

PRINTER/SCANNER OPTION

(Machine Code: B783)








For Machine Code: B195/B198/B264/B265 Copiers

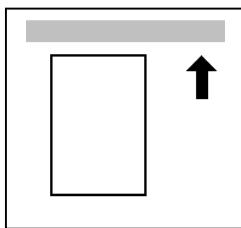
THE FAX UNIT MUST BE INSTALLED BY A CUSTOMER SERVICE REPRESENTATIVE WHO HAS COMPLETED BASE COPIER AND FAX UNIT TRAINING.

20 June 2005
Subject to Change

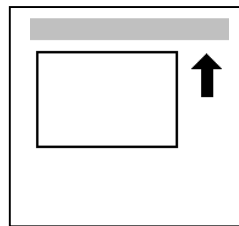
Conventions Used in this Manual

This manual uses several symbols.

Symbol	What it means
	Refer to section number
	See Core Tech Manual for details
	Screw
	Connector
	E-ring
	Clip ring
	Clamp




Lengthwise, SEF
(Short Edge Feed)



Sideways, LEF
(Long Edge Feed)

Cautions, Notes, etc.

The following headings provide special information:

 WARNING
FAILURE TO OBEY WARNING INFORMATION COULD RESULT IN SERIOUS INJURY OR DEATH.

 CAUTION
Obey these guidelines to ensure safe operation and prevent minor injuries.

Important

- Obey these guidelines to avoid problems such as misfeeds, damage to originals, loss of valuable data and to prevent damage to the machine.

IMPORTANT

- **ALWAYS OBEY THESE GUIDELINES TO AVOID SERIOUS PROBLEMS SUCH AS MISFEEDS, DAMAGE TO ORIGINALS, LOSS OF VALUABLE DATA AND TO PREVENT DAMAGE TO THE MACHINE. BOLD IS ADDED FOR EMPHASIS.**

NOTE: This information provides tips and advice about how to best service the machine.

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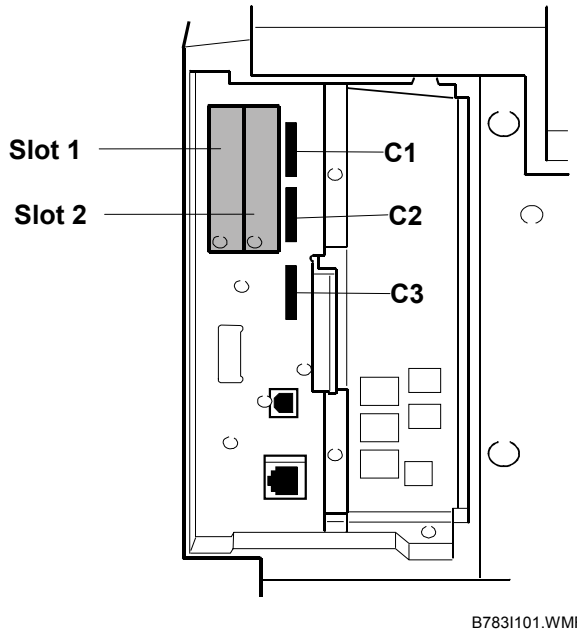
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1. INSTALLATION

1.1 OVERVIEW

Board, SD Card Slots

The machine controller box has two board slots and three SD card slots. Make sure that each board and SD card is put in the correct slot.



The names of the slots for the boards and SD cards are embossed on the face of the controller plate.

Slot 1, Slot 2

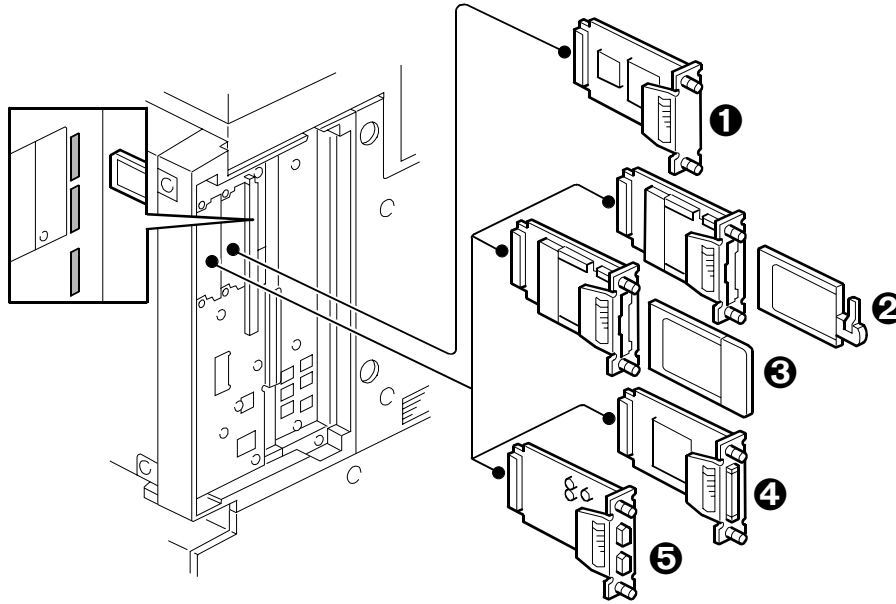
The optional boards are inserted here (see the next page).

SD Card Slots

C1	Printer/Scanner B783. The printer/scanner option also requires installation of the 256 MB memory DIMM and HDD unit.
C2	PostScript3 B720 or Data Overwrite Security B735. The DOS option can be moved to the PostScript SD card if both options will be used.
C3	Service slot for firmware version updates, moving applications to other SD cards, and downloading/uploading NVRAM contents.

Board Slots

Two slots are available for the following boards:



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Slot	Board
1 or 2	❶ File Format Converter B609 (MLB)
1 or 2	❷ Bluetooth Interface Unit B736* ¹
1 or 2	❸ IEEE802.11b G813 – Wireless LAN* ¹
1 or 2	❹ IEEE1284 Interface Board B679 – Centronics* ¹
1 or 2	❺ IEEE1394 Interface Board B581 – FireWire* ¹

*¹ Only one of these boards can be installed at one time.

