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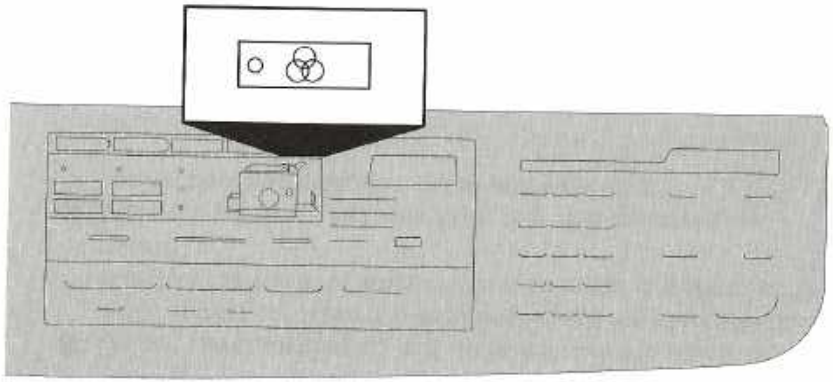
Welcome to the RISOgraph RA4300

About This *User Guide*

This *Guide* provides all of the information necessary to use your new RISOgraph RA4300. It is designed to help you take advantage of the features built into the RISOgraph RA4300. It also provides information about how to maintain your RISOgraph and solve problems.

- If the optional RA ADF Unit is installed on your RISOgraph, special Replacement Pages are provided at the back of this *User Guide*.
- Control panel buttons and displays are clearly indicated, in this manner:



- Indicators that are lit, to show you when a feature or mode is active, are presented with the associated button or icon, in this manner:

- Procedures for using the RISOgraph are presented with simple numbered steps, in this manner:

1 **Set the original into place.**

- Special information is presented in this manner:

Note *Change Drum Units with the power ON.*

Important!
Do not mix printing paper of different sizes.

- Safety information is presented in this manner:

⚠ **Caution**

⚠ **WARNING**

- When you may find more details in another section of the *User Guide*, cross-references are provided, in this manner:

➥ ***Page 40*** — See "Troubleshooting" for further information.

Installing Your RISOgraph

Location and Environment

⚠ Caution

- Install the machine near the electrical socket to avoid using an extension cord between the machine and the electrical socket.
- Do not allow anything to rest on or roll over the electrical cord, and do not place the machine where the electrical cord is subject to traffic or abuse. This may result in a shock or fire hazard.
- Maintain adequate distance from rear wall to allow easy connection/disconnection of the electrical cord.

Note To avoid mechanical problems:

- *Avoid dusty locations.*
- *Select a location where the machine will be level.*
- *Avoid locations where direct sunlight will fall on the machine. If it is unavoidable, protect the machine with a curtain or shade on windows.*
- *Install within the recommended temperature range: 10° C to 30° C (50° F to 86° F) with moderate humidity.*
- *Avoid locations where heat or air is directed onto the machine from an air conditioner or a heater.*

Power Connections

⚠ WARNING – To Avoid Personal Injury

- Securely insert the electrical cord plug into the electrical socket.
- Do not overload the electrical socket or extension cord, as this may result in fire or electrical shock.

About Your RISOgraph

The RISOgraph RA4300 is a high-quality scanner/printer that is as easy to use as a copier.

Features

Print Speed Control
Any of five print speeds may be selected for optimum performance.

Confidential Feature
A confidential original may be printed and the master may be automatically discarded to prevent further, unauthorized printing.

Automatic Idle
This optional feature prevents ink from drying on the Drum Unit when the RISOgraph is not in use for a period of time. This prevents faint or blurred images on the first few sheets when printing starts again.

Photo Enhancement
By simply pressing the LINE/PHOTO button, you may set the RISOgraph to process for sharp line definition or to process for graphics and accurately reproduce shades.

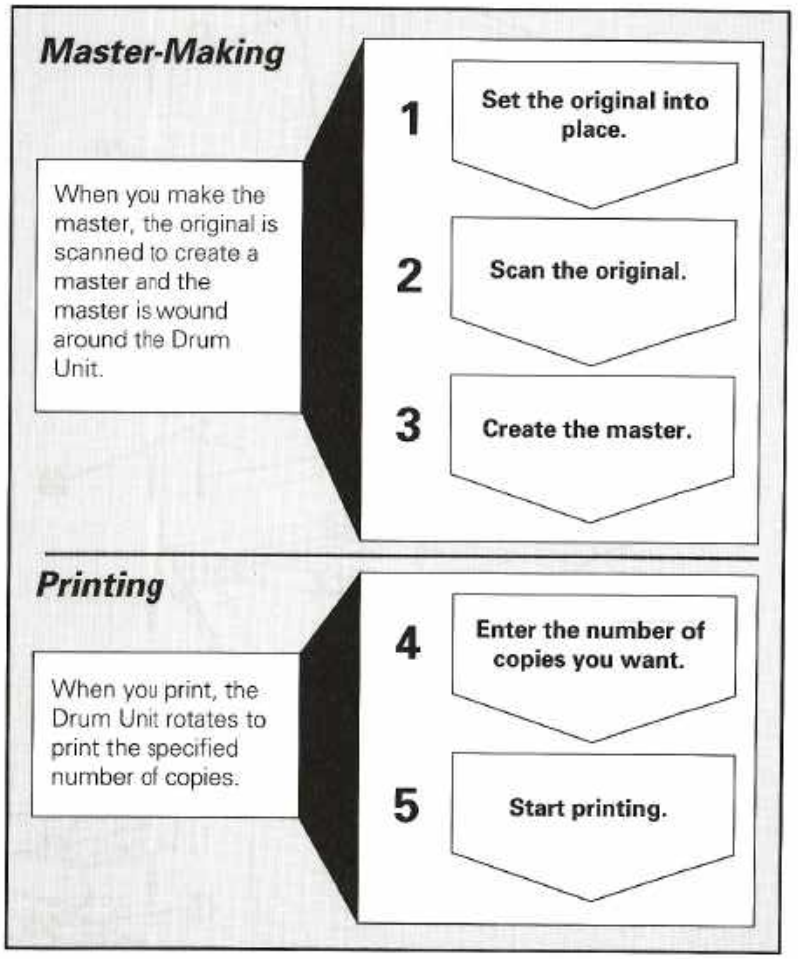
Colour Printing Options
Any of six optional ink colours may be used by changing the Drum Unit.

Easy to Use
The control panel is designed to show you the options available and the current status of the machine: Indicator lights, an easy-to-read digital display, and a convenient "Machine Monitor" display for troubleshooting.

Two-Up Printing
Originals can be printed side by side on a single sheet.

Fully Automatic Processing

The RISOgraph RA4300 processes your original by first master-making and then printing. These processes are fully automatic, unless you choose to manually set the processing mode. The Master-Making/Printing indicator always shows the current process.



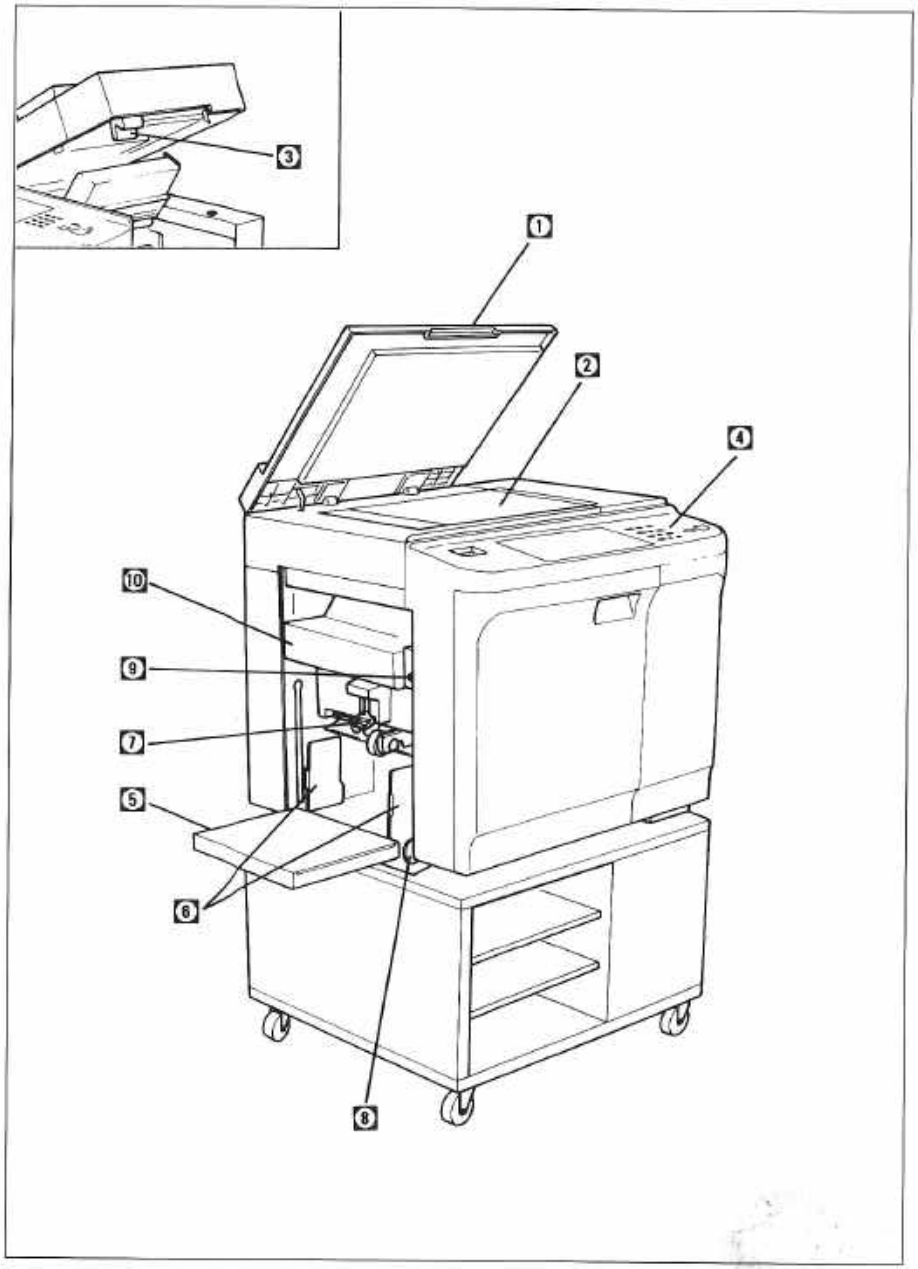
Knowing the Parts and Components

Upper Block

1. **Stage Cover**
   Covers and secures the original placed on the Stage Glass.
2. **Stage Glass**
3. **Scanner Table Release Lever**
   Unlocks and opens the Scanner Table.
4. **Control Panel**

Paper Feed Block

5. **Paper Feed Tray**
6. **Feed Tray Paper Guides**
   Holds and guides paper.
7. **Paper Feed Pressure Adjustment Lever**
   Adjusts the paper feed pressure according to the paper being used.
8. **Left/Right Print Position Adjustment Dial**
   Moves the print position to the left or right.
9. **Feed Tray Down Button**
   Lowers the Paper Feed Tray for replacing or adding printing paper.
10. **Master Disposal Box**
    Holds discarded masters.



