

RICOH**D131/D132/D133
Service Training****MT-C5**

Slide 1

Version 1.0

This training course provides service technician training for the MT-C5 series. It only explains the differences from the MT-C4, so knowledge of that model is required.

RICOH**D131/D132/D133
Service Training****Product Overview**

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This section provides an overview of the machine, and the options that can be installed.

How many Models?

- ❑ **Three models**
 - ♦ MT-C5a (D131): Aficio MP 6002
 - » 60 pages per minute (A4/LT LEF)
 - » Warm-up time: 30s
 - ♦ MT-C5c (D132): Aficio MP 7502
 - » 75 pages per minute (A4/LT LEF)
 - » Warm-up time: 30s
 - ♦ MT-C5e (D133): Aficio MP 9002
 - » 90 pages per minute (A4/LT LEF)
 - » Warm-up time 300 s: Hot roller has a thicker surface layer than the other three models
- ❑ **Each model has two versions: One without printer/scanner kit (basic model), and one with printer/scanner kit (SP model)**
 - ♦ So, there are a total of six different machines.
 - ♦ Basic models can be upgraded to SP models.
- ❑ **All models contain an ARDF and a color scanner.**

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Other differences

- ❑ D133 fusing unit has no pressure release mechanism
- ❑ D133 development unit has a pressure release tube

Differences between Basic and SP Models

| | Basic models | SP models |
|--------------------------------|--|--|
| Function | Copier (Printer and Scanner are optional) | Copier, Printer, Scanner |
| Memory | 1 GB standard | 1.5 GB standard |
| HDD | 250 GB standard | 250 GB standard |
| VM card | Optional | Standard |
| App2Me | Not included; download from web site after installing the optional VM card | Standard |
| PDF direct print | Optional | Standard |
| Data overwrite security | Standard; included on the controller board | Standard; included on the controller board |
| HDD encryption | Standard; included on the controller board. | Standard; included on the controller board |

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Optional memory and hard disk

- ❑ When a customer wishes to upgrade a basic model with a printer/scanner kit, 512 MB of memory must be installed. This memory is supplied with the printer/scanner option.


Appearance

Finishers


3,000-sheet finisher with 50-sheet stapling (SR4060)




2,000-sheet booklet finisher with 50-sheet stapling (SR4070)



3000-sheet finisher with 100-sheet stapling (SR4080)




Mainframe




Other Finishing Options


Copy Tray (Type 9002)




Cover Interposer Tray (CI4000)



Multi Folding Unit (FD5020)




Mail Box (CS4000)



LCT Option

LCT (LCIT RT4010)



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No additional notes

Installation Requirements for Peripherals - 1

| Unit | Requires | Cannot Install at the Same Time |
|--------------------------------------|--|--|
| 8 1/2"x14" Paper Size Tray Type 9002 | LCIT RT4010 | |
| Finisher SR4060 | | Finisher SR4080, Booklet Finisher SR4070, Copy Tray Type 9002, Multi-Folding Unit FD5020 |
| Booklet Finisher SR4070 | | Finisher SR4060, Finisher SR4080, Copy Tray Type 9002 |
| Finisher SR4080 | | Finisher SR4060, Booklet Finisher SR4070, Copy Tray Type 9002, Mail Box CS4000 |
| Output Jogger Unit Type 9002A | Finisher SR4060 or Booklet Finisher SR4070 | Finisher SR4080 |
| Output Jogger Unit Type 9002B | Finisher SR4080 | Finisher SR4060 or Booklet Finisher SR4070 |
| Punch Unit Type 3260 | Finisher SR4060 or Booklet Finisher SR4070 | |
| Punch Unit Type 1075 | Finisher SR4080 | |
| Punch Unit Type 850 | Finisher SR4080 | |

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No additional notes

Installation Requirements for Peripherals - 2

| Unit | Requires | Cannot Install at the Same Time |
|------------------------------|---|--|
| Mail Box CS4000 | Finisher SR4060 or Booklet Finisher SR4070 | Finisher SR4080, Cover Interposer Tray CI4000, Copy Tray Type 9002 |
| Cover Interposer Tray CI4000 | Finisher SR4060, Booklet Finisher SR4070 or Finisher SR4080 | Mail Box CS4000, Copy Tray Type 9002 |
| Copy Tray Type 9002 | | Finisher SR4060, Booklet Finisher SR4070, Finisher SR4080 |
| Multi-Folding Unit FD5020 | Booklet Finisher SR4070 or Finisher SR4080 | Finisher SR4060 |

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No additional notes

Options: Paper Feed and Finishing (1)

| | | Also used with these models: | Similar to: | Note |
|---|-----|------------------------------|-------------|---------------------|
| Side LCT (D613) RT4010 | New | | MT-C4 | Cover color changed |
| 8 1/2"x14" Paper Size Tray Type 9002 (B474) | New | | MT-C4 | |
| Finisher SR4060 (D611) | New | | MT-C4 | |
| Booklet Finisher SR4070 (D612) | New | | MT-C4 | |
| Finisher SR4080 (D610) | New | | MT-C4 | |
| Output Jogger Unit Type 9002A (B703) | New | | MT-C4 | |
| Output Jogger Unit Type 9002B (B513) | New | | MT-C4 | |
| Punch Unit Type 3260 (B702) | | | MT-C4 | |
| Punch Unit Type 1075 (B531) | | | MT-C4 | |
| Punch Unit Type 850 (A812) | | | MT-C4 | |

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No additional notes

Options: Paper Feed and Finishing (2)

| | | Also used with these models: | Similar to: | Note |
|-------------------------------------|-----|------------------------------|-------------|------|
| Mail Box CS4000 (D616) | New | | MT-C4 | |
| Cover Interposer Tray CI4000 (D614) | New | | MT-C4 | |
| Multi-Folding Unit FD5020 (D615) | New | | MT-C4 | |
| Copy Tray Type 9002 (B756) | New | | MT-C4 | |
| A3/11" x 17" Tray Type 9001 (D482) | New | | MT-C4 | |
| Tab Sheet Holder Type 9002 (B499) | New | | MT-C4 | |

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No additional notes

Options: Printer, Scanner, & Fax Units

| | | Also used with these models: | Similar to: | Note |
|--------------------------------------|-----|------------------------------|-------------|---|
| D620: Printer/Scanner Unit Type 9002 | New | | | |
| D620: PostScript3 Unit Type 9002 | New | | | |
| D620: IPDS Unit Type 9002 | New | | | |
| D619: Fax Option Type 9002 | New | | | |
| D619: G3 Interface Unit Type 9002 | New | | | |
| D621: Fax Connection Unit Type E | New | | | For the Remote Fax feature (new function) |
| G578: Memory Unit Type B 32MB | | OR-C1, AP-C3, AT-C3 | | For fax |

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- ❑ There is no optional fax handset.

Options: Controller

| | | Also used with these models: | Similar to: | Note |
|--|-----|------------------------------|-------------|---|
| D377: DOS Unit Type H | | MT-C4 | | For CC certification |
| D566: Bluetooth Interface Unit Type D | | OR-C1, AP-C3, AT-C3, AL-C2 | | USB type; not previously used in the MT-series |
| B679: IEEE 1284 Interface Board Type A | | MT-C4 | | |
| D377: IEEE 802.11a/g Interface Unit Type J | | MT-C4 | | |
| D377: IEEE 802.11g Interface Unit Type K | | MT-C4 | | |
| D377: Gigabit Ethernet Type B | | MT-C4 | | |
| D620: Browser Unit Type J | New | | | |
| D640: VM Card Type U | | AL-C2 | | Option for Basic models; SP models include this |
| B849: Copy Data Security Unit Type F | | MT-C4 | | |
| D377: File Format Converter Type E | | MT-C4 | | |
| B328: Copy Connector Type 3260 | | MT-C4 | | |
| D620: SD card for NetWare printing Type L | New | | | |

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No additional notes

Options: Other

| | | Also used with these models: | Similar to: | Note |
|--|--|------------------------------|-------------|------|
| B452: Key Counter Bracket Type 1027 | | MT-C4 | | |
| B498: Card Reader Bracket | | MT-C4 | | |
| B870: Optional Counter Interface Unit Type A | | MT-C4 | | |
| D593: ADF Handle Type C | | OR-C1 | | |

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No additional notes

Controller Options

Memory Upgrade Options

- ☐ **There are no memory upgrades.**

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- ☐ Printer/scanner memory is included in the printer/scanner option.
- ☐ There is no fax memory upgrade option.

Controller Options

Printer/Scanner

- ❑ **The SP model already contains printer and scanner features.**
 - ◆ No set-up is needed at installation.
- ❑ **The basic models can be upgraded as follows:**
 - ◆ To the basic model, add a printer/scanner unit and 512 MB memory to make an SP model.
- ❑ **It is not possible to install a scanner option without the printer option.**
- ❑ **Note that the 512 MB memory is included in the printer and printer/scanner upgrade kits.**

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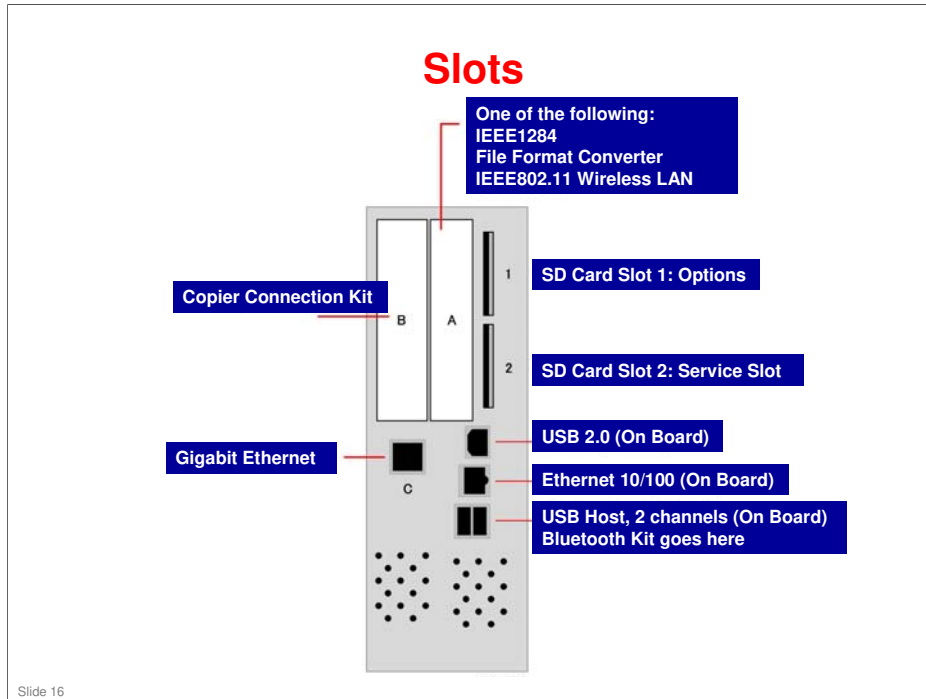
No additional notes

Controller Options Fax Unit

- ❑ In this fax unit, the FCU and MBU boards have been combined. Because of this, the data backup procedure has been changed.
- ❑ The optional memory module is the same as previous models.
- ❑ The FCU contains the ROM, SRAM and NCU circuits.
- ❑ Fax Options:
 - ◆ Extra G3 Interface option: This provides one more analog line interface. This allows full dual access. Two extra G3 interface options can be installed.
 - ◆ Memory Expansion: This expands the SAF memory and the page memory (used for image rotation); without this expansion, the page memory is not big enough for image rotation at 400 dpi, so transmission at 400 dpi is not possible.
 - ◆ There is no optional handset.

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No additional notes



- ❑ The SD Card slots are discussed in more detail on the next few slides.

SD Card Slots (1)

❑ Slot 1 (upper slot):

- ♦ The SP model has an SD card with the following applications in slot 1 when shipped:
Printer/scanner, PDF Direct, VM, App2Me.
 - » App2Me and VM must be enabled by the user with user tools
- ♦ The basic model has an empty SD card in slot 1 when shipped.

