EMP156

Controller Maintenance Manual

NOTICE TO USER

In an effort to meet the demands of a rapidly changing technology, the manufacturer is continually developing new features and functions to meet your changing printing or printer needs. As a result, this manual may not exactly reflect future changes made to the product. Please be sure to consult all manual updates or addenda when using this product's documentation.

Rev. Table

Rev. for Manual	Machine Rev.	Page No. (Contents)	Date
00	-	First Edition	Jun. 29, 2005
01	-	TOC-1(01) ~ TOC-3(01) : Some headings and Page No. are modified.	Nov. 17, 2005
		Safety-2(01), Safety-3(01) : Correct the CAUTION statements.	
		2-4(01) : Delete the "User Software".	

		3-12(01) :
		    Correct the default of "Auto Winding", and change the default of
		    Wind. Fuser Web.	

		3-15(01) : Modify the "System Software".	
		4-1(01) : Correct the type of "Français".	
		4-3(01) ~ 4-5(01) : Change the Figure.	
		4-8(01) ~ 4-17(01) : Change the Figure.	
		4-18(01) : Button name is changed to bold.	
		4-19(01) : Change the Figure.	
		4-21(01) ~ 4-25(01) : Change the Figure.	
		5-2(01) : Add the Connector Cover and the Dust Cover.	
		5-10(01) : Modify procedure for the Connector Cover and the Dust Cover.	
		5-23(01) ~ 5-26(01) : Delete the "System Software".	
		6-10(01) ~ 6-22(01) : Delete the "Controller Advanced Troubleshooting".	
02	-	TOC-1(02) ~ TOC3(02) : Some headings and Page No. are modified.	Mar. 31, 2006
		2-2(01) : Modify momory size. Modify figure number for Diagram.	
		2-3(01) : Modify the figure title.	
		2-4(02) : Add the Figure.	
		2-5(01) : Contents are shifted from previous page.	
		2-6(01) : Add a page.	
		3-5(01) : Add a NOTE statement.	
		3-6(01) : Change the Figure.	
		3-11(01) : Delete the "Exit Jam Recovery".	
		3-12(02) : Add "Exit Jam Recovery", "Auto Online", "Auto Backup Time" and "Cascade Priority".	
		4-9(02) : Change the Figure.	
		4-17(02) : Change the Figure.	

Rev. Table

Rev. for Manual	Machine Rev.	Page No. (Contents)	Date
02	-	4-20(01) : Add the "Misc".	Mar. 31, 2006
		4-26(01) : Add the "Configuration-Misc".	
		5-2(02) : Modify the Figure.	
		5-4(01) : Modify the Figure.	
		5-6(01) : Change the Figure.	
		5-9(01) : Add the Table 5-2.	
		5-10(02) ~ 5-12(01) : Contents are shifted from previous page.	
		5-14(01) : Add the Table 5-3.	
		5-15(01) : Contents are shifted from previous page.	
		5-16(01) : Add the Table 5-4.	
		5-17(01), 5-18(01) : Contents are shifted from previous page.	
		5-19(01) : Add the Table 5-5.	
		5-20(01) : Contents are shifted from previous page.	
		5-21(01) : Add the Table 5-6.	
		5-22(01) : Contents are shifted from previous page.	
		5-23(02) : Add the NOTE statement.	
		5-24(02) : Modify description of backup time.	
		5-25(02), 5-26(02) : Contents are shifted from previous page.	
		6-11(02) : Modify the statement of "*1" and the table title.	
03	-	TOC-1(03) : Add the "Click Charge Reset".	Sep. 21, 2006
		TOC-2(03), TOC-3(03) : Items are shifted.	
		3-11(02) : Change the value of "Wait Timeout".	
		3-15(02) : Add the "Post Device Config", "Set Time Mode" and "Set Time". Modify the "PM Counter Reset".	
		3-16(01) : Add the "Path Through" and "Finishing" to the "Finishing Test".	
		3-17(01) : Add the "Click Charge Reset".	
		3-19(01) : Add the "Transit Path Unit" to the "Unit Config".	
		3-20(01) : Add the "FTU" to the "Driver Test 1", "Driver Test 2" and "Sensor Test 1". Add the "Post Device Config", "Set Time Mode" and "Set Time".	
		3-21(01) : Add the "Path Through" and "Finishing" to the "Finishing Test". Add the "Click Charge Reset".	
		4-7(01) : Modify the "Page Counter".	

