RICOH

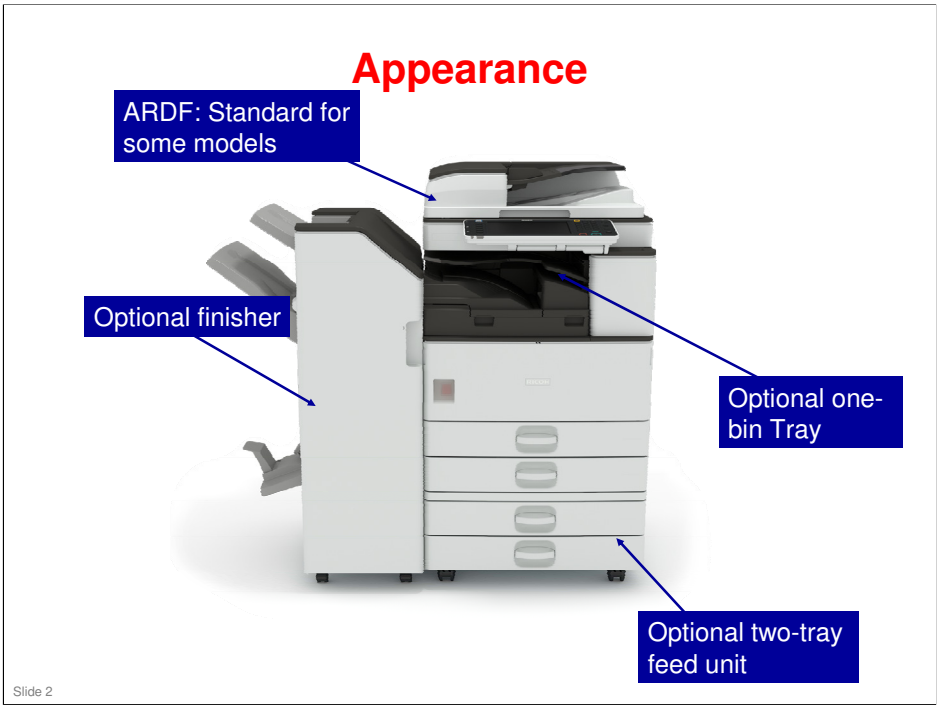
# D182/D183/D184
# Service Training

## OR-C2

Slide 1

Version 1.0

**This course explains the new series of middle-range copiers OR-C2.**




**No additional notes**


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

# What Models are there in the Series?
## Comparing Basic Specifications

- **OR-C2a (D182)**
  - 25 cpm
- **OR-C2b (D183)**
  - 30 cpm
- **OR-C2c (D184)**
  - 33 cpm

- **Controller: GW+**
  - Contains new features introduced with the latest models that use this controller
  - Java VM is standard (built into the controller)
  - USB/SD slots built into the operation panel
- **Memory**
  - Basic models (no scanner or printer kits built in)
    - » 512 MB memory, no HDD
  - SP models (with scanner and printer kits built in)
    - » 1.5 GB memory, 250 GB HDD

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**No additional notes**

# What Models are there in the Series?

## Regional Variations in Standard Models

| | RAC | RE | RA | RCN |
|---|---|---|---|---|
| C2a | SP model only<br>ARDF is standard; Smart Operation Panel is option | 2 models<br>1) SP model, ARDF, normal operation panel<br>2) SP model, ARDF, Smart operation panel | 1 model<br>SP model , no ARDF, normal operation panel | 1 model<br>SP model , no ARDF, normal operation panel |
| C2b | SP model only<br>ARDF is standard; Smart Operation Panel is option | 3 models<br>1) Basic model, no ARDF, normal operation panel<br>2) SP model, ARDF, normal operation panel<br>3) SP model, ARDF, Smart operation panel | 2 models<br>1) Basic model, no ARDF, normal operation panel<br>2) SP model, no ARDF, normal operation panel | 2 models<br>1) Basic model, no ARDF, normal operation panel<br>2) SP model, no ARDF, normal operation panel |
| C2c | SP model only<br>ARDF is standard; Smart Operation Panel is option | 3 models<br>1) Basic model, no ARDF, normal operation panel<br>2) SP model, ARDF, normal operation panel<br>3) SP model, ARDF, Smart operation panel | 2 models<br>1) Basic model, no ARDF, normal operation panel<br>2) SP model, no ARDF, normal operation panel | 2 models<br>1) Basic model, no ARDF, normal operation panel<br>2) SP model, no ARDF, normal operation panel |

- **Basic models can be upgraded with one or more of the following options:**
  - Printer Unit Type M7
  - Scanner Enhance Option Type M7
  - Printer/Scanner Unit Type M7
  - Hard Disk Drive Option Type M7
  - Memory Unit Type M1 1.5GB

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**No additional notes**

# Comparing Specifications with OR-C1

| | OR-C1 | | | OR-C2 | | |
|---|---|---|---|---|---|---|
| | a | b | c | a | b | c |
| CPM | 23 | 28 | 33 | 25 | 30 | 33 |
| Operation panel | 8.5 inches | | | 9 inches | | |
| RAM (maximum) | 1 GB | | | 1.5 GB | | |
| HDD | 120 GB | | | 250 GB | | |
| Paper Feed Capacity (standard) | 1150 | | | 1150 | | |
| Paper Feed Capacity (max) | 3150 | | | 3150 | | |
| Warm-up Time | w/ HDD: 20 s, w/o HDD: 14 s | | | w/ HDD: 15.5 s, w/o HDD 14.5 s | | |
| First Copy Time | 5.4 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Scanning Speed (max) | 50 ipm | | | 80 ipm (A4), 79 ipm (LT) | | |
| Scanning Resolution | 200 dpi | | | 300 dpi | | |

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**No additional notes**

## Changes to the Engine

- **The machine is the same as the OR-C1, except for the following points:**
  - Scanner: This is the same as the MET-C1.
  - SBU board: This is also the same as the MET-C1.
  - Operation panel: This has been increased from 8.5 inches to 9 inches. This is also the same as the MET-C1.
  - Boards: A GW+ controller is used. The BCU and IPU have been changed.
  - Main switch: This is the same type as CH-C1 and MET-C1. This means that the method of turning power off before removing machine components is different from OR-C1.
  - The metal frame was modified because of the changes to the scanner, controller board, and main PCBs.

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**No additional notes**

## Yield of Consumables

- **Toner cartridges**
  - 360 g
  - 11 k prints
  - Same toner as OR-C1

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**Yields are based on these conditions:**

- A4 (LT) long-edge feed
- 5% image coverage ratio

# Targets

- **Average Print Volume**
  - OR-C2a: 4 k/month
  - OR-C2b: 5 k/month
  - OR-C2c: 7 k/month

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**No additional notes**

# Reliability Information

- **PM Interval**
  - Components of the PCU: 60k
  - Others: 120 k
- **MPBF Target (Mainframe)**
  - OR-C2a: 102.6 k
  - OR-C2b: 106.4 k
  - OR-C2c: 111.1 k
- **Call Ratio Target (Mainframe)**
  - OR-C2a: 0.039
  - OR-C2b: 0.047
  - OR-C2c: 0.063
- **Machine Life**
  - OR-C2a: 900k or 5 years
  - OR-C2b: 1,200k or 5 years
  - OR-C2c: 1,800k or 5 years

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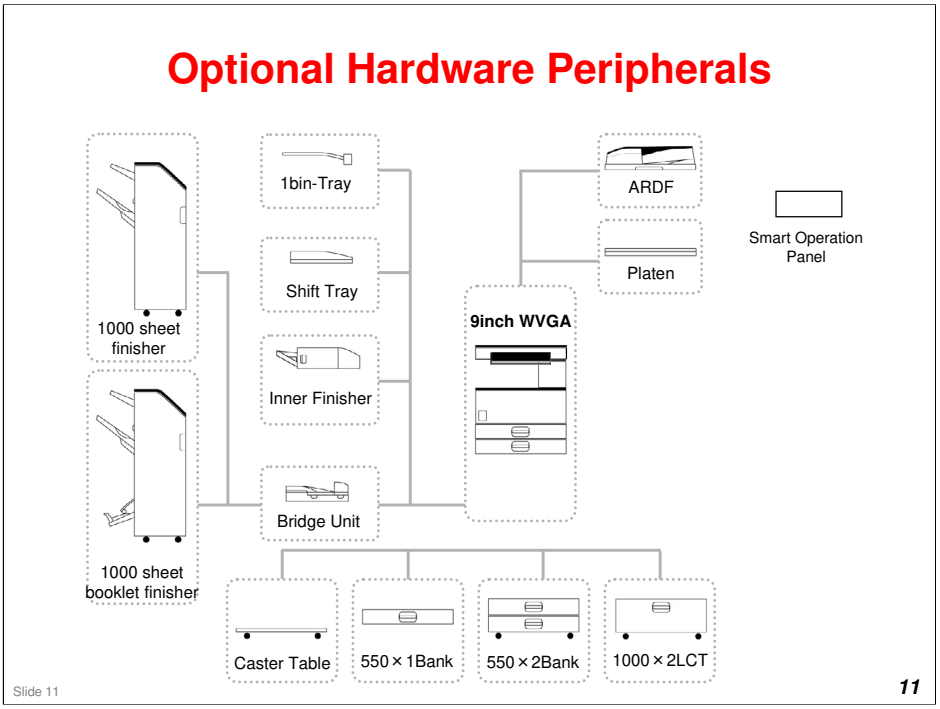
**No additional notes**




- If you install either of the 1000-sheet finishers, you must also install either the LCT or the two-tray paper tray unit. An adapter kit is also required.

# Options: Original Feed

| | | Also used with these models: | Similar to: | Note |
|---|---|---|---|---|
| D779: ARDF DF3090 | | MET-C1 | K-C4 | |
| D700: Platen Cover PN2000 | | K-C4, MET-C1 | | |
| D593: ADF Handle Type C | | OR-C1 | | |
| | | | | |
| | | | | |

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**No additional notes**

# Options: Paper Feed

| | | Also used with these models: | Similar to: | Note |
|---|---|---|---|---|
| D746: Paper Feed Unit PB3180 | New | | OR-C1 | 2 trays |
| D579: Paper Feed Unit PB3120 | | OR-C1 | | 1 tray; only one of these can be installed |
| D747: LCIT PB3190 | New | | OR-C1 | |
| D593: Caster Table Type D | | OR-C1 | | Requires PB3120 |
| | | | | |

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**No additional notes**

# Options: Finishing

| | | Also used with these models: | Similar to: | Note |
|---|---|---|---|---|
| D687: Finisher SR3140 | | MET-C1 | | 1000-sheet |
| D686: Booklet Finisher SR3150 | | MET-C1 | | 1000-sheet |
| D687: Finisher Adapter Type M7 | New | | | Needed for D686/D687 finishers |
| D717: Punch Unit PU3050 | | MET-C1 | | For D686/D687 |
| D586: Internal Finisher SR3352 | | OR-C1 | | 500-sheet |
| D587: Punch Unit PU3020 | | OR-C1 | | For D586 |
| D583: Internal Shift Tray SH3050 | | OR-C1 | | |
| D584: Bridge Unit BU3050 | | OR-C1 | | |
| D582: 1 Bin Tray BN3090 | | OR-C1 | | |
| | | | | |

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**No additional notes**

# Options: Controller

| | | Also used with these models: | Similar to: | Note |
|---|---|---|---|---|
| D757: Postscript3 Unit Type M7 | New | | Similar to those used with other models | |
| D758: Browser Unit Type M7 | New | | | |
| D758: SD card for NetWare printing Type M7 | New | | | |
| D757: IPDS Unit Type M7 | New | | | |
| D758: Hard Disk Drive Option Type M7 | New | | | For upgrading the Basic models |
| D701: Memory Unit Type M1 1.5GB | | K-C4 | | Memory option: Take out the existing 512 MB module and install the 1.5 GB option. |
| D757: Printer Unit Type M7 | New | | | Upgrade procedures: Service Manual > Installation > Printer and Printer/Scanner Options > Printer, Printer/Scanner Unit Installation (For Basic Models) |
| D757: Scanner Enhance Option Type M7 | New | | | |
| D757: Printer/Scanner Unit Type M7 | New | | | |

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**No additional notes**

# Options: Controller

| | | Also used with these models: | Similar to: | Note |
|---|---|---|---|---|
| D164: IEEE 802.11a/g/n Interface Unit Type M2 | | MET-C1 | Similar to those used with other models | |
| D166: OCR Unit Type M2 | | CH-C1, MET-C1 | | |
| D773: Smart Card Reader Built-in Unit Type M7 | New | | MET-C1 | |
| B679: IEEE 1284 Interface Board Type A | | Used with many other models | | |
| D566: Bluetooth Interface Unit Type D | | Used with many other models | | |
| D377: File Format Converter Type E | | Used with many other models | | |
| D640: Copy Data Security Unit Type G | | Used with many other models | | |
| D641: SD Card for Fonts Type D | | Used with many other models | | |
| B869: Unicode Font Package for SAP® | | Used with many other models | | |
| D362: Data Overwrite Security Unit Type I | | S-C4, DI-C1 | | For CC certification |

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**No additional notes**

# Options: Fax

| | | Also used with these models: | Similar to: | Note |
|---|---|---|---|---|
| D759: Fax Option Type M7 | New | | Similar to those used with other models | |
| D759: G3 Interface Unit Type M7 | New | | | |
| D757: Fax Connection Type M7 | New | | | |
| G578: Memory Unit Type B 32MB | | In use with many models | | |
| D593: Handset Type 3352 | | OR-C1 | | |
| H903: Marker Type 30 | | In use with many models | | |

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**No additional notes**

# Options: Other

| | | Also used with these models: | Similar to: | Note |
|---|---|---|---|---|
| B870: Optional Counter Interface Unit Type A | | OR-C1 | Similar to those used with other models | |
| A674: Key Counter Bracket Type H | | OR-C1 | | |
| D593: Card Reader Bracket Type 3352 | | OR-C1 | | |
| D148: Smart Operation Panel Type M3 | New | MET-C1 | | A new type of operation panel.<br>The external keyboard bracket (used in MET-C1) is not required. |
| | | | | |