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Printer/Scanner Unit Service manual, SD Card Appli Move

- ❑ Note that PostScript 3 and PDF Direct can now be moved to another SD card. In previous models, this is not possible because of licensing restrictions.

SD Card Slots (2)

❑ Slot 2 (lower slot):

- ◆ Empty when shipped
- ◆ Use this slot for service procedures, such as firmware update and NVRAM backup.
- ◆ Use when installing the SD card options

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No additional notes

SD Card Slots (3)

❑ Operation panel SD card slot:

- ◆ Use this for SMC data export (SP5992). The service slot does not support this function.
- ◆ PDF direct print from SD card



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No additional notes

Data Overwrite Security, HDD Encryption

- ❑ **These features are built into the controller board for all models.**
 - ◆ There is no Security SD Card.
- ❑ **At installation, these features must be enabled with SP mode.**
 - ◆ Service Manual > Installation > Copier Installation > Installation Procedure > Data Overwrite Security
 - ◆ Service Manual > Installation > Copier Installation > Installation Procedure > HDD Encryption
- ❑ **Then the user must switch them on with a User Tool.**

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No additional notes

RICOH**D131/D132/D133
Service Training****Improved Features and Specifications**

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This section explains the important changes to the specifications since the MT-C4 series.

Comparing Specifications with Previous Models

| | MT-C4 | MT-C5 |
|--|---|---|
| Copy speed (copies per minute) | C4a: 60, C4b: 70, C4d: 80, C4e: 90 | C5a: 60, C5c: 75 , C5e: 90 |
| First copy time (seconds) | C4a: 4.2, C4b: 3.5, C4d: 3.5, C4e: 3.3 | C5a: 3.9, C5c: 3.2, C5e: 2.9 |
| Warm-up time (seconds) | C4a: 30, C4b: 30, C4d: 60, C4e: 300 | C5a: 30, C5c: 30, C5e: 300 |
| Max Power Consumption (kW) | NA: All models 1.8kW EU/Asia: C4a/b/e: 1.9kW, C4d: 1.95kW | NA: C5a: 1.8, C5c: 1.8, C5e: 1.9 EU/Asia: All models 1.9kW |
| Paper weight | Standard Tray: 52 - 128 gsm (14 - 34 lb) Bypass Tray: 52 - 216 gsm (14 - 57 lb) Duplex: 63 - 128 gsm (17 - 34 lb) | Standard Tray: 52 - 216 gsm (14 - 57 lb) Bypass Tray: 52 - 216 gsm (14 - 57 lb) Duplex: 63 - 169 gsm (17 - 45 lb) |
| Scanning Speed (b/w, images per minute, A4, 200 dpi) | Single-sided: 80 ipm Duplex: 130 ipm | Single-sided: 90 ipm Duplex: 178 ipm |

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- ❑ The red text shows improvements since the MT-C4.
- ❑ Why is the warm-up time so long for MT-C5e?
 - The outer layer of the hot roller is much thicker, to enable higher productivity. Because of this, the fusing unit takes longer to warm up.

Targets

| | MT-C4 | MT-C5 |
|----------------------------------|--|---|
| ACV, per month | C4a: 25k C4b: 30k C4d: 50k C4e: 70k | C5a: 20k C5c: 29k C5e: 36k |
| PM Cycle | 300k | 300k |
| MCBC (Mean Copies Between Calls) | 120k | 120k |
| Estimated Unit Life | 9,000k or 5 years whichever comes first | 9,000k or 5 years whichever comes first |

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No additional notes

Yield of Consumables

- ☐ **Same as MT-C4**

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No additional notes

New Feature for this Series

New PDI Concept (Product Design Identity Concept)



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No additional notes

New Feature for this Series Operation Panel



- ☐ The angle of the operation panel can be changed.
- ☐ A home button is added. You can return to the home screen from anywhere.
- ☐ Five function keys are available, to which you can assign your own designated functions.
- ☐ An SD/USB slot is built-into the right side of the panel as standard equipment (not an optional unit).
 - ♦ The Basic models cannot use the full range of functions that this SD/USB slot provides.

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No additional notes

New Feature for this Series GW+ Controller

- ❑ An enhanced GW controller is used in this series.

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List of features provided by this new controller.

- ❑ Copying
 - Bates Numbering
- ❑ Printing
 - Auto Job Promotion
 - Scheduled Print
 - Unauthorized Copy Control (PCL6/PS)
 - Mandatory Hold Print mode
 - Layout + Booklet Print
 - Banner Page Print
 - Print from USB/SD
- ❑ Fax
 - Remote Fax
 - Weekly timer for output of received faxes
- ❑ Scanning
 - Scan to PDF-A/digitally signed PDF
 - JBIG2 compression mode support
 - Reduce/Enlarge scan
 - Enhanced Batch scan
 - Split scan from Booklet original
- ❑ Others
 - Customizable Home screen
 - MFP Full Browser
 - Eco-Friendly Counter
 - Ecology Indicator
 - External USB Keyboard support
 - QWERTZ layout support
 - Greek/Brazilian Portuguese support
 - Homefolder over LDAP
 - Mandatory security information print
 - More User Codes (500 to 1000)
 - Import/Export of Preference settings
 - Scheduling of Quota management
 - Bypass as priority tray
 - Duplex Copy/Print of custom paper size
 - Enhanced Encryption level (AES256bit, SHA-2)
 - Separate A3/DLT counter
 - Quota Setting
 - Power Consumption Measurement

New Feature for this Series

Print from USB/SD - 1

- ❑ In previous models, the optional USB/SD card slot can only be used for scanning data to an SD card or USB device.
- ❑ However, in this new series, it is also possible to print from data stored on an SD card or USB device.
 - ◆ Works for PDF, JPG, and TIFF.
 - ◆ Some USB devices will not be recognized.
- ❑ If the customer wants to print PDF files from the USB/SD card slot on a basic model, PDF Direct (built-into the printer/scanner unit or printer unit) or Postscript 3 must be installed.
 - ◆ The SP model has PDF Direct built in.

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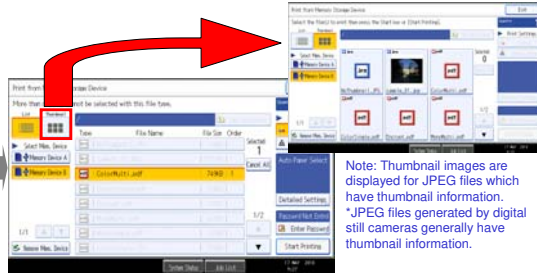
No additional notes

New Feature for this Series Print from USB/SD - 2

How to start Print from USB/SD
Push the "Print" button.



Push "Print from Memory Storage Device".



Select the data you want to print.

Note: Multiple JPEG / PDF / TIFF files in same folder can be selected at the same time. (Max: 999)
* Multiple selections of different file formats is not available.

Detailed settings



Select "Detailed settings".



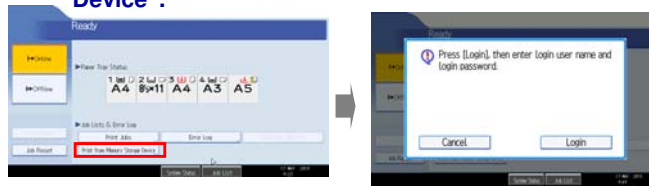
To print, click 'Start Printing'.

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No additional notes

New Feature for this Series Print from USB/SD - 3

- ❑ If “Basic authentication” is enabled, users must input login user name and password after pressing “Print from Memory Storage Device”.



- ❑ If “User Code authentication” is enabled, users must input login user name and password after pressing “Start Printing”.



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No additional notes

New Feature for this Series Print from USB/SD - 4

- ❑ When removing the USB/SD device, press **“Remove Mem. Device”** first, and follow the instructions.



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No additional notes

New Feature for this Series

Print from USB/SD - 5

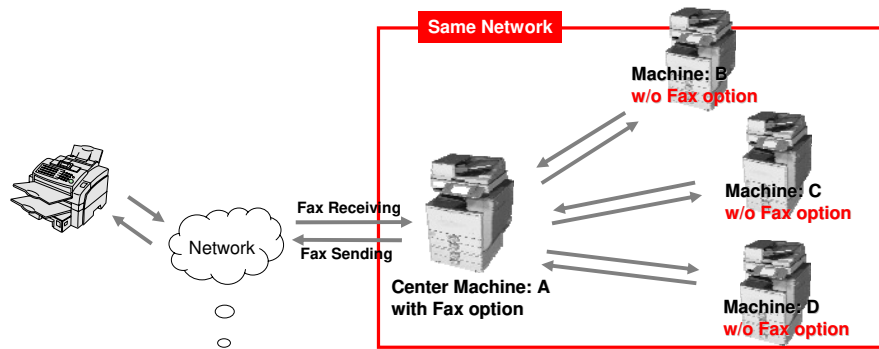
- ❑ **The following enhancements have been made to this feature since the MT-C4 series.**
 - ◆ Print preview: There is a Preview button on the display panel. Press this to see a preview of the file that you want to print.
 - ◆ Booklet printing: PDF only
 - ◆ Sort/stack/staple for JPEG files
 - ◆ Print multiple PDF or TIFF files: In addition to JPEG files, multiple selection of PDF or TIFF files in same folder becomes available from this model (max: 999).
 - » Selecting multiple different format files or files stored in different folders is not possible.
- ❑ **Some PDF files whose file size is big can't be printed directly from USB/SD.**
- ❑ **Only the first page is displayed in the preview screen for files with multiple pages.**

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No additional notes

New Feature for this Series

Remote Fax - 1



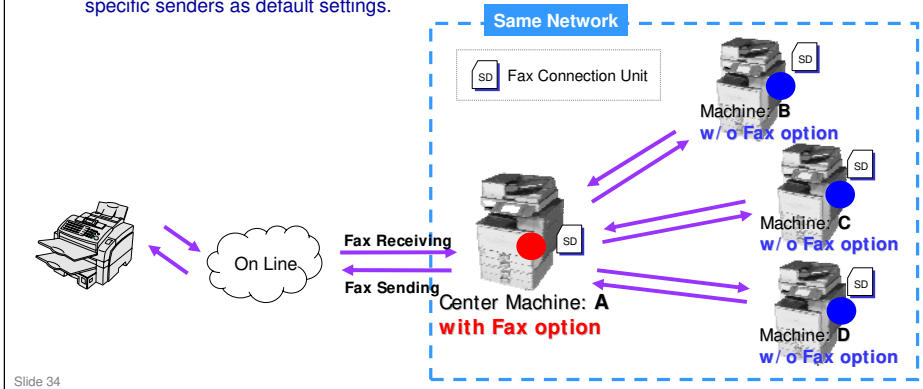
- ❑ With this feature, GW+ machines can send or receive faxes through a central GW+ machine with a fax option.
- ❑ Users can share the fax function with the central machine if it is on the same network. They don't have to buy multiple fax options and can reduce the number of fax lines.
- ❑ **Note:** HDD and printer option are required for both centre machine and sub machines.

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No additional notes

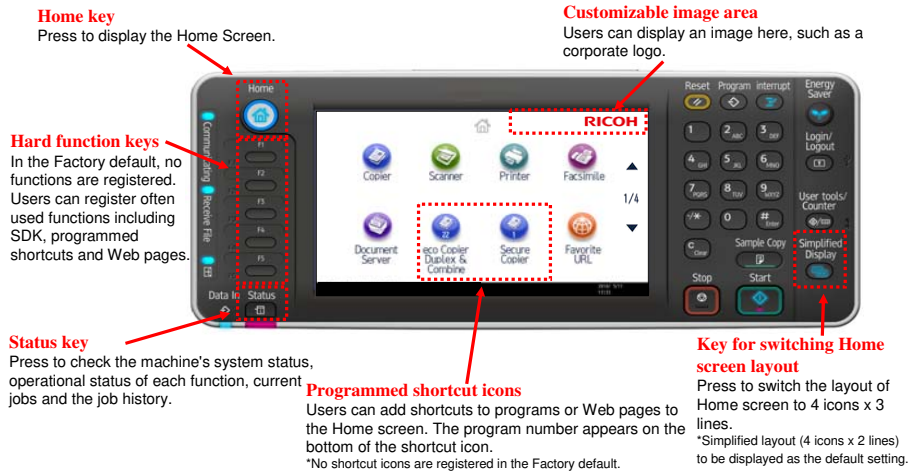
New Feature for this Series Remote Fax - 2

- **Center Machine**
 - Fax Option must be installed.
 - HDD and printer option must be installed.
 - * "Fax Connection Unit (SD card option for MFP)" must be installed.
- **Sub Machines**
 - HDD and printer option must be installed.
 - "Fax Connection Unit (SD card option for MFP)" must be installed.
 - * In order to receive fax document on sub machines, operators must register the addresses of specific senders as default settings.