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Rev. for Manual	Machine Rev.	Page No. (Contents)	Date
03	-	4-10(02) : Change the Figure 4-8 and modify contents.	Sep. 21, 2006
		4-12(02) : Change the Figure 4-10.	
		4-13(02) : Change the Figure 4-11.	
		6-16(02), 6-17(02) : "IF#03" and "IF#04" are added.	
04	-	Cover sheet : Title logo is changed.	May 31, 2007
		2-1(01) : Description is modified.	
		3-11(03) : "Halftone" is modified. "PS Wait Timeout" is added.	
		3-16(02), 3-21(02) : "Halftone Selection" is added.	
		4-3(02) : Figure 4-2 is changed.	
		4-5(02) : Figure 4-4 is changed.	
05	-	2-1(02) : "Features" is modified.	Sep 5, 2007
		2-5(02) : "Print Options" is modified.	
		3-11(04) : Table 3-2 is changed.	
		4-5(03) : Figure 4-4 is changed.	
		4-17(03) : Figure 4-15 is changed.	
		4-18(02) : "IPDS Log" is added.	
		4-22(02) : Figure 4-19 is added.	
		5-18(02) : "Reinstalling the Keycode" is added.	
		5-26(03) : "Installing a New Keycode" is modified.	
		6-8(01) : Figure 6-1 is changed.	
		6-17(03) : Table 6-6 is changed.	
		6-22(02) : "IPDS Internal Error" and "IPDS Database Error" is added.	
06	-	TOC-1(04) : Several items of chapter 3 are modified.	Dec. 4, 2007
		TOC-2(04), TOC-3(04) : Contents are shifted from previous page.	
		3-10(01) : All contents are added.	
		3-11(05) : Contents are shifted from previous page.	
		3-12(03) : "Cover Insert Mode" and "Faceup Always" are added.	
		3-13(01) : "Post Device Config", "Set Time Mode", "MIB Function" and "Click Charge Count Value" are added.	
		3-14(01), 3-15(03) : Contents are shifted from previous page.	
		3-16(03) : "Post Device Config" is modified.	
		3-17(02) : Contents are shifted from previous page.	
		3-18(01) : "Click Charge Reset" is deleted. "MIB Function", "Click Charge Count Value" and "Click Charge Double Count" are added.	

Rev. Table

Rev. for Manual	Machine Rev.	Page No. (Contents)	Date
06	-	3-19(02) : Several items are added to PR Parts.	Dec. 4, 2007
		3-20(02) : Contents are shifted from previous page.	
		3-21(03) : "Post Device Config" is modified.	
		3-22(01) : "Click Charge Reset" is deleted. "MIB Function", "Click Charge Count Value" and "Click Charge Double Count" are added.	
		4-9(03) : Figure 4-7 is changed.	
		6-16(03) : "AppleTalk error" is added.	

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⚠ SAFETY INFORMATION

⚠ General Safety Guidelines

Before operating the machine, read the following instructions carefully:

- Allow all the operating procedures provided in this manual.

- Pay special attention to and follow all the hazard warning on the machine and in the manual. Failure to do so can cause injury to yourself or damage to the machine.

- The hazard warnings which appear on the warning labels on the machine or in the manual have one of the following alert headings consisting of an alert symbol and a signal ward, DANGER, WARNING, or CAUTION.

⚠ *DANGER!* : indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

⚠ *WARNING!*: indicates a potentially hazardous situation which, if not avoided, can result in death or serious injury.

⚠ *CAUTION!*: indicates a hazardous situation which, if not avoided, will or can result in minor or moderate injury, or serious damage of product.

⚠ The alert symbol shown left precedes every signal word for hazard warnings, and appears in safety related descriptions in the manual.

The signal word 'NOTE' is used to present warnings which are not directly related to personal injury hazards.

- Do not perform any operation or action in any way other than as provided in this manual. When in doubt, call the designated field engineer.

- Keep in mind that the hazard warnings in this manual or on the machine cannot cover every possible case, as it is impossible to predict and evaluate all circumstances beforehand. Be alert and use your common sense.

⚠ SAFETY INFORMATION

⚠ Hazard Warming Statements

⚠ WARNING Statement

■ "To avoid serious injury or death, disconnect the power cord from the power outlet. Do not attempt to perform any servicing operation when the power cord is connected to the power outlet. The AC line voltage is present inside the controller enclosure regardless of the main power switch position." on page 1-3

■ "To avoid serious injury or death, disconnect the power cord from the power outlet. Do not attempt to perform any servicing operation when the power cord is connected to the power outlet. The AC line voltage is present inside the controller enclosure regardless of the main power switch position." on page 5-3

⚠ CAUTION Statement

■ "If the glass on the OCP breaks and the liquid crystal inside leaks out, avoid contact with it. If you do come in contact with the liquid crystal, wash it off with soap and water immediately." on page 1-3

■ "If the password is lost or forgotten it cannot be recovered. In that case, replace the HDD." on page 3-11

■ "The Hard Disk Drive (HDD) is attached to the CE box cover and has a cable connection. Take precautions to not damage the HDD cable when removing the CE cover from the printer." on page 5-4

■ "Do not exchange battery. There is danger of explosion if battery is replaced incorrectly. Dispose of used in accordance with local regulations. Do not dispose in fire." on page 5-9