1.2 INSTALLING SD CARDS

⚠ WARNING!

Always turn the machine off and disconnect the machine power cord before you install a controller option.

Important!

- To prevent damage to the controller box, always do your work carefully. Do not put your hand or a tool into the box when you remove the controller box or install an option.
- To prevent damage to the circuits on the boards, always touch a metal surface to remove static charge from your hands before you touch electronic components.

1.2.1 SD CARDS

SD cards are held in position by a small spring-lock mechanism.

1. To install an SD card, push it into the slot until it stops, then release it.
2. To remove an SD card, push the SD card in carefully to release it, and then remove it from the slot.

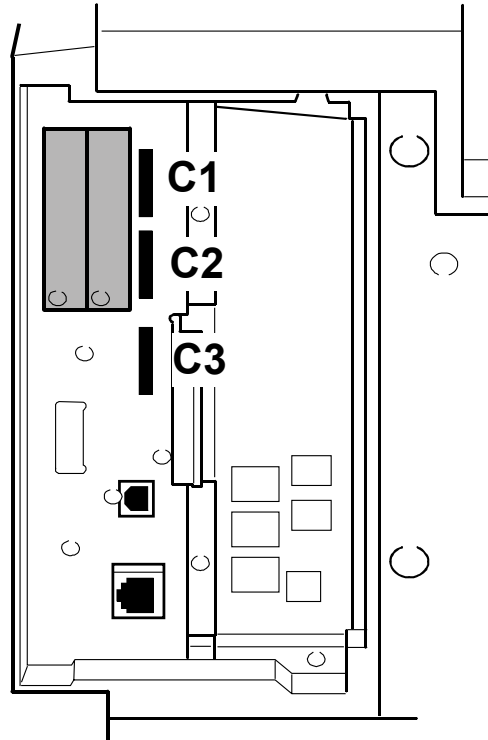
Important: To prevent damage to the SD card or the slot lock, always push the card in, to release it, before you try to remove it.

1.3 MERGING APPLICATIONS ON ONE SD CARD

1.3.1 OVERVIEW

The machine has three SD card slots:

- **C1** is for the printer/scanner option only.
- **C2** is for either PostScript3 or the Data Overwrite Security SD card. If both options are to be installed, the DOS application can be moved to the PS3 SD card. (☛1.3)
- **C3** is used for servicing only. Otherwise this slot should always be empty.



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Important

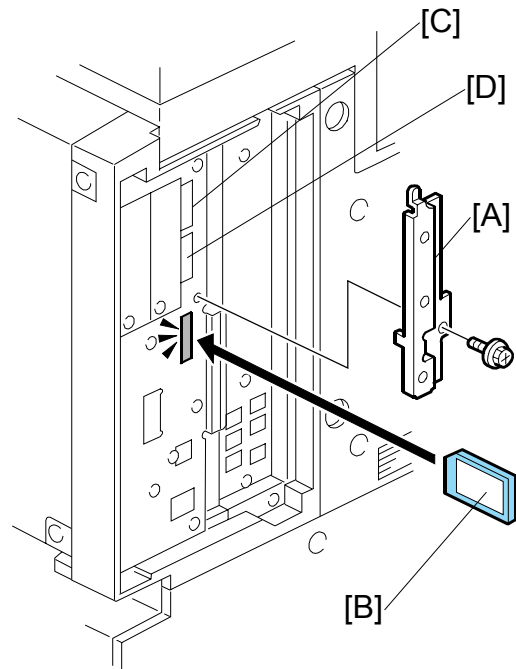
- The data necessary for authentication is transferred with the application program to the target SD card.
- Do not use an SD card if it was used with a computer before this time. Correct operation is not guaranteed if this type of SD card is used.
- The SD card is the only evidence that the customer is licensed to use the application program. The service technician may occasionally need to check the SD card and its data to solve problems. SD cards must be stored in a safe location at the work site.
- A licensing agreement prohibits copying of the PostScript SD card. However, you can copy an application from another SD card to the PS SD card.
- If an SD card was used to combine applications on that card, that SD card cannot be used for a different function.

1.3.2 MERGING APPLICATIONS

Do this procedure to put more than one application on one SD card.

This procedure shows you how to move the DOS application to the PS3 SD card.

1. Turn off the copier.
2. Remove the SD card slot cover [A] (x2).
3. Put the Source (DOS) SD card [B] in **C3**. This card contains the application that you want to copy.
NOTE: The PS SD card cannot be the source card, because it cannot be copied.
4. Put the Target (PS3) SD card in **C1** [C]. The application on the card in **C3** will be copied to this card.
5. Open the front door.
6. Turn the copier on.
7. Go into the SP mode and select **SP5873 001**.
8. Touch "Execute".
9. Read the instructions on the display and touch "Execute" to start copying.
10. When the display tells you copying is completed, touch "Exit".
11. Turn the copier off.
12. Remove the Source SD card from **C3**. Remove the target SD card from **C3** and insert it in **C2** [D].
13. Turn the copier on.
14. Go into the User Tools mode and check that all the applications on the SD card in **C2** are enabled:
 User Tools> System Settings> Administrator Tools> Firmware Version> Next
15. Turn the copier off again, then:
 - Attach the SD card slot cover.
 - Tape the copied source card (DOS) to the faceplate of the controller box.
 - Attach the rear cover of the machine.



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Important!

- After an SD card is copied, it cannot be used. But it must be stored in the front door, to serve as proof of purchase by the customer.
- The original card can also be used to perform an undo procedure (SP 5873 002). Before you put the card in the front cover, label it carefully so that you can identify it easily if you need to do the undo procedure (see the next page).

