

Printer Controller EB-105EX
(Machine Code: G353)
SERVICE MANUAL

Read this "Safety Information" carefully before you use this product.
For safety, please follow the instructions in information slip.

SAFETY INFORMATION

When using this machine, the following safety precautions should always be followed.

Safety During Operation

In this manual, the following important symbols are used:

 WARNING
--

Indicates a potentially hazardous situation which, if instructions are not followed, could result in death or serious injury.

 CAUTION
--

Indicates a potentially hazardous situation which, if instructions are not followed, may result in minor or moderate injury or damage to property

 WARNING
--

- Connect the power cord directly into a wall outlet and never use an extension cord.
- Disconnect the power plug (by pulling the plug, not the cable) if the power cable or plug becomes frayed or otherwise damaged.
- To avoid hazardous electric shock or laser radiation exposure, do not remove any covers or screws other than those specified in this manual.
- Turn off the power and disconnect the power plug (by pulling the plug, not the cable) if any of the following occurs:
 - You spill something into the machine.
 - You suspect that your machine needs service or repair.
 - The external housing of your machine has been damaged.

 CAUTION
--

- Protect the machine from dampness or wet weather, such as rain and snow.
- Unplug the power cord from the wall outlet before you move the machine. While moving the machine, you should take care that the power cord will not be damaged under the machine.
- When you disconnect the plug from the wall outlet, always pull the plug (not the cable).
- Risk of explosion if battery is replaced by an incorrect type.
- Dispose of used batteries according to the instructions.

Power Cords Precautions:

To reduce the risk of electric shock or damage to the equipment:

- Use the appropriate power cord which was set up by your manufacturer's authorized service provider.
- Do not place objects on AC power cords or cables. Arrange them so that no one may accidentally step on or trip over them.
- Do not pull on a cord or cable. When unplugging from the electrical outlet, grasp the cord by the plug.
- Do not disable the power cord grounding plug. The grounding plug is an important safety feature.
- Plug the power cord into a grounded (earthed) electrical outlet that is easily accessible at all times.

Power Supply:

The socket-outlet shall be installed near the product and shall be easily accessible.

Laser Safety:

This machine is considered a class 1 laser device. Safety precautions and interlock mechanisms have been designed to prevent any possible laser beam exposure to the operator.

The following label is attached on the internal cover that is revealed when the front cover is opened.



DECAL3.WMF

CD-ROM Drive Precaution:

Do not change the CD-ROM drive to a drive, which is not approved by the EB-105EX manufacturer.

If it is necessary to replace the CD-ROM drive, use the CD-ROM drive which is supplied as a spare part for this product.

Warning:

Use of controls, adjustment or performance of procedures other than those specified in this manual may result in hazardous radiation exposure.

IMPORTANT SAFETY NOTICES

PREVENTION OF PHYSICAL INJURY

1. Before disassembling or assembling parts of the controller, make sure that the AC power cord is unplugged.
2. The wall outlet should be near the controller and easily accessible.
3. Note that some components of the controller are supplied with electrical voltage even if the main power switch is turned off.
4. If any operation check has to be made with exterior covers off while the main switch is turned on, keep hands away from electrified or mechanically driven components.

OBSERVANCE OF ELECTRICAL SAFETY STANDARDS

1. The controller must be installed and maintained by a customer service representative who has completed the training course on the controller.
2. The danger of explosion exists if the battery on the motherboard is incorrectly replaced. Replace the battery only with the equivalent type recommended by the manufacturer. Discard the used motherboard battery in accordance with the manufacturer's instructions and local regulations.

SAFETY AND ECOLOGICAL NOTES FOR DISPOSAL

1. Dispose of replaced parts in accordance with local regulations.
2. When keeping used lithium batteries in order to dispose of them later, do not put more than 100 batteries per sealed box. Storing larger numbers or not sealing them apart may lead to chemical reactions and heat build-up.

This manual uses several symbols.

Symbol	What it means
	Refer to section number/document
	Screw
	Connector

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Detailed
Descriptions

1. INSTALLATION

1.1 INSTALLATION REQUIREMENTS

1.1.1 ENVIRONMENT

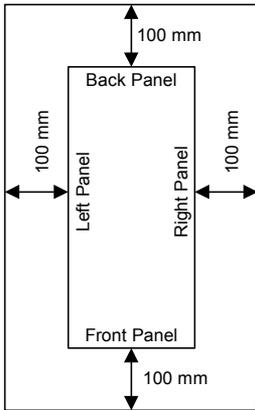
1. Temperature Range: 5°C to 35°C (39°F to 95°F)
2. Humidity Range: 30% to 80% RH
3. Ambient Illumination: Less than 2,000 lux (do not expose to direct sunlight or strong light)
4. Ambient Dust: Less than 0.075 mg/m³
5. If the place of installation is air-conditioned or heated, do not place the machine where it will be:
 - 1) Subjected to sudden temperature changes
 - 2) Directly exposed to cool air from an air-conditioner
 - 3) Directly exposed to heat from a heater
6. Do not place the machine where it will be exposed to corrosive gases.
7. Do not install the machine at any location over 3,000 m (9,900 feet) above sea level.
8. Place the controller on a strong and level base.
9. Do not place the machine where it may be subjected to strong vibrations.
10. Do not connect the machine to a power source shared with another electrical appliance.
11. The machine can generate an electromagnetic field, which could interfere with radio or television reception.

1.1.2 MACHINE LEVEL

1. Front to back: Within $\pm 5^\circ$ of level
2. Right to left: Within $\pm 5^\circ$ of level

1.1.3 MINIMUM SPACE REQUIREMENTS

Place the machine near the power source, providing clearance as shown.



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1.1.4 POWER REQUIREMENTS

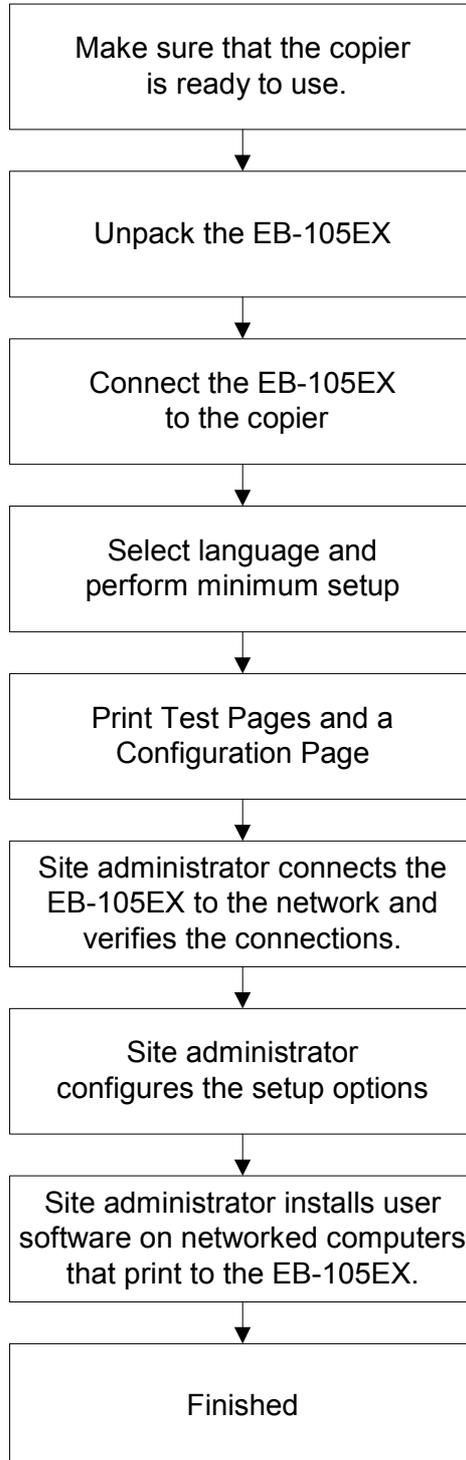
⚠ CAUTION

1. Insert firmly the plug in the outlet.
2. Avoid using an outlet extension plug or cord.
3. Ground the machine. Avoid using a 3-prong adapter in a 2-hole ungrounded outlet.
4. Use the supplied AC power cord (US, UK, or EU) with this product.

1. Input voltage level: 100 -127V, 50/60Hz: 1.4 A
200 - 240V, 50/60Hz: 0.7 A
2. Do not put anything on the AC power cord.

1.2 INSTALLATION FLOW CHART

Recommended installation steps are as follows:



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1.3 MACHINE INSTALLATION

1.3.1 SETTING CUSTOMER EXPECTATIONS

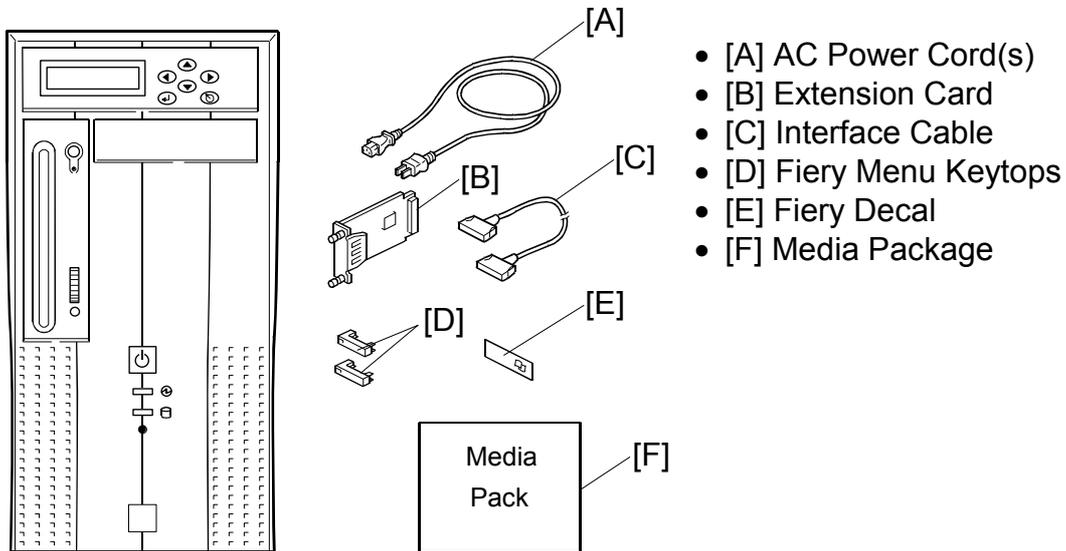
Before installation, the customer should be informed of the following:

- Some nodes on the network may be unavailable for up to one hour.
- The copier may be unavailable for up to one hour
- The site administrator should be available during the installation for network connectivity.
- Equipment downtime and impact on the network can be minimized if the site administrator installs a network connector for the EB-105EX and confirms network connection for the EB-105EX installation.
- The site administrator should have a networked computer available during the installation. The appropriate software should already be installed. Documentation for the networked computer and the network operating software should be available.
- The site administrator should install the user software shipped with the EB-105EX (user documentation is also included) onto networked PC and Mac OS computers that will print to the EB-105EX.

NOTE: This guide covers hardware installation and service. It provides general information on connecting the EB-105EX to the customer's network. For network setup and configuration information, refer the site administrator to the *Configuration Guide*.

1.3.2 UNPACKING THE EB-105EX

1. Open the box and remove the packing material.
2. Remove the contents from the top container. Inspect the contents for visible damage. The top container should include the following items:



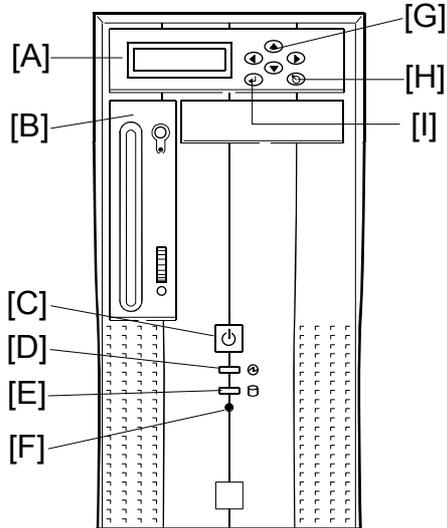
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3. Give the Media Package to the site administrator.
4. Take the remaining components out of the top container.
5. Remove the top container and any packing materials.
6. Carefully lift the EB-105EX out of the box.

1.3.3 FRONT AND BACK PANELS

After unpacking the EB-105EX, familiarize yourself with the front and back panels before you connect to the copier.

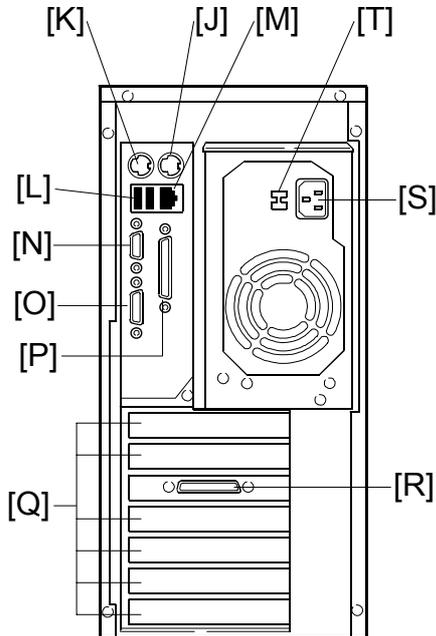
• **Front Panel**



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A	LCD Message Panel (for service only)
B	CD-ROM Drive (for service only)
C	Power Switch
D	Power Indicator
E	HDD Indicator
F	Reset Button (Not used)
G	Keys (Service only) UP▲/DOWN▼/LEFT◀/RIGHT▶
H	Cancel Key (for service only)
I	Enter Key (for service only)

• **Back Panel**

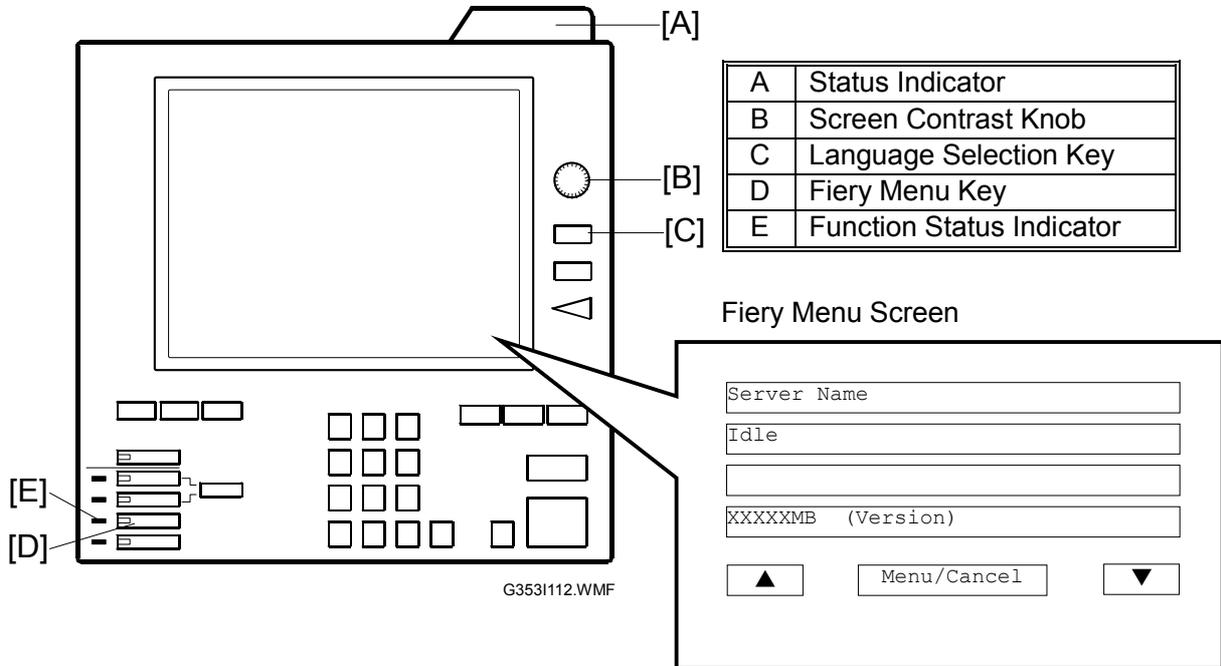


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J	Mouse (Not used)
K	Keyboard (Not used)
L	USB Ports (Not used)
M	RJ-45 Connector (10/100BaseT)
N	Serial Ports (Not used)
O	VGA Port (Not used)
P	Parallel Port (Not used)
Q	Empty Slots
R	Video Interface
S	Power Connector
T	Input Voltage Selector (for service only)

1.3.4 COPIER OPERATION PANEL

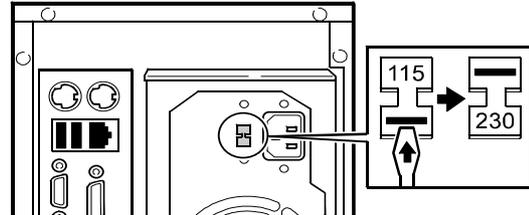
Familiarize yourself with the operation panel on the copier before you connect to the copier.



1.3.5 CONNECTING EB105EX TO THE COPIER

After you unpack the EB-105EX, connect to the copier before you connect the EB-105EX to the network. This is to confirm that there are no problems with the hardware and controller itself. If the BIOS detects a hardware error, you can use the diagnostic program "ULTRA POST" to check details of the problem (☛ 5.2.2).

1. Check if the proper input voltage (115 V or 230V) is set on the rear of the EB-105EX. If not, use the point of a screwdriver to change the voltage setting.



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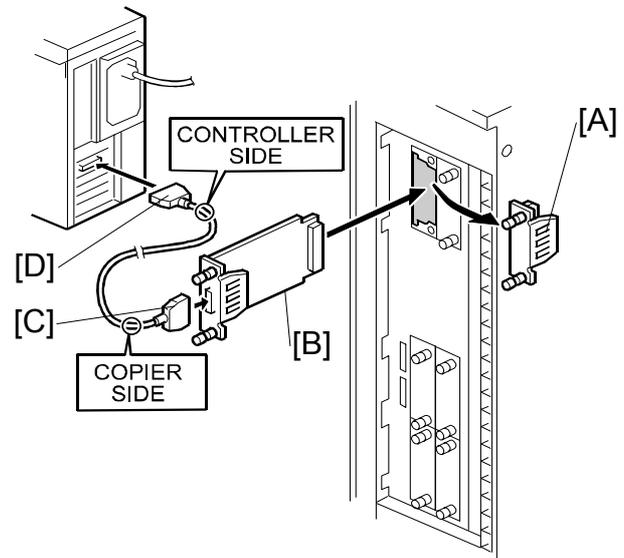
⚠ CAUTION

Check the input voltage setting before you plug the AC power cord into the EB-105EX. Otherwise, the power supply unit of the EB-105EX will be damaged.