■ "Commercially-available fonts downloaded in the HDD become unuseable after replacing the HDD. Hence, the user must download the fonts to the HDD again after replacing. Explain and ask it to user before removing HDD." on page 5-16

■ "The automatic backup function is only executed if the original time and backup time are the same. If the original time and backup time are different or the Backup/Restore menu displays "unavailable", then the OCP Backup/Restore Manual Backup Function "All" must be used." on page 5-25

■ "Restoring previously saved data to a HDD containing a different version of the controller software may render the printer unusable" on page 5-25

■ "When the HDD is replaced, the Restore/HDD Data should be selected. Also, the Backup/ENGINE and CONTROLLER functions should be selected." on page 5-25

■ "When the CPxxx Assembly is replaced, the Restore/ENGINE Data should be selected." on page 5-25

■ "When the Controller Main Board is replaced, the Restore/CONTROLLER Data should be selected." on page 5-25

- ■ "Use only monitoring the status. Some inputs can be made when in these modes that would require the board to be sent back to the factory to be fixed." on page 6-10

- ■ "If a part needs to be replaced in the printer, always power off the printer before attempting the procedure (even if not stated in the procedure)." on page 6-10

⚠ SAFETY INFORMATION

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Chapter 1
Introduction

About this Manual

The Controller Maintenance Manual is intended for certified service technicians servicing a printer. If you have not received service certification, you should not attempt to service the controller. The Company does not warrant the performance of the controller if serviced by non-certified personnel.

This manual is divided into the following sections:

■ Chapter 1, "Introduction"

Gives general information about this manual and general information that you should know before you service the controller.

■ Chapter 2, "Printer Overview"

Provides general information about the printer.

■ Chapter 3, "Using the Operator Control Panel"

Tells you how to use the Operator Control Panel for controller functions.

■ Chapter 4, "Web Interface Functions"

Describes information on accessing the printer web interface via the internet or your company's intranet.

■ Chapter 5, "Service Procedures"

Describes removal and replacement procedures for the controller and controller board components.

■ Chapter 6, "Troubleshooting Procedures"

Identifies the source of common problems and suggests ways of correcting them.

Customers should not use the technical service documentation. Do not leave this manual behind after you make a service call.

The figures in this Manual

Figures in this manual reflect the controller assembly at the time of publication. Components shown in these figures are subject to change. To receive information about any components that do not match figures in this manual, contact your authorized service/support center.

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Terminology and Conventions

The term "network administrator" refers to the person responsible for maintaining the network at the customer site.

The term "Operator Control Panel" (OCP) describes the area on the front of the printer that has the display window (LCD–liquid crystal display).

The term "PC" refers to any IBM PC or compatible computer running Windows.

The term "10/100/1000BaseT" is used throughout this manual to refer to 10BaseT/100BaseTX/1000BaseT.

The term "controller" refers to the functional module that supports printing and associated features for the printer.

> **NOTE:**
> *These statements highlight important messages and additional information.*

⚠️ **CAUTION!**

These statements indicate a need for special care and safety when handling the equipment.

⚠️ **WARNING!**

These statements indicate a need for special care and safety to prevent you from harming yourself when carrying, unpacking, assembling, installing, or operating the product.

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Precautions

Always observe the following general precautions when servicing the controller assembly:

1. Always disconnect power before opening the controller.

⚠️ *WARNING!*

To avoid serious injury or death, disconnect the power cord from the power outlet. Do not attempt to perform any servicing operation when the power cord is connected to the power outlet. The AC line voltage is present inside the controller enclosure regardless of the main power switch position.

The power supply cable is used as the main disconnect device. Ensure that the wall outlet is located near the equipment and is easily accessible.

Zur sichren Trennung des Gerätes vom Netz ist der Netzstecker zu ziehen. Vergewissern Sie sich, daß die Stechdose leicht zugänglich ist.

Le cordon d'alimentation est utilisé comme interrupteur général. La prise de courant doit être située ou installée a proximité du matériel et être facile d'accés.

2. Never alter an existing network without permission.

The controller is probably connected to an existing Local Area Network (LAN) based on Ethernet hardware. The network is the link between the customer's computer, existing laser printers, and other prepress equipment. Never disturb the LAN by breaking or making a network connection, altering termination, installing or removing networking hardware or software, or shutting down networked devices without the knowledge and express permission of the network administrator.

3. Never enter an IP address in Network Setup.

Only the network administrator should enter an IP address on a network device. Assigning an incorrect IP address to the controller can cause unpredictable errors on any or all devices connected to the network.

4. Handle the OCP glass display window with care.

⚠️ *CAUTION!*

If the glass on the OCP breaks and the liquid crystal inside leaks out, avoid contact with it. If you do come in contact with the liquid crystal, wash it off with soap and water immediately.

Use a soft cloth moistened with isopropyl or ethyl alcohol to clean the glass display window. Other solvents, such as water, may damage the polarizer.