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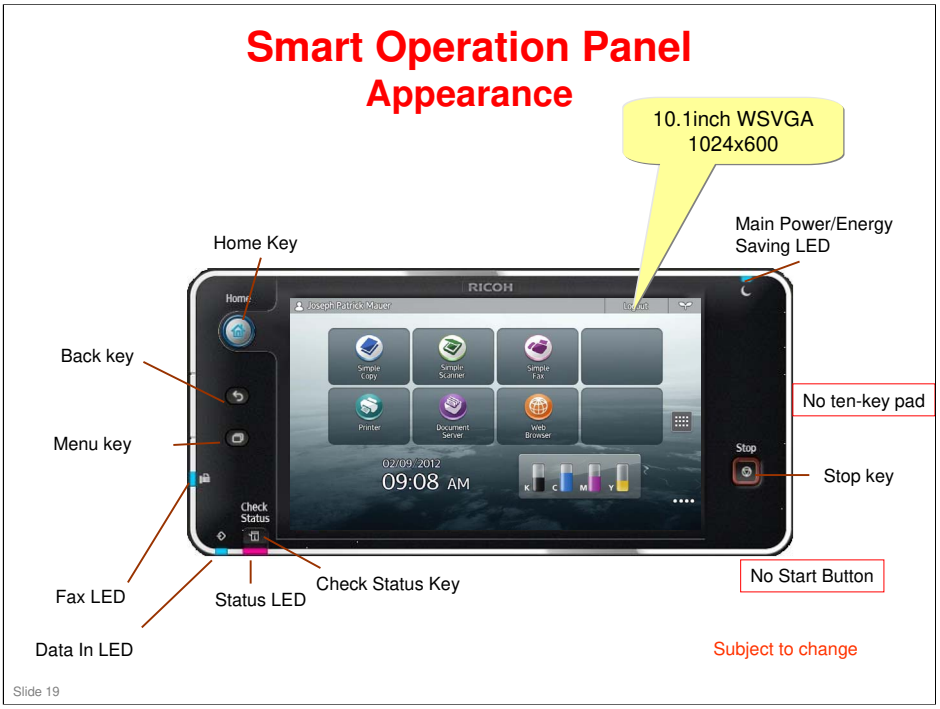
**No additional notes**




**No additional notes**


**No additional notes**

## Java VM Feature

- **Java VM was provided as an option on an SD card until now, but in this model, Java VM is mounted on the controller board (NAND flash memory) as standard.**

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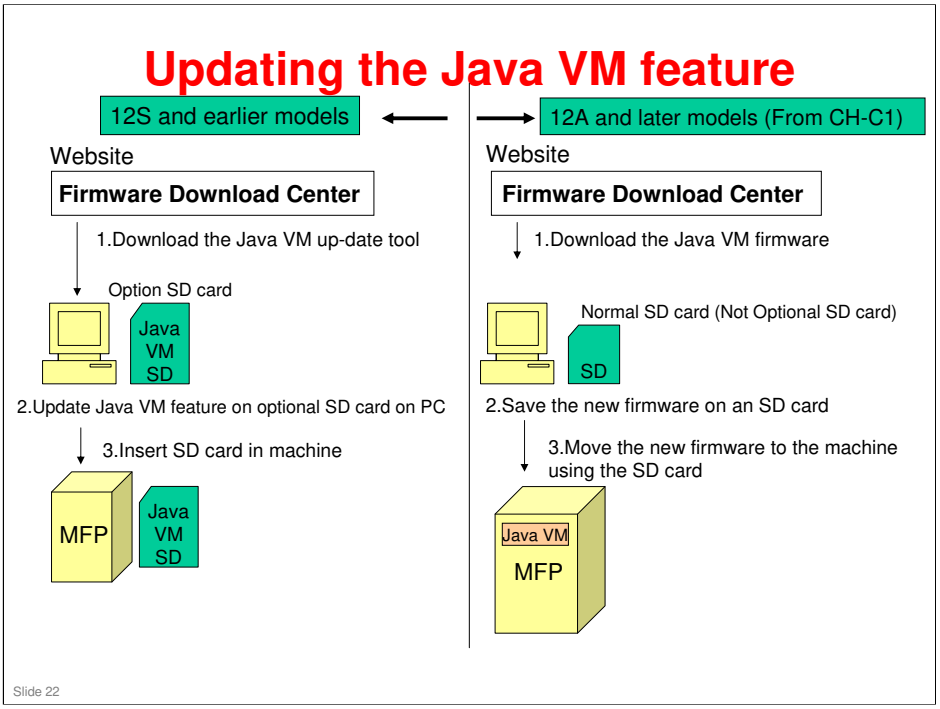
- This change is to expand sales of SDK solution applications.
- As you know, up until 12S models, if the customer wants to use SDK solution applications, it is necessary to buy two options, one is the feature itself, and one is the Java VM feature to activate the feature.
- But from CH-C1, the customer can use the SDK solution application by buying only the application.




**No additional notes**

# Re-install this feature if you replace the controller board

- **When replacing a controller board, you need to confirm which SDK applications are installed, and re-install them.**
  - To check, look at the most recent list of optional features installed in this machine. It was printed with SP5-990-024 (SDK/J Summary) or SP5-990-025 (SDK/J Application Info.)
  - For reinstalling, please keep the original SD card in the machine (the SD card Holder is in the front cover)

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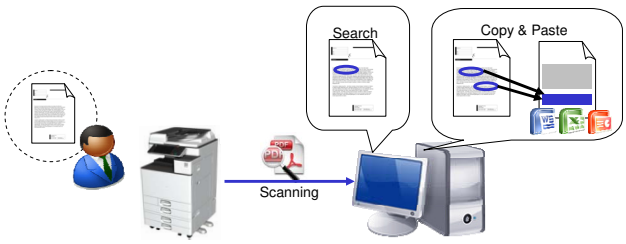
**No additional notes**

# Embedded OCR (Searchable PDF)
## Overview




- This function lets users add transparent text information on scanned documents.
- Searchable PDF is composed of two layers; Image-Layer and Text Layer.
- User can search specific words by using electronic search functions.
- Also this function allows Copy & Paste functions like other Office documents.
- Language support:
  - 1.English 2.German 3.French 4.Italian 5.Spanish 6.Dutch 7.Portuguese 8.Polish 9.Swedish 10.Finnish 11.Hungarian 12.Norwegian 13.Danish 14.Japanese
- Requires the OCR option (this is a new type of option).
- The OCR option cannot be copied from one SD card to another.

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- From 12A models such as CH-C1, we provide the new optional feature “Searchable PDF”
- This feature is provided as a SD card option.
- The OCR button is displayed after you install it from the SD card.
- It is not necessary to install any application on the customer’s PC. Just install the OCR kit on the machine.
- After scanning the originals, the machine starts the OCR processing on the scanned data in the HDD.
- And then, when the OCR processing has finished , the machine sends the scanned data which includes OCR data.
- While OCR processing, you can use other functions, such as printing or scanning.

# Embedded OCR (Searchable PDF)

## Notes about this Feature

- OCR can recognize texts even when there are multiple languages (easy words) in the scanned documents.
- When users choose Searchable PDF, invisible texts will be embedded in scanned images after scanning all input documents. Then, the machine sends a Searchable PDF file to the designated destinations.
- Files can be encrypted and be set with passwords in the same way as normal PDF files.
- File names can automatically be set from the OCR text. Example: " yyyymmdd + sequence number + words in document + .pdf "
- If documents are upside down, the machine will detect and modify automatically.
- The OCR system can detect white pages in the documents and take them out of the file. Users can enable this function from the operation panel or Web Image Monitor.

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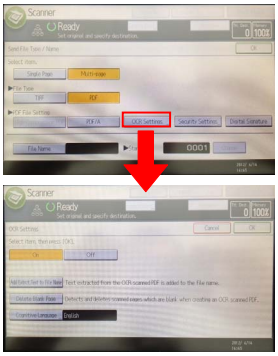
**No additional notes**

# Embedded OCR (Searchable PDF)
## How it Works



### User Operations

- Users' basic operation does not differ from other scanner settings.
- This function supports the following file types: PDF, High Compression PDF, and PDF/A.

### Send Searchable PDF to email

- When there are email size limitations and the scanned file size exceeds it, the file will be automatically divided so that its size will become within the limit.
- The file will be divided by pages.
- Please note that users cannot cancel the job once Searchable PDF job has started, unlike other file formats.

### Benefits for the Customer

- Users can search specific words by using electronic search functions. Also this function lets you use Copy & Paste functions like other Office documents. Therefore, users can reduce time to look for documents.
- This function requires only the OCR option. Users don't have to provide additional servers or software for using this function.
- Some models requires OCR option plus HDD option.

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**No additional notes**

# Embedded OCR (Searchable PDF)
## Remarks - 1

- This function is provided as an option.
- Some models require a HDD option.
- Searchable PDF files cannot be stored in the Document Server.
- Preview cannot be used for Searchable PDF files.
- When texts have kerning letters, accuracy may become lower.
- OCR can process texts up to 40,000 characters/page.
- When it is impossible to create a Searchable PDF file, a normal PDF will be created.
- OCR will start after all originals are scanned and then a searchable PDF will be sent to the specified destination. So users need to wait until OCR is completed when SD/USB is selected as a destination.
- Other Scan to SD/USB jobs will not start while a Searchable PDF job is in progress, until the files have been sent to SD/USB.
- When SD/USB is selected as a destination for searchable PDF, the function automatically naming the scanned file is not available.

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**No additional notes**

# Embedded OCR (Searchable PDF)

## Remarks - 2

- When the scan resolution is set below 200dpi, OCR quality may not be good enough to create a Searchable PDF. As a result, Searchable PDF cannot be used. Therefore, Searchable PDF cannot be used when the resolution is set less than 200dpi.
- Actual scanning resolution will become less than 200dpi when the size of the image is reduced. In this case, users can use Searchable PDF, though OCR quality deteriorates.
- When there are email size limitations and the scanned file size exceeds it, the whole file will be automatically divided to multiple files. In this case, the system ignores the limitation of file quantities.
- If the receiver PC doesn't support a specific language, the file name will be corrupted when the file name is set automatically,
- Users cannot use these functions at the same time:
  - Searchable PDF + Encryption + PDF/A + Signature
  - Searchable PDF + High compression PDF + PDF/A
- Processing time will be depend on the following items. Therefore, some cases takes a long time to create a Searchable PDF.
  - Controller spec / The number of characters / Resolution / Paper size

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**No additional notes**

## Capturing the Debug Logs - 1

- **Debug logs for the controller, engine, and operation panel (or optional Smart Operation Panel) can be transferred to an SD card in the SD slot on the operation panel.**
  - The controller debug is updated continuously during operation, but the engine debug log is only changed if an SC or jam occurs.
  - These logs can help solve problems caused by the software.
  - They are not effective for identifying defective parts or problems caused by hardware.
- **In older models, a technician enabled the logging tool after a problem occurred. After that, when the problem had been reproduced, the technician was able to retrieve the debug log.**
- **However, this new feature saves the debug logs at the time that problems occur. Then you can copy the logs to an SD card.**

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**No additional notes**

## Capturing the Debug Logs - 2

- **Insert the SD card into the slot on the side of the operation panel.**
- **Set the start date of the log with SP5-857-101**
  - e.g.: March 28, 2013: input 20130328 (yyyymmdd)
  - Set the date three days earlier than the occurrence of the problems.
- **Set the end date of the log with SP5-857-102**
  - e.g.: March 30, 2013: input 20130330 (yyyymmdd)
- **Execute SP5-857-103 to write the debug log to the SD card.**
  - The approximate time it takes to transfer the debug log is as follows. Transfer time may be affected by the type or format of the SD card.
    - » Controller debug log (GW debug log): 2 - 20 minutes
    - » Engine debug log: 2 minutes
    - » Operation panel debug log: 2 - 20 minutes

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- See the ‘Retreiving the Debug Logs’ section in the service manual for details of the procedures.

## Capturing the Debug Logs - 3

- **The debug logs are saved with the following file names and paths.**
  - Controller debug log (GW debug log):
    /LogTrace/machine number/watching/
    yyyymmdd_hhmmss_unique identification number.gz
  - Engine debug log:
    /LogTrace/machine number/engine/
    yyyymmdd_hhmmss.gz
  - Operation panel debug log:
    /LogTrace/machine number/opepanel/
    yyyymmdd_hhmmss.tar.gz

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**No additional notes**

## Import/Export of Settings Data

- **This feature uses the SD card slot on the side of the operation panel.**
- **There is a procedure for user tool settings data, and another procedure for SP settings data.**
- **Import/export is possible between devices only if their model type, region of use, and the following device configurations match.**
  - Input Tray
  - Output Tray
  - ADF
  - Whether or not equipped with a hard disk
  - Whether or not equipped with a finisher and the type of finisher
- **For full details about this feature, see the following section of the service manual:**
  - Service Table > UP/SP Data Import/Export

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**No additional notes**

# Import/Export of User Tool Settings Data - 1

- **To export data:**
  - Insert an SD card into the slot on the side of the operation panel.
  - Log in at the operation panel as an administrator with all privileges.
  - Use the following user tool: [System Settings] > [Administrator Tools] > [Device Setting Information: Export (Memry Strge Devc)].
- **To import data:**
  - Insert the SD card with the settings into the slot on the side of the operation panel.
  - Log in at the operation panel as an administrator with all privileges.
  - Use the following user tool: [System Settings] > [Administrator Tools] > [Device Setting Information: Import (Memry Strge Devc)].
- **Specify whether to [Include] or [Exclude] the "Device Unique Information". "Device Unique Information" includes the IP address, host name, fax number, etc.**
- **Specify an encryption key.**
- **See the service manual for full details of operation.**
  - Service Table > UP/SP Data Import/Export

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**No additional notes**

# Import/Export of User Tool Settings Data - 2

- **Data that can be imported and exported:**
  - Copier / Document Server Features
  - Printer Features
  - Scanner Features
  - Facsimile Features
  - Browser Features
  - Extended Feature Settings
  - Program (Document Server)
  - Program (Copier)
  - Program (Scanner)
  - Web Image Monitor Setting
  - Web Service Settings
  - Some System Settings
    - » The setting for the date, those settings that require the device certificate, and those settings that need to be adjusted for each device (for example, image adjustment settings) cannot be imported or exported.
    - » Settings only for executing functions and settings only for viewing cannot be imported or exported.

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**No additional notes**

# Import/Export of User Tool Settings Data - 3

- **Data that cannot be imported and exported:**
  - Extended Feature Settings
  - Address book
  - Programs (fax function)
  - Programs (printer function)
  - User stamp in Copier / Document Server Features
  - Settings that can be specified via telnet
  - Remote-related data
  - Counters
  - EFI printer unit settings
  - Settings that can only be specified via Web Image Monitor or Web Service (for example, Bonjour, SSDP setting)
  - Some System Settings
    - » The setting for the date, those settings that require the device certificate, and those settings that need to be adjusted for each device (for example, image adjustment settings) cannot be imported or exported.
    - » Settings only for executing functions and settings only for viewing cannot be imported or exported.

