

RICOH**HP4-R2.5 TRAINING
DUPLICATOR ENGINE****PRODUCT OUTLINE**

Slide 1

- ❑ This course explains the differences between this model and the HP4R2.

INTRODUCTION

Slide 2

No additional notes

How many Models?

□ Two models:

♦ C272

- » Successor to the HP4-R2 (C264)
- » A4 and A3 drums only
- » For sale in all regions
- » For China, there are three versions
 - 'Cost-down' version
 - With built-in FV-LT controller
 - 'Cost-down' version, with built-in FV-LT controller

♦ C273

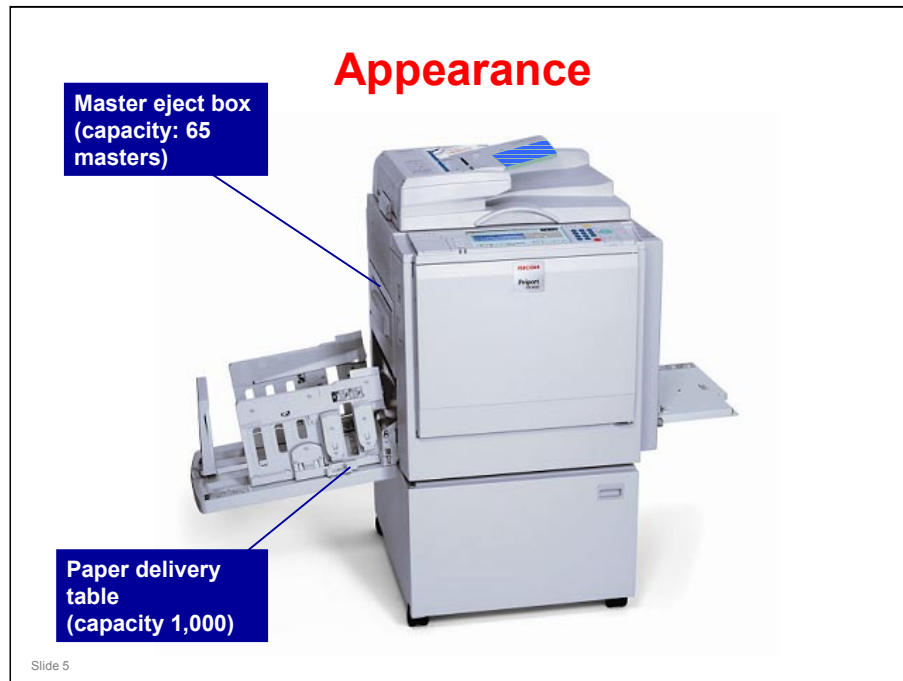
- » B4 drum only
- » For sale only in China
- » There are two versions
 - Without built-in FV-LT controller
 - With built-in FV-LT controller

Slide 3

No additional notes



- ☐ The LCD is not a touch-panel.
- ☐ The ADF is similar to the previous model. The only difference is the change of colour.



- ❑ Here is a view of the paper exit side of the machine.

Options

- ☐ **50-sheet Document Feeder (DF Type 4545): New item**
 - ◆ Similar to the HP4-R2; the color of the covers was changed
- ☐ **Platen Cover Type 1018: Same as previous models**
- ☐ **Colour Drum Type 45R(L) (A3): Same as the HP4-R2**
- ☐ **Colour Drum Type 45R(M) (B4) : Same as the HP4-R2**
- ☐ **Black Drum Type 45R(S) (A4 only): Same as the HP4-R2**
- ☐ **Tape Dispenser Type 20: Same as previous models**
- ☐ **Table (to be procured locally): Same as the HP4**
- ☐ **Network Controller (Printer Unit Type 4545, also known as FV-LT): New item**
 - ◆ This controller does not need an interface board.
 - ◆ The UC2e, UC5, UC5e, and UC6 controllers will not work with the HP4-R2.5
- ☐ **There is no sorter, Opal, or LCS.**
- ☐ **The drums cannot be used with the Opal or HQ-Opal.**

Slide 6

Document feeders

- ☐ The old DF (type 85) can theoretically be installed on the HP4R2.5.
- ☐ Also, the new document feeder (type 4545) can be used on the HP4 and HP4R2, and PinkGold

Platen Cover/ADF

- ☐ The customer needs one of the above options.
- ☐ This is because a platen cover is not installed at the factory.