5. Follow standard ESD (electrostatic discharge) precautions while working on the internal components of the printer.

Static is always a concern when servicing electronic devices. It is highly unlikely that the area around the printer is static-free. Carpeting, leather-soled shoes, synthetic clothing fibers, silks, and plastics may generate a static charge of more than 10,000 volts. Static discharge is capable of destroying the circuits etched in silicon microchips, or dramatically shortening their life span. By observing standard precautions, you may avoid extra service calls and save the cost of a new board.

When possible, work on a ground-connected antistatic mat. Wear an antistatic wristband, grounded at the same place as the antistatic mat. If that is not possible:

❏ Attach a grounding strap to your wrist. Attach the other end to a good ground.

❏ When you remove an electronic component, place it into an antistatic bag immediately. Do not walk across a carpet or vinyl floor while carrying an unprotected board.

❏ Leave new electronic components inside their antistatic bags until you are ready to install them.

❏ When you unpack the electronic components, touch a metal area of the printer to discharge the static on your body. Place the components on a grounded antistatic surface, component-side up.

6. Handle printed circuit boards by their edges only, but avoid touching the contacts on the edge of the board.

7. Never set a cup of coffee—or any liquid—on or near any components or the printer.

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Tools You Will Need

To service the controller, you should bring the following:

- ESD wrist grounding strap

- Antistatic mat

- #1 and #2 Phillips head screwdrivers (non-magnetic)

- 3/16" Hex nut driver and 4.5 mm Hex nut driver

- Small needlenose pliers

- Flashlight

- Ethernet Cable

    Standard : Enhanced Category 5 or Category 6 UTP

    Connecting Wires : Cross

- Operating Environment

    Windows NT/2000/XP

    CD-ROM Drive

    10/100BaseT or 10/100/1000BaseT

    Web Browser

- This manual and any technical notes you may have for the controller

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The controller provides computer connectivity and highly efficient printing capabilities for black and white printers. It is optimized for high-speed network communications, processing, rasterization, and printing of half-tone pages.

Features

As an integral part of the printing system, the controller enables users to:

■ Send files via network with TCP/IP protocol or AppleTalk protocol. With the optional Network Interface Card installed, additional network protocols are available. (Optional Network Interface Card is already discontinued.)

■ Use software running on network-enabled PC's to control spooled print jobs.

■ Print text and images in black and white and grayscale.

■ Print PCL5e, PCL XL and PostScript files. Supports for PDF and TIFF files are also available. Support for IPDS files is also available as an option.

■ Use resident PostScript and PCL fonts, and download additional PostScript and PCL fonts as needed. IPDS fonts are available as an option.

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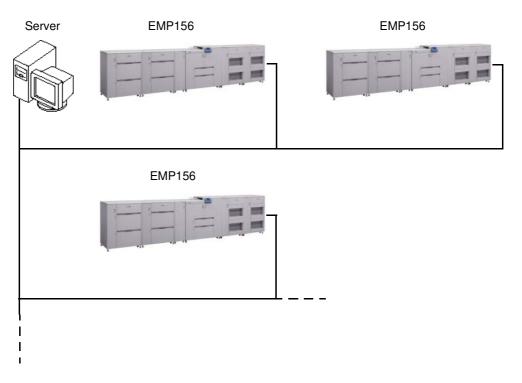
Figure 2-1. Controller Printing System

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How the Controller Operates

The controller enables users to access the printer through the network and use it to print files using advanced spooling and job control functions. Users can print to the controller from a local networked PC running TCP/IP. Files are received by the printer in a Raster Image Process (RIP) form allowing for more efficient printing.

The controller custom-designed boards and system software are responsible for efficient image processing and printing controls. The main functions of controller components and software are described below.

The controller uses a motherboard to process image data for printing images. The controller board includes a Power PC 750FX 800MHz microprocessor.

The DIMM (dual in-line memory modules) on the controller board hold image data during printing. The controller board is configured with 256MB or 512MB of memory.

A diagram of the primary controller functions is shown on Figure 2-2 on page 2-3 and Figure 2-3 on page 2-4.

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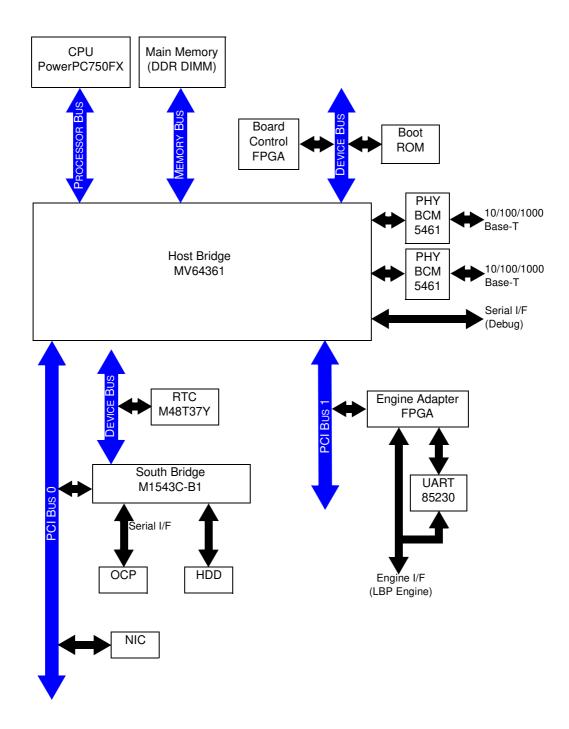
Figure 2-2. Controller Functional Diagram (CL121 Board)

