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Safety Guides - Installation

This section explains the precautions you have to observe when installing your RISOGRAPH.
Read this section before installing your RISOGRAPH.

NOTE Your dealer will help determine a proper location for your machine at the time of delivery.

Installation

⚠WARNING
- Do not place water containers or metallic objects on the machine. If water drips inside the machine or a metallic object drops inside it, it can result in a fire or an electric shock.

⚠Caution
- Install the machine near the electrical socket to avoid using an extension cord between the machine and the electrical socket.
  If an extension cord is unavoidable, do not use one longer than 5 m.
- Place the machine on a flat and stable surface (maximum of 10 mm differential allowed). Injury might occur if the machine falls.
- Do not place heavy objects on the machine. The objects might fall and cause injury.
- Keep the machine away from dusty or humid areas. Otherwise, a fire or an electric shock might occur.
- Unplug the electrical cord before moving the machine. Otherwise, the electrical cord might be damaged and a fire or an electric shock might occur.

Important!
- Avoid installing your RISOGRAPH in the locations listed below. Failure to observe this precaution may lead to machine failure or human injury.
  - Extremely bright locations such as locations close to windows or locations that are exposed to direct sunlight (provide a curtain if you have no choice but to install your RISOGRAPH in such a location)
  - Locations that are subject to sudden temperature change
  - Extremely hot and humid locations or cold and dry locations
  - Heated locations
  - Locations exposed to direct cold air, direct hot air, or direct radiant heat
  - Badly ventilated locations
  - Locations where it is impossible to provide a clearance of 10 cm or wider behind your RISOGRAPH

Power Connection

⚠WARNING
- Do not overload an electrical socket or extension cord, nor damage the electrical cord by placing heavy objects on it or pulling or bending it. Otherwise, a fire or an electric shock might occur.
- Do not plug or unplug the electrical cord if your hands are wet. Otherwise, an electric shock might occur.



⚠Caution
- Do not pull the electrical cord but hold the electrical cord plug itself when unplugging it. Otherwise, it could become damaged and a fire or an electric shock might occur.
- Pull out the electrical cord plug from the electrical socket more than once a year and clean the teeth of the electrical cord plug and their surroundings. If dust piles on them, a fire might occur.

Important!
- Check the electrical cord plug for poor connections. Plug the electrical cord securely into a nearby electrical socket.
- Be sure to turn the POWER switch off when connecting or disconnecting a cable.

Welcome to the RISOGRAPH RN Series Model

Thank you for purchasing a RISOGRAPH RN series model, which combines the clear reproduction of a printing machine with the convenient functions of a copier, keeping the operation sound as low as possible.
With its large-size LCD display and key entry for most procedures, this machine has been specially designed for simple operation.

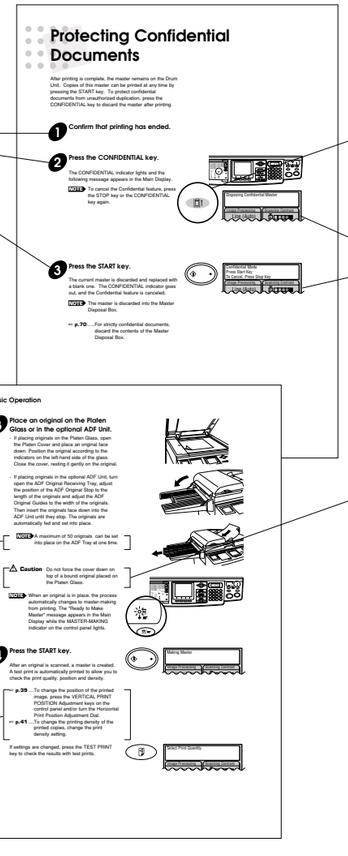
About This User's Guide

This Guide provides all information necessary to use your RISOGRAPH RN series model. It is designed to help you take advantage of the features built into your RISOGRAPH RN series model, and provides information on maintenance and troubleshooting.

[Pictorial Guide]

⇨ Original

⇨ Printed copy



Operation Instruction
Describes operation procedures with simple numbered steps.

Panel Highlight
Indicates the key and/or indicator to be used or referred to during operation.

Main Display Frame
Indicates the message to be displayed in relation to an instructed operation.

Advice Remark
Gives you helpful advice for trouble-free operation under the following headings:
NOTE
Important!

Cross-reference Remark
Indicates other sections of the User's Guide where you can find related descriptions.

Safety Remark
Gives you safety instructions under the following icons:
⚠ Caution
⚠ WARNING

Introduction to Your RISOGRAPH

This section provides the basic information about your RISOGRAPH, including initial installation, an overview of features, and names of parts.

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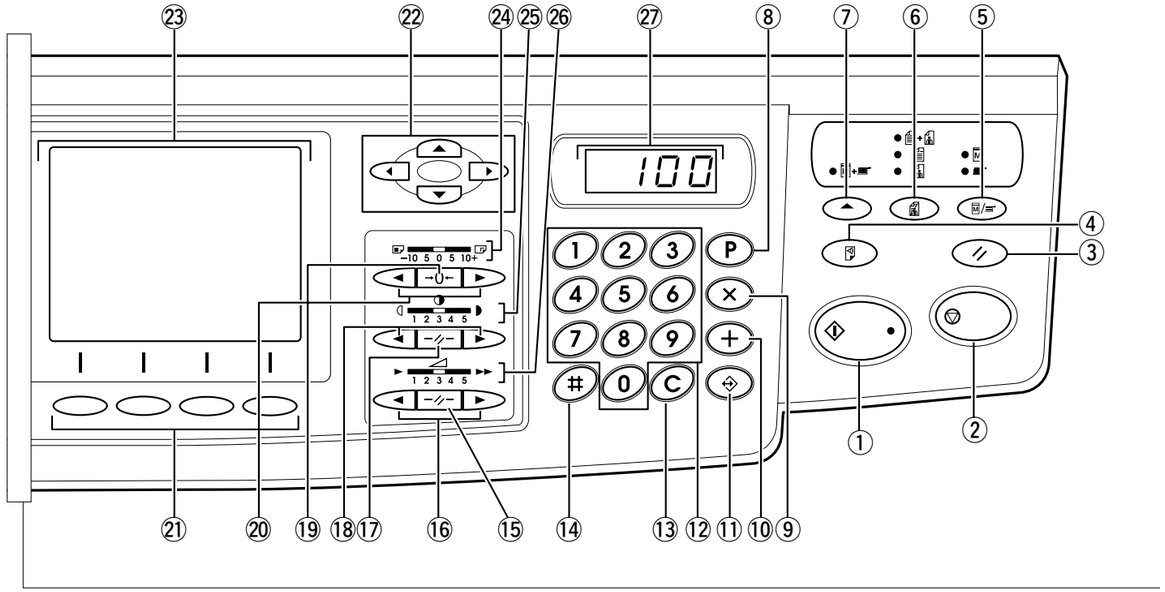
The Control Panel



Main Control Panel

① **START [◈] Key**
Starts printing or master-making process. The indicator is "GREEN" when the key is active. This key is also used to resume operation after troubleshooting.

② **STOP [⊘] Key**
Interrupts printing, and cancels confidential feature.

③ **RESET Key [⟋] (☞ p.42)**
Returns all settings to initial status.

④ **TEST PRINT Key [🖹] (☞ p.31)**
Prints a sample from the current master to allow you to check print quality and printing position.

⑤ **PROCESS Selection [🖫/☛] Key**
Switches between master-making and printing processes. Normally, selection is made automatically according to the current process.

⑥ **IMAGE PROCESSING Selection [🖻] Key (☞p.30)**
Switches the current processing mode among Line, Photo and Duo. The indicators light according to the selected mode.

⑦ **AUTO PROCESS Key [▲] (☞ p.32)**
Automates the process of master-making through printing. The indicator lights when the feature is active.

⑧ **PROGRAMME Key [P] (☞ pp.49-55)**
Provides access to programme grouping of prints.

⑨ **× Key (☞ pp.50-52)**
Use when making programme settings.

⑩ **+ Key (☞ pp.50-55)**
Use when making programme settings.

⑪ **MEMORY [◈] Key (☞ pp.62-68)**
Provides access to the Print job memory mode.

⑫ **Print Quantity Keys (0 to 9 Keys)**
Use these keys to enter the number of copies to be printed, or to enter other numeric values.

⑬ **C Key (☞ p.58, 64)**
Cancels the number entered and resets the Print Quantity Display to zero. Or deletes a word in naming programmed items.

⑭ **# Key (☞ p.50, 53)**
Used for making settings for programmes.

⑮ **NORMAL PRINT SPEED [−⟋−] Key (☞ p.40)**
Returns the print speed to the initial setting.

⑯ **PRINT SPEED Adjustment [◄►] Keys (☞ p.40)**
Adjust print speed (on a 1 to 5 scale).

⑰ **NORMAL PRINT DENSITY [−⟋−] Key (☞ p.41)**
Returns the print density to the initial setting.

⑱ **PRINT DENSITY Adjustment [◄►] Keys (☞ p.41)**
Adjust print density (on a 1 to 5 scale).

Overview of Features

Your RISOGRAPH is a high-quality digital printer that is as easy to use as a copier.

- **User-friendly Display Design**
  The large-size LCD display provides you with helpful information for the current operation in well-designed screens, enabling you to finish your print jobs with much ease.

- **Print Speed and Density Control**
  Any of five print speeds and densities can be selected for optimum performance.

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

- **Image and Text Processing Options**
  In addition to the standard processes for sharp line definition and accurate shading patterns, 4-pattern dot-screen processes are available. The spine of a book document can also be erased.

- **Colour Printing Options**
  Optional ink colours are available, by simply changing the Drum Unit.

- **Vertical Print Position Key Control**
  The Print position can be shifted vertically only by pressing the adjustment keys on the control panel.

- **Zoom Enlargement and Reduction Capabilities**
  Prints can be reduced or enlarged from 50% to 200% in 1% increments, according to your needs. Preset standard reduction and enlargement are also available (e.g., A3→A4).

- **Programmable Print Groupings**
  Simple control panel entries can automate different types of groupings to save time finishing your print jobs.

- **Programmable Print Jobs**
  Frequently used or complex print job settings can be stored in memory for instant recall.

- **Multi-Up Printing**
  Originals can be printed side by side on a single sheet. You can select their arrangement pattern from 4 choices.

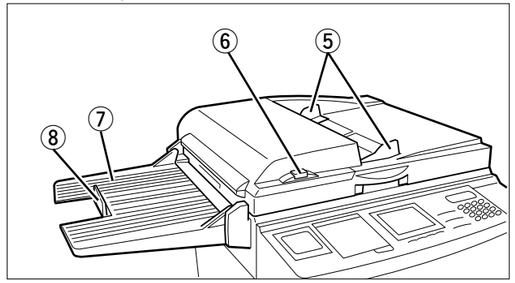
- **Automatic Idle**
  This feature prevents faint or blurred images on the first few sheets when printing starts again after a period of idle time.

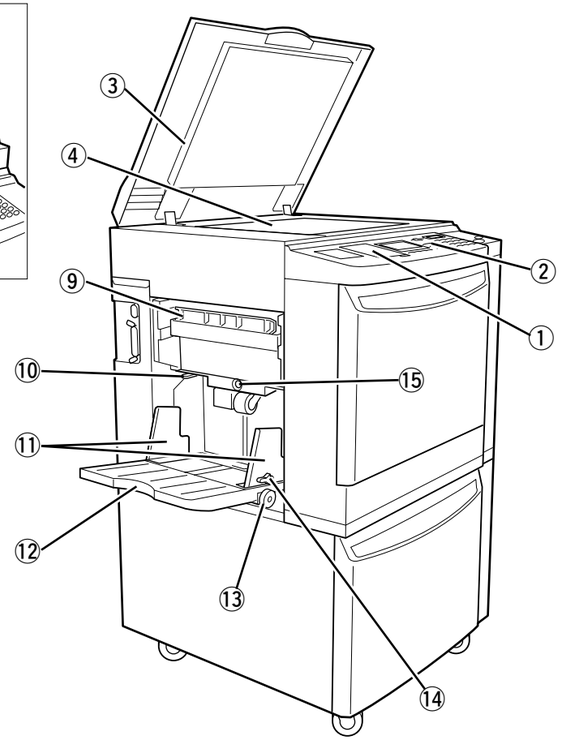
- **Preventive Maintenance Call**
  An advice display is given in advance when the periodical maintenance service is required, preventing your RISOGRAPH from remaining out of operation unexpectedly.

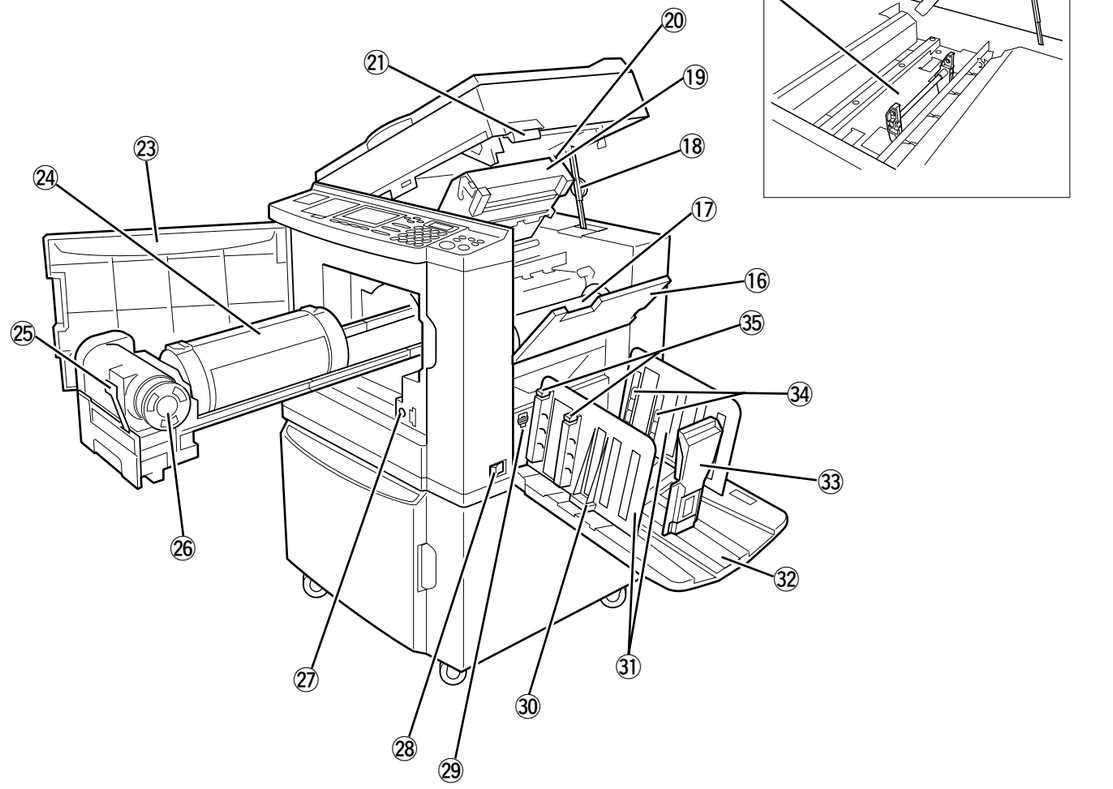
- **Direct PC Connection (optional for RN20 series models)**
  PC document data can also be printed out by connecting your RISOGRAPH directly to the PC with a printer cable. No additional control box is required.

Knowing the Parts and Components

=With the optional ADF Unit=







Upper Section

① **Sub Control Panel (☞ p.13)**
② **Main Control Panel (☞ p.12)**
③ **Platen Cover (☞ p.119)**
Secures the original placed on the Platen Glass.
④ **Platen Glass (☞ p.119)**

=With the optional ADF Unit=

⑤ **ADF Original Guides**
Holds and guides originals in the ADF Unit.
⑥ **ADF Original Release Button**
Releases the original fed in the ADF Unit for removal or realignment.
⑦ **ADF Original Receiving Tray**
Receives originals after scanning in the ADF Unit.
⑧ **ADF Original Stop**
Stops originals ejected into the Original Receiving Tray.

Paper Feed Section

⑨ **Master Disposal Box (☞ p.100)**
Holds discarded masters.
⑩ **Paper Feed Pressure Adjustment Lever (☞ p.20)**
Adjusts the paper feed pressure according to the paper being used.
⑪ **Feed Tray Paper Guides (☞ p.20)**
Holds and guides paper.
⑫ **Paper Feed Tray (☞ p.20)**
⑬ **Horizontal Print Position Adjustment Dial (☞ p.39)**
Moves the print position to the left or right.
⑭ **Feed Tray Paper Guide Lock Lever (☞ p.20)**
Locks the Feed Tray Paper Guide.
⑮ **Feed Tray Descent Button (☞ p.21)**
Lowers the Paper Feed Tray for replacing or adding printing paper.

Master-Making Section

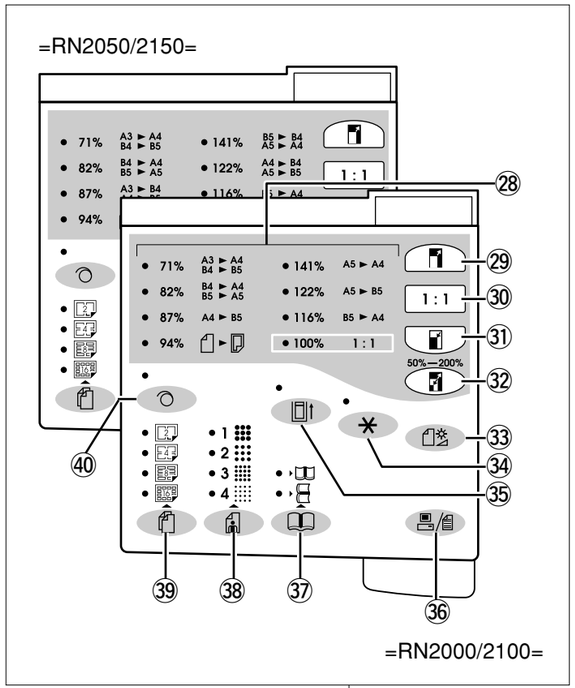
⑯ **Master Roll Cover (☞ p.98)**
Protects the Master Roll.
⑰ **Master Roll (☞ p.98)**
⑱ **Scanner Table Support (☞ p.99)**
Holds the Scanner Table when it is opened.
⑲ **Master Making Unit (☞ p.98)**
Makes a master.
⑳ **Master Making Unit Release Lever (☞ p.98)**
Opens the Master Making Unit.
㉑ **Scanner Table Release Lever (☞ p.98)**
Unlocks and opens the Scanner Table.
㉒ **Disposal Entrance Cover**
Opened to remove jammed used master.

Front Section

㉓ **Front Cover**
㉔ **Drum Unit (☞ p.74)**
Holds the master.
㉕ **Ink Cartridge Locking Lever (☞ p.96)**
Secures the Ink Cartridge in position.
㉖ **Ink Cartridge (☞ p.96)**
㉗ **Drum Unit Release Button (☞ p.74)**
Positions and unlocks the Drum Unit for removal.
㉘ **Main Power Switch (☞ p.26, 82)**

Paper Receiving Section

㉙ **Paper Ejection Wing Adjustment Lever**
Changes the position of the Paper Ejection Wings according to the paper being used.
㉚ **Receiving Tray Paper Guide Adjustment Knob (☞ p.21)**
㉛ **Receiving Tray Paper Guides (☞ p.21)**
Aligns printed paper neatly.
㉜ **Paper Receiving Tray (☞ p.21)**
㉝ **Paper Stop (☞ p.22)**
Stops printed paper ejected into the Paper Receiving Tray.
㉞ **Paper Arranger (☞ p.21)**
Helps arrange printed paper ejected into the Paper Receiving Tray.
㉟ **Paper Arranger Adjustment Knob (☞ p.21)**



⑲ **VERTICAL PRINT POSITION CENTRE [→0←] Key (☞ p.39)**
Moves vertical print position back to centre.

⑳ **VERTICAL PRINT POSITION Adjustment [◄►] Keys (☞ p.39)**
Adjust vertical print position.

㉑ **Function Keys**
Functions differently depending on the menu in the Main Display.

㉒ **Cursor Keys**
Change selection in the Main Display.

Display

㉓ **Main Display (☞ p.14)**
Shows the current machine status or gives instructions for operation.

㉔ **VERTICAL PRINT POSITION Indicator (☞ p.39)**
Shows the current vertical print position.

㉕ **PRINT DENSITY Indicator (☞ p.41)**
Shows the selected print density.

㉖ **PRINT SPEED Indicator (☞ p.40)**
Shows the selected print speed.

㉗ **Print Quantity Display**
Counts the number of printed copies.

Sub Control Panel

㉘ **Preset Reduction/Enlargement Size Indicator (☞ p.34)**
Shows the current preset reduction or enlargement size.

㉙ **ENLARGE [] Key (☞ p.34)**
Selects one of three preset enlargement sizes.

㉚ **1:1 Key (☞ p.34, 35)**
Returns the reproduction size to 1:1 (100%). This key is also used to cancel the zoom feature.

㉛ **REDUCE [] Key (☞ p.34)**
Selects any of four preset reduction sizes.

㉜ **ZOOM [] Key (☞ p.35)**
Opens the zoom selection window.

㉝ **SCANNING CONTRAST Adjustment [] Key (☞ p.36)**
Selects contrast adjustments (on a 1 to 5 scale) for the darkness of the original to be scanned.

㉞ **CUSTOM SETTING [] Key (☞ p.70)**
Provides access to the settings whose initial condition can be customised.

㉟ **CONFIDENTIAL [] Key (☞ p.48)**
Protects confidential documents from unauthorized duplication. The indicator lights when the feature is active.

㊱ **DATA Source Selection [] Key (☞ p.76, 80, 82)**
Switches between the PC data mode and Scan data mode.

㊲ **BOOK PROCESSING Selection [] Key (☞ p.38)**
Erases the binding shadow (spine) of an open, bound original placed on the Platen Glass. The indicator lights when the feature is active.

㊳ **DOT PHOTO Selection [] Key (☞ p.37)**
Selects among 4 kinds of Dot screens. The Dot Photo feature processes a photo original with dot screen. The corresponding indicator lights when the feature is active.

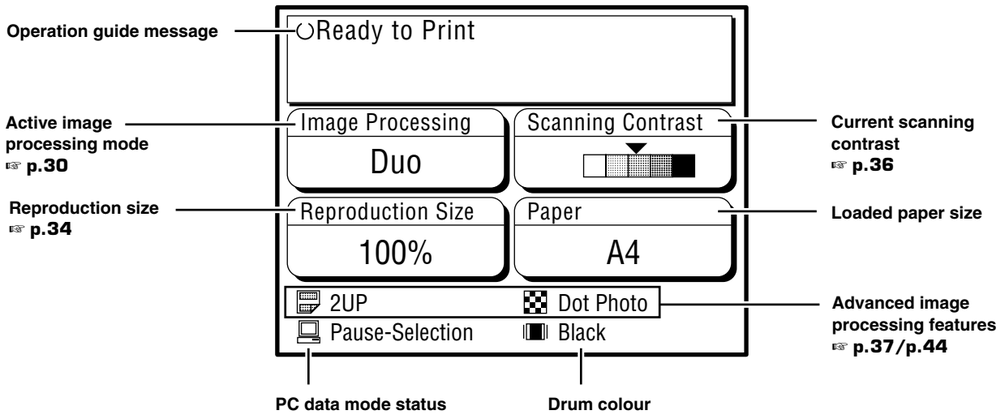
㊴ **MULTI-UP PRINT [] Key (☞ p.45, 46)**
Reproduces multiple prints (2, 4, 8 or 16) side by side on one sheet of paper. The corresponding indicator lights when the feature is active.