2. Connect the appropriate AC power cord (U.S., U.K., or European) to the power connector at the back of the EB-105EX.
3. Turn off the copier main power.
4. Remove the controller box cover on the rear of the copier (🔧 x 10).
5. Remove the cover [A] of the left upper slot (🔧 x 2).



6. Insert the extension card [B] into the right upper slot and fasten it with the screws. (🔧 x 2).
7. Make sure that the extension card is inserted straight. From the side, confirm that the extension card is firmly inserted.
8. Re-attach the controller box cover. (🔧 x 10).

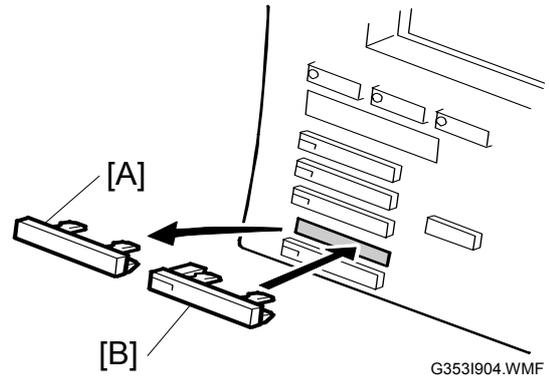


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9. Connect the interface cable as follows:
 - "Copier Side" [C]:
Connect to the extension card and fasten the screws.
 - "Controller Side" [D]:
Connect to the video interface on the rear of the EB-105EX.

NOTE: If the interface cable is connected in the opposite direction, the copier engine will fail to communicate with the controller.

10. On the operation panel of the copier, remove the Slot Cover [A] and discard it.
11. Install the Fiery Menu Keytop [B] in the position indicated in the illustration.



	INT'L Model (Symbolic)	US Model (English)
Only EB-105EX is connected.	 G353KEY-1.WMF	 G353KEY-2.WMF
EB-105EX and Copy Connector Kit (for the Tandem Copy feature) is connected.	 G353KEY-3.WMF	 G353KEY-4.WMF

1.3.6 STARTUP AND INITIAL SETUP

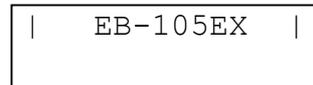
1. Switch on the copier main power.

NOTE: 1) The copier must be turned on before the EB-105EX is turned on.
 2) Make sure that all firmware for the Model B-C2 are updated to the newest version. If not, update them before you power on the EB-105EX. (☛ Model B-C2 Service Manual)

2. Switch on the EB-105EX using the power switch on the front panel.
3. Allow startup to proceed without interruption while you watch the LCD message panel of the EB-105EX.

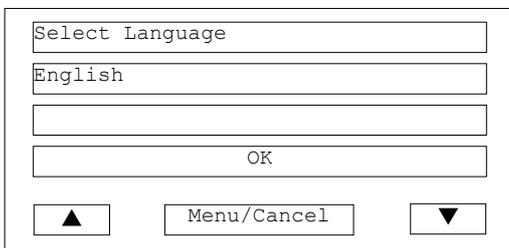
NOTE: If you see “POST ERROR” on the LCD message panel during startup, you need to run a diagnostic program manually to know the details of the hardware problem. For the procedure, see the Troubleshooting section (☛ 5.2.2).

4. Wait for the system to reach the idle screen to confirm that the EB-105EX is operating correctly.



5. Go to the copier operation panel and press the Fiery Menu key.

6. The language selection screen is shown. Select the desired language by using the down arrow “▼” key and up arrow “▲” key, and touch “OK”.



- English
- Dutch
- Spanish
- Italian
- German
- French

NOTE: 1) Once you have selected a language, you cannot change the language unless you do “Factory Defaults (☛ 4.3)” or re-install the system software.

2) The default settings for the EB-105EX depends on the language selection as follows:

		Selected Language & Market Region	
		English - US	English – UK/ Dutch / Spanish/ Italian /German/ French
PS Setting	Default Paper Sizes	US	Metric
	Paper Size	Letter	A4
PCL Setting	Paper Size for System Pages	US	Metric

If you selected “**English**” at the language selection screen, you are prompted to select the market region. Select either “**US**” or “**UK**” by using the down arrow “**▼**” key and up arrow “**▲**” key, then touch “**OK**”.

7. “Please Wait” will be indicated on the Fiery menu screen, then the Fiery menu screen will disappear from the operation panel.
8. Wait for a moment, then press the Fiery Menu key again on the operation panel. The Setup main menu will appear on the Fiery menu screen.

NOTE: The EB-105EX setup options should be configured later by the site administrator. However, a field technician must check that the EB-105EX controller works fine with the default configuration during the installation.

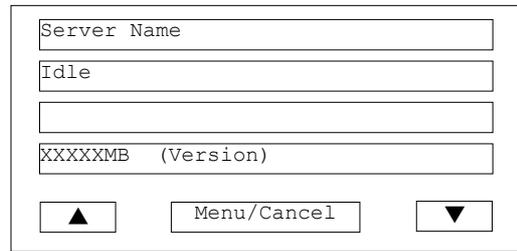
Therefore, the next steps show the steps for minimum configuration.

9. Touch the keys in the following order, in order to configure the minimum setup.
 - 1) “**Server Setup**” key
 - 2) “**Menu/Cancel**” key
 - 3) (When you are prompted “Save Changes for Server Setup / YES”) “**OK**” key
 - 4) “**Network Setup**” key
 - 5) “**Exit Network**” key
 - 6) (When you are prompted “Save Changes for Server Setup/ YES”) “**OK**” key
 - 7) “**Printer Setup**” key
 - 8) “**Menu/Cancel**” key
 - 9) (When you are prompted “Save Changes for Printer Setup / YES”) “**OK**” key

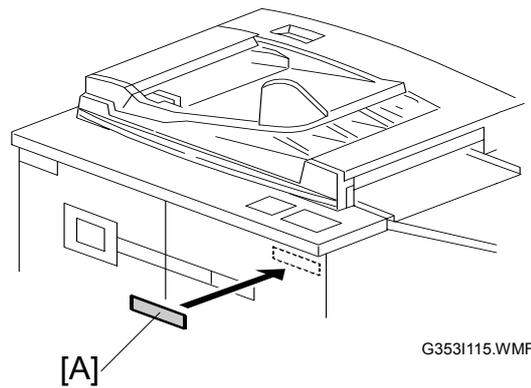
NOTE: If you need to specify the system date and time, enter the Server Setup menu and set them.

10. Select “**Exit Setup**”.

11. The system will reboot. The Fiery Menu key will have no effect until the system has rebooted. To confirm that the reboot was successful, press the Fiery Menu key after the LCD message panel on the EB-105EX shows “ | EB-105EX |”. The Fiery information screen will appear on the operation panel of the copier.



12. Attach the Fiery Decal [A] to the copier front cover.



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1.3.7 VERIFYING THE CONNECTION (LOCAL TEST PRINT)

After you connect the EB-105EX to the copier, print the Test Page and the Configuration Page to verify that the connection between the EB-105EX and the copier is good.

1. Make sure that the copier is not in use.
2. Check the settings in the following table and make sure that Letter or A4 paper is loaded in at least one of the paper trays of the copier.

Setup Option	PS Setting Default Paper Size		PCL Setting Paper Size for System Settings	
	"US"	"Metric"	"US"	"Metric"
Configuration Page requires...	Letter	A4	-	-
PS Test Page requires...	Letter	A4	-	-
PCL Test Page requires....	-	-	Letter	A4

3. On the operation panel of the copier, press the Fiery Menu key to access the printer initial menu screen.
4. Access the menu list by touching the "**Menu/Cancel**" key, and select "**Print Pages**".
5. Print the following pages:
 - Configuration Page
 - PS Test Page
 - PCL Test Page
6. Examine the quality of the test pages.
 - All patches should be visible, even though they may be very faint in the 5% and 2% ranges.
 - Each patch set should show uniform gradation from patch to patch as the shade lightens from 100% to 0%.
 - Poor image quality may indicate a need to service the copier. For more information, see the documentation provided with the copier.

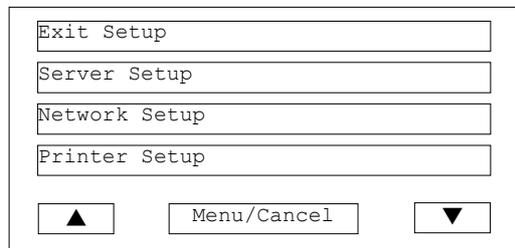
1.3.8 VERIFYING CONNECTION TO THE NETWORK

The EB-105EX provides twisted pair connectivity to an Ethernet network.

Category 3 or Category 5 unshielded twisted pair (UTP) network cable can be used for 10BaseT. Category 5 cable is required for 100BaseTX. It connects to the RJ-45 Connector on the EB-105EX.

1. Switch off the EB-105EX power before connecting the EB-105EX to any network device.
2. Connect the network cable to the RJ-45 connector on the EB-105EX.
3. Make sure that the copier power is switched on.
4. Switch on the EB-105EX power and wait until the LCD message panel shows “ | EB-105EX | ”.
5. Configure the Setup options.

- 1) Press the Fiery Menu key on the copier operation panel.
- 2) Touch the “**Menu/Cancel**” key .
- 3) Touch the down arrow “**▼**” key.
- 4) Select “**Run Setup**”.
- 5) Touch “**OK**”.
- 6) Wait for a while and then press the Fiery Menu key again.
- 7) Wait until the setup main screen appears.
- 8) Ask the site administrator to configure the Setup options.



NOTE: It is the site administrator’s responsibility to configure setup options according to the network and user environment. Default settings in setup may be adequate, although they may not be optimal for the user’s environment. Refer the site administrator to the *Configuration Guide* for Setup information.

6. After configuring the Setup options, verify the network connection. Ask the site administrator to install the printer driver on a client PC and make a test print from that PC.

2. GENERAL OPERATIONS FOR SERVICING

2.1 STARTING-UP, SHUTTING-DOWN, AND REBOOTING PROCEDURES

2.1.1 STARTING THE EB-105EX

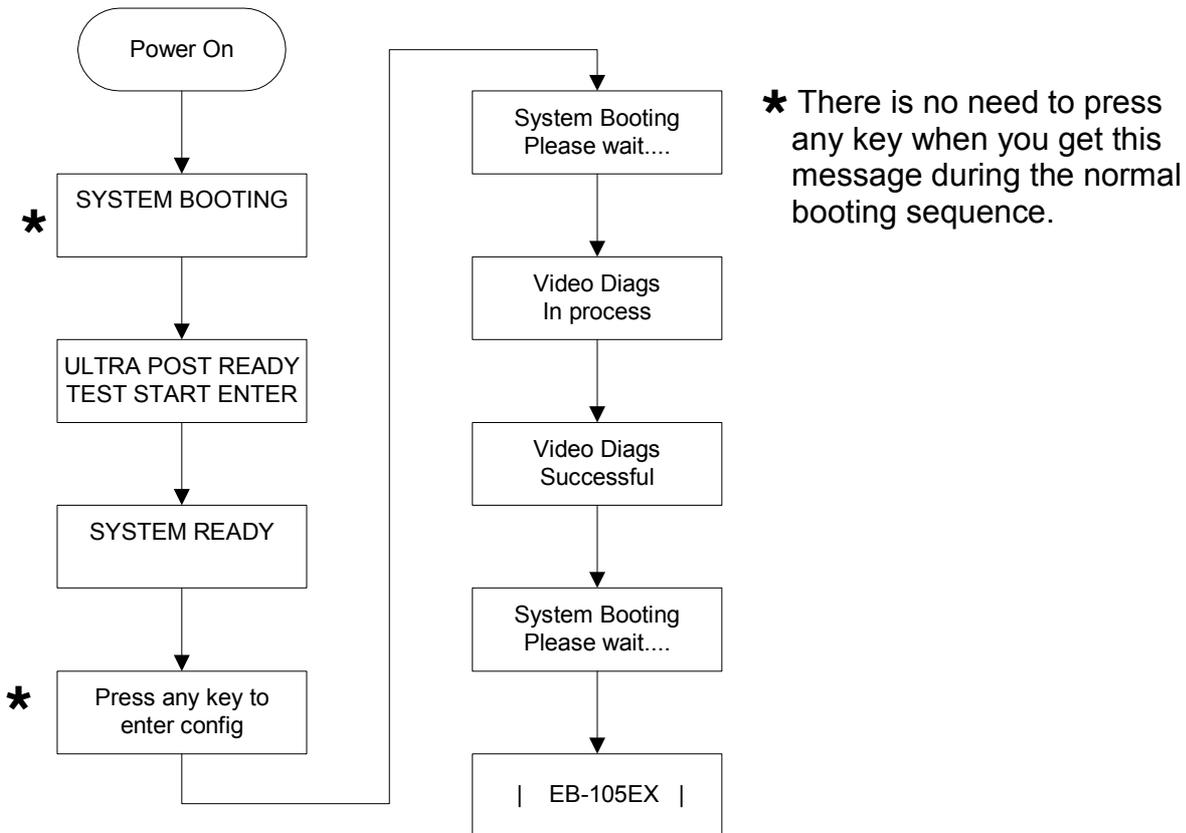
1. Make sure that the power of the copier is switched on.
2. Turn on the EB-105EX using the power switch on the front panel.

2.1.2 NORMAL START-UP SEQUENCE

When you power on the EB-105EX, the system runs the following routine on the LCD message panel.

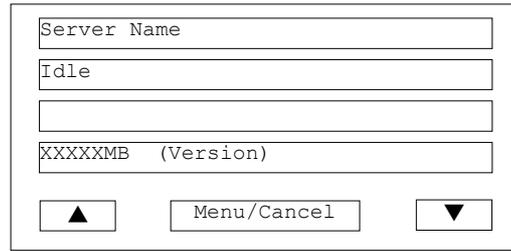
The routine takes about 4 minutes to reach the idle screen.

If the system hangs or data is missing during the startup sequence, note the screen that is displayed and check the errors and the required action in the error message tables in the Troubleshooting Section. (➔ 5.3)



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After the EB-105EX becomes idle, press the Fiery Menu key and the Fiery menu screen (Fiery information screen) will appear on the copier operation panel.

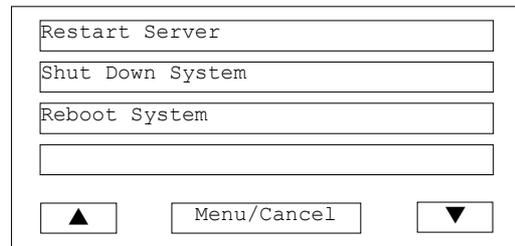


2.1.3 SHUTTING DOWN THE EB-105EX

<p>⚠ CAUTION</p> <p>Whenever you have to power off the EB-105EX, always perform the “Shut-Down” procedure from the operation panel of the copier as described below. Otherwise, the system software on the EB-105EX may be corrupted.</p>

NOTE: When the main power of the copier is switched off, the EB-105EX will automatically start the “Shut-Down” procedure. In such case, skip the steps 1-5, and start the procedure from step 6.

1. Make sure that the EB-105EX is not in use. (Make sure that the Fiery information screen on the operation panel reads idle.)
2. By pressing the Fiery Menu key on the operation panel of the copier, access the Fiery menu screen.
3. Touch the “**Menu/Cancel**” key to access the menu list.
4. Scroll the menu list by touching the down arrow “▼” key.
5. Touch the “**Shut Down**” key, then press the “**Shut Down System**” key.
6. When “It is now safe to power off” is indicated on the EB-105EX LCD message panel, power off the EB-105EX by using the power switch on the front panel of the EB-105EX.



<p>It is now safe to power off</p>

NOTE: If you are unable to shut down the system with the above procedure for some reason (i.e. connection lost/failure between the EB-105EX and the copier), press the power switch on the front panel for 4 seconds to turn off the EB-105EX. This procedure should be used only in special cases.

2.1.4 RESTARTING THE EB-105EX

When restarting the EB-105EX to recover from a problem, try this procedure first. However, “Restart Server” will only restart the application software on the system OS. To reboot the system OS (for example, after downloading a patch), see the next section “To Reboot the EB-105EX (☛ 2.1.5)”.

1. Make sure that the EB-105EX is not in use.
2. By pressing the Fiery Menu key on the operation panel of the copier, access the Fiery menu screen.
3. Press the “**Menu/Cancel**” key to access the menu list.
4. Scroll through the menu list by pressing the down arrow “▼” key.
5. Touch the “**Shut Down**” key, then touch the “**Restart Server**” key.
6. Wait until the EB-105EX becomes idle.
(When the EB-105EX LCD message panel shows “| EB-105EX |”, press the Fiery Menu key on the operation panel of the copier.)

2.1.5 REBOOTING THE EB-105EX

Use this procedure to reboot the system OS (for example, after downloading a patch).

1. Make sure that the EB-105EX is not in use.
2. By pressing the Fiery Menu key on the operation panel of the copier, access the Fiery menu screen.
3. Press the “**Menu/Cancel**” key to access the menu list.
4. Scroll through the menu list by pressing the down arrow “▼” key.
5. Touch the “**Shut Down**” key, then touch the “**Reboot Server**” key.
6. Wait until the EB-105EX becomes idle.
(When the EB-105EX LCD message panel shows “| EB-105EX |”, press the Fiery Menu key on the operation panel of the copier.)

2.2 CANCELLING THE CURRENT PRINT JOB

When you want to cancel the current print job, do the following:

1. Press the Fiery Menu key on the operation panel of the copier to access the Fiery menu screen.
2. Press the **“Menu/Cancel”** key to access the menu list.
3. Press **“Cancel Job”**

A screenshot of the Fiery menu screen. It features four text input fields: "Server Name", "Printing", an empty field, and "XXXXXXMB (Version)". Below these fields are three buttons: a left-pointing triangle, a "Menu/Cancel" button, and a right-pointing triangle.

For how to cancel the print jobs, please also refer to the *Job Management Guide*.

A screenshot of the "Cancel Job" menu screen. It features three text input fields: "Cancel Job", "(UserName)", and "(JobName)". Below these fields are three buttons: a left-pointing triangle, a "Menu/Cancel" button, and a right-pointing triangle.