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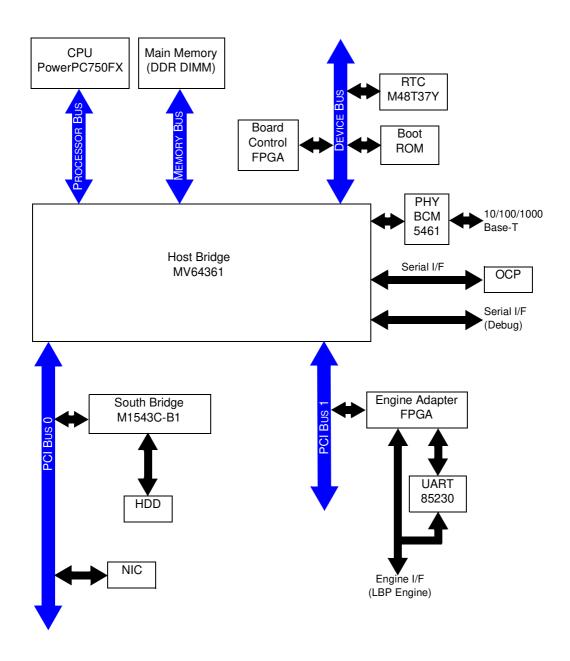
Figure 2-3. Controller Functional Diagram (CL146 Board)

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Print Options

The controller's efficient PostScript, PCL 5e/XL, PDF/TIFF and optional IPDS capabilities allow customers to use a variety of applications to create printed pages of text and/or images over a network.

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Chapter 3
Using the Operator Control Panel

This section describes the controller functions on the Operator Control Panel (OCP). The OCP is located on the top of the printer. The icons on the OCP are used to access and monitor different features of the controller. Refer to the *User's Guide* for a complete description of the OCP.

The current status and Setup information are displayed on the Operator Control Panel. Print activity can be monitored in the display window and specific controller functions (such as printing a Test Page and installing or updating system software) are controlled using the touch panel on the display window.

The screens and functions of the OCP display are controlled by simply touching the desired selection or icon. The current active screen is graphically displayed. There are no other buttons.

Operator Control Panel

Figure 3-1. Operator Control Panel

OCP Menu Icons and Buttons

The menus are accessed via the touch panel. Each OCP menu consists of icons and buttons that you use to make selections. The icons and buttons are defined below.

Table 3-1. OCP Menu Icons and Buttons

Icon or Button	Name	Function
?	Help	Touch to display Help on the current screen.
i	Information	From the Main Menu, displays information about the printer and consumables. From relevant screens, displays an illustration of the paper trays or finisher trays.
II	Pause/Offline	Touch to pause the printer.
▶	Resume/Online	When the printer is offline, touch to return to Ready status.
⏏	Return to Main Menu	Touch to cancel the current selection and return to the Main Menu.
◀	Previous Menu	Touch to cancel the current selection and return to the previous screen or menu.
▶▶	More Options	Touch to display additional options for the current selection.
■	Enter or Accept	Confirm or Done. Touch to confirm your selection and return to the previous screen or menu.
⚑	Sample	Touch to duplicate a current printing page and output to the sample tray.
Clr	Clear Button	Touch to erase entire entry.
Del	Delete Button	Touch to erase last character entered.
1 — 9	Ten Key	Use to enter numeric values.
⊟ ☼ ⊞	Brightness	Use to adjust backlight value of the OCP display.
⊟ ◑ ⊞	Contrast	Use to adjust the contrast level of the OCP display.
	Status Bar	Displays the current screen name and/or any system messages.

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Using the OCP Menus

There are 4 types of OCP Menu displays.

■ Option Button

■ Ten Key Pad

■ Change Button (+ / -)

■ Change Button (Enable/Disable)

A brief description of each menu and how to use it follows.