1.3.3 UNDO EXEC

1. Turn the main switch off.
2. Put the SD card with the merged applications in **C1**.
3. Put the original destination SD card (the one taped to the faceplate of the controller box) into C3.
NOTE: The SD card in **C3** must be the original SD card of the application you want to move from **C1** to **C3**. You cannot use any blank SD card in **C3**.
4. Turn the main switch on.
5. Go into the SP mode and do **SP5873-002** (Undo Exec)
6. Follow the messages on the operation panel to complete the procedure.
7. Turn the main switch off.
8. Remove the SD cards from the slots.
9. Turn the main switch on.

1.4 INSTALLING CONTROLLER OPTIONS

1.4.1 P/S MODULE (B783), 256 MB MEMORY (G818)

Accessories

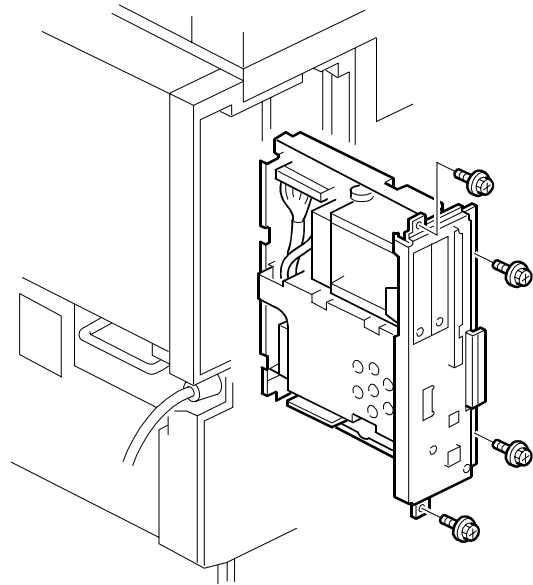
Check the accessories and their quantities against the following list:

Description	Q'ty
1. Paper Sensor.....	1
2. Paper Limit Sensor Unit.....	1
3. Tapping Screws M3 x8	2
4. Pan Head Screw M3 x 8	1
5. Ferrite Core.....	1
6. Stamp	1
7. CD-ROM (Printer).....	1
8. CD-ROM (Scanner)	1
9. Conductive Tape (for Bluetooth option)	1
10. Printer/Scanner SD	

Printer/Scanner Installation

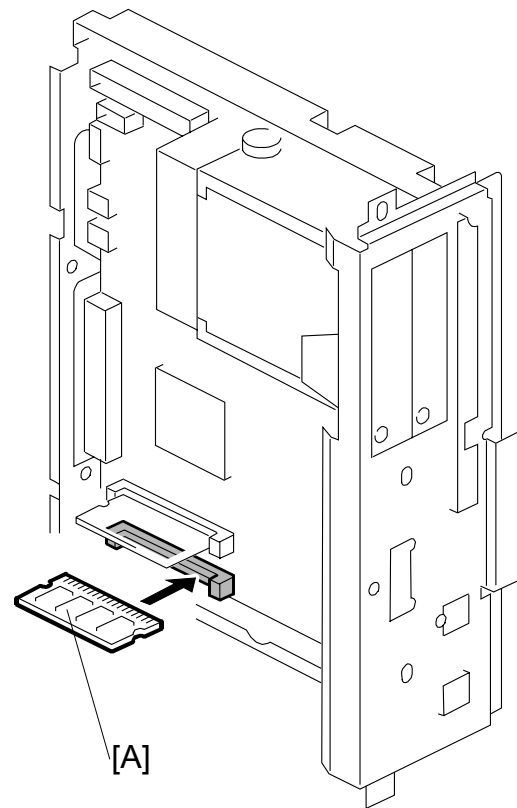
⚠ CAUTION
TURN OFF THE MAIN POWER SWITCH AND DISCONNECT THE POWER SUPPLY CORD.

1. Remove the application cover (🔩 x1).
2. Remove controller board [A] (🔩 x1).



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3. Install the 256 MB memory DIMM [A].
 (➡ 1.2)
4. Reinstall the controller board.



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5. Remove the SD card slot cover [A] (1x1).
6. Insert the Printer/Scanner SD card [B] in SD card slot C1.
7. Reattach the covers.
8. Connect the LAN cable to the "NIC" connection.
9. Connect the USB cable to the "USB" connection.
10. Remove the 1st, 2nd, 4th, and 5th blank key tops.

NOTE: The 3rd blank keytop from the top is reserved for the "Fax" keytop. Do not remove it at this time.

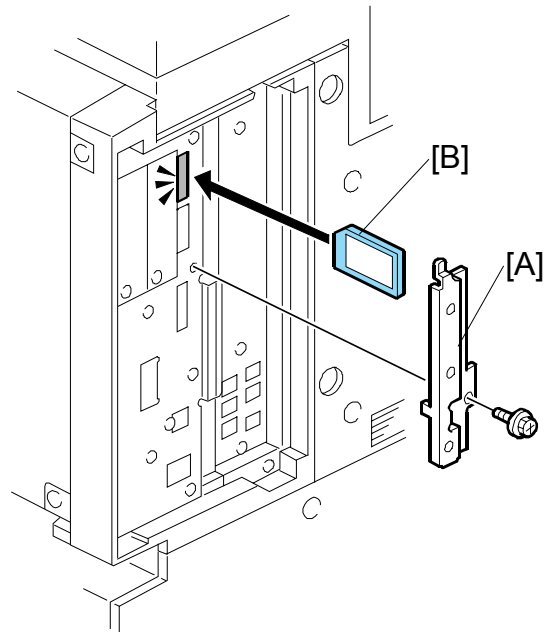
11. Replace the blank keytops:

- ❶ Copy
- ❷ Document Server
- ❸ Printer
- ❹ Scanner

12. Connect the machine's power cord and turn the main power switch on.
13. Enable the network and USB functions.

Important: The NIB and USB functions must be enabled with SP5985. These functions are built into the controller.

- To enable the Ethernet function, enter the SP mode and set SP5985-001 (On Board NIC) to "1" (Enable).
- To enable the USB function, enter the SP mode and set SP5985-002 (On Board USB) to "1" (Enable).