Master-Making Block

11 Master Loading Unit Release Lever
Opens the Master Loading Unit.

12 Master Loading Unit
Makes a master from the scanned original.

13 Master Loading Button
Loads and/or cuts the master.

14 Master Roll Cover
Protects the Master Roll.

15 Master Roll

Paper Receiving Block

16 Paper Receiving Tray

17 Receiving Tray Paper Guides
Aligns printed paper neatly.

18 Paper Guiding Arms
Guides printed paper into the Paper Receiving Tray.

19 Paper Stop
Stops printed paper ejected into the Paper Receiving Tray.

Front Block

20 Front Cover

21 Drum Unit
Holds the master on its surface.

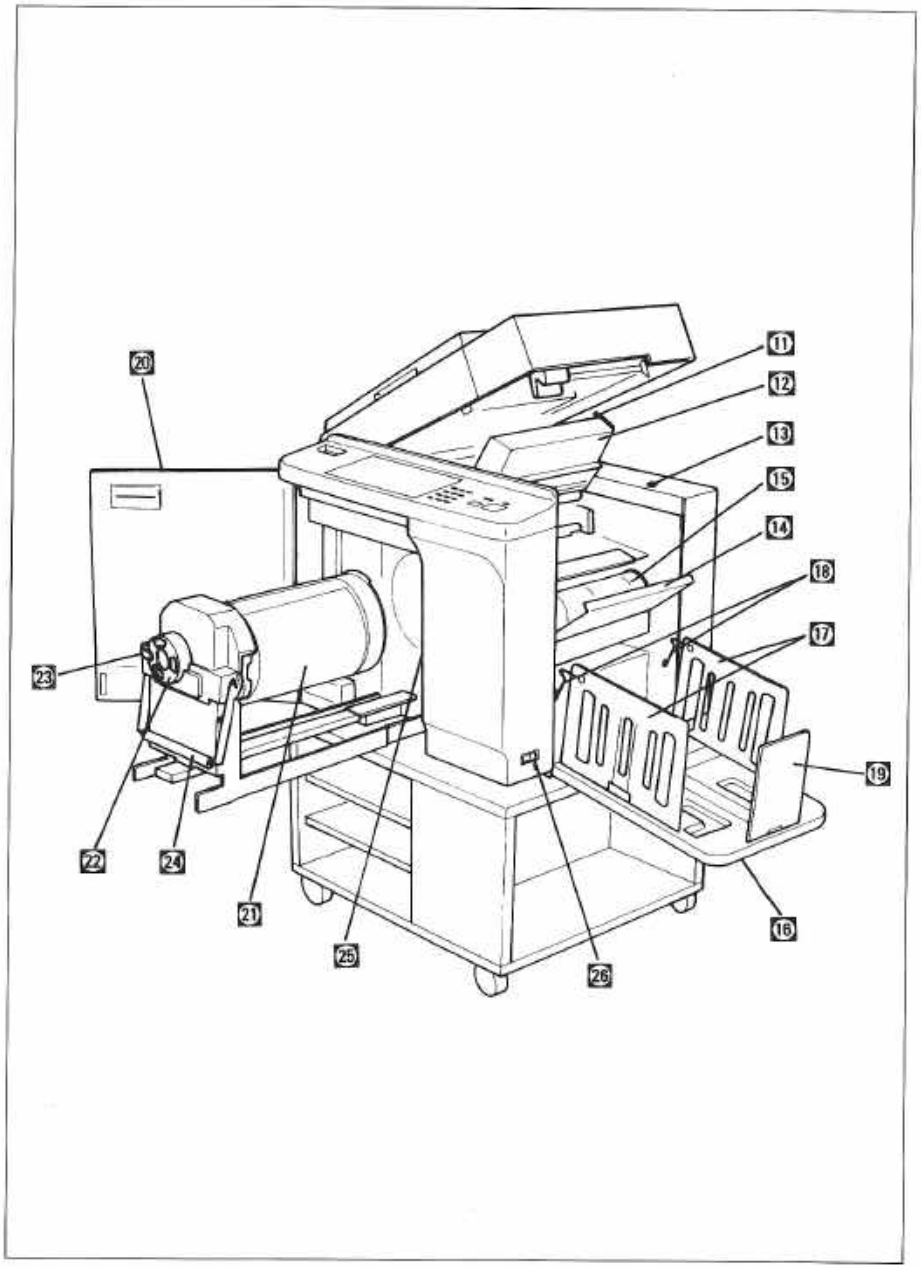
22 Ink Bottle

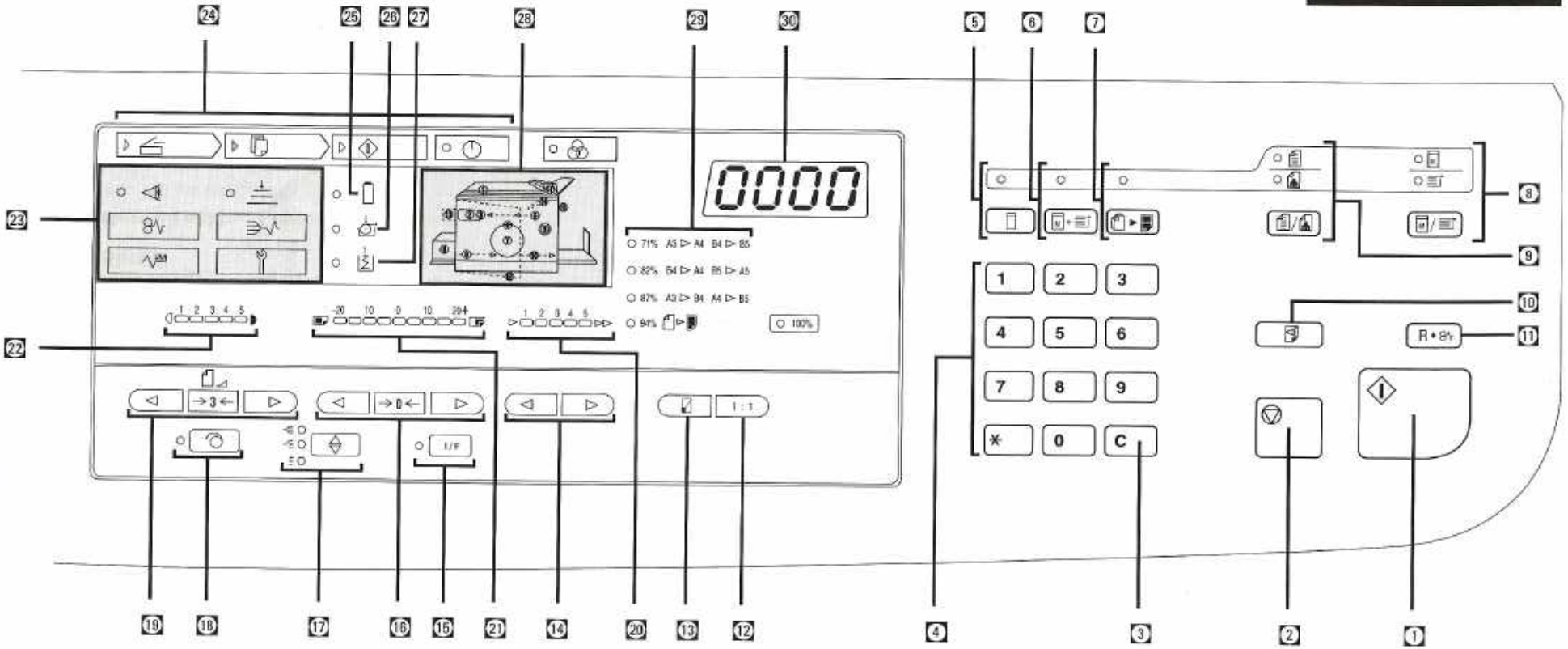
23 Ink Bottle Locking Lever
Secures the ink bottle in position.

24 Drum Handle
Used to pull the Drum Unit out of the machine.

25 Drum Home Position Button
Positions and unlocks the Drum Unit for removal.

26 Power Switch





Using the Control Panel

Main Panel

[1] START Button
Starts printing or making a master. This button is also used to resume operation after troubleshooting.

[2] STOP Button
Interrupts printing.

[3] Clear (C) Key
Cancels the number entered and resets the Print Quantity Display to zero.

[4] Print Quantity Keys
Use these keys to enter the number of copies to be printed.

[5] CONFIDENTIAL Button *(Page 22)*
Protects confidential documents from unauthorized duplication. The indicator lights when the feature is active.

[6] AUTO PRINT Button *(Page 23)*
Automates the process of master-making through printing. The indicator lights when the feature is active.

[7] TWO-UP Button *(Page 24)*
Reproduces two prints side by side on one sheet of paper. The indicator lights when the feature is active.

[8] Master-Making/Print (M/P) Button
Switches between Master-Making and Printing operations. Normally, selection is automatically made according to the current process.

[9] LINE/PHOTO Button *(Page 18)*
Switches the current mode between Line and Photo processing. The indicators light when the feature is active.

⑩ **TEST PRINT Button** ***(Page 19)***
Prints a sample from the current master. This button can be used to check print quality, printing position, density, and so on.

⑪ **ALL RESET Button**
Returns all settings to initial status. This button is also used to clear error messages after troubleshooting.

Sub Panel

⑫ **1:1 Button** ***(Page 19)***
Returns the reproduction ratio to 1:1 (100%).

⑬ **REDUCE Button** ***(Page 19)***
Selects any of four reduction ratios.

⑭ **PRINT SPEED Adjustment Buttons** ***(Page 21)***
Selects any of five print speeds.

⑮ **INTERFACE (I/F) Button**
Allows data transmission between the RA4300 and external equipment, such as personal computers, word processors, and so on.

⑯ **PRINT POSITION Adjustment Buttons** ***(Page 20)***
Adjusts vertical print position.

⑰ **SORTER Button** ***(Page 41)***
Use this button when you use the optional sorter. The indicator lights when the sorter is active.

⑱ **AUTO IDLE Button** ***(Page 26)***
When switched ON, extremely light or blurred printing is prevented after the machine is not used for long periods. The indicator lights when AUTO IDLE is switched ON.

⑲ **SCANNING Contrast Adjustment Buttons** ***(Page 18)***
Selects any of five contrast adjustments for the darkness of the original to be scanned.

Panel Displays

⑳ **Print Speed Display**
Shows the selected print speed.

㉑ **Print Position Display**
Shows the current print position.

㉒ **Original Scanning Contrast Display**
Shows the current original scanning contrast.

㉓ **Check & Error Display**
Shows errors or machine status.

㉔ **Operation Status Display**
Shows the next operation.

㉕ **Replace Ink Bottle Display**
Flashes when ink bottle is empty.

㉖ **Replace Master Roll Display**
Flashes when the Master Roll is depleted.

㉗ **Empty Disposal Box Display**
Flashes when the Master Disposal Box is full.

㉘ **Machine Monitor Display**
Shows locations associated with errors, advisory messages on the Print Quantity Display, or machine settings.

㉙ **Reduction Ratio Display**
Shows the current reduction ratio.

㉚ **Print Quantity Display**
Shows the specified number of copies to be printed or advisory messages.

About Printing Paper

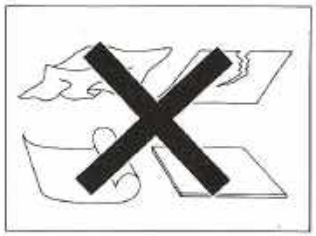
Selecting Printing Paper

Printing paper sizes of A6 (postcard) to A3 may be used. A wide range of paper thicknesses and types may be used for printing. Use printing paper with weights in the range of 46 g/m² to 210 g/m².

The maximum printing area is 245 x 350 mm for a B4 Drum Unit and 195 x 288 mm for an A4 Drum Unit.

Important!

Do not use the following paper, which may cause a jam or misfeed:



- Extremely thin paper (less than 46 g/m²)
- Extremely thick paper (greater than 210 g/m²)
- Chemically treated paper (such as thermal paper, carbon paper)
- Wrinkled, curled, folded, or torn paper
- Chemically coated paper (one or both sides)
- Paper with folded, curled, or rough leading edges
- Heavy drawing paper

To prevent paper jams and misfeeds:

- When using standard paper, set the Paper Feed Pressure Adjustment Lever to ⊼ (Normal) and the Paper Guiding Arms to ⊼ (Standard). ➥ ***Pages 12-13***
- When using thick paper, such as drawing paper, set the Paper Feed Pressure Adjustment Lever to ⊽ (Card) and the Paper Guiding Arms to ⊽ (Thick Paper/Ledger Paper). ➥ ***Pages 12-13***
- When using A3 size paper, set the the Paper Guiding Arms to ⊽ (Thick Paper/Ledger Paper). ➥ ***Page 13***
- When using slippery paper, set the Paper Feed Pressure Adjustment Lever to ⊽ (Card). ➥ ***Page 13***
- Slide the Feed Tray Paper Guides, Receiving Tray Paper Guides, and Paper Stop to fit the paper size. ➥ ***Pages 12-13***
- Use flat printing paper that is free of folds. If curled paper is unavoidable, place the printing paper so that the curl faces down.
- Printing paper tends to stick to the drum surface if the top margin is too narrow on the original or if the upper portion of the original uses a large amount of ink. To solve this problem, lower the print position to provide a wider top margin or reverse the top and bottom of the original. Then re-start printing from the beginning. ➥ ***Page 20***

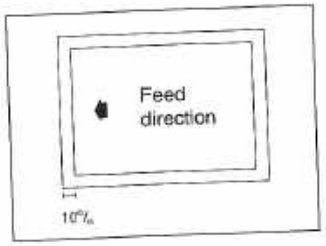
Storing Paper

Store printing paper in a level, dry area. Storing the paper in a humid area could cause paper jams and/or poor print quality.

