indicators light

Indicator	Meaning	Page
☒	Set the key counter.	p.108 "When Other Indicators Light"

Printing Problems

Problem	Cause	Action
When you try to select several functions at the same time, some of them cannot be selected.	Some functions cannot be used together.	See p.124 "Combination Chart".
Parts of the image are not printed in Edge Erase mode.	The edge erase margin that you set is too wide.	Adjust the edge erase margin with the user tools. See "5 Margin Eras.Area" on p.74 "3 Initial Setting".
	The original has very narrow margins.	
Prints are blank, or parts of the image are not printed.	The paper feed side plates are not set correctly.	Make sure that the paper feed side plates touch the paper lightly.
Printing in a second color is unsatisfactory.	The first color is still wet.	Wait until the first color becomes dry.
An uneven solid image appears.	Large solid image wrinkles the master.	Increase the printing speed or use Photo mode.

Printing Problems When Using Combine Mode

Problem	Cause	Action
Prints are blank or parts of the image are not printed.	Original size and orientation are not correct.	You cannot combine originals of different sizes and orientations
The image is not printed correctly.	The originals were fed in the wrong order.	When using the optional document feeder, place the originals face up. The first original should be on the top.
		When using the exposure glass, place the originals face down on the exposure glass. The first original should be placed first.

Clearing Misfeeds

The location indicators show where the jam has occurred.

Important

- When clearing misfeeds, do not turn off the main switch. Otherwise, your print settings are cleared.

When “” lights and “P” is indicated

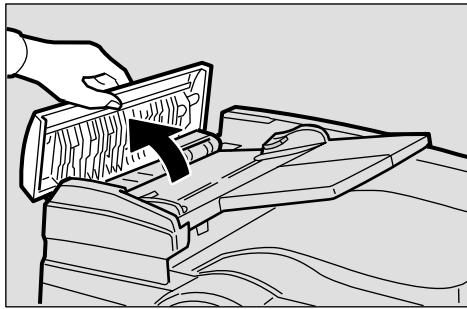
An original misfeed has occurred in the optional document feeder.

Note

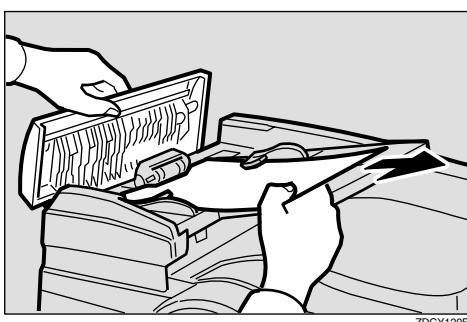
- This indicator will only be displayed when the machine is equipped with the optional document feeder.

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1 Open the document feeder cover.

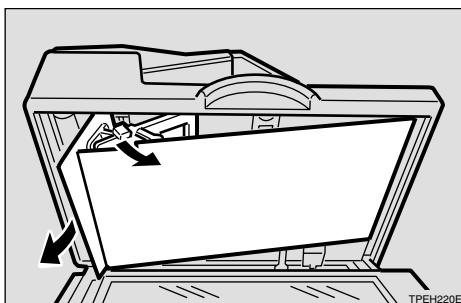


2 Pull out the original gently.



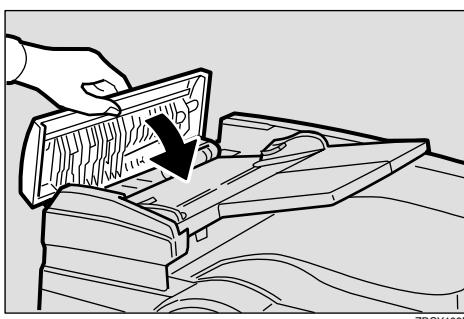
3 If you are unable to remove the misfed original in Step 2, lift the document feeder.

4 Pull the green knob towards you to remove the original.



5 Return the document feed sheet to its original position.

6 Close the document feeder cover until it clicks in position.



5

 **To prevent original misfeeds**

Use the exposure glass for the following kinds of originals.

- Originals heavier than 128g/m², 34 lb
- Originals lighter than 52g/m², 14 lb
- Originals smaller than 148mm × 210mm, 5.9" × 8.3"
- Originals larger than 297mm × 864mm, 11.6" × 34.0"
- Stapled or clipped originals
- Perforated or torn originals
- Curled, folded, or creased originals
- Originals with any kind of coating, such as thermal fax paper, art paper, aluminum foil, carbon paper, or conductive paper
- Bound originals such as books
- Damaged originals
- Originals with glue on them
- Pasted originals
- Originals written in pencil

- Thin and flimsy originals
- Originals with index tabs
- Transparent originals such as OHP transparencies or translucent paper

 **Note**

- You cannot place originals of different sizes at the same time.
- Remove staples or clips from the originals, and then fan the originals lightly.
- Do not stack originals above the limit mark.

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When “” lights and “A” is indicated

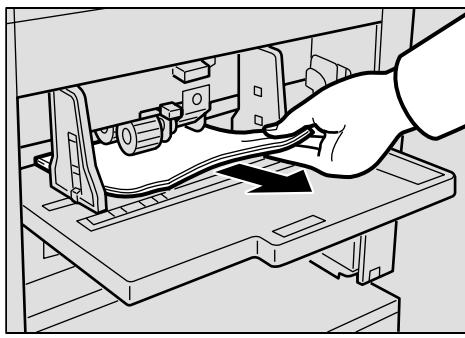
A paper misfeed has occurred in the paper feed section.

 **CAUTION:**

- *Be careful not to cut yourself on any sharp edges when you reach inside the machine to remove misfed sheets of paper or masters.*

5

1 Slowly but firmly pull out the paper.



2 If the indicators remain lit, open the front door and close it firmly.

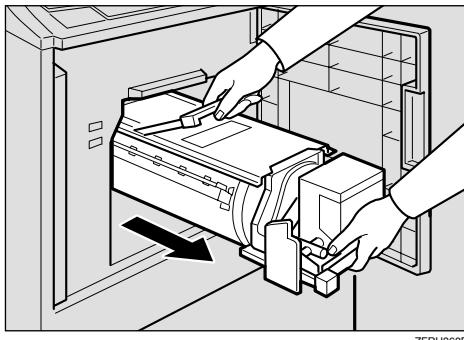
 **Reference**

See p.99 “To prevent paper misfeeds”.