2.3 PRINTING THE CONFIGURATION SHEET OR TEST SHEETS

1. Make sure that the EB-105EX is not in use.
2. Press the Fiery Menu key on the operation panel of the copier to access the Fiery menu screen.
3. Press the **“Menu/Cancel”** key to access the menu list.
4. Touch the **“Print Pages”** key, then touch the desired key.
 - **“PS Test Page”**
 - **“PCL Test Page”**
 - **“Configuration Page”**

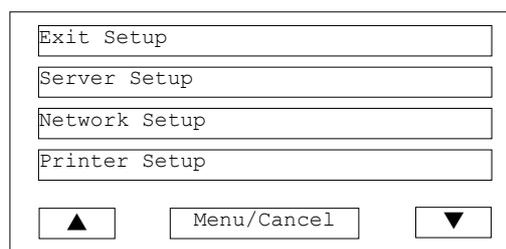
2.4 RUNNING THE EB-105EX SETUP

The following procedures show how to access the Setup menu from the Fiery menu screen.

NOTE: When the network settings (protocol, IP Address, etc.) are already configured and the “Enable Web Service” option is set to ON, you can also configure the EB-105EX setup from “Fiery Web Setup” by using a web browser on a personal computer which is connected on the network. For more detailed instructions, please refer to the Configuration Guide.

2.4.1 TO ACCESS THE SETUP MENU

1. Make sure that the EB-105EX is not in use.
2. Press the Fiery Menu key on the operation panel of the copier to access the Fiery menu screen.
3. Press the “**Menu/Cancel**” key to access the menu list.
4. Scroll through the menu list by pressing the down arrow “▼” key.
5. Touch the “**Run Setup**” key.
6. When you are prompted “Continue to Setup? / YES”, press “**OK**”.
The Fiery menu screen will disappear.
7. Press the Fiery Menu key to access the Fiery menu screen.
8. If a password is already set for the EB-105EX, you are prompted to enter the password. (Ask the site administrator to enter the password.)
9. The main setup screen appears.
For the details of each setup option value, refer to the *Configuration Guide*.



2.4.2 TO EXIT FROM THE SETUP MENU

1. At the main setup screen, touch “**Exit Setup**” key.
The Fiery menu screen will disappear.
2. Press the Fiery Menu key to access the Fiery menu screen.

3. REPLACEMENT

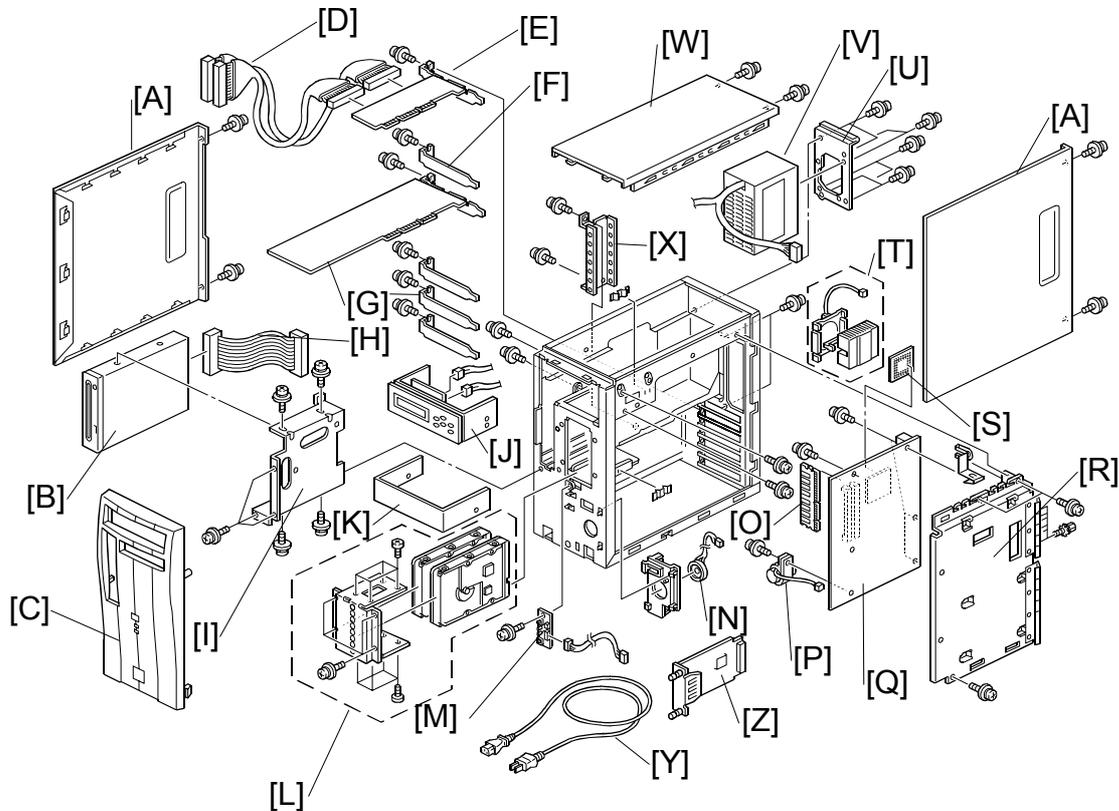
3.1 GENERAL CAUTION

⚠ WARNING

Turn off the power and unplug the EB-105EX before attempting any of the procedures in this section.

- Before accessing internal components, position the EB-105EX so that it is resting on its side on a flat, anti-static surface.

3.2 NAMES OF MAIN PARTS/UNITS



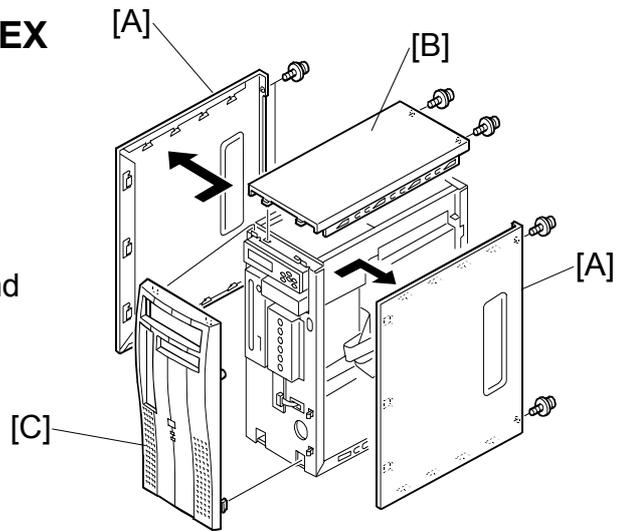
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Name	Refer to	Name	Refer to
A Side Covers	☛ 3.3.1	N Speaker	☛ 3.4.7
B CD-ROM Drive	☛ 3.4.3	O Memory	☛ 3.4.10
C Front Panel	☛ 3.3.1	P Lithium Battery	☛ 3.4.12
D IDE Cables	☛ 3.4.4, 3.4.2	Q Motherboard	☛ 3.4.9
E RAID Card	☛ 3.4.2	R Side Bracket	☛ 3.4.9
F Slot Covers	☛ 3.4.9	S CPU	☛ 3.4.11
G Video Board	☛ 3.4.1	T CPU Cooling Assembly	☛ 3.4.11
H CD-ROM Cable	☛ 3.4.3, 3.4.9	U Power Supply Unit Panel	☛ 3.4.5
I CD-ROM Bracket	☛ 3.4.3	V Power Supply Unit	☛ 3.4.5, 5.4
J LCD Unit	☛ 3.4.8	W Upper Cover	☛ 3.3.1
K 3.5" Shading Plate	-	X Plate Stay	☛ 3.4.1, 3.4.2
L HDD Unit	☛ 3.4.4	Y AC Power Cord	☛ 1.3.5
M Switch Board	☛ 3.4.6	Z Extension Card	☛ 3.4.13

3.3 COVER REMOVAL

3.3.1 COVERS FOR THE EB-105EX

- [A]: Side cover x 2 (⚙ x 2)
Slide out and remove.
- [B]: Top cover (⚙ x 2)
Slide out and remove.
- [C]: Front panel
Push the lock inside the chassis, and put it out.



G353R101.WMF

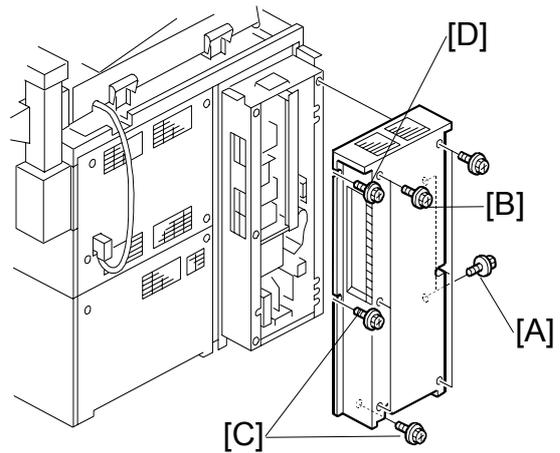


3.3.2 CONTROLLER BOX COVER OF THE COPIER

- [A]: Side screws (⚙ x 2).
- [B]: Rear panel screws (⚙ x 6).
- [C]: Bottom and left side screws (⚙ x 2)
- [D]: Top lock screw (⚙ x 1)

Note for Re-Assembling:

- When you re-install the controller box cover, fasten screw [D] first to ensure that the bottom and left side screws align correctly with their holes.



G353R905.WMF

3.4 UNIT REMOVAL

3.4.1 VIDEO BOARD

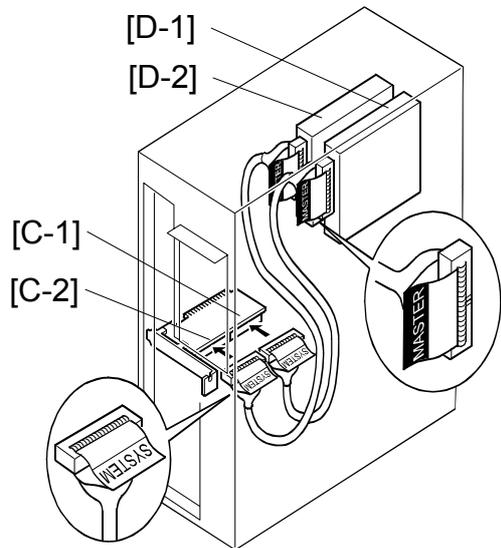
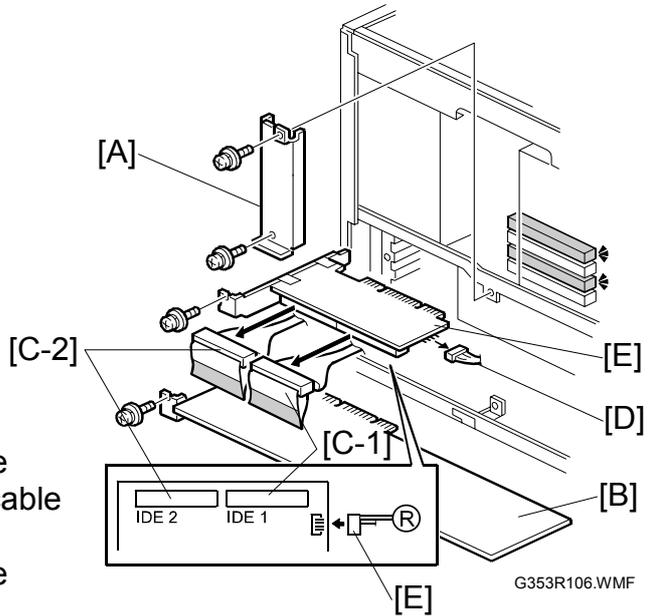
- [A]: Plate stay (̄ x 2)
- [B]: Video board (̄ x 1)

3.4.2 RAID CARD

- [A]: Plate stay (̄ x 2)
- [C]: IDE cables [C-1], [C-2] (̄ x 2)
- [D]: LED connector (4 pin ̄ x 1)
- [E]: RAID card (̄ x 1)

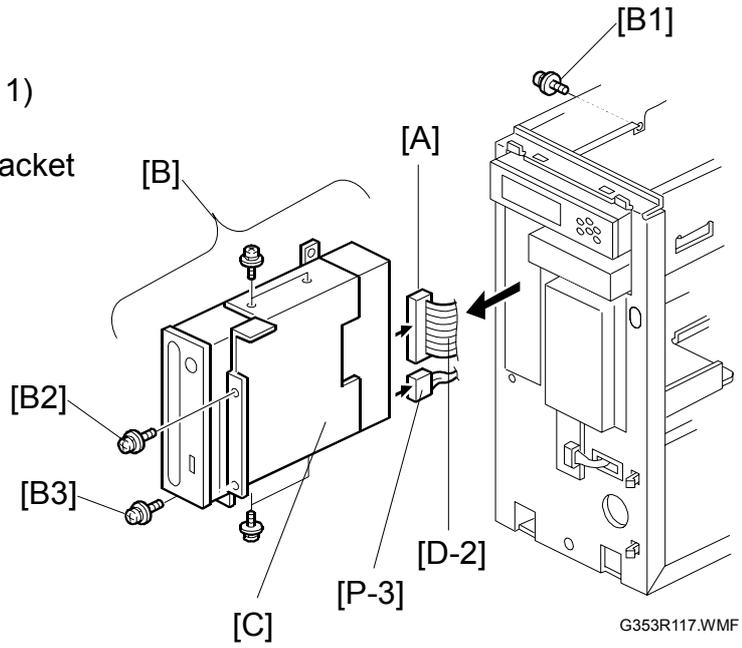
Notes for Re-Assembling:

- [C-1]/[C-2]: Make sure to connect the blue side (“SYSTEM” side) of each cable to the RAID card.
- [C-1]/[C-2]: Make sure to connect the cable (RAID/HDD) as follows.
 - “IDE1” [C-1] and HDD [D-1] should be connected (see the illustration).
 - “IDE2” [C-2] and HDD [D-2] should be connected (see the illustration).
- [E]: Connect the 4-pin LED connector to the RAID card as shown in the illustration. (The red wire must be at the top as shown in the diagram)



3.4.3 CD-ROM DRIVE

- [P3]: Power supply cable (☏ x 1)
- [A]: CD-ROM cable (☏ x 1)
- [B]: CD-ROM drive unit with bracket
(☏ x 3 [B1] [B2] [B3])
- [C]: CD-ROM bracket (☏ x 4)



3.4.4 HARD DRIVE UNIT

NOTE: The controller recognizes the two disks as one disk unit. For the following reasons, the HDDs must not be replaced separately.

- The two HDDs should always have exactly the same specifications (same model number, size, manufacturer, etc.).
- RAID setting (striping) information is written in the HDD MBR at the factory, so that the two disks are used as one disk unit. When replacing, both disks must be replaced. If only one of the two HDDs is replaced, the HDD unit will not work.
- As a spare part,
 - HDD Unit (Assembly of RAID set HDD x 2 + HDD Bracket)
 - HDD bracket
 is available.
- When you replace only the bracket, be very careful to put the hard disks back in the same places. If the locations of the two hard disks are reversed, the machine will not work.

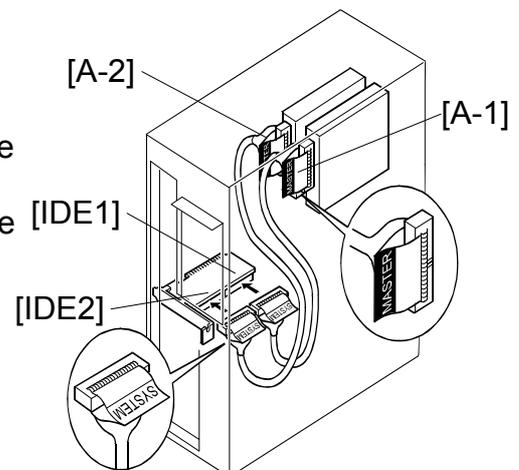
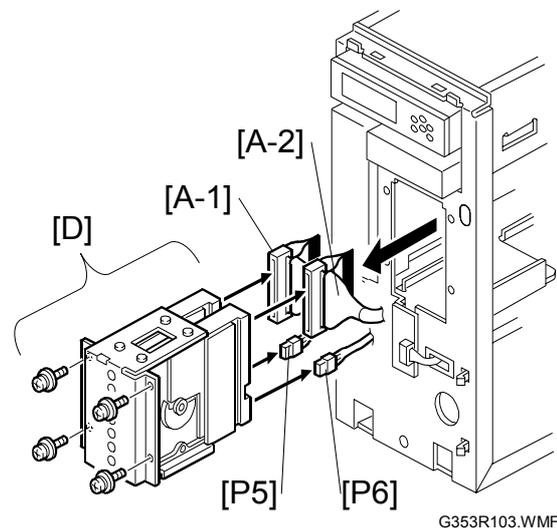
[A-1]/[A-2]: IDE cable (☞ x 2)

[P5]/[P6]: Power supply cable (☞ x 2)

[D]: HDDs with bracket (☞ x 3)

Notes for Re-Assembling:

- Connect the power supply cables as follows:
 - [P5]: Left HDD (closer to the CD-ROM drive)
 - [P6]: Right HDD (closer to the motherboard)
- Connect the IDE cables as shown in the illustration.
 - The "MASTER" connector should always be connected to the HDD; the "SYSTEM" connector should always be connected to the RAID card.
 - [A-1] (closer to the CD-ROM drive) should be connected from IDE1 on the RAID CARD.
 - [A-2] (closer to the motherboard) should be connected from IDE2 on the RAID CARD.
- The spare part of HDD unit does not consist of system software. After replacing the HDD, make sure to install the system software. (☞ 4.4)



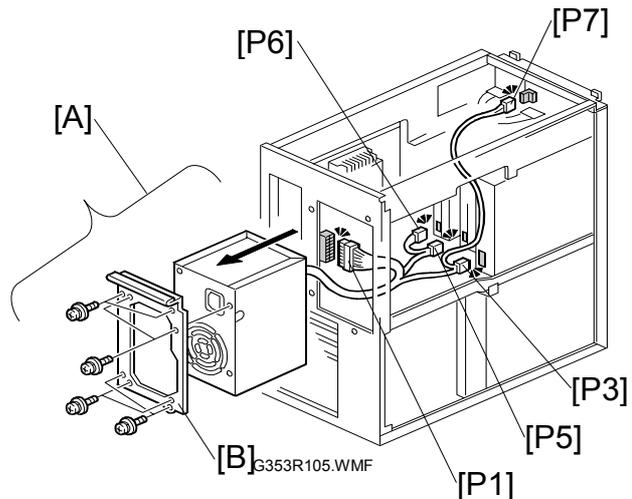
3.4.5 POWER SUPPLY UNIT

Power supply cable (☞ x 1).