- ❑ Sub machines can select and register multiple center machines beforehand, but can only transmit to one center machine at a time.
- ❑ Sub machines must have their own address books. Sub machines cannot use the center machine's address book.

New Feature for this Series Customizable Home Screen - 1



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- ❑ Up to 72 icons can be registered on the home screen.

New Feature for this Series

Customizable Home Screen - 2

- ❑ The displayed function icons and their order are customizable, and a bitmap such as a customer's corporate logo can be inserted at the upper right corner of the screen.
- ❑ In combination with user authentication, each user can have their own personal home screen that only displays those icons that he/she uses.
 - ◆ Personal home screens require a hard disk.
- ❑ Also a program short cut can be set on the home screen. Users can program a frequently used job operation on the home screen so that they can execute it with just one step.

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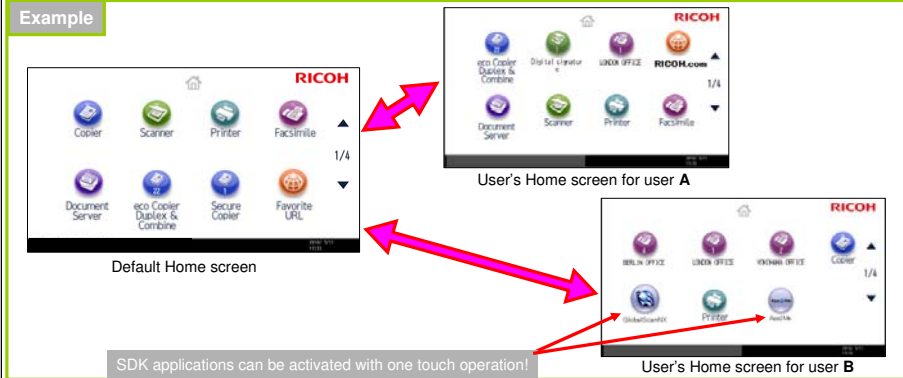
No additional notes

New Feature for this Series Customizable Home Screen - 3

Types of Home screen

There are two types of Home screen, "Default Home screen" and "User's Home screen". "Default Home screen" is displayed when the authentication function is not active or when the authentication function is active and you are logged in as an administrator. The machine administrator can customize displayed icons and the layout on the "Default Home screen" from the operation panel or [Web Image Monitor](#).

On the other hand, "User's Home screen" is available when user authentication is enabled, and it can be customized by each log-in user to make it more accessible!



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No additional notes

New Feature for this Series External USB Keyboard



- ❑ This lets you use a Windows-compatible external USB Keyboard for typing when the software keyboard is displayed in GW applications.
- ❑ Before you can use an external USB keyboard for GW applications, it must be enabled in SP mode. (Default setting: for SDK applications)
 - ◆ You cannot type in both SDK applications and GW applications from one keyboard. If the USB keyboard is used for GW applications, it can't be used for SDK applications.
- ❑ The external USB keyboard can be connected to the USB port on the operation panel or the USB port on the back of the controller board.
- ❑ Keyboards and tables are not provided as options.

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No additional notes

New Feature for this Series

MFP Full Browser - 1

- ❑ **This function lets users browse external web sites and print the displayed page directly from the machine's operation panel.**
- ❑ **Web page addresses can be registered as bookmark icons on the home screen.**
- ❑ **Example of use: If Ricoh's support web pages are bookmarked, users can check the machine's manuals at the operation panel.**
- ❑ **Requires the optional browser unit.**
 - ◆ Basic models must also be upgraded with a hard disk and printer option.

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- ❑ Paper size for HTML direct printing is fixed to A4/Letter.
- ❑ The 10 key pad on the operation panel can't be used for entering numbers in the url. Use the displayed character entry screen or the USB keyboard.

New Feature for this Series MFP Full Browser - 2

The screenshot shows the Ricoh MFP Full Browser interface. A red box highlights the 'Settings' icon in the top-left menu. A blue arrow points from this icon to a red box containing the following text:

Administrators can do the following by pressing this icon.

- Setting a specified URL as homepage
- Changing the character code and text size
- Managing Histories and Cookies
- Specifying Proxy server

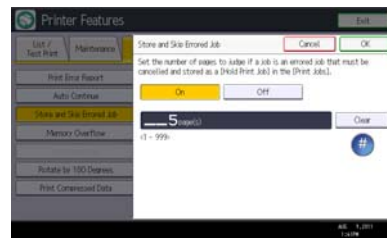
Other annotations include:

- A red box on the left side of the browser window stating: "Users can register a displayed web page in Favorites. Up to 100 URLs can be registered as 'Favorites' per device." with an arrow pointing to the 'Favorites' button.
- A red box on the right side of the browser window stating: "Users can print the displayed web page directly. Available print settings are shown in the next page." with an arrow pointing to the 'Print this page' button.
- A red box at the bottom of the browser window stating: "Horizontal scroll bar" with an arrow pointing to the scroll bar.
- A red box on the right side of the browser window stating: "Vertical scroll bar" with an arrow pointing to the scroll bar.

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- ☐ Bookmarks for each user is not supported.
- ☐ Simultaneous usage with an external billing system such as a coin lock is not supported.
- ☐ Preview screen before printing web pages is not available.
- ☐ Page numbers and URL address of web pages are not printed.

New Feature for this Series Auto Job Promotion - 1



- ❑ **The machine can skip specific defective jobs and start printing the subsequent jobs.**
- ❑ **Before using this function, turn on 'Store and Skip Error Jobs' (in the 'System' menu of 'Printer Features').**
- ❑ **When the following errors occur, the job will be skipped and the next job will be printed.**
 - ◆ Specified paper size is not available.
 - ◆ Specified paper type is not available.
 - ◆ No paper on the specified paper tray
 - ◆ No staples (*This is not covered by pre-detection of errors.)
 - ◆ Hole punch receptacle is full (*This is not covered by pre-detection of errors.)

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- ❑ Jobs that are skipped will be stored as 'Hold Print' jobs (max: 200 jobs).
- ❑ Skipped print jobs can be reprinted from the operation panel or Web Image Monitor after the cause of the error is resolved.
- ❑ If the number of pages for pre-detection of errors is increased, a longer time will be required until the first page of the job is printed.
- ❑ Print jobs that use IPDS can't be skipped.
- ❑ When a Fiery controller or optional Counter Interface Unit is installed, this function is not available.

New Feature for this Series

Auto Job Promotion - 2

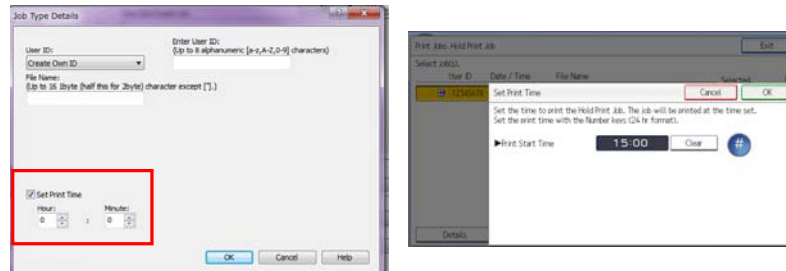
- ❑ Although specific error jobs can be skipped, when an error occurs during printing a job, the job cannot be skipped and the machine will stop with an error message.
- ❑ To reduce the occurrence of such situations, administrators can set the number of pages for pre-detection of errors.
- ❑ Example: If 4 sheets of paper are left and a 10-page simplex print job is sent to the machine:
 - ♦ i) when the number of pages for pre-detection of errors is 2
 - » It is confirmed that more than 2 sheets of paper are left, and the machine judges that no error will occur and starts printing. But paper end occurs and the machine will stop.
 - ♦ ii) when the number of pages for pre-detection of errors is 5
 - » The machine predicts that paper end will occur, so the job will be skipped and handled as 'Hold Print'.

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No additional notes

New Feature for this Series Scheduled Print

- ❑ This lets users delay printing to a specified time.
- ❑ The time can be input with the printer driver, as shown below left.
- ❑ The time can be changed at the operation panel or with Web Image Monitor, as shown below right.



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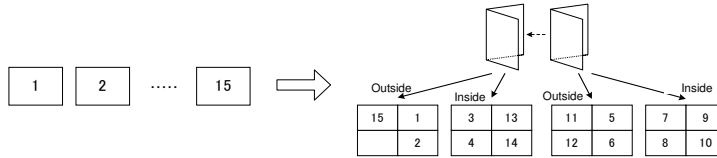
- ❑ Use this to print large jobs after office hours, so that others will not be prevented from using the machine.
- ❑ When the main power of the machine is turned off if the specified time has arrived, the Scheduled Print jobs are stored as Hold Print jobs.

New Feature for this Series Booklet Printing with Layout

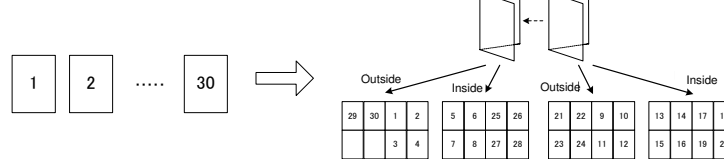
- ❑ This allows printing of booklets that have more than one image on each page.

Examples of output

2 in 1 + booklet



4 in 1 + booklet



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- ❑ This function is not available with PCL5 or XPS driver.
- ❑ It is available for the Mac OS (booklet printing was not available on the Mac before).
- ❑ First print output time will be slightly delayed when booklet printing with the PS3 driver.
- ❑ Specifying input tray and feeding paper from bypass tray are not possible for booklet printing with the PS3 driver.
- ❑ When printing files including PASSTHROUGH objects from Mac OS, this function will not work correctly.

New Feature for this Series Banner Page

- ❑ A banner page is a page that is printed before the job, and contains information about the job.



Users can activate this function on the property screen of printer drivers (PCL5, 6 & PS). This function is also available from Mac OS X 10.2 or later.

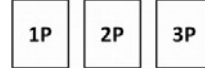
The following items are printed on a banner page.