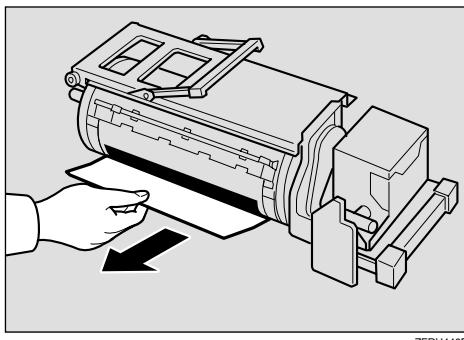
When “” lights and “B” is indicated

The paper is wrapped around the drum.

1 Unlock the lever and pull out the drum unit.

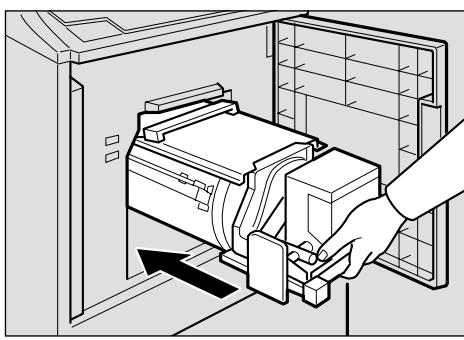


2 Remove the misfed paper.



5

3 Insert the drum unit until it locks in position, and then lower the drum unit lock lever.



4 Close the front door.

Reference

See p.99 “To prevent paper misfeeds”.

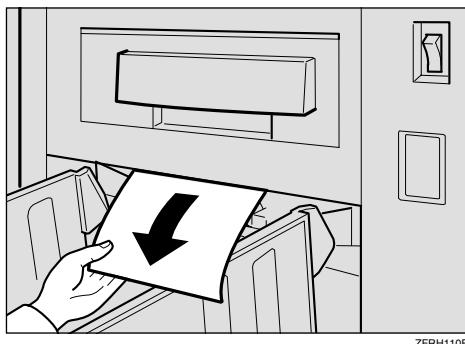
When “” lights and “C” is indicated

A paper misfeed has occurred in the paper delivery section.

 **CAUTION:**

- *Be careful not to cut yourself on any sharp edges when you reach inside the machine to remove misfed sheets of paper or masters.*

1 Remove the misfed paper.

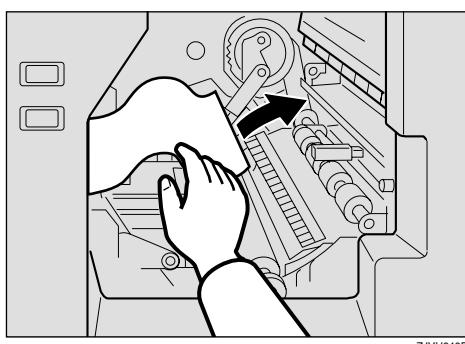


5

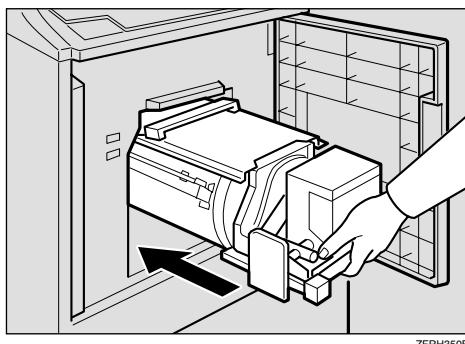
 **Note**

- Make sure that the paper delivery end plate and side plates are at their correct positions.
- If a jam occurs because the current printing speed is too fast, reduce the speed.

2 If the misfeed is still not cleared, take out the drum unit and remove the paper from the inside.



3 Insert the drum unit until it locks in position, and then lower the drum unit lock lever.



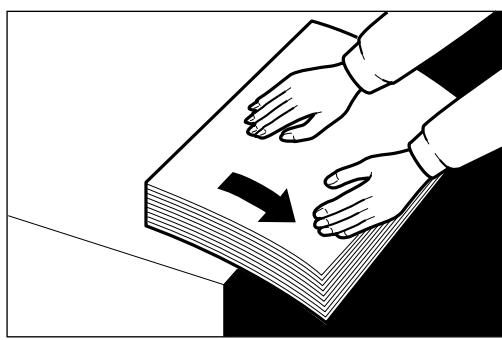
4 Close the front door.

To prevent paper misfeeds

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If paper is curled or the margin on the leading edge of the original is too narrow, the following action is necessary.

- Before using the paper, correct the curl as shown below.

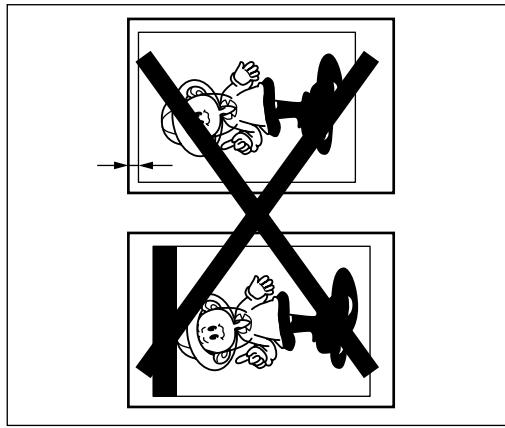


- If you are unable to correct the paper curl, place the paper in the paper feed tray with it curling either upward or downward, as shown in the illustration below.

	Right	Wrong
Thin Paper		
Thick Paper		

TPEY990E

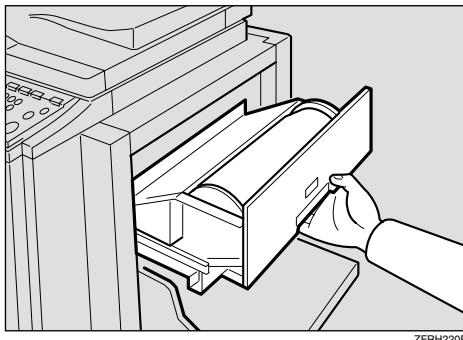
- When the leading edge margin of the original is less than 5mm, 0.2" , or when there is a solid image on the leading edge, feed the original from the edge with the widest margin. Alternately, create a leading edge margin on a duplicate of the original, and then print from the duplicate.



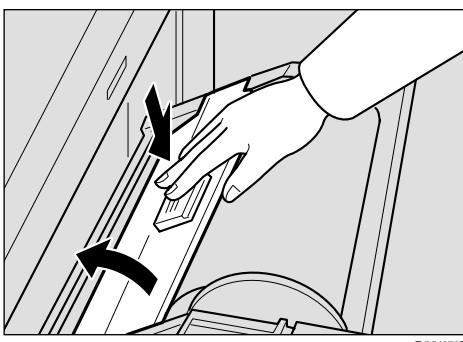
When “” lights and “D” is indicated

A master misfeed has occurred in the master feed section.