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**No additional notes**

## Import/Export of SP Settings Data - 1

- **System SP data, scanner SP data, fax SP data and printer SP data can be exported.**
- **To export data, insert an SD card and use SP5-749-001 (Import/Export: Export).**
  - There are two sets of data that can be exported: 'Unique', and 'Secret' (see the next slide)
  - The data classified as 'Secret' cannot be exported unless an encryption key is input.
- **To import data, insert the SD card with the required data and use SP5-749-101 (Import/Export: Import).**

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**No additional notes**

## Import/Export of SP Settings Data - 2

- **'Unique' data:**
  - Unique information that can be updated
    - » #1. Items that are to be used to identify the machine.
      - – Example: Network Information/ Host name / Information related to fax number /Mail address assigned to the machine
    - » #2. Items for specifying the options equipped on the machine.
      - – Example: Lot number for developer
  - Unique information that cannot be updated
    - » #1. Items that may cause a problem if imported
      - – Example: Serial number / Information related to @Remote
    - » #2. Items for managing the history of the machine
      - – Example: Time and date / Counter information / Installation date
    - » #3. Setting values for the Engine

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**No additional notes**

## Import/Export of SP Settings Data - 3

- **'Secret' data:**
  - #1. Data that cannot be exported without being encrypted first.
    - » Exported data is encrypted.
    - » Example: Password / Encryption key / PIN code
  - #2. Confidential information for the customer
    - » Example: User name / User ID / Department code / Mail address / Phone number
  - #3. Personal information
    - » Example: Document name / Image data
  - #4. Sensitive information for the customer
    - » Example: MAC address / Network parameters

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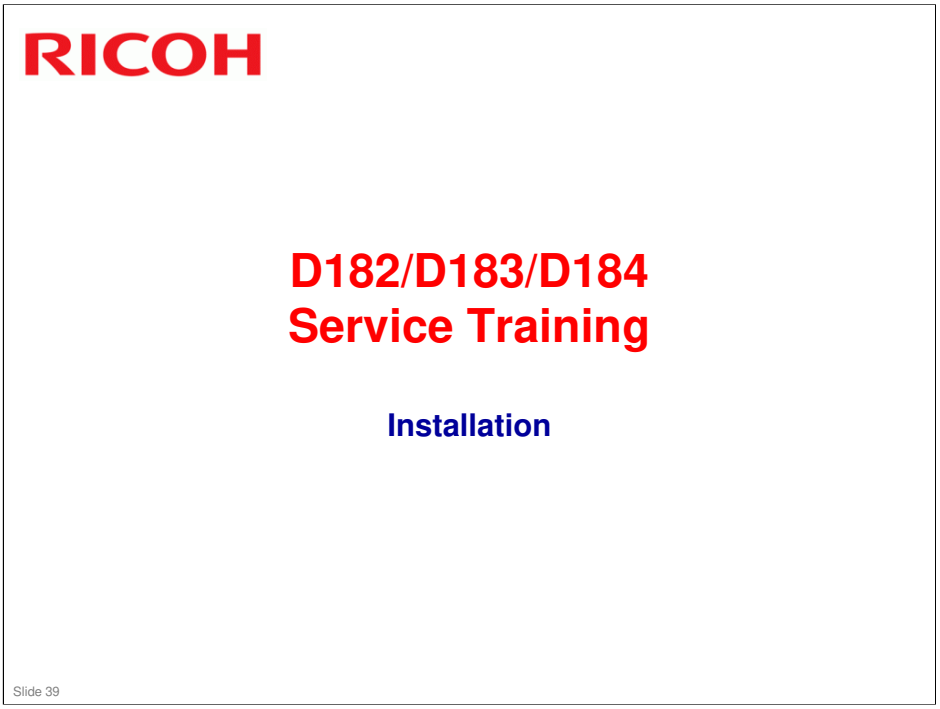
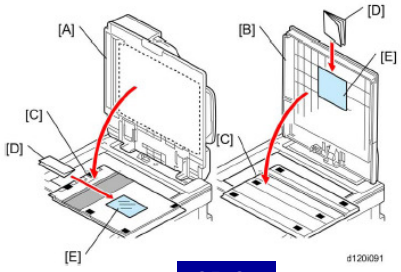
**No additional notes**

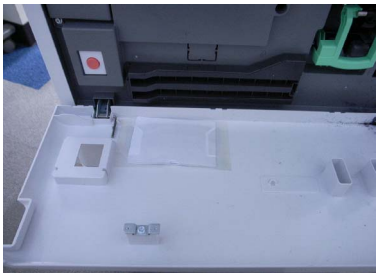



**This section explains the main points about installation. For full details, see the Field Service Manual.**

## SMC Sheet Storage Location




OR-C1



OR-C2

- **OR-C1: You have to remove the SMC sheet from the exposure glass and store it inside the ARDF or platen cover.**
- **OR-C2: The SMC sheet is stored inside the front cover (near the power switch) at the factory. You do not have to do anything.**

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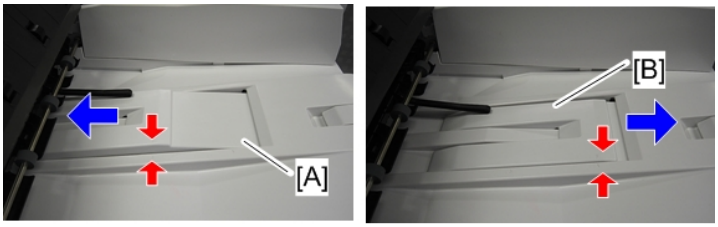
**No additional notes**

# Options
## ARDF DF3090




d1585055

- When feeding thin paper, adjust the sliding tray to the point shown above [A].
- When feeding normal paper, adjust the sliding tray to the point shown above [B].
- If not, you may get the following problems:
  - Original jam
  - Originals cannot be stacked neatly

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**No additional notes**

# Options
## Finishers

- The D686/D687 finishers are the same as for MET-C1. However, when installing on the OR-C2, Finisher Adapter Type M7 must be attached first.

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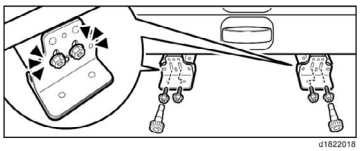
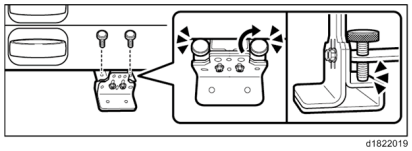
**No additional notes**

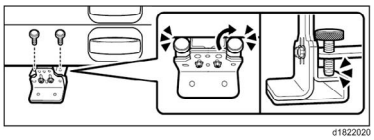
# Options

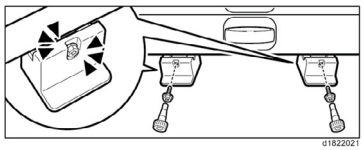
## Paper Tray Unit (two trays), LCT

- The casters are different from the OR-C1.
- The casters are adjustable. See the installation procedure in the service manual for details.




Slide 43

**No additional notes**

# Options
## Smart Operation Panel

- The external keyboard bracket (used in MET-C1) is not required.
- After installation, do the following SP adjustments.
  - Set SP5-748-201 bit 0 to 1 (default: 0).
  - Set SP5-748-101 to 1 (default: 0).
- Switch power OFF/ON.
- After switching the power ON, if the default setting icon is displayed and the default screen is displayed, the operation panel is connected normally.

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**No additional notes**

# Options
## SD Card Options

- **In former models (such as Ap/At-C3), there are some SD card options that can't be merged.**
- **In OR-C2, there are no restrictions.**
  - For example, the part of the Postscript software that requires licensing is now built into the controller, so the portion on the SD card can be moved to another SD card.
- **You can insert SD card options in any slot on controller board.**
  - We recommend that you insert SD card options in slot 1, because slot 2 is also used as the service slot.

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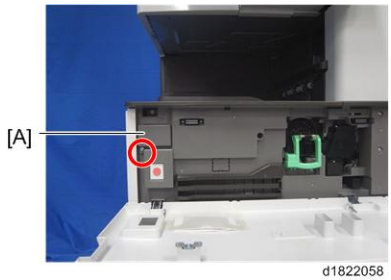
**No additional notes**

# Options
## SD Card Storage Location




d1822058

- Open the front cover, and then remove the bracket [A].


d1822059

- Keep the SD cards here [A].

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**No additional notes**

## Embedded OCR (Searchable PDF) Installation - 1

- Insert the OCR SD card in slot 1 or 2
- Turn the main switch on.
- Execute SP 5-878-004 (Option setup: OCR dictionary)
- Turn the switch off and on.
- Execute SP 5-878-004 again (Option setup: OCR dictionary)
- Turn the switch off.
- Remove the SD card from the SD slot.
- Save the SD card in the storage space under the switch cover.

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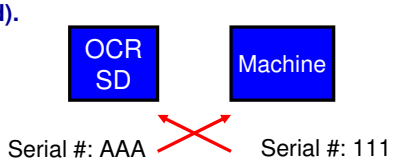
**No additional notes**

# Embedded OCR (Searchable PDF) Installation - 2

- The machine's serial number is saved on the OCR SD card during the first execution of SP5-878-004. At the same time, the OCR option's serial number is saved in the machine's NVRAM (on the controller board).




- Dictionary text information in the SD card is copied to the HDD during the second execution of SP5-878-004.
- Even after the dictionary data is copied to the HDD, the information is still stored in the SD card.

**Note: The OCR option has a license, like the PS option. Each SD card is available for only one machine. Therefore, once an OCR SD card is used on a certain machine, the machine writes the serial number on the SD card to prevent it from being used on other machines.**

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**No additional notes**

## Embedded OCR (Searchable PDF) Troubleshooting

1. **HDD broken**
   - Replace the HDD and copy the dictionary text information to the new HDD by using the original SD card again.
2. **NVRAM broken/replaced**
   - If upload/download of NVRAM is not possible, order the OCR SD card as a service part and do the installation procedure again.
3. **Please make sure to keep the original SD card in the storage location inside machine.**

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**No additional notes**


**Replacement procedures are similar to the OR-C1 (except for taking the covers off, and for replacing PCBs). However, refer to the service manual for OR-C2 for details when doing replacements and adjustments.**

## Important Notes

- **With previous models, when the DC power was turned off, the supply of power from the AC control board to machine internal systems was stopped.**
- **With this model, even after the main switch/DC power has been turned off, a voltage of 5V still flows through the machine to detect when the switch is pushed to turn the power on.**
- **Therefore, before performing any kind of machine maintenance, you must do either of the following:**
  - Physically remove the power cord from the outlet and wait several minutes (approx. equivalent to the time it takes to remove the rear cover).
  - Push the power switch again

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**No additional notes**

## Caution Before Removing Components


d1822066

- **Even if you turn the power switch off, +5V is still supplied. So do the following before you start work.**
  1. Push the power switch [A] on the machine.
  2. Wait 3 minutes to shut down.
  3. Take out the power cord.
  4. Do either of the following:
     - » Wait several minutes
     - » Push the power switch [A] again to remove the residual charge.

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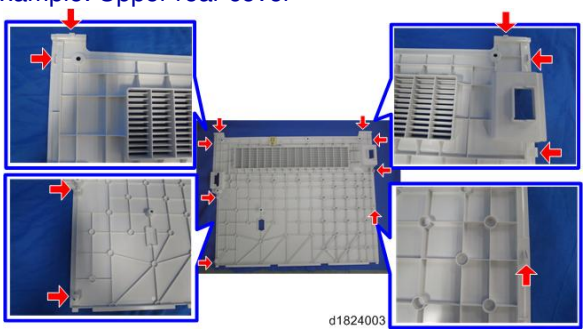
**No additional notes**

## Covers

- To improve the appearance of the machine, screw holes are mostly not visible. This means that the covers are held in place by a lot of tabs.
- The locations of these tabs are explained in the removal procedures. Pay attention to these diagrams, so that you do not damage the tabs.
  - Example: Upper rear cover

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**No additional notes**

## Starting the Machine Again

- To start the machine, press the main power switch.
- If you press the main power switch between the beginning and the end of a shutdown, the machine will not start.

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**No additional notes**

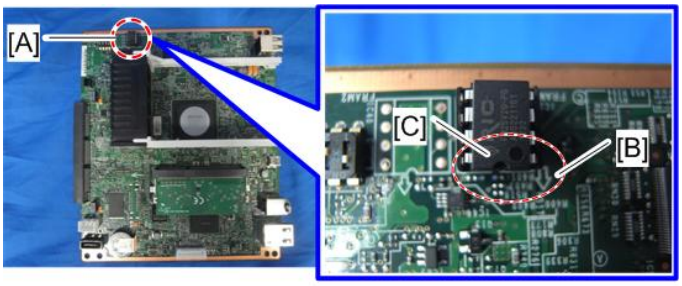
## Forced Shutdown

- In case normal shutdown does not complete for some reason, the machine has a forced shutdown function.
- To make a forced shutdown, press and hold the main power switch for 6 seconds.
- In general, do not use the forced shutdown. Forced shutdown may damage the hard disk and memory, and can cause damage to the machine. Use a forced shutdown only if it is unavoidable.

Slide 55

**No additional notes**

## Replacing the NVRAM on the Controller Board




- **See the following section of the manual for full details:**
  - Replacement and Adjustment > PCBs and Other Items > NVRAM on the Controller Board
- **When replacing the controller board, remove the NVRAM from the old controller board. Then install it at the same position on the new controller board.**
- **The indentation [C] on NVRAM [A] must face the direction of the arrow [B] that is printed on the controller board.**

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**No additional notes**

## Replacing the Controller Board - 1

- Before replacing the controller board, check which ESA applications have been installed.
- After replacing the controller board, re-install the ESA applications by following the installation instructions for each application.
- After reinstalling the ESA applications, print the SMC with SP-5-990-024/025.

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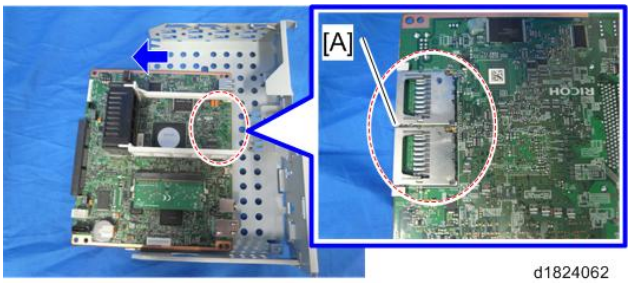
- ESA: This is sometimes called SDK

## Replacing the Controller Board - 2




- When removing the controller board, remove the board horizontally to the left so as not to damage the SD card slot [A] on the rear of the board.