- [P1]: Motherboard CN31
- [P3]: CD-ROM drive
- [P5]: Left HDD (closer to the CD-ROM drive)
- [P6]: Right HDD (closer to the motherboard)
- [P7]: LCD unit CN1

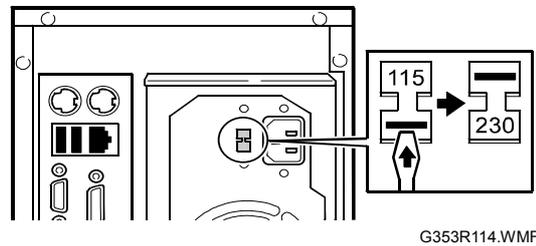
[A]: Power supply unit with panel (☞ x 4)

[B]: Power supply unit panel (☞ x 4)



⚠ CAUTION

Check the input voltage setting before you plug the AC power cord into the EB-105EX. Otherwise, the power supply unit of the EB-105EX will be damaged.



Replacement

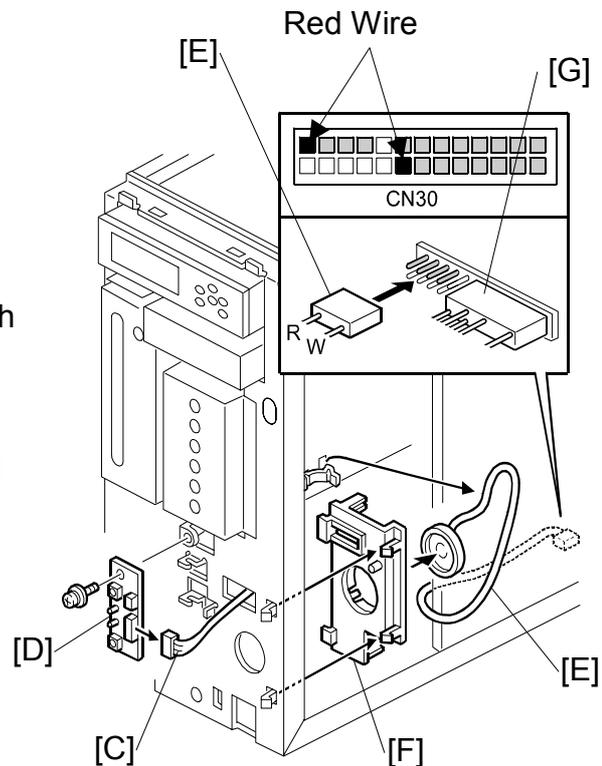
3.4.6 SWITCH BOARD

[C]: Switch Cable (☞ x 1)

[D]: Switch Board (☞ x 1)

Notes for Re-Assembling:

- The Switch Cable [C] should be connected as shown:
 - 8-pin connector: CN1 on the Switch Board
 - 4-pin connector: RAID card
 - 6-pin connector: CN30 on the motherboard, at the right hand end [G] as shown in the diagram



3.4.7 SPEAKER

[E]: Speaker cable (☞ x 1)

[F]: PCB extender board

Notes for Re-Assembling:

- Connect the speaker cable to CN30 on the motherboard as shown in the illustration.

3.4.8 LCD UNIT

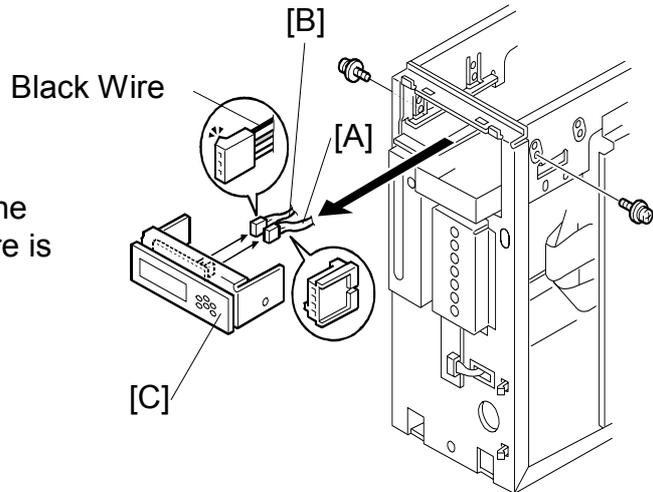
[A]: Power supply cable (☞ x 1)

[B]: LCD cable (☞ x 1)

[C]: LCD unit (☞ x 4)

Notes for Re-Assembling:

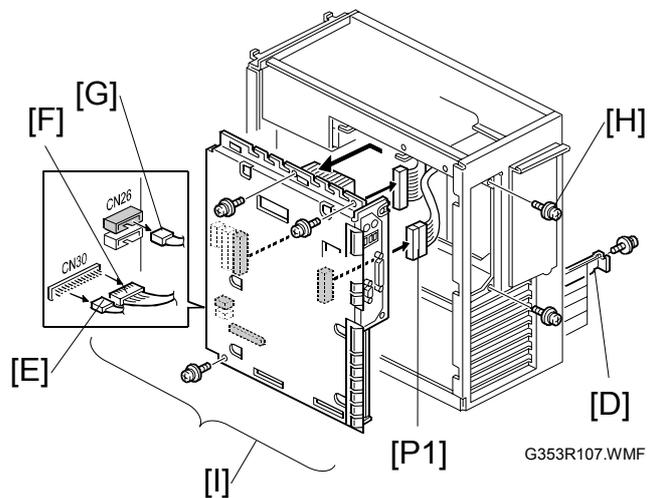
- Insert the LCD cable as shown in the illustration. Make sure the black wire is on the upper side.



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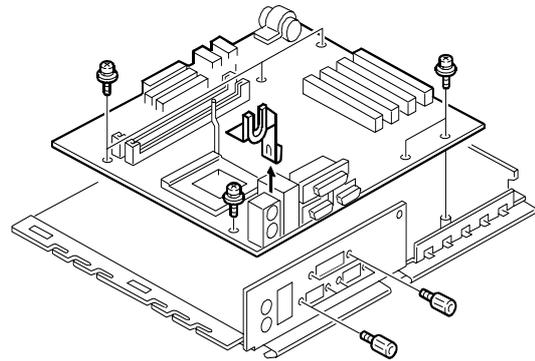
3.4.9 MOTHERBOARD

1. RAID card (☞ 3.4.2)
2. Video board (☞ 3.4.1)
3. PCI brackets [D] (☞ x 1 x 5)
4. Cables (☞ x4):
 - [P1]: Power supply cable from CN31
 - [E]: Speaker cable from CN30
 - [F]: Switch cable from CN30
 - [G]: LCD cable from CN26
5. Side screws [H] (☞ x 2)
6. Memory (☞ 3.4.10)
7. CPU Cooling Assembly (☞ 3.4.11)
8. CPU (☞ 3.4.12)
9. Side Bracket Assembly [I] (☞ x 3)



G353R107.WMF

10. Side Bracket [J] from the motherboard
( x 12)



G353R908.WMF

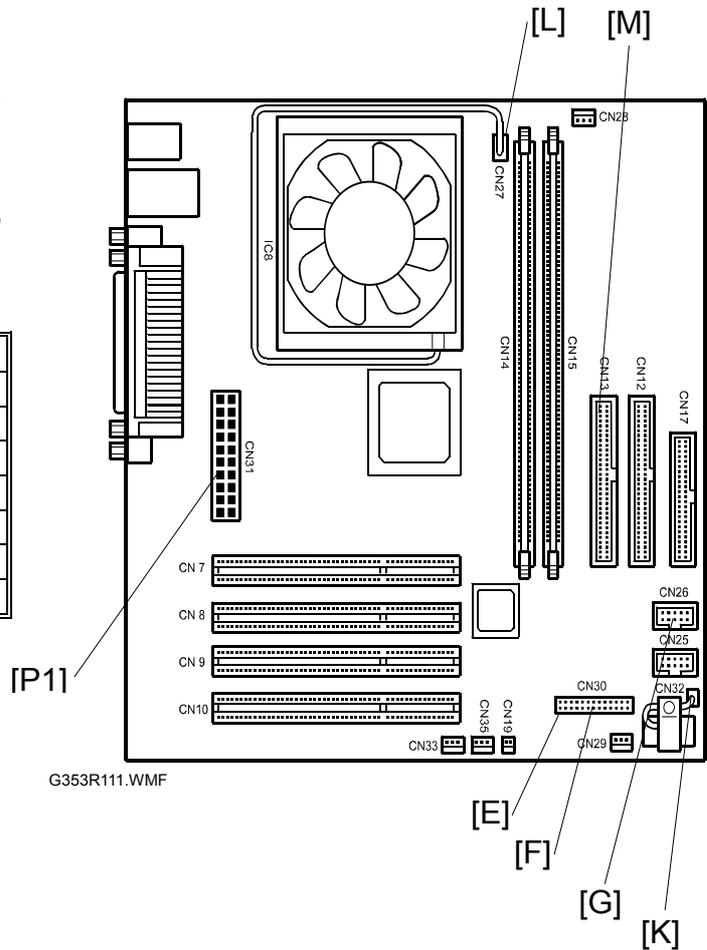
Replacement

NOTE: When you replace the motherboard, make sure to remove the CPU and memory and re-attach them to the new motherboard. (☛ 3.4.10, 3.4.12).

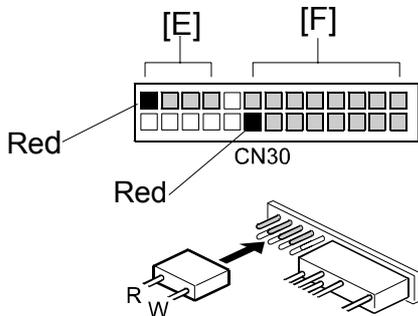
Notes for Re-Assembling:

- Make sure of where to connect the connectors for each cable. Make sure that all connectors are inserted firmly in the sockets. Also, do not put the connectors in the sockets the wrong way around.

No.	Connector	Location
[P1]	Power Supply Unit	CN31
[E]	Speaker Cable	CN30
[F]	Switch Cable	CN30
[G]	LCD Cable	CN26
[K]	Battery Cable	CN32
[L]	CPU Fan Cable	CN27
[M]	CD-ROM Cable	CN13



G353R111.WMF



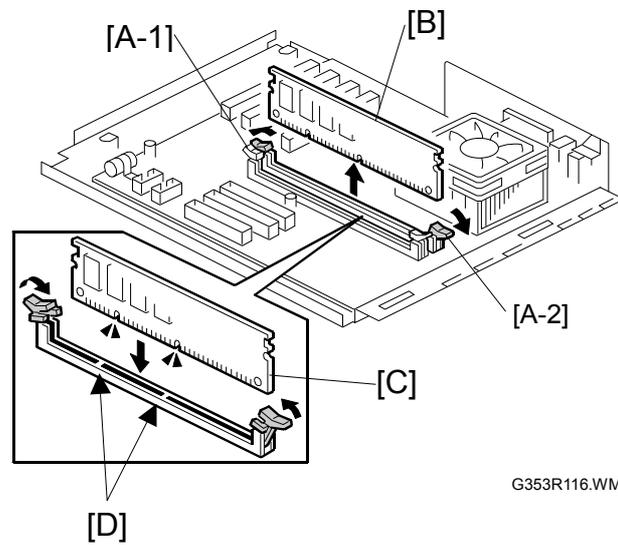
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3.4.10 MEMORY - 256 MB DIMM

1. Push outward on the levers [A-1], [A-2] on each side of the DIMM.
2. Slide the DIMM [B] straight out of the socket.

Notes for Re-Assembling:

- Always attach the DIMM [D] to the CN14 socket (closer to the CPU unit).
- Gently slide the DIMM straight down into the socket and press so that the levers lock the DIMM into place. Make sure that the levers close securely around the ends of the DIMM.
- DIMMs fit in the socket only one way. The two notches [D] on the bottom of the DIMM should line up with the notches in the socket.



G353R116.WMF

3.4.11 CPU AND COOLING ASSEMBLY

You can replace the following parts.

- Cooling Assembly [D] only
- CPU [F] and Cooling Assembly [D] (as a set)

*The cooling assembly consists of a fan and a heatsink.

NOTE: 1) Be careful not to damage the motherboard, the CPU, or the CPU socket when replacing the cooling assembly.

Remove the memory before removing the cooling assembly.

- 2) When you want to replace the CPU, replace the CPU and the cooling assembly as a set.

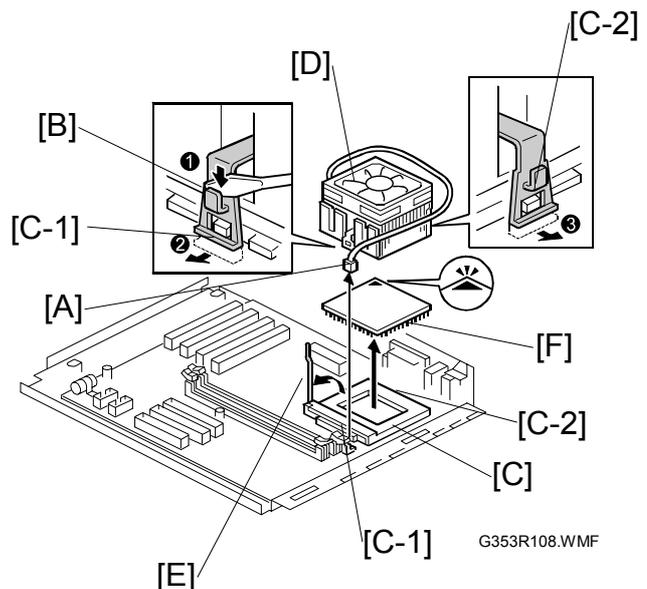
This is very important, because the silicone compound tape which is attached to a new heatsink will make good contact between the CPU and the heatsink when heated.

If you attach a used cooling assembly to a new CPU by mistake, the CPU and the heatsink will not be in contact properly, and this will cause the CPU to overheat.

Replacement

Cooling Assembly removal procedure:

1. Remove the CPU fan cable [A] from the motherboard CN27 (🔌 x 1).
2. Insert a flathead screwdriver into the hook on the end of the heatsink clip [B] and slowly press down on the clip to relieve the clip's tension.
3. Use the screwdriver to gently bend the clip off the rear mounting post [C-1] on the CPU socket [C].
4. Detach the other end of the clip from the front mounting post [C-2] on the CPU socket.
5. Remove the CPU cooling assembly [D].



CPU removal procedure:

1. Lift the CPU socket lever [E] to release the CPU [F] from the socket.
2. Grasp the CPU [F] by its edges and gently lift it from the socket.

CPU Attachment procedure:

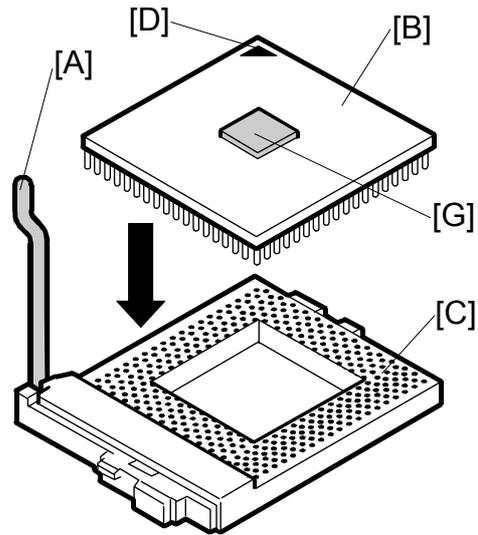
1. Wipe the contact surface of the CPU with a clean, lint-free cloth to assure good contact with the new heatsink.

NOTE: If you removed the CPU from the motherboard in order to install it on a new motherboard, make sure you completely remove any thermal compound residue on the surface of the CPU and at the base of heatsink.

2. Lift the CPU socket lever [A] to a vertical position.
3. Carefully align the pins on the CPU [B] with the pinhole pattern on the socket [C].

NOTE: 1) Check the direction of the arrow [D] on the CPU. (See the illustration.)
2) Be careful not to bend the pins when you insert the CPU into the socket.

4. Set the CPU [B] in the socket completely and without forcing it.
5. Close the socket lever [A] to secure the CPU [B] in place.

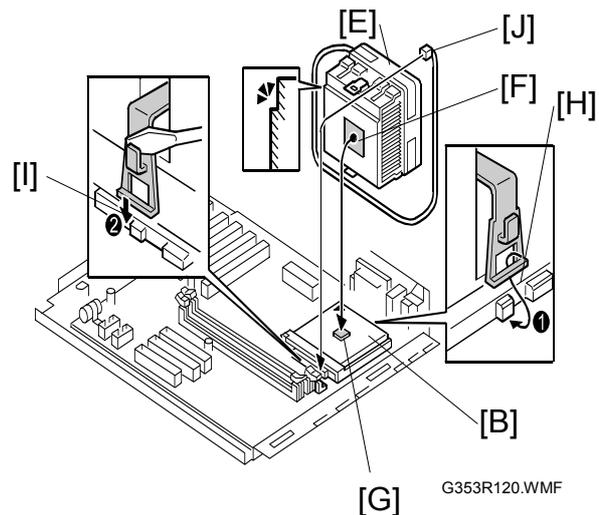


G353R119.WMF

Cooling Assembly attachment procedure:

NOTE: Incorrect installation could cause the CPU to overheat. Read the following instructions carefully.

1. Place the CPU cooling assembly [E] on the CPU [B] so that the silicone compound tape on the heatsink [F] is positioned on the center of the CPU chip [G].
2. Secure the hook end of the heatsink clip over the front mounting post [H] on the CPU socket.
3. To secure the clip over the rear mounting post [I] on the CPU socket [C], insert a flathead screwdriver into the hook on the heatsink clip and carefully press down.



G353R120.WMF

4. Route the CPU fan cable as shown in the diagram. It should be routed underneath the heatsink (around the CPU socket).
5. Connect the CPU fan cable [J] to CN27 on the motherboard.

3.4.12 LITHIUM BATTERY

The Lithium Battery on the Motherboard is located at CN32.