1 Pull out the master tray.



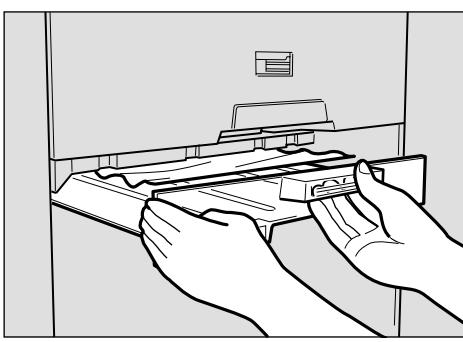
2 Open the master feeding cover, and then remove the misfed master inside.



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3 Close the feeding cover and the master tray.

4 Open the lower master tray and remove the misfed master.



5 Close the lower master tray.

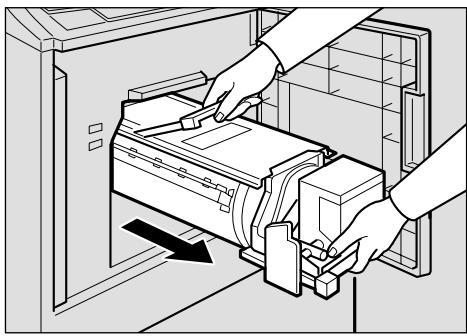
Note

- If “” remains lit and “B” is indicated, see p.104 “When the master is wrapped around the drum”.

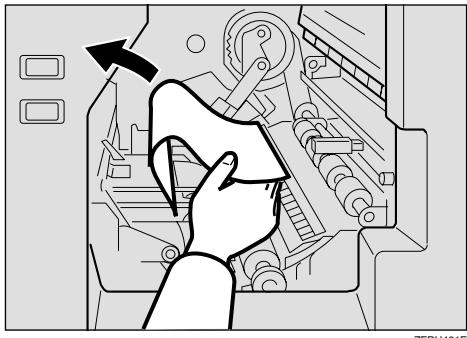
When “” lights and “A”, “B” are indicated

The paper is jammed between the drum and the paper feed section.

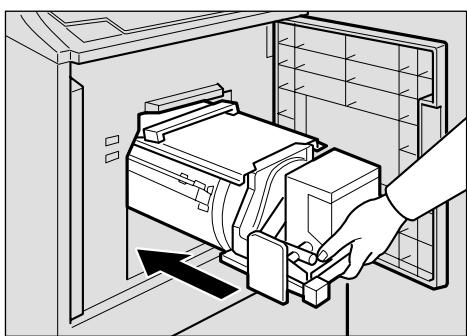
1 Unlock the lever and then pull out the drum unit.



2 Remove the misfed paper from inside.



3 Insert the drum until it locks into position, and then lower the lock lever.

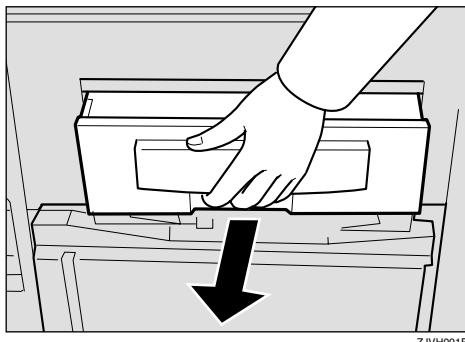


4 Close the front door.

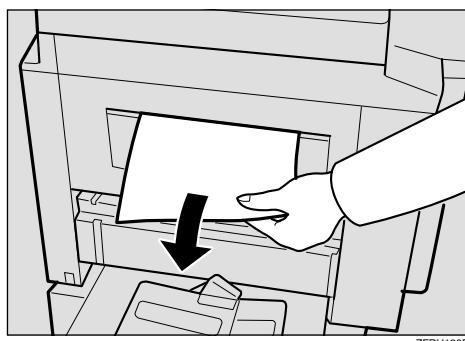
When "M" lights and "B", "E" are indicated

Either a master misfeed has occurred either in the master eject section, or the master is wrapped around the drum unit.

1 Open the master eject box.



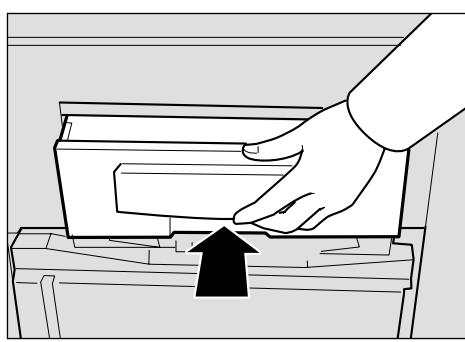
2 Remove the misfed master.



Note

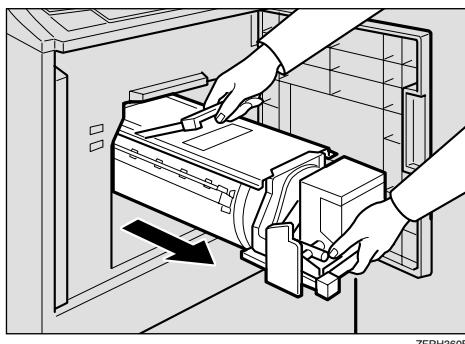
- Be careful not to stain your hands with ink when you touch used masters.

3 Close the master eject box.



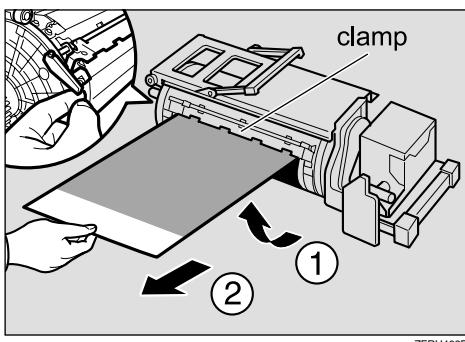
When the master is wrapped around the drum

1 Unlock the lever and then pull out the drum unit.



2 Pull out the misfed master from the clamp.

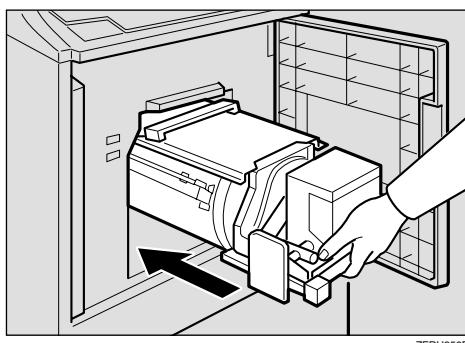
5



 **Note**

- If you still cannot remove the master, release the lock lever at the back of the drum unit to open the clamp while pulling the master out.