- Log-in User Name, User ID or Windows/Mac account name
- The Date and Time the document was printed
- The originating computer hostname (server hostname will be printed when "Point & Print" is used).
- The Job name

Example: 3-page job with stapling



Example: 2 sets of a 3-page job



Banner Page

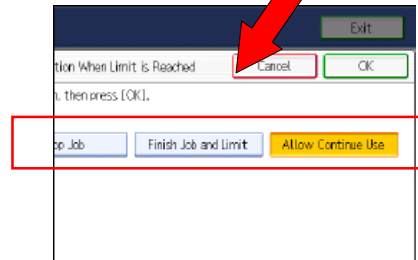
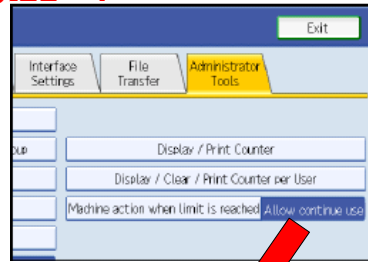


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- ❑ A banner page is used in network printing in order to separate documents (or "print jobs") from each other and to identify the originator of the print by user name.
 - In some cases, print jobs are sent to a central processing area where messengers take the printouts back to the owner, but the usual practice in modern office environments is for the user to retrieve his or her own documents. The banner page makes it clear who printed each job.
- ❑ Printed banner pages are counted as B&W jobs.
- ❑ The banner page is not available for "Sample print", "Locked print", "Stored print", "Hold print" and "Send to Document Server". Although exclusive control on printer driver UI is available on Windows OS, it doesn't work on Mac OS. This means that if both banner page and "Locked print" are selected at the same time on Mac OS, but the banner page setting is ignored.
- ❑ Landscape can't be selected as the orientation of banner pages.
- ❑ The NetBIOS name will be used as the Host name on banner pages. If users set a computer name which is longer than 15 bytes on a Windows OS, only the first 15 bytes of the computer name will be printed as Host name because of Windows OS specifications.
- ❑ If languages which are not supported by MFPs are included in the account name, computer host name or job name, the characters will be garbled.
- ❑ When users print multiple copies, just one sheet of banner page will be printed before the first copy. But please note that there are some applications which handle multiple copies as multiple jobs. In this case, banner pages will be printed before each copy.

New Feature for this Series Setting Quotas - 1

- ❑ This function allows the customer to set limits on the number of outputs for each individual user or group.
- ❑ The following applications can be managed with this function.
 - Copy
 - Print (including "Print from USB/SD")
 - Document Server
 - SDK
 - » Fax related jobs and "Mail to Print" jobs can't be limited.
- ❑ User authentication must be enabled.
- ❑ Possible Settings
 - Stop Job: When the maximum print volume is reached, both the current job and waiting jobs are canceled.
 - Finish Job and Limit: When the maximum print volume is reached, the current job is allowed to finish, but waiting jobs are canceled.
 - Allow Continue Use (Default setting): Print volume is not limited.



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No additional notes

New Feature for this Series Setting Quotas - 2

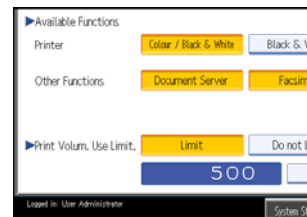
□ Specify a per-page unit count between "0" and "200" for each of the shown print conditions.

- Note: The display is for a color copier.
- "Others" means paper sizes other than A3 and DLT (11 x 17 inch).
- The default per-page unit count for every print condition is "1".
- If you specify "0" for a print condition, no volume restriction is applied to jobs matching that condition.
- This setting can be done from "Web Image Monitor" also.



□ Specify the Maximum Count per User.

- A value between "0" and "999,999" can be set for each user as the maximum available print volume.
- The maximum print volume for an individual user can also be specified in [Address Book] in "Web Image Monitor".



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□ Example

- If print conditions and Maximum Use Count of "User A" are specified as follows...

Copier: A3/DTL, B&W 10

Printer: A3/DTL, B&W 10

Copier: Others, B&W 5

Printer: Others, B&W 5

Maximum Use count of "User A": 500

- The following printing pattern is available for "User A".

50 pages of "Copier/Printer: A3/DTL, B&W"

100 pages of "Copier/Printer: Others, B&W"

New Feature for this Series

Setting Quotas - 3

- ☐ Users need to log in with Basic, Windows, LDAP or User Code authentication.
- ☐ When a user reaches his/her assigned print volume limit, the machine will suspend the current job or display a message. After a user has reached his/her limit, all subsequent print/copy jobs will be cancelled.
- ☐ Printing of received faxes is always allowed. Manual print out of fax transmission reports, and fax documents stored in the document server are also allowed.
- ☐ When a paper jam occurs, the last page that is jammed will not be counted.
- ☐ Print out of reports will not be counted.
- ☐ Printing from Mac/Linux can't be managed.

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No additional notes

New Feature for this Series

Scheduling of Quota Management

- ❑ **This function enables administrators to reset the print volume counters of each individual user or groups automatically after a set interval.**
- ❑ **Administrators can set the timing for auto-reset as follows:**
 - ◆ At a designated date and time
 - ◆ Every xx days from the designated date and time (xx can be 1 day - 180 days)
 - ◆ At a designated time on the designated date of every month
- ❑ **The time that the last auto-reset was done and the last print volume counter can be checked at the operation panel or Web Image Monitor.**
- ❑ **If the machine is turned off or in sleep mode at the designated time, auto-reset will be done when the machine is in ready mode.**
- ❑ **A hard disk is required.**

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No additional notes

New Feature for this Series Safe Shutdown

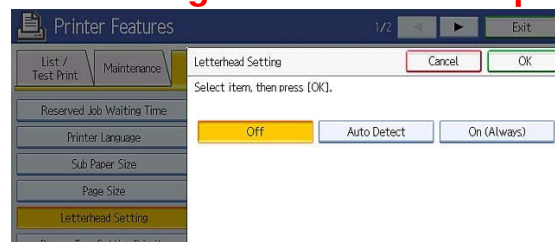
- ❑ In this machine, a board (the SDB) protects the HDD unit.
- ❑ After the main power switch of the machine has been turned off, the SDB keeps the power supply to the controller until the HDD unit has been shutdown safely.
- ❑ When shutting down from normal stand-by mode, if the safe shutdown takes more than 2 minutes, there is a problem with the controller board. It may be necessary to replace this board.

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- ❑ This table shows how long it takes to shut down from various machine conditions.
- ❑ SDB: Shutdown Board

| Mode | Status | Details | Time to Shut Down |
|-------------|--|---|-------------------|
| Stand-by | Stand-by | Stand-by Panel off Low power | Less than 10 s |
| | | Operation SW off | 0 s |
| Operation | Scanning Copying/Printing HDD deleting | - | Less than 20 s |
| | Firmware updating HDD encrypting | - | Less than 360 s |
| Error | SC issued | SC level A, D | Less than 360 s |
| | | SC level B, C | Less than 10 s |
| | Application error | Application SD Removed | Less than 360 s |
| Starting up | Starting up | During 1 min. after application screen is displayed | Less than 80 s |

New Feature for this Series Printing on Letterhead Paper

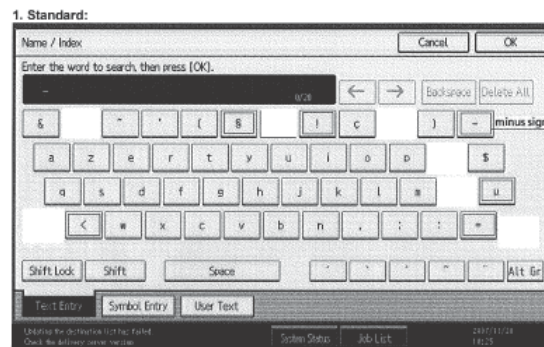


- ❑ **This setting changes the paper path.**
 - ◆ Off: Simplex pages go through the simplex path and duplex pages go through the duplex path.
 - ◆ Auto Detect: The paper path for simplex jobs with a paper type of "Letterhead", "Pre-printed" or "Pre-punched" is changed to the duplex path.
 - ◆ On (Always): The paper path for all simplex jobs with all types of paper is changed to the duplex path.
- ❑ **Simplex pages will still be counted as simplex jobs by the internal counter even if this setting is enabled.**

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- ❑ This is enabled with a printer bit switch.
- ❑ The purpose of the synchronizing the simplex and duplex paths is so that a single tray of preprinted paper can be used for both simplex and duplex pages.
- ❑ With the default setting, at least 2 separate trays are required for preprinted paper (one for simplex printing and the other for duplex printing). The paper is loaded face-up in one tray and face-down in the other. This can be a annoyance for customers.
 - The default setting is Off is to reduce wear on the duplex unit. The duplex unit may wear out early when this setting is always enabled. The degree of extra wear depends on print volume.
 - Note: If the preprinted paper is the same on both sides, then a single tray can be used and this setting will probably not need to be changed.
- ❑ If this feature is enabled, only a single tray of preprinted paper is needed for both simplex and duplex pages.

New Feature for this Series AZERTY Keyboard

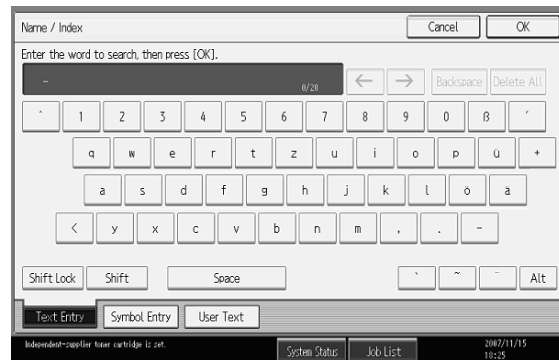


- ❑ If the language is changed to French, the keyboard changes as shown above.

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- ❑ It is possible to switch to a QWERTY keyboard.
- ❑ This feature is for Europe only. The North American model will use the QWERTY keyboard, which is widely used in Quebec.

New Feature for this Series QWERTZ Keyboard



- ❑ If the language is changed to German, the keyboard changes as shown above.

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- ❑ It is not possible to switch to a QWERTY keyboard.

New Feature for this Series Fax Line Assignment

- ❑ When optional G3 lines are equipped, you can route faxes that come in on each line to a different receiver.
- ❑ You need to register a SUB code for each line before using this function.
- ❑ Example:
 - ◆ Users can specify that incoming faxes through Line 1 are printed on paper, the ones through Line 2 are forwarded to designated users by email, the ones through Line 3 are forwarded to a designated user's shared folder.
- ❑ One or more optional G3 Fax lines must be installed.
- ❑ Documents received through Internet Fax and IP-Fax cannot be routed.

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No additional notes

New Feature for this Series

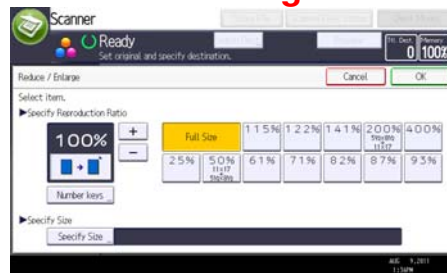
JBIG2 Compression

- ❑ JBIG2 typically generates files one third to one fifth the size of conventional compression methods.
- ❑ Before using this function, select “JBIG2” for “Compression Method (Black & White)” in “Send Settings” of “Scanner Features”.
- ❑ JBIG2 compression works in the following scanning conditions.
 - ◆ Scan settings: Black and White
 - ◆ Scan File Type: PDF/ PDF-A (single page/ multi page)
 - ◆ Scan method: Scan to Folder/ email/ USB/ SD
- ❑ Tiff file format doesn't support JBIG2 compression. MH compression will be applied when scanning to Tiff.
- ❑ When a scanned document is stored in the Document Server, the applied compression method will be MH.
- ❑ JBIG2 compression can't be used in TWAIN scanning and WSD scanning.
- ❑ When JBIG2 compression is selected, the preview function is not available.
- ❑ Acrobat Reader version 5 or later is required to open files which were compressed with JBIG2.

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No additional notes

New Feature for this Series Reduce/Enlarge Scan

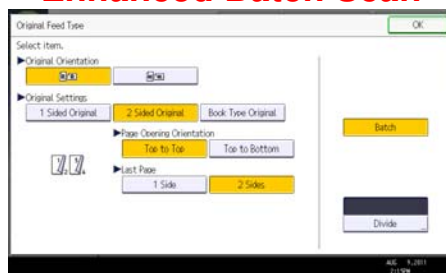


- ❑ With this function, users can reduce or enlarge a standard paper size to another standard paper size, for example, scanning A5 originals and changing to A4 sized data. Also, scanning can be done with an arbitrary reduction or enlargement ratio.
- ❑ When using 'Specify Size', if the originals are all different sizes, the image sizes will all be the same.

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- ❑ This function is not available for TWAIN scanning or WSD scanning.
- ❑ When using this function, "High Compression PDF" can't be selected as the file type.
- ❑ It is not possible to specify different reduction/enlargement ratios for height and width.