㊵ **AUTO IDLE [] Key (☞ p.69)**
When switched ON, the Drum Unit is automatically rotated on a preset basis to ensure excellent first print quality. The indicator lights when AUTO IDLE is switched ON.

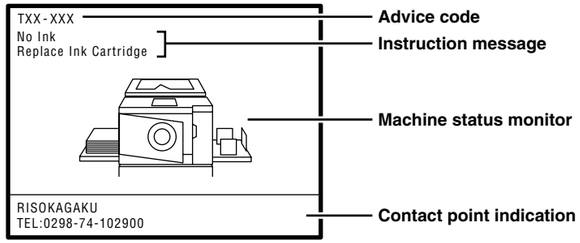
The Main Display

In the Main display, various windows appears according to the current operation as illustrated below. Among them, the basic window acts as the home of the multi-window guidance display, indicating the current printer configuration and status.

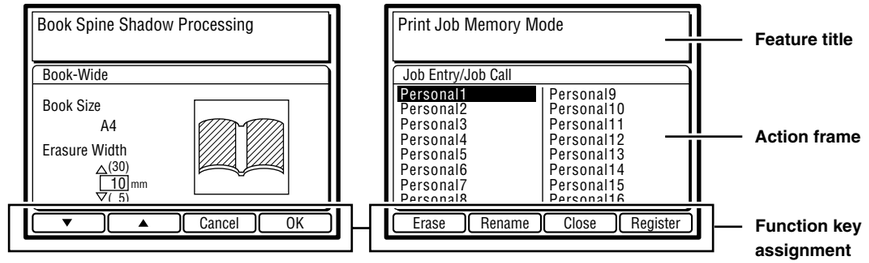
Basic Window



Advice Window

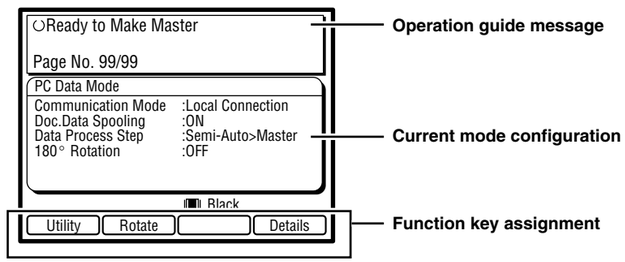


Feature Window



PC Data Mode Window

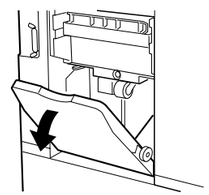
< Optional for RN20 Series Models >



Setting Up Your RISOGRAPH

Setting Up the Paper Feed Tray

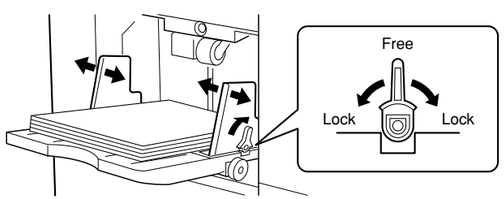
1 Open the Paper Feed Tray.



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

Push down the Feed Tray Paper Guide Lock Levers to lock the guides.

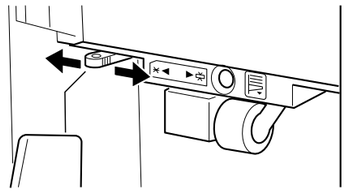
Important!
Do not mix printing paper of different sizes.



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) Standard paper
- ⌘ (CARD) Thick paper such as drawing paper or smooth paper



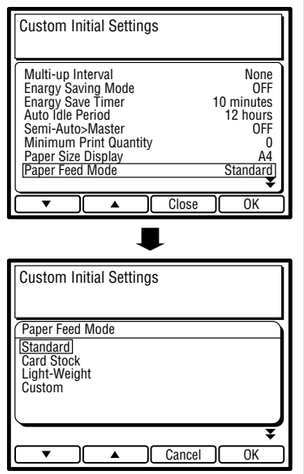
Tips

Selecting the paper feed mode

You can adjust the paper feed range according to paper type as well.
It may improve the paper feed conditions with certain types of paper.
To adjust the paper feed range, open the Custom Initial setting window in the Main Display and proceed to [Paper Feed Mode].
Then select an appropriate item according to paper type. ☞ **p.70, 73**

- Standard Standard paper
- Card Stock Thick paper such as card stock
- Light-weight Light-weight paper
- Custom Paper for which special adjustment is required in feeding

NOTE For detailed information about the "Custom" paper feed mode, consult your service representative.



Getting Ready to Use Your RISOGRAPH

This section describes how to set your RISOGRAPH for initial use, with basic information on printing paper and originals.

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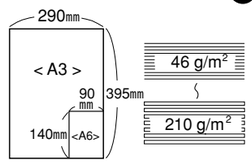
Printing Paper

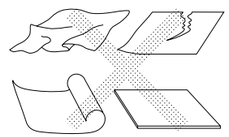
Size and Weight

Usable printing paper is as follows:
Size: Max. 290 mm × 395 mm
Min. 90 mm × 140 mm
Weight: Max. 210 g/m²
Min. 46 g/m²



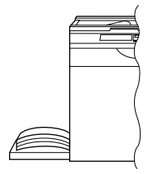
The maximum printing area is as follows:
= RN2000/2100 =
• A4 Drum - 204 × 290 mm
= RN2050/2150 =
• B4 Drum - 251 × 357 mm

Important!
Do not use the following types of paper, as they can cause jams or misfeeds:
- Extremely thin paper (less than 46 g/m²)
- Extremely thick or heavy paper (greater than 210 g/m²)
- Wrinkled, curled, folded, or torn paper
- Chemically treated or coated paper (such as thermal or carbon paper)



Guides for Trouble-Free Use

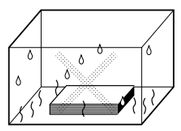
To prevent paper jams and misfeeds, follow the directions below:
- When using standard paper, set the Paper Feed Pressure Adjustment Lever and the Paper Ejection Wing Adjustment Lever to "✳" (NORMAL), select "Standard" in the Paper feed mode and open all four Paper Arrangers. ☞ **pp.20-22**
- When using thick paper (such as drawing paper), set the Paper Feed Pressure Adjustment Lever and the Paper Ejection Wing Adjustment Lever to "✳" (CARD), select "Card Stock" in the Paper feed mode and open the two inner Paper Arrangers. ☞ **pp.20-22**
- When using light-weight paper, set the Paper Feed Pressure Adjustment Lever and the Paper Ejection Wing Adjustment Lever to "✳" (NORMAL), select "Light-Weight" in the Paper feed mode and open all four Paper Arrangers. ☞ **pp.20-22**
- When using slippery paper, set the Paper Feed Pressure Adjustment Lever to "✳" (CARD). ☞ **p.20**
- Slide the Feed Tray Paper Guides, Receiving Tray Paper Guides, and Paper Stop to fit the paper size. ☞ **pp.20-22**
- Use flat printing paper that is free of folds. If curled paper is unavoidable, place the printing paper so that the curl faces down.
- 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. Then restart printing from the beginning. ☞ **p.39**



Storing Environment

Store printing paper in a level, dry area. Storing the paper in an excessively humid area could cause paper jams as well as poor print quality.

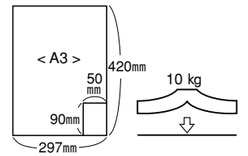
After unpacking printing paper, keep the remaining paper wrapped and store it in a moisture-proof box. It is highly recommended to put silica gel in the paper storage box.



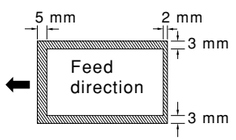
Originals

Size and Weight

Using the Platen Glass
The Platen Glass can be used to print from bound originals or sheet originals.
Usable originals are as follows:
Size: Max. 297 mm × 420 mm Weight: Max. 10 kg
Min. 50 mm × 90 mm
The margins indicated on the figure to the right are required for the original.
Reduce the original if necessary to fit it inside these margins.



NOTE
- If an original is wrinkled, curled, or creased, flatten it thoroughly so that the originals can be pressed directly onto the Platen Glass during processing.
- If correction fluid or glue is used on an original, thoroughly dry it before you place the original on the Platen Glass.



Using the Optional ADF
You can use the optional ADF (Automatic Document Feeder) to feed automatically up to 50 original sheets.
Usable original sheets are as follows:
Size: Max. 297 mm × 420 mm Weight: Max. 110 g/m²
Min. 90 mm × 140 mm Min. 50 g/m²

NOTE Use the Platen Glass when printing the following originals:
- Patched or worn originals
- Wrinkled, curled, folded, or torn originals
- Transparent originals (such as tracing paper or OHP transparencies)
- Chemically treated originals (such as thermal or carbon paper)
- Originals with correction fluid or glue
- Extremely thin originals (less than 50 g/m²)
- Extremely thick originals (greater than 110 g/m²)
- Heavy drawing paper
- Bound originals
- Originals with staples or clips

Guides for Selecting Processing

You can use various image processing modes to produce printed copies according to the contents of the original.

- IMAGE PROCESSING Selection Key - ☞ **p.30**
  - LINE For ordinary documents with lines and text.
  - PHOTO To reproduce different shades of photographs or half-tone images.
  - DUO To reproduce photographs or half-tone images clearly without deteriorating line sharpness.

- DOT PHOTO Selection Key - ☞ **p.37**
  To process a photo original using a dot screen.

- BOOK PROCESSING Selection Key - ☞ **p.38**
  To print a two-page spread of a bound original on one sheet with the binding shadow erased.
  - WIDE Erases the binding shadow horizontally.
  - LONG Erases the binding shadow vertically.

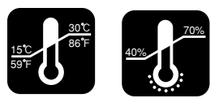
Safety Guides - Handling and Operation

This section describes the precautions to be observed when handling your RISOGRAPH. Read this section before operating your RISOGRAPH.

Operation Environment

Important!

- Operate your machine under the following appropriate ambient environment conditions.
  Temperature range: 15°C to 30°C
  Humidity range: 40% to 70% (non-condensing)



Handling Precautions

⚠WARNING

- Do not insert or drop any metallic material or flammable substance into this machine through any opening. Otherwise, a fire or an electric shock might occur.
- Do not remove the covers. Otherwise, you might be electrically shocked by the high-voltage parts inside.
- Do not disassemble or rebuild this machine by yourself. Otherwise, a fire or an electric shock might occur.
- If this machine gets uncomfortably hot, smokes or smells bad, immediately turn the power off, unplug the electrical cord and contact your service representative because a fire or an electric shock might occur.
- If something drops inside this machine, turn the power switch off first, then unplug the electrical cord and contact your service representative. If you continue using it, a fire or an electric shock might occur.
- Never stick your hands or fingers in the openings around the Paper Feed Tray and the Paper Receiving Tray during operation.
- Keep loose clothing or long hair away from moving parts to avoid becoming entangled.
- Before cleaning any part of this machine, turn the power off.

⚠Caution

- Do not open any covers or move this machine during operation.
- Unplug the electrical cord, if you do not use this machine for a long time.

Important!

- Do not unplug the electrical cord or turn the power off during operation.
- Be sure to open and close any cover gently.
- Do not place heavy objects on or apply shocks to this machine.
- This machine has precision parts and driving parts inside. Do not handle this machine in other ways than described in this guide.
- Contact your local service centre before moving this machine.

⚠Caution - Handling of Ink

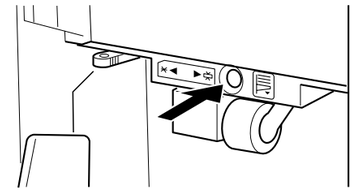
- If ink gets into your eyes, flush it out immediately with plenty of water.
- If ink comes into contact with your skin, wash it off thoroughly using soap.
- Allow plenty of ventilation during printing.
- If you feel unwell during use, seek medical advice.
- Only use the ink for printing purposes.
- Keep the ink out of the reach of children.

Important! - Materials Not to Be Printed

Remember not to infringe copyrights or violate laws when using the machine, even during personal use. Consult the authorities in the country of your residence for further details. In general, use discretion and common sense.

Adding or Replacing Paper

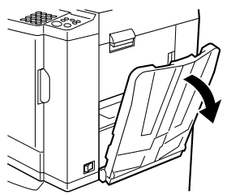
If you want to add paper or use paper of different size, lower the Paper Feed Tray so that you can load the paper easily.
When the Feed Tray Descent Button is pressed lightly, the Paper Feed Tray lowers to the bottom. When you keep on pressing it on the other hand, the tray stops immediately when you release it.



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

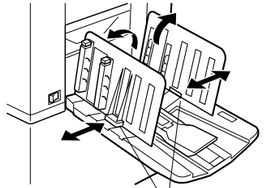
Setting Up the Paper Receiving Tray

1 Open the Paper Receiving Tray.



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

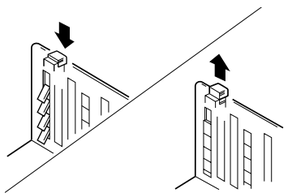
Holding the Receiving Tray Paper Guide Adjustment Knob, slide the guides.



NOTE
- For thick paper, set the guides a little wider than the actual paper width.
- When you change the horizontal print position, adjust the position of the Receiving Tray Paper Guides as well.

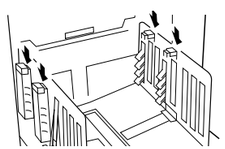
3 Adjust the Paper Arrangers.

Select the best combination of Paper Arranger settings, referring to the following instruction.



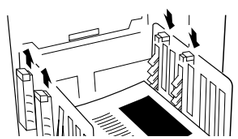
NOTE = How to Set Paper Arrangers =

- Ordinary paper



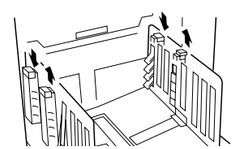
Open all four Paper Arrangers.

- Ordinary paper with images lopsided on page



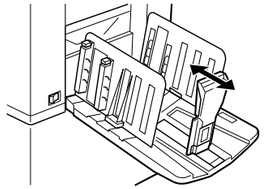
Open two Paper Arrangers on the more heavily printed side.

- Thick paper



Open two Paper Arrangers closest to the machine.

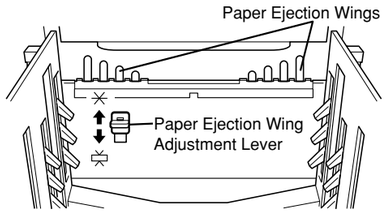
4 **Raise and slide the Paper Stop to fit paper length.**



5 **Set the Paper Ejection Wings.**

Position the Paper Ejection Wing Adjustment Lever at either ✱ (NORMAL) or ⌧ (CARD), according to the paper to be used.

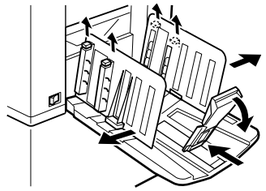
- ✱ (NORMAL) Standard paper
- ⌧ (CARD) Thick paper such as drawing paper



Closing the Paper Receiving Tray

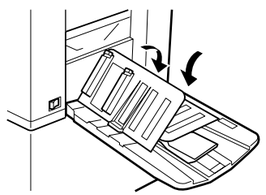
1 **Slide the Paper Stop inwards and turn it down and outwards.**

Do not let the Paper Stop protrude from the Paper Receiving Tray.

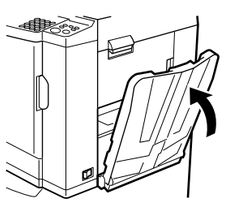


2 **Close all four Paper Arrangers and spread the Receiving Tray Paper Guides to the B4 position.**

3 **Turn down the Receiving Tray Paper Guides.**



4 **Close the Paper Receiving Tray.**

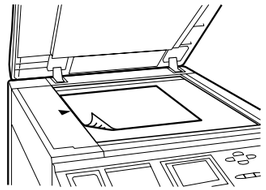


Basic Features

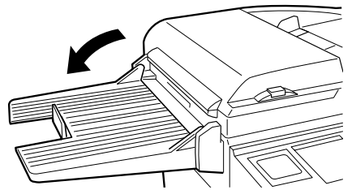
This section describes the basic operation procedures and the features which are easy to use even for inexperienced operators in order to enhance the utility of your RISOGRAPH.

Safety Guides - Handling and Operation 24
Basic Processes 25
Basic Operation 26
Photo/Half-Tone Processing 30
Producing Test Prints 31
Quick Printing 32

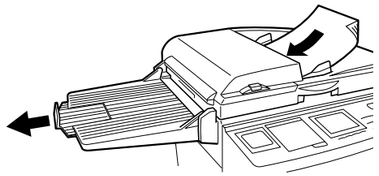
3 Place an original on the Platen Glass or in the optional ADF Unit.



- If placing originals on the Platen Glass, open the Platen 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.

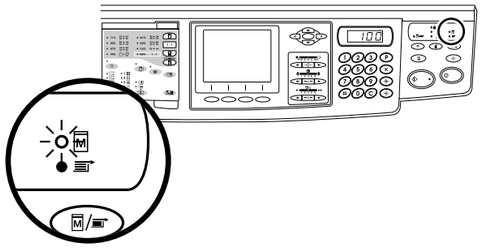


- If placing originals in the optional ADF Unit, turn open the ADF Original Receiving Tray, adjust the position of the ADF Original Stop to the length of the originals and adjust the ADF Original Guides to the width of the originals. Then insert the originals face down into the ADF Unit until they stop. The originals are automatically fed and set into place.



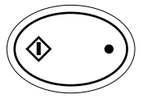
NOTE A maximum of 50 originals can be set into place on the ADF Tray at one time.

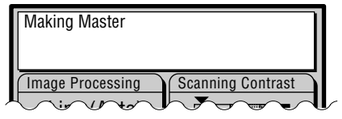
⚠ **Caution** **Do not force the cover down on top of a bound original placed on the Platen Glass.**



NOTE When an original is in place, the process automatically changes to master-making from printing. The "Ready to Make Master" message appears in the Main Display while the MASTER-MAKING indicator on the control panel lights.

4 Press the START key.



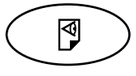


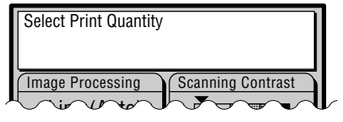
After an original is scanned, a master is created. A test print is automatically printed to allow you to check the print quality, position and density.

☞ **p.39** ....To change the position of the printed image, press the VERTICAL PRINT POSITION Adjustment keys on the control panel and/or turn the Horizontal Print Position Adjustment Dial.

☞ **p.41** ....To change the printing density of the printed copies, change the print density setting.

If settings are changed, press the TEST PRINT key to check the results with test prints.





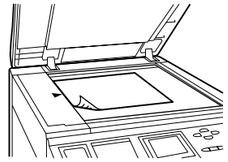
Basic Processes

The basic processes of your RISOGRAPH can be divided into two stages: making a master of an original/PC data (master-making), and then printing copies from the master.
Your RISOGRAPH has been designed so that these two processes flow smoothly from one to the other, with the current action shown clearly in the LCD display.

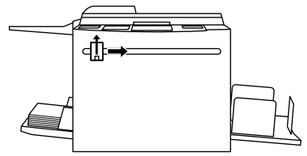
Master-Making

When you create a master, an original is scanned to create a master and a master is wound around the Drum Unit.

1 Set an original in place.

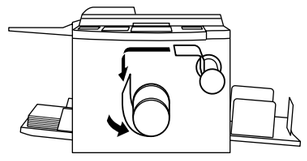


2 Scan the original.



3 Create a master.

The master is loaded on the Drum Unit and a test print comes out.

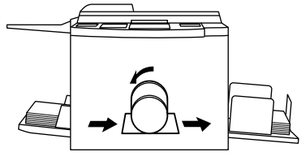


NOTE When document data is sent from a PC to your RISOGRAPH, the first 2 steps (original scanning) are skipped.

Printing

When you print, the Drum Unit rotates to print the specified number of copies.

4 Enter the number of copies you want.

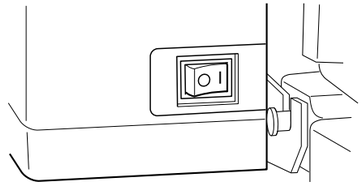


5 Start printing.

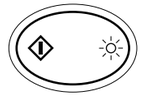
Basic Operation

1 Turn the power switch ON.

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



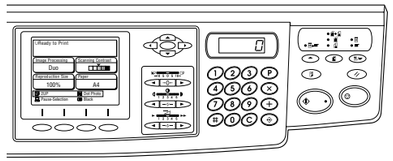
I	–	ON
O	–	OFF



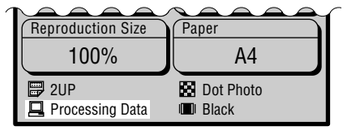
NOTE When your RISOGRAPH is sleeping in the Energy saving mode, the indicator on the START key lights. In this case, press the START key to wake up your RISOGRAPH.
☞ **p.72**

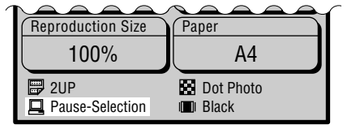
2 Check the settings on the control panel.

When the power is connected, the Main Display and control panel indicators show the initial settings.
Make any necessary changes, such as reproduction size and processing mode.



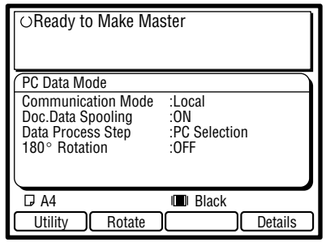
NOTE
- When "Processing Data" appears as PC data mode status at the base of the Main Display, it indicates that document data have already been received from the PC and are being processed in the system of the machine. In normal operation, the print job of this document data will start within a few minutes. If it is not required to proceed with your original urgently, wait until this print job finishes.
  If the PC data mode status display changes to "Pause-Selection" or "Pause-Master" in this case, however, you can proceed with your original.

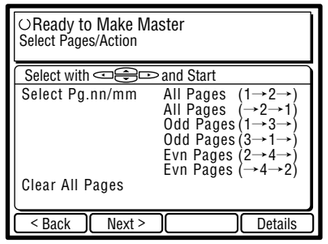




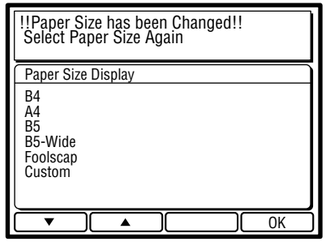
- If the Main Display shows the PC data mode window, press the Data Source Selection key on the Sub control panel to open the window for the stand-alone operation mode (Scan data mode). Before pressing this key in this case, however, make sure no print job is proceeding for any PC document data. You can close the PC data mode window safely when the window displays to the right appear in the Main Display.







- When the message shown to the right appears in the Main Display, the size of the paper loaded on the Paper Feed Tray is not selected for paper size display. Select the correct paper size by pressing the ▼ or ▲ function key and press the OK function key. In case the selected paper size is not equal to the actual one, unexpected or smudged images may appear on printed copies.
- When irregular size paper is loaded on the Paper Feed Tray, select "Custom" in the list. In this case, be sure to match the original size (image size) with the loaded paper size. If it is larger than the loaded paper size, ink on the Drum Unit may be transferred to the Press Roller and it may cause smudges on the back of the printed copies.
  ☞ **p.119** ....You can clean the Press Roller if it is stained.



Holding down the RESET key longer than one second returns the control panel to the initial settings.

☞ **p.42** ....You can return to initial settings.
☞ **p.70** ....You can customise the initial settings.
☞ **p.62** ....Frequently used combinations of settings can be saved in memory for quick recall.

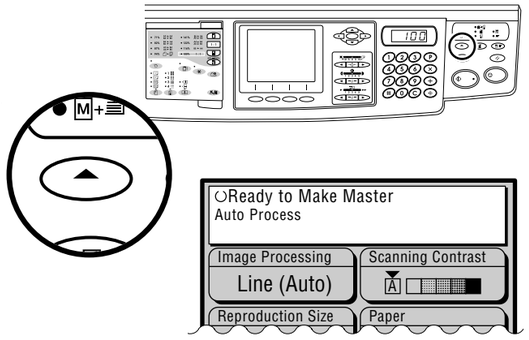
Quick Printing (No Test Print Check)

If you do not need to check print samples before making prints, press the AUTO PROCESS key before pressing the START key to activate the Auto Process feature. This feature enables nonstop operation from master-making through printing.