3 Insert the drum until it locks into position, and then lower the lock lever.



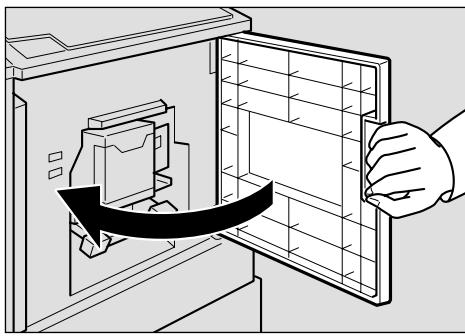
4 Close the front door.

When the Open Cover/Unit Indicator (□*) Lights and a Message is Displayed

A message is displayed explaining the place where the doors/covers are not properly closed.

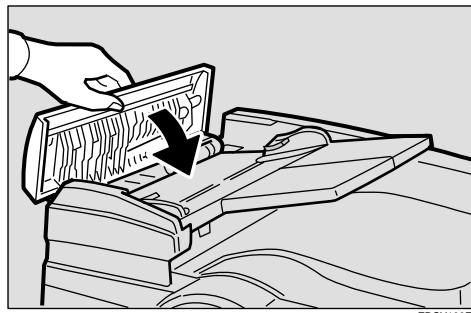
Front Door is Open

- 1 Close the front door completely.



Cover of Optional Document Feeder is Open

- 1 Close the document feeder until it clicks into place.



When the Master End Indicator (⌚) Lights and a Message is Displayed

A message is displayed explaining the place in the master feed section that is not properly set.

Master Feeding Cover is Open

1 Close the feeding cover firmly with both hands.

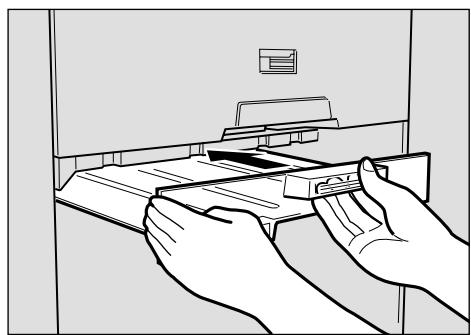


ZFRH250E

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Lower Master Tray is Open

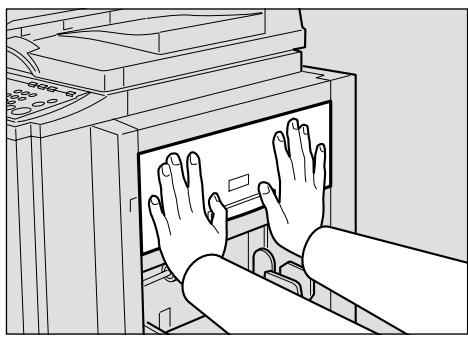
1 Close the lower master tray completely.



ZJRH050E

Master Tray is Not Set Properly

1 Push in the master tray completely.

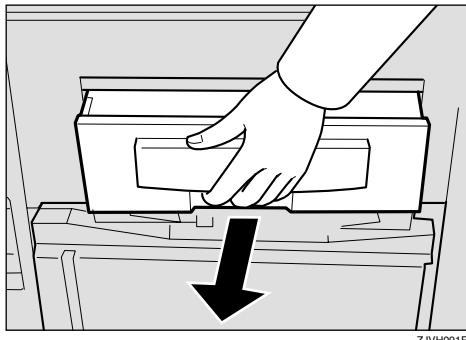


ZFRH230E

When the Master Eject Indicator (✉) Lights

The master eject indicator (✉) lights when it is time to empty master eject box.

1 Pull out the master eject box and remove the used masters.

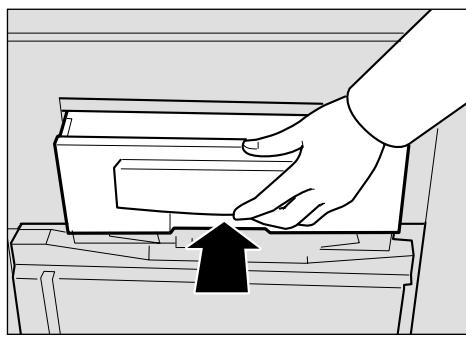


Note

- Spread out an old newspaper, and then pour the used masters onto the newspaper. Throw away the used masters.

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2 Return the master eject box to its original position.

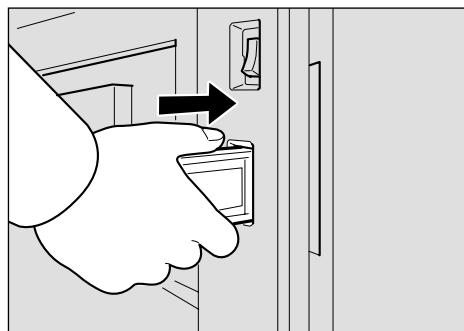


When Other Indicators Light



Set Key Counter.

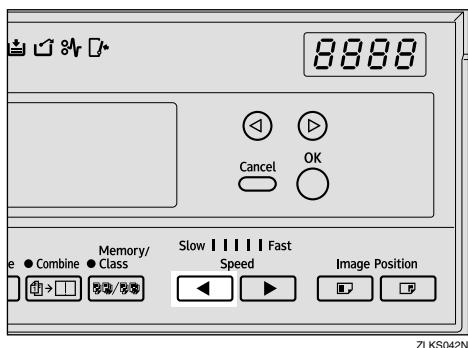
The key counter (option) is not set. Slot in the key counter.



ZFRH150E

When the Prints are Thrown Over the Paper Delivery Tray

1 Reduce the printing speed by pressing the [\blacktriangleleft] (Speed) key.



Note

If a jam occurs with the current printing speed, reduce the paper delivery speed.