Slide 7

- ☐ This is the same as the HP4R2.

IMPORTANT CHANGES

Slide 8

No additional notes

Technical Improvements - 1

☐ New controller option

- ◆ RPCS Network Controller FV-LT
 - » China: Not available as an option, but is built into some versions of the machine.
- ◆ Ricoh Network utility – Web Image Monitor, Smart Device Monitor for Admin (Laurel) and Desktop Binder
- ◆ Printer controller only; no scan to email or other scanner features
- ◆ No interface board needed

☐ @Remote Capability (as GW MIB device only)

☐ Custom-made Color Inks

Slide 9

No additional notes

Technical Improvements - 2

- ❑ **New SP mode**
 - ◆ Reduces negative image of the previous master on the first few prints from a new master
- ❑ **Fine mode (Higher density)**
 - ◆ The machine makes masters at 600 x 400 dpi
 - ◆ Scanning is done at 600 x 600 dpi
- ❑ **Traditional Chinese, Russian and Turkish are now available for the LCD.**

Slide 10

New SP mode (2-101)

- ❑ If a used master is kept wrapped around the drum for a long time, a negative image of the old master is transferred to the first few prints that are made from the next master.
- ❑ This is because ink in the holes in the old master dry out on the drum, and when a new master is wrapped around the drum, these holes are still blocked. So a negative image of the previous master appears on the first few prints with the new master, because ink cannot get through to the paper.
- ❑ This negative image will disappear gradually during the first few prints.
- ❑ The new SP mode (SP2-101) prevents this problem.
- ❑ The SP mode activates a special keypad operation to remove the old master from the drum after the end of printing (push the Mode Clear key for more than three seconds).
- ❑ However, if there is no master on the surface of the drum for a long time, the ink dries out; therefore, the user must wrap a new blank master. (Push the Master Making key while pushing the # key).
- ❑ The new SP mode enables these operations, but the user must do them. Wrapping a blank master adds to the user's costs, so this cannot be done without the user's permission.

New Controller

❑ RPCS Network Controller FVLT

- ♦ This new controller has more functions at a reasonable price than the predecessor EG-Lt.
- ♦ There is an RPCS driver, which means that users can use this controller in the same way as Ricoh's MFP copiers and printers.
- ♦ This makes the HP4R2.5 more attractive for government offices, schools and corporations where a LAN environment is well established.
- ♦ With this controller, the machine can be connected through Ethernet or USB.

❑ Ricoh Network Utilities

- ♦ Ricoh Network utilities can be used.
 - » Web Image Monitor, Smart Device Monitor for Admin (Laurel) and Desktop Binder – Smart Device Monitor (Maple) for Client
- ♦ This integrates duplicators into the Ricoh product line, along with MFP copiers and printers.

Slide 11

No additional notes

Custom-made Color Inks

- ❑ CM color inks are RGS (Ricoh Global Standard) compliant products and are guaranteed by Ricoh.
- ❑ New color variations – Reflex blue, Hunter green, Burgundy and Violet are newly available as Type VI color inks in response to requests from users.

Slide 12

No additional notes

Fine Mode



- ☐ A 'fine mode' key was added to the operation panel.
 - ◆ 600 x 600 dpi scanning
 - ◆ 600 x 400 dpi master making
- ☐ This is useful if there are photographs in the original.
- ☐ Fine mode cannot be selected when printing with the controller.