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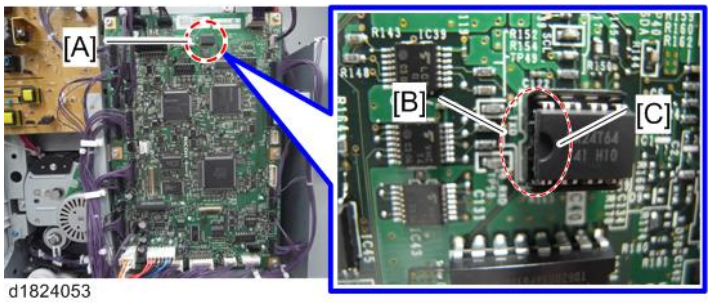
**No additional notes**

# Replacing the EEPROM on the BCU Board



d1824053

- **See the following section of the manual for full details:**
  - Replacement and Adjustment > PCBs and Other Items > EEPROM on the BCU
- **Install the EEPROM [A] the correct way around.**
  - The indentation [C] must point in the direction of the indentation [B] that is printed on the board.

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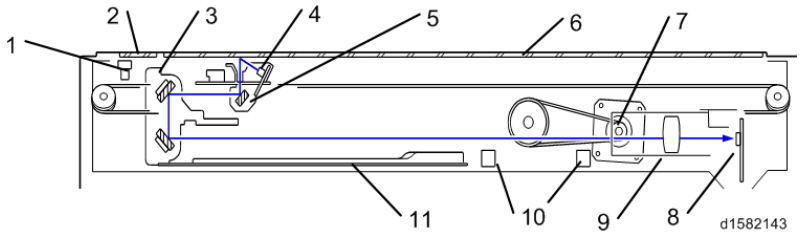
**No additional notes**


**This section describes the scanner. It is the same as MET-C1.**

## Scanner Unit




- **The machine uses a CCD for scanning.**
  1. Scanner HP sensor
  2. DF exposure glass
  3. 2nd scanner (2nd carriage)
  4. Scanner lamp
  5. 1st scanner (1st carriage)
  6. Exposure glass
  7. Scanner motor
  8. Sensor board unit (SBU)
  9. Lens Block
  10. APS sensor
  11. Scanner Anti-condensation Heater (Optional Unit)

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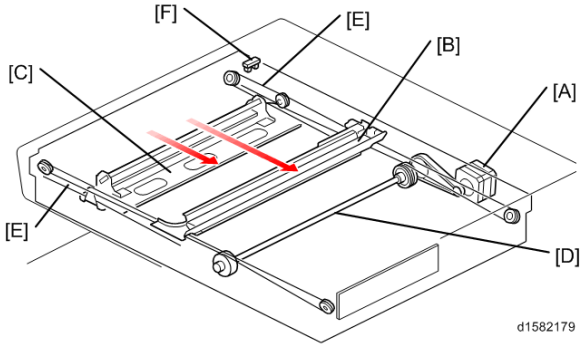
- The original on the exposure glass or ARDF exposure glass reflects the light emitted from the scanner lamp. The reflected light goes to the CCD on the sensor board by way of the 1st and 2nd scanners. The sensor board converts the CCD analog signals into digital signals.
- When the original is manually placed on the exposure glass, the scanner motor pulls the 1st and 2nd scanners via mechanical linkage. The original is scanned from left to right.
- When the original is fed from the optional ARDF, it is automatically fed over the ARDF exposure glass, and to the original exit. The 1st and 2nd scanners stay at their home positions below the ARDF exposure glass.
- The anti-condensation heater is available as an optional unit. It prevents condensation on the mirrors. Condensation can occur when the scanner unit is, for example, moved from a cold room to a warm room. Condensation can cause abnormal images.

## Scanner Drive




- **The scanner motor [A] drives the 1st scanner [B] and the 2nd scanner [C] through the scanner drive pulley, scanner drive shaft [D], and two scanner wires [E].**
- **In ARDF mode, the scanners always stay in their home position (the scanner HP sensor [F] detects the 1st scanner). The ARDF motor feeds the original through the ARDF.**

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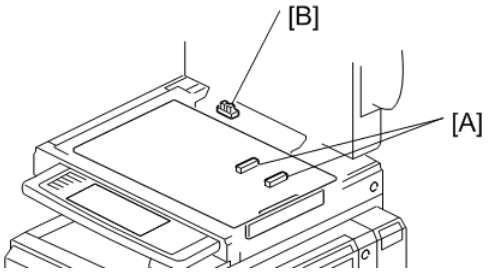
### Book mode

- The SBU board controls the scanner drive motor. The 2nd scanner speed is half that of the 1st scanner.
- In reduction or enlargement mode, the scanning speed depends on the magnification ratio. The returning speed is always the same, whether in full size or magnification mode. The image length change in the sub scan direction is done by changing the scanner motor speed. In the main scan direction it is done by image processing on the BCU board.
- You can adjust the magnification in the sub-scan direction by changing the scanner motor speed with SP4-008.

### ARDF mode

- The scanners always stay in their home position (the scanner HP sensor [F] detects the 1st scanner) to scan the original. The ARDF motor feeds the original through the ARDF. In reduction/enlargement mode, the image length change in the sub-scan direction is done by changing the ARDF motor speed. Magnification in the main scan direction is done in the BCU board. This is the same as for book mode.
- You can adjust magnification in the sub-scan direction by changing the ARDF motor speed with SP6-017.

# Original Size Detection – Platen Mode




- **There are no original width sensors in the scanner unit.**
- **The CCD detects the original width. The APS length sensors [A] detect the original length.**
- **The BCU board checks the sensors when the platen cover sensor [B] is activated as it is closed.**
  - If the copy is made with the platen cover open, the CPU determines the original size from the sensor outputs after the Start key is pressed.

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**No additional notes**

## Original Size Detection – Notes

- By changing SP4-305-001, you can change between A4 size/letter size and Chinese paper size (8 × 16).
- If the user specifies that the pre-scan lamp is too bright, the brightness for the pre-scan can be reduced by decreasing the value of SP4-309-004. However, if the lamp brightness is reduced, size detection may be less accurate for a document with a large number of solid images.

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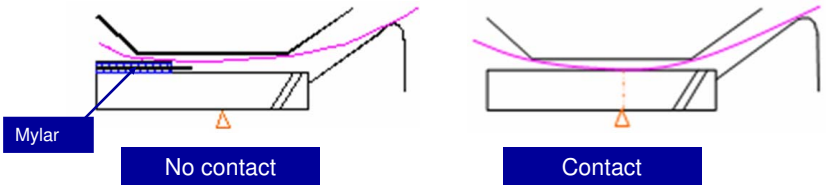
**No additional notes**

## ADF Exposure Glass: No contact vs Contact




- Originals that have sticky substances on the surface may cause streaks on the exposure glass.
- To prevent these streaks, the ADF exposure glass has a mylar, which guides the original over the glass so that it does not contact the glass.
- This method has one demerit: any dust that attached to the exposure glass will stay there and will not be swept away by originals passing through.
- However, the dust detection feature described on the next few slides can help with this.
- The machine uses the no contact type, but it can be converted to a contact type.

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- To convert between contact and no contact type scanning:
  - Troubleshooting > Other Problems > Converting the ARDF DF3090 (D779) to Contact Scanning
  - The procedure is the same as in the MET-C1

## Dust Detection – Overview

- **This function checks the ADF exposure glass for dust that can cause black lines in copies.**
- **The dust check is done before the first original is scanned.**
  - This is done only once at the beginning of a job. The check is not done for originals added during a long scanning job.
- **If dust is detected, a message is displayed on the operation panel, but the machine does not stop.**

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- This function is the same as V-C3.

## Dust Detection - SP 4020

- SP 4020 001: Enable/disable (default – disabled)
- SP 4020 002: Sensitivity adjustment
- SP 4020 003: Do not adjust in the field
- SP 7852: Counts how many times the machine detected dust on the ADF.

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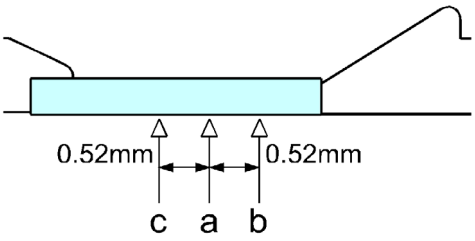
**No additional notes**

# Dust Detection – Action Taken




- **When dust detection determines that dust exists, the scan point shifts in order to avoid the dust.**
- **There are three scanning points.**
  - a: Home position
  - b: The first time that dust is detected, the scanner moves here.
  - c: The next time that dust is detected, the scanner moves here.
  - If dust is detected again, the scanner moves back to a. Then with consecutive dust detections, the scanning position cycles a > b > c > a > b > c , etc

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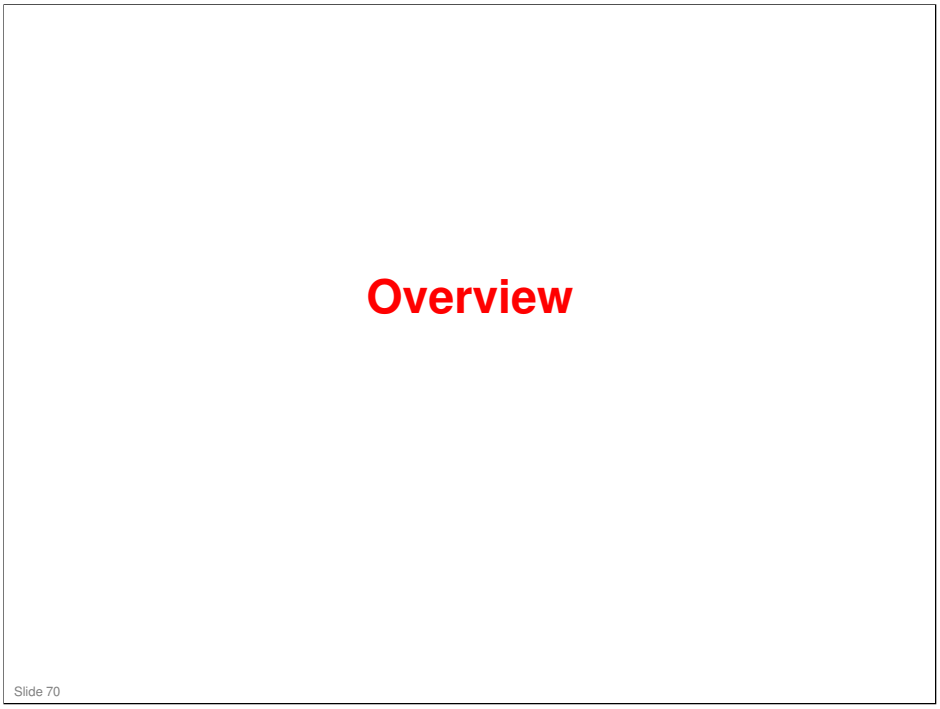
**No additional notes**


**No additional notes**




**No additional notes**

## What are the D686 and D687 Finishers?

- **1000-sheet Booklet Finisher D686**
  - This finisher has three trays: a proof tray on top of the finisher, an upper (shift) tray, and a lower tray for booklets.
  - This is a replacement for the B793 finisher.
    - » The mechanisms are very similar to the B793 finisher.
- **1000-sheet Finisher D687**
  - This finisher has two trays: a proof tray on top of the finisher and the upper (shift) tray.
  - This finisher does corner stapling only. It does not have a lower tray for stapled and folded booklets.

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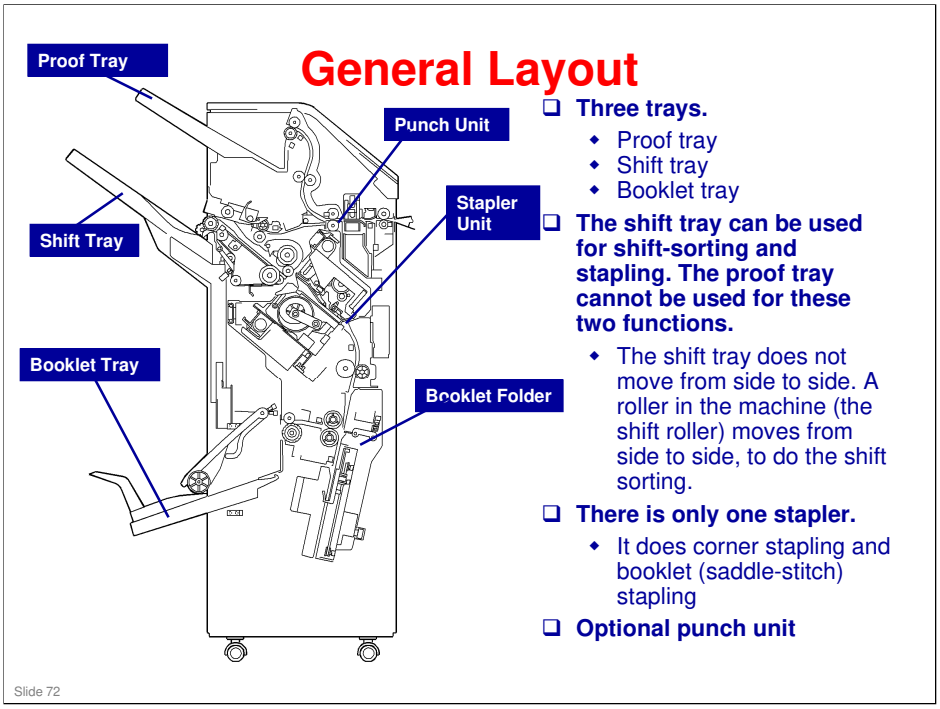
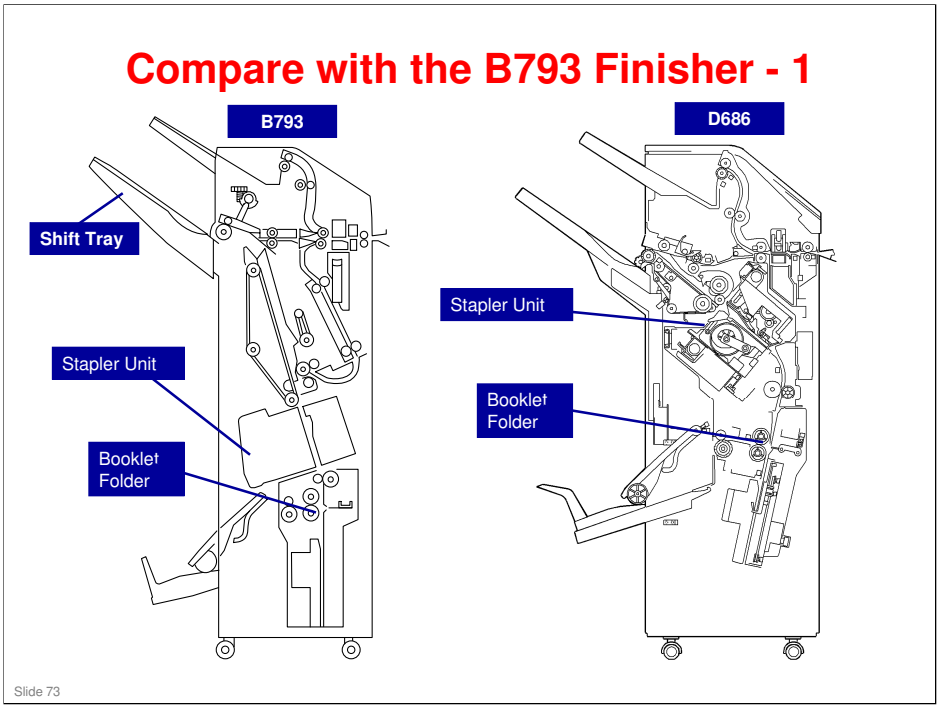
**No additional notes**




**No additional notes**




**No additional notes**

## Compare with the B793 Finisher - 2

- **Better for thick paper**
  - D686/D687 has a less severe bend going back to the stapler tray from the shift tray. So, heavier paper can be stapled than in the B793.
- **Better for thin paper**
  - In the B793, the stapler tray is almost vertical, so thin paper bends while in the staple tray. In D686/D687, the stapler tray is at a smaller angle, so thin paper can be stapled better.