NOTE If you need to check or adjust the print position, cancel the Auto Process feature by pressing the AUTO PROCESS key again. Or, activate the [Semi-Auto (Master)] feature in the Custom Initial Setting window.

1 Press the AUTO PROCESS key.

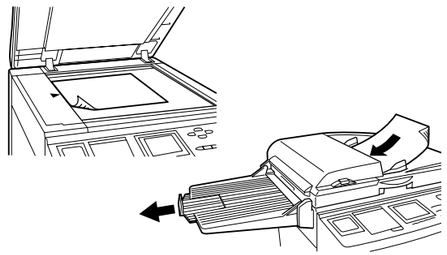
The Auto Process Indicator lights and the "Auto Process" message appears in the Main Display.



2 Set an original into place.

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

= With the Optional ADF Unit =
Insert originals face down into the optional ADF Unit until it stops. A maximum of 50 originals can be placed on the optional ADF Tray at one time.



3 Enter the number of copies to be printed.

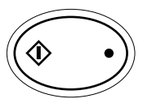
If you enter a number incorrectly, press the C key to reset the Print Quantity Display to "0," then enter the correct number.



NOTE If "0" is selected as the print quantity, the machine will not start.

4 Press the START key.

The specified number of copies are produced with an extra test print.



☞ **p.62 ...**The Auto Process feature can be saved in memory for quick recall.

Holding down the RESET key longer than one second returns the Auto Process feature to the initial setting.

☞ **p.70 ...**You can customise initial settings.

5 Enter the number of copies to be printed.

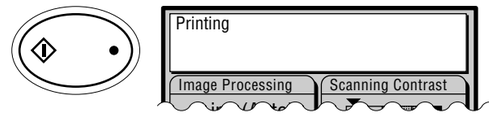
Specify the number of copies to be printed using the Print Quantity keys; the number is displayed in the Print Quantity Display.



NOTE If you enter a number incorrectly, press the C key to reset the Print Quantity Display to zero, then enter the correct number.

6 Press the START key.

The specified number of copies is printed.



NOTE If printing stops and the "Add Paper" message appears in the Main Display, paper has run out in the Paper Feed Tray. Load paper into the tray.

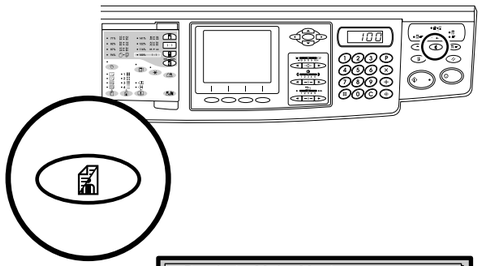
7 Press the RESET key.

After printing has finished, press the RESET key to restore the initial settings.

Photo/Half-Tone Processing

If an original contains photographs or half-tone images, or a multi-coloured original is used, select (PHOTO) or +(DUO) processing by pressing the IMAGE PROCESSING Selection key. The current selection appears in the Main Display.

Since the image is processed graphically, degrees of shading are accurately reproduced.



(PHOTO)

Reproduces different shades of photograph or half-tone images most clearly.
Lines and texts become less sharp if they are included in an original.

+ (DUO)

Reproduces photograph or half-tone images clearly without deteriorating the sharpness of lines and texts. This processing mode is recommended for multi-coloured originals or photo originals with sharp lines and texts included.

☞ **p.36** ....The scanning contrast setting should be checked and adjusted according to image density, if necessary.

NOTE
- If +(DUO) is selected for light-density originals, lines might be broken. In this case, select (LINE).
- If (LINE) is selected to print an original that contains a darkly shaded photograph, on the other hand, copies might be smudged. In this case, select (PHOTO) or +(DUO).

Holding down the RESET key longer than one second returns processing to the initial setting.

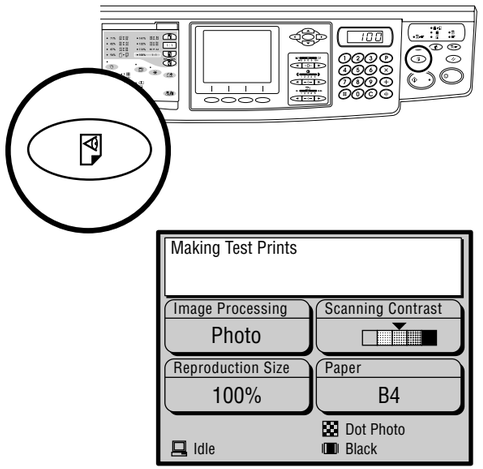
☞ **p.62** ....The selected processing can be saved in memory for quick recall.
☞ **p.70** ....You can customise initial settings.

Producing Test Prints

If changes have been made to the print position and other settings, check the print quality by producing test prints.

By holding down the TEST PRINT key, you can print continuously.

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

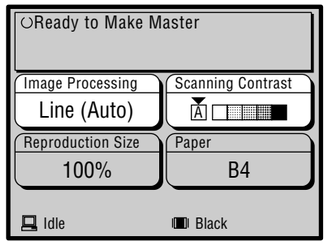


Changing Image Tone on Prints

To achieve different tones on printed copies from those of an original, adjust the scanning contrast manually by canceling the Auto Scanning Contrast Adjustment mode.

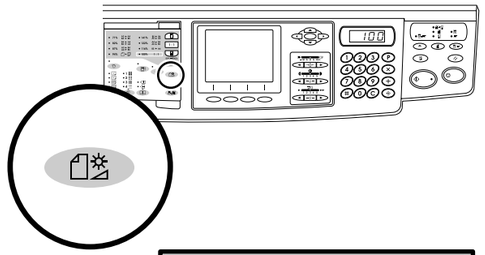
NOTE The Auto Scanning Contrast Adjustment mode is available only for the Line processing mode. However, this mode is not available with the Book Processing feature even when the Line processing mode is selected.

When the Auto Scanning Contrast Adjustment mode is selected, [A] is highlighted in the [Scanning Contrast] frame and [Line (Auto)] appears in the [Image Processing] frame in the Main Display.
In this case, the scanning contrast will be adjusted automatically according to the darkness of the original scanned.



Press the SCANNING CONTRAST Adjustment key in the Sub control panel.

The [Scanning Contrast] frame indicates the contrast currently selected.
Each time the key is pressed, the contrast changes in the following order:



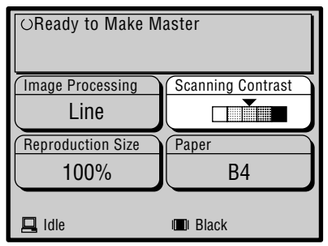
☐ For newspaper or coloured originals.

■ For poor prints or pencil-written originals.

NOTE After adjusting the scanning contrast, make another master to make the adjustment effective for further printed copies.

Holding down the RESET key longer than one second returns the Scanning Contrast Adjustment mode to the initial setting.

☞ **p.62** ....Scanning contrast can be adjusted and saved in memory for quick recall.
☞ **p.70** ....You can customise initial settings.



Handy Features

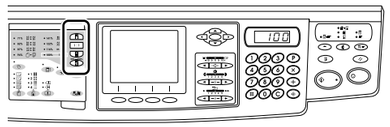
This section describes the features that enhance your RISOGRAPH's versatility.

Reducing and Enlarging Originals 34
Changing Image Tone on Prints 36
Producing Dotted Images 37
Reproducing Bound Documents 38
Repositioning the Print 39
Changing the Print Speed 40
Changing the Print Density 41
Return to Initial Settings 42

Reducing and Enlarging Originals

Originals can be reduced or enlarged, using either preset reduction and enlargement or zoom that you specify.

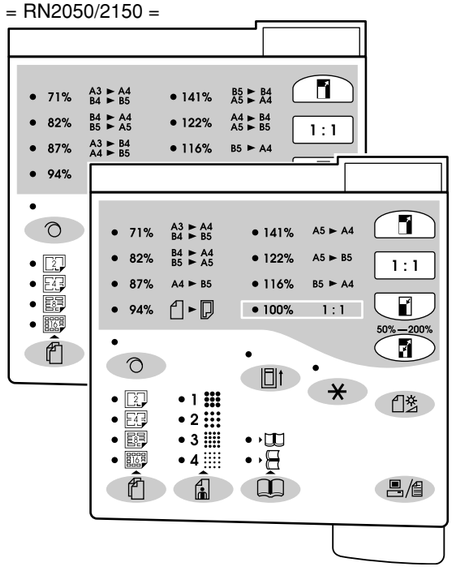
☞ **p.62** ....Reproduction percentage can be adjusted and saved in memory for quick recall.



Using Preset Reduction and Enlargement

To reduce or enlarge any standard-size original to another standard size, use the Preset Size method. Seven Preset Reduction and Enlargement percentages are available. The chosen percentage appears in the Main Display, and the Preset Reduction/Enlargement Size indicator in the Sub Control Panel lights up.

= RN2050/2150 =



= RN2000/2100 =

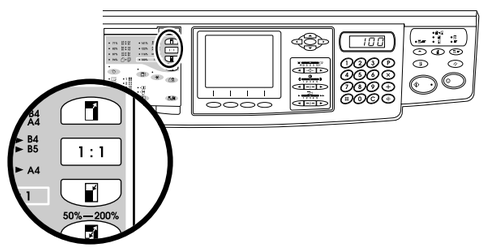
Press the REDUCE or ENLARGE key to select a desired percentage.

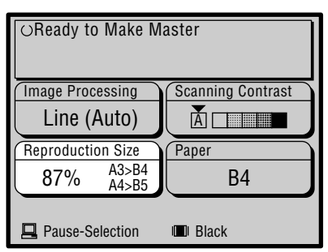
Each time the REDUCE or ENLARGE key is pressed, the indicators light and the percentage appearing in the Main Display changes in the following order:

94%→87%→82%→71%→94%
116%→122%→141%→116%

When you press the 1:1 key, the percentage returns to the original size (100%).

Holding down the RESET key longer than one second returns print size to the initial setting (1:1).





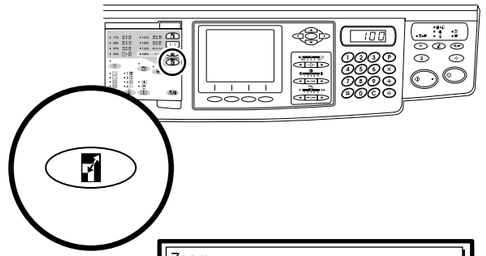
Using Zoom

You can specify any reduction or enlargement between 50% and 200%.

NOTE When you press the 1:1 key, the Zoom mode is canceled and the percentage returns to the original size (100%).

1 Press the ZOOM key.

The Zoom selection window appears in the Main Display.



2 Specify a desired reproduction size.

Specify a desired percentage by pressing the ▲ or ▼ function key.

▲: The percentage is increased by one percent each time this button is pressed.

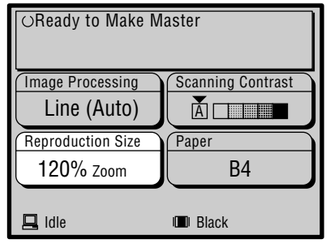
▼: The percentage is decreased by one percent each time this button is pressed.

NOTE
- You can specify the percentage also by pressing the cursor keys on the Main Control Panel.
- To cancel the zoom mode, press the Cancel function key.

3 Press the OK function key.

The Zoom selection window is closed and the specified percentage is indicated in the [Reproduction Size] frame.

NOTE To return the percentage to 100%, press the 1:1 key.



Changing the Print Speed

Print speed can be set at any of five levels, ranging between 60 and 130 sheets per minute .

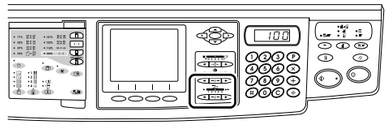
Press the PRINT SPEED Adjustment keys to change print speed.

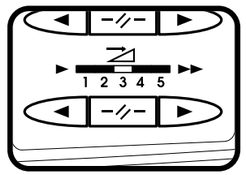
- Decreases print speed.
- Returns the print speed to the default setting (Level 3).
- Increases print speed.

☞ **p.62** ....Print speed setting can be saved in memory for quick recall.

Holding down the RESET key longer than one second returns print speed to the initial setting.

☞ **p.70** ....You can customise initial settings.





Producing Dotted Images

You can enhance photograph or half-tone images on an original copy by processing images with a dot screen.
4 types of dot screens are available.

Press the DOT PHOTO Selection key in the sub control panel.
When this feature is selected, the corresponding indicator lights and " (, , or)Dot Photo" appears in the Main Display.

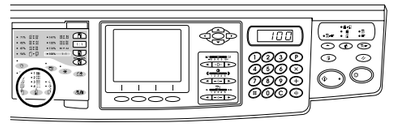
- 1 - 30 lpi equivalent
- 2 - 40 lpi equivalent
- 3 - 60 lpi equivalent
- 4 - 120 lpi equivalent

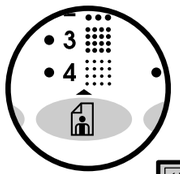
Coarse ↕ Fine

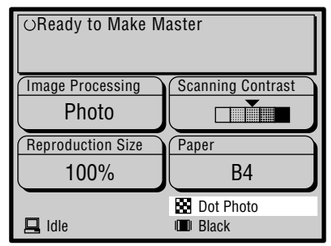
NOTE This feature is not available in the line processing mode.

Hold down the RESET key longer than one second returns processing to the initial setting.

☞ **p.62** ....The selected processing can be saved in memory for quick recall.

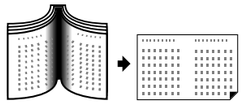






Reproducing Bound Documents (Book Spine Shadow Processing)

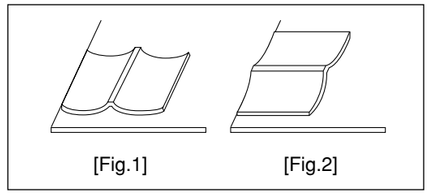
The Book Processing feature can be used to process originals that are printed on facing pages of a book, such as an atlas, printed report, or other types of bound originals.
When this feature is active, the binding "spine" shadow can be erased.



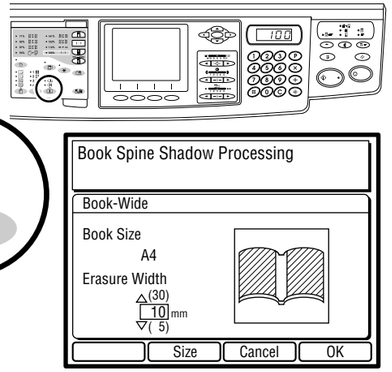
NOTE • The Auto scanning contrast adjustment mode is not available for this feature.
• When the printing paper size is set to "Custom", this feature is not available.

1 Press the BOOK PROCESSING Selection key and select either [Book-Wide] or [Book-Long].

Book-Wide : When a book is placed as shown in Fig.1
Book-Long : When a book is placed as shown in Fig.2



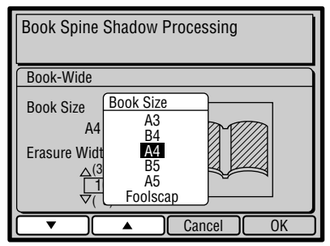
[Fig.1] [Fig.2]



2 Select the book size.

Press the [Size] function key and select the opened book size by pressing the [▲] or [▼] function key.
Then press the [OK] function key.
The book size is defined and you go back to the Book Spine Shadow Processing window.

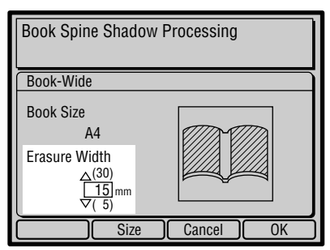
NOTE To cancel the book size selection, press the [Cancel] function key.



3 Specify the erasure width.

Press the cursor keys on the control panel to specify the width of the spine shadow to be erased.
Press the [OK] function key to confirm the specified value.
The settings of the Book spine shadow processing is defined and you go back to the Initial window.

NOTE To cancel the erasure width setting, press the [Cancel] function key.



☞ **p.62** ....The selected processing can be saved in memory for quick recall.

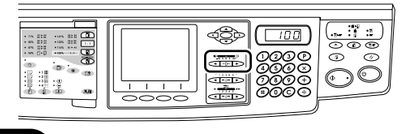
Repositioning the Print

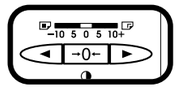
The print position can be adjusted vertically (up and down) and horizontally (to the right and left).

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

Adjusting Vertical Print Position

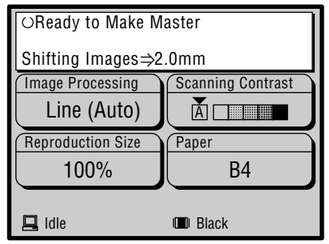
You can move the print position vertically by pressing either of the VERTICAL PRINT POSITION Adjustment keys. The allowable range is ± 10 mm.
When the key is pressed, the distance of print position shift appears in the Main Display and the adjusted vertical print position is roughly given by the VERTICAL PRINT POSITION indicator. Produce test prints and check the print positions.

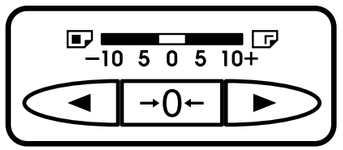




◀ Moves print position down.
[→0←] Returns print position to the centre.
▶ Moves print position up.

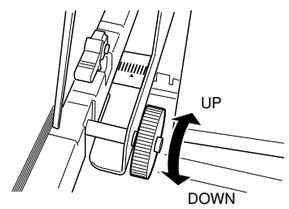
☞ **p.62** ....The vertical print position can be adjusted and saved in memory for quick recall.





Adjusting Horizontal Print Position

Lower the Paper Feed Tray by pressing the Feed Tray Descent Button, and adjust the horizontal positions by the Horizontal Print Position Adjustment Dial. The print position moves to the left when you turn the dial upward, and moves to the right when you turn the dial downward.

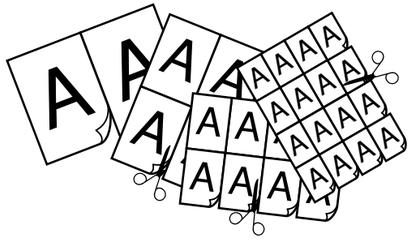


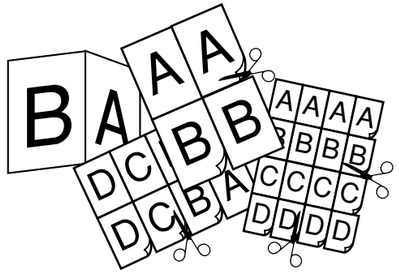
NOTE The solid triangle ▶ indicates the centre position of the tray. If you shift it, It is recommended to return the Paper Feed Tray to the centre position after your print job.

Important!
When you adjusted the horizontal positions, be sure to readjust them to the original position after printing is finished.

Printing Originals Side by Side (Multi-Up Printing)

The same or different originals can be printed side by side and, if required, each original can have different settings: reproduction size (Reduce/Enlarge), scanning contrast and processing (Line/Photo/Duo).
You can select how they are arranged side by side on a single sheet, from the following pattern: 2-by-1 (2UP), 2-by-2 (4UP), 4-by-2 (8UP) and 4-by-4 (16UP).





☞ **p.62** ....Frequently used combinations of settings can be saved in memory for quick recall.

High-Volume printing time can be shortened remarkably by cutting the multi-image prints into pieces and/or folding them in half, to finish your print job.

☞ **p.32** ....The Auto Process feature can be used with the Multi-Up printing.
☞ **p.62** ....The Multi-Up printing feature can be saved in memory for quick recall.

Holding down the RESET key longer than one second cancels this feature.

NOTE When the printing paper size is set to "Custom", this feature is not available.

<Reference Charts for Multi-Up Printing Operation>

Regular size original and printing paper can only be used with the Multi-Up printing feature.
Refer to the charts below for the combinations of the following items in the respective Multi-Up patterns: original size, printing paper size and size adjustment requirement.

NOTE Only one original placement direction is possible for the respective Multi-Up patterns.

[2UP / 8UP]

Original Placement Direction ← A		Original Size						
		2UP				8UP		
		A4	B5	A5	B6	B5	A5	B6
Printing	B4	87%	100%	122%	141%	50%	61%	71%
Paper	A4	71%	82%	100%	116%	-	50%	58%
Size	B5	61%	71%	87%	100%	-	-	50%

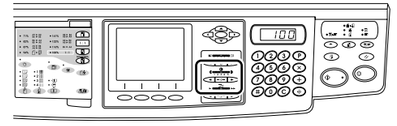
[4UP / 16UP]

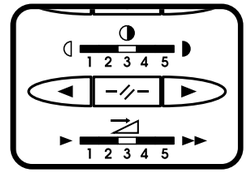
Original Placement Direction ← A		Original Size						
		4UP					16UP	
		B4	A4	B5	A5	B6	B6	A6
Printing	B4	50%	61%	71%	87%	100%	50%	61%
Paper	A4	-	50%	58%	71%	82%	-	50%
Size	B5	-	-	50%	61%	71%	-	-

Changing the Print Density

Print density can be set at any of five levels.

Press the PRINT DENSITY Adjustment keys to change print density.





- Makes print density lighter.
- Returns the print density to the default setting (Standard).
- Makes print density darker.

☞ **p.62** ....Print density setting can be saved in memory for quick recall.

When the print density setting is changed, press the TEST PRINT key to check the results with test prints.

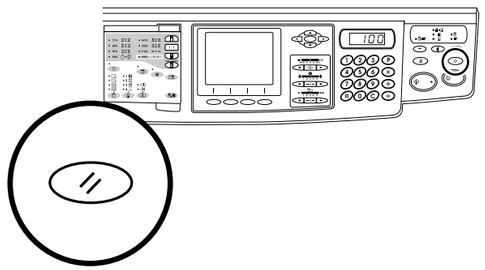
NOTE If the print density levels do not provide the desired result, adjust scanning contrast and create another master.
☞ **p.36**

Holding down the RESET key longer than one second returns print density to the initial setting.

☞ **p.70** ....You can customise initial settings.

Return to Initial Settings

To return all the settings to initial status, including print position and reproduction percentage, turn the power off and on again, or hold down the RESET key for more than one second.



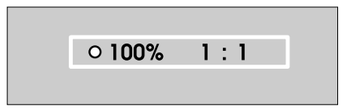
NOTE If you have customised the initial settings, they will be the ones recovered when you perform the procedure above.
☞ **p.70**

INITIAL SETTINGS at time of purchase

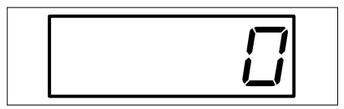
- Image Processing Mode Selection →



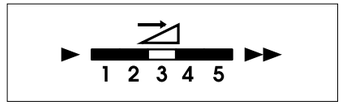
- Size Adjustment →



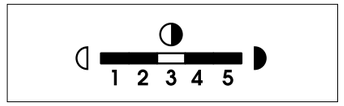
- Print Quantity Display →



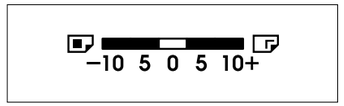
- Print Speed →



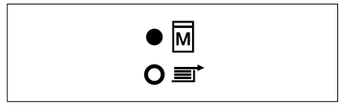
- Print Density →



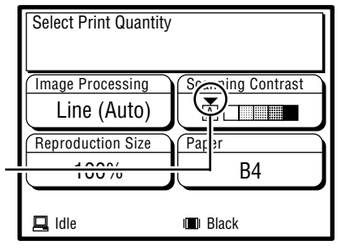
- Print Position →



- Master-Making/Print →



- Main Display →



- Original Scanning Contrast →

Special Features

This section describes special features that may be used for special needs.