After unpacking printing paper, keep remaining paper wrapped and store it in a moisture-proof box. It is highly recommended to put silica gel in the paper storage box.

About Your Originals

The RISOgraph RA4300 creates masters and high-quality prints from almost any original. The Stage Glass and Cover may be used for bound documents and sheet originals.



You may use the (LINE/PHOTO) button to produce printed copies according to the contents of the original. If the original contains only text or lines, select (LINE) to produce crisp characters. If the original contains photos, select (PHOTO) to reproduce different shades.

Note *Be sure to provide a margin of 10 mm or more at the top of original sheets and bound originals.*

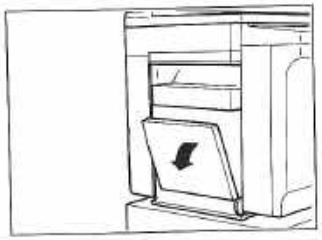
Size and Weight

The Stage Glass may be used to print from bound originals or sheet originals. You may place originals from 55 x 90 mm (business card) size to A3 size on the Stage Glass. The weight of bound originals should be 2 kg or less.

Note *If an original is wrinkled, curled, or creased, flatten it thoroughly so that the original is pressed directly onto the Stage Glass during processing.*
If correction fluid or glue is used on an original, thoroughly dry it before you place the original on the Stage Glass.

Setting Up the Paper Feed Tray

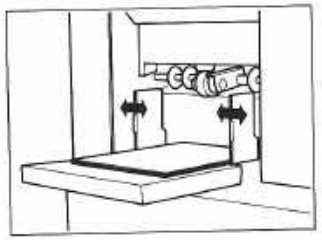
1 **Open the Paper Feed Tray.**



2 **Load printing paper and slide the Feed Tray Paper Guides to fit the paper width.**

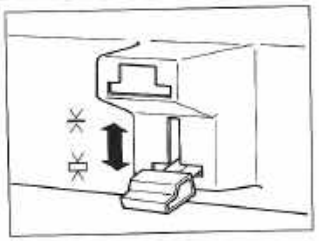
Important!

Do not mix printing paper of different sizes.



3 **Set the paper feed pressure.**

Position the Paper Feed Pressure Adjustment Lever at either ⅄ (Normal) or ⅄ (Card), according to the paper to be used:

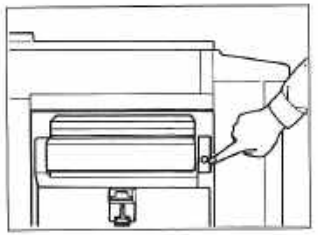


- ⅄ (Normal)
  — when using standard paper
- ⅄ (Card)
  — when using thick paper, such as drawing paper, or slippery paper

Replacing or Adding Paper

If printing paper is depleted during printing, or you want to use paper of a different size, lower the Paper Feed Tray so that you may load the paper easily.

To lower the Paper Feed Tray, hold down the Feed Tray Down button.

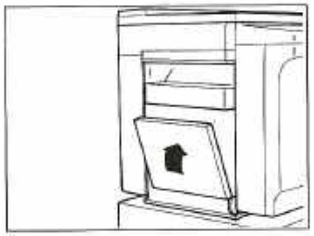


Important!

Do not mix different paper sizes in the Paper Feed Tray.

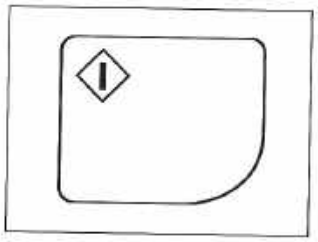
Closing the Paper Feed Tray

Remove the printing paper, widen the Feed Tray Paper Guides completely, and then close the Paper Feed Tray.



6 **Press the START button.**

A sample print is automatically produced.



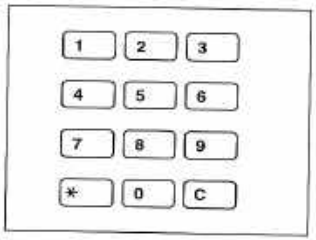
7 **Check print quality.**

- ➥ ***Page 20*** — Print position may be adjusted vertically and horizontally.
- ➥ ***Page 21*** — Print speed may be adjusted.
- ➥ ***Page 19*** — More sample prints may be printed.

Printing

8 **Enter the number of copies to be printed.**

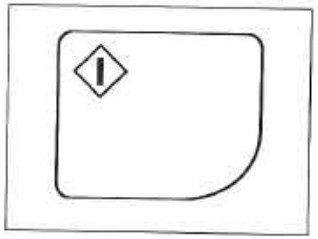
- ➥ ***Page 17***



9 **Press the START button.**

The specified number of copies are printed.

- ➥ ***Page 17***
- ➥ ***Page 22*** — After printing, the master remains on the Drum Unit unless the Confidential feature is switched ON.



Quick Overview

Printing operations are divided into three stages: Setting up and loading the Paper Feed Tray and Paper Receiving Tray, making masters, and printing.

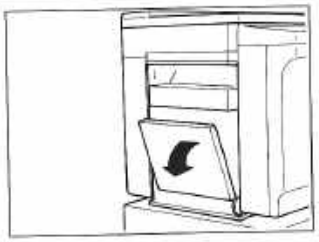
Setting Up

1 **Open the Stage Cover.**

➥ *Page 16*

2 **Open the Paper Feed Tray, load paper, and adjust the Feed Tray Paper Guides.**

➥ *Page 12*

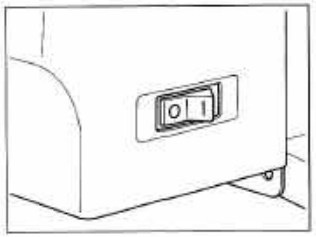


3 **Open the Paper Receiving Tray and raise the Receiving Tray Paper Guides and Paper Stop.**

➥ *Page 13*

4 **Turn the power ON and check the Operation Status Display.**

➥ *Page 14* — An optional coloured-ink Drum Unit may be installed.



Making Masters

When you make the master, you may change settings to optimize print quality.

5 **Place originals face-down on the Stage Glass.**

➥ *Page 16*

➥ *Page 18* — Scanning contrast may be adjusted.

➥ *Page 18* — The type of processing (line or photo) may be specified.

➥ *Page 19* — Reduction ratio may be specified.

➥ *Page 23* — The Auto Print feature may be switched ON.

➥ *Page 24* — The Two-Up feature may be activated.

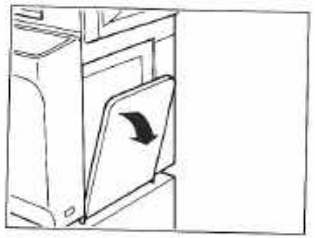
Setting Up the Paper Receiving Tray

Printed paper stacks on the Paper Receiving Tray according to size, thickness, and quantity. The Paper Receiving Tray may be positioned at high and low levels:

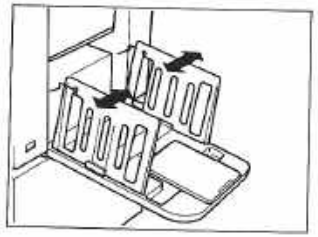
- At the high level, the tray is angled.
- At the low level, it may be level or angled.

Choose the best Paper Receiving Tray position for the paper you are using.

1 **Open the Paper Receiving Tray.**



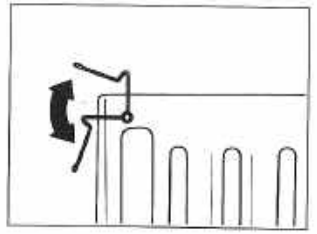
2 **Raise and slide the Receiving Tray Paper Guides to fit paper width.**



3 **Adjust the Paper Guiding Arms.**

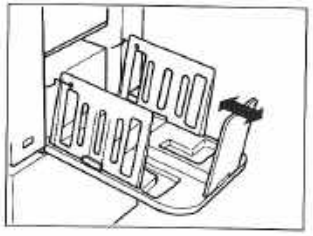
Adjust the Paper Guiding Arms so that discharged paper stacks easily.

- For standard paper, lower the Paper Guiding Arms and set them in the slit of the Receiving Tray Paper Guides.



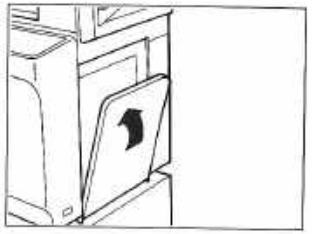
- For card stock and A3 paper, raise the Paper Guiding Arms.

4 **Raise and slide the Paper Stop to fit paper length.**

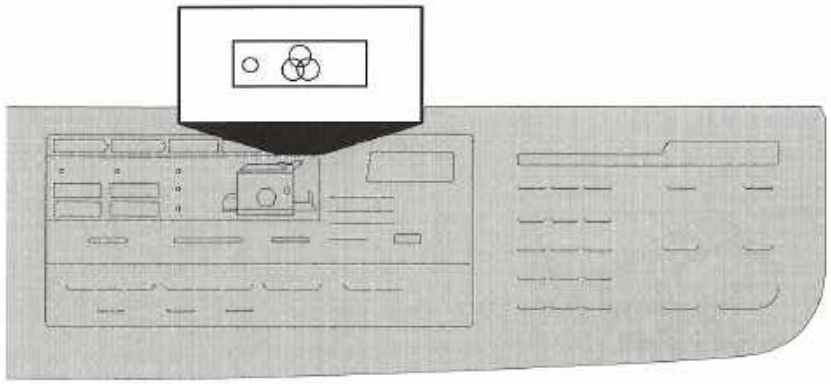


Closing the Paper Receiving Tray

Slide the Paper Stop to the A3 position and turn it down. Spread the Receiving Tray Paper Guides to the A3 position, turn them down, and close the Paper Receiving Tray.



Colour Printing



To print with another colour ink, purchase optional colour Drum Units and replace the entire drum. When a Drum Unit other than black is in place, the Coloured Drum indicator lights on the control panel.

⚠ **Caution**
Only use RISOGRAPH RA Drums.

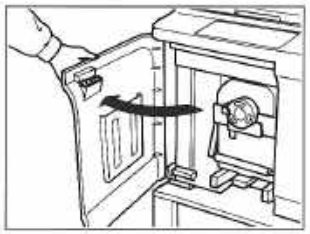
Notes *Change Drum Units with the power ON.*

Store the removed Drum Unit horizontally in the Drum Unit case.

Never store Drum Units in an upright position.

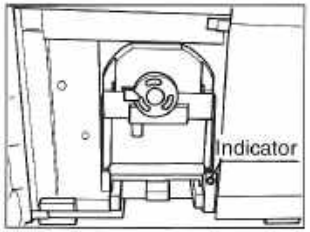
Changing Colour Drum Units

1 **Open the Front Cover.**



2 **Be sure that the Drum Home Position indicator is lit.**

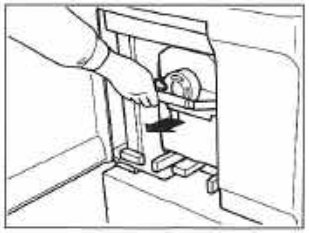
If it is not lit, press the Drum Home Position indicator. The drum will rotate and stop at the preset home position, and the Drum Home Position indicator will light.



Note *Unless the Drum Home Position indicator is lit, the Drum Unit cannot be pulled out.*

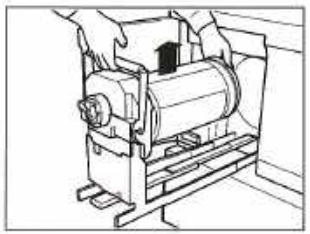
3 **Pull out the Drum Unit.**

Raise the Drum Unit Handle until it is level and pull out the Drum Unit until it stops.