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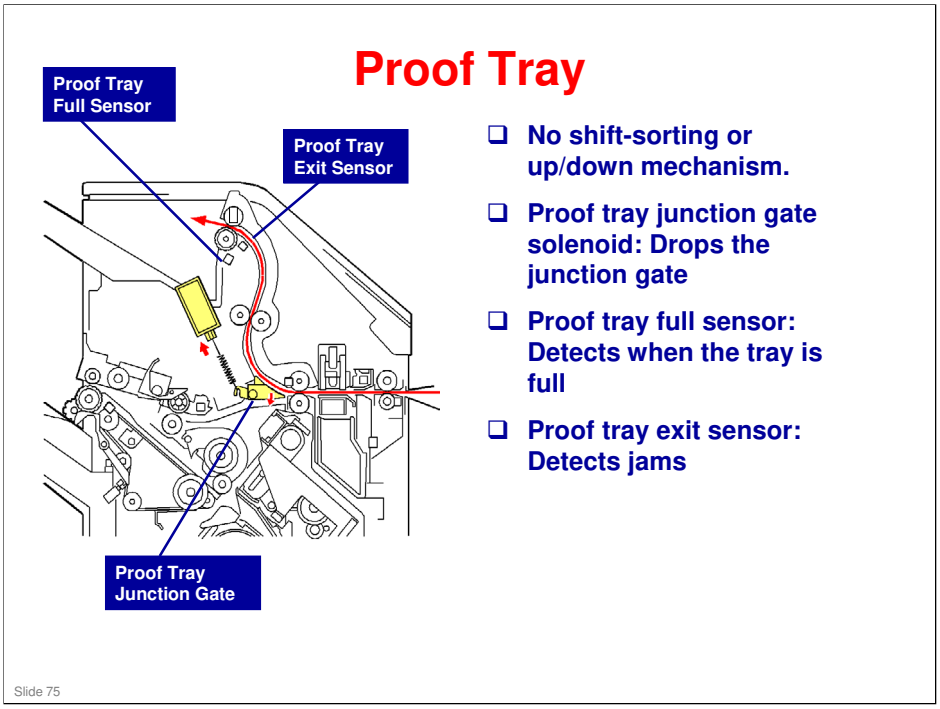
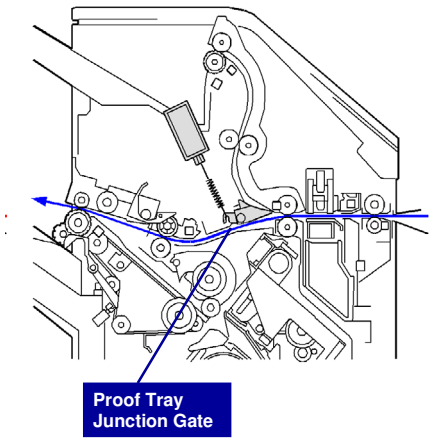
**No additional notes**




- The B793 has two junction gates. The D686/D687 have only one.
- The upper transport and entrance motors control the rollers.

# Shift Tray

- Has shift-sorting and up/down mechanism.
- Proof tray junction gate solenoid: Does not turn on
- This is the default mode.

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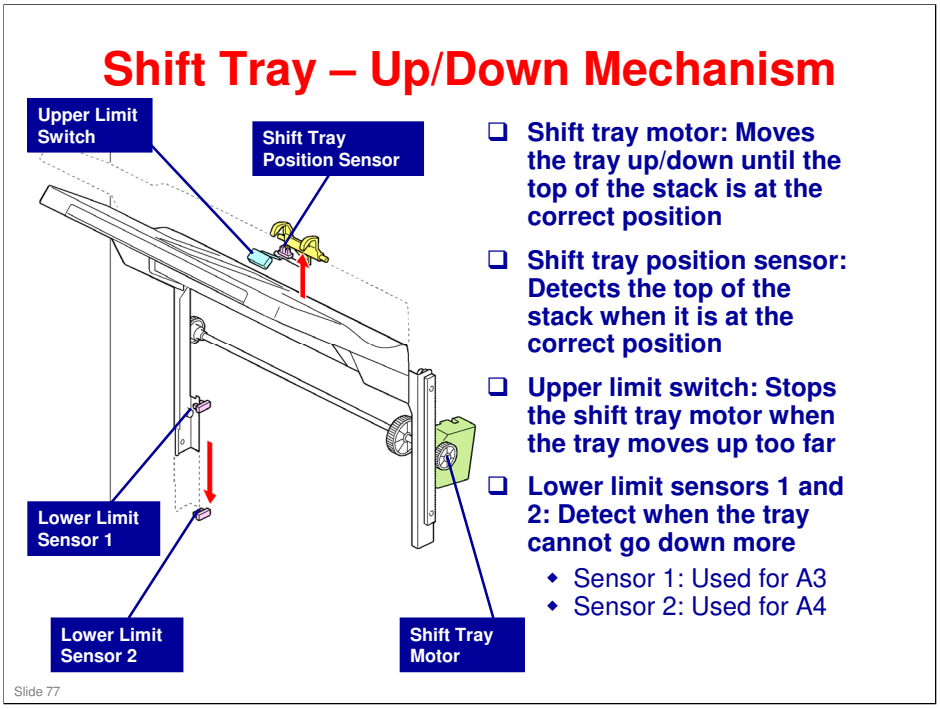
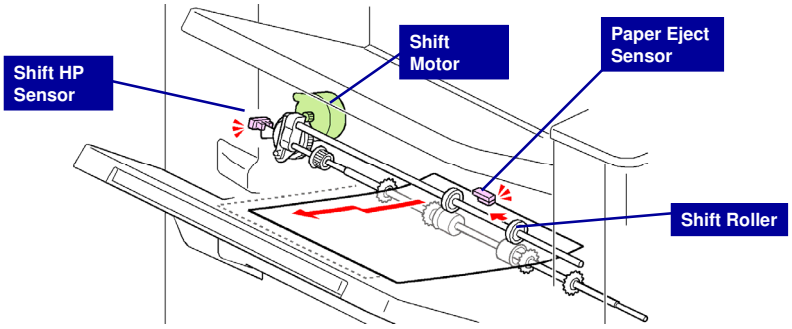
**No additional notes**




- The B793 has two lower limit sensors. The D686/D687 have only one.
- The tray moves up/down to keep the top of the stack at the correct position.
  - Detected by the shift tray position sensor.
- If the lower limit sensor turns on, copying stops.
- During sort/stack mode, the tray position is adjusted every 5 pages.
- During staple mode, the tray position is adjusted after every stapled set is fed out.

## Shift Tray – Side-to-side Mechanism




- **Shift motor: Moves the shift roller from side to side, after the paper eject sensor detects the trailing edge of the paper**
- **After the sheet is fed out, the shift roller moves back to home position**
  - Detected by the shift HP sensor

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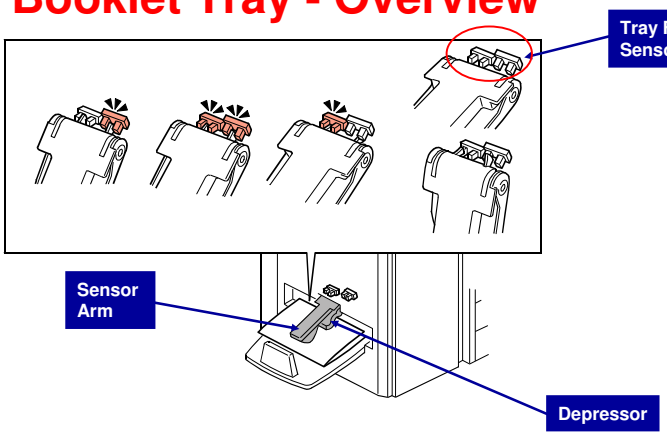
- This is basically the same as the B793 finisher.

- The shift roller moves the sheet to one side while it is fed out.
- All sheets of the same set are moved across to the same side, one at a time. Then, for the next set, the shift roller moves in the opposite direction.
- The shift roller goes back to home position after it feeds out each page.
  - Home position is in the middle.
- In shift mode, if the set is one sheet, the motor moves every sheet. In this case, the output speed of the finisher is reduced to 60%.

## Booklet Tray - Overview




- This tray does not have a lift mechanism.
- Two sensors detect when the tray is full.
- The actuators for these sensors are attached to the sensor arm.
- This tray is for booklets only.

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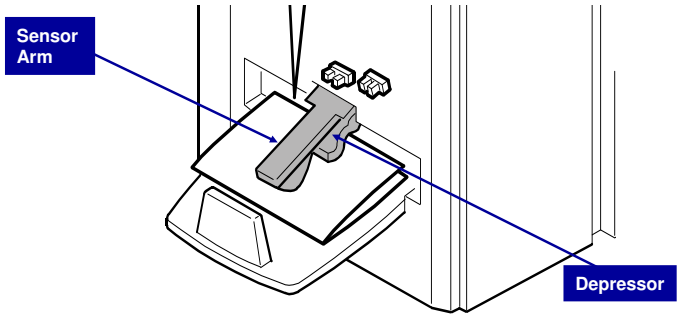
- This is the same as the B793 finisher.

# Booklet Tray – Stacking




- The sensor arm rests on the top of the booklets.
- The depressor pushes the open ends of the booklets down.
- This lets the machine stack more booklets on the tray.

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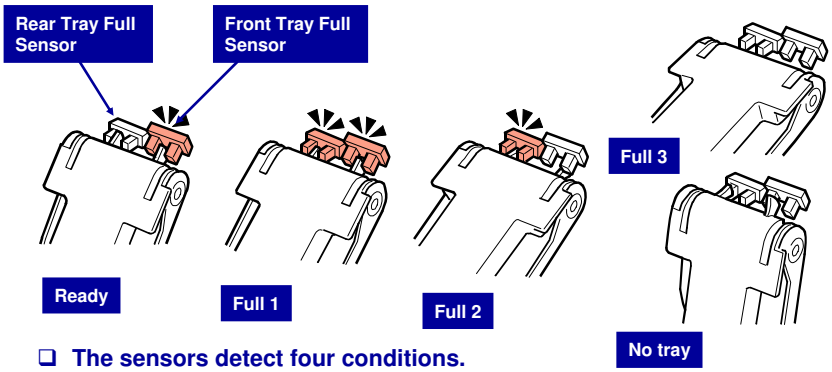
**No additional notes**

## Booklet Tray – Tray Full Sensors




- **The sensors detect four conditions.**
  - Ready, Full 1, Full 2, Full 3
  - The three 'Full' conditions are not 'half-full', 'almost full', and 'completely full'. The machine checks for one of these conditions to detect that the tray is full. The condition that the machine checks depends on the size of the paper and the number of sheets in one stapled and folded booklet.
- **If the tray is removed, the machine detects the Full 3 condition.**

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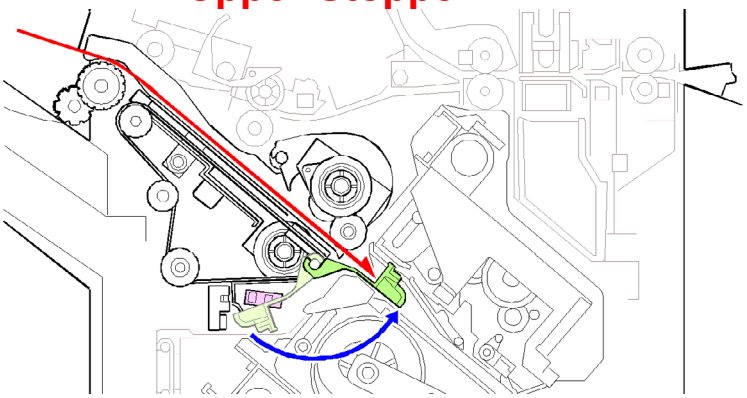
- The red sensors are 'ON'. The actuator is in the sensor.
- The three 'Full' conditions are not 'half-full', 'almost full', and 'completely full'. The machine checks for one of these conditions to detect that the tray is full. The condition that the machine checks depends on the size of the paper and the number of sheets in one stapled and folded booklet.
- After a booklet is fed out, the machine checks every 100 ms. Then, if the required 'full' condition is detected a set number of times (called "Cnt" in the service manual), the tray is full.
  - The only exception to this is Full 3. The machine must check this at all times to make sure that the tray was not removed.
- There are some examples in the service manual.
- The two-sensor mechanism is designed to take account of the way that booklets of various size and thickness settle on the output tray when the tray is getting full. The 'Cnt' values are the results of evaluations by the machine's designers, and they are the optimum values for the detection process in this model.