New Feature for this Series Enhanced Batch Scan

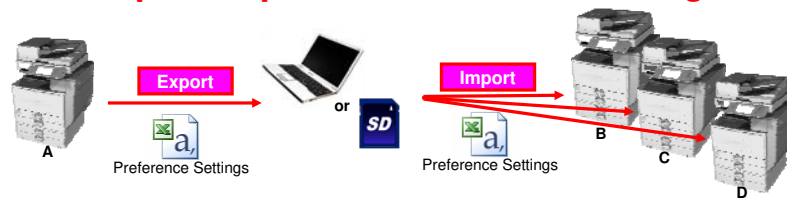


- ❑ **When one sided originals and two sided originals are mixed, users can switch the scanning to one side or both sides in a single batch scan job.**
 - ◆ Separate one sided originals from two sided originals within your stack of originals
 - ◆ Select "Batch" mode for and specify "Original Settings"
 - ◆ Set the correct portion of the batch of originals on the ADF and start scanning
 - ◆ When scanning of the first portion is finished, change "Original Settings" and set the other portion.
- ❑ **If this is done correctly, blank sides of one-sided originals in the batch will not be scanned.**
- ❑ **An ARDF is required for this function.**

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No additional notes

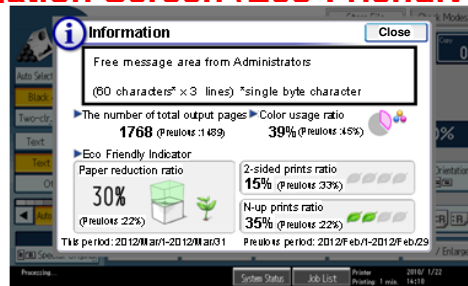
New Feature for this Series Import/Export of Preference Settings



- ❑ Users can output settings such as “System Settings”, “Application Settings” and shortcut programs to an SD card or a local folder of a client PC via Web Image Monitor, and they can apply these settings to other machines that have a GW+ controller.
- ❑ A Machine Administrator can export/import User Program (UP) settings, shortcut programs and the image displayed on the home screen, and a Customer Engineer can export/import Service Program (SP) settings.
- ❑ Exported settings will be in CSV format.
- ❑ The image displayed on the home screen will be exported in JPG format.
- ❑ Exported settings can be encrypted. *Factory Default: “Encrypt”
- ❑ Users or Customer Engineers can apply the same settings of an existing GW+ machine to other GW+ machines quickly. Therefore, users can reduce the amount of work when they install new machines.

- ❑ SP settings can be imported/exported between the same models with the same EDP code only.
- ❑ Import/export cannot be suspended once it has begun.
- ❑ A log of the Export/Import operation will be saved in CSV file format in the same folder in which the preference settings are exported.
- ❑ Importing/exporting address book information or shortcut programs which use address book information is not supported by this function. Please use an existing solution for copying address book information.

New Feature for this Series Information Screen (Eco-Friendly Indicator)

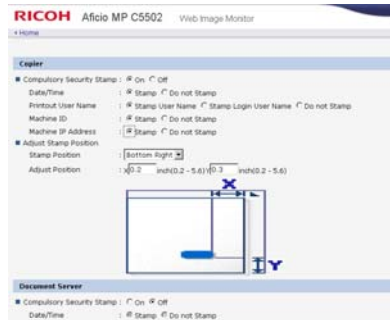


- ❑ When the user logs on, information about machine usage will appear. There is also a space for an administrator's message to appear.
- ❑ This may be used to improve the awareness of users to how heavily they are using the machine.
- ❑ This function is only available if the machine has a hard disk.

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- ❑ Displayed data depends on whether user authentication is disabled or enabled.
 - If user authentication is enabled => Eco counter for each user is displayed.
 - If user authentication is disabled => Eco counter for system (all users of the machine) is displayed.
- ❑ The Eco-Friendly Indicator is shown at these times
 - After log-in
 - After recovering from energy save mode (when user authentication is disabled)
 - After system auto reset (when user authentication is disabled)

New Feature for this Series Mandatory Security Information Print



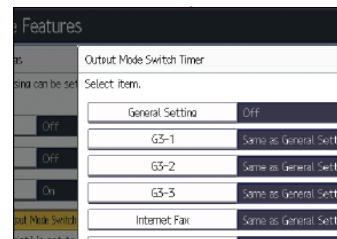
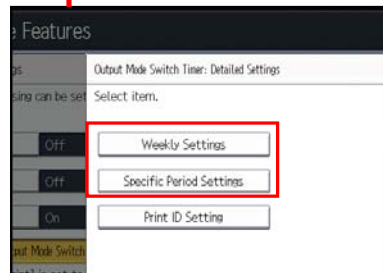
- ❑ If this feature is turned on, security information will be printed on the output.
- ❑ Before using this function, an administrator must activate this function at the operation panel or Web Image Monitor.
- ❑ Administrators can select which security information will be included.
 - ◆ Date and Time when the job was printed
 - ◆ Name or Log-in User ID of the user who printed the job
 - ◆ IP address of the device which printed the job
 - ◆ Serial number of the device which printed the job
- ❑ Also, the print position can be changed to upper left, upper right or lower left. (Default setting: lower right)

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- ❑ When printing on small sized paper such as A6 or envelopes, a part of the security information may not be printed.
- ❑ If print fonts which are not supported by the device such as Chinese, Arabic, Korean or Thai are included, the security information can't be printed correctly.
- ❑ The directions of image and security information may not match when printing from a PS driver or IPDS.

New Feature for this Series

Output Mode Switch Timer for Received Faxes

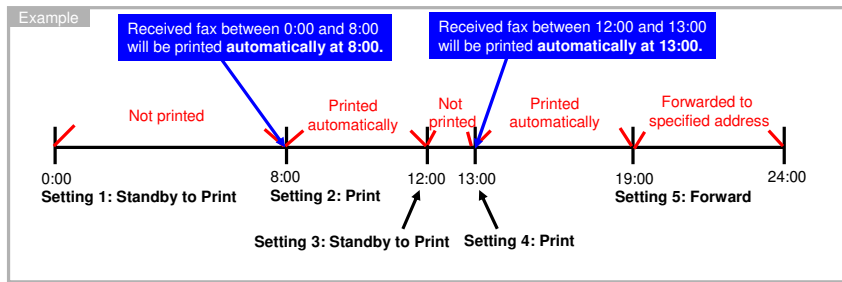


- ❑ Users can specify whether faxes received in a specific period are to be printed, to stand by to print, to be forwarded to a registered receiver, or to be saved on the HDD.
- ❑ Also, prohibiting automatic printing of received faxes can be set manually on the operation panel when this timer function is disabled.

- ❑ By utilizing this function, received faxes are not printed when users are not in their office, so they can reduce the risk of information leak from uncontrolled outputs.
- ❑ And also, it will be possible to forward faxes received when the office is closed to another working office.
- ❑ Printing from the LAN-FAX driver is always possible regardless of output mode switch timer setting.
- ❑ The machine must have a HDD.
- ❑ To use this function, specify the period of time to switch the output mode in "Timer: Detailed Settings", and then specify the output mode in "Output Mode" when the Output Mode Switch Timer function is enabled.
- ❑ Jobs affected by this timer
 - Received fax/ Internet fax/ IP fax documents
 - Mail to Print
 - Auto Report related fax application
- ❑ Available Timer settings
 - Weekly settings (set output mode switch timer for each day of the week)
 - Specific Period Settings (This timer is used when the office is closed for a long time.)
- ❑ Available Output Mode
 - Not Set (Default)
 - Print
 - Standby to Print (Printing received fax documents will be suspended.)
 - ID Required Print (an ID will be required to print suspended fax jobs.)
 - Forwarding (Received fax documents will be forwarded to a specified email address.)
 - Store (Received fax documents will be stored in Document Server.)
- ❑ These timer settings and output modes can be assigned for each fax line and type.

New Feature for this Series

Output Mode Switch Timer for Received Faxes

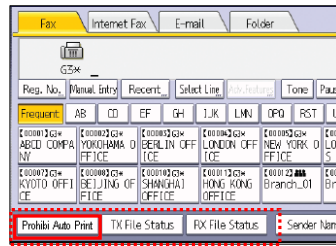


❑ Up to 5 timers can be set per day.

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No additional notes

New Feature for this Series Output Mode Switch Timer for Received Faxes



- ❑ **When this feature is disabled:**
 - ◆ Users can specify whether or not to print the received faxes immediately with the “Prohibit Auto Print” setting.
 - ◆ Also, this setting can be registered as a Quick Operation Key, so users can easily switch the output mode of received faxes.

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No additional notes

New Feature for this Series Enhanced Encryption



- ❑ This function lets users select safer encryption algorithms, AES256bit and SHA-2.

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AES256bit

- ❑ The Advanced Encryption Standard (AES) is a symmetric-key encryption standard adopted by the U.S. government. AES is also adopted by NESSIE in EU and CRYPTREC in Japan.
- ❑ There are 3 types of AES, and each of these ciphers has a 128-bit block size, with key sizes of 128, 192 and 256 bits, respectively. DES, the previous encryption standard, has a 56-bit key size, so AES with a 256-bit key size is much safer than DES.

SHA-2

- ❑ Secure Hash Algorithm-2 (SHA-2) is a set of cryptographic hash functions designed by the National Security Agency (NSA).
- ❑ SHA-2 has 224, 256, 384, and 512 bit hashes. Since SHA-2's hashes are longer than SHA-1 (160 bits), SHA-2 is safer than SHA-1. Ricoh basically adopts the 256-bit hash.

New Feature for this Series

Bates Numbering

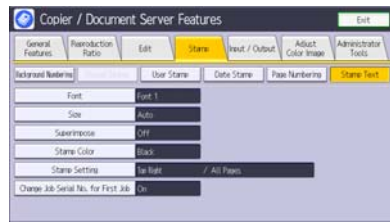
- ❑ **Bates numbering is used in the legal, medical, and business fields to place identifying numbers on documents as they are scanned or processed.**
- ❑ **Bates stamping can be used to mark and identify images with copyrights by putting a company name on them.**

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- ❑ “Auto Start”, “Interrupt Copy” and “Printing from Document Server” cannot be used with Bates numbering.
- ❑ Zero suppression for auto-increment numbering is available on SP mode.
- ❑ If the arbitrary text is long and its size is big, latter subset of numbering may not be printed.
- ❑ When this function is enabled, collated output is not available in copying multiple sets of multiple page document.

New Feature for this Series

Bates Numbering



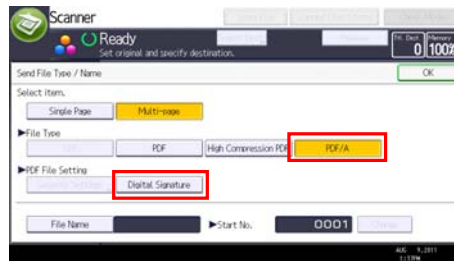
- Bates numbering is provided as a stamp function of the Copier application.
- By setting arbitrary text such as a company name, a nine-digit start number for auto-increment numbering, and stamp position, users can add Bates numbering on each page of copy output.
 - ◆ The total number of digits of arbitrary text and auto-increment numbering must be less than 64 bytes.
- To use this function, change the default setting of "Stamp Text" in "Copier / Document Server Features".

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No additional notes

New Feature for this Series

Scan to PDF/A & Digitally Signed PDF

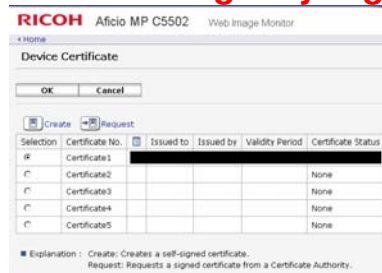


- ❑ This function enables users to scan paper documents to PDF/A format. Also, users can make digitally signed PDF files.
- ❑ Scan to PDF/A or Scan to Digitally Signed PDF is available for the following jobs.
 - Scan to mail
 - Scan to Folder (SMB/FTP/NCP)
 - Scan to USB/SD
 - Universal send to mail address destination / Folder destination from fax function
- ❑ Although Scan to PDF/A is available, adding a digital signature to PDF is not available for the following jobs.
 - Scan to Document Server
 - Forwarding incoming fax to mail address

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- ❑ PDF/A is a file format and an ISO Standard for the long-term archiving of electronic documents. Users can utilize this function when scanning paper documents related to quality management, or when submitting electronic documents with PDF/A format is required by governments.
- ❑ Also, users can avoid manipulation by utilizing the digitally signed PDF function when scanning receipts or contracts for which keeping the original content is needed.
- ❑ Some PDF viewer applications cannot open PDF/A files. (example: Acrobat 4.0 or earlier)
- ❑ Locked PDF/A function is not available on some SDK applications.