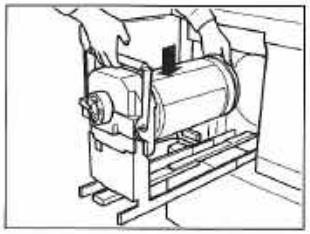
4 **Remove the Drum Unit from the machine.**

Lift the Drum Unit with both hands and remove it from the machine.



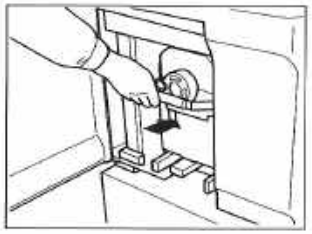
5 **Load the colour Drum Unit onto the holder.**

Insert the Drum Unit into the holder horizontally, holding the handle and body with both hands.



6 **Install the Drum Unit in the machine.**

With the Drum Unit Handle in its raised position, push the Drum Unit into the machine until it stops. Then lower the handle and close the Front Cover.



Making Masters and Printing

⚠ WARNING – To Avoid Personal Injury

- Be alert and use common sense.
- Don't open the covers or move the machine during operation.
- Keep loose clothing away from moving parts to avoid becoming entangled.
- Keep hands away from openings in the machine during operation.
- Before cleaning any parts of the machine, turn the power OFF.
- Disconnect the electrical cord if you think an electrical problem is present.

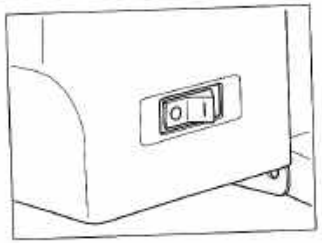
⚠ Caution – To Avoid Mechanical Problems

- Open/close the covers gently.
- Do not turn the power switch OFF or pull out the electrical plug during operation.
- DO NOT place items on top of the machine or in any opening of the machine during operation. This could damage the machine.

1 Turn the power switch ON.

The power switch is located on the lower right side of the machine:

I - ON
O - OFF



2 Check the settings on the control panel.

When power is connected, the indicators on the control panel show the initial settngs. Make any necessary changes such as reduction ratio, Line/Photo, and so on.

Holding down the R • 8v (ALL RESET) button for more than 1 second retums the control panel to the initial settings.

➥ ***Page 26***— Return to initial settings.
➥ ***Page 27***— You may customize the initial settings.

3 Place an original on the Stage Glass.

Open the Stage Cover and place an original face-down. Position the original according to the indicators on the left-hand side of the glass.

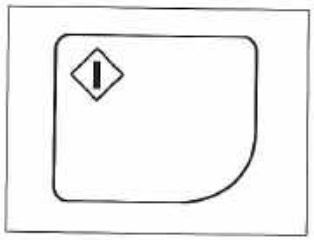
Close the cover, resting it gently on the original.

⚠ Caution

Do not force the cover down on top of bound originals placed on the Stage Glass.

Note *When originals are in place, processing automatically changes to Master-Making from Printing. The [M] (Master-Making) indicator on the control panel lights.*

4 Press the START button.



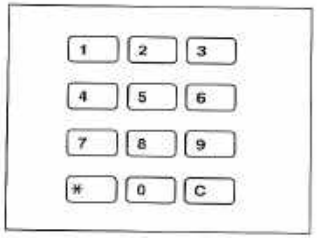
After an original is scanned, a master is created. A sample is automatically printed so that you may check the print quality, position, and density.

➥ ***Page 20*** — To change the position of the printed image, press the Print Position adjustment buttons, and/or turn the Left/Right Print Position Adjustment Dial.

➥ ***Page 18*** — To change the density of the printed copies, adjust scanning contrast and create another master.

If settings are changed, press the (TEST PRINT) button to check the results with sample prints.

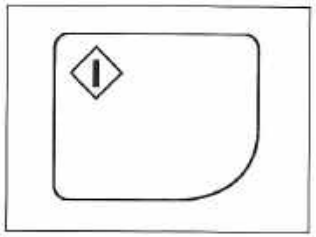
5 Enter the number of copies to be printed.



Specify the number of copies to be printed using the Print Quantity keys. The specified number is displayed on the Print Quantity Display.

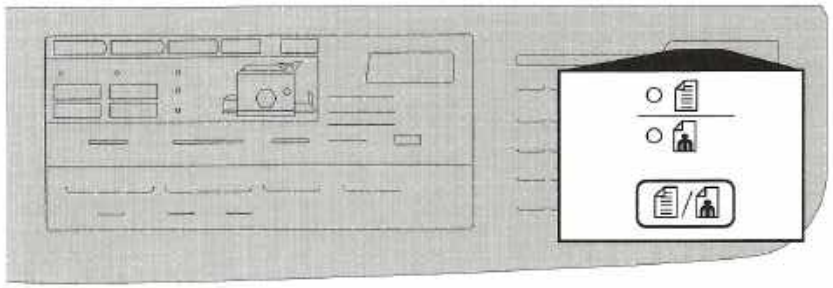
Note *If you enter the incorrect number, press the C key to re-set the Print Quantity Display to zero, then enter the correct number.*

6 Press the START button.



The specified number of copies are printed.

Note *If printing stops and the (Add Paper) indicator flashes on the control panel, paper in the Paper Feed Tray is depleted. Load paper into the Paper Feed Tray.*



Standard Text/Photo Processing

You may produce printed copies that are processed according to the contents of the original.

Holding down the LINE/PHOTO button switches between (LINE) and (PHOTO).

Line

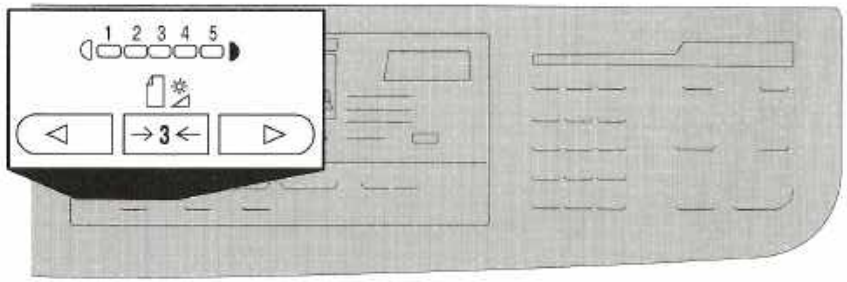
- Select (LINE) if the original contains only text or lines. This includes word-processed originals, photocopies, and newspaper. Since images will be processed in two scales, characters are sharply defined.

Photo

- Select (PHOTO) if your original contains a photo. Since it will be graphically processed, degrees of shading are accurately reproduced.

Note *If (LINE) is selected to print an original that contains a photo with dark shades, copies could be smudged.*

Holding down the R • 8V (ALL RESET) button for more than 1 second returns processing to the initial setting (LINE).



Adjusting Scanning Contrast

Scanning contrast may be set to any of five levels according to the darkness of the original.

- For light originals, such as inappropriately copied documents or those written with a pencil, make the scanning contrast darker.
- For dark originals, like newspapers or coloured stock, make the scanning contrast lighter.

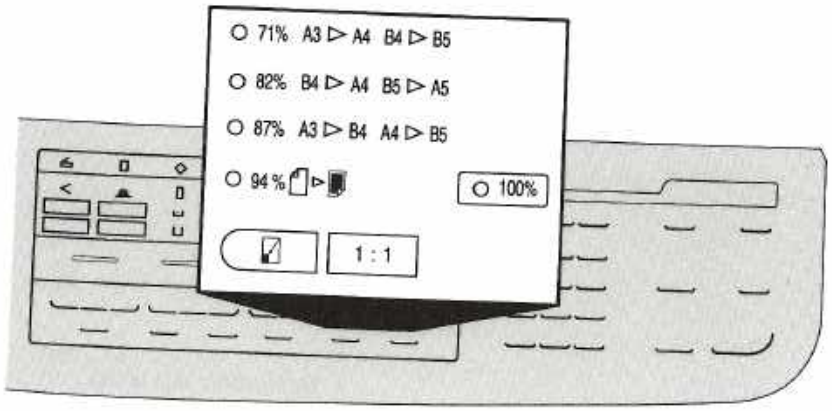
Use the SCANNING Contrast Adjustment buttons as follows:

▷ Makes the contrast darker.

◁ Makes the contrast lighter.

→3← Returns the contrast to normal.

Holding down the R • 8V (ALL RESET) button for more than 1 second returns the contrast to the initial setting (NORMAL).



Reducing the Print

Originals may be printed in four reduced sizes.

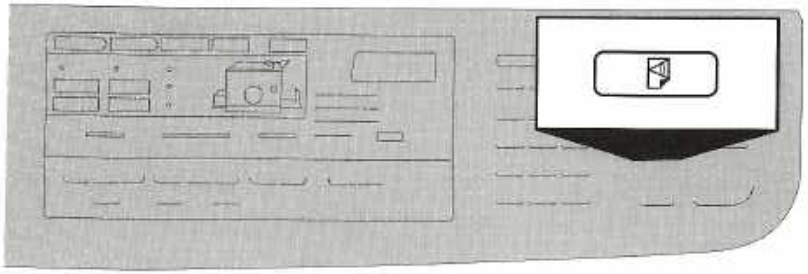
Press the REDUCE button on the control panel and select the desired reduction.

Each time the REDUCE button is pressed, the indicators light in this order: 94 – 87 – 82 – 71 – 94.

94% Border Increase
87% A3 ► B4, A4 ► B5
82% B4 ► A4, B5 ► A5
71% A3 ► A4, B4 ► B5

To return to 1:1 (100%) ratio, press the 1:1 button.

Holding down the R • 8√ (ALL RESET) button for more than 1 second returns print size to the initial setting (1:1).

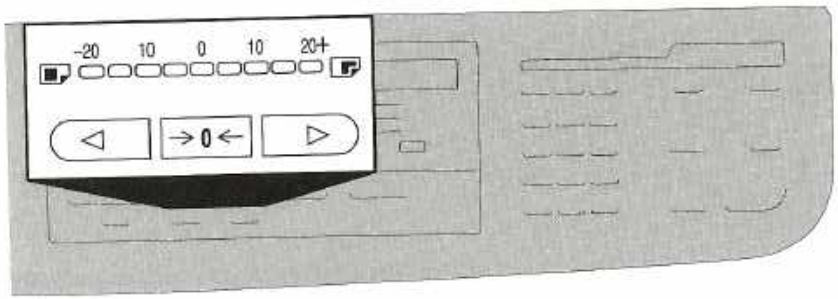


Checking Print Quality

If changes have been made to print position, etc., check print quality by producing test prints.

If you hold down the TEST PRINT button, you may print continuously.

Note *Test printing does not affect the quantity in the Print Quantity Display.*



Positioning the Print

Print position may be adjusted up and down and/or right and left:

- Vertical print position may be adjusted by pressing the PRINT POSITION Adjustment buttons on the control panel.
- Horizontal print position may be adjusted by using the Left/Right Print Position Adjustment dial on the Paper Feed Tray.

Note *If you adjust the print position, be sure to produce test prints to verify the new print position.*

Printing paper may stick to the drum surface if the top margin is too narrow on the original or if the upper portion of the original uses a large amount of ink. To solve this problem, lower the print position to provide a wider top margin or reverse the top and bottom of the original and re-start printing from the beginning.

Adjusting Vertical Print Position

You may move the print position up or down within a range of ±20 mm by pressing either of the PRINT POSITION Adjustment buttons.

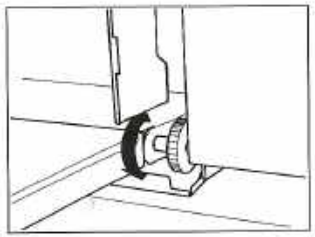
◁ Moves print position down.

▷ Moves print position up.

→0← Returns print position to the center.