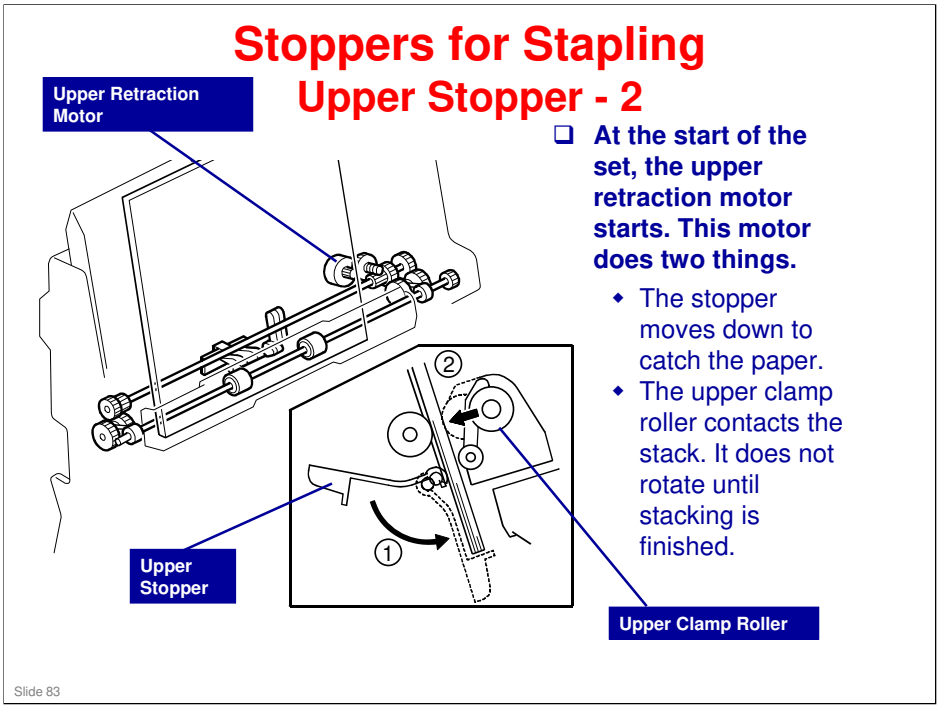
## Stoppers for Stapling
### Upper Stopper - 1



- **Used for the following:**
  - Corner stapling: All paper sizes
  - Booklet stapling: B5, A4, LT

Slide 82

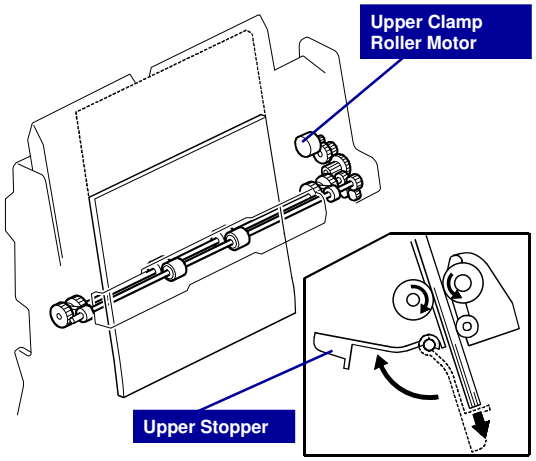
- This is similar to the B793 finisher.




- These diagrams are copied from the B793. The mechanism is similar, but the layout is different, because the stapler tray is at a less steep angle in the D686/D687.

# Stoppers for Stapling

## Upper Stopper - 3

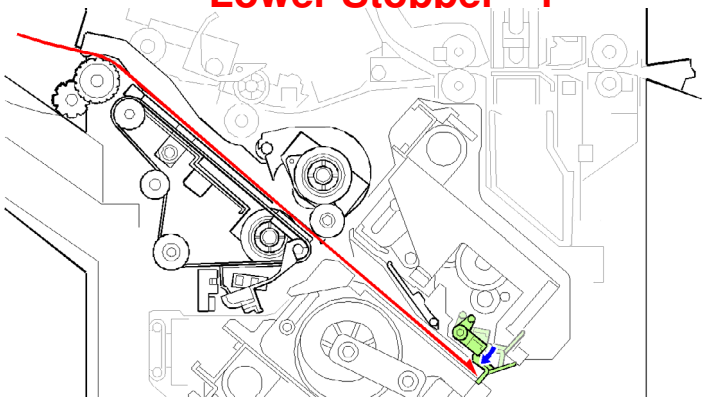



- **At the end of the set, the stopper moves away.**
- **The upper clamp roller feeds the stack to the correct position for stapling.**
  - Driven by the upper clamp roller motor

Slide 84

- These diagrams are copied from the B793. The mechanism is similar, but the layout is different, because the stapler tray is at a less steep angle in the D686/D687.

## Stoppers for Stapling
### Lower Stopper - 1

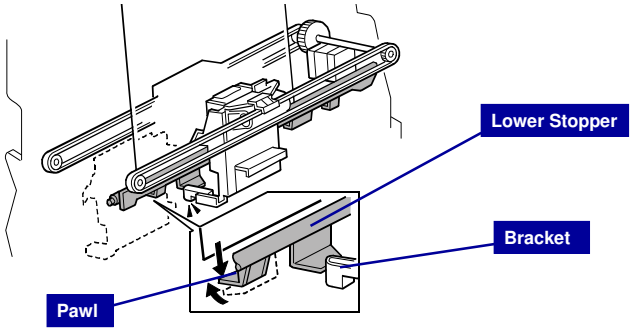


- **Used for the following:**
  - Booklet stapling: LG, B4, A3, DLT, 12"x17.7"

Slide 85

- This is similar to the B793 finisher.

# Stoppers for Stapling
## Lower Stopper - 2

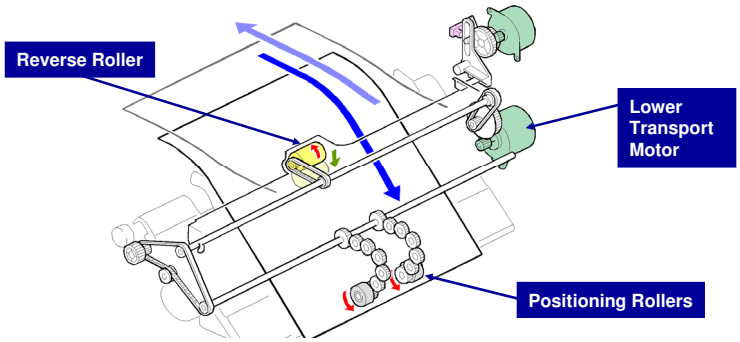



- **At the start of the set, the stapler moves to the center.**
- **A bracket on the stapler pushes the stopper, and the pawl moves into the correct position to catch the leading edge of the paper.**
  - The upper clamp roller holds the stack (see the previous slide).
- **When the stack is complete, the stapler moves to the rear-side position, and the stopper moves away. The upper clamp roller feeds the stack to the correct position for stapling.**

Slide 86

- This diagram is copied from the B793. The mechanism is similar, but the layout is different, because the stapler tray is at a less steep angle in the D686/D687.

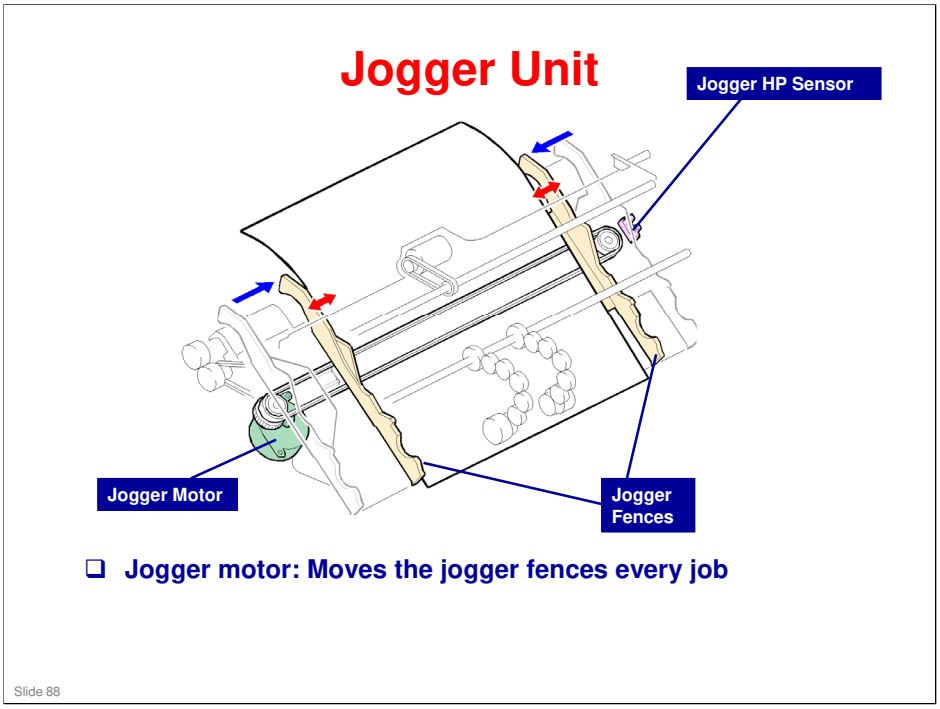
# Stacking in the Stapler Tray




- **To send the paper to the stapler, the paper must be fed back into the machine.**
- **The lower transport motor drives the reverse roller, which feeds the paper into the stapler.**
  - It also drives the positioning rollers, which feed the edge of the paper against the stopper.
- **The other motor in this diagram moves the reverse roller up/down.**
  - A sensor detects the position of the roller.

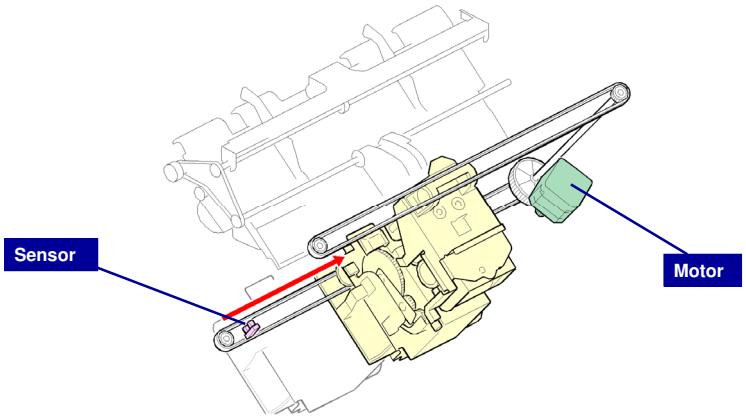
Slide 87

- This is basically the same as the B793 finisher.




❑ This is basically the same as the B793 finisher.

## Stapler Unit Movement

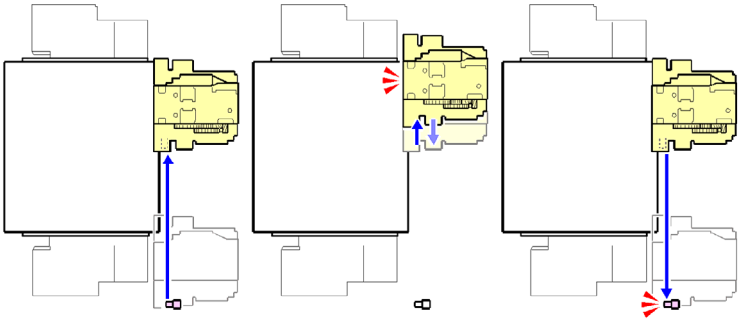



- Stapler unit motor: Moves the stapler from side to side
- Stapler HP sensor: After the job, the stapler moves back to this position

Slide 89

- This is basically the same as the B793 finisher.

# Corner Stapling
## One Staple

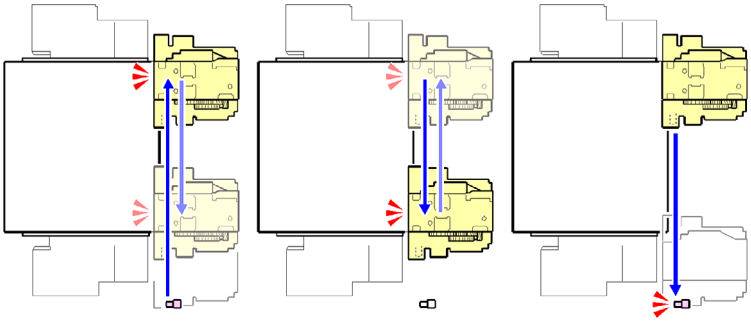


- The home position is at the front of the machine.
- The stapler moves to the stapling position, which is at the rear of the machine, and inserts the staple.
- The stapler stays at the rear until all copies are stapled, then comes back to home position.

Slide 90

**No additional notes**

# Corner Stapling
## Two Staples

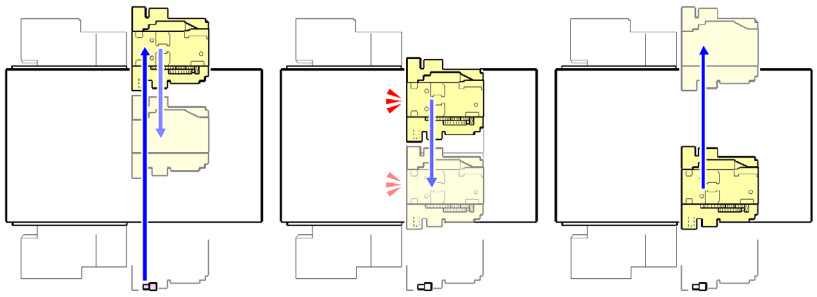


- On the first copy, the stapler inserts the first staple at the rear of the machine, and the second at the front of the machine. Then the first copy is fed out.
- For the second copy, the first staple is inserted at the front. Then the stapler moves to the rear and inserts the second staple. Then the second copy is fed out.
- The stapler returns to home position after all copies are stapled.

Slide 91

**No additional notes**

# Booklet Stapling
## B5, A4, LT

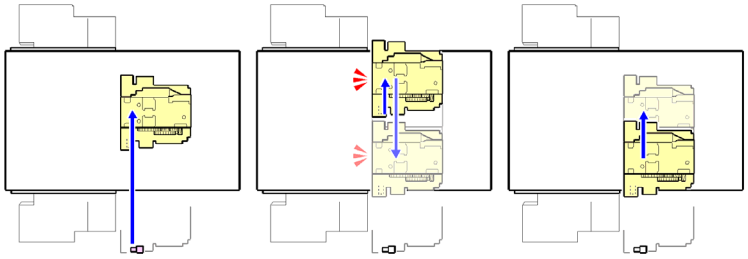


- The stapler moves from the home position to the rear of the machine, then to the center.
- The stapler then moves to the first stapling position, towards the rear from the center, and inserts the staple.
- The stapler then moves to the second stapling position, towards the front from the center, and inserts the staple.
- The booklet is then fed to the booklet folder, while the stapler waits at the rear of the machine for the next copy.

Slide 92

**No additional notes**

# Booklet Stapling
## LG, B4, A3, DLT, 12"x17.7"

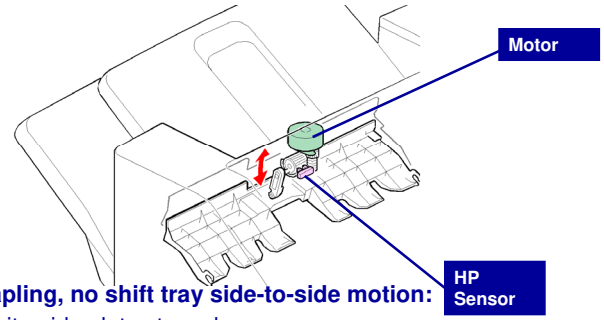


- The stapler first moves to the center position. At this position, the bracket on the stapler releases the lower stopper, which is necessary to catch the bottom edge of long paper.
- The stapler then moves to the first stapling position, towards the rear from the center, and inserts the staple.
- The stapler then moves to the second stapling position, towards the front from the center, and inserts the staple.
- The booklet is then fed to the booklet folder, then the stapler moves to the center position for the next copy.