Printing Originals Side by Side 44
Protecting Confidential Documents 48
Automatic Sorting into Groups 49
Storing Settings in Memory 62
Preventing Initial Paper Waste 69
Customising the Initial Settings 70
Changing Print Colour 74
Interfacing with a Computer 76

Protecting Confidential Documents

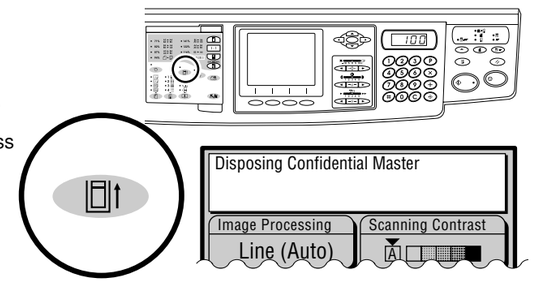
After printing is complete, the master remains on the Drum Unit. Copies of this master can be printed at any time by pressing the START key. To protect confidential documents from unauthorized duplication, press the CONFIDENTIAL key to discard the master after printing.

1 **Confirm that printing has ended.**

2 **Press the CONFIDENTIAL key.**

The CONFIDENTIAL indicator lights and the following message appears in the Main Display.

NOTE To cancel the Confidential feature, press the STOP key or the CONFIDENTIAL key again.

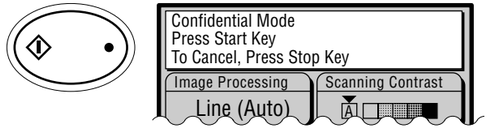


3 **Press the START key.**

The current master is discarded and replaced with a blank one. The CONFIDENTIAL indicator goes out, and the Confidential feature is canceled.

NOTE The master is discarded into the Master Disposal Box.

☞ **p.100** ...For strictly confidential documents, discard the contents of the Master Disposal Box.

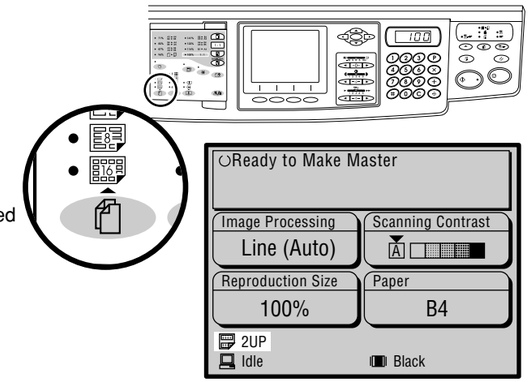


Printing the Same Original Multi-Up

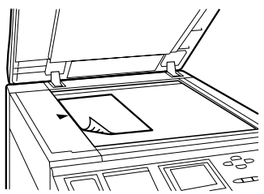
1 **Press the MULTI-UP PRINT key to select a desired pattern.**

The corresponding indicator lights and the corresponding message appears in the Main Display when a desired pattern is selected.

NOTE To cancel this feature, press the key repeatedly until the indicators are turned off.

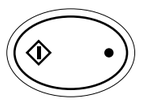


2 **Place an original face-down on the Platen Glass.**



3 **Press the START key.**

The original is scanned twice or four times and a sample Multi-Up print is produced.



NOTE If a 15-second beep sounds and a copy is produced that is half or three quarter blank, change the initial setting of the Multi-Up printing feature to cancel the interval time.

Printing Different Originals Multi-Up

When different originals are used in the Multi-Up printing feature, place them on the Platen Glass individually. The RISOGRAPH scans the first original and then provides a 15-second period (a beep sounds) within which to place the second original.

NOTE If you press the STOP key or do not place the following original during the 15-second period, the test print will be produced, partly blank.

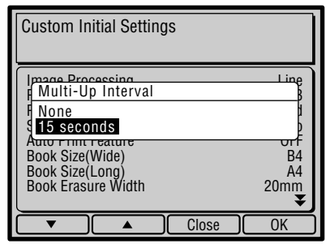
If the optional ADF Unit is installed on your RISOGRAPH:
You can place all originals there at the same time. In this case, you have only to press the START key after selecting a desired Multi-Up pattern and placing originals, in order to make desired-pattern Multi-Up prints.
By activating the Auto Process feature, besides, different Multi-Up prints can be produced without interruption until all originals placed there are processed.
For the Auto Process feature, refer to page 32.

NOTE When different settings are required for each original, place originals on the Platen Glass or in the optional ADF Unit individually, as instructed below.

1 Change the initial setting of the Multi-Up printing feature to provide a 15-second interval for placing the following originals.

☞ p.72

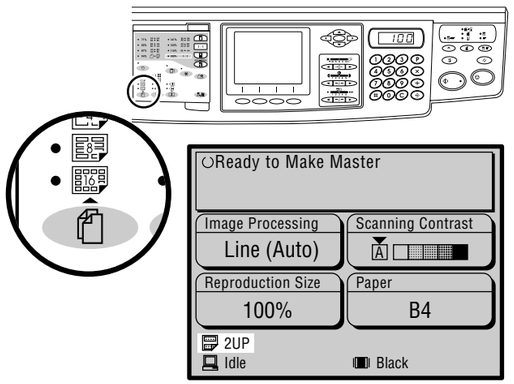
NOTE Skip this step when you place an original in the optional ADF Unit.



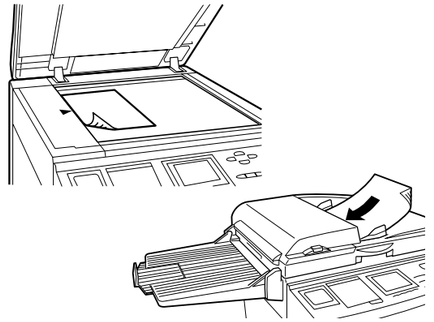
2 Press the MULTI-UP PRINT key to select a desired pattern.

The corresponding indicator lights and the corresponding message appears in the Main Display when a desired pattern is selected.

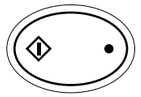
NOTE To cancel this feature, press the key repeatedly until the indicators are turned off.



3 Place an original face-down on the Platen Glass or in the optional ADF Unit.



4 Press the START key.



After the first original is scanned, a 15-second beep sounds.

5 During the 15-second beep, enter the setting for the second original, if necessary, and place the second original on the Platen Glass or in the optional ADF Unit.

- When selecting 2Up or 4Up pattern -
After it is sanned, a 2Up or 4Up test print is automatically printed.

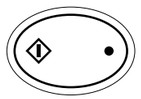
- When selecting 8Up or 16Up patten -
After it is scanned, a 15-second, beep sounds again to request the third original to be placed. When the third one is placed, it is scanned and another 15-second beep requests the placement of the fourth original.
After the fourth one is placed and scanned, an 8Up or 16Up test print is automatically printed.

8 Specify other print job settings for the selected original.

You can specify all the features available in normal operation, such as enlargement/reduction and Multi-Up printing.

NOTE If you activate the Auto Process feature with multiple originals in the optional ADF Unit, the current programme setting is applied for all originals there.

9 Press the START key.



A test print is produced.
If the Auto Process feature is not activated, press the START key again.
Copies are produced and sorted according to the specified programme, starting with the last group specified.
To interrupt the programmed printing, press the STOP key.

NOTE The current programme setting remains available for other originals even after the programmed printing operation finishes for the selected one.
To clear it, therefore, press the RESET key.

Automatic Sorting into Groups

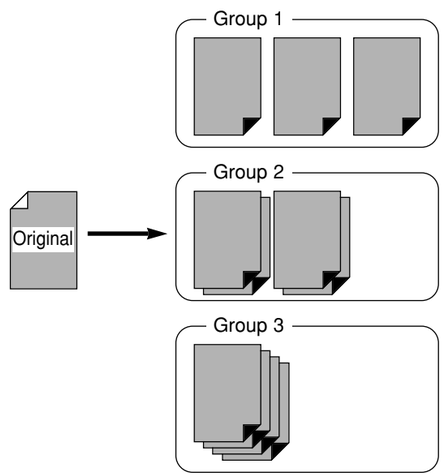
The Programmed Printing feature can be used to print and sort printed sheets into various groups automatically.
One of two programmed printing methods, "Single-original Programme" and "Plural-original Programme", can be selected using the PROGRAMME key.
The programmed printing setting can be saved in the dedicated programme memory, given a desired programme name, allowing you to retrieve it quickly from the programme list.

☞ **p.62** ....Frequently used combinations of settings can be saved in memory for quick recall.
☞ **p.62** ....The Programmed printing setting can be saved in memory for quick recall.

NOTE Up to 20 groups can be set up, with a maximum of 9999 copies in each group.
NOTE The Job Separator (option) is useful for the Programmed printing.

Single-original Programme

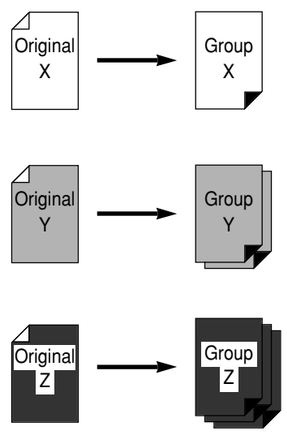
One original is printed in different quantities.



If more than one original (up to 50 sheets) is placed in the optional ADF Unit with the Auto Process feature activated, the Single-original Programme set-up runs completely for each original, until all the originals are printed and sorted into groups as specified in the programme.

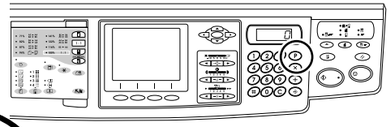
Plural-original Programme

Different originals are printed in different quantities.



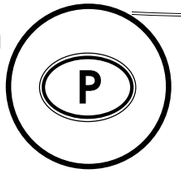
Setting Up Single-original Programme

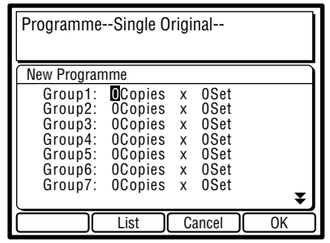
1 Press the PROGRAMME key.



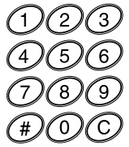
The Single-original programme entry window appears in the Main Display.

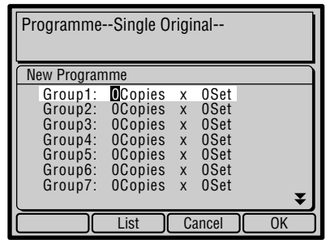
NOTE To close this window, press the [Cancel] function key.





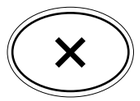
2 Input the number of copies to be printed for each cluster of the first group using the Print Quantity keys.

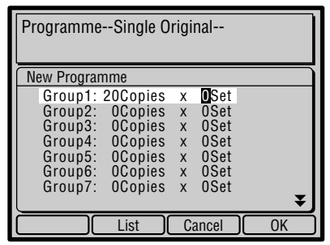




NOTE If you enter a number incorrectly, press the "C" key to reset the number to zero and then enter the correct number.

3 Press the "✕" key and input the number of clusters of the first group.

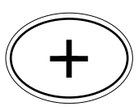


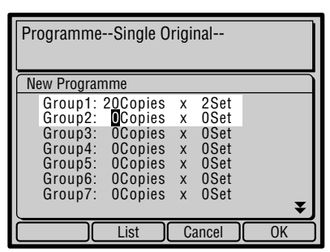


NOTE You can also use the "#" key in place of the "✕" key.

4 Press the "+" key to set the print quantity for the second group.

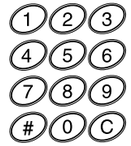
The cursor ■ moves to the next group.

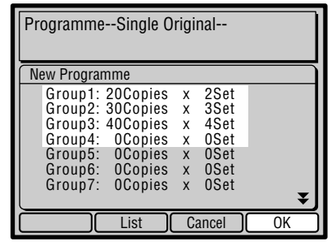




NOTE Yon can also use the "#" key in place of the "+" key.

5 Use the Print Quantity keys, "✕" key and "+" key and input print quantities and cluster numbers for any remaining groups.

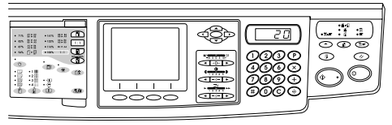




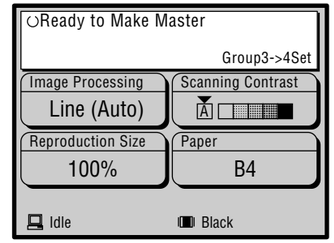
Up to 20 groups can be specified.
If you want to correct the number of clusters and/or copies already specified, move the cursor ■ to a desired position using the cursor keys and enter a correct number. Press the "C" key to reset the number to zero.

NOTE To cancel the current programme setting, press the [Cancel] function key. (This window is closed and the basic window appears again.)

6 Press the [OK] function key.

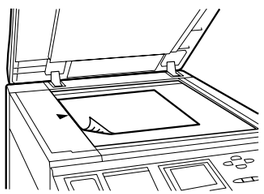


The current programme setting is confirmed and made available for the original you selected.
The Single-original programme entry window is closed and the basic window appears again in the Main Display, showing the programme for the group specified last.

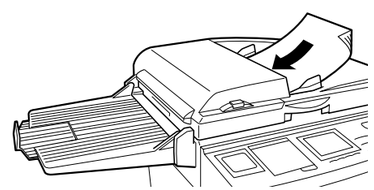


NOTE You can save the current programme setting in memory for repeated use.
☞ **p.56**

7 Place an original face-down on the Platen Glass.



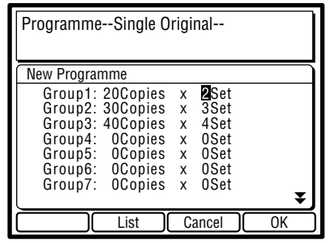
NOTE If the optional ADF Unit is installed, more than one original can be placed there.



Saving the Current Programme Setting

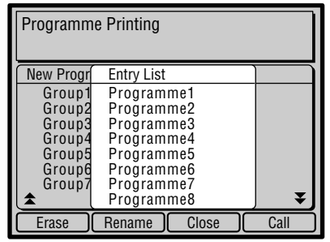
You can save the current programme setting in memory and apply it to another print job whenever desired only by calling it up from the memory.

1 Set up a programme.

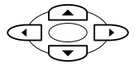


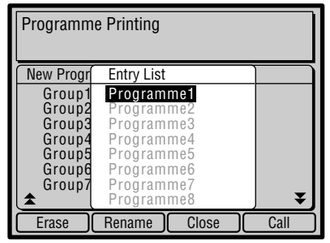
2 Press the [List] function key.

The Entry list box appears.



3 Select a programme name.





Highlight a desired programme name by pressing the cursor keys. Free programme names appear dimmed.
When they are not dimmed, they are already occupied and not available for new entry.

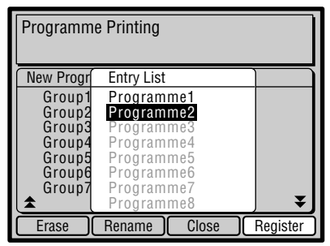
NOTE If no dim programme name exists in the list or a desired one is not dimmed, erase the programme setting saved under the selected programme name first.

4 Press the [Register] function key.

The current programme setting is saved under the selected programme name, whose appearance changes accordingly.

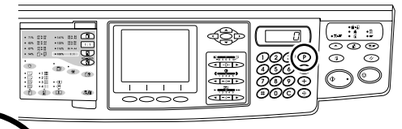
NOTE
- You can give a desired name to the saved programme setting in this step.
- To cancel this operation, press the [Close] function key in place of the [Register] function key.

☞ **p.58** .....Renaming a Saved Programme Setting



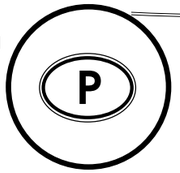
Setting Up Plural-original Programme

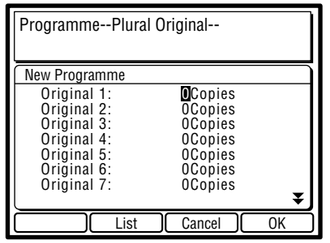
1 Press the PROGRAMME key twice.



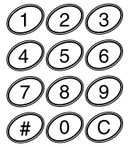
The Plural-original programme entry window appears in the Main Display.

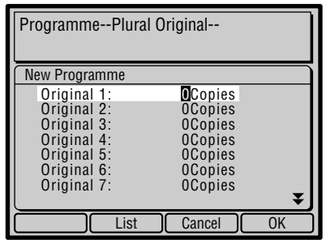
NOTE To close this window, press the [Cancel] function key.





2 Input the number of copies to be printed for the first original using the Print Quantity keys.

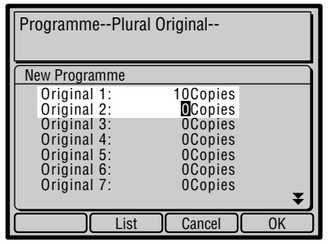




NOTE If you enter a number incorrectly, press the "C" key to reset the number to zero and then enter the correct number.

3 Press the "+" Key and set the print quantity for the second original.

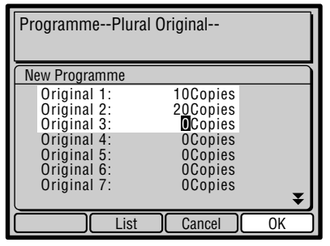
NOTE You can also use the "#" key in place of the "+" key.



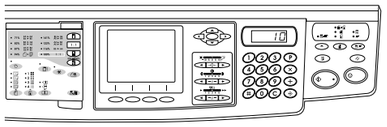
4 Input the print quantity for the remaining originals using the Print Quantity keys and the "+" key.

Up to 20 originals can be specified.
If you want to correct the number of copies already specified, move the cursor ■ to a desired position using the cursor keys and enter a correct number.
Press the "C" key to reset the number to zero.

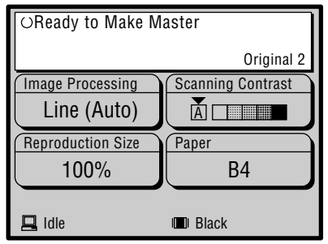
NOTE To cancel the current programme setting, press the [Cancel] function key. (This window is closed and the basic window appears again.)



5 Press the OK function key.

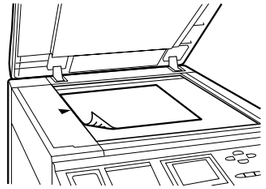


The current programme setting is confirmed and made available for the originals you selected.
The Plural-original programme entry window is closed and the basic window appears again in the Main Display, showing the programme for the original specified last.

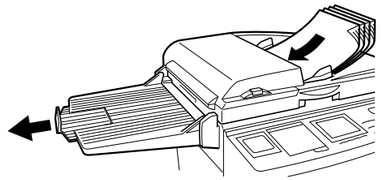


NOTE You can save the current programme setting in memory for repeated use.
☞ **p.56**

6 Place an original face-down on the Platen Glass.



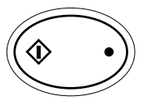
NOTE If the optional ADF Unit is installed, up to 20 programmed originals can be placed there at one time.



7 Specify other print job settings for the selected originals.

You can specify all the features available in normal operation, such as enlargement/reduction and Multi-Up printing.

8 Press the START Key.



A test print is produced.
If the Auto Process feature is not activated, press the START key again.
Prints are produced according to the specified programme, starting with the last original specified.
When printing is completed for the current original, place the next original on the Platen Glass and press the START key again.
To interrupt the programmed printing, press the STOP key.

NOTE
- When printing is completed for all originals, the current programme setting is automatically cleared.
- If the optional ADF Unit is used, it is not required to change originals during operation.
  In this case, it is recommended to activate the Semi-Auto Process feature to save one key operation.
  ☞ See below.

Semi-Auto Process Feature
With this feature activated, the master-making process automatically starts for the following original placed in the optional ADF Unit after the current printing process, even if the Auto Process feature is not selected.
As a result, you can still check a test print, saving one key operation.
To activate this feature, open the Custom Initial setting list window and proceed to [Semi-Auto>Master].
☞ **p.73**

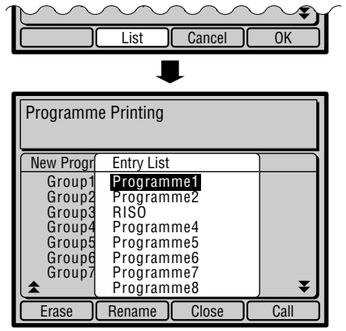
Calling Up a Saved Programme Setting

You can apply a desired programme setting saved in the memory to any print job whenever desired only by calling it up from the memory.

1 Open the Entry list box.

Press the [List] function key in the desired programme entry window.

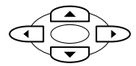
NOTE To open the programme entry window, press the PROGRAMME key.

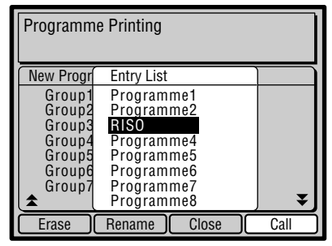


2 Select a desired programme setting.

Highlight the programme name of a desired programme setting in the list with the cursor keys.

NOTE
- When the programme name is dimmed, no programme setting is saved under it.
- To cancel this operation, press the [Close] function key. The Entry list box is then closed.

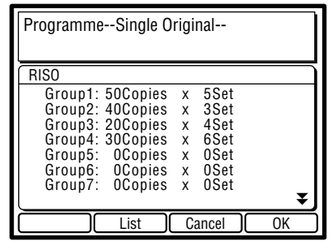




3 Press the [Call] function key.

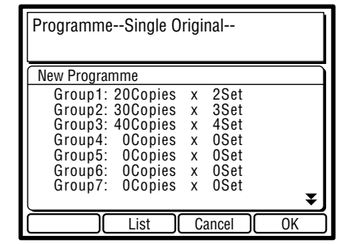
The Entry list box is closed and the selected programme setting appears in the programme entry window.

NOTE To start printing with the selected programme setting, press the [OK] function key in this window.
☞ **p.51**



5 Press the [Close] function key.

The Entry list box is closed.



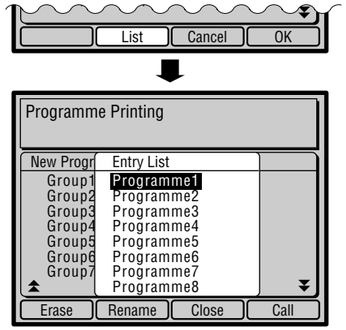
Renaming a Saved Programme Setting

You can give a desired name to the programme settings saved in the memory to make it easier to find a desired programme setting in the list when calling it up from the memory.

1 Open the Entry list box.

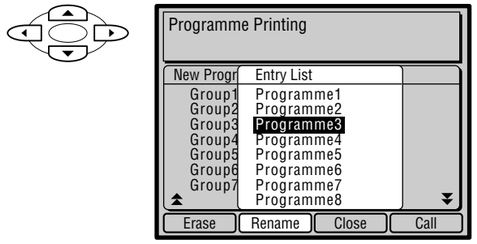
Press the [List] function key in the programme entry window.

NOTE To open the programme entry window, press the PROGRAMME key.



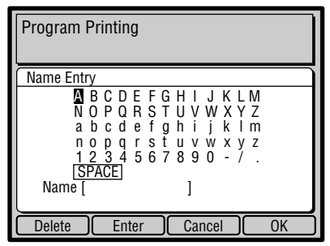
2 Select the programme name to be changed, using the cursor keys.

Highlight a desired programme name.