Using the Option Button Menu

The image below is a sample of a menu with Option buttons. The status bar indicates the current setting. In this sample there is a More Options button indicating there are more options to choose from on the following page.
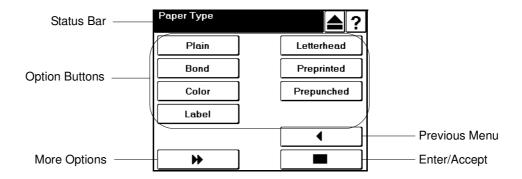
Figure 3-2. Using the Option Button Menu

To use this menu,

1. Touch the Option button. The selection is highlighted.

2. Touch the Enter/Accept button to activate the selection.

> **NOTE:**
> *The selection will be ignored if the Enter/Accept button is not touched, or if any other button is touched prior to touching Enter/Accept.*

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Using the Ten Key Pad Menu

The image below is a sample of a menu with a ten key pad. It is used to enter numeric values.
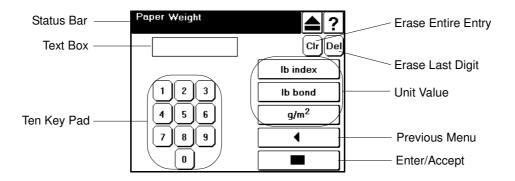
Figure 3-3. Using the Ten Key Pad Menu

To enter a value,

1. Touch the appropriate numbers on the pad. The value appears in the Text Box.

2. Touch the desired Unit Value button (if applicable).

3. Touch the Enter/Accept button to activate the entry.

> *NOTE:*
>
> *The entry will be ignored if the Enter/Accept button is not touched, or if the Previous Menu button is touched prior to touching Enter/Accept.*

Using the + / - Change Button Menu

The image below is a sample of a menu with a + / - change button. It is used to increase and decrease the OCP brightness and contrast. The current value is displayed to the right of the icon.
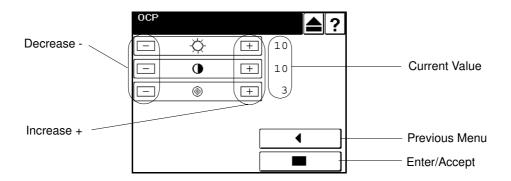
Figure 3-4. Using the +/- Change Button Menu

To increase or decrease the value,

1. Touch the + or - to adjust brightness or contrast. The numeric value and the display will change immediately.

NOTE:

Brightness control is not displayed in the production model after April '06.

Touch the Enter/Accept button to activate setting.

NOTE:

The setting will be ignored if the Enter/Accept button is not touched, or if the Previous Menu button is touched prior to touching Enter/Accept.

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Using the Enable/Disable Change Button Menu

The image below is a sample of a menu with an Enable/Disable toggle. It is used to turn an option on or off.
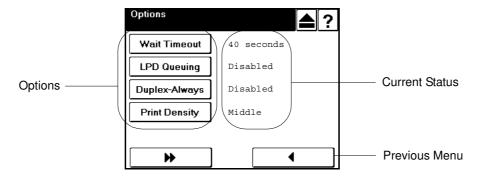
Figure 3-5. Using the Enable/Disable Change Button Menu

1. Touch the Option Button to toggle between enable and disable. The current setting appears to the right.

2. When you are finished, touch the Previous Menu button.

> **NOTE:**
>
> *The Enter/Accept button is not used for Enable/Disable options. The setting is activated immediately.*

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Service Menu

The Main Menu screen is shown below. For the purpose of this manual only the service menu is outlined on the following pages. The Service Menu is accessed by selecting the Setup Menu icon. For detailed information regarding user-accessible menus refer to the *User's Guide*.
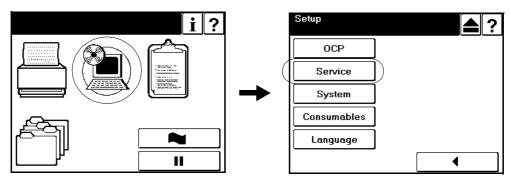
Figure 3-6. Accessing the Service Menu

The Service option is password protected. Following options are available when you enter the password. See Table 3-3 beginning on page 3-18 for the complete Service Menu structure.

Consumables

Consumables menu is used for replacing the consumable parts and the periodic replacement parts. Following options are available in this menu.

■ Report

Print a report page contains current usage and life for each UC Parts and the PR Parts.

■ UC Parts

Menu for replacing the consumable parts. Following options are available.

❏ Developer Mix

Use for exhausting and supplying the Developer Mixture. Also the counter is reset when replacing.

❏ Heat Roll

Use for reset the counter when replacing the Heat Roll.

❏ OPC Sheet

Use for wind the OPC Sheet. Also use for reset the counter when replacing the OPC Sheet.

❏ Backup Roll

Use for reset the counter when replacing the Backup Roll.

❏ Cleaner Brush

Use for reset the counter when replacing the Cleaner Brush.

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❑ Transfer Belt

Use for reset the counter when replacing the Transfer Belt.

❑ Fuser Web

Use for reset the OCP message when replacing the Fuser Cleaning Web.

■ PR Parts

Menu for replacing the periodic replacement parts. Following options are available

❑ TR WIRE/CLEANER

Use for reset the counter when replacing the TRANSFER WIRE & CLEANING PIECES.