New Feature for this Series Scan to PDF/A & Digitally Signed PDF



| Selection | Certificate No. | Issued to | Issued by | Validity Period | Certificate Status |
|--------------------------|-----------------|-----------|-----------|-----------------|--------------------|
| <input type="checkbox"/> | Certificate1 | | | | None |
| <input type="checkbox"/> | Certificate2 | | | | None |
| <input type="checkbox"/> | Certificate3 | | | | None |
| <input type="checkbox"/> | Certificate4 | | | | None |
| <input type="checkbox"/> | Certificate5 | | | | None |

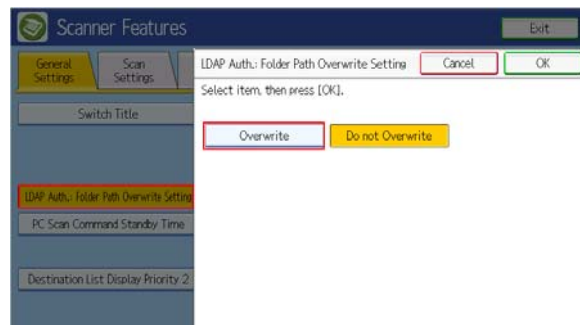
■ Explanation : Create: Creates a self-signed certificate.
Request: Requests a signed certificate from a Certificate Authority.

- ❑ Registering a “Device Certificate” is required for making digitally signed PDF.
- ❑ Please add a certificate with Web Image Monitor. If the certificate is expired or the mail address of the certificate is wrong, users can’t generate a digitally signed PDF.
- ❑ Also, if the certificate is about to expire, users can select either continuing the job or canceling the job.

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No additional notes

New Feature for this Series Homefolder over LDAP

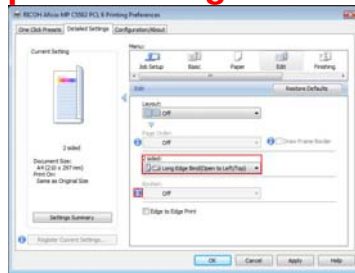


- ❑ **Home directory information registered on the LDAP server can be copied to the machine's address book automatically when LDAP authentication is enabled.**
 - ◆ User name and email address registered on the LDAP server can be also copied to the address data generated automatically in the machine.

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- ❑ Before using this function, please change the "LDAP Auth: Folder Path Overwrite Setting" to "Overwrite" in "General Settings" of "Scanner Features".
- ❑ If the user has logged in using LDAP authentication, select whether or not to overwrite the user's address book on this machine with the folder information of the logged-in user.
- ❑ After log-in to the machine, users can use HomeDirectory information registered to address book automatically as a destination for "Scan to Folder".
- ❑ If HomeDirectory information is registered on the LDAP server, users can use the registered folder information as a destination for "Scan to Folder" with one touch operation after log-in even though folder information is not registered on the machine.
- ❑ Also, HomeDirectory information stored in the LDAP server can be used on machines in same network. This means that administrators don't have to register shared folder information in each machine.
- ❑ If HomeDirectory information is not registered on the LDAP server, no folder information be copied to the address data generated automatically in the machine.

New Feature for this Series Duplex Printing as Default



- ❑ The default setting for Duplex Printing in the printer driver will be “On” when the driver is first installed.
- ❑ The first printing job will be done in duplex mode unless the customer modifies the printer driver settings first.

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- ❑ Duplex will be default for drivers on the CD-ROM, but not for drivers downloaded from the web site.
- ❑ For some features, duplex must be off. Users must be aware of this.

Improved Feature Split Scan from Book Original



- ❑ This function scans the left page and right page of a double-page spread original separately. Users will receive the left and right pages as separate images.
- ❑ 1. Set a book type original on the glass.
- ❑ 2. Select “Book Type Original” at “Original Settings” in “Original Feed Type”.
- ❑ 3. Press “Start”

Slide 71

No additional notes

Improved Feature

Scan to Web Mail (SSL over SMTP)

- ❑ **SSL encryption is supported when using scan to E-mail via SMTP server.**
 - ◆ Setting SSL for SMTP connection can be specified by the network administrator.
- ❑ **When SMTP over SSL is enabled, Internet Fax to Ricoh GW models is not available because GW models do not comply with SSL reception at this time.**

Slide 72

No additional notes

Improved Feature User Codes

- ❑ **For the GW+ controller, the number of user codes is increased from 500 to 1000.**

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No additional notes

Improved Feature Page Counters

- ❑ An A3/DLT billing counter has been added.
- ❑ This counter counts up by 1 for every A3 or DLT sheet.
 - ◆ The copy and total counters also count up by 2, as before.

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Old system

- ❑ Total count = A4/LT sheets + (A3/DLT sheets x 2)

New system

- ❑ Total count = A4/LT sheets + (A3/DLT sheets x 2)
- ❑ A3/DLT counter = A3/DLT sheets x 1

Improved Feature Language Support

- ❑ **NA models: Brazilian Portuguese is now supported**
- ❑ **EU models: Greek is now supported**

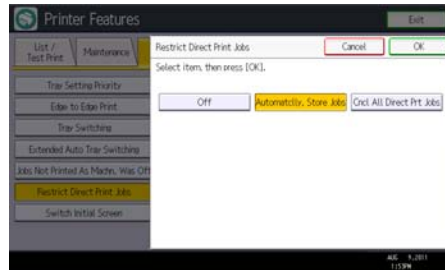
Slide 75

No additional notes

Improved Feature Enhanced Print Functions using HDD

❑ **Mandatory Hold Print mode**

- ♦ Select “Automatically. Store Jobs” to enable Mandatory Hold Print mode.
- ♦ If “Cncl All Direct Prt Jobs” is selected, print jobs which are not stored in the HDD will be cancelled.
- ♦ When printing hold print jobs, users must select single or multiple print jobs from the job list on the operation panel and press “Print”. Users can also delete them from operation panel when the jobs are no longer necessary or users find some wrong print settings.



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No additional notes

Improved Feature

Enhanced Print Functions using HDD

❑ Changing Print Settings on the operation panel

- ◆ When “Sample Print”, “Locked Print”, “Hold Print” or “Stored Print” is selected in printer drivers, users can change the print settings such as number of copies, color/monochrome, duplex, staples and so on at the operation panel before printing.
- ◆ Please note that users can't use the operation panel to change the print settings of jobs that are stored in Mandatory Hold Print mode.
- ◆ Color print jobs can be printed in B&W by changing the print setting on the operation panel, but the reverse is not available.

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- ❑ Print settings cannot be changed when print jobs are sent via Centronics interface, USB or Bluetooth.

RICOH**D131/D132/D133
Service Training****Installation**

Slide 78

- ❑ This section explains important changes to the installation procedure since MT-C4.
- ❑ Installation for the copier is very similar to the MT-C4. However, the procedures for the options have some changes. Make sure that you use the correct procedures for the machine you are working on.

Overview

- ❑ **Installation for the main machine and peripherals is basically the same as for the MT-C4.**
- ❑ **This section of the course shows the main changes.**
- ❑ **Some details are different, so always refer to the MT-C5 service manual when installing the machine and peripherals.**

Slide 79

No additional notes

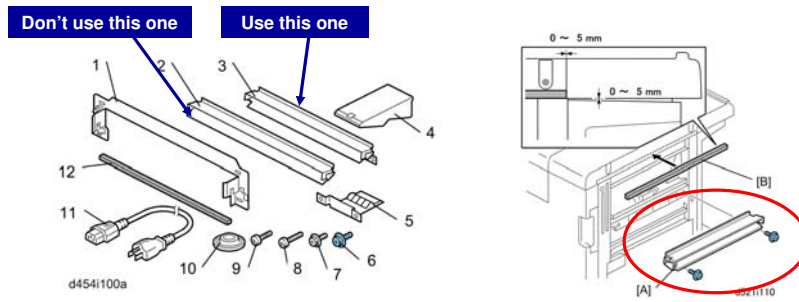
Installing the Main Machine

- ❑ As in previous models in this series, you must keep the front door open the first time that you turn the machine power on, so that the machine will initialize correctly.
- ❑ After you turn the power on, the display panel will show 'Cover Open'. Ignore this message. Do not close the cover at this time.
- ❑ Follow the procedure in the service manual when initializing the machine.
 - ◆ Installation > Main Machine > Installation Procedure > Initializing the Drum Settings

Slide 80

No additional notes

Installing the Folder Unit



- ❑ There are two paper guides in the carton. Use the short one when installing the folder on this machine.

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No additional notes

Fax Connection Unit

- ☐ This option is required for the new Remote Fax feature (described earlier in the presentation).
- ☐ The feature is on an SD card.
- ☐ There is no need to set up any bit switches or SPs. However, soome user tool settings must be adjusted.

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Fax service manual, Installation, Remote Fax Installation

RICOH

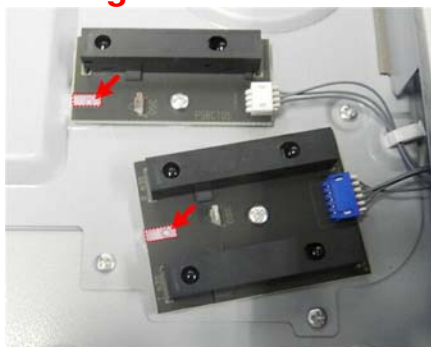
**D131/D132/D133
Service Training**

Changes to the Engine

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No additional notes

Scanner Original Size Sensors

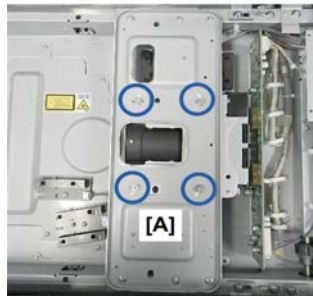


- ❑ When reinstalling, make sure that the bosses on the frame fit into the slots as shown.
- ❑ These bosses position the sensors correctly for accurate detection.

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No additional notes

Scanner Lens Block



- ❑ Never loosen or attempt to remove the four paint-locked screws [A] around the top of the lens.
- ❑ To avoid damaging the lens block, lay it down as shown below left. Never lay the lens block down with the PCB on the bottom.