Slide 13

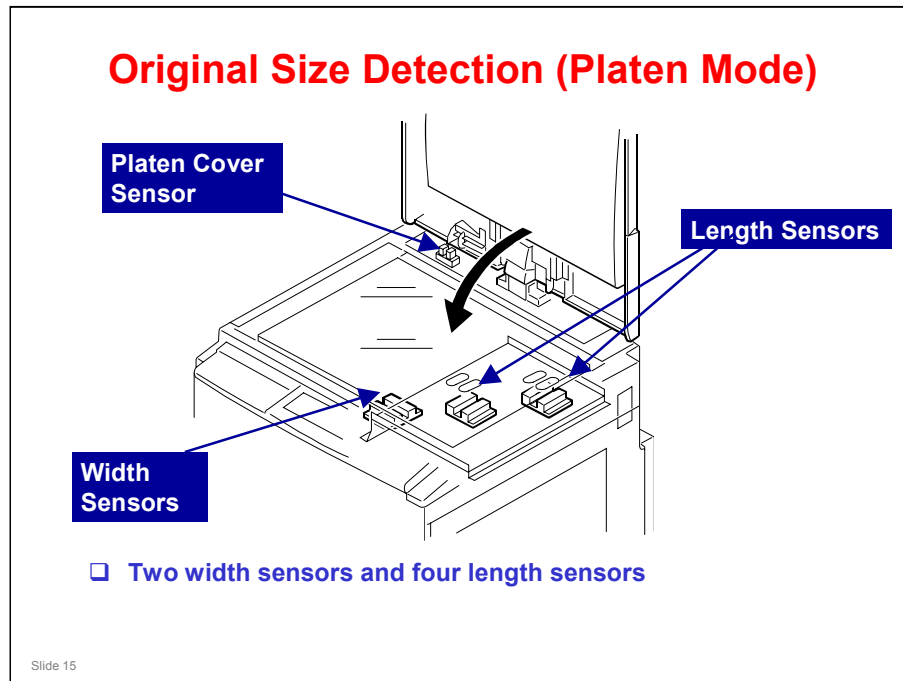
No additional notes

Other Changes to the Specifications

- ❑ **Printable area for the B4 drum: 251 x 355 mm/ 9.88" x 13.98"**
- ❑ **Master Eject Box Capacity:**
 - ◆ 65 masters (A3, B4 drum)
 - ◆ 70 masters (A4 drum)
 - ◆ Previous models: Was 65 for all sizes
- ❑ **Master Process Time for B4 drum**
 - ◆ Less than 28 seconds (B4 machine)
 - ◆ Less than 26 seconds (B4 machine-A4 copying)
- ❑ **New ink colours: Reflex blue, Hunter green, Burgundy, and Violet**
- ❑ **Options: Two new options**
 - ◆ B4 color drum (China only)
 - ◆ Network printer controller (FV-Lt)

Slide 14

- ❑ Master process time specs are for normal resolution, not fine mode.
- ❑ Master process time for other drum sizes are the same as for the previous model.



- ❑ This is new for the HP4/Pink Gold series.
- ❑ The size is detected at these times:
 - Immediately after the platen cover sensor detects that the cover was just closed
 - When the start key is pushed while the platen cover sensor is open.
- ❑ The platen cover sensor or the DF position sensor in the optional ADF informs the main CPU of the original size when the platen is about 15 cm above the exposure glass. At this time, only the sensors located underneath the original receive the reflected light and switch on. The other sensors remain off. The main CPU can recognize the original size from the number of activated sensors.

YIELD AND RELIABILITY TARGETS

Slide 16

No additional notes

Supply Yield Targets

❑ Masters

- ◆ The master rolls are compatible with the HP4 and HP4-R2.
 - » A3 drum: 200 masters/roll
 - » B4 drum: 220 masters/roll
 - » Optional A4 drum: 315 masters/roll
 - » 4,000 prints/master

❑ Ink (black, coloured)

- ◆ The ink cartridge is compatible with the HP4 and HP4-R2.
 - » 600 ml/cartridge

Slide 17

- ❑ These are all the same as the HP4-R2.