⚠ CAUTION

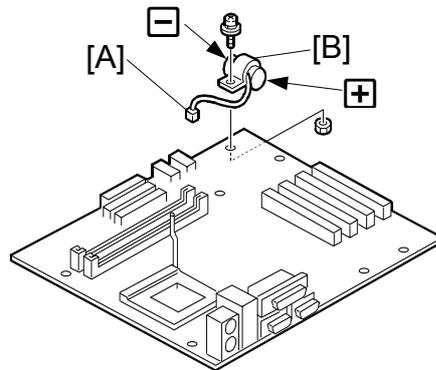
There is danger of explosion if the battery is replaced with the incorrect type. Replace with only with the same lithium battery supplied as a spare part.

Discard the used motherboard battery in accordance with the manufacturer's instructions and local regulations.

1. Connector [A] from the CN32 socket (🔧 x 1).
2. Lithium battery [B] (🔧 x 1)

Note for Re-Assembling:

- You need to re-configure the system date and time.
To configure the system date and time, enter the Server setup menu from the Setup main menu. (👉 2.4.1)



Replacement

G353R909.WMFF

3.4.13 EXTENSION CARD

1. Controller box cover (👉 3.3.2)
2. Extension card (🔧 x 2)

Note for Re-Assembling:

- Make sure that the extension card is inserted straight. From the side, check if the connector of the extension card is firmly inserted.

4. SOFTWARE MAINTENANCE

4.1 GENERAL NOTES AND CAUTIONS

You may use one of the following when you have a problem with the system software or the HDD.

- **Clear Server:** Clears all queued print jobs from the EB-105EX
- **Factory Default:** Restores the EB-105EX to the factory defaults
- **System Software Reinstallation**

The following table shows whether the current data on the EB-105EX will remain or be deleted when each of these is used.

	"Clear Server".	"Factory Default".	System Software Reinstallation / Upgrade
Job Log	Cleared	Cleared	Cleared
Queued Jobs	Cleared	Cleared	Cleared
Scanned Jobs	Cleared	Cleared	Cleared
MailBox	Cleared	Cleared	Cleared
Archived Jobs	Cleared	Cleared	Cleared
FreeForm masters	Cleared	Cleared	Cleared
Resident Fonts	Not cleared	Not Cleared	Cleared
Downloaded Fonts	Not cleared	Cleared	Cleared
Language Selection	Not cleared	Cleared	Cleared
Setup Options	Not cleared	Cleared	Cleared
Patches	Not cleared	Not cleared	Cleared

Software
Maintenance

Before using any of the above features, make sure you inform the site administrator that the indicated data and settings will be deleted and should be re-installed after the feature has been used.

- **Job Log**

The list of jobs in the Job Log and any jobs in the queues are deleted. The site administrator can use Fiery Spooler to save a current list of jobs from the Job Log (the actual jobs are not saved, only a list of them).

- **Queued Jobs**

All queued print jobs (in the Print, Hold, and Printed queues) will be deleted.

- **Archived Jobs and Free Form masters**

Archived jobs on the EB-105EX HDD and FreeForm masters are deleted. The lists of archived jobs and FreeForm masters are deleted as well.

- **Fonts**

All fonts on the HDD are deleted when you reinstall the system software. Resident fonts are reinstalled when you reinstall the system software. Any customer-supplied fonts will need to be reinstalled by the site administrator using Fiery Downloader.

- **Configuration**

Make sure to print a configuration page before reinstalling the system software. The Setup configuration will be lost when you reinstall the system software.

Compatibility

When upgrading the system software, make sure the latest user software is installed onto all computers that print to the EB-105EX. Using incompatible versions of the system and user software may result in system problems.

4.2 CLEARING THE QUEUED PRINT JOBS IN THE EB-105EX

The "**Clear Server**" command allows you to clear all queued print jobs from the EB-105EX – jobs in the EB-105EX Print, Hold, and Printed queues. Clear Server also clears all jobs archived on the EB-105EX hard disk, the index of archived jobs, and finally, all Fiery FreeForm masters and the index of Fiery FreeForm masters.

NOTE: Before using Clear Server, inform the site administrator that data in the EB-105EX hard disk will be deleted.

1. Make sure the EB-105EX is not in use.
2. Run the setup menu. (☛ 2.4)
3. Scroll through the setup main menu list by pressing the down arrow "▼" key twice.
4. Touch the "**Clear Server**" key.
5. When you are prompted "Clear all jobs from all queues?/NO", press the down arrow "▼" key so that the second line will be changed to "YES"
6. Touch the "**OK**" key.

The Fiery menu screen will disappear and data will be cleared before the system restarts.

7. Press the Fiery Menu key and check if the EB-105EX becomes idle.

4.3 RESTORING THE EB-105EX TO FACTORY DEFAULTS

When EB-105EX system software is first installed, a backup copy is made automatically. You or your customer can recover the system from this backup without having to reload the software from CDs.

Also use “Factory Default” when you want to change the language selection.

NOTE: Before using “**Factory Default**”, inform the site administrator that all data (including the downloaded fonts) stored in the HDD and setup options will be cleared.

1. Make sure the EB-105EX is not in use.
2. Print a configuration page (You may refer to this configuration page when you re-enter the setup options). (☛ 2.3)
3. Run the setup menu. (☛ 2.4)
4. Scroll through the setup main menu list by pressing the down arrow “▼” key twice.
5. Touch the “**Factory Default**” key.
6. When you are prompted “Reset server to factory settings?/NO”, press the down arrow “▼” key so that the third line will be changed to “YES”
7. Touch the “**OK**” key.
The Fiery menu screen will disappear.
8. When the message on the LCD message panel changes from “Shut down in progress” to “It is safe to power off”, press the power switch on the front panel of the EB-105EX to power it off.
9. Wait for 10 seconds, and then press the power switch again.
Wait until the EB-105EX becomes idle.
10. When the EB-105EX LCD message panel shows “| EB-105EX |”, press the Fiery Menu key on the operation panel of the copier.
11. The language selection screen will appear. Start to configure the EB-105EX.
(For details, go to step 8 of the system software installation procedure. (☛ 4.4))

4.4 SYSTEM SOFTWARE INSTALLATION PROCEDURE

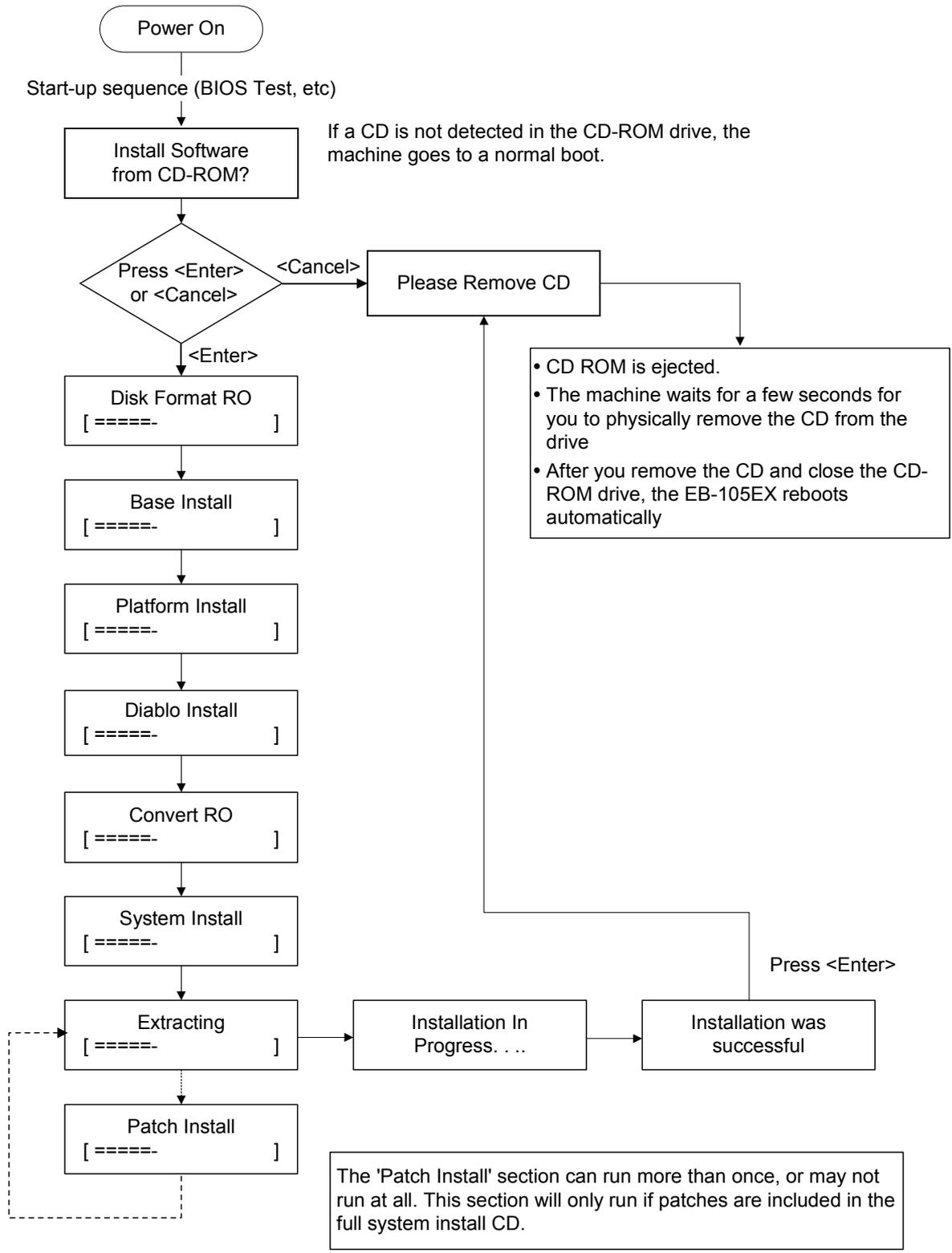
The system software CD includes the system software and fonts. Use the system software CD when:

- You replace the HDD Unit with a new one (on which the System Software is not installed)
- You update to a more recent version of the system software
- You have trouble with the system software (i.e. software corruption) and the problem cannot be solved by performing "Factory Default".

NOTE: System software installation takes about 20 minutes

1. First, give the site administrator the opportunity to print the Job Log and to save any custom simulations. Also, print the following from the Print menu.
 - Configuration page
 - Font Lists
2. Insert the system software CD in the CD-ROM drive.

NOTE: If you installed a new HDD, switch on the system using the power switch on the back panel, insert the system software CD in the CD-ROM drive, allow the system to boot, and then proceed to step 5.
3. Press the Fiery Menu key on the copier operation panel, then touch the "Menu/Cancel" key, scroll the menu list with the down arrow "▼" key, and select "Shut Down".
4. At the next screen, select "Reboot System".
Allow the system to shut down and reboot. Routine startup diagnostics appear on the LCD message panel of the EB-105EX while the system reboots.
5. Following the startup diagnostics, the system software installation process begins immediately.
6. Follow the installation flowchart on the next page.

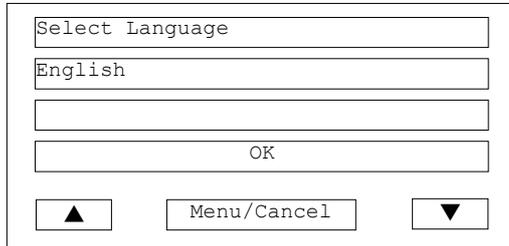


Messages on the LCD Message Panel

Install software From CD-ROM?	A valid CD is detected in the CD-ROM drive. Select either the <Enter> or <Cancel> key to proceed.
Please Remove CD	When the installation process is finished (either successfully or unsuccessfully) or when <Cancel> is selected from the above screen. Select either the <Enter> or <Cancel> key to proceed.
Installation was Successful	When installation is completed successfully. Press <Enter> to proceed from this screen.
Installation failed.	When installation is not completed successfully. Press <Enter> to proceed from this screen.
Installation is in progress. . . .	Basic screen indicating that installation is still in progress.
Disk Format RO [=====]	Indicates that the disk is being formatted as a Read-Only environment.
Base Install [=====]	Indicates that the basic installation modules are being installed.
Platform Install [=====]	Indicates that the platform specific information is being installed. This is specific to the hardware configuration of the system software.
Diablo Install [=====]	Indicates that boot loader (DIABLO) is being installed. (Note: DIABLO will not be used with EB-105EX.)
Convert RO [=====]	Indicates that the file system is being converted to read-only. This is to guarantee file system integrity in case of an ungraceful shutdown of the controller.
System Install [=====]	Indicates that the EB-105EX system software is being installed.
Patch Install [=====]	Indicates that a patch is being installed.
Extracting [=====]	Indicates that compressed software is being extracted.

[=====] is a progress bar. This indicates the progress of the operation shown.

7. Go to the copier operation panel and press the Fiery Menu key.
8. The language selection screen is shown. Select the desired language by using the down arrow “▼” key and up arrow “▲” key, and touch OK.



- English
- Dutch
- Spanish
- Italian
- German
- French

NOTE: 1) Once you have selected a language, you cannot change the language unless you perform “Factory Default” (● 4.3) or re-install the system software.
 2) The default settings for the EB-105EX depends on the language selection as follows:

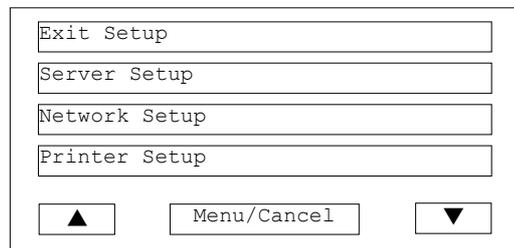
		Selected Language & Market Region	
		English - US	English – UK/ Dutch / Spanish/ Italian /German/ French
PS Setting	Default Paper Sizes	US	Metric
PCL Setting	Paper Size	Letter	A4
	Paper Size for System Pages	US	Metric

Software Maintenance



If you selected “**English**” at the language selection screen, you are prompted to select the market region. Select either “**US**” or “**UK**” by using the down arrow “▼” key and up arrow “▲” key, then touch “**OK**”.

9. “Please Wait” will be indicated on the Fiery menu screen, then the Fiery menu will disappear from the operation panel.
10. Wait for a moment, then press the Fiery Menu key again on the operation panel. The setup menu will appear on the Fiery menu screen.



11. Reenter the customer’s settings from the Configuration Page that you printed earlier.
 By-pass any settings that are not included on the configuration page if it is more appropriate for the site administrator to set them. For more information, see the *Configuration Guide*.

4.5 PATCH UPDATE PROCEDURE

Normally, patches are not installed using the CD installation method. The CD installation method is primarily used to install the whole system software onto the Fiery controller.

Patches to a EB-105EX controller are often in the form of a PostScript downloadable file.

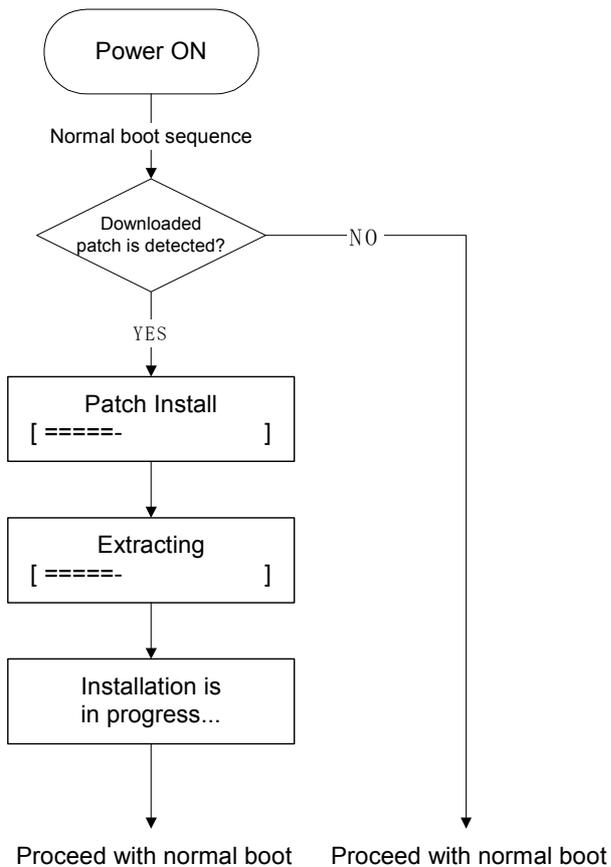
Being PostScript, the patch file can then be sent to the Fiery via any print job interface, network, or CommandWorkstation downloader. After a patch file is downloaded, the Fiery must be rebooted for the patch to be properly installed.

NOTE: The detailed install procedure may vary for each patch. For some patches, you may need to reboot the system several times in order for them to take effect.

Before applying a patch, make sure to carefully read the readme file or technical bulletin for the patch.

If you have installed the patch incorrectly, start from re-installing the system software.