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21. If there was no HDD in the machine before you installed the printer/scanner kit, do **SP5846 41** to let the user get access to the address book.

Important

- This SP must be done immediately after installation of an HDD unit in a machine that previously had no HDD.
- The first time the machine power is turned on with the new HDD installed, the system automatically takes the address book from the NVRAM and writes it on the new HDD. But, only the system administrator can get access to the new address book on the HDD at this time.
- If you do SP5846 41 immediately after power on, then all users can use the address book.

NOTE: It is not necessary to format the HDD.

1.4.2 USB/NIC FUNCTION ENABLE

The NIB and USB functions are built into the controller. Installation procedures for these functions are not necessary. However, these functions must be enabled with SP5985.

1. If you want to use the Ethernet function, enter the SP mode and set SP5985-001 (On Board NIC) to "1" (Enable).
2. If you want to use the USB function, enter the SP mode and set SP5985-002 (On Board USB) to "1" (Enable).

1.4.3 IEEE 1284 (B679)

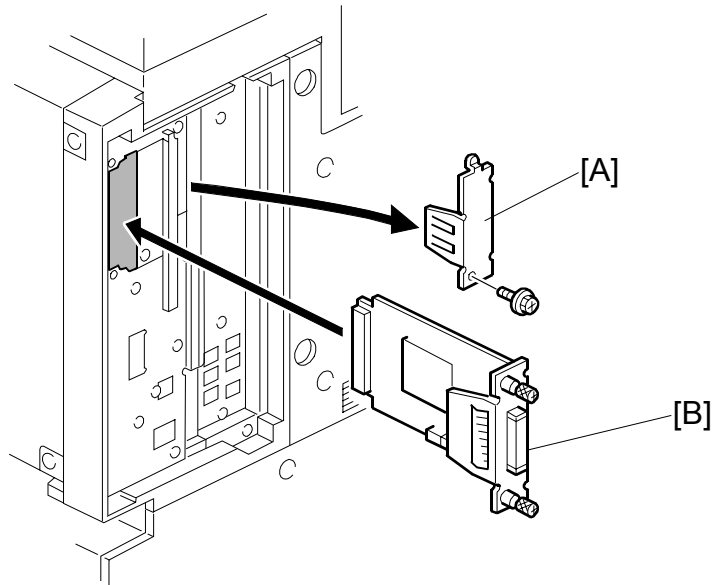
Accessories

Check the accessories and their quantities against the following list:

Description	Q'ty
1. IEEE 1284 Interface Board B679.....	1

CAUTION
 TURN OFF THE MAIN POWER SWITCH AND DISCONNECT THE POWER SUPPLY CORD.

NOTE: You can only install one of these network interfaces: IEEE 802.11b (Wireless LAN), IEEE1284 (Parallel/Centronics), IEEE1394 (FireWire), Bluetooth.



1. Remove the cover [A] of board **Slot 1 or 2** (⚙️ x1)
2. Install the interface board [B] (⚙️ x2 knob screws)
NOTE: Use a screwdriver to tighten the knob-screws. Do not tighten manually, because this can disconnect the board.
3. Reattach the application cover (⚙️ x1)

1.4.4 IEEE 1394 INTERFACE KIT (B581)

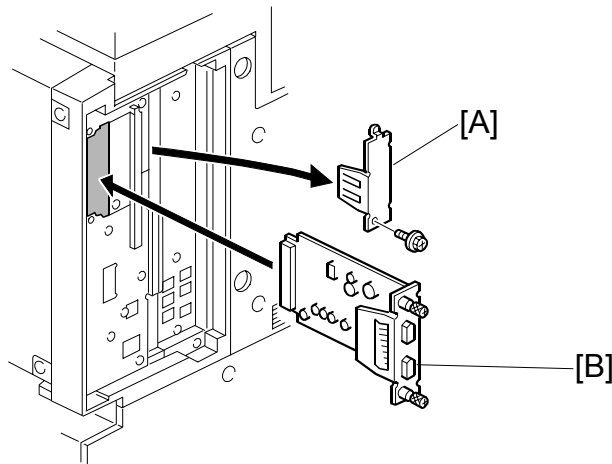
Accessories

Check the accessories and their quantities against the following list:

Description	Q'ty
1. IEEE 1394 Interface Board B581	1

<p>⚠ CAUTION</p> <p>TURN OFF THE MAIN POWER SWITCH AND DISCONNECT THE POWER SUPPLY CORD.</p>
--

NOTE: You can only install one of these network interface boards: IEEE 802.11b (Wireless LAN), IEEE1284 (Parallel/Centronics), IEEE1394 (FireWire), or Bluetooth.



1. Remove the cover [A] of board **Slot 1 or 2** (⚙ x1).
2. Install the interface board [B] (⚙ x1 knob screw).
NOTE: Use a screwdriver to tighten the knob-screw. Do not tighten manually, because this can disconnect the board.
3. Reattach the application cover (⚙ x1).

UP Mode Settings for IEEE 1394

Enter the UP mode. Then do the procedure below to perform the initial interface settings for IEEE 1394. These settings take effect every time the machine is powered on.

1. Press the “User Tools/Counter”key.
2. On the touch panel, press “System Settings”.
3. Press “Interface Settings”.
4. Press “IEEE1394”.
5. Press the following soft keys on the touch panel. Then select the following settings:
 - “IP Address”. Select the “AUTO-Obtain (DHCP) ” or “Specify”. When you select “Specify”, you can set the IP Address and Subnet Mask manually.
 - “IP over 1394”.
 - Enable or disable this setting as required. This setting enables IP over 1394 as the default setting for the printing method.
 - “SCSI Print”. Enable or disable this setting as required. This setting enables SCSI Print as the default setting for the printing method.
 - “Bi-directional SCSI Print”. Switch bi-directional printing on or off for SCSI print.

SP Mode Settings for IEEE 1394

The following SP commands can be set for IEEE 1394.