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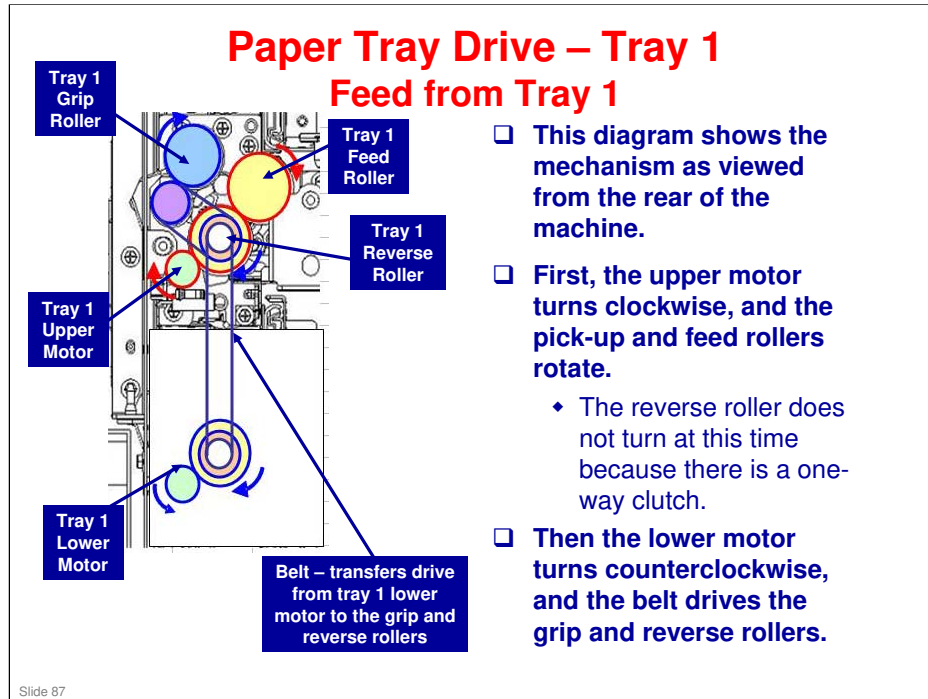
No additional notes

Paper Feed Motors

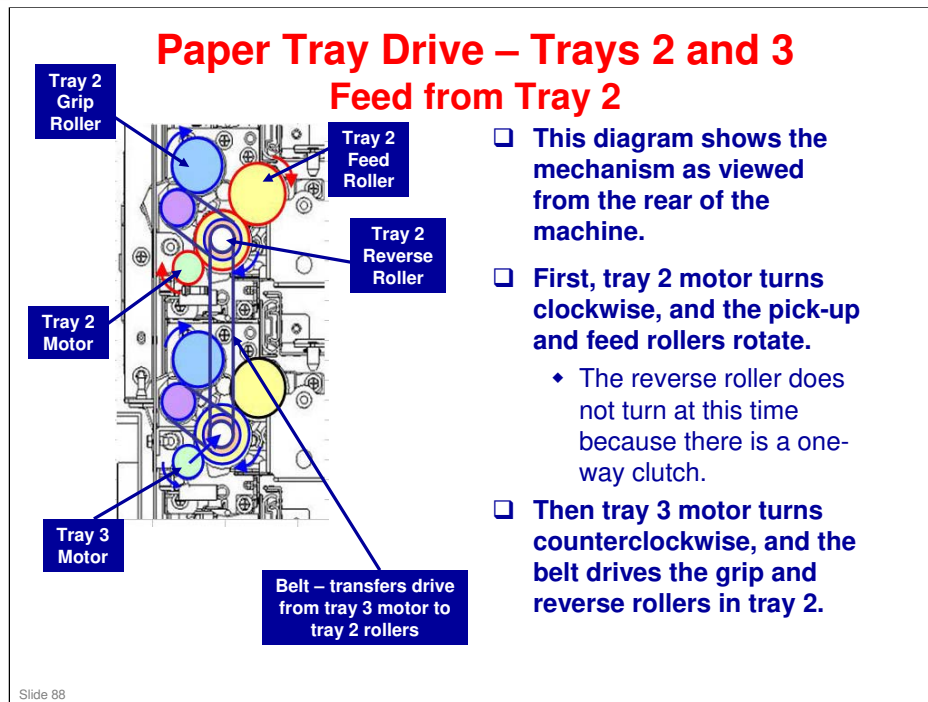
- ❑ There are two paper feed motors in the tandem tray (tray 1).
- ❑ Also, in trays 2 and 3, both motors work together when feeding from either tray.
- ❑ This change was implemented to provide more drive power during paper feed.
 - ◆ In some situations with the previous model, there is not enough drive power.
 - ◆ Also, with this new model, the maximum paper weight is increased, so more power is needed.

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No additional notes

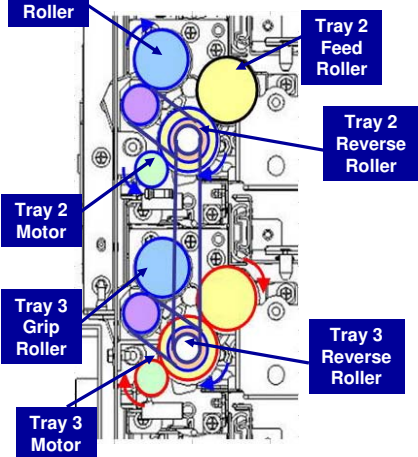


- ❑ In the diagram, red arrows show the rollers driven by the upper motor, and blue arrows show the rollers driven by the lower motor.



- ❑ In the diagram, red arrows show the rollers driven by the tray 2 motor, and blue arrows show the rollers driven by the tray 3 motor.

Paper Tray Drive – Trays 2 and 3 Feed from Tray 3



- **First, tray 3 motor turns clockwise, and the pick-up and feed rollers rotate.**
 - ♦ The reverse roller does not turn at this time because there is a one-way clutch.
- **Then tray 2 motor turns counterclockwise, and the belt drives the grip and reverse rollers in trays 2 and 3.**
 - ♦ The grip roller in tray 2 must rotate, in order to feed the paper up from tray 3 into the machine.

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- In the diagram, red arrows show the rollers driven by the tray 3 motor, and blue arrows show the rollers driven by the tray 2 motor.

Fax Unit

- ❑ The MBU and FCU are combined into one board.
- ❑ After you replace the FCU, you must transfer the SRAM data from the old FCU to the new one.
- ❑ This is done by connecting the old FCU to the new one with a flat cable.
 - ◆ A flat cable is provided with the new FCU service part.
- ❑ The following data will be transferred: TTI, RTI, CSI, bit switch settings, RAM address settings, NCU parameter settings

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- ❑ See the fax unit's service manual for the procedure.

RICOH

Environmental Conservation

Technology for Environmental Conservation

Energy Saving

Paper Saving

Slide 91

- ☐ This section explains the technology used in this machine for environmental conservation, and the default settings of related functions.

Technology for Environmental Conservation

** : New or modified function

* : Has this function

Blank : Does not have this function

| Environmental Technology/Feature | Description | New model MT-C5 | Old model MT-C4 |
|---|---|-----------------|-----------------|
| 1. QSU | - Reduction of warm-up time (Energy saving) | * | * |
| 2. Hybrid QSU | | | |
| 3. IH QSU | | | |
| 4. Paper-saving features | - Reduction of CO ₂ emissions - Allows documentation to be managed digitally, cutting down on paper consumption. - Improves machine productivity when printing out duplex (double-sided) images. | * | * |
| 5. High-speed duplex output | - Improves machine productivity when printing out duplex (double-sided) images | * | * |
| 6. Ozone reduction design | - Low ozone emissions | * | * |
| 7. PxP (polymerized) toner | - Energy saving - Conservation of materials/resources (reduced toner consumption) | * | * |
| 8. Noise reduction design | - Low noise | * | * |
| 9. Minimization of harmful substances | - Minimization of harmful substances | * | * |
| 10. Environmentally-friendly toner bottle | - Conservation of materials/resources | * | * |
| 11. Toner recycling | | * | * |
| 12. Recycle-friendly design | | * | * |

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- ☐ This slide explains what technologies are used for conserving the environment in this product.

Brief Descriptions of the Technologies

❑ 1. QSU (Quick Start-up)

- ◆ This technology reduces both the amount of energy consumed while in Standby mode (the Ready condition) is reduced, as well as the time it takes for the machine to warm up to the Ready condition.
- ◆ This is made possible through the utilization of dual fusing lamp heating, low fusing point toner, a pressure roller with a "sponge" surface layer, and a thin surface layer hot roller.

❑ 2. Hybrid QSU

- ◆ This technology adds an additional circuit to conventional QSU Technology, which allows the benefits of reduced energy consumption and reduced warm-up time described above to be extended to high-speed machines.

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No additional notes

Brief Descriptions of the Technologies

❑ 3. IH QSU

- ◆ This technology incorporates IH (Inductance Heating) technology into conventional QSU technology, which allows the benefits of reduced energy consumption and reduced warm-up time to be extended to color machines.

❑ 4. Paper-saving features

- ◆ 1) The duplex (double-sided) and Combine features reduce paper consumption.
- ◆ 2) The Document Server and other electronic document management features reduce paper consumption by offering an electronic method for storing and managing important documents.

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No additional notes

Brief Descriptions of the Technologies

❑ 5. High-speed duplex output

- ◆ 1) Enables high-speed duplex printing through the utilization of the Duplex Interleaf and high-speed Inverter Transport features.
- ◆ 2) Enables quick printing of duplex jobs through the use of Duplex Scanning.

❑ 6. Ozone reduction design

- ◆ Greatly reduces the machine's ozone emissions to near-zero levels by utilizing:
 - 1) A charge roller/belt instead of a corona wire
 - 2) An image transfer roller/belt instead of a corona wire-based transfer system

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No additional notes

Brief Descriptions of the Technologies

□ 7. PxP (polymerized) toner

- ♦ "PxP toner" is a fine-particle, polyester resin based toner, manufactured using a Ricoh-original polymerization method instead of the conventional pulverization method.
- ♦ This allows the toner to fuse at a lower temperature, which reduces the impact on the environment and contributes to achieving even higher image quality than before.
- ♦ PxP toner also has other benefits, including a reduction in the amount of toner needed to develop the image, as well as an approximate 35% reduction in CO₂ emissions during the toner manufacturing process.

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No additional notes

Brief Descriptions of the Technologies

□ 8. Noise reduction design

- ◆ 1) The machine and its components are designed to minimize the overall noise generated by the machine. As a result, all noise levels conform to the local laws and regulations as well as user requirements in each market in which the products are sold.
- ◆ 2) Reduces the noise generated by the polygon mirror motor.

□ 9. Minimization of harmful substances

- ◆ 1) Products sold in the EU conform to the RoHS Directive.
- ◆ 2) Products sold in China conform to China's version of the RoHS Directive.
- ◆ 3) In addition, Ricoh imposes strict internal standards for limiting the presence of harmful substances.

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No additional notes

Brief Descriptions of the Technologies

- ❑ **10. Environmentally-friendly toner bottle**
 - ◆ A changeover from PS/PP/HDP to PET plastics allows approximately 40 percent by weight of the toner bottle to be recycled, and also reduces CO₂ emissions that occur during the toner bottle manufacturing process.
- ❑ **11. Toner recycling**
 - ◆ Enables effective use of resources by recycling (reusing) the toner left over on the drum surface after image transfer.
- ❑ **12. Recycle-friendly design**
 - ◆ To maximize the recycling ratio of machine and component materials, as well as the ease of performing the recycling in the field, machine sections and components are designed so that the recyclable parts can be separated out easily.
 - ◆ In addition, components are designed so that they can be reused for as long as possible after the machine has reached its operational lifetime.

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No additional notes

Quick Start-up

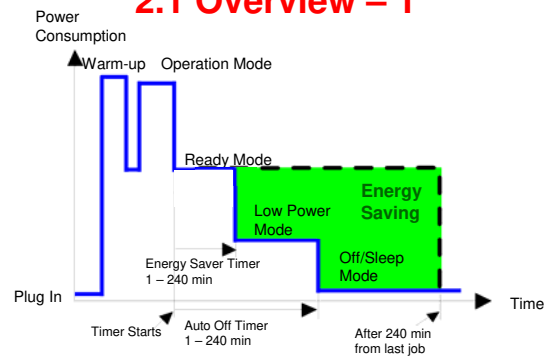
- ❑ QSU reduces the operating temperature, because of these improvements in fusing unit technology
- ❑ This also means that the warm-up time and recovery time from energy saver modes are also reduced.

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- ❑ Through major reductions in warm-up time and recovery time from energy saver modes (Low power, Off/Sleep), QSU (Quick Start Up) Technology has eliminated the traditional trade-off between energy saving and convenience of speed.