Slide 93

- When the stapler is at the center position, a bracket releases the lower stopper, which catches the bottom edge of the paper for booklet stapling with longer paper sizes.

# Exit Guide Plate Open/Close

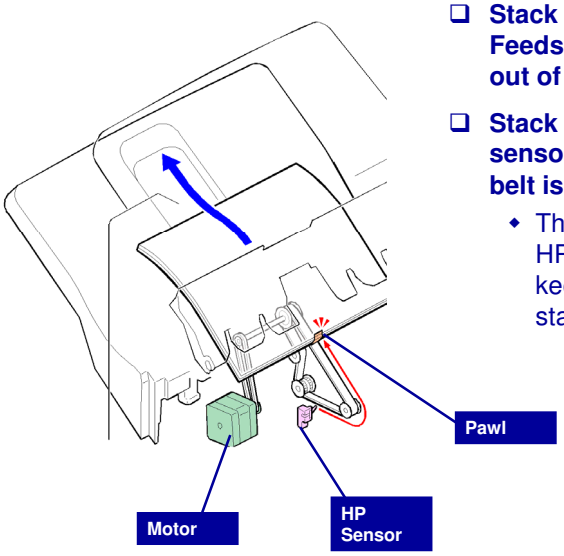



- **For no stapling, no shift tray side-to-side motion:**
  - The exit guide plate stays down
- **Shift tray side-to-side motion**
  - When the shift motor starts, the exit guide plate motor lifts the exit guide plate. When shift has finished, the exit guide plate drops again.
  - Stapling: The motor the exit guide plate up at the start of the job and drops it at the end of the job.
    - » Necessary to make sufficient space between the exit rollers for long paper (for example, A3/DLT)
    - » The exit guide plate HP sensor detects the correct time to stop moving down.

Slide 94

- This is basically the same as the B793 finisher.
- The guide plate moves away from the paper path. Because of this, the leading edge of copies in the jogger unit does not hit the exit rollers, and is not aligned incorrectly before stapling.
  - ➢ This is done for all paper sizes, but it is only necessary for long paper sizes.

## Stack Feed-out

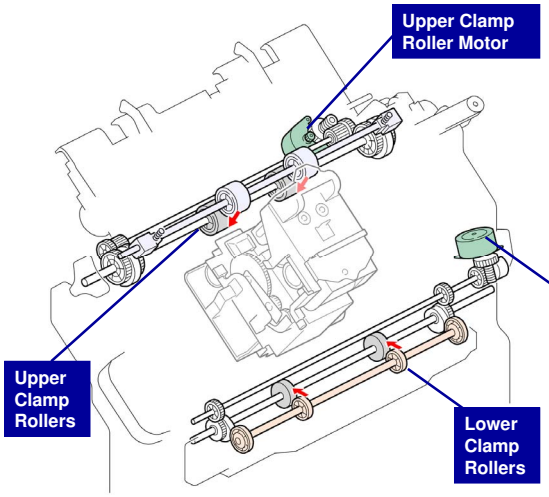



- **Stack feed-out motor: Feeds the stapled stack out of the jogger tray**
- **Stack feed out belt HP sensor: Detects when the belt is at home position**
  - The pawl is next to the HP sensor at HP. This keeps it away from the stapler when it moves.

Slide 95

- This is basically the same as the B793 finisher.
- The stack feed-out belt feeds the stack out to the shift roller.
  - The pawl on the belt lifts the stack.
  - For booklet stapling, this pawl stays at home position, which is on the rear side, so it does not interfere with booklet stapling.
- The shift roller continues to feed the stack out.
  - The shift roller does not move from side to side in stapling mode.
  - The exit motor turns the shift roller.

# Booklet Feed
## Through the Stapler - 1



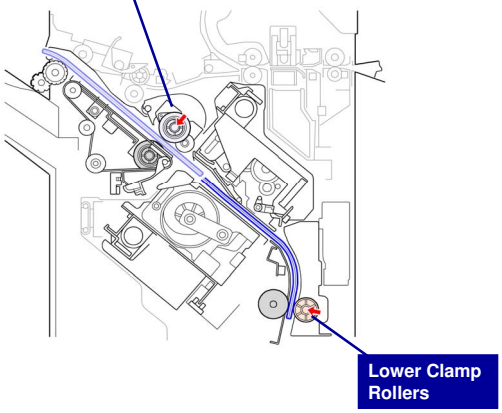

- These rollers feed the stack into the stapler and out to the booklet folder, and apply pressure to the stack during this process.

Slide 96

- This is similar to the B793 finisher.

# Booklet Feed
## Through the Stapler - 2

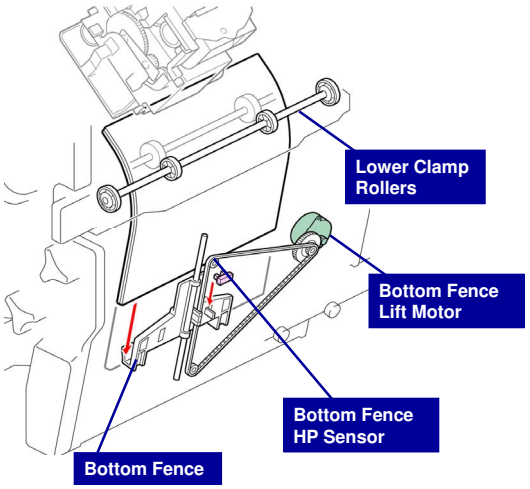
- This shows a side view of the mechanism that we have just described.




Slide 97

**No additional notes**

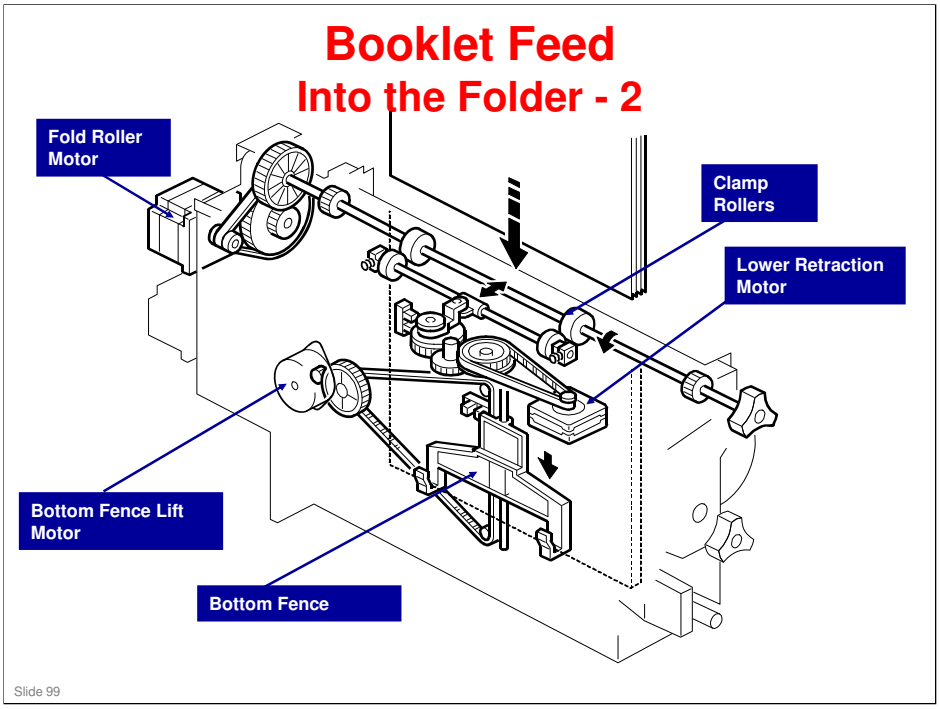
# Booklet Feed
## Into the Folder - 1




- The lower clamp rollers feed the stack of paper down towards the folder.
- The bottom fence is lifts the stack to the folding position, based on the paper size used for the booklet.
- The clamp rollers open to let the booklet fall onto the bottom fence of the folder unit.
- The lower retraction motor opens and closes the gap between the clamp rollers (see the next slide).

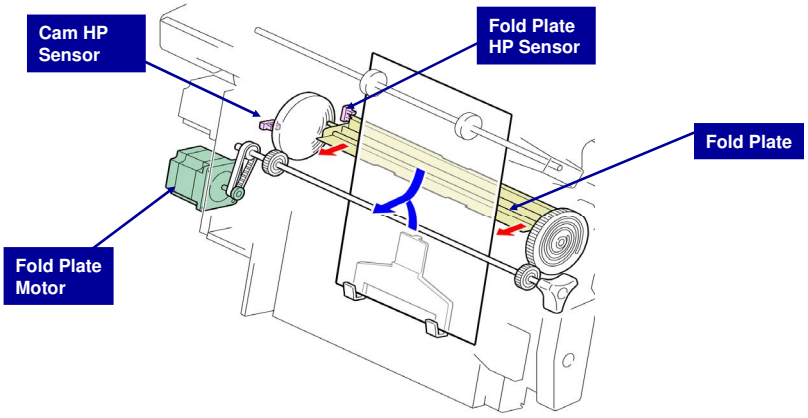
Slide 98

- This is similar to the B793 finisher.




- This diagram is from the B793. The mechanism is similar.

# Fold Plate Drive Mechanism

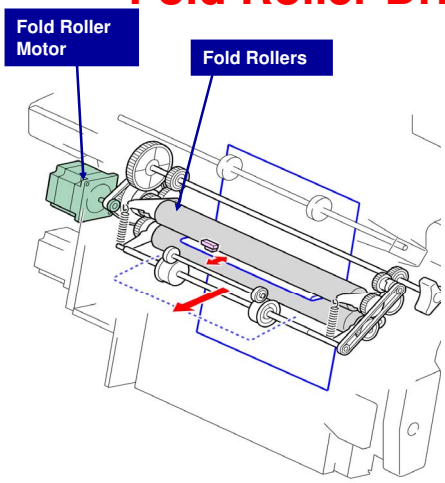



- A motor and cam drive the fold plate.
- The fold plate and cam both have home position sensors, to control the folding operation.

Slide 100

- This is similar to the B793 finisher.

## Fold Roller Drive Mechanism




- The fold roller motor drives these rollers.
- Springs apply pressure between the rollers.

Slide 101

- This is similar to the B793 finisher.

## Punch Unit - Overview

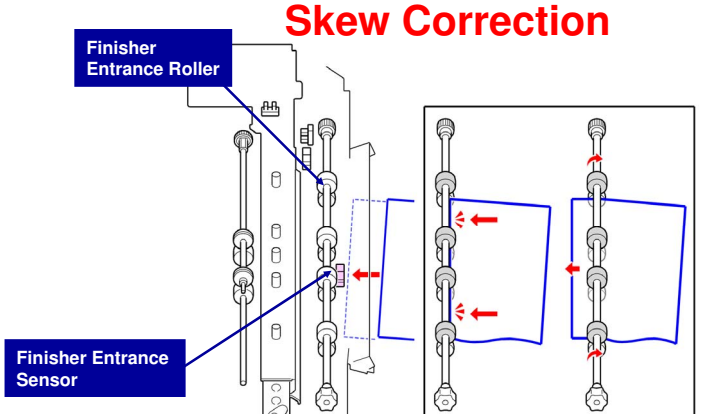
- **This punch unit has two new mechanisms to make the positions of punch holes more accurate**
  - Skew correction
    - » The punch unit corrects skew in the paper before the holes are punched.
  - Side-to-side movement of the punch unit
    - » The paper must be in the middle of the paper feed path, or the punch holes will be too high or too low along the edge of the paper.
    - » The punch unit detects the distance that the paper is away from the ideal position.
    - » Then it moves the punch unit across to put the holes in the correct position at the edge of the paper.

Slide 102

- The mechanism is the same as the punch unit for the B793, but the layout is a bit different.

# Punch Unit Operation

## Skew Correction



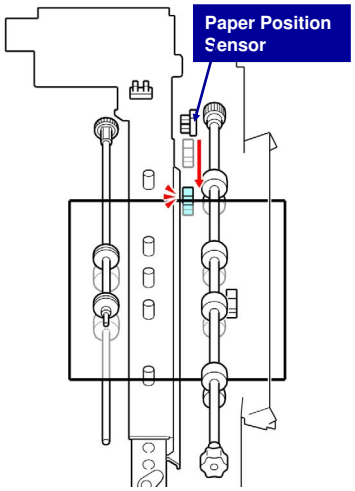

- **Finisher entrance sensor: Detects the leading edge of the sheet**
- **Finisher entrance roller: Stops for a short time, to correct skew**
- **These SPs control the skew correction mechanism**
  - SP 6131: Enable/disable
  - SP 6130: Amount of time that the roller stops.

Slide 103

- This shows how the punch unit corrects for skew.

# Punch Unit Operation

## Punch Hole Position Correction - 1



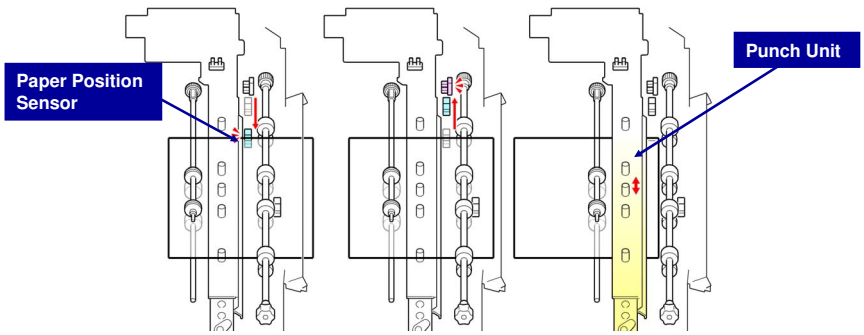

- **The paper position sensor is moved until it detects the edge of the paper.**
  - This measures the distance of the paper from the ideal central position in the feed path.
  - The machine uses this to calculate the distance that the punch unit must be moved across the page.

Slide 104

**No additional notes**

# Punch Unit Operation

## Punch Hole Position Correction - 2



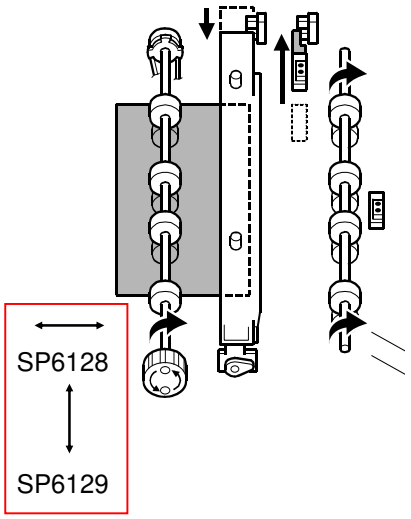

- The paper position sensor moves back to home position.
- The rollers feed the paper to the punch position.
- The punch unit moves across the page, to put the holes in the correct position.