Holding down the R • 8v ***(ALL RESET) button for more than 1 second returns the print position to the initial setting (Center).***

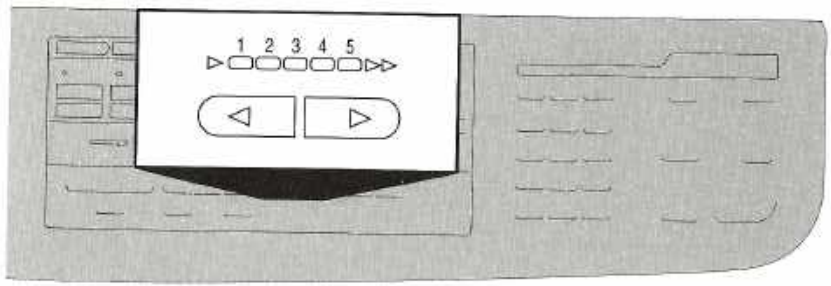
Adjusting Horizontal Print Position



You may move the print position left or right by turning the Left/Right Print Position Adjustment dial on the Paper Feed Tray.

The distance that you may adjust horizontal print position is determined by the size of the printing paper:

A6 (postcard) to B4	►	±20 mm
A3	►	±5 mm



Adjusting Print Speed

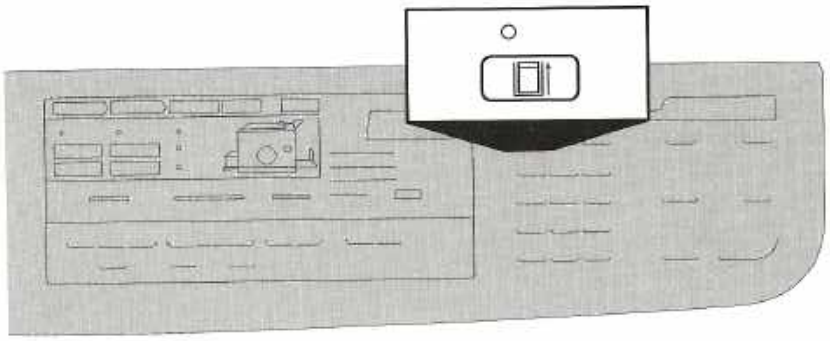
Printing may be set at any of five speeds, ranging between 60 and 130 sheets per minute.
The normal print speed is 100 sheets per minute.

◁ Decreases print speed.

▷ Increases print speed.

Holding down the R • 8v (ALL RESET) button for more than 1 second returns print speed to the initial setting.

➥ ***Page 27*** — You may customize initial settings.



Protecting Confidential Documents

After printing is complete, the master remains on the Drum Unit. The master on the Drum Unit may be printed at any time by pressing the ◇ (START) button.

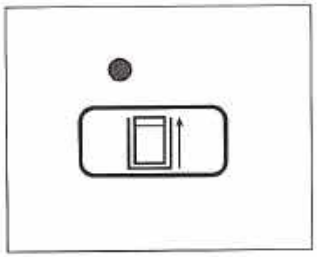
To protect confidential documents from duplication, press the CONFIDENTIAL button to discard the original's master after printing.

1 **Confirm that printing has ended.**

2 **Press the CONFIDENTIAL button.**

The CONFIDENTIAL indicator lights.

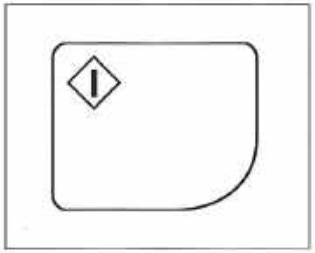
Note *To cancel the Confidential feature, press the CONFIDENTIAL button again.*



3 **Press the START button.**

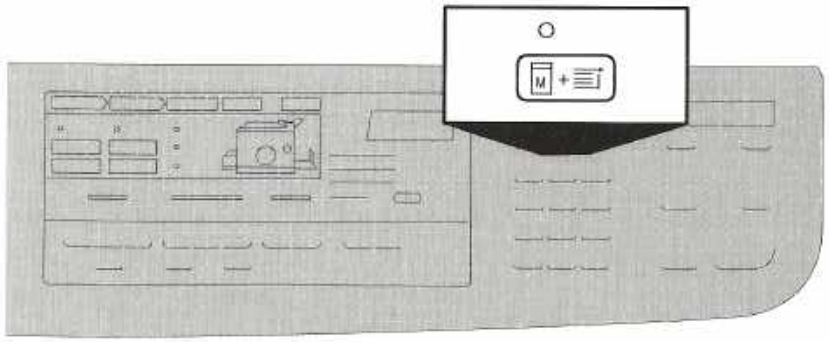
The existing master is discarded and replaced with a blank master.

The CONFIDENTIAL indicator goes out, and the Confidential feature is canceled.



Note *The master is discarded into the Master Disposal Box.*

➥ ***Page 31*** — For strictly confidential documents, discard the contents of the Master Disposal Box.



One-Step Printing

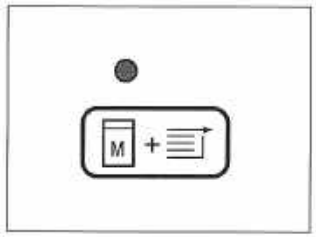
The Auto Print feature automates the processes from master-making through printing.

Press the AUTO PRINT button to activate this feature. To cancel this feature, press the AUTO PRINT button again.

Note *If you need to check or adjust print position, cancel the Auto Print feature.*

1 **Press the AUTO PRINT button.**

The Auto Print indicator lights.

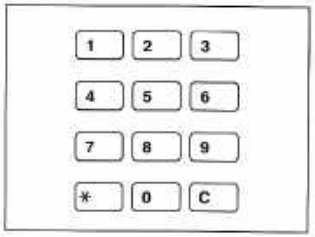


2 **Set an original into place.**

Open the Stage Cover and place an original face-down on the Stage Glass. Close the cover gently on the original.

3 **Enter the number of copies to be printed.**

Enter the number of copies to be printed using the Print Quantity keys.

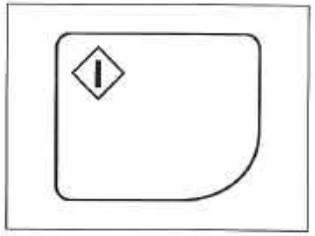


Note *If you enter an incorrect number, press the C key to re-set the Print Quantity Display to zero, then enter the correct number.*

If zero is displayed as the print quantity, the machine will not start.

4 **Press the START button.**

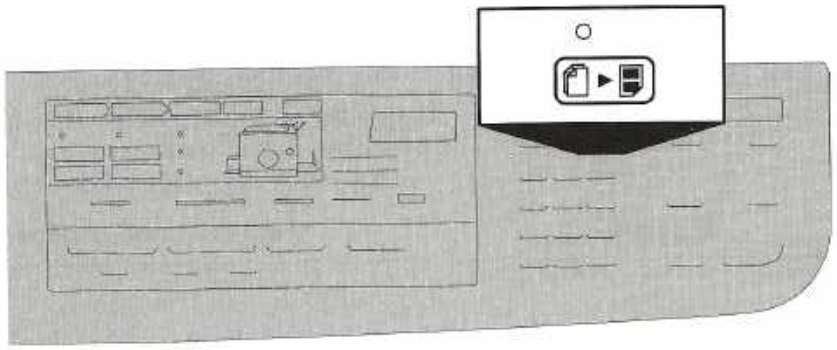
Master-making through printing will take place automatically, producing as many copies as specified.



Note *Since a sample is automatically produced after master-making, one extra copy is printed.*

Holding down the R • 8V (ALL RESET) button for more than 1 second returns the Auto Print feature to the initial settings.

➥ ***Page 27*** — You may customize initial settings.

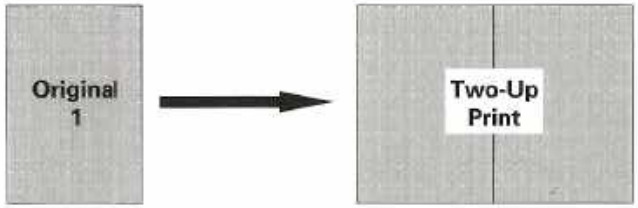


Printing Two Originals Side by Side

Two of the same originals may be printed side by side on a sheet using the TWO-UP button.

High-volume printing time may be cut in half using the Two-Up feature. For example, you may double your productivity by using printing paper which is twice as large as the originals. When you use the Two-Up feature, you may then cut the Two-Up prints in half to finish the job.

To print the same original twice on a sheet, place the original on the Stage Glass:

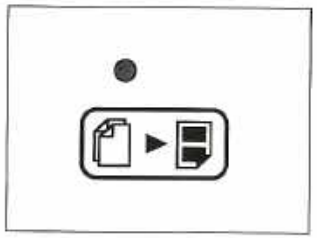


Printing the Same Original Two-Up

1 **Press the TWO-UP button to activate the Two-Up feature.**

The Two-Up indicator lights when the feature is active.

Note *To cancel the Two-Up feature, press the TWO-UP button again.*

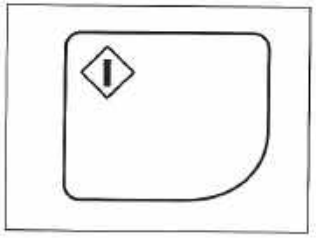


2 **Place the original face-down on the Stage Glass.**

3 **Press the START button.**

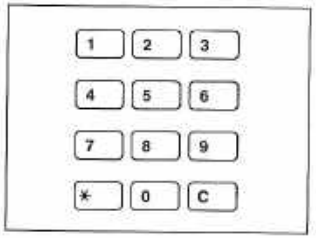
The original is scanned twice and the Two-Up master is made.

A sample Two-Up print is made.



4 **Enter the number of copies to be printed.**

Specify the number of copies to be printed using the Print Quantity keys. The specified number is displayed on the Print Quantity Display.

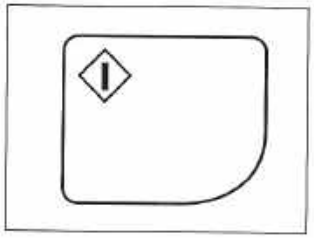


Note *If you enter the incorrect number, press the C key to re-set the Print Quantity Display to zero, then enter the correct number.*

5 **Press the START button.**

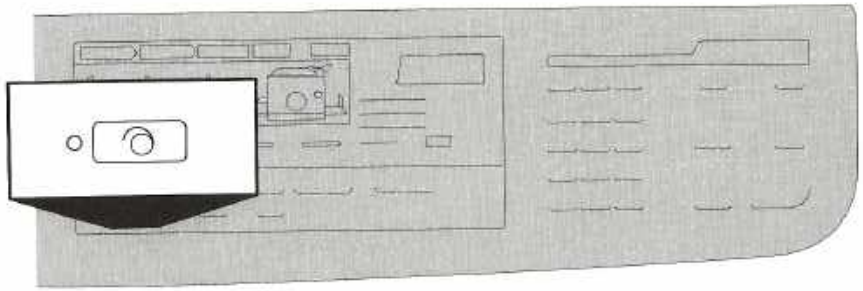
The specified number of Two-Up prints are printed.

The Two-Up indicator goes out, and the Two-Up feature is canceled.



Holding down the R•8Y (ALL RESET) button for more than 1 second returns the control panel to the initial settings.

Automatic Maintenance



When the RISOgraph is not used for several hours, ink may dry on the Drum Unit. This may cause the first few sheets to be faint or blurred when printing starts again. The Automatic Idle feature assures consistent print quality.

Whenever the Automatic Idle indicator is lit, the Automatic Idle feature works. If you want this feature when the indicator is not lit, press the AUTOMATIC IDLE button to activate it.

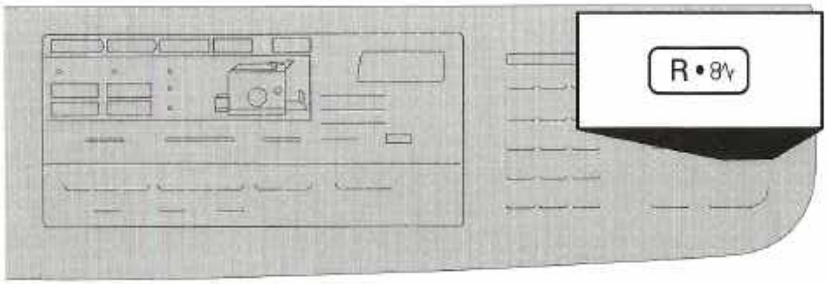
The Automatic Idle feature is automatically activated if the power is switched ON when the RISOgraph unit is not used for a certain period (12 or 6 hours).