Messages on the screen while installing a patch



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5. TROUBLESHOOTING

5.1 OVERVIEW

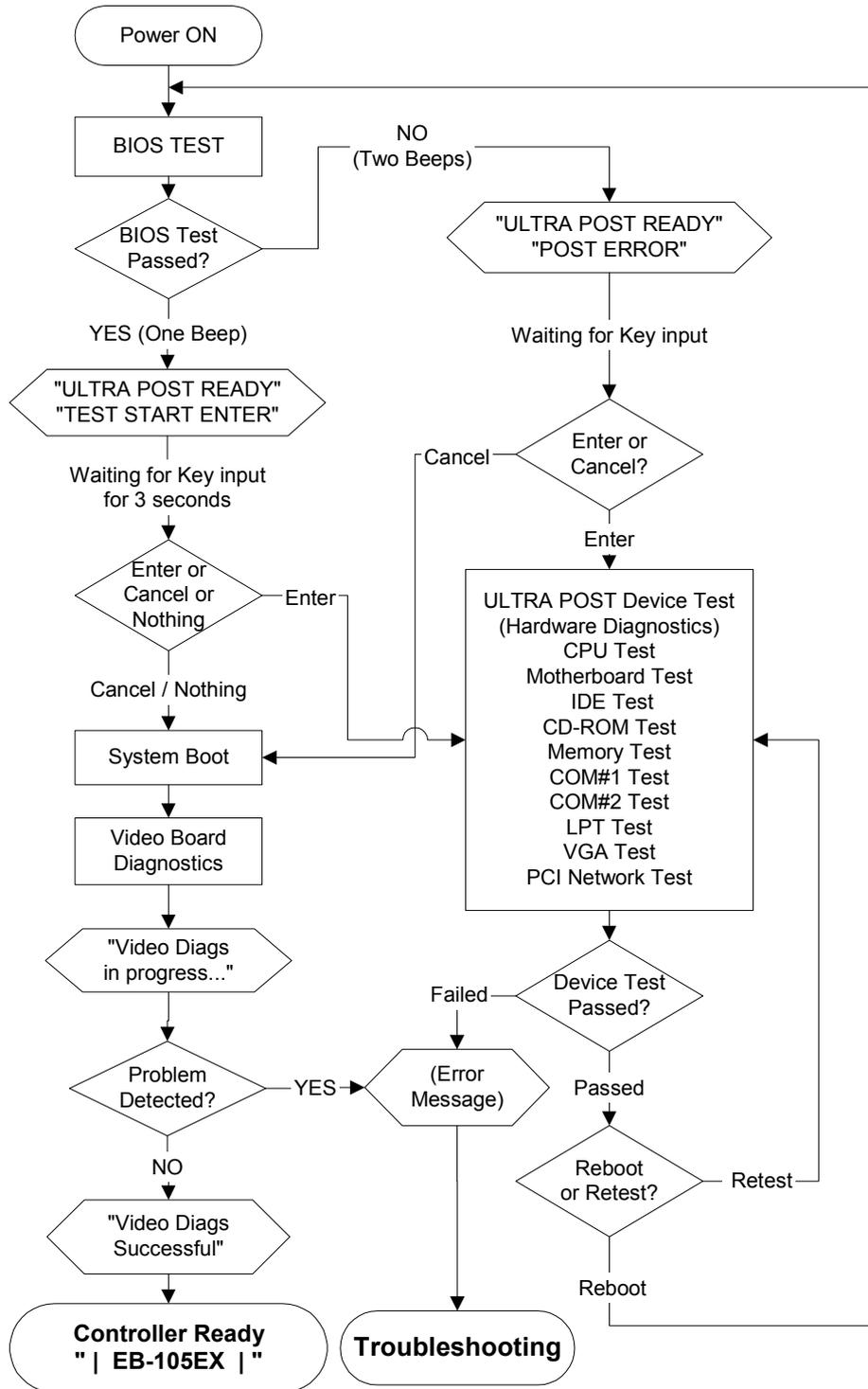
When a problem occurs, check in the following orders.

1. Verify that there is no problem in the startup sequence of the EB-105EX. (☛ 2.1.1)
2. Verify that the network is functioning, no unauthorized software or hardware is installed on the EB-150EX, and there are no problems with a particular print job or application. The site administrator can help you to verify these issues.
3. Verify that the EB-105EX and connection with the copier has no problem by printing test pages. (☛ 2.3)
4. If the EB-105EX is able to boot, run the diagnostics to see if there are any problems with the hardware devices. (☛ 5.2)
5. Check that all parts and cables are correctly installed and connected. (☛ 1)
6. Try to solve the problem by performing “Clear Server” or “Factory Default”. Inform the site administrator that the data stored in the HDD will be deleted. (☛ 4.2, 4.3)
7. Check if a newer version of system software, firmware or patch for the EB-105EX and copier has been released. If so, install it. (☛ 4.4)
8. If the problem will not disappear, reinstall the system software. (☛ 4.4)
9. If the problem will still not disappear, replace parts of the hardware. (☛ 5.3)

5.2 CONTROLLER SELF-DIAGNOSTICS

5.2.1 FLOW CHART

While the EB-105EX is booting, hardware self-diagnostics are performed as follows:



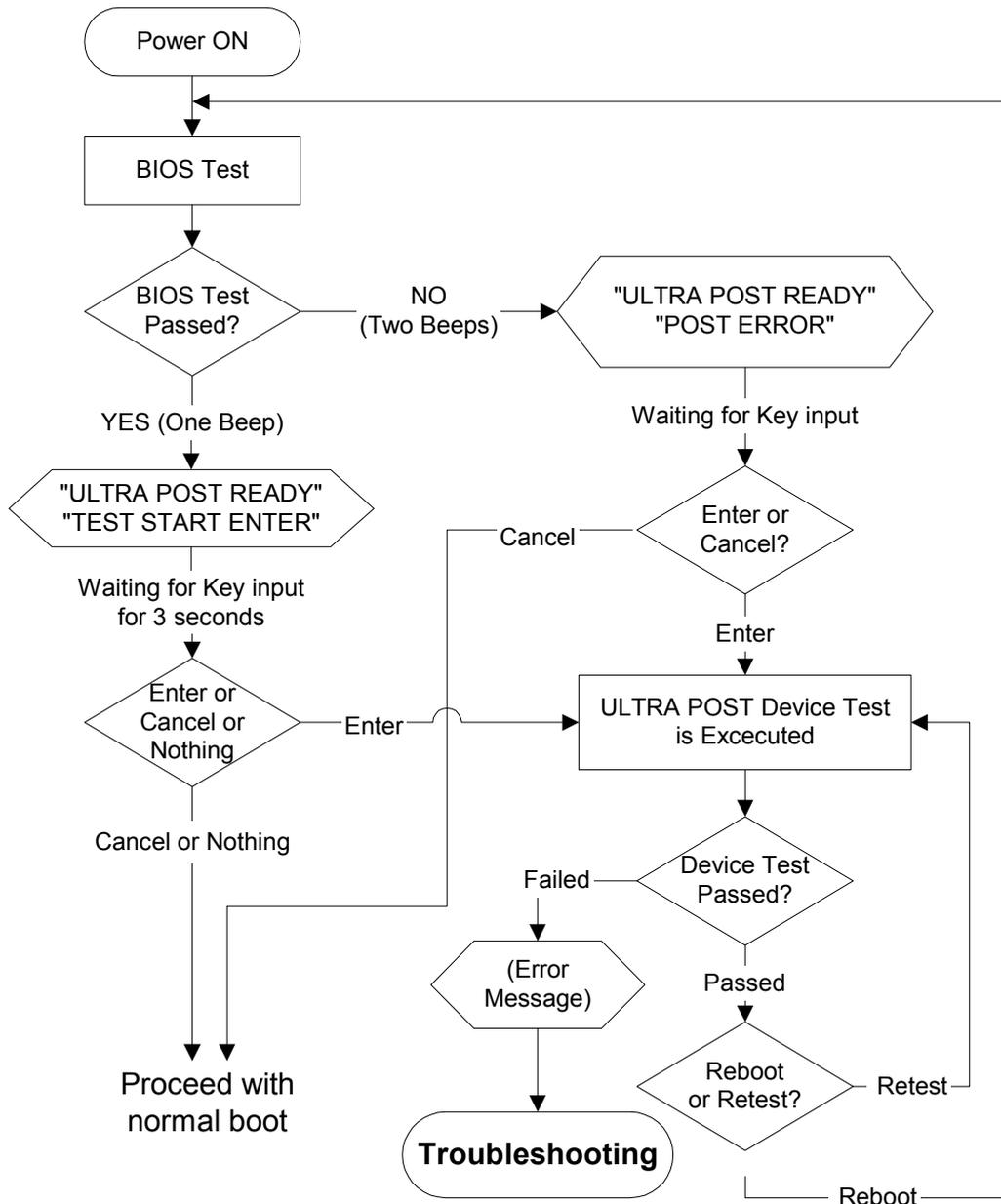
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5.2.2 DEVICE TEST PROGRAM "ULTRA POST"

Just after the power is turned on, the BIOS on the Motherboard will perform a self-test.

If the BIOS test detects a problem, two beeps can be heard. Then you are prompted to start a device test program called "ULTRA POST".

You can also start "ULTRA POST" if no problem was detected, if you press the <Enter> key while "TEST START ENTER" is displayed for 3 seconds during the startup sequence.



Trouble-shooting

ULTRA POST tests the following devices, and the test may take about 3 minutes.

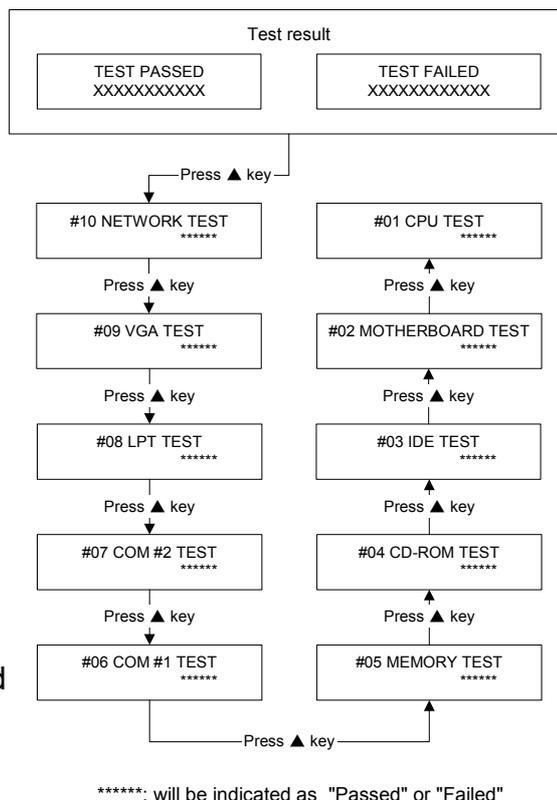
- CPU
- Motherboard
- IDE devices (RAID HDDs / CD-ROM Drive)
- Memory (256MB DIMM)
- COM Ports (COM#1 and COM#2)
- LPT Port
- VGA
- PCI Network

NOTE: ULTRA POST will only test whether the PCI Network feature on the Motherboard works fine. The network connection will not be tested.

The test number and checked devices which are displayed during the test are as follows:

Test Number	Device Name
#01	CPU
#02	Motherboard
#03	IDE
#04	CD-ROM
#05	Memory
#06	COM#1
#07	COM#2
#08	LPT
#09	VGA
#10	PCI Network

If the RAID card or CD-ROM drive is not connected to the motherboard or if it is completely defective, it will not be detected by ULTRA POST, so ULTRA POST will skip the IDE test or CD-ROM test. (For example, “#03 IDE Test failed” will not be displayed.)



In this case, the test numbers after the failed test will not match the device names as above.

- If ULTRA POST indicates “#03 CD-ROM TEST PASSED” instead of “#04 CD-ROM TEST PASSED”, check if the RAID card is correctly installed. If the RAID card is correctly installed, replace the RAID card.
- If ULTRA POST indicates “#04 MEMORY TEST” just after “#03 CD-ROM TEST”:
 - Check the connections of the CD-ROM cable. (The other end of the cable should be connected to CN13 on the motherboard. (☛ 3.4.3, 3.4.9)
 - Check the connection of the [P3] connector of the power supply unit. (☛ 3.4.3, 3.4.5)
 - Check the output voltage of the [P3] connector of the power supply unit. (☛ 5.4)
 - Replace the CD-ROM cable. (☛ 3.4.3)
 - Replace the CD-ROM drive unit. (☛ 3.4.3)

For the messages and action required for ULTRA POST, please see the following pages.

Trouble-shooting

Messages relating to the BIOS Test (ULTRA POST)

Message	Situation
SYSTEM BOOTING	This message appears after the LCD is powered on (while the BIOS TEST and ULTRA POST are running.)
ULTRA POST READY TEST START:ENTER	The initial BIOS Test did not detect any hardware problem. If you want to perform a hardware diagnostic, press the <Enter> key while this message is shown (for 3 seconds)
SYSTEM READY	The system is ready to continue booting the system software.

Message	Situation	Action required
ULTRA POST READY POST ERROR:	The initial BIOS Test has detected a problem. To know where the problem is, run the ULTRA POST diagnostic.	<ul style="list-style-type: none"> • Press the <Enter> key to start the ULTRA POST test. • Press the <Cancel> key to skip the test.
TEST PASSED RE-TEST :<-KEY	The ULTRA POST test has passed. (No problem found)	<ul style="list-style-type: none"> • Press the up arrow “▲” key repeatedly to see the details of the test result. • Press the left arrow “◀” key to re-start ULTRAPOST. • Press the <Enter> key to exit ULTRA POST and reboot the system.
TEST PASSED RE-BOOT :ENTER		
TEST FAILED RE-TEST :<-KEY	ULTRA POST detected a problem.	<ul style="list-style-type: none"> • Press the up arrow “▲” key repeatedly to see the details of the test result. • Press the left arrow “◀” key to re-start ULTRAPOST. • Press the <Enter> key to exit ULTRA POST and reboot the system.
TEST FAILED RE-BOOT :ENTER		
(TEST NAME) PASSED	The test for the displayed device has passed.	<ul style="list-style-type: none"> • Press the up arrow “▲” key to see the test result for the next device.

Error Message	Possible Causes	Solution required
<div style="border: 1px solid black; padding: 5px; width: fit-content;"> #01 CPU TEST FAILED </div>	<ul style="list-style-type: none"> • CPU defective: <ul style="list-style-type: none"> – Protect Mode defective (this supports multi-task features and virtual memory features) – FLOP (Floating-Point operation) defective – CPU Timer defective 	<ul style="list-style-type: none"> • Replace the CPU (☛ 3.4.11) • Replace the motherboard (☛ 3.4.9) • Check if the cable of the CPU cooling assembly is firmly connected to the CN27 socket.
	<ul style="list-style-type: none"> • Motherboard defective: <ul style="list-style-type: none"> – CPU power supply circuit defective 	Replace the motherboard. (☛ 3.4.9)
	<ul style="list-style-type: none"> • Power supply problems: <ul style="list-style-type: none"> – Abnormal power voltage supply. – AC power cord defective – Power supply unit cable /connector defective – Motherboard power supply connector defective. 	<ul style="list-style-type: none"> • Check if the [P1] connector of the power supply unit is firmly inserted into the CN31 socket on the motherboard. • Replace the AC power cord. • Replace the power supply unit. (☛ 3.4.5) • Replace the motherboard. (☛ 3.4.9)
<div style="border: 1px solid black; padding: 5px; width: fit-content;"> #02 MOTHERBOARD FAILED </div>	<ul style="list-style-type: none"> • Motherboard defective: <ul style="list-style-type: none"> – C-MOS defective – DMA defective – Interrupt failure. 	<ul style="list-style-type: none"> • Replace the motherboard. (☛ 3.4.9)
	<ul style="list-style-type: none"> • Lithium battery connector incomplete connection • Lithium battery defective • Lithium battery connector defective 	<ul style="list-style-type: none"> • Replace the lithium battery (☛ 3.4.12). • Re-connect the connector of the lithium battery firmly to the CN32 socket. • Replace the motherboard. (☛ 3.4.9)
	<ul style="list-style-type: none"> • CPU incomplete installation • CPU defective • CPU socket defective 	<ul style="list-style-type: none"> • Reinstall the CPU. Make sure that the pins are inserted in the correct position and are inserted firmly in the socket. • Replace the CPU (☛ 3.4.11) • Replace the motherboard (☛ 3.4.9)
	<ul style="list-style-type: none"> • Memory incomplete installation • Memory defective 	<ul style="list-style-type: none"> • Reinstall the memory. Make sure that the memory is firmly inserted in the socket. • Replace the memory. (☛ 3.4.10)

Trouble-shooting

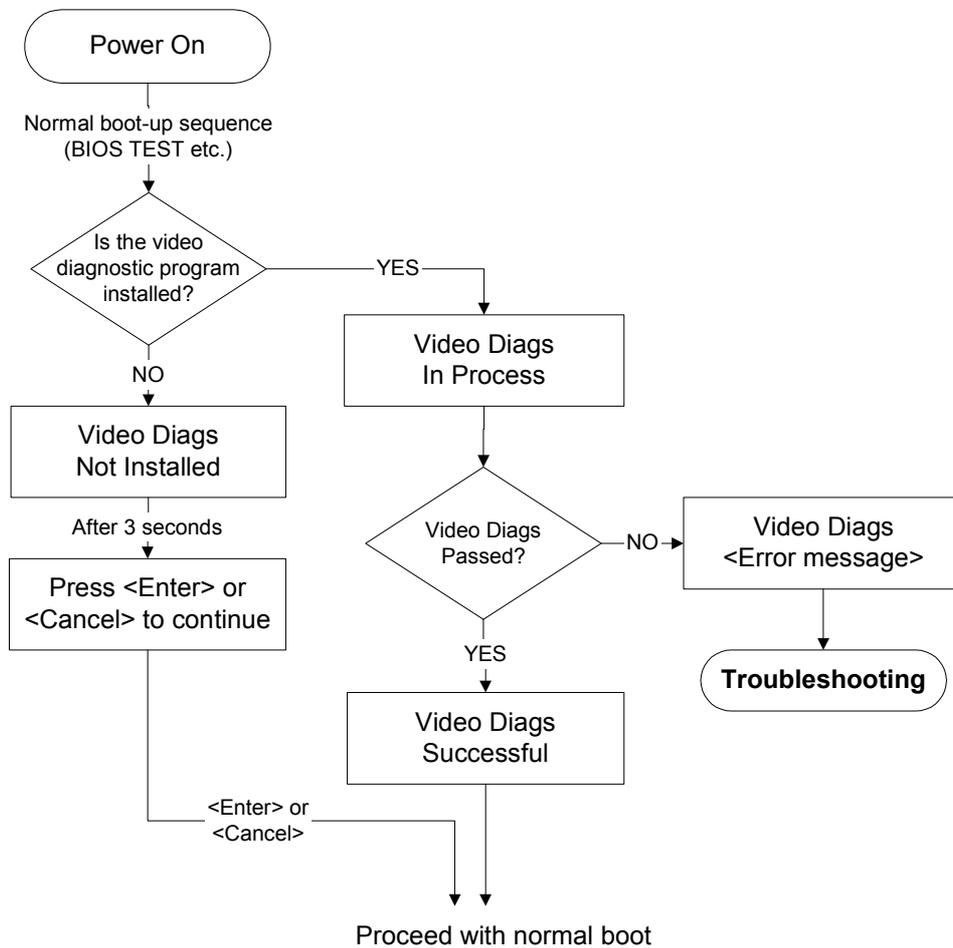
Error Message	Possible Causes	Solution required
<p>(Continued from the previous page)</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> <p>#02 MOTHERBOARD FAILED</p> </div>	<ul style="list-style-type: none"> • Power supply problems: <ul style="list-style-type: none"> – Abnormal power voltage supply. – AC power cord defective – Power supply unit cable /connector defective. – Motherboard power supply connector defective. 	<ul style="list-style-type: none"> • Check if the [P1] connector of the power supply unit is firmly inserted into the CN31 socket on the motherboard. • Replace the AC power cord. • Replace the power supply unit. (☛ 3.4.5) • Replace the motherboard. (☛ 3.4.9)
	<ul style="list-style-type: none"> • PCI card problems: • RAID card incomplete installation (PCU Bus not connected) • RAID card defective • Video board incomplete installation • Video board defective 	<ul style="list-style-type: none"> • Reinstall the RAID card • Replace the RAID card • Reinstall the Video board • Replace the Video board <p>RAID card: (☛ 3.4.2) Video board: (☛ 3.4.1)</p>
<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> <p>#03 IDE TEST FAILED</p> </div>	<ul style="list-style-type: none"> • RAID HDD problem <ul style="list-style-type: none"> – HDD drive controller defective – HDD drive not ready – HDD calibration defective – HDD seek problem – HDD read problem 	<ul style="list-style-type: none"> • Replace the HDD Unit. (☛ 3.4.4)
	<ul style="list-style-type: none"> • IDE connector incomplete connection. • IDE cable defective • Motherboard IDE interface problem • Power supply for IDE defective • Power supply connector for IDE not connected. • Power supply connector for IDE defective • RAID card incomplete installation • RAID card defective 	<ul style="list-style-type: none"> • Check if the connections of the IDE cables are firmly inserted into the HDDs and the RAID card sockets. • Check the connection of the connectors [P5]/[P6] of the power supply unit are firmly inserted into the HDDs. • Replace the IDE cable. • Replace the power supply unit. • Replace the motherboard. • Reinstall the RAID card. • Replace the RAID card. <p>Hard disk: (☛ 3.4.4) Power supply unit: (☛ 3.4.5) Motherboard: (☛ 3.4.9) RAID card: (☛ 3.4.2)</p>