Slide 105

**No additional notes**

# Punch Unit Operation

## Punch Hole Position Correction - 3

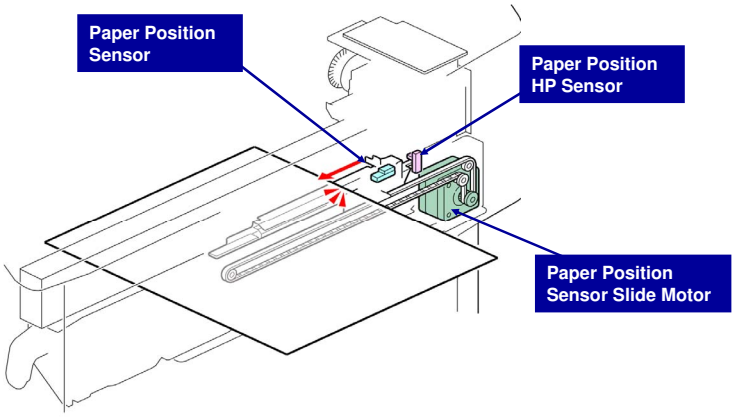



- **The paper is fed out of the punch unit.**
- **Punch hole position adjustments**
  - SP 6128: Moves the position parallel to the feed direction
  - SP 6129: Moves the punch position perpendicular to the feed direction

Slide 106

**No additional notes**

# Paper Position Detection

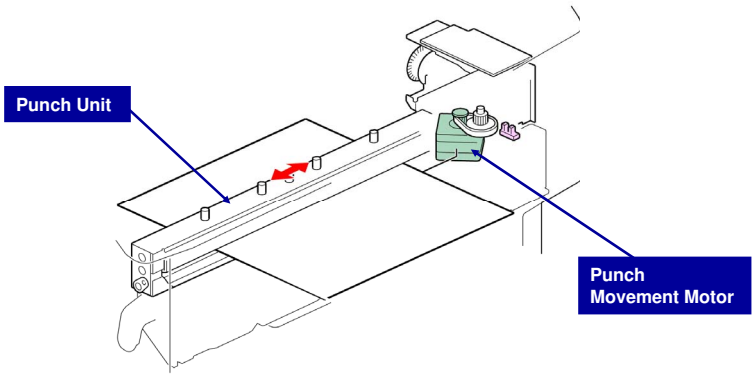



- **The motor moves the sensor across the paper feed path until the sensor detect the edge of the paper.**

Slide 107

- The other sensor in the diagram is a home position sensor.

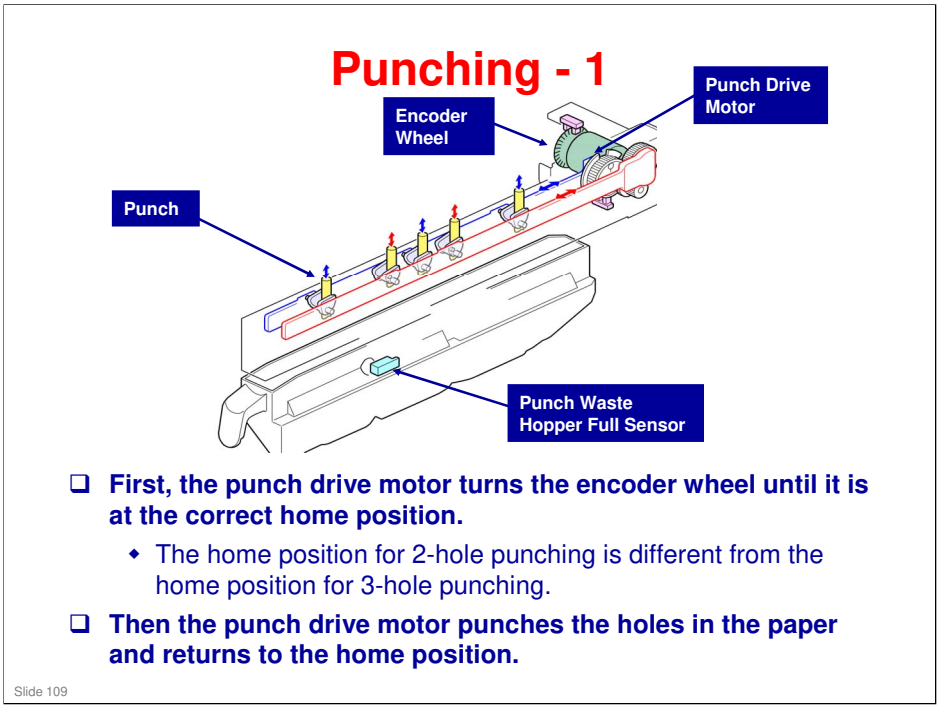
# Punch Unit Movement




- Punch movement motor: Moves the punch unit across until it is in the correct position.
- Punch drive motor (see the next slide): Puts the punch holes in the paper.

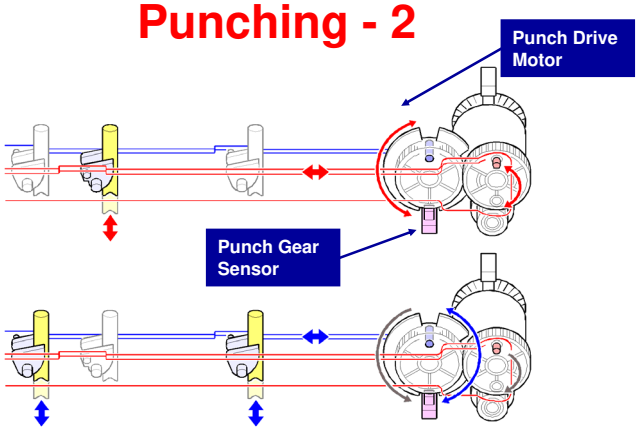
Slide 108

**No additional notes**




- The diagram shows the operation of 3-hole punching in the 2-hole/3-hole punch unit.
- Punch waste falls into the hopper.
- The sensor detects when the hopper is full, and if the hopper is not in the machine.

# Punching - 2




- Two-hole punching (top diagram): The motor drives clockwise then reverse.
- Three-hole punching (bottom diagram): First the punch gear is turned 180 degrees, then the motor drives clockwise then reverse

Slide 110

**No additional notes**

## Adjustments

- **SP modes**
  - 6134: Stapling position
  - 6136: Booklet stapling position
  - 6132: Position of jogger fences
  - 6137: Folder position adjustment
- **Dip switches**
  - SW100: Stapling position
  - SW101: Jogger fence position
  - If you adjust a dip switch setting, open and close the finisher cover to enable the new setting. It is not necessary to switch the power off/on.

Slide 111

- Jogger fence adjustment: This adjusts the distance between the front and rear fences. If the fences are too far apart, skewing may occur. If the fences are too close, the paper may be creased. Also adjust if the edges of stapled stacks are untidy.

# Replacement and Adjustment

- **Stapler Unit**
  - After you remove this, a special tool is needed when you reassemble the machine.
  - The stapler unit has two parts. The special tool holds the two parts in the correct positions.
  - The special tool is packed with each staple unit that is ordered as a service part.

Slide 112

**No additional notes**

RICOH

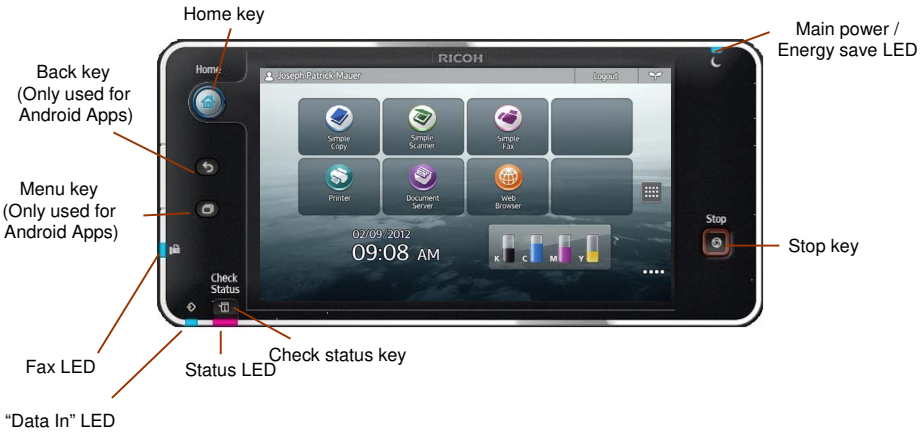
# Smart Operation Panel

## Smart Operation Panel Type M3 (D148)


Slide 113

**No additional notes**

## Appearance - 1

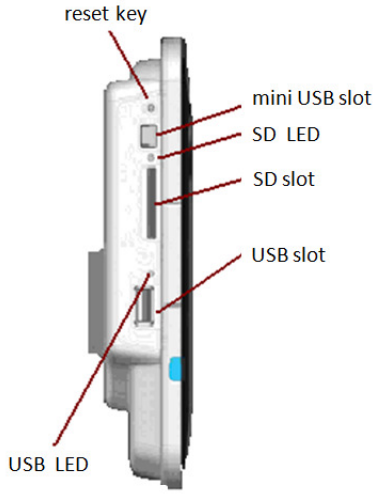



- There are few hard keys.
- Back and Menu keys are only available (light up) in Android applications.

Slide 114

**No additional notes**

## Appearance - 2




- The operation panel has SD / USB slots.
- There is a Reset key for Android.

Slide 115

**No additional notes**

## Basic information - 1

- There are two kinds of applications.
  - 1) Android applications
    - You can use “flick input” and “swiping”.
    - You can use “Menu” and “Back” keys.
      - These keys only light for Android applications.
  - 2) Legacy applications
    - You cannot use “flick input” or “swiping”.
    - You cannot use the “Menu” and “back” keys.

Slide 116

**No additional notes**

# Basic information - 2

- **You can customize the Home display.**
  - You can add widgets (Toner remaining, clock, language and so on) and applications.
    - Please push and hold on the Home display
    - Select the object which you want to add.
  - You can delete widgets or application icons.
    - Please push and hold the object which you want to delete.
    - After the trash box appears, move the object to the trash box.

Slide 117

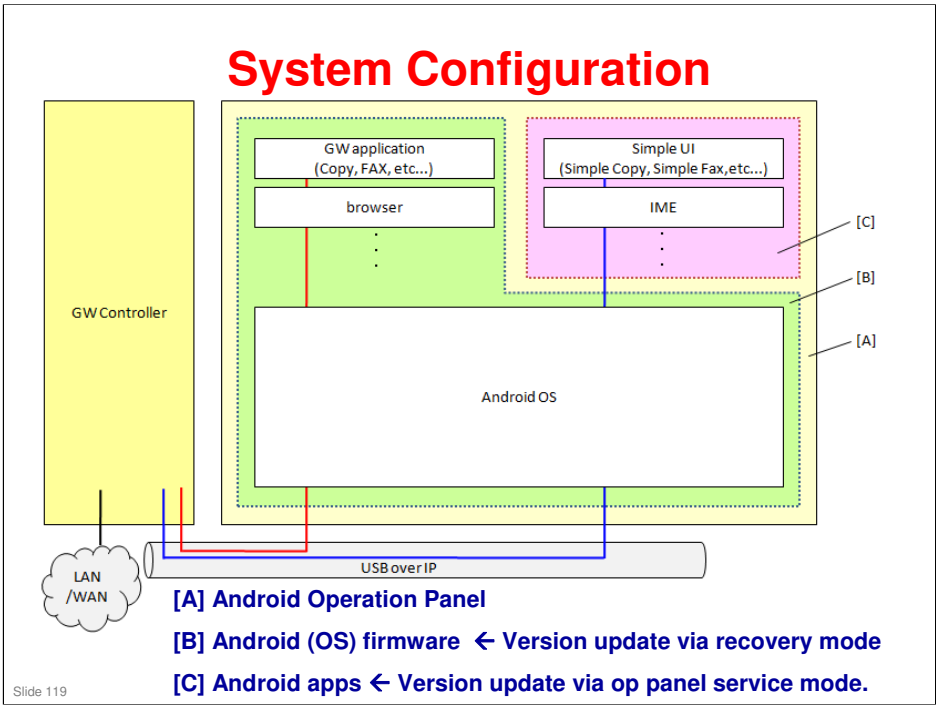
**No additional notes**

## Basic information - 3

- SC or machine status is displayed in legacy mode.
- There is no independent Address Book or Authentication for Android.

Slide 118

**No additional notes**




**No additional notes**

# Start up

- There are two start up displays: GW controller and Android)

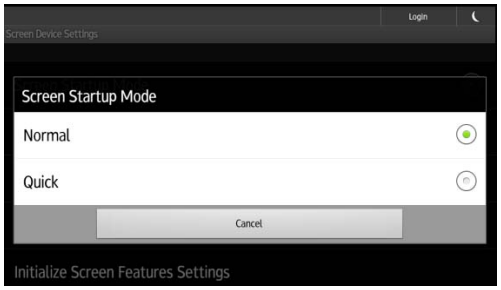
GW controller


Android

Slide 120

**No additional notes**

## Screen start up mode




- **There are two modes for screen start up**
  - Normal (Default)
    Low electricity mode. It takes some time to start up the operation panel (about 68 seconds).
  - Quick
    Supplying electricity for the operation panel is continued while the machine power is off, to start up quickly (about 18 seconds).
    * It takes some time to shut down to prepare for the next wake up.

Slide 121

- Display is under sleep mode condition.

# Special shut down mode

## ❑ There are two special shut down modes.

- Shut down for maintenance.
  - » When “Quick” start up mode is set, just enough power is supplied to keep the panel in sleep condition.
  - • Procedure: Turn the power off while pushing the “Stop” key. Continue pressing the power switch until "Shutting Down" is displayed.
- Shut down for main machine update.
  - » You can shut down only the Controller and the Engine (without Android) with this method.
  - » Procedure: Turn the power off while pushing the “Back” key. Continue pressing the power switch until "Shutting Down" is displayed.

Slide 122

**No additional notes**

## Service Modes

- **There are three SP modes. Contact your supervisor for details on how to access these.**
  - Machine service mode
  - Android operation panel service mode
  - Recovery mode: Needed for updating firmware, and for android system recovery

Slide 123

- The firmware update procedure is in the section of the service manual about smart operation panel maintenance.


**The End**