2. Energy Saving

2.1 Overview – 1



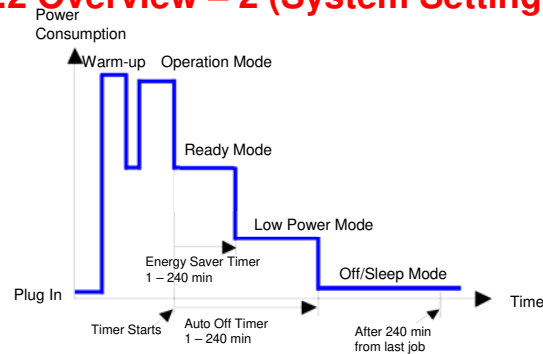
| Energy Saver Modes | Description |
|---------------------|--|
| Low Power Mode | The fusing temperature is lowered to the prescribed temperature (below ready temperature). |
| Auto Off/Sleep Mode | No power is supplied to the printing engine, and almost none to the controller. |

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- ❑ When the machine is not being used, the machine enters energy saver mode to reduce the power consumption by turning off the LCD of the operation panel and lowering the fusing temperature.
- ❑ The area shaded green in this diagram represents the amount of energy that is saved when the timers are at the default settings. If the timers are changed, then the energy saved will be different. For example, if the timers are all set to 240 minutes, the green area will disappear, and no energy is saved before 240 minutes expires.
- ❑ Power consumption during warm-up may be much higher than shown in this diagram.

2. Energy Saving

2.2 Overview – 2 (System Settings)



Timer settings and recovery time (System settings => Timer setting)

| Mode | Timer | Default | Setting range | Recovery time |
|----------------|--------------------|--------------------------------|---------------|------------------------------|
| Low Power Mode | Energy Saver Timer | 1 min | 1 to 240 min. | C5a, C5c: 10 s C5e: 30 s |
| Off/Sleep Mode | Auto Off Timer | C5a, C5c: 1 min C5e: 15 min | 1 to 240 min. | C5a, C5c: 30 s C5e: 300 s |

| Specified values for timers | Low Power Mode | Auto Off Mode |
|-----------------------------|------------------------|---------------------|
| If Energy Saver > Auto Off | This mode cannot start | This mode can start |
| If Energy Saver = Auto Off | This mode cannot start | This mode can start |
| If Energy Saver < Auto Off | This mode cannot start | This mode can start |

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- ❑ The user can set these timers with User Tools
MFP/ Priport: User Tools > System settings > Timer Setting
Printer : User Tools > System settings > Energy Saver Timer
- ❑ Normally, Energy Saver timer < Auto Off timer.
- ❑ But, for example, if Auto Off timer < or = Energy Saver timer, the machine goes immediately to Off mode when the Auto Off timer expires. It skips the Energy Saver mode.
- ❑ We recommend that the default settings should be kept.
 - If the customer requests that these settings should be changed, please explain that their energy costs could increase, and that they should consider the effects on the environment of extra energy use.
 - If it is necessary to change the settings, please try to make sure that the Auto Off timer is not too long. Try with a shorter setting first, such as 30 minutes, then go to a longer one (such as 60 minutes) if the customer is not satisfied.
 - If the timers are all set to the maximum value, the machine will not begin saving energy until 240 minutes has expired after the last job. This means that after the customer has finished using the machine for the day, energy will be consumed that could otherwise be saved.
 - If you change the settings, the energy consumed can be measured using SP8941, as explained later in this presentation.
- ❑ Power consumption during warm-up may be much higher than shown in this diagram.

2. Energy Saving
2.2 Energy Saver Mode: Condition of LEDs

□ Condition of LEDs on the operation panel

| Mode | Operation Switch LED | Energy Saver LED | Main Power LED |
|----------------|----------------------|------------------|----------------|
| Low Power Mode | On | Off | On |
| Off/Sleep Mode | Off | Blinking | On |

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No additional notes

2. Energy Saving

2.3 Energy Saver Mode: Low Power Mode

- ❑ The machine enters low power mode when the energy saver timer runs out after the last job.
- ❑ When the machine enters low power mode, the fusing temperature is lowered to the prescribed temperature (below the machine ready temperature).
- ❑ The machine recovers to the ready condition if one of the following occurs:
 - ◆ The Energy Saver key is pressed
 - ◆ An original is placed in the ADF
 - ◆ The ADF is lifted
 - ◆ The user touches the operation panel
 - ◆ The front door is opened or closed
- ❑ The recovery time depends on the model.
 - ◆ C5a, C5c: 10 seconds or less
 - ◆ C5e: 30 seconds or less

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No additional notes

2. Energy Saving

2.4 Energy Saver Mode: Auto Off Mode – 1

- ❑ The machine enters auto off mode when one of the following is done.
 - ◆ The auto off timer runs out after the last job.
 - ◆ The operation switch is pressed to turn the power off.
- ❑ When the machine enters auto off mode, no power is supplied to the printing engine, and almost none to the controller.
- ❑ Recovery time
 - ◆ C5a, C5c: 30 seconds or less
 - ◆ C5e: 300 seconds or less

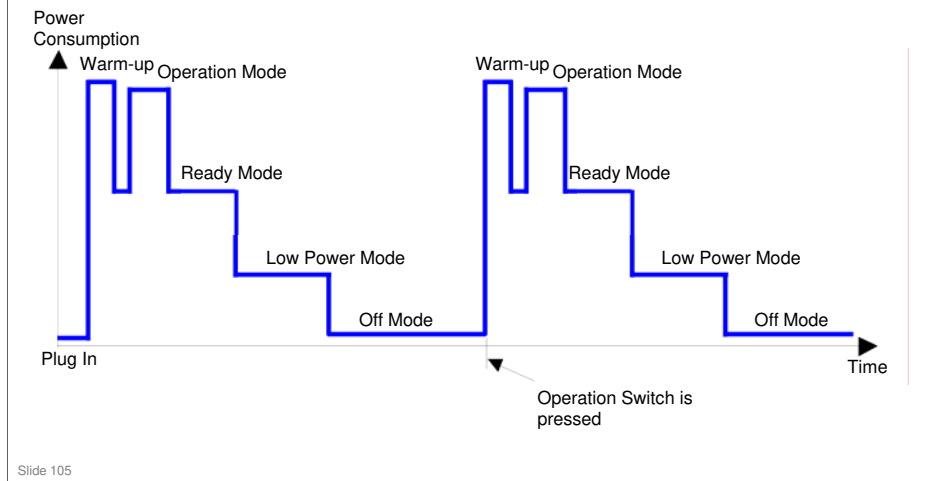
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No additional notes

2. Energy Saving

2.4 Energy Saver Mode: Auto Off Mode – 2

- ❑ The machine recovers to the ready condition if the operation switch is pressed.



- ❑ This timing chart shows what happens if the operation switch is pressed while the machine is in auto off mode.
- ❑ Power consumption during warm-up may be much higher than shown in this diagram.

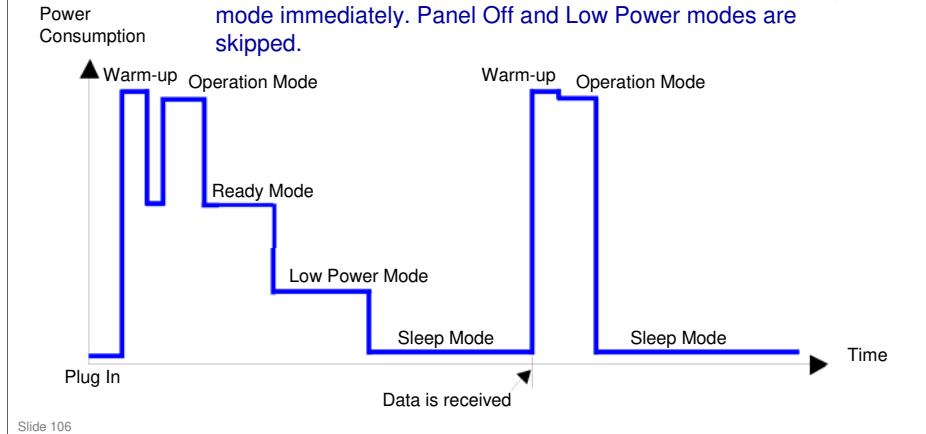
2. Energy Saving

2.5 Energy Saver Mode: Sleep Mode

❑ The machine recovers to the ready condition:

♦ If data is received

- » After warm-up, the job starts, but the operation panel stays dark.
- » Then, after the job is completed, the machine returns to sleep mode immediately. Panel Off and Low Power modes are skipped.



- ❑ This timing chart shows what happens if data is received while the machine is in sleep mode.
- ❑ Power consumption during warm-up may be much higher than shown in this diagram.

2. Energy Saving

2.6 Energy Save Effectiveness

- ❑ With the data from SP 8941:Machine Status, and the power consumption values from the specifications, we can estimate the amount of energy that is used by the machine.
 - ◆ 8941-001: Operating mode time
 - ◆ 8941-002: Standby mode time
 - ◆ 8941-004: Low power mode time
 - ◆ 8941-005: Off/sleep mode time
- ❑ This should only be used as a reference value, because the power consumption specifications are measured in a controlled environment with a constant power supply.
- ❑ To get an exact measurement at the customers site, a watt meter must be used to measure the actual energy consumed.

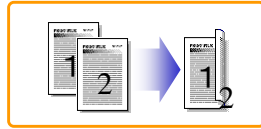
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No additional notes

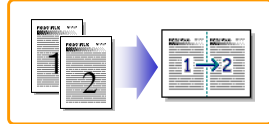
3. Paper Saving

3.1 Measuring the Paper Consumed – 1

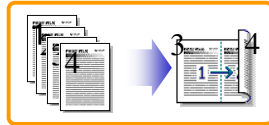
1. Duplex: Reduce paper volume in half!



2. Combine: Reduce paper volume in half!



3. Duplex + Combine: Using both features together can further reduce paper volume by 3/4!



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No additional notes

3. Paper Saving

3.1 Measuring the Paper Consumed – 2

- ❑ **To check the paper consumption, look at the total counter and the duplex counter.**
 - ◆ Total counter : SP 8581 001
 - ◆ Single-sided with duplex mode : SP 8421 001
 - ◆ Double-sided with duplex mode : SP 8421 002
 - ◆ Book with with duplex mode : SP 8421 003
 - ◆ Single-sided with combine mode : SP 8421 004
 - ◆ Duplex with combine mode : SP 8421 005
- ❑ **The total counter counts all pages printed.**
- ❑ **The duplex and combine counter counts all pages printed with duplex and combine mode.**

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No additional notes

3. Paper Saving

3.1 Measuring the Paper Consumed – 3

- ❑ How to calculate the paper reduction ratio, when compared with Single-sided copying, with no 2-in-1 combine mode
 - ❑ Paper reduction ratio (%) = Number of sheets reduced: A/Number of printed original images: B x 100
 - ◆ Number of sheets reduced: A
 = Output pages in duplex mode/2 + Number of pages in Single-sided with combine mode + Number of pages in Duplex with combine mode x 3/2

$$A = (\textcircled{2} + \textcircled{3} + \textcircled{4})/2 + \textcircled{5} + \textcircled{6} \times 3/2$$
 - ◆ Number of printed original images: B
 = Total counter + Number of pages in Single-sided with combine mode + Number of pages in Duplex with combine mode

$$B = \textcircled{1} + \textcircled{5} + \textcircled{6}$$
- | | |
|----------------------------------|-----------------------|
| ① Total counter | : SP 8581 001 (pages) |
| ② Single-sided with duplex mode | : SP 8421 001 (pages) |
| ③ Double-sided with duplex mode | : SP 8421 002 (pages) |
| ④ Book with with duplex mode | : SP 8421 003 (pages) |
| ⑤ Single-sided with combine mode | : SP 8421 004 (pages) |
| ⑥ Duplex with combine mode | : SP 8421 005 (pages) |

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In the above formula:

- ❑ Sheet: A sheet of paper
- ❑ Page: A side of a sheet of paper. In duplex mode, one sheet is two pages
 - Output page: One side of a sheet of output paper
- ❑ Original Image: An image of one original page (or, an image of one side of a two-sided original)
 - For one sheet of output paper in two-in-one copying, four original pages are copied onto two output pages.



No additional notes