Error Message	Possible Causes	Solution required
<div style="border: 1px solid black; padding: 5px; width: fit-content;">#04 CD-ROM TEST FAILED</div>	<ul style="list-style-type: none"> • CD-ROM drive status problem • Media check problem • Door lock problem 	<ul style="list-style-type: none"> • Replace the CD-ROM drive. (☛ 3.4.3)
	<ul style="list-style-type: none"> • IDE connector not connected. • CD-ROM cable defective • Motherboard IDE interface problem • Power supply for IDE defective • Power supply connector for IDE not connected. • Power supply connector for IDE defective 	<ul style="list-style-type: none"> • Check if the connections of the CD-ROM cable are firmly inserted into the CD-ROM Drive and the CN13 socket on the motherboard. • Check if the [P3] connector of the power supply unit is firmly inserted into the CD-ROM Drive unit. • Replace the CD-ROM cable. • Replace the power supply unit. • Replace the motherboard. <p>CD-ROM drive: (☛3.4.3) Power supply unit: (☛3.4.5) Motherboard: (☛3.4.9)</p>
<div style="border: 1px solid black; padding: 5px; width: fit-content;">#05 MEMORY TEST FAILED</div>	<ul style="list-style-type: none"> • Memory incomplete installation • Memory defective • Memory Read/Write problem • Memory socket defective • Motherboard defective • Abnormal power voltage supply 	<ul style="list-style-type: none"> • Reinstall the memory. Make sure that the memory is firmly inserted in the socket. • Replace the memory. • Replace the motherboard. • Replace the power supply unit. <p>Memory: (☛3.4.10) Power supply unit: (☛3.4.5) Motherboard: (☛3.4.9)</p>
<div style="border: 1px solid black; padding: 5px; width: fit-content;">#06 COM #1 TEST FAILED</div> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin-top: 5px;">#07 COM #2 TEST FAILED</div>	<ul style="list-style-type: none"> • Serial controller detection problem • Serial controller register access problem • Interrupt defective 	<ul style="list-style-type: none"> • Replace the motherboard. (☛3.4.9)
	<ul style="list-style-type: none"> • Abnormal power voltage supply • LCD unit defective 	<ul style="list-style-type: none"> • Replace the power supply unit. (☛ 3.4.5) • Replace the LCD unit. (☛ 3.4.8)
<div style="border: 1px solid black; padding: 5px; width: fit-content;">#08 LPT TEST FAILED</div>	<ul style="list-style-type: none"> • LPT controller register access problem • Abnormal power voltage supply 	<ul style="list-style-type: none"> • Replace the motherboard. (☛ 3.4.9) • Replace the power supply unit. (☛ 3.4.5)
<div style="border: 1px solid black; padding: 5px; width: fit-content;">#09 VGA TEST FAILED</div>	<ul style="list-style-type: none"> • VGA controller access problem. • Video memory defective 	<ul style="list-style-type: none"> • Replace the motherboard. (☛3.4.9)

Error Message	Possible Causes	Solution required
<div data-bbox="228 277 525 360" style="border: 1px solid black; padding: 5px; text-align: center;">#10 NETWORK TEST FAILED</div>	<ul style="list-style-type: none">• Network controller not detected.• Abnormal power voltage supply	<ul style="list-style-type: none">• Replace the motherboard. (●3.4.9)

5.2.3 VIDEO BOARD DIAGNOSTICS

During the normal boot-up sequence, a diagnostic for the video board will run after the BIOS test has passed.



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When video board diagnostics detected an error, an error message will appear on the LCD message panel, until you power off the EB-105EX and the problem has been solved.

For the messages and action required, please see the following page.



Messages relating to the Video Board Diagnostics

Message	Meaning
Video Diags in progress...	Indicates that the video board diagnostics program is being executed.
Press <Enter> or <Cancel> to continue	Waiting for either the <Enter> or the <Cancel> key to be pressed. Note that you can use the "▲" and "▼" arrow keys to see the whole message.
Video Diags Successful	Indicates that the video board diagnostics completed successfully.

Error Messages

Error Message	Cause	Solution required
Video Diags Not installed	The video diagnostic program is not installed or is not working because of a problem (such as software corruption)	Re-install the system software. (☛ 4.4)
Video Board Not installed	The video board is not physically present.	Install the video board correctly.
Video Board Init failure	Unable to initialize the video chips.	Replace the video board. (☛ 3.4.1)
Video Diags failed!!!	General video failure.	Replace the video board. (☛ 3.4.1)
Video Diags DMA timed out	DMA loop back check failed.	Replace the video board. (☛ 3.4.1)
Video Diags In buffer error	Not enough input buffer memory.	Reboot and retry. If the failure persists, reinstall the system software. (☛ 4.4)
Video Diags Out buffer error	Not enough output buffer memory.	Reboot and retry. If the failure persists, reinstall the system software. (☛ 4.4)
Video Diags error code: ##	Unknown error <##> detected.	Replace the video board. (☛ 3.4.1) If you send the defective video board somewhere, inform the code number to the recipient.

5.3 ERRORS AND SUGGESTED ACTIONS

Before replacing a part, make sure that the parts and connectors are correctly and firmly installed. (☛ 3. REPLACEMENT)

Symptom	Possible Cause	Suggested Action
When the main power switch is turned on, no power is supplied to the EB-105EX.	<ul style="list-style-type: none"> The AC power cord is not connected. Incorrect power supply voltage set on rear of EB-105EX. 	<ul style="list-style-type: none"> Connect the AC power cord. Check if the correct power supply voltage is set (115V or 230V). (☛ 1.3.5)
	<p>Faulty power supply.</p> <p>Open the left side cover of EB-105EX and see what will happen when you plug in the AC power cord. (You do not have to turn the power switch to on.)</p> <ul style="list-style-type: none"> If you can see a small green LED which is lit near the CN29 socket, then +5V stand-by power is properly supplied to the motherboard. If you cannot see any green LED which is lit on the Motherboard, the +5V stand-by power is not properly supplied to the motherboard. 	<p>If the green LED is not lit,</p> <ul style="list-style-type: none"> Check if the [P1] connector of the power supply unit is correctly inserted into the CN31 socket. (☛ 3.4.9) If the above check has passed, replace the parts in the following order. <ol style="list-style-type: none"> AC Power cord Power supply unit (☛ 3.4.5) Motherboard (☛ 3.4.9) <p>If the green LED is lit,</p> <ul style="list-style-type: none"> Check if the switch cable is correctly connected to the CN30 socket. Check the orientation of the connector when you put in to the socket. (☛ 3.4.6) Check if the front panel is installed correctly so that the switch button pushes the switch on the switch board. If the above checks have passed, replace the parts in the following order. <ol style="list-style-type: none"> Switch cable (☛ 3.4.6) Switch board (☛ 3.4.6)

Symptom	Possible Cause	Suggested Action
<p>EB-105EX can be powered on, but will not continue to boot-up.</p> <p>In addition, it is impossible to power the EB-105EX off by pressing the power switch.</p>	<p>Motherboard / Memory / CPU is incorrectly installed.</p> <ul style="list-style-type: none"> • Motherboard defective • Memory defective • CPU defective • Power supply unit defective 	<p>Unplug the AC power cord to power off the EB-105EX and check the following items:</p> <p>Memory: (☛ 3.4.10) CPU: (☛ 3.4.11)</p> <ul style="list-style-type: none"> • Is the memory installed in the CN14 socket and is it well-seated. • Is the CPU installed properly (no pin of the CPU bent or broken) and is the cable of the CPU cooling assembly connected to the CN27 socket. <ul style="list-style-type: none"> • Try to install the following parts correctly and then try to replace the parts in the following order: <ol style="list-style-type: none"> 1. Power supply unit (☛ 3.4.5) 2. CPU (☛ 3.4.11) 3. Memory (☛ 3.4.10) 4. Motherboard (☛ 3.4.9)
<p>System hangs at the following screen</p> <div style="border: 1px solid black; padding: 5px; width: fit-content;"> <p>SYSTEM BOOTING</p> </div>	<ul style="list-style-type: none"> • The LCD cable is incorrectly connected. • IDE cable not connected or not firmly connected. • LCD cable defective • LCD unit defective • Memory defective • CPU defective • Motherboard defective 	<p>Turn the power off by pressing the power switch for more than 4 seconds, and then check the following items:</p> <ul style="list-style-type: none"> • Check the connections of the LCD cable. Check the orientations of the connectors when you connect them to the socket. (☛ 3.4.8) • Check the connections of the IDE cable (☛ 3.4.4) • Replace the LCD cable (☛ 3.4.8) • Replace the LCD unit (☛ 3.4.8) • Replace the Memory (☛ 3.4.10) • Replace the CPU (☛ 3.4.11) • Replace the Motherboard (☛ 3.4.9)
<p>System hangs at the following screen</p> <div style="border: 1px solid black; padding: 5px; width: fit-content;"> <p>ULTRA POST READY TEST START:ENTER</p> </div> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin-top: 10px;"> <p>Install software From CD-ROM?</p> </div> <p>The keys on the message panel (<Enter>, <Cancel>, etc.) will not function.</p>	<p>The LCD cable is incorrectly connected.</p>	<p>Check the connections of the LCD cable. Check the orientation of the connectors when you connect them to the socket. (☛ 3.4.8)</p>

Symptom	Possible Cause	Suggested Action
The system hangs at the following screen SYSTEM READY	System software cannot boot due to software corruption.	Re-install the system software. (☛ 4.4)
	RAID card or HDD is not installed correctly or is defective, so the system software cannot boot.	Before replacing the parts, run the ULTRA POST device test. (☛ 5.2.2) For the HDDs, make sure to replace them both as a unit.
<ul style="list-style-type: none"> Power indicator will not light. (Power is on) CD-ROM drive LED will not light when the CD-ROM drive is reading a CD. 	<ul style="list-style-type: none"> Switch cable defective Switch board defective 	<ul style="list-style-type: none"> Replace the switch cable. Replace the switch board. (☛ 3.4.6)
HDD indicator will not light. (System software can boot correctly.)	<ul style="list-style-type: none"> There is currently no access to the HDD. The switch cable is not connected correctly to the RAID card. Switch cable defective Switch board defective RAID card defective 	<ul style="list-style-type: none"> Check if the 4-pin connector is correctly connected to the RAID card. Replace the switch cable. Replace the switch board. (☛ 3.4.6) Replace the RAID card. (☛ 3.4.2)
CD-ROM drive not working.	<ul style="list-style-type: none"> Incomplete cable connections. Incorrect cable connections. CD-ROM cable defective. CD-ROM drive defective. 	<ul style="list-style-type: none"> If the tray will not come out when you press the open tray button, check if the power supply unit cable [P3] is plugged into the CD-ROM drive. (☛ 3.4.3) If you can insert a CD on the tray but the CD-ROM drive is not reading it, check if the CD-ROM cable is connected correctly. (☛ 3.4.3, 3.4.9) If you cannot solve the problem, replace the parts in the following order. <ol style="list-style-type: none"> CD-ROM cable CD-ROM drive (☛ 3.4.3, 3.4.9)
CPU cooling fan is not working.	<ul style="list-style-type: none"> Incomplete cable connection. CPU Cooling fan defective. 	<ul style="list-style-type: none"> Check if the cable of the CPU cooling assembly is connected firmly to CN27. Replace the CPU cooling assembly. (☛ 3.4.11)
CPU cooling fan is making noise.	Dirty cooling fan.	<ul style="list-style-type: none"> Remove the cooling fan, clean it, and re-attach it. (☛ 3.4.11)

Symptom	Possible Cause	Suggested Action
<p>The status information screen will not appear on the copier operation panel when pressing the Menu key.</p>	<ul style="list-style-type: none"> • Controller not ready. • Incomplete cable connection. • Interface cable defective. • Incomplete connection of the extension card. • Extension card defective. • System software corruption. 	<ul style="list-style-type: none"> • Check if the LCD message panel of EB-105 shows “ EB-105EX ”); this is the ready screen. • Check if the interface cable is connected the correct way round. (☛ 1.3.5) • Check if the connectors of the interface cable are inserted firmly in the sockets. • Check if the extension card is inserted straight and connected firmly into the upper left slot. It is better to check the extension card connection from the side by opening the controller box cover. • If the above checks do not solve the problem, replace the interface cable or extension card.
<p>A test page or configuration page cannot be printed, or the images on the printed pages are abnormal.</p>	<ul style="list-style-type: none"> • Copier problem • Incomplete cable connection. • Interface cable defective. • Incomplete connection of the extension card. • Extension card defective. • System software corruption. • Video Board defective. 	<ul style="list-style-type: none"> • Check if the LCD message panel of EB-105 shows “ EB-105EX ”); this is the ready screen. • Check if the interface cable is connected the correct way round. (☛ 1.3.5) • Check that the copier functions correctly. (Check if you can make hard copies without any problem) • Check if the connectors of the interface cable are inserted firmly in the sockets. • Check if the extension card is inserted straight and connected firmly into the upper left slot. It is better to check the extension card connection from the side by opening the controller box cover. • Try “Clear Server”. “Factory Default”, or re-install the system software. (☛ 1.) • If the above checks do not solve the problem, replace the interface cable, extension card, or the video board. (☛ 3.4.1)

Symptom	Possible Cause	Suggested Action
<p>The system date on the configuration will always be returned to "01/01/2003 00:00:00" after you turn on the EB-105EX.</p> <p>Or, the time and date settings that appear on the configuration sheet are sometimes earlier or later than the actual time and date.</p>	<ul style="list-style-type: none">• BIOS settings were lost due to a dead battery.• Motherboard defective.	<ul style="list-style-type: none">• Replace the lithium battery on the Motherboard, and re-configure the system time and date (☛ 3.4.12).• Replace the motherboard (☛ 3.4.9).

5.4 TESTING THE VOLTAGE SUPPLIES

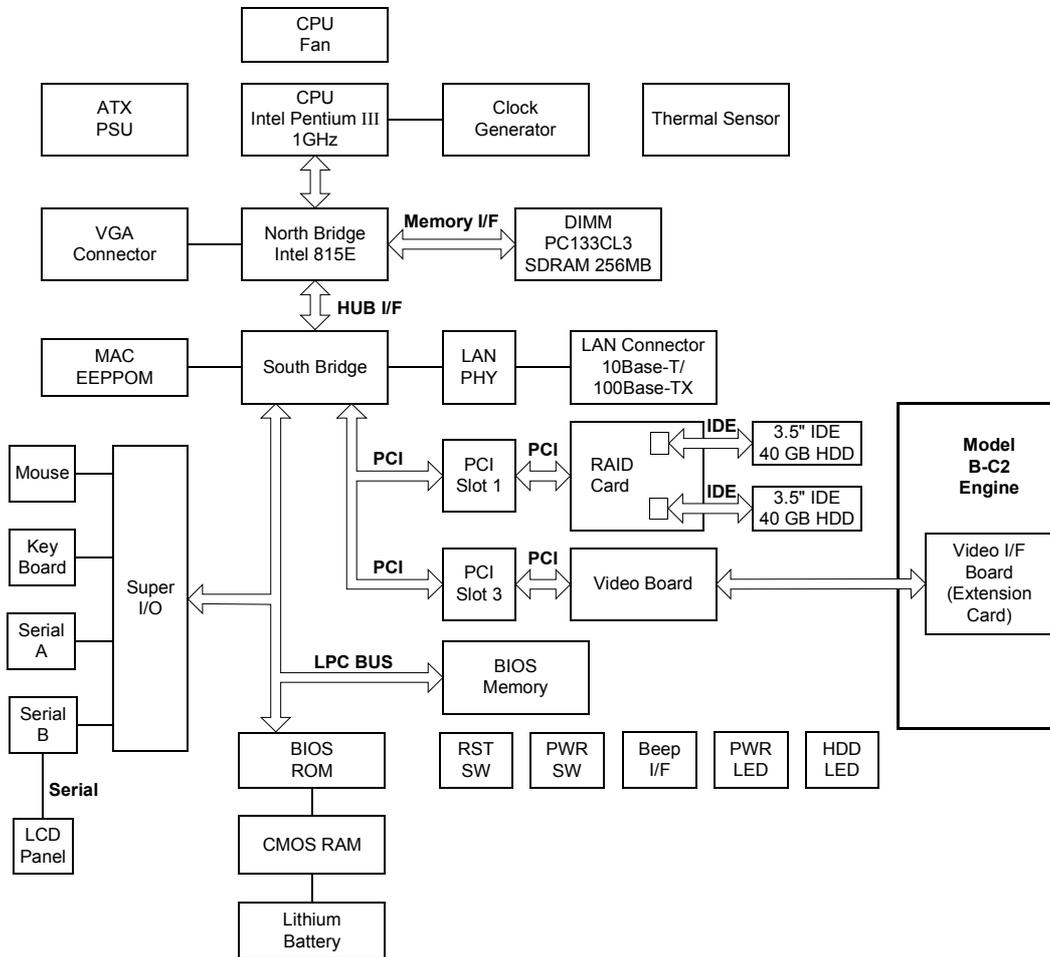
To check if the power supply is working, use a multimeter at the following locations on the power supply unit.