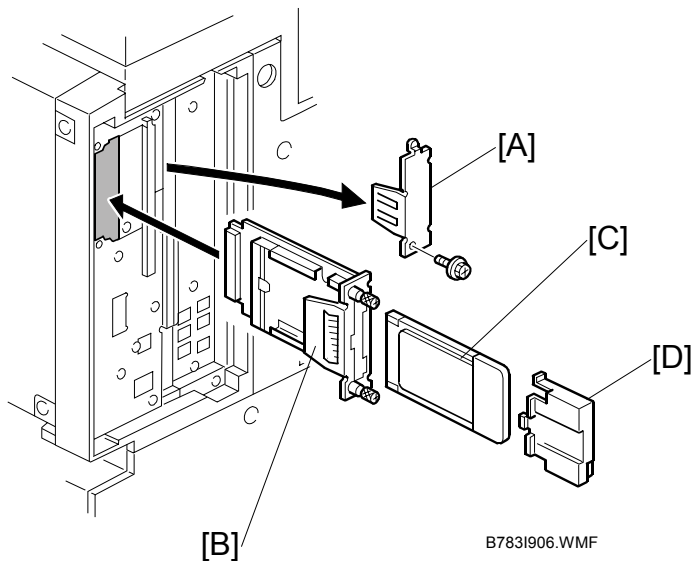
SP No.	Name	Function
5839 004	Host Name	Sets the name of the device used on the network. Example: RNPXXXXXXXXXX
5839 007	Cycle Master	Enables or disables cycle master function of the IEEE 1394 standard bus.
5839 008	BCR Mode	Sets the BCR (Broadcast Channel Register) setting for the Auto Node operation for the standard IEEE1394 bus for when IRM is not in use. The following three settings are available: “Standard,” “IRM Color Copy,” and “Always Effective.”
5839 009	IRM 1394a Check	Determines whether an IRM check for IEEE 1394a is conducted for the Auto Node when IRM is not used.
5839 010	Unique ID	Enables the “Node_Unique_Id” setting for enumeration on the standard IEEE 1394 bus.
5839 011	Logout	Determines how successive initiator login requests are handled during login in for SBP-2.
5839 012	Login	Enables or disables exclusive login for SBP-2.
5839 013	Login MAX	Sets the limit for the number of logins for SBP-2. Range: 1 ~ 62.

1.4.5 IEEE 802.11B INTERFACE KIT (G813)

Accessories

Check the accessories and their quantities against the following list:

Description	Q'ty
1. IEEE 802.11b Board	1
2. PCI Card.....	1



⚠ CAUTION
TURN OFF THE MAIN POWER SWITCH AND DISCONNECT THE POWER SUPPLY CORD.

NOTE: You can only install one of the following network interfaces at the same time: IEEE 802.11b (Wireless LAN), IEEE1284 (Parallel/Centronics), IEEE1394 (FireWire), Bluetooth.

1. Remove the cover [A] of board **Slot 1 or 2** (⚙ x1)
2. Attach the interface board [B] to the controller board (⚙ x1 knob screw).
NOTE: Use a screwdriver to tighten the knob-screws. Do not tighten manually, because this can disconnect the board.
3. With the printed side facing the front of the machine, insert the interface card [C] board.
4. Attach the antenna cap [D].

UP Mode Settings for Wireless LAN

Enter the UP mode. Then do the procedure below to perform the initial interface settings for IEEE 802.11b. These settings take effect every time the machine is powered on.

NOTE: You cannot use the wireless LAN if you use Ethernet.

1. Press the “User Tools/Counter” key.
2. On the touch panel, press “System Settings”.
NOTE: The Network I/F (default: Ethernet) must be set for either Ethernet or wireless LAN.
3. Select “Interface Settings” → “Network” (tab) → “Network I/F Setting”
4. Press “IEEE 802.11b”. Only the wireless LAN options show.
5. **Communication Mode.** Select either “802.11 Ad hoc”, “Ad hoc” or “Infrastructure”.
6. **SSID Setting.** Enter the SSID setting. (The setting is case sensitive.)
7. **Channel.** You need this setting when Ad Hoc Mode is selected.
Range: 1 ~ 14 (default: 11)
NOTE: The allowed range for the channel settings may vary for different countries.
8. **WEP (Encryption) Setting.** The WEP (Wired Equivalent Privacy) setting is designed to protect wireless data transmission. The same WEP key is required on the receiving side in order to unlock encoded data. There are 64 bit and 128 bit WEP keys.

WEP:

Selects “Active” or “Inactive”. (“Inactive” is default.)

Range of Allowed Settings:

64 bit	10 characters
128 bit	26 characters

9. **Transmission Speed.** Press the Next button to show more settings. Then select the transmission speed for the mode: Auto, 11 Mbps, 5.5 Mbps, 2 Mbps, 1 Mbps (default: Auto). This setting should match the distance between the closest machine or access point. This depends on which mode is selected.
NOTE: For the Ad Hoc Mode, this is the distance between the machine and the closest PC in the network. For the Infrastructure Mode, this is the distance between the machine and the closest access point.

11 Mbps	140 m (153 yd.)
5.5 Mbps	200 m (219 yd.)
2 Mbps	270 m (295 yd.)
1 Mbps	400 m (437 yd.)

10. Press “Return to Default” to initialize the wireless LAN settings.

Press “Yes” to initialize the following settings:

- Transmission mode
- Channel
- Transmission Speed
- WEP
- SSID
- WEP Key

SP Mode Settings for IEEE 802.11b Wireless LAN

The following SP commands and UP modes can be set for IEEE 802.11b

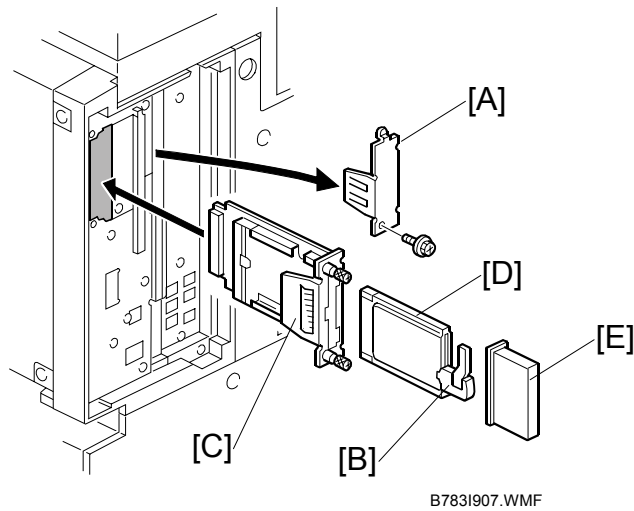
SP No.	Name	Function
5840 006	Channel MAX	Sets the maximum range of the channel settings for the country.
5840 007	Channel MIN	Sets the minimum range of the channels settings allowed for your country.
5840 011	WEP Key Select	Used to select the WEP key (Default: 00).
UP mode	Name	Function
	SSID	Used to confirm the current SSID setting.
	WEP Key	Used to confirm the current WEP key setting.
	WEP Mode	Used to show the maximum length of the string that can be used for the WEP Key entry.

1.4.6 BLUETOOTH UNIT 2045 (B736)

Accessories

Check the accessories and their quantities against the following list:

Description	Q'ty
1. Bluetooth Unit B736.....	1
2. PCI Card.....	1
3. Cap.....	1



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CAUTION
 TURN OFF THE MAIN POWER SWITCH AND DISCONNECT THE POWER SUPPLY CORD.

NOTE: You can only install one of these network interfaces at the same time: IEEE 802.11b (Wireless LAN), IEEE1284 (Parallel/Centronics), IEEE1394 (FireWire), Bluetooth.

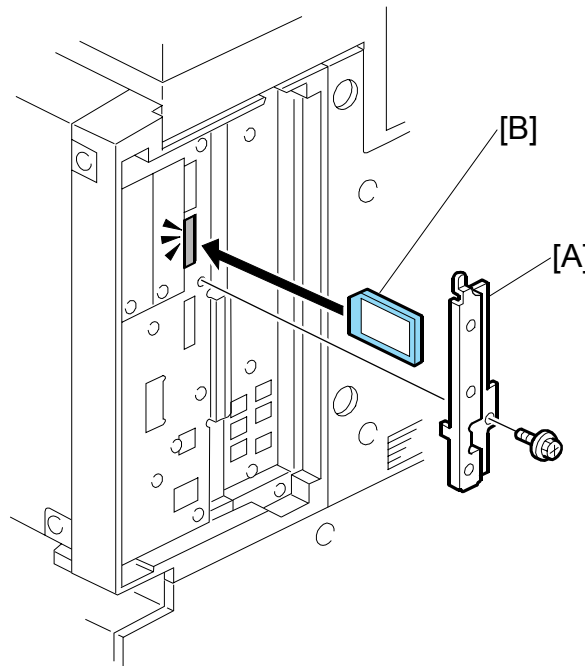
1. Remove the cover [A] of board **Slot 1 or 2** (⚙️ x1).
2. Attach the conductive tape [B] to the Bluetooth card.
Important: Attach the tape to the card on the side of the card opposite to the position shown at [B]
3. Attach the interface board [C] to the controller board (⚙️ x2 knob screws).
NOTE: Use a screwdriver to tighten the knob-screws. Do not tighten manually, because this can disconnect the board.
4. Install the Bluetooth card [D] in the slot in the Bluetooth unit.
5. Attach the antenna cap [E].

1.4.7 POSTSCRIPT 3 UNIT (B757)

Accessories

Check the accessories and their quantities against the following list:

Description	Q'ty
1. PostScript 3 Emulation SD Card	1
2. Decal	1



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⚠ CAUTION
TURN OFF THE MAIN POWER SWITCH AND DISCONNECT THE POWER SUPPLY CORD.

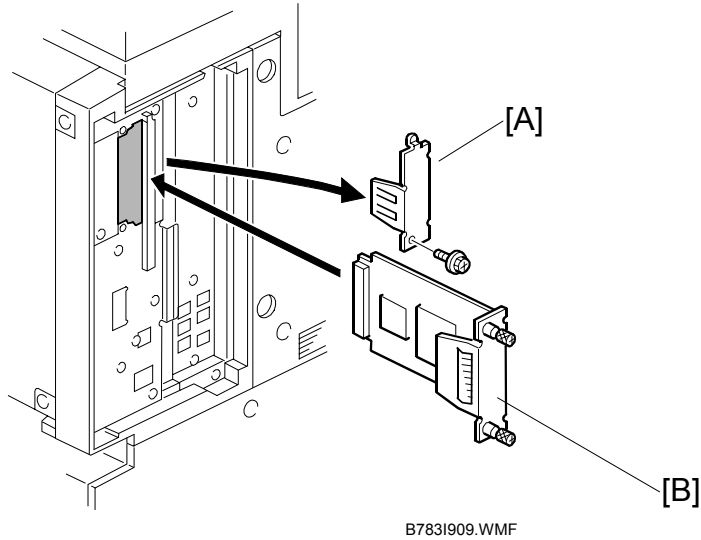
1. Remove the application cover [A] (🔧 x1).
2. With the printed side of the SD card [B] facing the rear of the machine, install the SD card in SD card slot **C2**. (👁-1.2)
3. Reattach the application cover (🔧 x1).
4. Attach the “Adobe PostScript 3” decal to the front cover.

1.4.8 FILE FORMAT CONVERTER (B609)

Accessories

Check the accessories and their quantities against the following list:

Description	Q'ty
1. File Format Converter Board	1



CAUTION
 TURN OFF THE MAIN POWER SWITCH AND DISCONNECT THE POWER SUPPLY CORD.

1. Remove the cover [A] of Board **Slot 1 or 2** (⚙️ x1).
2. Install the board [B] (⚙️ x2 knob screws).
NOTE: Use a screwdriver to tighten the knob-screw. Do not tighten manually, because this can disconnect the board.
3. Reattach the application cover (⚙️ x1).