Note *For ordinary or test printing after a long rest, the Automatic Idle feature is ignored even if the indicator is lit.*

The minimum period required for automatic activation of the Automatic Idle feature may be selected.

➥ ***Page 27*** *— You may customize initial settings.*

Return to Initial Settings



To return all the settings, including print position and reduction ratio, to initial status, turn the power OFF and ON again or hold down the ALL RESET button for more than 1 second.

Note *If the initial settings have been customized, the customized settings will be returned by performing the procedure above.*

INITIAL SETTINGS (at time of purchase)

Original Mode Select	● / ○
Size Adjustment	100%
Print Quantity Display	0
Print Speed	1 2 3 4 5
Print Position	-20 10 0 10 20+
Master-Making/Print	○ / ●
Original Scanning Contrast	1 2 3 4 5

Customizing the Initial Settings

You may change some of the initial settings to which the machine status will be returned when the power is turned ON or the R•8V (ALL RESET) button is held down for more than 1 second.

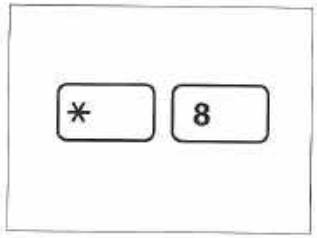
The initial settings of the following settings may be changed (the settings at the time of purchase are shown in boldface):

Item Number	Initial Setting Item	Enter 0	Enter 1
01	Print Speed	**100 sheets/min**	60 sheets/min
02	Auto Print Feature	**OFF**	ON
04	Displayed Print Quantity	**0**	1
06	Auto Reset Time	**None**	5 minutes
08	Auto Idle Period	**12 hours**	6 hours

When you customize the initial settings, the settings remain valid until they are changed again.

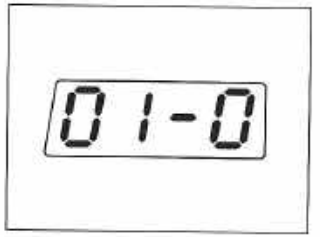
1 **Press 8 while holding down the * Print Quantity key.**

Access the changeable initial settings.



2 **Check the Print Quantity Display.**

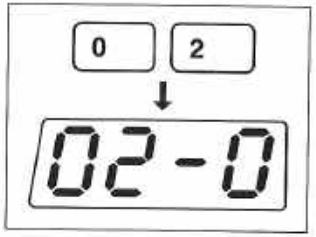
Item number 01 and setting-status numbers 0 or 1 appear on the Print Quantity Display.



3 **Enter an item number.**

Enter the item number that you want to customize, using the Print Quantity keys.

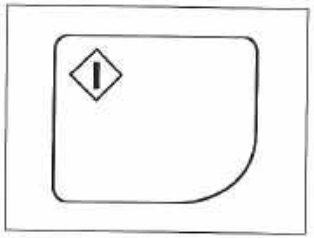
For example, to select item number 02, enter 0 and 2.



Note *If you want to change item number 01, just press the ◇ (START) button without entering an item number, then change the setting.*

4 **Press the ◇ (START) button.**

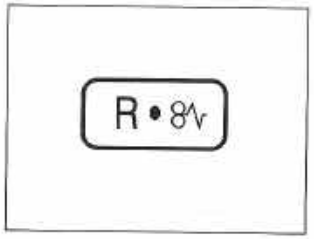
Each time you press the START button, the setting-status number switches between 0 and 1. Select either number.



5 **Press the R•8V (ALL RESET) button.**

After customizing the settings, hold down the ALL RESET button for more than 1 second.

The custom settings appear as the initial settings when the power is turned ON or the ALL RESET button is held down for more than 1 second.



Maintaining Your RISOgraph

⚠ WARNING – To Avoid Personal Injury During Handling

- DO NOT allow unauthorised persons to make adjustments or repairs.
- DO NOT remove any fixed covers.
- CALL your Dealer immediately if you suspect any dangerous situations or have questions or problems with the machine.
- Precision parts and driving mechanisms are contained in the machine. Do not perform actions other than those described in this manual.
- Don't make any modifications to the machine or remove parts.
- When you want to move the machine, contact your RISO Dealer.

⚠ Caution – To Avoid Mechanical Problems

- The best safety device is an alert person who demonstrates good sense.
- Neither RISO nor its dealer is responsible for maintenance service performed by non-RISO-authorised personnel.

Replacing the Lithium Battery

The lithium battery in your RISOgraph should last about 5 years.

When the battery is losing power, the (Call Service) Display will light and the code number E17 will appear.

⚠ Caution

The lithium battery must be replaced by a trained and authorised service technician.

Cleaning Your RISOgraph

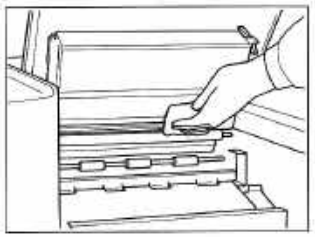
If the Thermal Print Head (in the Master Loading Unit) or the Stage Glass and/or Cover is smudged with dust, dirt, ink, or correction fluid, printed copies may be stained or blurred.

Clean them periodically in the following way.

Cleaning the Thermal Print Head

Clean the Thermal Print Head after you have replaced two Master Rolls.

Lift up the Scanner Table and open the Master Loading Unit. Then gently wipe the Thermal Print Head (inside the Unit) several times with a soft cloth or tissue.



Note *It is effective to dampen a soft cloth or tissue with a small amount of alcohol before wiping the Thermal Print Head.*

⚠ Caution

Since the Thermal Print Head is very delicate, avoid shocks or scratching with a hard object.

Cleaning the Stage Glass and Cover

If the Stage Glass is stained, imperfections may appear on prints.

Wipe the Stage Glass and/or Cover gently with a soft cloth or tissue.

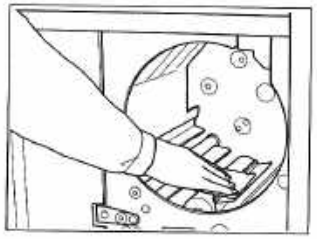
⚠ **Caution**

Since the Stage Glass is very delicate, avoid shocks or scratching with a hard object.

Cleaning the Press Roller

If the rubber Press Roller that presses the printing paper against the Drum Unit is stained, smudged strips may appear on the back sides of prints.

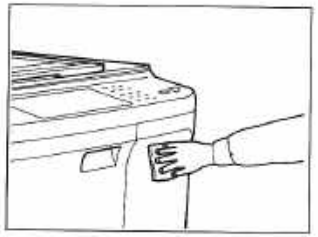
Wipe the Press Roller gently with a soft cloth or tissue.



Cleaning the Machine Exterior

To remove dust, wipe the machine exterior periodically with a soft cloth.

To remove stains, use an appropriate cleanser.



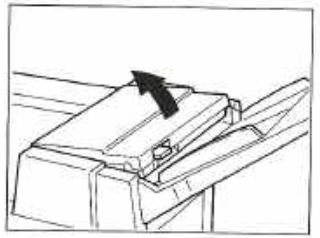
⚠ **Caution**

The machine exterior is plastic.
Never use alcohol or solvent for cleaning.

Cleaning the Optional ADF Scanner Glass

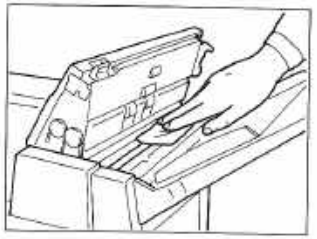
1 **Open the ADF Unit.**

Open the ADF Unit while holding the ADF Unit Release Lever.



2 **Wipe the scanner glass.**

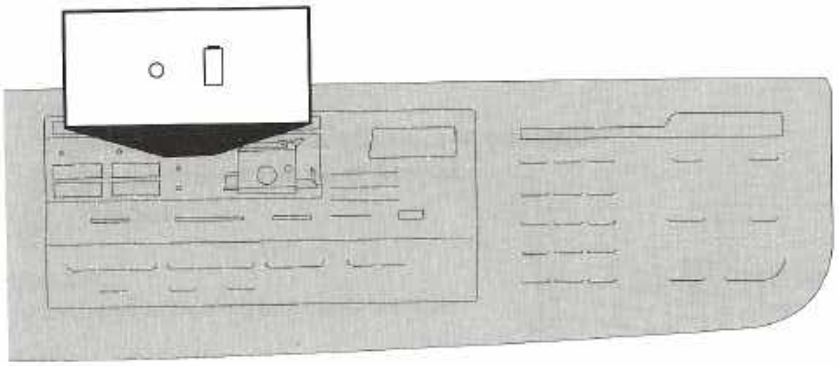
Gently wipe the scanner glass several times with a soft cloth or tissue.



Note *It is effective to dampen a soft cloth or tissue with a small amount of alcohol before wiping the scanner glass.*

⚠ **Caution**

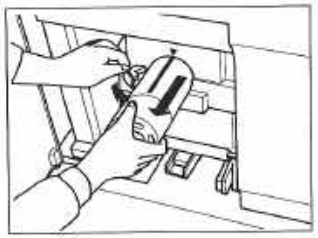
Since the scanner glass is very delicate, avoid shocks or scratching with a hard object.



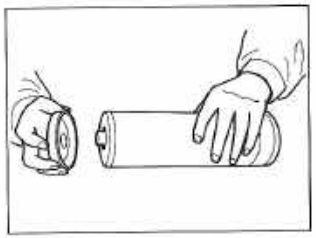
Replacing the Ink Bottle

1 **Open the Front Cover, and pull the empty ink bottle out of the machine.**

Release the green Ink Bottle Locking Lever and pull the empty ink bottle out of the Drum Unit.

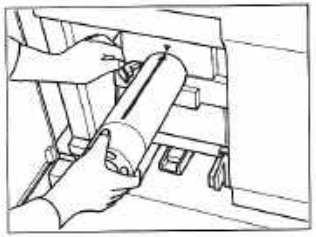


2 **Remove the cap from the new ink bottle.**



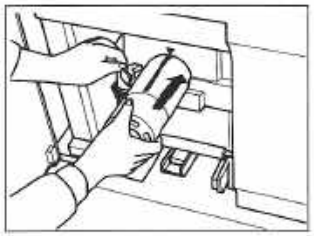
3 **Align the arrow on the new ink bottle with the arrow marked on the drum.**

While pushing the Ink Bottle Locking Lever aside, rotate the ink bottle until its arrow meets the arrow marked on the drum.



4 **Insert the new ink bottle.**

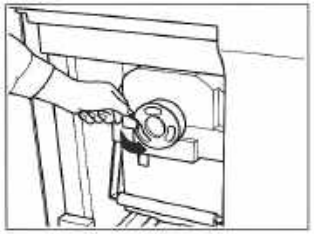
Insert the ink bottle all the way into the drum.



5 **Lock the ink bottle into place, and close the Front Cover.**

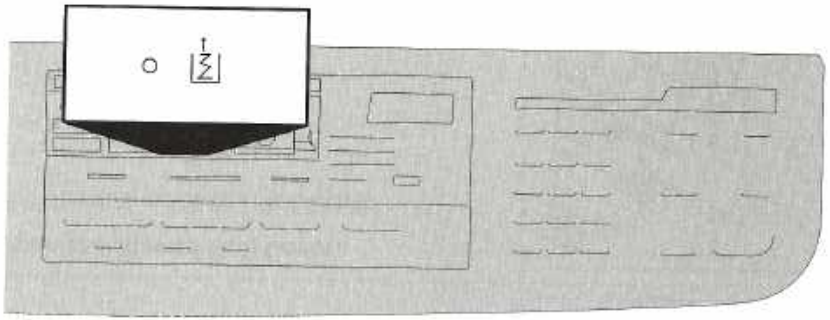
Return the Ink Bottle Locking Lever to its initial position to keep the ink bottle in place.

Press on the lower right-hand area of the Front Cover to close it securely.



Important!

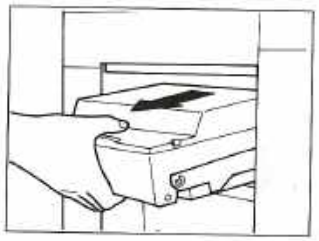
- **Never insert a bottle of a different colour ink.**
  Always be sure that the colour of the new ink bottle is the same as that of the old one. To change print colour, replace the entire Drum Unit.
- **The master wrapped around the Drum Unit has ink on it. Keep your hands and clothing away from it.**
  If your hands come into contact with ink, wash them immediately and thoroughly.