5

Poor Printing

Dirt on the Back Side of Paper

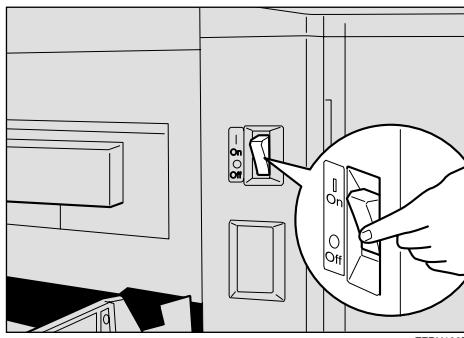


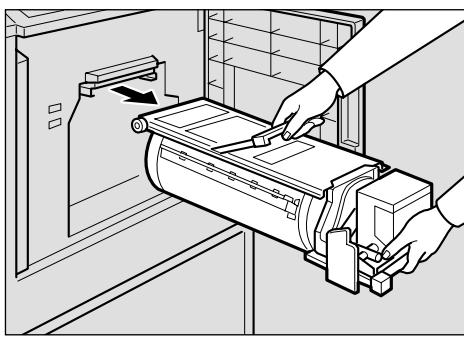
Note

5

- When you use paper smaller than the original, select the proper reduction ratio. Otherwise, you might get dirty background prints.
- When you use postcards, the background might be dirty because postcards do not absorb ink well.
- You might get prints with dirty background when printing at high speed under high temperature.

1 Turn off the main switch.

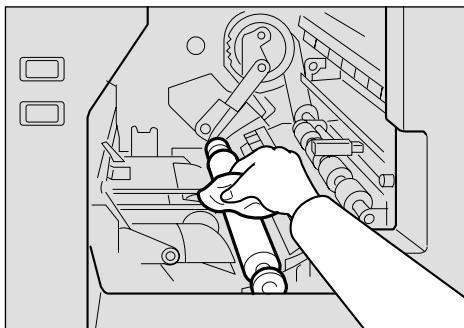


2 Pull out the drum unit.

ZFRH370E

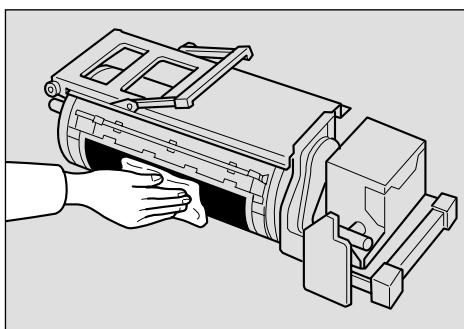
 **Reference**

For details about how to remove the drum unit, see p.66 “Changing the Color Drum Unit”.

3 Clean the pressure roller with a clean cloth.

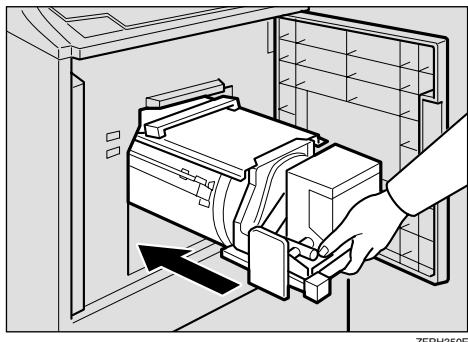
ZFRH430E

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4 With a clean cloth, remove any ink that has accumulated on the trailing edge of the drum unit.

ZFRH470E

5 Insert the drum unit until it locks in position, and then lower the drum unit lock lever.

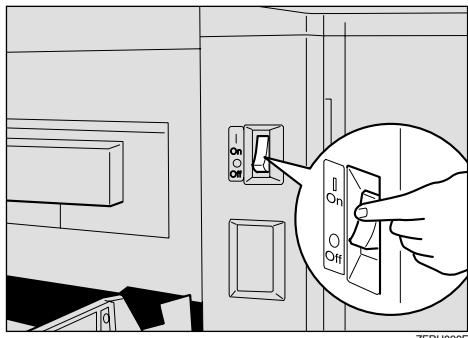


ZFRH350E

6 Close the front door.

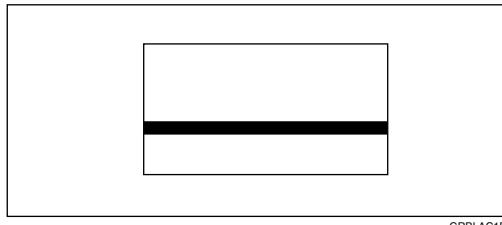
7 Turn on the main switch.

5



ZFRH090E

Dirt on the Front Side of Paper (Black Line/Stain)



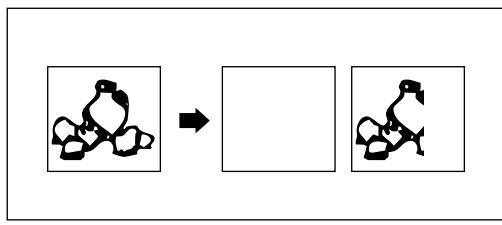
GRBLAC1E

Note

- If there is no margin or if there is a solid image area near the leading edge of the original, make a margin of at least 5mm, 0.2" at the leading edge. Otherwise, the paper exit pawl might become dirty and cause black lines on prints.
- Check the exposure glass cover and clean it if dirty. See p.122 "Exposure Glass Cover".
- Check the exposure glass and clean it if dirty. See p.122 "Exposure Glass".
- When black lines or stains still appear on prints even if you clean the above, contact your service representative.

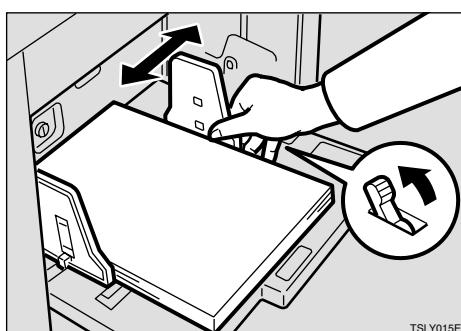
5

Blank Prints or Incomplete Prints



GRWHITE1E

- Make sure that the paper feed side plates touch the paper lightly. Shift the lock lever backward.

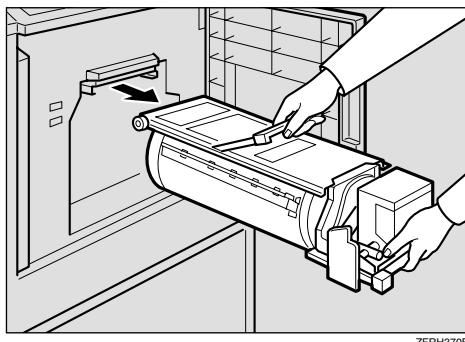


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- When you use the optional document feeder, make sure that the original guides contact the originals lightly.