Important:

- This option also requires installation of the Printer/Scanner Unit B783.

1.4.9 CHECK ALL CONNECTIONS

1. Plug in the power cord and turn on the main switch.
2. Enter the printer user mode and print the configuration page.
User Tools> Printer Settings> List Test Print> Config. Page

NOTE: The same data can also be printed by executing SP1-004 – Print Summary. All installed options are listed in the “System Reference” column.

2. SERVICE TABLES

2.1 PRINTER SERVICE TABLE

SP	Number/Bit SW		Initial	
1001	Bit Switch			
	001	Bit SW 1	00H	Adjusts the bit switch settings. Note: These bit switches are currently not being used
	002	Bit SW 2	00H	
	003	Bit SW 3	00H	
	004	Bit SW 4	00H	
	005	Bit SW 5	00H	
	006	Bit SW 6	00H	
	007	Bit SW 7	00H	
008	Bit SW 8	00H		

Service Tables

1003	Clear setting		
	001	Initialize Printer System	Initializes the settings in the printer feature settings of UP mode.
	002	Clear CSS Counter	DFU
	003	Delete Program	DFU
1004	Print Summary		Prints the printer summary sheet.
1005	Display Version.		Displays the version of the controller firmware.
1006	Sample/Proof Print		[0~1/0/1] 0: Link with Doc. Server 1: Enable

7910	PDL Part No. Information			Returns a text string for the version.		
	RPCS	150	R55	156	PDF	162
	PS	151	RTIFF	157	BMLinks	163
	RPDL	152	PCL	156	PICTBRIDGE	164
	R98	153	PCLXL	159	FONT	180
	R16	154	MSIS	160	FONT1	181
	RPGL	155	MSIS (OPT)	161	FONT2	182

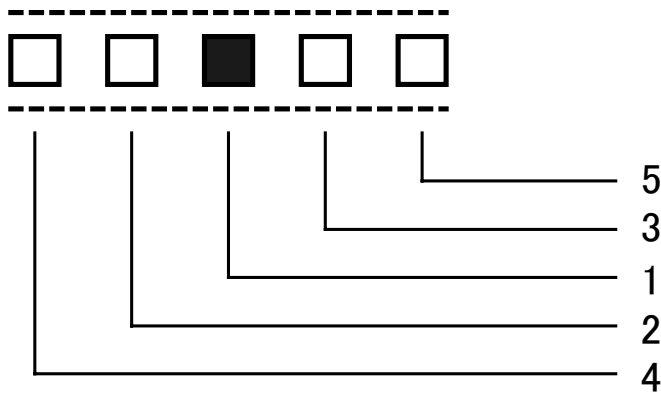
7911	PDL Version Information			Returns a text string for the version.		
	RPCS	150	R55	156	PDF	162
	PS	151	RTIFF	157	BMLinks	163
	RPDL	152	PCL	156	PICTBRIDGE	164
	R98	153	PCLXL	159	FONT	180
	R16	154	MSIS	160	FONT1	181
	RPGL	155	MSIS (OPT)	161	FONT2	182

2.2 SCANNER SERVICE TABLE

SP	Number/Name	Function/[Setting]
1004	Compression Type	Selects the compression type for binary picture processing. [1-3/1/1] 1: MH, 2: MR, 3: MMR
1005	Erase Margin	Creates an erase margin for all edges of the scanned image. <i>If the machine has scanned the edge of the original, create a margin.</i> [0 – 5/0/1mm]
1009	Forbid Using TWAIN	Sets the system not to use the network TWAIN scanner driver. 0 : Not forbidden (can use TWAIN) 1 : Forbid using TWAIN driver.

SP	Number/Name	Function/[Setting]
2021	Compression level (grayscale)	
	These SP codes set the compression ratio for the grayscale processing mode that can be selected with the notch settings on the operation panel. Range: 5 (lowest ratio) ← → 95 (highest ratio)	
1	Level 3 (Middle I-Qual)	[5~95/40/1/step]
2	Level 2 (High I-Qual)	[5~95/50/1/step]
3	Level 4 (Low I-Qual)	[5~95/30/1/step]
4	Level 1 (Highest I-Qual)	[5~95/60/1/step]
5	Level 5 (Lowest I-Qual)	[5~95/20/1/step]

Compression Notch Assignment



B783S901.WMF

3. DETAILS

3.1 OVERVIEW

Enhanced and New Printer Features Table for A-C4

Feature	Status	Description
Sample Print	Enhanced	Outputs a single hard copy of the document so it can be checked for errors or irregularities. If the sample copy looks acceptable, the user can enter a number to print additional copies. This feature can be used before setting up large copy jobs.
Locked Print	Enhanced	Printing a document requires a password entry. This feature is useful for protecting sensitive information.
Hold Print	New	Documents are stored on the printer HDD (similar to a locked print) but printing does not require a password entry.
Stored Print	New	Documents are stored on the printer HDD and printed as needed. This is useful for documents that are printed frequently (applications, catalogs, etc.)

Details

AC-4 Printer Features Comparison Table

Model	Feature	Storage Capacity	Sort by User ID	Multiple File Print/Delete	Save at Power Off	File Password	Save After Printing
A-C3	Sample Print	30* ¹	No	No	No	Yes (4-digit)	No
	Locked Print		No	No	No	NO	No
A-C4	Sample Print	100* ¹	Yes	Yes	Yes	Yes (4-8 digits)	No
	Locked Print		Yes	Yes	Yes	No	No
	Hold Print		Yes	Yes	Yes	No	No
	Stored Print		Yes	Yes	Yes	Optional (4-8 digits)	Yes

*¹ Total number of files (includes all job types).