❑ COROTORON CASE

Use for reset the counter when replacing the COROTORON CASE(F)/(R).

❑ CH WIRE/CLEANER

Use for reset the counter when replacing the CHARGER WIRE & CLEANING PIECES.

❑ CHARGER GRID

Use for reset the counter when replacing the CHARGER GRID.

❑ CH WIRE HOLDER

Use for reset the counter when replacing the CHARGER WIRE HOLDER F/R.

❑ DC WIRE HOLDER

Use for reset the counter when replacing the DISCHARGER WIRE & CLEANING PIECE.

❑ COROTORON WIRE

Use for reset the counter when replacing the ERACE COROTORON WIRE.

❑ TC WIRE HOLDER

Use for reset the counter when replacing the TC WIRE HOLDER (L)/(R) ASSEMBLY.

❑ OZONE FILTER

Use for reset the counter when replacing the OZONE FILTER(E).

❑ BR SEPARATOR

Use for reset the counter when replacing the BR SEPARATOR.

❑ HP L PICK BELT

Use for reset the counter when replacing the STD HP LOWER PICK BELT.

❑ HP U PICK BELT

Use for reset the counter when replacing the STD HP UPPER PICK BELT.

| M M | L | 0 0 | |

❒ AHP1 L PICK BELT

Use for reset the counter when replacing the AHP LOWER PICK BELT.

❒ AHP1 U PICK BELT

Use for reset the counter when replacing the AHP UPPER PICK BELT.

❒ AHP2 L PICK BELT

Use for reset the counter when replacing the AHP2 LOWER PICK BELT.

❒ AHP2 U PICK BELT

Use for reset the counter when replacing the AHP2 UPPER PICK BELT.

❒ ST1 ROLLER(L)

Use for reset the counter when replacing the ST1 LOWER IDLER ROLLER ASSEMBLY.

❒ ST1 ROLLER(U)

Use for reset the counter when replacing the ST1 UPPER IDLER ROLLER ASSEMBLY.

❒ ST2 ROLLER(L)

Use for reset the counter when replacing the ST2 LOWER IDLER ROLLER ASSEMBLY.

❒ ST2 ROLLER(U)

Use for reset the counter when replacing the ST2 UPPER IDLER ROLLER ASSEMBLY.

❒ AIR FILTER

Use for reset the counter when replacing the AIR FILTER.

❒ FU1 AIR FILTER

Use for reset the counter when replacing the AIR FILTER (FOR FEEDER UNIT 1).

❒ FU2 AIR FILTER

Use for reset the counter when replacing the AIR FILTER (FOR FEEDER UNIT 2).

❒ DISCHARGER CASE

Use for reset the counter when replacing the DISCHARGER CASE.

❒ CARBON ELECTRODE

Use for reset the counter when replacing the CARBON ELECTRODE.

| M M | L | 0 0 | |

❐ BRAKE PAD

Use for reset the counter when replacing the BRAKE PAD.

❐ REGIST ROLLER

Use for reset the counter when replacing the REGIST DRIVE ROLLER ASSEMBLY.

❐ TIMING ROLLER

Use for reset the counter when replacing the TIMING DRIVEN ROLLER.

❐ HEATER LAMP

Use for reset the counter when replacing the HEATER LAMP ASSEMBLY.

❐ EARTH SPRING

Use for reset the counter when replacing the EARTH SPRING ASSEMBLY(5).

❐ SLEEVE BEARING

Use for reset the counter when replacing the SLEEVE BEARING.

❐ FEED ROLLER PHS

Use for reset the counter when replacing the FEED ROLLER PHS(L) ASSEMBLY.

| M M | L | 0 1 | |

Passwords

Passwords provide security to restrict access to system parameters and certain printer maintenance functions. Two types of passwords are available with the printer: a system password and a service password.

The system password is used by the System Administrator and provides access to the system parameters. The service password is used by the Service Technician and provides access to service and maintenance functions, as well as the system parameters.

The passwords are not set at the factory and should be set up at installation.

1. To set up or change the service password make the following selections from the OCP:

Setup / Service

The ten-key pad will appear.
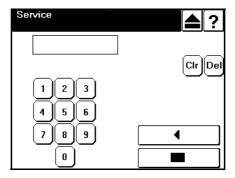
Figure 3-7. Passwords (1)

2. If you are setting the password for the first time press Enter (■), or

If you are changing the password, use the ten-key pad to enter the current password, then press Enter (■).

3. Select *Passwords* from the menu.
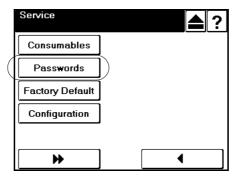
Figure 3-8. Passwords (2)

| M M | L | 0 5 | |

4. Enter a new password using the ten-key pad then press Enter (■).

5. Re-enter the password and press Enter (■). The display will indicate that the password has been changed.

⚠ *CAUTION!*

If the password is lost or forgotten it cannot be recovered. In that case, replace the HDD.