Reliability Targets

- ❑ **Maximum copies per master**
 - ◆ 4,000
- ❑ **Monthly Print Volume**
 - ◆ Average: 100k
 - ◆ Maximum: 170k
- ❑ **Estimated Unit Life**
 - ◆ 10,000k prints, 30k masters, or 5 years
- ❑ **PM Cycle**
 - ◆ 600k or 6 months
- ❑ **MCBC**
 - ◆ 480k

Slide 18

HP4-R2

- ❑ Maximum copies per master
 - 4,000
- ❑ Monthly Print Volume
 - Average: 50k
 - Maximum: 170k
- ❑ Estimated Unit Life
 - 10,000k prints, 30k masters, or 5 years
- ❑ PM Cycle
 - 1200k or 6 months
- ❑ MCBC
 - 240k

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**HP4-R2.5 TRAINING
DUPLICATOR ENGINE**

INSTALLATION

Slide 19

No additional notes

Options

□ Controller

- ◆ Study the installation procedure for this new option.

Slide 20

*C272 service manual, Installation, Network Printer
Controller (Printer Unit Type 4545)*

Firmware Update for the Controller

- ❑ The controller firmware must be on an SD card.
- ❑ Study the procedures in the manual:
 - ◆ How to prepare an SD card with the controller firmware.
 - ◆ How to copy new firmware to the machine with SP 9-40.
- ❑ Do not insert or extract the SD card when the machine power is on.
- ❑ Do not shut off the power when the firmware is downloading.
- ❑ If an error occurred during the download, do the download again when the display panel shows the SP mode screen. If this is not possible, the printer board (Printer controller board) must be replaced.

Slide 21

*C272 service manual, System Maintenance Reference,
Firmware Update*

Firmware Update for the Engine

- The engine firmware must be on a flash memory card.
 - ♦ SP 8-1: Copies firmware from a flash memory card to the machine.
 - » SP 8-2: Copies firmware from the machine to a flash memory card.
 - ♦ SP 1-70: Displays the part number and suffix of the current firmware
 - ♦ SP 1-73: Displays the main firmware version.

Slide 22

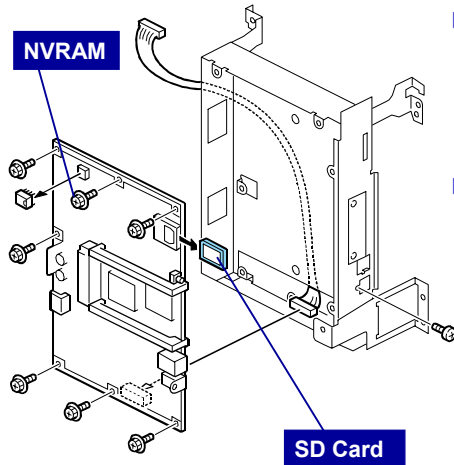
*C272 service manual, System Maintenance Reference,
Firmware Update*

RICOH**HP4-R2.5 TRAINING
DUPLICATOR ENGINE****REPLACEMENT AND ADJUSTMENT**

Slide 23

- ❑ This section explains new replacement procedures for this model.

Printer Board



- ❑ If there is an SD card here, remove it before you remove the printer board.
 - ◆ Normally, there should be no SD card here.
- ❑ Remove the NVRAM from the old printer board and install it on the new printer board.
 - ◆ Otherwise, all the controller settings (such as the IP address) will be lost.

Slide 24

*C272 Service Manual, Replacement and Adjustment,
Network Printer Controller*

Scanner

- ☐ A procedure was added for the original size sensors.

Slide 25

No additional notes

2nd Drum Master Sensor Adjustment

- The standard value has been changed to 2.2 V.

Slide 26

No additional notes

RICOH**HP4-R2.5 TRAINING
DUPLICATOR ENGINE****TROUBLESHOOTING**

Slide 27

- ❑ This section explains new troubleshooting tools for this model.

Hex Dump (to Paper or SD Card)

□ SP 9-1

- ◆ 0: Normal operation
- ◆ 1: Hex data printed on paper
 - » This mode continues until main power is shut off.
 - » In some cases, there will be a large quantity of data, and many masters will be consumed to print out the hex dump. Be careful when you use this mode.
- ◆ 2: Hex data, stored on an SD card
 - » Turn the power off before you remove the SD card.

Slide 28

C272 Service Manual, Appendix, Service Tables

- This feature is available on some other duplicator models, but it is the first time for this series.