Test the voltages on the ends of the connectors coming from the power supply unit. The following table lists the power connectors.

Connector No.	Connected To	Position	Output	Wire Color
P1	Motherboard (CN31)	1	+3.3V	Violet
		2	+3.3V	Violet
		3	Ground	Black
		4	+5V	Red
		5	Ground	Black
		6	+5V	Red
		7	Ground	Black
		8	(No output)	White
		9	+5V aux	Green
		10	+12V	Orange
		11	+3.3V and +3.3V Remote Sense	Violet
		12	-12V	Blue
		13	Ground	Black
		14	On/Off	Gray
		15	Ground	Black
		16	Ground	Black
		17	Ground	Black
		18	(Not Connected)	-
		19	+5V	Red
		20	+5V	Red
P2	(Not used)	1	(Not Connected)	-
		2	FAN STOP	Blue
		3	(Not Connected)	-
P3	CD-ROM Drive	1	+12V	Orange
		2	Ground	Black
		3	Ground	Black
		4	+5V	Red
P4	(Not used)	1	+12V	Orange
		2	Ground	Black
		3	Ground	Black
		4	+5V	Red
P5	HDD	1	+12V	Orange
		2	Ground	Black
		3	Ground	Black
		4	+5V	Red
P6	HDD	1	+12V	Orange
		2	Ground	Black
		3	Ground	Black
		4	+5V	Red
P7	LCD Unit (CN1)	1	+5V	Red
		2	Ground	Black
		3	Ground	Black
		4	+12V	Orange

6. DETAILED SECTION DESCRIPTIONS

6.1 BLOCK DIAGRAM AND FUNCTIONS



G353D901.WMF

Detailed Descriptions

Components

Component	Type	Configuration
Processor	Intel Pentium III	1GHz
Hard Drive	EIDE	40GB x 2 (RAID configured)
SDRAM	PC133, CL3	256MB, 168 pin DIMM
BIOS ROM	Flash	512KB
EEPROM	EEPROM	1Kbit
CMOS RAM	CMOS	128bit
RAID Card	PCI	RAID 0 (Striping)

Networking

The standard networks and cabling configuration includes:

- Ethernet 10BaseT (Unshielded Twisted Pair)
- Fast Ethernet 100Base-TX (Unshielded Twisted Pair)

Video Board

The Video Board responsibilities include:

- High speed data transmission
- High speed data decompression
- Engine output at maximum rated output speed

The video interface controls such aspects of the print job as:

- Hardware decompression
- Print quality enhancement technologies

Hard Disk Drive

The hard disk drive is used to optimize many parts of the printing system as well as improving throughput and ease-of-use. The two hard disks are RAID-configured (using striping) and used as one drive. The hard disk drive stores the following information:

- System software
- Non-volatile spooled print jobs
- Additional storage for compressed pages
- Non-volatile record of printed jobs (Job Log)
- Resource storage space for downloaded fonts

RAID Card

The RAID card improves the speed of data transmission and data access by allowing multiple simultaneous I/Os to multiple disk drives rather than using just one disk drive.

- Hardware RAID
- Supports Ultra ATA 133
- 2-channel IDE interface

Memory

The dynamic memory used for System and Frame Buffer memory is PC133, CL3 Synchronous DRAM in 168 pin DIMMs.

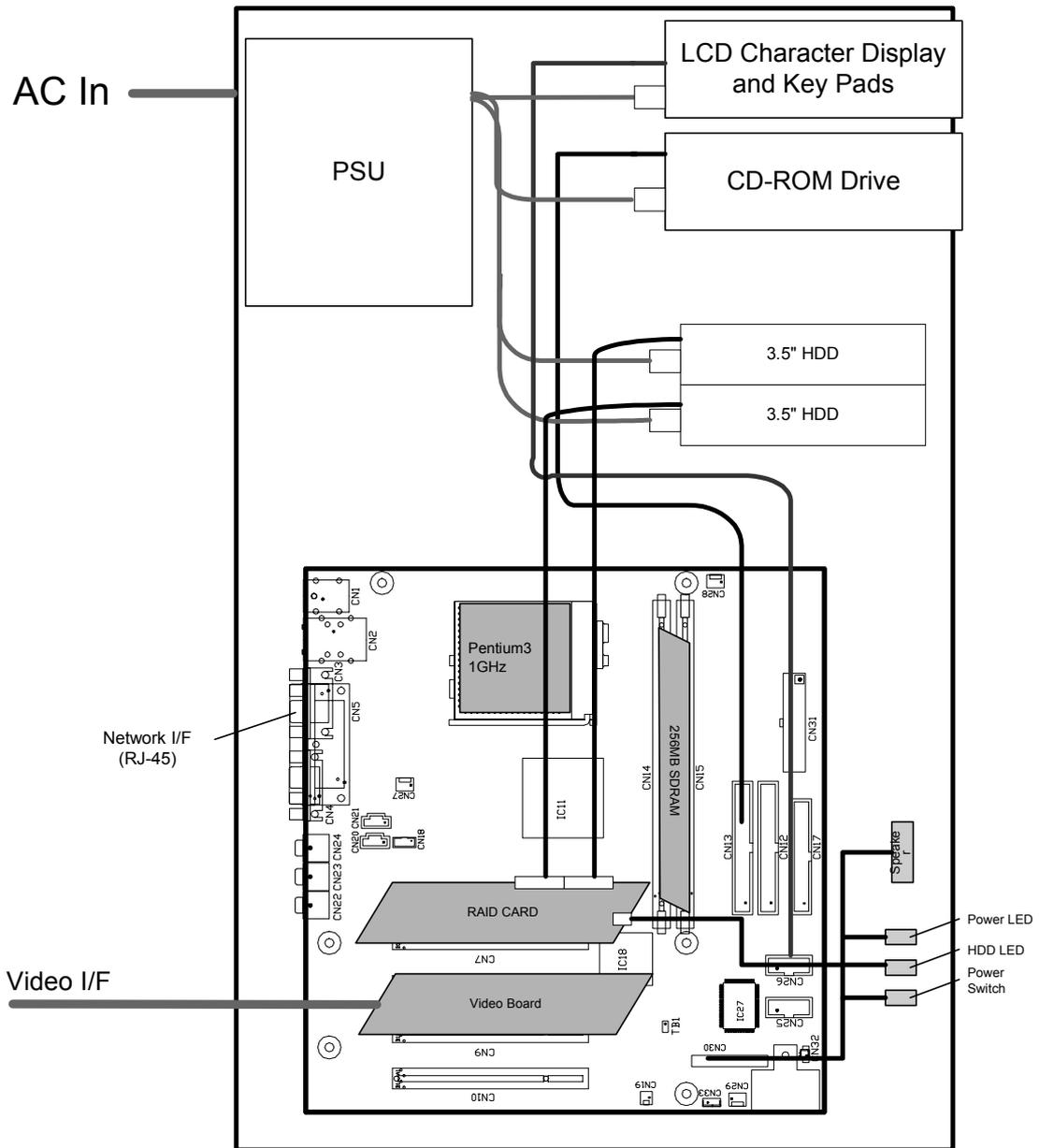
Non-Volatile Memory

- The 512KB Flash Memory contains the BIOS program and ULTRA POST (low level hardware diagnostic program), etc.
- The 1Kbit EEPROM holds the MAC address data.
- The 128bit CMOS RAM holds the configuration data from the BIOS setup menu. The CMOS RAM itself is a volatile memory, but the data will be held in the RAM until the lithium battery on the motherboard runs out.

Volatile Memory

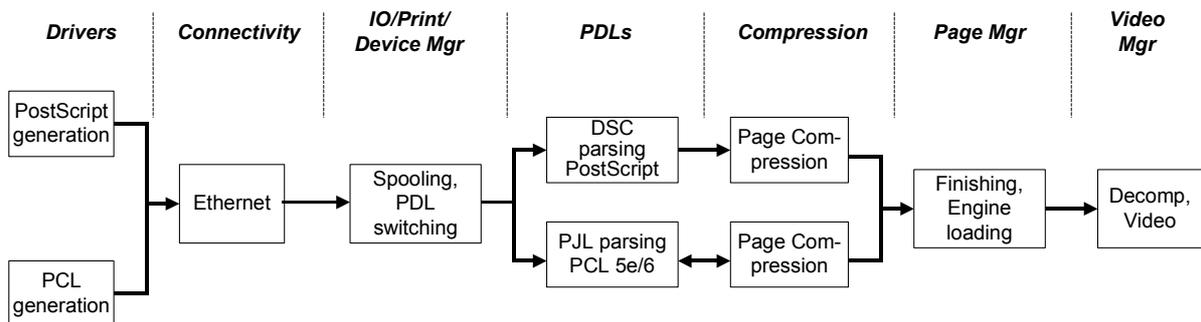
- The 256MB SDRAM holds the image data during printing.

6.2 SYSTEM PC LAYOUT



G353D900.WMF

6.3 PRINT DATA PROCESSING



G353D904.WMF

The key roles of each part of the print system are outlined below.

- The *drivers* are responsible for generating the page description on the host system and for transmitting data to the printer.
- The *I/O manager* mediates the connection with the network interface and establishes a device or print manager connection.
- The *print manager* is responsible for spooling the job (if appropriate) and for feeding jobs to the correct PDL interpreter.
- The *PDL interpreters* are responsible for turning page descriptions into rendered pages and for parsing job management comments.
- The *compression* subsystem manages compressed pages in memory.
- The *page manager* coordinates pages for sending to the engine for the most efficient printing, finishing, and accessory handling.
- The *video* subsystem is responsible for decompressing pages and feeding the engine with appropriate engine signals. The video subsystem also handles certain print quality processing functions.

7. SPECIFICATIONS

7.1 GENERAL SPECIFICATIONS

Configuration:	Server-PC Type Printer Controller Unit
Motherboard:	CPU: Intel Pentium III 1 GHz Cache: Level 2 cache (256 KB) Network Interface: RJ-45 Network port (100-BaseT/10-BaseT)
 Memory:	256MB (standard and max.) 168-pin SDRAM: PC100, CL2, NonECC
Direct Access Storage Device:	Internal HDD: 40GB x 2 IDE with RAID controller CD-ROM Drive: (For service purposes only)
Operating System:	Linux
Network Protocols:	AppleTalk TCP/IP IPX/SPX (Novell)
Printer Description Languages:	PCL5e, PCL6, Adobe PostScript3
Supported Driver Language:	English, French, German, Italian, Spanish and Dutch
Print Resolution:	PCL5e: 300 dpi / 600 dpi PCL6: 600 dpi / 1200 dpi PS3: 600 dpi / 1200 dpi
Gradation:	1 bit/pixel
Scan Resolution:	150 / 200 / 300 / 400 / 500 / 600 dpi
Scan Source:	ADF / Exposure Glass
Scan Sides:	Simplex / Duplex
Scan Destination:	Hold Queue / MailBox / Email / FTP Server
Scan Format:	PDF / TIFF
Printing Speed:	Model B-C2 Type a: 90 ppm Model B-C2 Type b: 105 ppm (A4/Letter, Long Edge Feed, 1200 dpi)
Resident Fonts:	PS: 136 (Adobe type 1 fonts & 10 TrueType fonts) PCL: 81 (80 Intellifont Typefaces & 1 Bitmap font)
Print Paper Size:	See the table on the following pages.

Media Type: See the table on the following pages.

Power Consumption: Maximum 100 W

Noise Emission: Maximum: less than 69db

(Sound Power Level) Standby: less than 49db



Dimensions (W x D x H): 181 x 363 x 407mm, 7.12" x 14.3" x 16"

Weight: 13 kg (34.8 lb)

7.2 SUPPORTED PAPER SIZES

Paper Orientation: S = Short Edge Feed, L=Long Edge Feed

Paper Name	Paper Size	Tray 1		Tray 2		Tray 3		Tray 4		Tray 5		Tray 6		Tray 7	
		NA	EU	NA	EU	NA	EU	NA	EU	NA	EU	NA	EU	NA	EU
A3	297x420	N(Y)	N(Y)	Y*	Y	Y*	Y	N	N	N	N	N	N	Y	Y
B4	257x364	N(Y)	N(Y)	Y*	Y*	Y*	Y*	N	N	N	N	N	N	Y	Y
A4-S	210x297	N(Y)	N(Y)	Y*	Y	Y*	Y	N	N	N	N	N	N	Y*	Y
A4-L	297x210	Y(Y)	Y(Y)	Y*	Y	Y*	Y	Y	Y	Y	Y	Y	Y*	Y*	Y
B5-S	182x257	N(N)	N(N)	Y*	Y*	Y*	Y*	N	N	N	N	N	N	Y*	Y*
B5-L	257x182	N(N)	N(N)	Y*	Y*	Y*	Y*	Y	Y	Y	Y	Y	Y*	Y*	Y
A5-S	148x210	N(N)	N(N)	Y*	Y	Y*	Y	Y	Y	Y	Y	Y	Y*	Y*	Y
A5-L	210x148	N(N)	N(N)	Y*	Y	Y*	Y	Y	Y	Y	Y	Y	Y*	Y*	Y
DLT	11"x17"	N(Y)	N(Y)	Y	Y*	Y	Y*	N	N	N	N	N	N	Y	Y
LG	8.5"x14"	N(Y)	N(Y)	Y	Y*	Y	Y*	N	N	N	N	N	N	Y*	Y*
LT-S	8.5"x11"	N(Y)	N(Y)	Y	Y*	Y	Y*	N	N	N	N	N	N	Y	Y*
LT-L	11"x8.5"	Y(Y)	Y(Y)	Y	Y*	Y	Y*	Y	Y	Y	Y	Y	Y*	Y*	Y
HLT-S	5.5"x8.5"	N(N)	N(N)	Y	Y*	Y	Y*	Y	Y	Y	Y	Y	Y*	Y*	Y
HLT-L	8.5"x5.5"	N(N)	N(N)	Y	Y*	Y	Y*	Y	Y	Y	Y	Y	Y*	Y*	Y
Executive-S	7.25"x10.5"	N(N)	N(N)	Y	Y*	Y	Y*	N	N	N	N	N	N	Y*	Y*
Executive-L	10.5"x7.25"	N(N)	N(N)	N	N	N	N	N	N	N	N	N	N	Y*	Y*
F	8"x13"	N(N)	N(N)	Y	Y*	Y	Y*	N	N	N	N	N	N	Y	Y
Foolscap	8.5"x13"	N(N)	N(N)	Y*	Y	Y*	Y	N	N	N	N	N	N	Y*	Y*
Folio	8.25"x13"	N(N)	N(N)	Y*	Y	Y*	Y	N	N	N	N	N	N	Y*	Y*
	12"x18"	N(N)	N(N)	Y*	Y*	Y*	Y*	N	N	N	N	N	N	Y*	Y*
8K-S	267x390	N(N)	N(N)	Y*	Y*	Y*	Y*	N	N	N	N	N	N	Y*	Y*
16K-S	195x267	N(N)	N(N)	Y*	Y*	Y*	Y*	N	N	N	N	N	N	Y*	Y*
16K-L	267x195	N(N)	N(N)	Y*	Y*	Y*	Y*	N	N	N	N	N	N	Y*	Y*
Custom	Width: 5.5" -12", 139.7- 305.0mm Length: 5.5"-18", 139.7- 458.0mm	N (C+)	N (C+)	C	C	C	C	N	N	N	N	N	N	C	C

NOTES:

1. Y: Automatic detection using the paper size slider.
2. Y*: This size is available when the paper size slider is set to the "*" position and the specified paper size is selected using the system settings.
3. (): Only when the A3 tray (1000 sheets cassettes) is installed as Tray1.
4. C Available as a custom setting.
5. C+: When the A3 tray is installed, custom setting is available from SP mode (SP5019-2, SP5040, SP5041) Width: 210.0 mm to 305.0 mm , Length: 210.0 mm to 439.0 mm

7.3 SUPPORTED MEDIA TYPES

Input Tray	Media Type														
	Plain	Recycled	Special	Letter-Head	Used *3	Color (11kinds)*1	Pre-Printed	Pre-Punched	Labels	Bond	CardStock	Transaarency (OHP)	Translucent	Thick *2 Plain: Thick Color: Thick Tab: Thick	Tab
Tray1	X	X	X	X	X	X	X	X		X	X				
Tray2	X	X	X	X	X	X	X	X		X	X	X	X		
Tray3	X	X	X	X	X	X	X	X		X	X	X	X		
Tray4	X	X	X	X	X	X	X	X		X	X	X	X	X	X
Tray5	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Tray6	X	X	X	X	X	X	X	X		X	X	X	X		
Tray7	X	X	X	X	X	X	X	X		X	X	X	X	X	X
Cover Insertter	X	X	X	X	X	X	X	X		X	X			X	

NOTES:

*1: The 11 kinds of color paper:

Yellow, Green, Blue, Purple, Ivory, Orange, Pink, Red, Grey, Color1, Color2

*2: In the case of Thick, it can be specified with Plain, Color-n, and Tab in the system settings.

*3: This media type is not displayed by default. Only field service people can activate this.

The printer doesn't support this media type. Only the copier application will support this media type.

7.4 SUPPORTED OS VERSIONS FOR APPLICATIONS/UTILITIES

<i>OS</i>	<i>Windows 98 (SE)/ME</i>	<i>Windows NT 4.x Sp6</i>	<i>Windows 2000</i>	<i>Windows XP</i>	<i>Mac OS 9</i>	<i>Mac OS X (native)</i>
<i>Fiery Applications/Utilities</i>						
Webtools	X	X	X	X	X	X
Weblink	X	X	X	X	X	X
WebSetup	X	X	X	X	No	No
WebInstaller	X	X	X	X	X	X
Webscan	X	X	X	X	X	X
Webspooler	X	X	X	X	X	X
Webstatus	X	X	X	X	X	X
Fiery Spooler					X	No
Fiery Downloader	X	X	X	X	X	No
Fiery Remote Scan	X	X	X	X	X	No
Fiery Remote Scan Plug-in	X	X	X	X	X	No
CommandWorkStation	X	X	X	X	No	CWS LE (OS 10.2.4)
DBP	X	X	X	X	No	No
Fiery Driver	X	X	X	X	No	No

NOTES:

1. No support for Windows95
2. Supported version of Mac OS X: 10.2.3 or later.