Emptying the Master Disposal Box

1 **Pull out the Master Disposal Box.**

Hold together both the upper and lower handles of the Master Disposal Box and pull out the box.

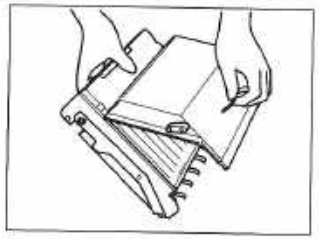


Note *When carrying the Master Disposal Box, be sure to hold the handles so as not to drop the used masters.*

2 **Discard used masters.**

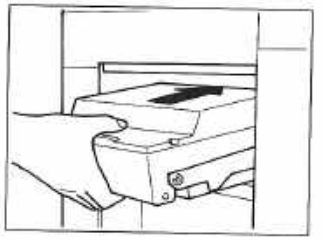
While holding the handles, open the cover by pulling up the locking lever and discard used masters.

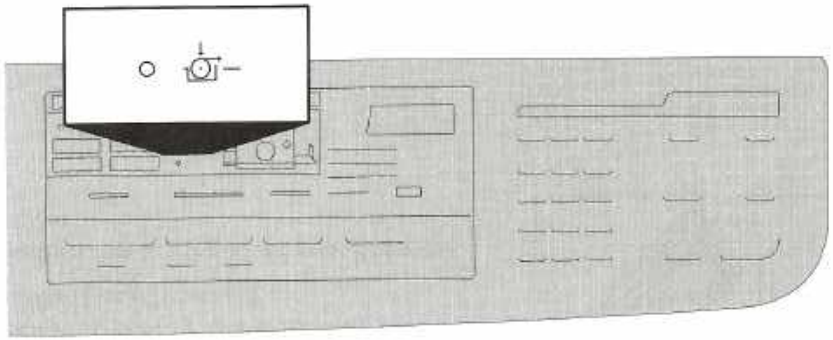
Return the locking lever and close the cover.



3 **Insert the Master Disposal Box into position.**

Holding the handles, insert the Master Disposal Box into position as far as it will go. Then release the handles.

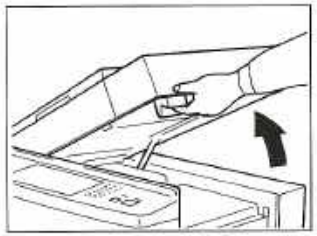




Replacing the Master Roll

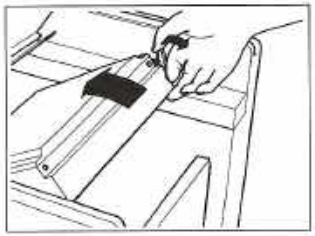
1 **Raise the Scanner Table.**

Hold the Scanner Table Release Lever and raise the Scanner Table until it stops.



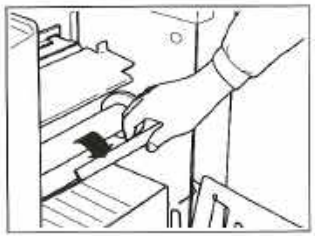
2 **Open the Master Loading Unit.**

Open the Master Loading Unit by pulling down the green Master Loading Unit Release Lever, which is located on the right side of the unit.



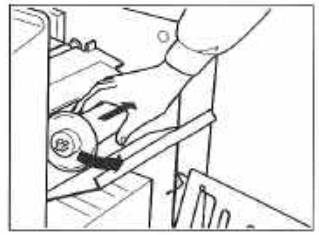
3 **Open the Master Roll Cover.**

Pull down the Master Roll Cover.



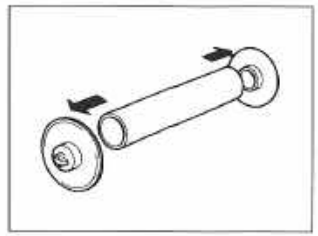
4 **Remove the depleted Master Roll.**

Pushing the depleted Master Roll to the right, pull it toward you and remove it from the supporter.



5 **Remove both left and right flanges.**

Remove both left and right flanges from the depleted Master Roll.



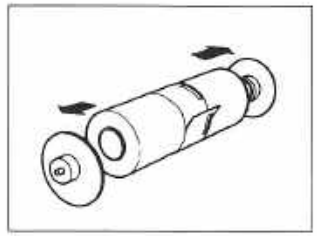
6 **Attach the existing flanges to a new Master Roll.**

Unpack a new Master Roll.

Note *If you use the RISOGRAPH RC Master, remove both the left and right flanges from the new Master Roll.*

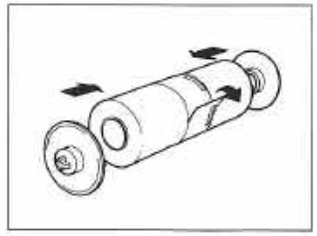
Important!

Do not use flanges removed from the new RISOGRAPH RC Master Roll.



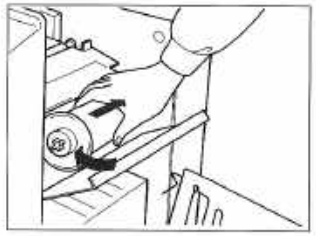
Attach the flanges removed from the depleted Master Roll to the new Master Roll, with the coloured flange to the right end and the white flange to the left end.

Then unwrap the new Master Roll.



7 **Install the new Master Roll.**

Pushing the coloured flange onto the right-hand flange holder, slide the white flange securely into the center groove of the supporter.

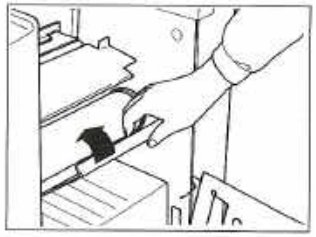


8 **Insert the leading edge of the master under the green film.**

Unroll the Master Roll by pulling on the leading edge and insert the leading edge under the green film.

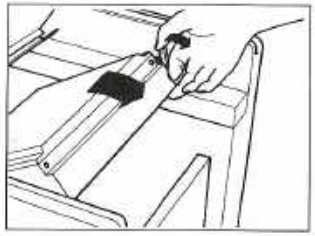
9 **Close the Master Roll Cover.**

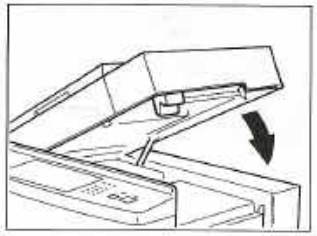
Close the Master Roll Cover gently.



10 **Close the Master Loading Unit and the Scanner Table.**

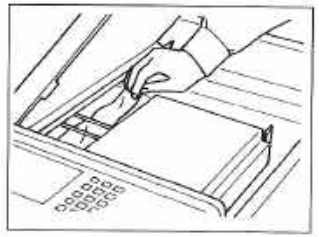
Close the Master Loading Unit gently and return the Scanner Table to the original position.



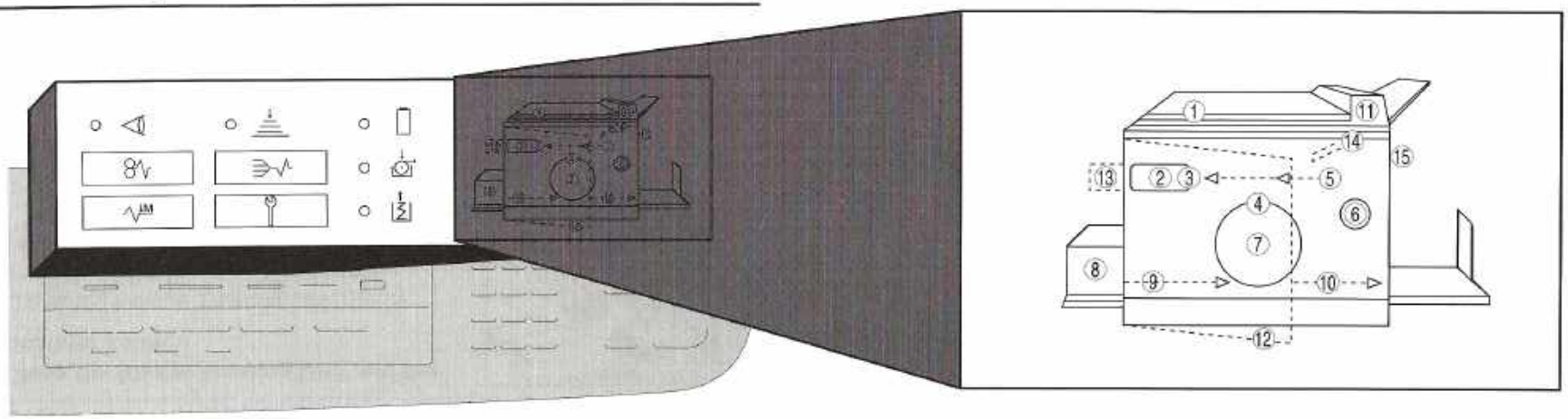


Important!

If the leading edge of the master is inserted too far beyond the green film, the excess portion will be automatically cut off. If the cut-off strip remains inside, the ◁| (Check Settings) indicator flashes on the control panel. Be sure to remove the cut-off strip.



Advisory Messages



When the machine is not ready for use (when consumables are not installed, for example), an indicator lights or flashes on the display panel and a related code number appears on the Print Quantity Display.

The indicator shows machine status and the Machine Monitor Display indicates the problem location. The code number on the Print Quantity Display provides more detail about machine status.

If you need to contact technical support about a problem, inform the authorized service representative of the code number to help solve the problem quickly.

◁ CHECK SETTINGS

The Check Settings indicator flashes when the Drum Unit, ink bottle, Master Roll, or Master Disposal Box are not properly installed, or a part of the machine (like the Front Cover) is not closed completely.

Location	Code Number	Description and Action
④⑪	E24	A strip of cut master remains in the machine. ➥ *A cut-off piece of master is inside the Master Loading Unit. Open the Scanner Table and Master Loading Unit, and remove the piece.* ➥ ***Page 33***
④⑫	E27	There is no master on the Drum Unit. ➥ *Press the R•ﾘv (ALL RESET) button to clear the display. Then place an original on the ADF Original Tray or Stage Glass and start operation from master-making.* ➥ ***Page 16***
④⑫	E52	Drum Unit is not properly installed. ➥ *Slide the Drum Unit all the way into place and then let down the lever. Be sure the Drum Unit is securely locked in place.* ➥ ***Page 14***
⑦⑫	E53	Ink bottle is not properly installed. ➥ *Insert the ink bottle completely and then hook the locking lever onto it to securely lock it in place.* ➥ ***Page 30***
⑤⑪⑭	E54	Master is not properly loaded. ➥ *Install the Master Roll in the Master Holder, if necessary. Be sure the leading edge of the master is inserted between the green plastic film tabs on the machine.* ➥ ***Page 32***
⑫	E55	Front Cover is not properly closed. ➥ *Close the Front Cover tightly.* ➥ ***Page 30***
⑪	E56	Scanner Table is not properly closed. ➥ *Close the Scanner Table tightly.* ➥ ***Page 33***
⑬	E57	Master Disposal Box is not properly installed. ➥ *Holding the handles of the Master Disposal Box, insert the box completely.* ➥ ***Page 31***
⑭	E58	Master Loading Unit is open. ➥ *Open the Scanner Table and close the Master Loading Unit securely. Then return the Scanner Table to its original position.* ➥ ***Page 32***
⑪	E59	ADF Unit (optional) is not properly closed. ➥ *Close the ADF Unit tightly.* ➥ ***Page 29***
⑧	E60	There is an obstacle stuck on the Paper Feed Tray. ➥ *Remove it.* ➥ ***Page 12***
④⑫	E61	Drum Unit is wrong type or size. ➥ *Install a recommended Drum Unit.* ➥ ***Page 14***

ADD PAPER

The Add Paper indicator flashes when paper is not loaded in the Paper Feed Tray.