3 Press the [Rename] function key.

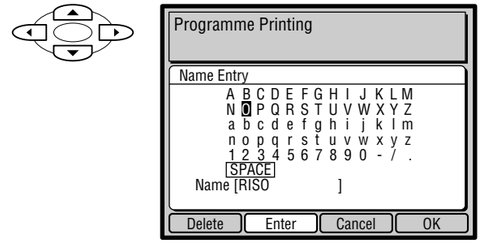
The Name entry window appears.



4 Enter a new programme name for the selected programme setting.

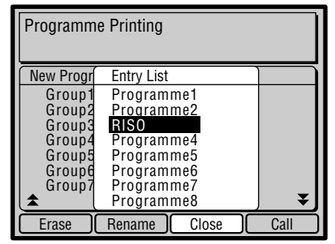
Select the characters you want to use with the cursor keys and enter them one by one by pressing the [Enter] function key.

NOTE
- To enter a space, select [SPACE] in the window with the cursor keys and press the [Enter] function key.
- To cancel this operation, press the [Cancel] function key. The Name entry window is then closed.



5 Press the [OK] function key.

The new programme name is confirmed and the Name entry window is closed.
The programme name of the selected programme setting now changes to the new one in the Entry list.



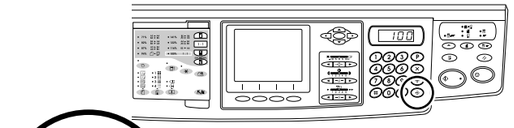
6 Close the Entry list box.

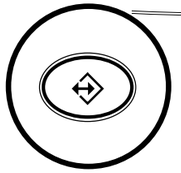
Press the [Close] function key.

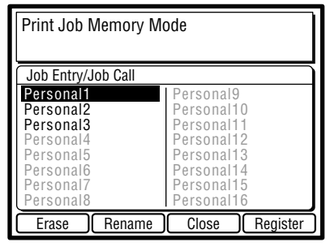
Renaming a Saved Print Job Setting

1 Press the MEMORY key.

The Print Job Memory window appears in the Main Display.

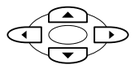


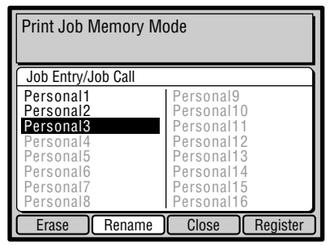




2 Select the job register name to be changed, using the cursor keys.

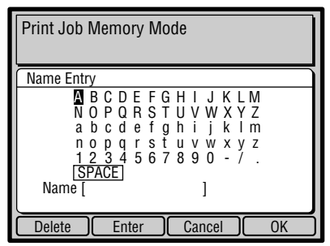
Highlight a desired job register name.





3 Press the Rename function key.

The Name Entry window appears.

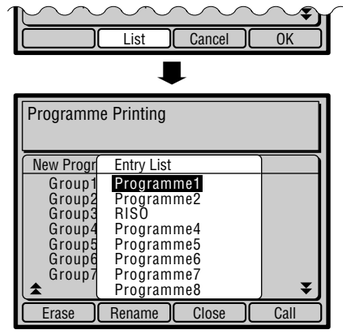


Erasing a Saved Programme Setting

1 Open the Entry list box.

Press the List function key in the desired programme entry window.

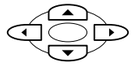
NOTE To open the programme entry window, press the PROGRAMME key.



2 Select the programme setting to be erased.

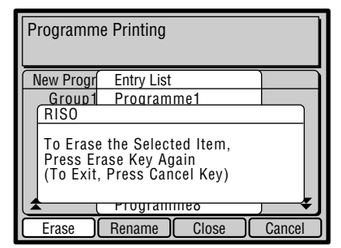
Highlight the programme name of the corresponding programme setting in the list with the cursor keys.

NOTE
- When the programme name is dimmed, no programme setting is saved under it.
- To cancel this operation, press the Close function key. The Entry list box is then closed.



3 Press the Erase function key.

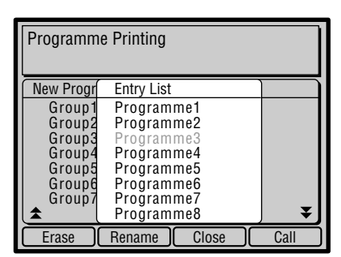
The confirmation message box appears.



4 Press the Erase function key again.

The selected programme setting is erased from the memory and the selected programme name will be dimmed.
If the name was changed from the initial one, it will be returned to the initial one after the corresponding programme setting is erased from the memory.

NOTE To cancel this operation, press the Cancel function key in place of the Erase function key.



Storing Settings in Memory

The Print Job Memory feature is a flexible tool for automating frequently used or complicated combinations of settings for print jobs.

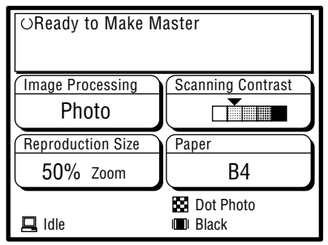
You can store up to 16 combinations of frequently used or complex print-job settings and apply them to new print jobs whenever necessary.

The settings of the following print job elements can be registered in memory for quick recall.

- Image processing mode
  - Line/Photo/Duo
  - Dot photo
- Scanning contrast
- Reproduction size
- Print quantity
- Vertical print position
- Print speed
- Print density
- Print options
  - Auto Process
  - Book processing
  - Multi-Up printing

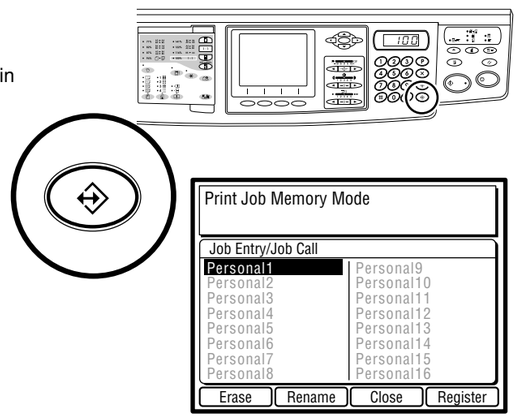
Saving the Current Print Job Setting

1 Set up desired settings.



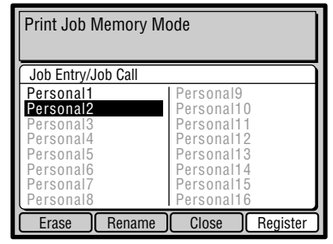
2 Press the MEMORY key.

The Print job memory window appears in the Main Display.



3 Select a job register name.

Highlight a desired job register name by pressing the cursor keys.
Free job register names appear dimmed.
When they are not dimmed, they are already occupied and not available for new entry.



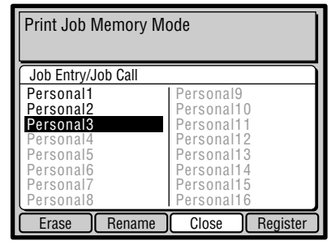
NOTE If no dim job register name exists in the list or a desired one is not dimmed, erase the job setting saved under the selected job register name first.
☞ **p.67** .....Erasing a Saved Print Job Setting.

4 Press the [Register] function key.

The current print job setting is saved under the selected job register name, whose appearance changes accordingly.

NOTE
- Yon can give a desired name to the saved print job setting in this step.
- To cancel this operation, press the [Close] function key in place of the [Register] function key.

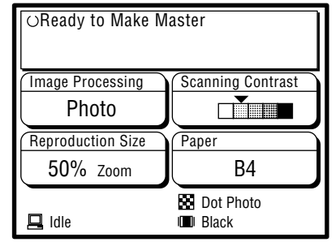
☞ **p.64** .....Renaming a Saved Print Job Setting.



5 Press the [Close] function key.

The Print job memory window is closed and the basic window appears again.

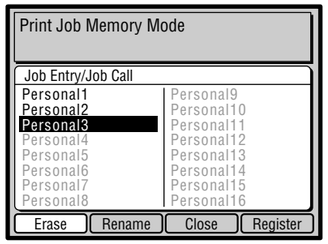
NOTE It is recommended that you maintain a list of job register names and their associated settings.



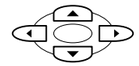
4 Press the [Erase] function key again.

The selected print job setting is erased from the memory and the selected job register name will be dimmed.
If the name was changed from the initial one, it will be returned to the initial one after the corresponding print job setting is erased from the memory.

NOTE To cancel this operation, press the [Cancel] function key in place of the [Erase] function key.

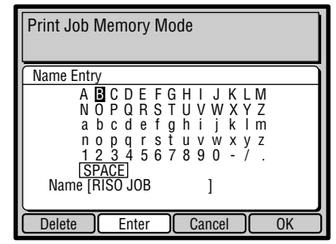


4 Enter a new job register name for the selected print job setting.



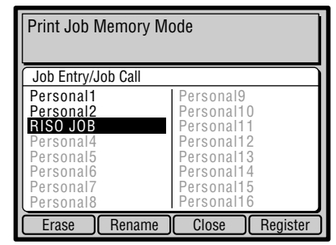
Select the characters you want to use with the cursor keys and enter them one by one by pressing the [Enter] function key.

NOTE
- To enter a space, select [SPACE] in the window by the cursor keys and press the [Enter] function key.
- To cancel this operation, press the [Cancel] function key. The Name entry window is then closed.



5 Press the [OK] function key.

The new job register name is confirmed and the Name entry window is closed.
The job register name of the selected print job setting now changes to the new one.



6 Press the [Close] function key.

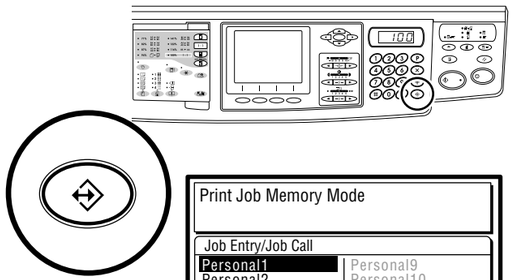
The Print job memory window is closed and the basic window appears again.

Calling Up a Saved Print Job Setting

You can apply a desired print job setting saved in the memory to any print job whenever desired only by calling it up from the memory.

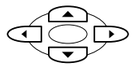
1 Press the MEMORY key.

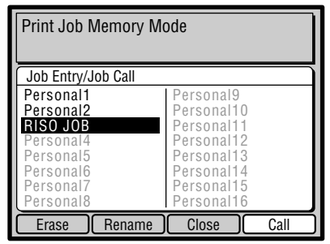
The Print Job Memory window appears in the Main Display.



2 Select a desired print job setting.

Highlight the job register name of a desired print job setting in the list.



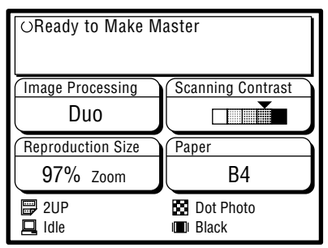


NOTE

- When the job register name is dimmed, no print job setting is saved under it.
- To cancel this operation, press the Close function key. The Print job memory window is then closed.
- It is recommended that you maintain a list of job register names and their associated settings.

3 Press the Call function key.

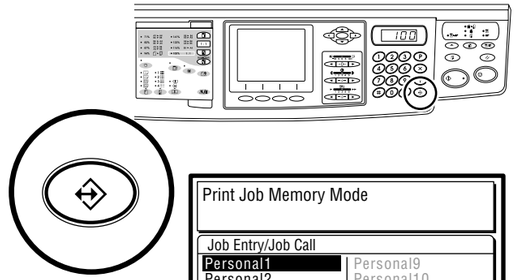
The Print job memory window is closed and the basic window appears, showing the selected print job setting.
The indicators on the control panel also light according to the selected print job setting.



Erasing a Saved Print Job Setting

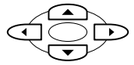
1 Press the MEMORY key.

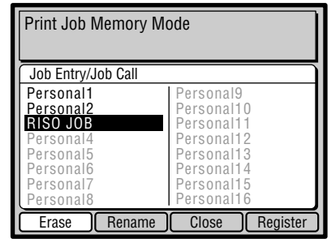
The Print Job Memory window appears in the Main Display.



2 Select the print job setting to be erased.

Highlight the job register name of the corresponding print job setting in the list with the cursor keys.



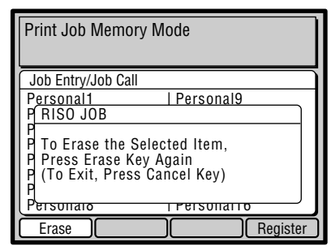


NOTE

- When the job register name is dimmed, no print job setting is saved under it.
- To cancel this operation, press the Close function key.
  The Print job memory window is then closed.
- It is recommended that you maintain a list of job register names and their associated settings.

3 Press the Erase function key.

The confirmation message box appears.



INITIAL SETTINGS OPEN TO ARBITRARY CHANGES

Title	Description	Choices	Ref.Page
Image Processing	Selects the initial image processing mode.	[Line,] Duo, Photo	p.30
Print Speed	Selects the initial print speed (copies per minute).	Level 1(=60), Level 2(=80), [Level 3(=100),] Level 4(=120), Level 5(=130)[cpm]	p.40
Print Density	Selects the initial print density.	Light, Medium light, [Standard,] Medium dark, Dark	p.41
Scanning Contrast	Selects the initial setting of the Original scanning contrast.	[Auto,] Light, Medium light, Standard, Medium dark, Dark	p.36
Auto Process	Selects the initial status of the Auto Process feature.	ON, [OFF]	p.32
Book Size (Wide)	Selects the initial opened book size to be specified for the book placed wide on the Platen glass.	RN2050/2150 : A3, [B4,] A4, B5, A5, Foolscap RN2000/2100 : A3, B4, [A4,] B5, Foolscap	p.38
Book Size (Long)	Selects the initial opened book size to be specified for the book placed longways on the Platen glass.	[A4,] B5, A5	p.38
Book Erasure Width	Specifies the initial erasure width of the book spine shadow applied in the Book processing feature.	[(10 mm)]	p.38
Multi-Up Interval	Selects if an interval is required or not, for replacing the original placed on the Platen glass for Multi-Up printing.	[None(No interval),] 15 Seconds	p.46
Energy Saving Mode	Selects if energy is required to be saved or not, while your RISOGRAPH is idle. Two modes, "Auto Power-off" and "Auto Sleep", are available to save energy. If "Auto Power-off" is selected, the power will be turned off automatically when your RISOGRAPH remains idle for a specified period. If "Auto Sleep" is selected, on the other hand, the power supply will be shut off only for the control panel under the same condition, thus allowing your RISOGRAPH to receive PC data even in the energy saving mode. NOTE You can specify the idle period required to lead your RISOGRAPH into the energy saving mode, using the Energy save timer. ☞ See the next page.	Auto Power-OFF, Auto Sleep, [OFF] NOTE The "Auto Sleep" mode is available as standard only for the RN21 series models. For the RN20 series models, the optional Printer Control Board RISORINC2 is required to use the "Auto Sleep" mode.	p.26, 82

* The framed item is the default setting.

Preventing Initial Paper Waste

The Automatic Idle feature assures consistent print quality even after a long break by rotating the Drum Unit to ensure even ink distribution, and saves you from wasting paper due to faint images in printing.

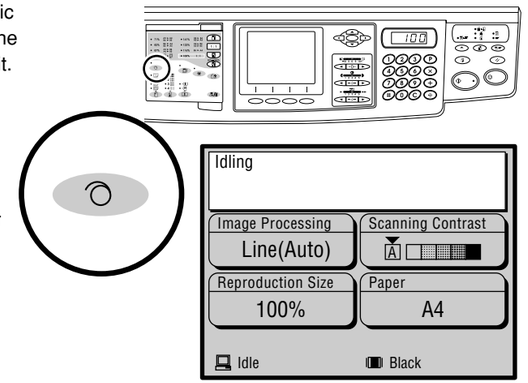
NOTE When ordinary or test printing takes place after a long break, the Automatic Idle feature is ignored even when the Automatic Idle indicator is lit.

Whenever the Automatic Idle indicator is lit, the Automatic Idle feature is on. If you want to use this feature when the indicator is not lit, press the AUTO IDLE key to activate it.

This feature is automatically activated if the power is switched on when the machine has not been used for a certain period (6 to 12 hours).

NOTE You can select the minimum period required for the automatic activation of the Automatic Idle feature.

☞ **p.70**.....You can customise initial settings.



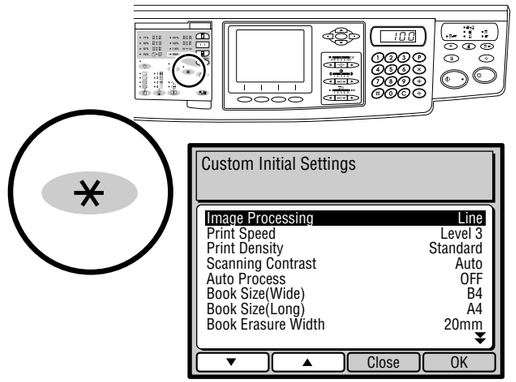
Customising the Initial Settings

You can customise some of the initial settings to which the machine status will be returned when the power is turned on, or the RESET key is held down for more than one second.

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

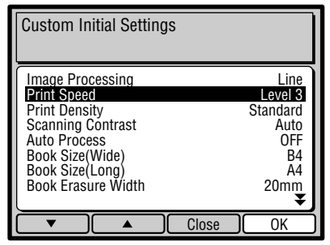
1 Press the CUSTOM SETTING key.

The Custom Initial Settings List window appears in the Main Display.



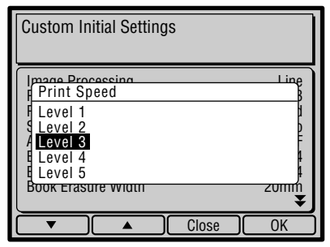
2 Select an item that you want to customise.

Highlight a desired item name by pressing the [▼] or [▲] function key or the cursor keys.



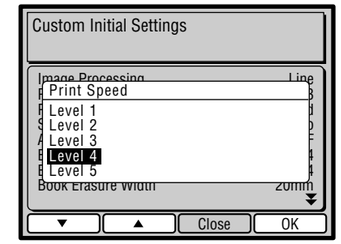
3 Press the [OK] function key.

The Initial setting selection box of the selected item appears.



4 Select a desired initial setting.

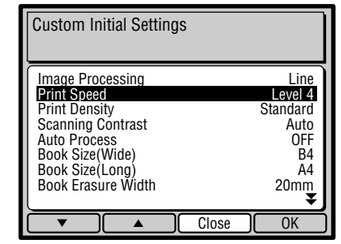
Highlight a desired setting by pressing the [▼] or [▲] function key or the cursor keys.



5 Press the [OK] function key.

A new initial setting is confirmed and the Initial setting selection box is closed.
The initial setting of the selected item now changes to the new one in the Custom Initial Setting List window.

NOTE To cancel this operation, press the [Close] function key in place of the [OK] key.



6 Press the [Close] function key.

The Custom Initial Setting List window is closed and the new (custom) initial settings are applied to the selected items.

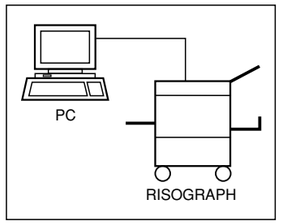
Interfacing with a Computer (Optional for the RN20 Series Models)

Your RISOGRAPH can be interfaced with personal computers (Windows and Macintosh) in two ways: by directly connecting a computer printer cable to them (local connection mode) and over the public telecommunication line (remote transmission mode).
The network enhancement is also available as optional.

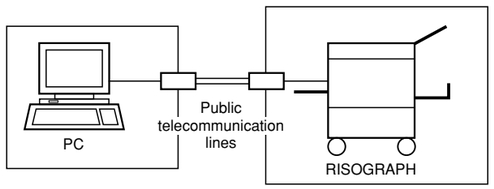
For detailed description about operations with personal computers, see the section "Computer Interface Guides".
☞ **p.77**

NOTE The optional Network Interface Card RISORINC2-NET-A is required to connect your RISOGRAPH to Macintosh.

= Local connection mode =



= Remote transmission mode =



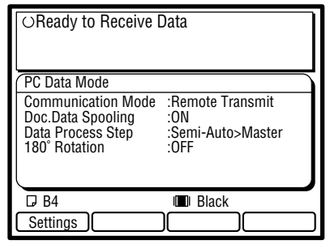
NOTE The dedicated interface control boxes are also connectable to the RN20 series models.
☞ **p.122**

When the RISOGRAPH is processing PC document data, the PC data mode basic window appears in the Main Display.
In this window, you can print out the document data sent from the personal computers.

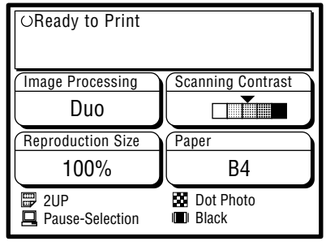
The data processing status of the PC data mode is also indicated in the standard (Scan data mode) basic window, allowing you to check if any PC document data is waiting to be printed out in the PC data mode, during operation in the Scan data mode.
If you want to print out the waiting PC document data, in this case, press the Data Source Selection key in the Sub control panel and open the PC data mode basic window.

NOTE When the PC data mode basic window appears in the Main Display, you cannot make copies of originals.
If you want to make copies of originals, in this case, press the Data Source Selection key in the Sub control panel and change the window in the Main Display.

= PC Data Mode Basic Window =



= Scan Data Mode Basic Window =

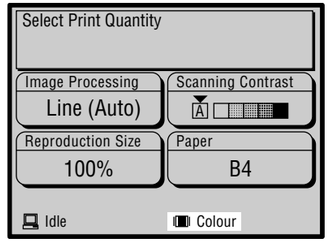


Title	Description	Choices	Ref.Page
Energy Save Timer	Selects the idle period required to lead your RISOGRAPH into the energy saving mode.	5 minutes, [10 minutes,] 30 minutes	p.72
Auto Idle Period	Selects the period required for automatic activation of the Auto idle feature.	[12 hours,] 6 hours, OFF (No auto activation)	p.69
Semi-Auto>Master (Available only when the optional ADF Unit is installed)	Activates the Semi-auto process feature or not, when multiple originals are placed in the optional ADF Unit. If this feature is activated, the master-making process will start automatically for the following original placed in the optional ADF Unit after the current printing, even when the Auto process feature is not activated.	ON, [OFF]	p.55
Minimum Print Quantity	Selects the minimum print quantity which should be produced from one master.	[0,] 10, 20, 30 [copies]	
Paper Size Display	Selects the initial paper size shown in the Main Display.	RN2050/2150 : [B4,] A4, B5, B5-Wide, Foolscap, Custom RN2000/2100 : [A4,] B5, B5-Wide, Custom	p.27
Paper Feed Mode	Selects the current paper feed mode. "Light-weight" is for light-weight paper and "Custom" for the paper which requires special adjustment in feeding. Select an appropriate one according to paper type.	[Standard,] Card Stock, Light-weight, Custom	p.20
Job Separator Line	Selects if the data line is required to be opened for the optional Job Separator. Select "Open" when attaching the Job Separator.	[Closed,] Open	p.122
LCD Mode Priority (Optional for RN20 series models)	Selects the initial basic window shown in the Main Display. "Scan Data Mode" is to be used when operating your RISOGRAPH stand-alone. "PC Data Mode" is, on the other hand, to be used when printing out the PC document data.	[Scan Data Mode,] PC Data Mode	p.14, 76, 80
Beep Sound	Selects if a beep sound is to be emitted or not, to signal the following elements; key operation, status change and errors.	[ON,] OFF	
Displayed Language	Selects a displayed language.	Consult your service representative.	
Clock/Calendar	Adjusts the time and date of the system clock and calendar. (The system clock time is used as the data receipt time given in the PC data mode.)		
Meter Display	Displays the Master Count, Copy Count, and Drum Meter. • Master Count: the total number of masters made on your RISOGARAPH • Copy Count: the total number of copies printed on your RISOGARAPH • Drum Meter: the total number of copies printed with the existing Drum Unit. When you want to check the meter of another Drum Unit, install it before this operation.		