When blank or incomplete prints persist even after you have checked the above, perform the following procedure.

1 **Unlock the lever and pull out the drum unit.**

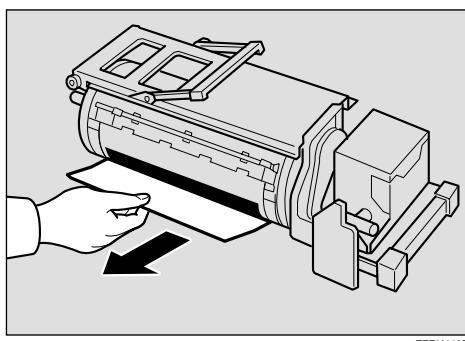


 **Reference**

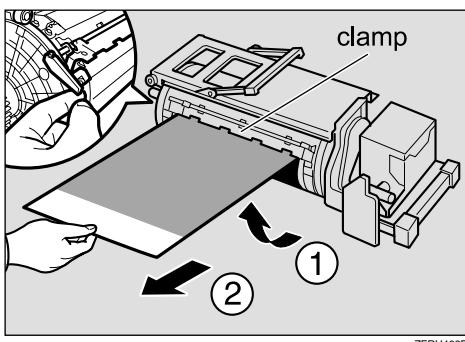
For details about how to remove the drum unit, see p.66 "Changing the Color Drum Unit".

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2 **Remove any paper wrapped around the drum.**



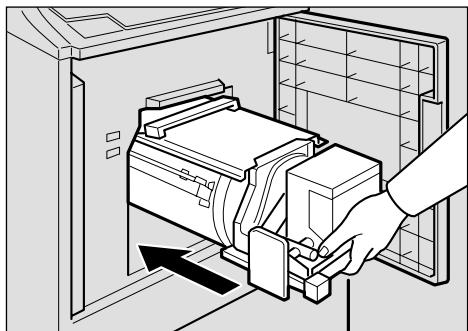
3 **Remove the master from the drum.**



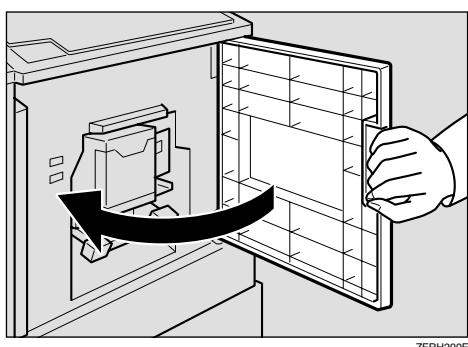
 **Note**

- If you still cannot remove the master, release the lock lever at the back of the drum unit to open the clamp while pulling the master out.

4 Insert the drum unit until it locks in position, and then lower the lock lever.



5 Close the front door.



Operation Notes

General Cautions

- While printing, do not turn off the main switch.
- While printing, do not open the door or covers.
- While printing, do not unplug the power cord.
- While printing, do not move the machine.
- Keep corrosive liquids, such as acid, off the machine.
- Open and close the door and covers softly.
- Do not put anything except originals on the machine.
- Do not spill liquid on the machine.
- When opening or closing the door or covers, keep hold of them so they do not fall.
- When removing the drum unit from the machine, be careful not to let the drum unit fall.
- Do not modify or replace any parts other than the ones specified in this manual.
- Do not operate the machine without covers. You might get your fingers caught in the machine, or the machine might be damaged because, for example, dust or the like might get inside.
- Since some parts of the machine are sharp and might cause injury, touch only the parts specified in this manual.
- If you clean rubber parts with benzine, wipe them with a dry cloth afterwards.
- Always turn the machine off when you have finished printing for the day.
- If the machine must be transported by vehicle, please contact your service representative.
- Always make a few trial prints to check the image position because the image position of the trial print might not correspond with that of the original.
- If image registration is not consistent, slow the printing speed down to Setting 1.
- When doing duplex or multicolored printing, leave the printed paper for a while before the next printing in order to let the ink dry on the printed paper. If this is not done, feed roller marks will appear on the print image.

- If the machine has not been used for a long period, the ink may dry up causing image density to decrease. In such a case, make extra prints until the image density recovers.
- When the machine is used in low temperature conditions, the image density might decrease. In such a case, slow the printing speed down to Setting 1 or 2.
- When using paper which has printing on the reverse side, a black area on the leading edge of the reverse side would cause the machine to mistake it for a case of paper wrapping around the drum. Always keep a margin of at least 5mm, 0.2" on the leading edge of the reverse side.
- Press the **[Proof]** key to perform a test print as the first few prints might be faint.
- When making duplex prints or when using printing paper that is not white in color, the paper end sensor might fail to detect the paper correctly. In such a case, place a blank sheet under the printing paper on the paper feed tray.
- The outer portion of the image might not be printed under low temperature. In this case, slow the printing speed down to Setting 1 or 2, or increase the room temperature.
- The paper exit pawl might contact the printing paper and cause black lines on the prints. In this case, increase the printing speed or make a new master with a lighter image density.
- If you are unable to pull out the drum, close the front door again to rotate the drum. Pull out the drum after it has stopped at the position.
- The leading edge of the prints might become stained if the edge touches the image of prints on the paper delivery tray.
- The ink of the print on the paper delivery tray might stick to the reverse side of the next print.
- When the machine is on and the power source is less than 90 % of the specified amount, printing quality will decrease. Therefore, make sure the supply from your electrical outlet is at least 90 % of the required amount.
- As various kinds and qualities of paper exist, some paper might be wrapped around the drum or cause misfeeds.
- If your hands are stained with ink:
 - Avoid prolonged or repeated contact with skin.
 - Cleanse skin thoroughly after contact, before breaks and meals, and at the end of the work period.
 - Ink can be readily removed from skin using waterless hand cleaners followed by washing with soap and water.
- Be careful not to get any ink on your clothing while emptying the master eject box or while loading a new ink cartridge.
- The image density varies according to the printing speed and the room temperature. To achieve the desired image quantity, adjust the printing speed or increase the room temperature.