Location	Code Number	Description and Action
⑧		Paper is not loaded in the Paper Feed Tray. ➡ *Install paper in the Paper Feed Tray.* ➡ ***Page 12***

REPLACE INK BOTTLE

The Replace Ink Bottle indicator flashes when the ink bottle is empty.

Location	Code Number	Description and Action
⑦⑫		Ink Bottle is empty. ➡ *Replace the empty ink bottle.* ➡ ***Page 30***

REPLACE MASTER ROLL

The Replace Master Roll indicator flashes when the Master Roll is depleted.

Location	Code Number	Description and Action
⑥⑪		Master Roll is depleted. ➡ *Install a new Master Roll.* ➡ ***Page 32***

EMPTY DISPOSAL BOX

The Empty Disposal Box indicator flashes when the Master Disposal Box is full of used masters.

Location	Code Number	Description and Action
②		Master Disposal Box is full. ➡ *Pull out the Master Disposal Box and discard used masters.* ➡ ***Page 31***

PAPER JAM

The Paper Jam indicator flashes when printing paper or originals get jammed inside the machine or ADF Unit.

Location	Code Number	Description and Action
④⑨⑫	E31	Paper is jammed in the paper feed area. ➥ *Open the Front Cover, pull out the Drum Unit, and remove the jammed paper from the paper feed area.* ➥ ***Page 14***
④⑩⑫	E32	Paper jammed in the paper ejection area. ➥ *Open the Front Cover, pull out the Drum Unit, and remove the jammed paper from the paper ejection area.* ➥ ***Page 14***
⑨	E33	Printing paper was not fed, or was improperly fed. ➥ *Check paper and Paper Feed Tray and press the R•8↑ (ALL RESET) button.* ➥ ***Page 12***
④⑫	E34	Printed paper is stuck to the drum. ➥ *Open the Front Cover, pull out the Drum Unit, and remove the printing paper.* ➥ ***Page 14***
⑪	E36	An original was not fed, or was improperly fed. ➥ *Remove the original and re-load it.* ➥ ***Page 16***
⑪	E37	An original is jammed at the entrance to the ADF Unit (optional). ➥ *Open the ADF Unit by holding the ADF Unit Release Lever. Remove the jammed original and re-load it.* ➥ ***Page 29***
⑪	E38	An original is jammed inside the ADF Unit (optional). ➥ *Open the ADF Unit by holding the ADF Unit Release Lever. Remove the jammed original and re-load it.* ➥ ***Page 29***
⑪	E39	An original is jammed at the exit of the ADF Unit (optional). ➥ *Open the ADF Unit by holding down the ADF Unit Release Lever. Remove the jammed original and re-load it.* ➥ ***Page 29***

Note ***To prevent paper jams:***

- *Print on paper free of folds. If using curled paper is unavoidable, place the printing paper so that the curl faces down.*
- *When using slippery paper for printing, set the Paper Feed Pressure Adjustment Lever to ⊟ (Card).*
  ➥ ***Page 12***
- *Printing paper tends to stick to the drum surface if the top margin is too narrow on the original, or if the upper portion of the original uses a large amount of ink. To solve this problem, lower the print position to provide a wider top margin or reverse the top and bottom of the original and then re-start printing.*
  ➥ ***Page 20***

MASTER MISFEED

The Master Misfeed indicator flashes when an error occurs during master-making or master disposal.

Location	Code Number	Description and Action
⑤⑪⑭	E21	Master is not loaded on the drum, or is improperly loaded on the drum. ➥ *Open the Master Loading Unit and wind up the Master Roll. Re-load the master. After closing the Master Loading Unit, press the ◇ (START) button to re-start the master-making operation.* ➥ ***Page 33***
⑤⑪⑭	E22	Master was not fed properly. ➥ *Open the Master Loading Unit, wind up the Master Roll, and re-load the master.* ➥ ***Page 33***
④⑫	E23	Master was not cut correctly. ➥ *Open the Front Cover and pull out the Drum Unit to see if the master is properly loaded on the drum. If not, re-start the operation from master-making.* ➥ ***Page 14***
③④⑫	E25	A used master remains on the drum. ➥ *Open the Front Cover, pull out the Drum Unit, and remove the remaining master from the drum. After returning the Drum Unit to its original position, press the ◇ (START) button.* ➥ ***Page 14***
③	E26	A used master is stuck at the entrance of the Master Disposal Box. ➥ *Pull out the Master Disposal Box while holding the handles, and look inside. If the master remains, remove it.* ➥ ***Page 31***

SORTER ERROR

The Sorter Error indicator flashes if an optional sorter malfunctions. The trouble location is not indicated on the Machine Monitor Display. Check the code number below for detailed error information.

Note *For details about using the optional sorter, please refer to the documentation provided with the sorter.*

Location	Code Number	Description and Action
	E01	A paper jam has occurred. ➥ *Open the sorter door, if necessary, and remove the jammed paper. Then close the door.*
	E02	Sorter door or cover is open. ➥ *Close the door or cover.*
	E03	Paper remains in the sort bin. ➥ *Open the sorter door and remove the paper. Then close the door.*
	E04	No more paper may be accommodated. ➥ *Open the sorter door, if necessary, and remove the sorted paper. Then close the door.*
	E05	The specified size does not match the printing paper size. ➥ *Remove printing paper of different size, or specify the correct size on the sorter.*
	E06	Wrong paper size is specified. ➥ *Specify the correct paper size on the sorter.*
	E09	Job Separator Tape is depleted. ➥ *Install a new Job Separator Tape.*

CALL SERVICE

If the Call Service indicator flashes, contact your authorized service representative and report the code number on the Print Quantity Display to authorized service personnel.

Troubleshooting

If you have any of these problems, check the following items before calling your authorized service representative.

The machine does not start even when you press the power switch.

- Check to see that the electrical cord is firmly connected to an electrical socket.
- Check to see that the electrical cord is connected to the machine.
- Check to see that the commercial electrical circuit breaker is normal.

The ⑫ and E55 advisory messages appear even when the Front Cover is closed.

- There is a metal plate in the lower righthand section of the Front Cover. Unless this plate is in direct contact with the magnet on the lower righthand part of the machine, advisory messages remain on the control panel.
  - ➥ Press on the lower righthand area of the Front Cover to close it tightly.

There is no image on prints.

- Check to see if the original is correctly placed.
  - ➥ Be sure that the original is placed face-down.
    - ➥ ***Page 16***
- Check to see if the master is correctly placed.
  - ➥ Be sure that the master is placed with the leading edge unrolled from above.
    - ➥ ***Page 32***

The background of an original is picked up on prints.

- If newspaper or coloured paper is used as an original, the background could be picked up on prints.
  - ➥ Press the SCANNING Contrast Adjustment button ◁ to make scanning contrast lighter. Then re-set the original and press the ◇ (START) button.
    - ➥ ***Page 18***

Prints are incomplete; some images are missing or unclear.

- The Stage Glass is stained with correction fluid or glue.
  - ➥ Open the Stage Cover and clean the Stage Glass using a soft cloth or tissue.
    - ➥ ***Page 29***
- The Stage Cover was open during scanning.
  - ➥ Images were not scanned properly because of exposure to light. Be sure that the Stage Cover is closed during scanning.

Printed images are excessively faint or blurred.

- If the machine is not used for a long period of time, ink on the drum surface dries. Dry ink on the Drum Unit may cause faint or blurred printing.
  - ➥ Press the ▣ (TEST PRINT) button several times until a clear printed image is obtained.
    - ➥ ***Page 19***
  - ➥ Turn ON the ◯ (AUTOMATIC IDLE) feature before operation to prevent light images that may occur after periods of non-use.
    - ➥ ***Page 26***
- Light originals result in light images.
  - ➥ Press the SCANNING Contrast Adjustment button ▷ to make scanning contrast darker. Then re-set the original and press the ◇ (START) button.
    - ➥ ***Page 18***
- If the temperature is low (below 15° C, or 59° F) or the ink bottles are stored in a cold place, ink may not flow smoothly.
  - ➥ Warm the room or ink bottle before operating the machine.

Printing paper slips when it is fed.

- Misfeeding of printing paper could cause a paper jam.
  - ➥ Set the Paper Feed Pressure Adjustment Lever to ⌸ (Card).
    - ➥ ***Page 12***

Vertical blank lines are found on printed copies.

- The Thermal Print Head (the device that makes the master) is smudged with paper powder from the master.
  - ➥ Open the Master Loading Unit and clean the Thermal Print Head using a soft cloth or tissue.
    - ➥ ***Page 28***
- The Stage Glass is stained with correction fluid or dust.
  - ➥ Open the Stage Cover and gently clean the Stage Glass using a soft cloth or tissue.
    - ➥ ***Page 29***

- If the optional ADF Unit is installed:

- The ADF scanner glass is smudged with dust or correction fluid.
  - ➥ Open the ADF Unit and clean the glass using a soft cloth or tissue.
    - ➥ ***Page 29***

Printing paper sticks to the drum surface.

- Use recommended printing paper.
- Lower the vertical print position with the PRINT POSITION Adjustment button ◁.
  - ➥ ***Page 20***
- Replace the original in the reverse direction and re-start printing from the beginning (master-making).

The back of finished prints is smudged with ink.

- The rubber Press Roller, which keeps printing paper pressed against the drum during printing, is stained with ink.
  - ➥ Remove the Drum Unit and clean the roller gently with a soft cloth or tissue.
    - ➥ ***Page 29***
- The Feed Tray Paper Guides are set at maximum width.
  - ➥ Adjust the Feed Tray Paper Guides to fit the width of the printing paper.

The Drum Unit does not go in all the way.

- The Drum Unit does not go in all the way if the handle is let down.
  - ➥ Slide in the drum with the handle up, and lower the handle after the drum is fully inserted.
    - ➥ ***Page 15***

Optional Accessories

A variety of optional accessories are available to enhance the capabilities of the RISOgraph RA4300.

Colour Drum Units (RISOGRAPH RA Drum)

The six colours available are black, blue, red, green, brown, and yellow. Each Drum Unit has its own case for storage.

➥ ***Page 14***— By exchanging Drum Units, you may achieve multicolour prints.

RISOGRAPH RA ADF Unit

The Automatic Document Feeder (ADF) Unit automatically feeds up to 50 sheets for scanning. When you use the ADF Unit with the Auto Print, or Two-Up, several print jobs may be set up and completed automatically.

Note *If the optional ADF Unit is installed, be sure that you use the Replacement Pages provided.*

RISOGRAPH Sorter TM2400

This compact sorter is capable of handling up to A3-size paper. The sorter is equipped with an electric stapler so that you may efficiently create booklets from finished prints.

Job Separator

This accessory efficiently sorts groups of prints with strips of paper as they are printed. The Job Separator is attached beside the Paper Receiving Tray.

Specifications

Processing	High-speed automatic digital scanning/fully automatic, thermal screening duplicating system
Time to First Copy	Approx. 17 seconds (A4 original)
Print Speed	5 selectable print speeds (60 to 130 sheets per minute)
Scanning Resolution	300 DPI
Original Input Type	Bound documents or sheets
Original Size	Business card (55 x 90 mm) to A3 (297 x 431 mm)
Output Paper Size	A6 (100 x 148 mm) to A3 (297 x 431 mm)
Original Weight	2 kg or less
Paper Weight	46 g/m² to 210 g/m²
Image Area	245 x 350 mm in B4 drum 195 x 288 mm in A4 drum
Paper Capacity	1000 sheets in feed and receiving tray (64 g/m²)
Reduction Parameters	4 selectable reductions: 94%, 87%, 82%, and 71%
Features	Print Speed control, confidential mode, Two-Up printing, interface capabilities, photo enhancement, Automatic Idle, and scanning contrast adjustment
Print Colours	Six colours available as optional accessories (black, blue, red, green, brown, yellow)
Optional Accessories	Colour Drum Units, RA ADF Unit, Sorter TM2400, Job Separator
Power Source	220 to 240 VAC, 50/60 Hz
Requirements	3.0A
Weight	Approx. 104 kg
Dimensions (W x D x H)	1295 x 665 x 631 mm in use 650 x 665 x 631 mm in storage

If the optional RA ADF Unit is installed...

Please remove pages ii-iii, 3-6, 9-10, 15-18, 23-26, and 41-42 and replace them with the corresponding pages located at the back of this *User Guide*.