* The framed item is the default setting.

Changing Print Colour

To print with an optional colour Drum Unit, simply remove the existing Drum Unit from your RISOGRAPH and replace with the colour of choice.
When a Drum Unit other than the Black one is in place, the "Colour" message appears in the Main Display.

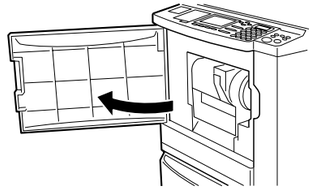


⚠ Caution **Only use RISOGRAPH RN Drum Unit.**

NOTE
- Change Drum Unit with the power ON.
- Store the removed Drum Unit horizontally in the Drum Unit case.
- Never store Drum Unit in an upright position.

Changing Drum Units

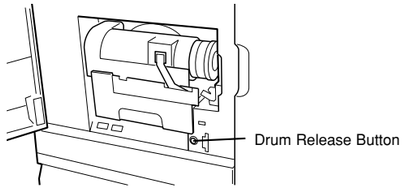
1 Open the Front Cover.



2 Be sure that the Drum Release Button lights.

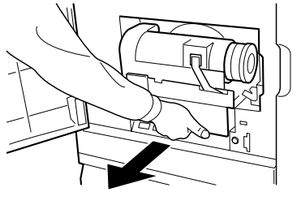
If not, press it. The Drum will rotate and stop at the release position, leading the button to light.

NOTE If the Drum Release Button does not light, the Drum Unit cannot be pulled out.



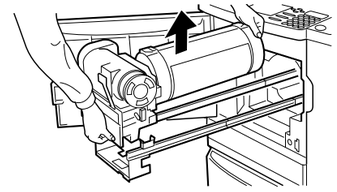
3 Pull out the Drum Unit.

Grasp the Drum Handle and pull out the Drum Unit until it stops.



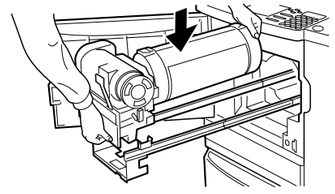
4 Remove the Drum Unit from the machine.

Lift the Drum Unit with both hands to remove it.



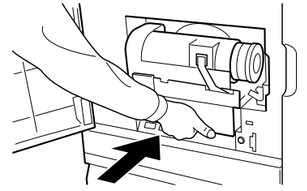
5 Load another colour Drum Unit onto the holder.

Place another Drum Unit on the holder horizontally.

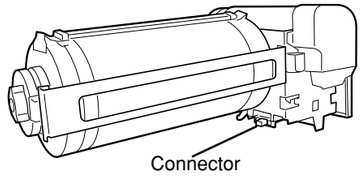


6 Slide the Drum Unit into the machine.

Holding the Drum Handle, slide the Drum Unit into the machine until it stops. Then release the handle and close the Front Cover.

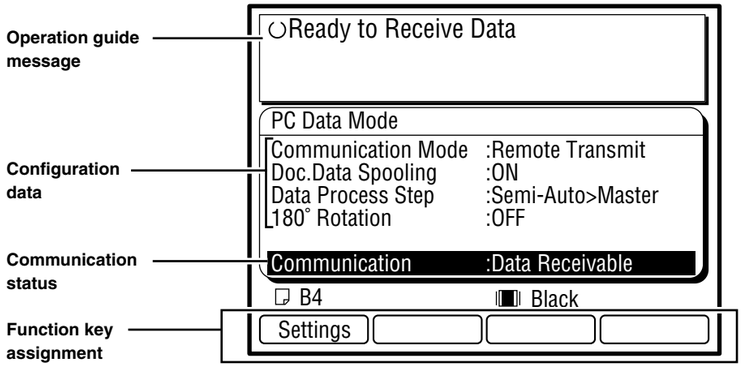


⚠ Caution **The Drum Unit contains highly sensitive electronic components. To avoid damage by an electrostatic charge, do not touch the Drum Connector.**



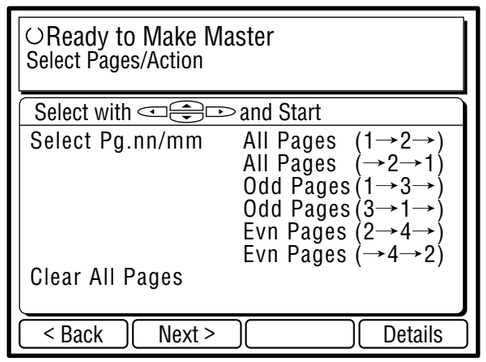
PC Data Mode Display

Basic Window



* The communication status is displayed in the Remote transmission mode only.

Output Option Window



☞ p.84

NOTE You can open these windows by pressing the Data Source Selection key on the Sub Control panel.

Computer Interface Guides
- Optional for RN20 Series Models

This section describes various operation patterns and functions which are available for printing out the document files created on your computer in the PC data mode.

Connecting to a Computer 78
PC Data Mode Display 80
Basic Interface Operation 82
Selecting Output Pages on Your RISOGRAPH 84
Rotating Images by 180 Degrees 86
Changing Print Job Flow 87
Changing the PC Data Mode Configuration 89

Connecting to a Computer

You can connect your RISOGRAPH to a computer in two ways, i.e. with direct cable connection (Local connection mode) and over the public telecommunication lines (Remote transmission mode).
For direct cable connection, the standard parallel port (IEEE 1284A) is provided on your RISOGRAPH.
For data transmission over the public telecommunication lines, on the other hand, the standard serial port (DB-9) is mounted there.

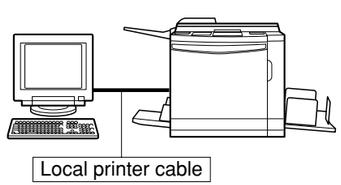
NOTE An extra network port can be added to enable the connection of standard Ethernet cables (10Base-T and 100Base-TX) by building the optional network interface card into your RISOGRAPH.
☞ **p.122**

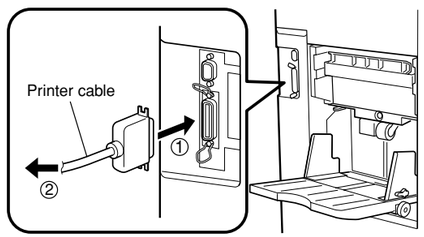
Using the Standard Printer Cable

To print out the document file created on your Windows PC which is placed beside your RISOGRAPH, connect the standard parallel printer cable, IEEE 1284-compliant one, between the printer port of your computer and the parallel port of your RISOGRAPH.
With this connection, you will be able to send the document data created on your Windows PC directly to your RISOGRAPH.
In this case, you are required to select "Local connection" as communication mode on your RISOGRAPH.

Important!

- Always use a commercially available IEEE 1284-compliant printer cable.
- Be sure to turn the PC off and the RISOGRAPH when connecting the cable.
- The allowable maximum input voltage of the parallel port is 5 V.





①To the parallel port of your RISOGRAPH
②To the printer port of your Windows PC

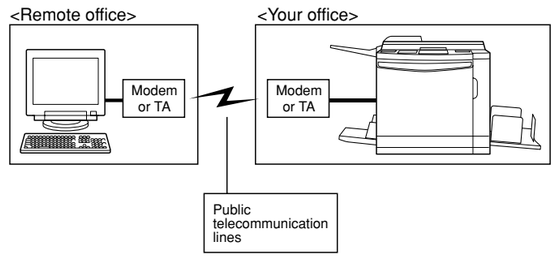
NOTE If you want to connect your RISOGRAPH to a Macintosh PC or use your RISOGRAPH in the LAN (Local area network) environment, you are required to install the optional network interface card into the RISOGRAPH and add the Ethernet network port (RJ45) to allow the connection of the 10Base-T or 100Base-TX Ethernet cable.

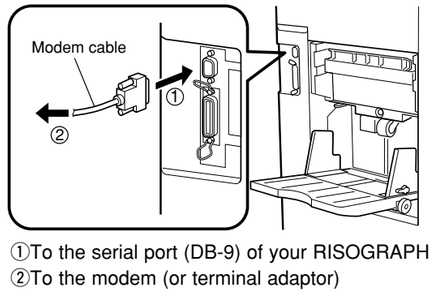
Using the Public Telecommunication Lines

To print out the document file sent from a remote location over the public telecommunication lines, connect the standard serial communication cable (RS-232C) between the modem (or terminal adapter) and the DB-9 serial port of your RISOGRAPH. With this connection, you will be able to receive the document data created on the computer in a remote location over the public telecommunication lines.
In this case, you are required to select "Remote transmission" as communication mode on your RISOGRAPH.

Important!

- Be sure to turn off the modem (or terminal adapter) and the RISOGRAPH when connecting the cable.
- The allowable maximum input voltage of the serial port is 12 V.
- Poor contact trouble may occur when a 9-pin-to-25-pin adapter is used for this connection.
- In some countries, this communication mode may not be available due to the unsuitable local telecommunication environment.





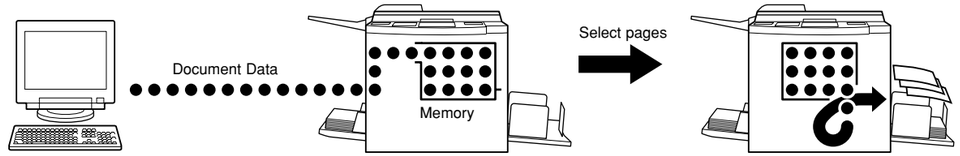
①To the serial port (DB-9) of your RISOGRAPH
②To the modem (or terminal adaptor)

NOTE To assist you to transmit the document data from the remote location to the RISOGRAPH, the dedicated communication utility software, RISORINC Manager, is included in the accessory software CD-ROM.

Selecting Output Pages on Your RISOGRAPH

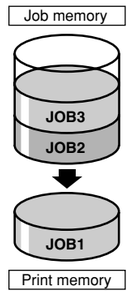
Your RISOGRAPH can store the document data received from the computer in the memory without printing them, allowing you to select the pages to be printed out on the RISOGRAPH.
Besides, the document data stored in the memory remain there until they are cleared with key operation, enabling the repeated output of the same document data.
To enable this function of your RISOGRAPH, open the Mode configuration window in the Main Display and change the setting of the "Document Data Spooling" function to "ON".
☞ **p.89**

NOTE When the communication mode is changed to "Remote Transmission", the "Document Data Spooling" function is automatically activated.
It is highly recommended to keep this function activated in the "Remote Transmission" mode.



In the RISOGRAPH, each document data is first stored in the Job memory in a compressed format and then transferred into the Print memory and developed there to be printed out. While the Job memory is not full, the RISOGRAPH can receive document data additionally.

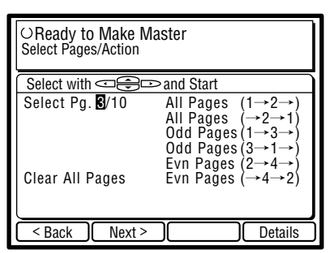
NOTE If the Document Data Spooling function is not selected, further operation will automatically start in your RISOGRAPH after all document data have been received, thus printing out all pages of the received document data in order.



Selecting Pages

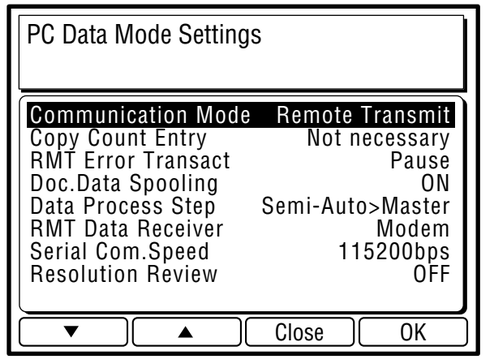
When the "Document Data Spooling" function is activated, the Output option window appears in the Main Display after all document data are received.
Select a page or pages you want to print out in this window and press the START key.
The selected page or pages will be processed and printed out as specified.

= Selecting a desired single page =
Press the <Back or Next> function key and show a desired page number in the window.



Mode Configuration Window

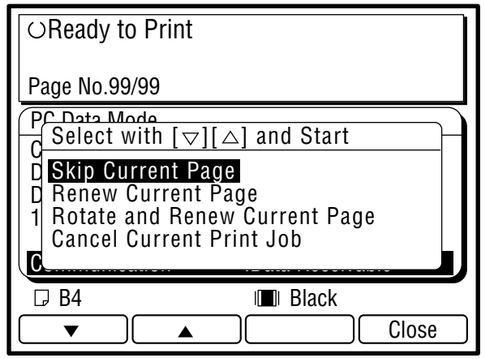
Settings →



☞ **p.89**

Utility Window

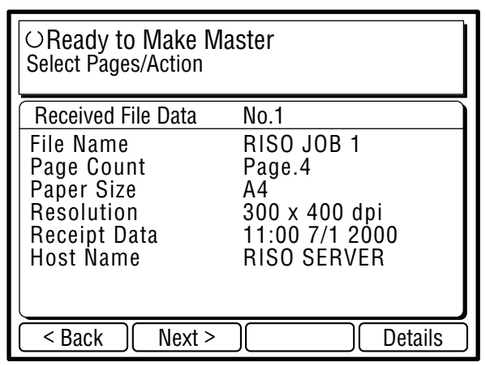
Utility →



☞ **p.87**

File Data Window

Details →



☞ **p.85**

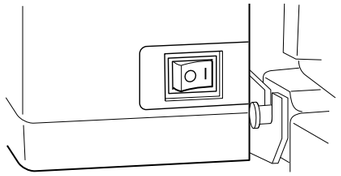
NOTE This window is available only for the Remote transmission mode.

Basic Interface Operation

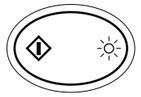
1 Turn the power switch ON.

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

I	–	ON
O	–	OFF



NOTE When your RISOGRAPH is sleeping in the Energy Saving mode, the indicator on the START key lights. In this case, press the START key to wake up your RISOGRAPH.
☞ **p.72**



2 Open the PC data mode basic window in the Main Display.



Press the Data Source Selection key.
If this window is already opened, skip this step.

3 Check the mode configuration data in the Main Display.

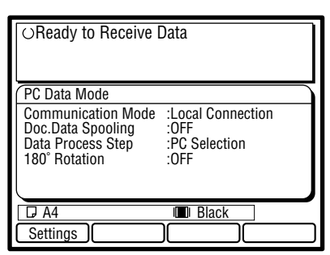
Confirm that your RISOGRAPH is appropriately configured to process your print job.
If not, change the configuration in the Mode configuration window.
☞ **p.89**

NOTE Always confirm that the correct communication mode is selected.
- Local Connection: To send data directly from your Windows PC.
- Remote Transmit: To receive data over the public telecommunication lines.

= Local connection mode =



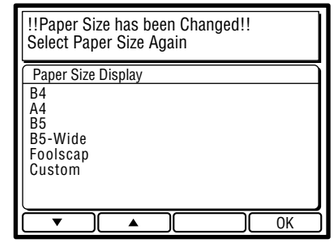
= Remote transmission mode =



4 Check the current paper size and print colour.

If you require another size of paper and/or print colour, replace paper on the Paper Feed Tray and/or the Drum Unit.
☞ **p.20** ....Setting Up the Paper Feed Tray
☞ **p.74** ....Changing Drum Units

NOTE When another size of paper is loaded on the Paper Feed Tray, the message shown to the right appears.
Select the new paper size by pressing the ▲ or ▼ function key and press the OK function key.
In case the selected paper size is not equal to the actual one, unexpected or smudged images may appear on printed copies.
When irregular size paper is loaded on the Paper Feed Tray, select "Custom" in the list.



5 Send the document data to your RISOGRAPH.

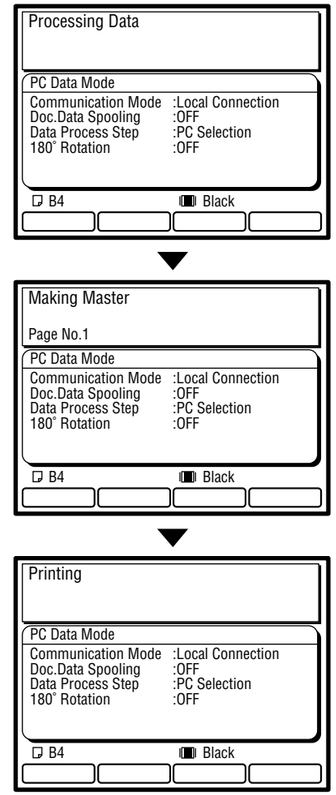
Using the dedicated printer driver or the communication utility software, send your selected document file from the computer to the RISOGRAPH.
The RISOGRAPH processes the received document data according to the current mode configuration and the print conditions specified on the computer. If required, operate the control panel of the RISOGRAPH to finish your print job.

NOTE To interrupt operation, press the STOP key.

For detailed descriptions about the operation with the computer, consult the user's guides included in the accessory software CD-ROM or those of the related software.

NOTE The dedicated printer driver programme, which is included in the accessory software CD-ROM, is required to be installed in the computer in advance.

Display transition pattern for the full automatic process operation in the Local connection mode



Job Flow List

- Skip Current Page

Cancels the print job of the current page and starts to make a master for the following page.

- Renew Current Page

Cancels the print job of the current page and starts to make another master for the current page.

- Rotate and Renew Current Page

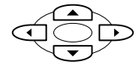
Cancels the print job of the current page and starts to make another master for the current page, rotating images by 180 degrees.

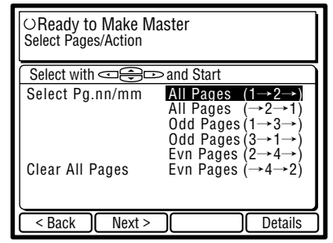
NOTE The above two job flow options cannot be selected when the specified number of copies have been produced for the current page without the Document Data Spooling function activated.
If you want to select either of them, therefore, press the STOP key to interrupt printing.

- Cancel Current Print Job

Cancels the total print job of the multiple pages specified for the current document data.
When the Document Data Spooling function is not activated, the current document data will be cleared from the memory of your RISOGRAPH.
When this function is activated, on the other hand, you can select another output option for the current document data in the Output option window.

= Selecting multiple pages =



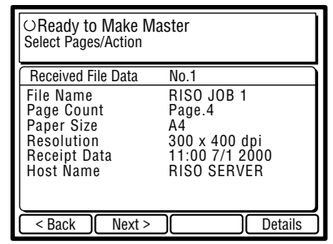


Press the cursor keys on the control panel and highlight a desired output option.
The following output options are available.

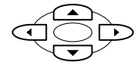
- All Pages (1→2→): To print all pages in order.
- All Pages (→2→1): To print all pages in reverse order.
- Odd Pages (1→3→): To print only odd pages in order.
- Odd Pages (→3→1): To print only odd pages in reverse order.
- Evn Pages (2→4→): To print only even pages in order.
- Evn Pages (→4→2): To print only even pages in reverse order.

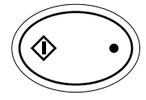
NOTE

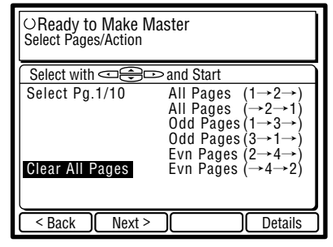
- You can cancel the current print job in the Utility window if you select a multiple-page output option.
☞ **p.87**
- If you press the Details function key in this window, the detailed information of the received document file whose pages can be printed out can be checked in the File data window, which is available only in the Remote transmission mode.
When the dedicated communication utility software, RISORINC Manager, is used to transmit the document data, all listed items of information will be given in this window.
If another communication software is used instead, however, no data will be provided for some listed items. In this case, "Unknown" will appear in the lines of the corresponding items.



Clearing Document Data from the Memory



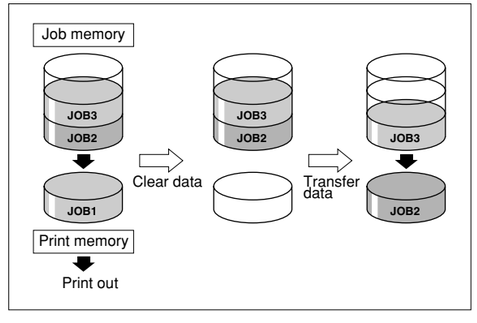




Only one document data file can be printed out at one time.
To print out another data file stored in the memory, you are required to clear the current document data from the memory after all required pages are printed out.

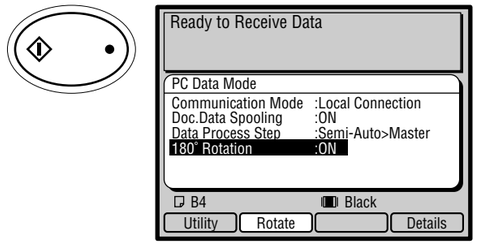
When the selected print job is finished, the Output option window appears again in the Main Display.
To clear the current document data, select "Clear All Pages" in this window by pressing the cursor keys on the Control panel and press the START key.
The following document data stored in the memory will then be available in the Output option window.

NOTE All document data that are received by your RISOGRAPH will be cleared when turning off the Main power switch.



Rotating Images by 180 Degrees

You can rotate images in the received document data by 180 degrees before printing them out. This function will be useful to improve paper ejection condition in case printed copies cannot be ejected well due to the presence of large solid areas at the page top, or to print on special paper whose feed direction is limited to one way.
To activate this function, press the [Rotate] function key to change the status display of "180˚ Rotation" to "ON" in the Mode configuration window. Then press the START key to make a new or another master for the current document data, rotating images by 180 degrees.
To cancel this function, press the [Rotate] function key again.



NOTE
- This function is available only before master-making process. Once a master is made, therefore, return to the master-making process by pressing the Process Selection key or select "Rotate and Renew Current Page" in the Utility window, if you want to rotate images on the current page.
- When you select the 180-degree image rotation feature for the current print job on the computer, avoid selecting this function. Otherwise, the 180-degree image rotation feature will be canceled.

Changing Print Job Flow

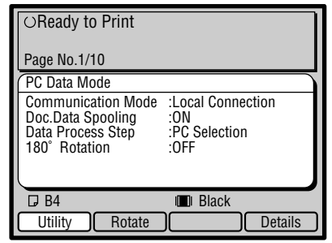
You can change the print job flow specified when the current document data was sent to the RISOGRAPH according to the current print job requirements.
The new job flows which are available for the current print job are listed in the Utility window, which can be opened by pressing the [Utility] function key.
Select a desired job flow by pressing the [▼] or [▲] function key and press the START key.
The current print job is resumed in the selected new job flow.

Renewing the Current Page

When operation is stopped before printing (the "Ready to Print" window is opened), you can renew (remake) the master with/without image rotation.

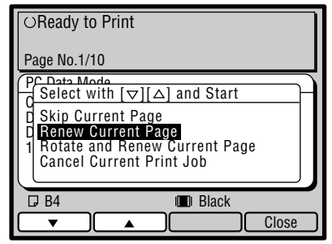
1 Press the [Utility] function key.

The Utility window appears.



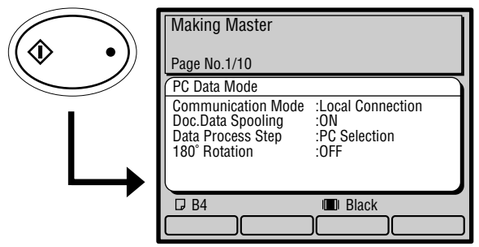
2 Select "Renew Current Page" or "Rotate and Renew Current Page" by pressing the [▲] or [▼] function key.

NOTE To cancel this operation, press the [Close] function key to close this window.



3 Press the START key.

The current page will be renewed.