- When you make a lot of prints from a small image, ink might ooze out from the edges of the master, especially under high temperature and when printing in two or more colors. In this case, make a new master.
- Use ink made within one year. Ink stored for a long period of time tends to dry gradually and result in lower image density.
- While making a master, do not leave the exposure glass cover or optional document feeder open.
- In Letter/Photo mode, moire patterns might occur you are printing from screened originals. In this case, print using Letter mode or Photo mode.
- When you use originals with light lettering, edges of the letters might be printed clearly and the inside of the letters might be light. In this case, increase the image density.
- When marks on the printing paper occur, clean the paper feed roller. See p.122 "Paper Feed Roller (paper feed tray)".
- If you make a print before the ink on the first print dries, the ink may adhere to the paper feed roller and soil the print. Before printing on the reverse side of a printed sheet or printing over a printed sheet, be sure that the ink on the first print is completely dry. See p.122 "Paper Feed Roller (paper feed tray)".

Print Paper

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- When paper is curled, correct the curl before printing, or else the paper might wrap around the drum or stains might appear.
- Postcards and the like do not absorb ink well. Offset images might appear on the rear side of subsequent prints. Solid image originals will cause offset image prints.

Originals

- If there is no margin or if there is a solid image area near the leading edge of the original, create a margin of at least a 5mm, 0.2", on the leading edge; otherwise, the paper might wrap around the drum or the paper exit pawl might become dirty and cause black lines on prints.
- If you use originals that have bold letters or solid images at the leading edges, you might get prints with dirty edges. In this case, make sure that the edge with the widest margin goes in first, or raise the printing speed.
- If you use paste-up originals, make sure that the pasted parts hold firmly to the base sheet. If the thickness of the paste-up originals is more than 0.2mm and the space between the pasted parts is less than 2mm, 0.08", a shadow might appear on the print.

Where to Put the Machine

Your machine's location should be carefully chosen because environmental conditions greatly affect its performance.

Environmental Conditions

Optimum environmental conditions

⚠ CAUTION:

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

⚠ CAUTION:

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

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⚠ CAUTION:

- *After you move the machine, use the caster fixture to fix it in place. Otherwise the machine might move or come down to cause an injury.*

- Temperature: 10 – 30 °C, 50 – 86 °F
- Humidity: 20 – 90 % RH
- A strong and level base.
- The machine must be level within 5mm, 0.2" both front to rear and left to right.
- Make sure to locate this machine in a large well ventilated room that has an air turnover of more than 30 m³/hr/person.

Environments to avoid

- Locations exposed to direct sunlight or strong light (more than 1500 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 machine.)
- Places where the machine might be subjected to frequent strong vibration.
- Dusty areas.
- Areas with corrosive gases.

Power Connection

⚠ WARNING:

- **Connect the machine only to the power source described on the inside front cover of this manual. Connect the power cord directly into a wall outlet and do not use an extension cord.**
- **Do not damage, break or make any modifications to the power cord. Do not place heavy objects on it. Do not pull it hard nor bend it more than necessary. These actions could cause an electric shock or fire.**

⚠ CAUTION:

- **Unplug the power cord from the wall outlet before you move the machine. While moving the machine, you should take care that the power cord will not be damaged under the machine.**

⚠ CAUTION:

- **When you disconnect the power plug from the wall outlet, always pull the plug (not the cable).**

❖ Main Frame

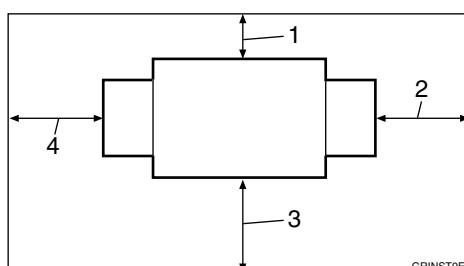
- Make sure the plug is firmly inserted in the outlet.

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Access to Machine

Place the machine near the power source, providing clearance as shown.

❖ Main Frame



1. More than 10 cm, 4.0"
2. More than 60 cm, 23.7"
3. More than 60 cm, 23.7"
4. More than 60 cm, 23.7"

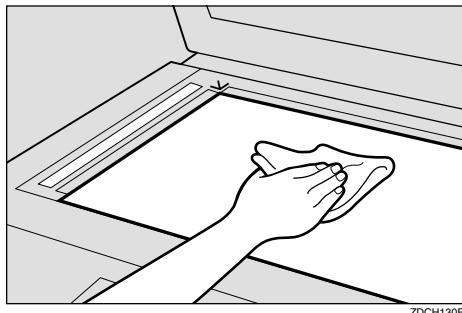
Maintaining the Machine

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

Main Frame

Exposure Glass

- 1** Lift the exposure glass cover or optional document feeder.
- 2** Clean the exposure glass with a damp cloth and wipe it with a dry cloth.



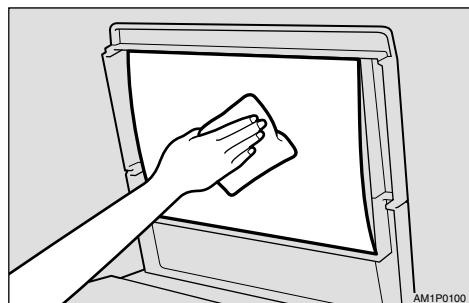
6

Note

If you do not clean the exposure glass, marks on the glass will be printed.

Exposure Glass Cover

- 1** Lift the exposure glass cover.
- 2** Clean the exposure glass cover with a damp cloth and wipe it with a dry cloth.

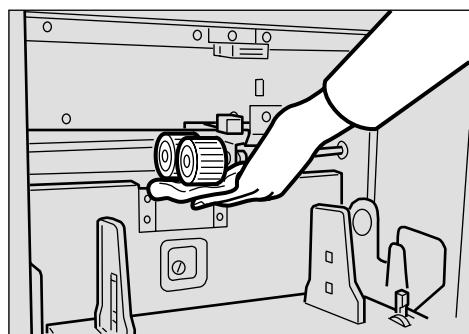


Note

If you do not clean the exposure glass cover, marks on the cover will be printed.

Paper Feed Roller (paper feed tray)

- 1** Wipe off the paper dust on the paper feed roller with a damp cloth, then wipe it with a dry cloth.



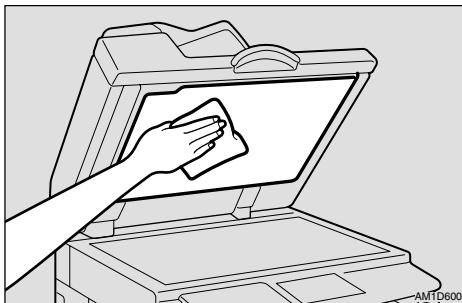
Note

If you do not clean the paper feed roller, paper misfeeds tend to occur.

Optional Document Feeder

Cleaning the Sheet

- 1 Lift the document feeder.
- 2 Clean the sheet with a damp cloth and wipe it with a dry cloth.