4. SPECIFICATIONS

4.1 PRINTER CONTROLLER (GENERAL)

Printing Speed:	Maximum 35 ppm (A4/LT LEF): B195 Maximum 45 ppm (A4/LT LEF): B198
Printer Languages:	PCLXL/PCL5e PostScript 3 (option) RPCS (Refined Printing Command Stream) - an original Ricoh PDL
Resolution (Driver):	RPCS 200/600 dpi PS3 600 dpi PCL5e 300/600 dpi PCLXL 600 dpi
Resident Fonts:	PCL TrueType: 10, Intellifont: 35, International: 13, Bitmap: 1 PS3 Option fonts PS3
Connectivity	Std. RJ-45 network port (100BASE-TX, 10BASE-T, USB 2.0) Option IEEE1394 (FireWire), IEEE802.11b (Wireless LAN), Bluetooth, IEEE1284 (Centronics Parallel)
Network Protocols	TCP/IP, IPX/SPX, SMB (NetBIOS over TCP/IP), AppleTalk (Auto Switching)
RAM:	Maximum 384 MB (Resident 128 MB + Additional 256 MB) Note: Additional 256 MB is required for the printer/scanner option.

4.2 USB SPECIFICATIONS

USB connectivity is built into the controller firmware.

Interface	USB 1.1, USB 2.0
Data rates	480 Mbps (high speed), 12 Mbps (full speed), 1.5 Mbps (low speed) High speed mode is only supported by USB 2.0.

4.3 IEEE 802.11B SPECIFICATIONS

Standard applied	IEEE802.11b	
Data transmission rates	Speed	Distance
	11 Mbps	140 m (153 yd.)
	5.5 Mbps	200 m (219 yd.)
	2 Mbps	270 m (295 yd.)
	1 Mbps	400 m (437 yd.)
Network protocols	TCP/IP, Apple Talk, NetBEUI, IPX/SPX, SMB	
Bandwidth	2.4GHz (divided over 14 channels, 2400 to 2497 MHz for each channel)	

4.4 IEEE 1394 SPECIFICATIONS

Interface	IEEE 1394 (firewire)	
Number of Ports	2 ports	
Data Transmission Speed	400 Mbps, 200 Mbps, 100 Mbps	
Available Features, Functions, Protocols	SCSI print	IP over 1384
	Print	Print, Scan
	SBP-2	TCP/IP

4.5 BLUETOOTH SPECIFICATIONS

Transmission Specifications	Based on Bluetooth V1.1
Data Transfer Speed	1 Mbps
Profile	Hard Copy Cable Replacement Profile (HCRP), Serial Port Profile (SPP), BIP
Distance Between Devices	10 m (The maximum distance when using outdoors, otherwise depends on the office environment.)

4.6 SCANNER SPECIFICATIONS

Standard Scanner Resolution:	Main scan/Sub scan 600 dpi
Scanning Speed	52 ppm, E-mail/Scan-to-Folder/Network Delivery Scanner (A4 LEF, Text 200 dpi, MH Compression)
Available scanning Resolution Range:	100 ~ 1200 dpi; When used as a Network TWAIN scanner.
	100, 200, 300, 400, 600 dpi; When used as a network delivery scanner or for sending e-mail
Grayscales:	8 bits/pixel
Interface:	Ethernet 10/100BASE TX, IP over IEEE1394, Wireless LAN 802.11b
Compression Method:	MH, MR, MMR (Binary Picture Processing) JPEG (Grayscale Processing)
Video Memory Capacity:	384 MB
Image Storage Capacity:	Number of originals per file: Maximum 1,000 pages
	Maximum of files: 3000 files
Max. Storage on Doc. Svr.	9,000 pp. (B&W (ITUT No. 1/200 dpi MMR)

4.7 SOFTWARE ACCESSORIES

4.7.1 PRINTER

The printer drivers and utility software are provided on one CD-ROM. An auto-run installer allows you to select which components to install.

4.7.2 PRINTER DRIVERS

Printer Language	Windows 95/98/Me	Windows NT4.0	Windows 2000, XP, Server 2003	Macintosh
PCL 6	Yes	Yes	Yes	No
PCL 5e	Yes	Yes	Yes	No
PS3	Yes	Yes	Yes	Yes
RPCS	Yes	Yes	Yes	No

- NOTE:** 1) The printer drivers for Windows NT 4.0 are only for the Intel x86 platform. There is no Windows NT 4.0 printer driver for the PowerPC, Alpha, or MIPS platforms.
- 2) The PS3 drivers are all genuine AdobePS drivers, except for Windows 2000/XP/Server 2003, which uses Microsoft PS. A PPD file for each operating system is provided with the driver.

Utility Software

Software	Description
Agfa Monotype Font Manager 2000 (Win 95/98/Me, NT4, 2000)	A font management utility with screen fonts for the printer.
SmartNetMonitor for Admin (Win 95/98/Me, NT4, 2000/XP/Server 2003)	A printer management utility for network administrators. NIB setup utilities are also available.
SmartNetMonitor for Client (Win 95/98/Me, NT4, 2000/XP/Server 2003)	A printer management utility for client users. Peer-to-peer printing utility and parallel/recovery printing functions are included.
1394 Utility (Win 2000/XP)	A utility for removal IEEE 1394 printers.
LAN-Fax M3 Driver (Win 95/98/Me, NT4, 2000/XP)	This driver allows use of the LAN-Fax functions by installing the LAN-Fax driver, Address Book, and LAN-Fax Cover Sheet Editor.
Printer Utility for Mac	This software provides several convenient functions for printing from Macintosh clients.
USB Printing Support	A utility for the USB 2.0 board. A computer running Windows 98 SE or Windows ME requires installation of this utility.
Acrobat Reader	A utility that allows reading PDF files.

4.7.3 SCANNER

The scanner driver and utility software are provided on one CD-ROM.

Scanner Driver

- Network Twain Driver for Win95/98/Me/NT4/2000/XP/Server 2003

Scanner Utilities

- Scan Router V2 Lite for Win95/98/Me/NT4.0/2000/XP
- Desk Top Binder V2 Lite for Win95/98/Me/NT4.0/2000/XP/Server 2003