Items	Descriptions	Options
Serial Com. Speed (Available only for the Remote transmission mode)	Selects the serial communication speed between the RISOGRAPH and the data receiving device for the Remote transmission mode.	[115200bps], 57600bps, 38400bps, 19200bps, 9600bps, 4800bps, 2400bps
Resolution Review (Available only for the Remote transmission mode)	Selects if the resolution of the document data received should be converted into the printing resolution of the RISOGRAPH. The document data resolution will be converted only when it is different from the printing resolution of the RISOGRAPH. Select "ON" if you want to activate this function. **NOTE** If the document data resolution is converted, the image quality will deteriorate, compared with the original one.	ON, [OFF]
AT Command Output (Available only for the Remote transmission mode)	Outputs a selected AT command to the connected data receiving device (modem or TA). You can check if your selected data receiving device can properly communicate with the RISOGRAPH by transmitting a desired AT command. For detailed descriptions about the AT commands, refer to the user's guide of the selected data receiving device.	See the list below.

The framed option is selected as default one.

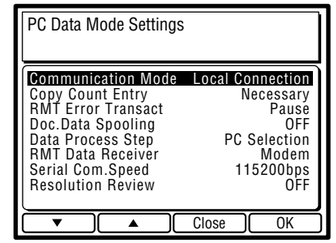
< AT Command Selection List >

No.	No.	No.	No.
001 ATB0&W	014 AT&B1&W	027 AT&M7&W	040 AT%X0&W
002 ATB1&W	015 AT&B2&W	028 AT&W0	041 AT%C0&W
003 ATL0&W	016 AT&D0&W	029 AT&W1	042 AT%C1&W
004 ATL1&W	017 AT&D1&W	030 AT&Y0&W	043 AT%C2&W
005 ATL2&W	018 AT&D2&W	031 AT&Y1&W	044 AT%C3&W
006 ATL3&W	019 AT&D3&W	032 AT\J0&W	045 AT&K0&W
007 ATM0&W	020 AT&F&W	033 AT\J1&W	046 AT&K1&W
008 ATM1&W	021 AT&F0	034 AT\N0&W	047 AT&K2&W
009 ATM2&W	022 AT&F1	035 AT\N1&W	048 AT&K3&W
010 ATM3&W	023 AT&M0&W	036 AT\N2&W	
011 ATY0	024 AT&M4&W	037 AT\N3&W	
012 ATY1	025 AT&M5&W	038 AT\N4&W	
013 AT&B0&W	026 AT&M6&W	039 AT\N5&W	

The 0's in the No. fields are zeros.

Changing the PC Data Mode Configuration

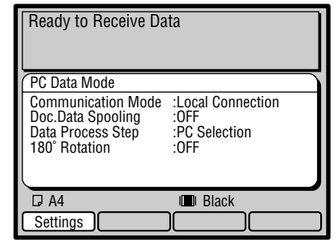
You may be required to change the initial PC data mode configuration according to your operation requirements for printing out the document data sent from the computer.
To allow you to change the PC data mode configuration, therefore, the following window, Mode configuration window, is prepared.
Follow the procedures described below to change the configuration according to your needs.



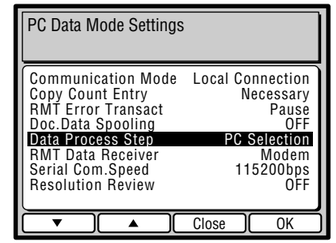
1 Press the [Settings] function key in the PC data mode basic window.

The Mode configuration window appears.

NOTE When the PC data mode basic window does not appear in the Main Display, press the Data Source Selection key on the Sub control panel.

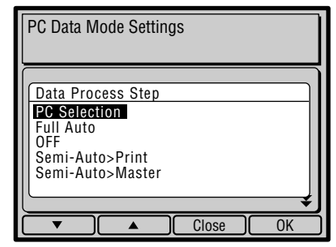


2 Press the [▼] or [▲] function key and highlight a desired item.

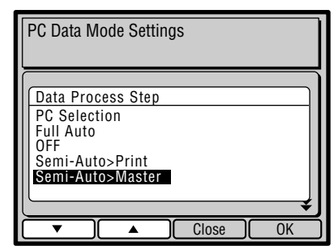


3 Press the [OK] function key.

The Configuration option window for the selected item appears.

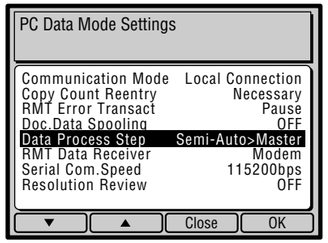


4 Press the [▲] or [▼] function key and highlight a desired option.



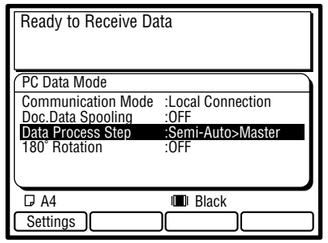
5 Press the [OK] function key.

The selected item is configured as specified in the selected option and the Mode configuration window reappears, displaying the new configuration for the selected item.



6 Press the [Close] function key.

The new PC data mode configuration specified in the Mode configuration window is confirmed and the Main Display returns to the basic window.



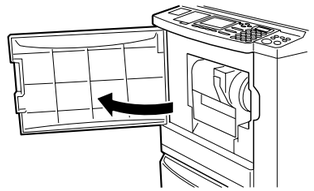
= Configuration Items and Their Options =

Items	Descriptions	Options
Communication Mode	Selects the current communication mode.	[Local Connection,] Remote Transmit
Copy Count Entry (Available only when the Document Data Spooling function is activated)	Selects if the number of copies is required to be specified for the current print job on the Control panel of the RISOGRAPH, or Not. If "Not necessary" is selected, the number of copies specified on the computer will be applied.	[Necessary,] Not necessary
RMT Error Transact (Available only for the Remote transmission mode)	Selects how to process communication errors in the Remote transmission mode. To suspend the data transmission when an error occurs, select "Pause". To continue the data transmission clearing the document data which has caused the error, on the other hand, select "Skip the Error". **NOTE** When "Pause" is selected, an error message appears in the Main Display on the RISOGRAPH to inform you that an error has occurred in data transmission. You can check when the error occurred by printing out the document data already received.	[Pause,] Skip the Error
Doc. Data Spooling	Selects the current status of the Document Data Spooling function. If "ON" is selected, the document data sent from the computer are stored in the memory of the RISOGRAPH and not printed out immediately after data receipt. **NOTE** When you select "Remote Transmit" as communication mode, this function is automatically activated.	ON, [OFF]
Data Process Step	Selects the current status of the Auto process function. - PC Selection: Applies the setting specified on the computer. - Full Auto: Processes all print jobs without interruption. - OFF: Interrupts print jobs by the step, i.e., after master-making process and printing process. - Semi-Auto>Print: Interrupts print jobs after printing process. - Semi-Auto>Master: Interrupts print jobs after master-making process. **NOTE** If you select other options than "PC Selection", the Auto process feature setting specified on the computer will be ignored.	[PC Selection,] Full Auto, OFF, Semi-Auto>Print, Semi-Auto>Master
RMT Data Receiver (Available only for the Remote transmission mode)	Selects the data receiving device for the Remote transmission mode. **NOTE** Consult your service representative for the appropriate model of the respective devices.	[Modem,] TA (Terminal Adapter), Cellular Phone, Others

The framed option is selected as default one.

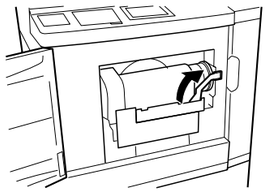
Replacing the Ink Cartridge

1 **Open the Front Cover.**



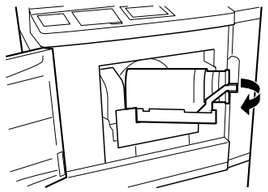
2 **Turn the Ink Cartridge Locking Lever to the right.**

The Ink Cartridge is released.

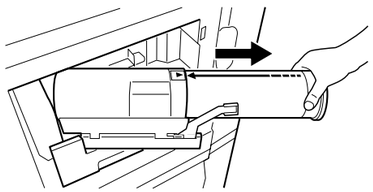


3 **Turn the Ink Cartridge Holder off position.**

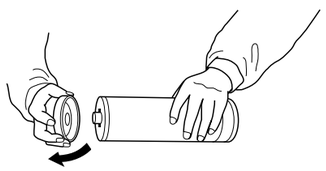
Pull the Ink Cartridge Locking Lever toward you.



4 **Pull the empty Ink Cartridge out of the Ink Cartridge Holder.**

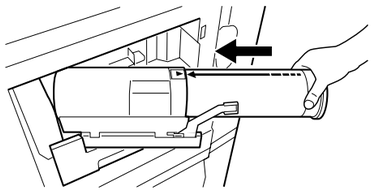


5 **Remove the cap from a new Ink Cartridge.**



6 **Insert the new Ink Cartridge into the Ink Cartridge Holder.**

Align the arrow on the Ink Cartridge with the ▶ mark on the Ink Cartridge Holder and push the Ink Cartridge until it stops.

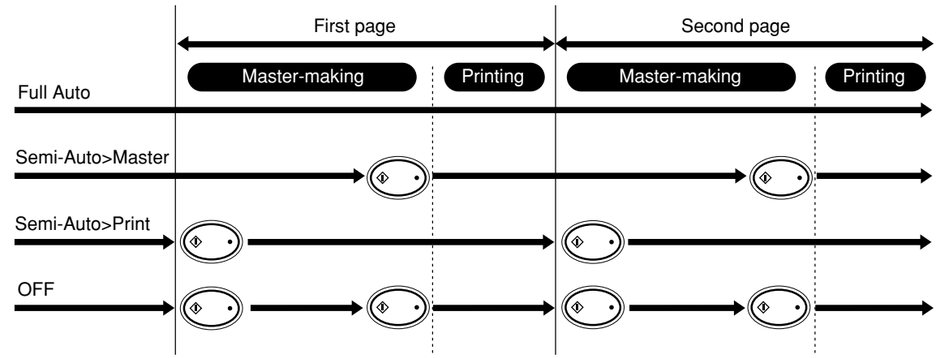


Auto Process Function

You can specify how to process print jobs in the PC data mode, i.e., to process without interruption or to interrupt print jobs after a specified process step, on your RISOGRAPH. By interrupting print jobs, you can check print position and quality with test prints before printing process or change the print job flow according to your print requirements.
The operations listed in the chart below are available after each process step when the print job is interrupted.

After printing process	After master-making process
• 180-degree image rotation for the following page ☞ **p.86** • Paper replacement • Received file information review ☞ **p.85**	• Print position/quality check • Job flow change ☞ **p.87**

After interruption, you can resume the print job by pressing the START key.
The figure below shows the key operation timing with the respective Auto-process options.



Replenishing and Disposing Supplies

This section describes how to replenish supplies when they have been depleted and how to dispose of them regularly.

Replacing the Ink Cartridge 96

Replacing the Master Roll 98

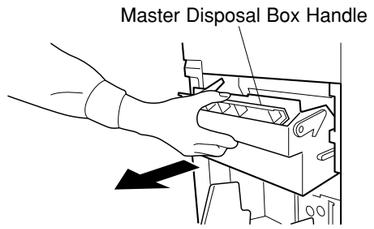
Emptying the Master Disposal Box 100

Emptying the Master Disposal Box

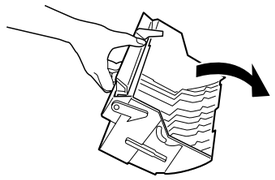
1 Pull out the Master Disposal Box.

Hold the handle of the Master Disposal Box and pull out the box.

Important!
Make sure that the Paper Feed Tray is lowered to the bottom. If not, the Master Disposal Box could not be pulled out or might be damaged in removal.

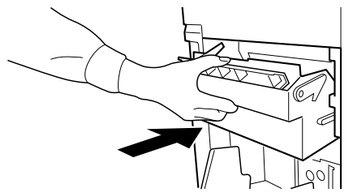


2 Discard used masters.



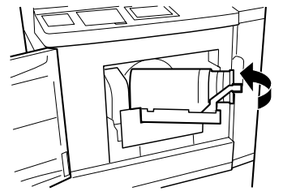
3 Insert the Master Disposal Box into position.

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



7 Push back the Ink Cartridge Holder into position.

Push the Ink Cartridge Locking Lever.

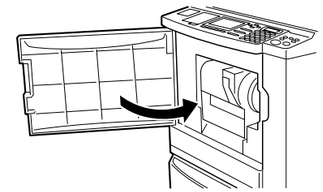


8 Turn back the Ink Cartridge Locking Lever to the left.

The Ink Cartridge is locked.



9 Close the Front Cover.



Important!

- **Always use the ink cartridge whose name's suffix is the same alphabetic character as of the initial suffix of your machine name, for "Black".**

- **Never insert a cartridge of a different colour ink.**
  Always be sure that the colour of the new Ink Cartridge is the same as that of the old one being replaced. If you want to change the print colour, you must replace the entire Drum Unit.

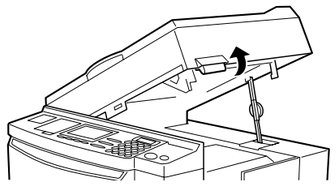
- **There is ink on the master wrapped around the Drum Unit. Keep your hands and clothing away from it.**
  If your hands come into contact with ink, wash thoroughly.

- **Dispose of the empty Ink Cartridge following the disposal rule in your community.**
  The Ink Cartridge is made of the following material: Polypropylene and Polyethylene. Regarding the components of ink, consult your service representative.

Replacing the Master Roll

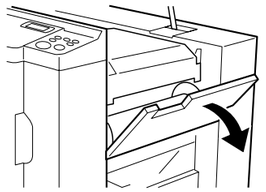
1 Raise the Scanner Table.

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



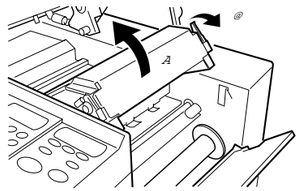
2 Open the Master Roll Cover.

Pull down the Master Roll Cover.



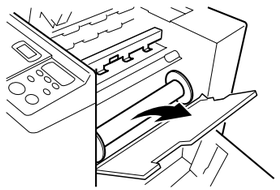
3 Open the Master Making Unit.

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



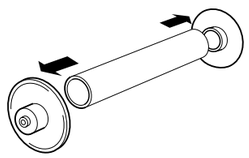
4 Remove the depleted Master Roll.

Pull the depleted Master Roll toward you and remove it from the supporter.



5 Remove both left and right flanges.

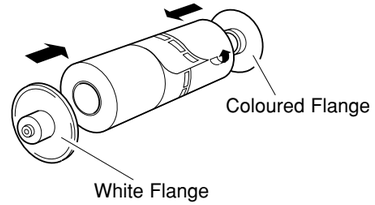
Remove both left and right flanges from the depleted Master Roll.



6 Attach the existing flanges to a new Master Roll.

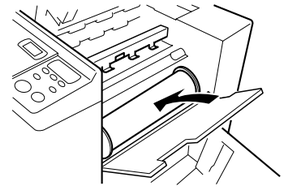
Unpack a new Master Roll.

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



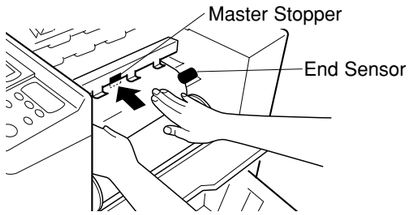
7 Install the new Master Roll.

Insert the Master Roll into the supporter, placing the coloured flange on the right-hand flange holder.



8 Insert the leading edge of the Master Roll into the Master Entrance.

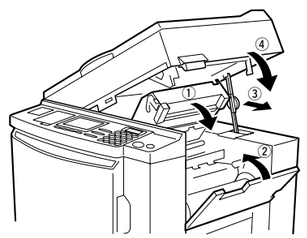
Unroll the Master Roll by pulling on the leading edge, pass the Master under the Master End Sensor on the right side and feed it until the leading edge reaches the Master Stopper.
Then take the slack, winding the Master Roll.



9 Close the Master Making Unit and the Master Roll Cover gently.

10 Close the Scanner Table.

Pull the Scanner Table Support toward you until it stops and then push down the Scanner Table gently.



Check Settings

Message	Description and Action	Reference
Wrong-Type Print Drum Installed	This type of Drum unit is not acceptable for this machine. **Action** Install a correct Drum unit. If you don't know what Drum unit is the correct one, contact your service representative.	**p.74**
Wrong-Type Ink Cartridge Installed	This type of ink cartridge is not acceptable for this machine. **Action** Insert a correct type. If you don't know what Ink cartridge is the correct type, contact your service representative.	**p.96**

Requires Technical Assistance

Message	Description and Action	Reference
!!Battery Replacement!! Call Service (To continue, Press R•3V Key)	The battery has lost most of the power. **Action** Contact your authorized service representative and request to replace a battery. To continue operation, press the R•3V function key.	**p.118**
!!Maintenance!! Call Service (To Continue, Press R•3V Key)	The periodical maintenance service is required. **Action** Contact your authorized service representative. To continue operation, press the R•3V function key.	**p.118**
!!System Error!! Press R•3V Key If Recovery has Failed, Call Service & Quote the Error Code	An error has occurred in the system. **Action** Press the R•3V function key. If this message still appears, contact your authorized service representative and report him or her the error code.	
!!System Error!! Turn Main Power SW OFF Then ON If Recovery has Failed, Call Service & Quote the Error Code	An error has occurred in the system. **Action** Turn the power off and then on again. If this message still appears, contact your authorized service representative and report him or her the error code.	

Advisory Messages

This section describes how to respond to advisory messages in the Main Display. If you need help in following a message's direction, consult the alphabetized index chart on the next page and refer to the corresponding page.

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O Original Jam 107
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System Error Turn Main Power SW OFF 104
W Wrong-Type Ink Cartridge Installed 104
Wrong-Type Print Drum Installed 104

Check Settings

Message	Description and Action	Reference
Insert Card in Key/Card Counter	An operator card is requested to be inserted into the Key/card counter (optional). **Action** Insert it.	
Set Print Drum in Place	The Drum unit is not properly installed. **Action** Slide it into place, holding the handle.	**p.74**
Install Ink Cartridge	An Ink cartridge is not properly installed. **Action** Insert it into the Ink cartridge holder completely and lock it.	**p.96**
Master Not Set in Place Insert Lead Edge of Master into Master Entrance and Close Master Making Unit	Master is not properly loaded. **Action** Install a Master roll, if required, and insert the lead edge into the Master entrance. Then close the Master making unit.	**p.98**
Close Front Cover	The Front cover is not properly closed. **Action** Close it tightly, pressing on the lower right-hand area.	
Close Scanner Table	The Scanner table is not properly closed. **Action** Close it tightly, holding it down.	
Set Master Disposal Box in Place	The Master disposal box is not properly loaded. **Action** Insert it completely, holding the handle.	**p.100**
Close Master Making Unit	The Master making unit is open. **Action** Open the Scanner table and close the Master making unit securely.	
Close Disposal Entrance Cover	The Disposal entrance cover is not properly closed. **Action** Close it securely.	

Check Supplies and Disposal Box

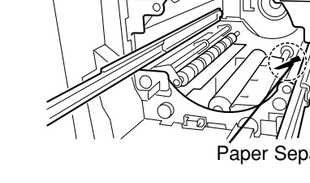
Message	Description and Action	Reference
No Ink Replace Ink Cartridge	An Ink cartridge is empty. **Action** Replace it with a new one.	**p.96**
No Master Replace Master Roll	A Master roll is depleted. **Action** Install a new one.	**p.98**
Empty Master Disposal Box	The Master disposal box is full of used masters. **Action** Pull out the box and discard used masters.	**p.100**
Add Paper	Paper is depleted and/or not loaded in the Paper feed tray. **Action** Load paper in the Paper feed tray.	**p.20**

Errors in Master-Making Area

Message	Description and Action	Reference
Master was Not Loaded on Print Drum Correctly Pull Out Print Drum and Remove Master	Master has not been properly loaded on the Drum unit. **Action** ①Open the Front cover and pull out the Drum unit. Then remove the master on the Drum unit and return the Drum unit into the original position. ②Open the Master making unit and wind the Master roll. Then reset master in place. After closing the Master making unit, resume operation from master-making.	**p.74, 98**
Master Mis-Feed Rewind Master Roll and Reset Master in Place	Master has misfed. **Action** Open the Master making unit and wind the Master roll. Then reset master in place. Press the START key to resume operation.	**p.98**
Pull Out Print Drum and Remove Master	Master was not cut correctly. **Action** ①Open the Front cover and pull out the Drum unit. Then remove the master on the Drum unit and return the Drum unit into the original position. ②Open the Master making unit and wind the Master roll. Then reset master in place. After closing the Master making unit, resume operation from master-making.	**p.74, 98**
!!System Error!! Rewind Master Roll and Reset Master in Place	The cutter did not operate in master cutting. **Action** Open the Master making unit and wind the Master roll. Then close the Master making unit.	**p.98**

Errors in Master-Making Area

Message	Description and Action	Reference
Master Disposal Error Pull Out Print Drum and Discard Master	A used master remains on the Drum unit. **Action** Open the Front cover, pull out the Drum unit and remove the remaining master. After returning the Drum unit to its position, press the START key to restart the master-making operation.	**p.74**
Master Jammed in Disposal Unit Open Scanner Table and Disposal Entrance Cover, then Remove Master	A used master is stuck at the entrance of the Master disposal unit. **Action** Open the Scanner table and the Disposal entrance cover, and then remove the stuck master inside. To open the Disposal entrance cover, pull up the handle, tilting down the green lever.	**p.98**



Errors in Printing Area

Message	Description and Action	Reference
No Master on Print Drum Make a New Master	There is no master on the Drum unit. **Action** Place an original on the Platen glass or in the optional ADF unit and press the START key.	**p.28**
Paper Jam Check Paper Feed Area and Press [R•8V] Key	Paper was not fed or was improperly fed. **Action** Check paper on the Paper feed tray and remove jammed paper if any. Then press the [R•8V] function key.	**p.20**
Paper Jam Pull Out Print Drum and Remove Paper	Paper is jammed on or under the Drum. **Action** Open the Front cover, pull out the Drum unit and remove the jammed paper.	**p.74**

⚠ Caution **Take extra care not to hurt your hand by the sharp tip of the paper separation hook when removing the paper jammed inside the machine.**

Paper Separation Hook

Errors in Printing Area

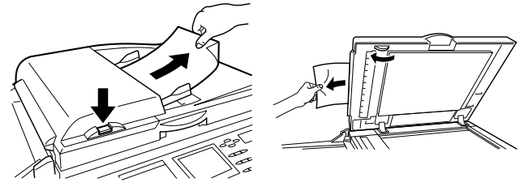
Message	Description and Action	Reference
Paper Jam Check Paper Ejection Area and Press [R•8V] Key	Paper was not ejected properly. **Action** Check the paper ejection area and remove jammed paper if any. Then press the [R•8V] function key.	**p.21**
Check Paper Feed Tray	The safety switch under the Paper feed tray has been activated. **Action** Check the paper feed area for any obstructions and clear it if an obstacle is found.	**p.20**

NOTE **TO PREVENT PAPER JAMS**

- Use flat printing paper that is free of folds. If curled paper is unavoidable, place it so that the curl faces down.
☞ **p.18**
- When using smooth paper for printing, set the Paper feed pressure adjustment lever to ⇔ (CARD).
☞ **p.20**

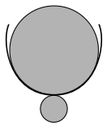
Errors in Optional ADF Unit

Message	Description and Action	Reference
Original Jam Remove Original, Holding down Original Release Button, and Press [R•8V] Key	An original has jammed in the optional ADF unit. **Action** Pull out the original, while holding down the Original release button.	



Action If the original has fed too far to be removed from the entrance side of the ADF unit, open the ADF unit and pull out the original, while turning the Original release dial at the bottom of the machine.

☐ Printing paper sticks to the drum surface.



Action
- Use recommended printing paper.
  ☞ **p.18**
- Lower the vertical print position with the VERTICAL PRINT POSITION Adjustment key.
  ☞ **p.39**
- Replace the original in the reverse direction and restart printing from the beginning (master-making).