 **Note**

- If you do not clean the sheet, marks on the sheet will be printed.

Combination Chart

This combination chart shows which modes can be used together.

Blank	means that these modes can be used together.
×	means that these modes cannot be used together.

Function selected first	Function chosen later													
	-	Image Density	Type of Original	Tint mode	Economy mode	Auto Cycle	Preset Reduce/Enlarge	Zoom	Combine	Repeat	Edge Erase	Memory/Class	Skip Feed	On Line
Image Density	-													
Type of Original	-		×										×	
Tint mode	×	-											×	
Economy mode				-										
Auto Cycle					-									
Preset Reduce/Enlarge						-		×					×	
Zoom							-						×	
Combine								-					×	
Repeat									-				×	
Edge Erase										-			×	
Memory/Class											-		×	
Skip Feed											-		–	
On Line	×	×	×			×	×	×	×	×	×		–	

7. Specifications

Main Frame

❖ Configuration:

Desktop

❖ Printing Process:

Full automatic one drum system

❖ Original Type:

Sheet/Book

❖ Original Size:

- Maximum 304.8mm × 432mm, 12.0" × 17.0"

❖ Pixel Density:

400dpi × 400dpi

❖ Image Mode:

Photo mode

Letter mode

Letter/Photo mode

Tint mode

❖ Reduction Ratios:

- Inch version:
93 %, 77 %, 74 %, 65 %
- Metric version:
93 %, 87 %, 82 %, 71 %

❖ Enlargement Ratios:

- Inch version:
155 %, 129 %, 121 %
- Metric version:
141 %, 122 %, 115 %

❖ Printing Area:

- A3, 11" × 17" drum:
More than 290mm × 410mm, 11.4" × 16.2"
- A4, 8¹/₂" × 17" drum:
More than 290mm × 200mm, 11.4" × 7.8"

◆ Printing Paper Size:

Maximum 297mm × 432mm, 11.6" × 17.0"
 Minimum 70mm × 148mm, 2.8" × 5.9"

◆ Leading Edge Margin:

5mm ± 2mm, 0.2" ± 0.08"

◆ Print Paper Weight:

47.1g/m² to 209.3g/m², 12.5 lb to 55.6 lb

◆ Print Speed:

60 – 120rpm (5 speeds)

◆ First Print Time (Master Processing Time):

Less than 24.0 seconds (A4 □, 8¹/₂" × 11" □)
 (When setting an original on the exposure glass)

◆ Color Printing:

Drum unit replacement system (red, blue, green, brown, yellow, purple, navy, maroon, orange, teal and grey)

◆ Image Position Adjustment:

- Forwards or backwards:
 $\pm 15\text{mm}$, $\pm 0.6"$
- Right or left:
 $\pm 10\text{mm}$, 0.4" on either side

◆ Paper Feed Tray Capacity:

1,000 sheets (80g/m², 20 lb)

◆ Paper Delivery Tray Capacity:

1,000 sheets (80g/m², 20 lb)

◆ Master Eject Box Capacity:

65 masters

◆ Dimensions (W × D × H):

	Width	Depth	Height
Stored	790mm, 31.1"	700mm, 27.6"	640mm, 25.2"
Stored with document feeder	790mm, 31.1"	700mm, 27.6"	750mm, 29.5"
Set up	1360mm, 53.6"	700mm, 27.6"	640mm, 25.2"
Set up with document feeder	1360mm, 53.6"	700mm, 27.6"	750mm, 29.5"

❖ Weight:

- Main Frame: 85kg, 187.4 lb

❖ Noise Emission ^{*1}

Sound Power Level

	Mainframe only	Complete System ^{*3}
During printing: Speed 1	75dB(A)	75dB(A)
During printing: Speed 3	78dB(A)	78dB(A)
During printing: Speed 5	80dB(A)	80dB(A)
Stand-by	43dB(A)	43dB(A)

Sound Pressure Level ^{*2}

	Mainframe only	Complete System ^{*3}
During printing: Speed 1	60dB(A)	60dB(A)
During printing: Speed 3	63dB(A)	63dB(A)
During printing: Speed 5	65dB(A)	65dB(A)
Stand-by	27dB(A)	27dB(A)

^{*1} These are actual values measured in accordance with ISO 7779.

^{*2} Sound pressure level is measured from the position of the operator.

^{*3} The Complete System consists of mainframe with full options.

❖ Power Source:

See the inside front cover of this manual.

❖ Power Consumption:

Stand-by	Less than 0.055kW
Master Making	0.27kW
Printing: Speed 1	0.235kW
Printing: Speed 3	0.25kW
Printing: Speed 5	0.28kW

❖ Optional Equipment:

- A3, 11" × 17" Color Drum
- A4, 8¹/₂" × 17" Black Drum
- Key Counter
- Tape Dispenser
- Document Feeder
- Exposure Glass Cover
- PC Controller

Document Feeder (Option)

❖ **Original Type:**

Sheet

❖ **Original Weight:**

52.3g/m² to 127.9g/m², 13.9 lb to 34 lb

❖ **Original Size:**

Max. 297mm × 864mm, 11.7" × 34.0"

Min. 149mm × 210mm, 5.9" × 8.3"

❖ **Original Capacity:**

50 sheets (80g/m², 20 lb)

7.5mm, 0.3" height

Consumables

Name	Size	Remarks
Master:	Length: 110m, 410ft/roll Width: 320mm, 12.6" 2 Rolls/case	A3 drum More than 200 masters can be made per roll A4 drum More than 270 masters can be made per roll
Ink-Black	600ml/pack, 5 packs/case	Environmental conditions: -5 to 40°C, 10 to 95 % RH
Ink-Red	600ml/pack, 5 packs/case	
Ink-Blue	600ml/pack, 5 packs/case	
Ink-Green	600ml/pack, 5 packs/case	
Ink-Brown	600ml/pack, 5 packs/case	
Ink-Yellow	600ml/pack, 5 packs/case	
Ink-Purple	600ml/pack, 5 packs/case	
Ink-Navy	600ml/pack, 5 packs/case	
Ink-Maroon	600ml/pack, 5 packs/case	
Ink-Orange	600ml/pack, 5 packs/case	
Ink-Teal	600ml/pack, 5 packs/case	
Ink-grey	600ml/pack, 5 packs/case	
Tape for Tape dispenser	35m (114.8ft)/roll	

Note

Specifications are subject to change without notice.

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