☐ Paper cannot feed well.

- Paper slips.

Action
- Set the Paper feed pressure adjustment lever to ⇳ (CARD).
  ☞ **p.20**
- Change the Paper feed mode according to the type of the paper in use.
  ☞ **p.20**

Troubleshooting Tips

This section describes how to take care of problems that may arise with your RISOGRAPH.
Check the following "Tips List" and the related items before calling your authorized service representative.

The machine does not start even when the power switch is pressed. 110
The "Close Front Cover" message appears even when the Front cover is closed. 110
There is no image on prints. 110
The unwanted background of an original is picked up on prints. 110
Prints are incomplete; some images are missing or unclear. 110
Printed copies are half or three quarter blank in the Multi-Up printing. 111
Printed images are excessively faint or blurred. 111
Vertical blank lines are found on printed copies. 111
The back of finished prints are smudged with ink. 111
Printing paper sticks to the drum surface. 112
Paper cannot feed well. 112

☐ The machine does not start even when the power switch is pressed.

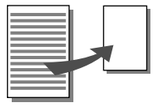
Action
- Check whether the electrical cord is firmly connected to an electrical outlet.
- Check whether the electrical cord is connected to the unit.
- Check whether the commercial electrical circuit breaker is on.

☐ The "Close Front Cover" message appears even when the Front cover is closed.

- There is a metal plate in the lower right-hand section of the Front cover. Unless this plate is in direct contact with the magnet on the lower right-hand part of the machine, the advisory message remains on the Main Display.

Action Press on the lower right-hand area of the Front cover to close it tightly.

☐ There is no image on prints.



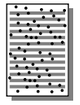
- Check whether the original is correctly placed.

Action Be sure it is placed face down.
☞ p.28

- Check whether the master is correctly placed.

Action Be sure that it is placed with the leading edge unrolled from below.
☞ p.98

☐ The unwanted background of an original is picked up on prints.



- If newspaper or coloured paper is used as an original, the background might have been picked up on prints.

Action Press the SCANNING CONTRAST Adjustment key to make the scanning contrast lighter. Then replace the original and press the START key.
☞ p.36

☐ Prints are incomplete; some images are missing or unclear.



- The Platen glass is stained with correction fluid or glue.

Action Open the Platen cover (or the optional ADF unit table) and clean the Platen glass using a soft cloth or tissue.
☞ p.119

- Something sticks on or under the master on the Drum.

Action Pull out the Drum and remove the stack item.
☞ p.74

- The Platen cover was open during scanning.

Action Images were not scanned properly because of exposure to light. Be sure that the Platen cover (or the optional ADF unit table) is closed during scanning.

- The paper size indicated in the Main Display may be smaller than the actual size of printing paper loaded on the Paper feed tray.
In this case, the images placed beyond the displayed paper size on originals might not be printed on copies.

Action Make the displayed paper size equal to the actual one.

☐ Printed copies are half or three quarter blank in the Multi-Up printing.



- The initial setting of the Multi-Up printing feature is adjusted to provide a 15-second interval for placing the following originals.

Action Change the initial setting of the Multi-Up printing feature to cancel the interval time.
☞ p.72

- The STOP key may have been pressed by mistake during scanning originals.

Action Repeat operation from the beginning.

☐ Printed images are excessively faint or blurred.



- If the machine is not used for a long period of time, ink on the surface of the Drum may dry. Dry ink on the Drum unit may cause faint or blurred printing.

Action Press the TEST PRINT key several times until a clear printed image is obtained.
☞ p.31

Action Activate the Automatic Idle feature before operation to prevent light images that may occur after periods of non-use.
☞ p.69

- Light originals result in light images.

Action Press the SCANNING CONTRAST Adjustment key to make scanning contrast darker. Then replace the original and press the START key.
☞ p.36

- If the temperature is low (below 15℃) or the Ink cartridges are stored in a cold place, ink may not flow smoothly.

Action Warm the room or Ink cartridge before operating the machine.

☐ Vertical blank lines are found on printed copies.



- The Thermal print head (the device that makes the master) may be smudged with paper powder from the master.

Action Open the Master making unit and clean the Thermal print head using a soft cloth or tissue.
☞ p.119

- The Platen glass may be stained with correction fluid or dust.

Action Open the Platen cover (or the optional ADF unit table) and gently clean the Platen glass using a soft cloth or tissue.
☞ p.119

If the optional ADF unit is installed:

- The ADF scanner glass may be smudged with dust or correction fluid.

Action Open the ADF unit table and clean the glass using a soft cloth or tissue.
☞ p.120

☐ The back of finished prints are smudged with ink.



- The rubber Press roller, which keeps printing paper pressed against the Drum during printing, may be stained with ink.

Action Remove the Drum and clean the roller gently with a soft cloth or tissue.
☞ p.119

- The paper size indicated in the Main Display may be larger than the actual size of printing paper loaded on the Paper feed tray.
In this case, images might be printed beyond the paper frame, causing the rubber Press roller to be stained with ink.

Action Make the displayed paper size equal to the actual one.
☞ p.27, 82

Troubleshooting Tips (PC Data Mode)

This section describes how to take care of problems that may arise in relation to operations in the PC data mode.
Check the related items as instructed in this section before calling your authorized service representative.

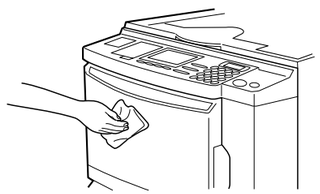
Problem	Cause	Action
The number of copies specified on the computer is not applied to the print job.	"Necessary" is selected for the "Copy Count Entry" in the Mode configuration window.	Change the setting to "Not necessary". ☞ **p.91**
The number of copies cannot be entered for the current print job.	The number of copies specified on the computer appears in the Print quantity display.	Press the C key to reset the Print quantity display to zero.
The print job does not proceed as specified in the Auto process feature on the computer.	"PC Selection" is not selected for the "Data Process Step" in the Mode configuration window.	Select "PC Selection". ☞ **p.91**
The print job does not start even when document data is received in the Local connection mode.	The Document data spooling function is activated.	Select "OFF" for the "Doc. Data Spooling" in the Mode configuration window.
The RISOGRAPH repeats the master-making process for each copy of the identical page.	The [Collate Copies] or [Collate] option was selected as a print condition for the received document data.	Cancel the current print job and send the document data concerned again without selecting the [Collate Copies] or [Collate] option as a print condition.
The message "Data Receiving Error" is displayed in the Output option window.	A communication error has occurred while receiving the current document data.	Print out the received document data to check what document data have not been received and request to transmit the remaining data again.
Document data cannot be received through the modem.	The modem has no power.	Check the power cord and power switch of the modem.
	The power of the RISOGRAPH is turned off.	Turn it on.
	The cables are not correctly connected to the modem and/or the public telecommunication line.	Check if the modem cable is securely connected between the serial port of your RISOGRAPH and the LINE terminal of the modem.
		Check if the telecommunication wire is securely connected between the PHONE terminal of the modem and the public telecommunication line socket.
	"Local Connection" is selected as communication mode in the Mode configuration window.	Select "Remote Transmit" as communication mode. ☞ **p.91**
	The interface memory of your RISOGRAPH is full of spooled document data.	Print out the spooled document data and clear them from the interface memory.
	A communication error has occurred while receiving the document data, causing the message "Data Receiving Error" to appear in the Output option window.	Print out the received document data and clear them from the interface memory of your RISOGRAPH.

Problem	Cause	Action
	A unique configuration is selected for the static memory in the modem.	Recover the factory-set configuration of the static memory in the modem, referring to the user's guide of the modem concerned.
	The data transmission level of the modem is not suitable for your RISOGRAPH.	Adjust the data transmission level of the modem, referring to the user's guide or contacting the manufacturer of the modem concerned.
"Unknown" appears in the lines of several listed items when the File data window is opened for the received document data.	The dedicated communication utility software, RISORINC Manager, was not used to transmit the document data.	Use the RISORINC Manager to transmit data if you want to know the details of all listed items in the File data window. ☞ **p.85**
The receipt time and/or date of the document data, which is displayed in the File data window, is not correct.	The system clock and calendar of your RISOGRAPH are not correctly adjusted.	Adjust them correctly in the Custom initial setting list window. ☞ **p.73**

Cleaning the Machine Exterior

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

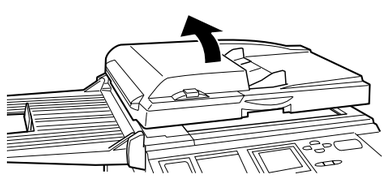
To remove stains, use an appropriate cleanser recommended by your authorized service representative.



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

Cleaning the Optional ADF Scanner Glass

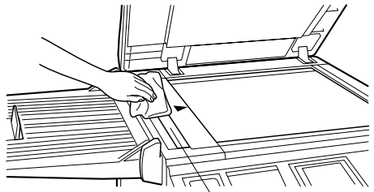
1 **Open the Optional ADF Unit Table.**



2 **Wipe the Scanner Glass.**

Gently wipe the Scanner Glass several times with a soft cloth or tissue.

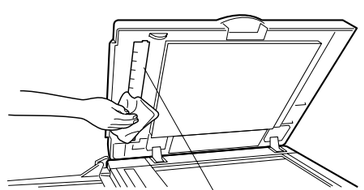
NOTE For more effective cleaning, dampen a soft cloth or tissue with a small amount of alcohol before wiping the Scanner Glass.



⚠ **Caution** **Since the Scanner Glass is very delicate, avoid shocks or scratching with a hard object.**

Cleaning the Optional ADF White Sheet

1 **Open the Optional ADF Unit Table.**



2 **Wipe the White Sheet.**

Gently wipe the White Sheet several times with a soft cloth or tissue.

Maintenance

This section describes the actions to be taken to maintain your RISOGRAPH in proper working order.

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Cleaning : Preventing Defective Prints 119

Safety Guides - Maintenance

⚠WARNING [To Avoid Personal Injury]

- DO NOT allow unauthorized persons to make adjustments or repairs.
- DO NOT remove any fixed covers.
- CALL your dealer immediately if you have questions or problems with the machine.
- When you want to move the machine, contact your dealer.

⚠ Caution [To Avoid Mechanical Problems]

- Precision parts and driving mechanisms are contained in the unit. Do not perform actions other than those described in this manual.
- Don't make any modifications to the unit or remove parts.
- Neither RISO nor its dealer is responsible for maintenance service performed by non-RISO-authorized personnel.

Replacing the Lithium Battery

The lithium battery in your machine should last about five years.

When the battery has lost most of the power, however, the message to the right appears in the Main Display. In this case, call your authorized service representative and request to replace battery.

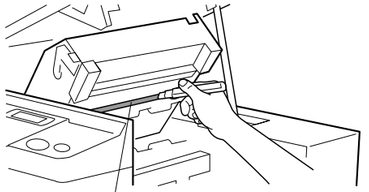
!!Battery Replacement!!
Call Service
(To Continue, Press R•8V Key)

⚠ **Caution** **The lithium battery must be replaced by a trained and authorized service representative.**

Cleaning : Preventing Defective Prints

Cleaning the Thermal Print Head

Clean the Thermal Print Head after every two Master rolls. Lift up the Scanner table and open the Master making unit. Then gently wipe the Thermal Print Head (inside the unit) several times with a soft cloth or tissue.



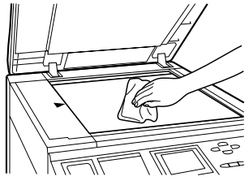
NOTE For more effective cleaning, dampen a soft cloth or tissue with a small amount of alcohol before wiping the Thermal Print Head.

⚠ **Caution** **Since the Thermal Print Head is very delicate, avoid shocks or scratching with a hard/sharp object.**

Cleaning the Platen Glass and Platen Cover

If the Platen Glass and/or Platen Cover is stained, imperfections may appear on prints.

Wipe them gently with a soft cloth or tissue.

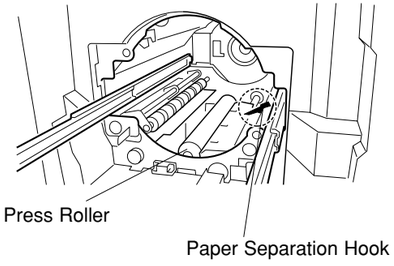


⚠ **Caution** **Since the Platen Glass is very delicate, avoid knocking or scratching with a hard object.**

Cleaning the Press Roller

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

In such a case, wipe the Pressure Roller thoroughly with a soft cloth dampened with alcohol, or feed scrap paper with a blank master loaded on the Drum unit using the Confidential feature.



⚠ **Caution** **Take extra care not to hurt your hand by the sharp tip of the Paper Separation Hook when wiping the Press Roller.**

Specifications - RN2050

Processing	High-speed automatic digital scanning/fully automatic, thermal screening duplicating system
Time to First Copy	A4 original : approx. 20 seconds
Print Speed	5 selectable print speeds (60 to 130 sheets per minute)
Scanning Resolution	300 × 400 dpi
Original Input Type	Bound documents or sheets
Original Size	- For the Platen Glass - 50 × 90 mm to 297 × 420 mm - In the optional ADF Unit - 90 × 140 mm to 297 × 420 mm (A3)
Output Paper Size	90 × 140 mm to 290 × 395 mm
Original Weight	- For the Platen Glass - 10 kg or less - In the optional ADF Unit - 50 g/m² to 110 g/m²
Output Paper Weight	46 g/m² to 210 g/m²
Image Area	251 × 357 mm
Paper Capacity	1000 sheets in feed and receiving tray (64 g/m²)
Enlargement Parameters	3 selectable enlargements: 141%, 122% and 116%
Reduction Parameters	4 selectable reductions: 94%, 87%, 82% and 71%
Zooming Parameters	50% to 200%
Features	• Large-format display screen • Print Speed/Density control (auto/manual) • Confidential mode • Multi-Up printing • Book document processing • Programmed printing • Print job memory mode • Duo mode • Dot screen mode • Photo mode • Interface capabilities • Automatic idle • Scanning contrast adjustment (auto/manual) • Precision stacking tray • Preventive maintenance call
Print Colours	A wide range of colours including: black, blue, red, green, brown, yellow, etc.
Optional Accessories	Colour Drum, ADF Unit Ⅴ, Job Separator Ⅲ, Key/Card Counter Ⅳ, Printer Control Board, Network Interface Card and Interface Control Boxes
Power Source <Requirements>	RN2050EP : 220-240 V AC, 50/60 Hz <1.5 A> ⚠ **WARNING** **Always check the rating plate on the machine before connecting the power.**
Weight	Approx. 95 kg
Dimensions (W × D × H)	In use: 1,300 × 645 × 1,045 mm In storage: 735 × 645 × 1,045 mm

NOTE The specifications are subject to change without prior notice. Please acknowledge that the illustrations and descriptions in this manual may differ from the actual machine, due to the change in specifications.

Appendices

This section includes information on options and specifications.

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Optional Accessories

A variety of optional accessories are available to enhance the capabilities of your RISOGRAPH RN series models.

Colour Drum Units

A variety of colours are available, such as blue, red, green, and brown. Each Drum Unit has its own case for storage.

☞ **p.74** ....By exchanging the Drum Units, you can achieve multi-colour prints.

Job Separator Ⅲ

This accessory efficiently sorts groups of prints with strips of paper as they are printed. The Job Separator is attached next to the Paper receiving tray.

RISOGRAPH ADF Unit Ⅴ

The Automatic Document Feed (ADF) Unit automatically feeds up to 50 sheets for scanning. When you use the ADF Unit with the Auto Process, Programmed Printing, Multi-Up printing, or Print Job Memory features, multiple print jobs can be set up and completed automatically.

Interface Control Boxes [Except for RN21 series models]

The dedicated Interface control boxes enable you to combine all the advantages of your desktop publishing software with the high speed efficiency and low cost printing benefits of your RISOGRAPH.

Key/Card Counter Ⅳ

This counter shows the numbers of printed sheets and consumed masters within a preset period of time. This can help you control costs.

Network Interface Card RISORINC2-NET-A

This card can be seated on the built-in printer control board RISORINC2, extending the activity field of your RISOGRAPH into the Ethernet network environment. When your RISOGRAPH is connected to the Ethernet LAN environment, besides, the operation status can be checked on your PC screen, using the accessory monitoring utility software, RISO-MONITOR.

Printer Control Board RISORINC2 [Except for RN21 series models]

This printer control board can be built in your RISOGRAPH, converting it into a PC printer with standard parallel and serial communication ports. This control board also enables your RISOGRAPH to receive PC document data to be sent from a remote location over the public telecommunication lines.

Specifications - RN2000

Processing	High-speed automatic digital scanning/fully automatic, thermal screening duplicating system
Time to First Copy	A4 original : approx. 20 seconds
Print Speed	5 selectable print speeds (60 to 130 copies per minute)
Scanning Resolution	300 × 400 dpi
Original Input Type	Bound documents or sheets
Original Size	- For the Platen Glass - 50 × 90 mm to 297 × 420 mm - In the optional ADF Unit - 90 × 140 mm to 297 × 420 mm (A3)
Output Paper Size	90 × 140 mm to 290 × 395 mm
Original Weight	- For the Platen Glass - 10 kg or less - In the optional ADF Unit - 50 g/m² to 110 g/m²
Output Paper Weight	46 g/m² to 210 g/m²
Image Area	204 × 290 mm
Paper Capacity	1000 sheets in feed and receiving tray (64 g/m²)
Enlargement	3 selectable enlargements: 141%, 122% and 116%
Reduction	4 selectable reductions: 94%, 87%, 82% and 71%
Zoom	50% to 200%
Features	• Large-format display screen • Print Speed/Density control (auto/manual) • Confidential mode • Multi-Up printing • Book document processing • Programmed printing • Print job memory mode • Duo mode • Dot screen mode • Photo mode • Interface capabilities • Automatic idle Scanning contrast adjustment (auto/manual) • Precision stacking tray • Preventive maintenance call
Print Colours	A wide range of colours including: black, blue, red, green, brown, yellow, etc.
Optional Accessories	Colour Drum Unit, ADF Unit Ⅴ, Job Separator Ⅲ, Key/Card Counter Ⅳ, Printer Control Board, Network Interface Card and Interface Control Boxes
Power Source <Requirements>	RN2000EP : 220-240 V AC, 50/60 Hz <1.5 A> ⚠ **WARNING** **Always check the rating plate on the machine before connecting the power.**
Weight	Approx. 95 kg
Dimensions (W × D × H)	In use: 1,300 × 645 × 1,045 mm In storage: 735 × 645 × 1,045 mm

NOTE The specifications are subject to change without prior notice. Please acknowledge that the illustrations and descriptions in this manual may differ from the actual machine, due to the change in specifications.

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Specifications - RN2100

Processing	High-speed automatic digital scanning/fully automatic, thermal screening duplicating system
Time to First Copy	A4 original : approx. 20 seconds
Print Speed	5 selectable print speeds (60 to 130 copies per minute)
Scanning Resolution	300 × 400 dpi
Original Input Type	Bound documents or sheets
Original Size	- For the Platen Glass - 50 × 90 mm to 297 × 420 mm - In the optional ADF Unit - 90 × 140 mm to 297 × 420 mm (A3)
Output Paper Size	90 × 140 mm to 290 × 395 mm
Original Weight	- For the Platen Glass - 10 kg or less - In the optional ADF Unit - 50 g/m² to 110 g/m²
Output Paper Weight	46 g/m² to 210 g/m²
Image Area	204 × 290 mm
Paper Capacity	1000 sheets in feed and receiving tray (64 g/m²)
Enlargement	3 selectable enlargements: 141%, 122% and 116%
Reduction	4 selectable reductions: 94%, 87%, 82% and 71%
Zoom	50% to 200%
Features	• Large-format display screen • Print Speed/Density control (auto/manual) • Confidential mode • Multi-Up printing • Book document processing • Programmed printing • Print job memory mode • Duo mode • Dot screen mode • Photo mode • Direct computer interface • Automatic idle • Scanning contrast adjustment (auto/manual) • Precision stacking tray • Preventive maintenance call
Print Colours	A wide range of colours including: black, blue, red, green, brown, yellow, etc.
Optional Accessories	Colour Drum Unit, ADF Unit Ⅴ, Job Separator Ⅲ, Key/Card Counter Ⅳ and Network Interface Card
Power Source <Requirements>	RN2100EP : 220-240 V AC, 50/60 Hz <1.5 A> ⚠ **WARNING** **Always check the rating plate on the machine before connecting the power.**
Weight	Approx. 97 kg
Dimensions (W × D × H)	In use: 1,300 × 645 × 1,045 mm In storage: 735 × 645 × 1,045 mm

Interface Specifications

CPU	SH-3 (66 MHz)
Available PDL	RISORINC2
Applicable OS	Windows95/98, WindowsNT4.0 and MAC OS*
Available Input Port	• Parallel (IEEE1284A Centronics) • Serial (RS-232C) for communication devices • Ethernet (10BASE-T/100BASE-TX)*
Memory	64MB

* The optional Network Interface Card RISORINC2-NET-A is required to use the RN21 series model as a network printer in LAN (Local Area Network) or to connect with Macintosh.

NOTE The specifications are subject to change without prior notice. Please acknowledge that the illustrations and descriptions in this manual may differ from the actual machine, due to the change in specifications.

Specifications - RN2150

Processing	High-speed automatic digital scanning/fully automatic, thermal screening duplicating system
Time to First Copy	A4 original : approx. 20 seconds
Print Speed	5 selectable print speeds (60 to 130 sheets per minute)
Scanning Resolution	300 × 400 dpi
Original Input Type	Bound documents or sheets
Original Size	- For the Platen Glass - 50 × 90 mm to 297 × 420 mm - In the optional ADF Unit - 90 × 140 mm to 297 × 420 mm (A3)
Output Paper Size	90 × 140 mm to 290 × 395 mm
Original Weight	- For the Platen Glass - 10 kg or less - In the optional ADF Unit - 50 g/m² to 110 g/m²
Output Paper Weight	46 g/m² to 210 g/m²
Image Area	251 × 357 mm
Paper Capacity	1000 sheets in feed and receiving tray (64 g/m²)
Enlargement Parameters	3 selectable enlargements: 141%, 122% and 116%
Reduction Parameters	4 selectable reductions: 94%, 87%, 82% and 71%
Zooming Parameters	50% to 200%
Features	• Large-format display screen • Print Speed/Density control (auto/manual) • Confidential mode • Multi-Up printing • Book document processing • Programmed printing • Print job memory mode • Duo mode • Dot screen mode • Photo mode • Direct computer interface • Automatic idle • Scanning contrast adjustment (auto/manual) • Precision stacking tray • Preventive maintenance call
Print Colours	A wide range of colours including: black, blue, red, green, brown, yellow, etc.
Optional Accessories	Colour Drum, ADF Unit Ⅴ, Job Separator Ⅲ, Key/Card Counter Ⅳ and Network Interface Card
Power Source <Requirements>	RN2150EP : 220-240 V AC, 50/60 Hz <1.5 A> ⚠ **WARNING** **Always check the rating plate on the machine before connecting the power.**
Weight	Approx. 97 kg
Dimensions (W × D × H)	In use: 1,300 × 645 × 1,045 mm In storage: 735 × 645 × 1,045 mm

Interface Specifications

CPU	SH-3 (66 MHz)
Available PDL	RISORINC2
Applicable OS	Windows95/98, WindowsNT4.0 and MAC OS*
Available Input Port	• Parallel (IEEE1284A Centronics) • Serial (RS-232C) for communication devices • Ethernet (10BASE-T/100BASE-TX)*
Memory	64MB

* The optional Network Interface Card RISORINC2-NET-A is required to use the RN21 series model as a network printer in LAN (Local Area Network) or to connect with Macintosh.

NOTE The specifications are subject to change without prior notice. Please acknowledge that the illustrations and descriptions in this manual may differ from the actual machine, due to the change in specifications.

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