Factory Default

Factory Default menu provides the function to initializing parameters to default setting. Following table shows factory default value of each parameters. Several parameters does not change to the factory default value when the Factory Default menu is performed

Table 3-2. Factory Default

Parameter			Factory Default Value
Printer	Paper Source	Default	Auto Select
		Paper Size (Common in all Trays)	Folio *(Note2)*
		Paper Type (Common in all Trays)	Plain
		Paper Color (Common in all Trays)	White
		Paper Weight (Common in all Trays)	20 lb. bond
		HV Adjust	0
		Table Adjust (Common in all Trays)	Normal *(Note1)*
		Paper Moisture (Common in all Trays)	Normal *(Note1)*
		HCF Tray Control	Normal Pick Mode *(Note 1)*
	Paper Output	Default Output	Container 1 Lower
		Stacking Level (Common in all Trays)	100%
	Options	Wait Timeout	300 second
		LPD Queuing	Disable
		Duplex-Always	Disable
		Print Density	Middle *(Note1)*
		Auto Proof Sample	0
		Cover Insert Mode	Cover Insert
		Faceup Always	Disable
	PostScript	Print Errors	Enable
		Best Fit	Enable
		Job Timeout	0 second
		Halftone *(Note3)*	Medium, 106lpi
		PS Wait Timeout	295 second
	PCL	Wide A4	Disable
		Requested Tray	Exclusively
	IPDS	Caching	Enabled
		Font Capture	Enabled

Note1: This parameter does not change to the factory default value when the Factory Default menu is performed.

Note2: This value is only available when the Custom Size Switch is set to the "Custom" position.

Note3: This option is only displayed when the Halftone Selection is Enable.

Table 3-2. Factory Default - Continued

Parameter				Factory Default Value
Setup	OCP	Brightness		10
		Contrast		10
		Buzzer Volume		3
	Service	Password	System	(None) *(Note1)*
			Service	(None) *(Note1)*
		Configuration	OPC Surface Volt	Enable *(Note1)*
			OCP Mode	User Menu	Disable *(Note1)*
				Auto Winding	Enable *(Note1)*
			Tray Adjust	Side Nozzle (Common in all Trays)	AutoSelect *(Note1)*
				Solenoid (Common in all Trays)	AutoSelect *(Note1)*
			Stacker Adjust	Job Offset (Common in all Trays)	Enable *(Note1)*
				Front Jogger (Common in all Trays)	0 *(Note1)*
				Rear Jogger (Common in all Trays)	0 *(Note1)*
				Stopper (Common in all Trays)	0 *(Note1)*
				Offset (Common in all Trays)	0 *(Note1)*
			Wind. Fuser Web	60 *(Note1)*
			Heat Roll Tmp	Normal *(Note1)*
			Transfer Current	Normal *(Note1)*
			Temp/Humid Ctrl	Enable *(Note1)*
			Thickness Setup	Normal *(Note1)*
			Post Device Config	Sheet Rotator	Not Installed *(Note 1)*
				Cover Feeder	Not Installed *(Note 1)*
				Binder	Not Installed *(Note 1)*
			Set Time Mode	Auto *(Note 1)*
		Halftone Selection		Disable
		MIB Function		Standard *(Note 1)*
		Click Charge Count Value		Hide *(Note 1)*
	System	Exit Jam Recovery		Enable
		Network (AUX)	IP Address	192.0.0.1
			Subnet Mask	0.0.0.0
			Gateway Address	0.0.0.0
			HTTP Port	80
		Calendar	Time Zone	GMT
			Date	(Date) *(Note1)*
			Time	(Time) *(Note1)*
		Country Code		1 *(Note1)*
		Energy Save Mode		Enable
		Energy Save Time		15
		Password		(None) *(Note1)*
		Auto Online		Enable
		Emulation		Auto Select
		Public R/W		Disable
		Auto Backup Time		1:00
		Output Cascade	Cascade Priority	Lower to Upper
			Cascade on CS Open	Stop
	Language			English

Note1: This parameter does not change to the factory default value when the Factory Default menu is performed.

Configuration

Configuration menu is used for change or define various parameters of the engine. Following options are available in this menu.

■ Unit Config

Use this menu when disconnect any Stacker or HCF unit from the printer. If you disconnect any Stacker or HCF unit, open this menu and select a desired unit name, and press Enter (■) prior to power off for disconnecting.

If you connect any Stacker or HCF unit, do not need to operate this menu because the printer automatically recognize a new unit.

■ OPC Surface Volt

Can be set to enable or disable. When set to enable, the printer detects the error if the OPC surface voltage is abnormal.

■ OPC Mode

❐ User Menu

Can be set to enable or disable. When set to enable, the "OPC" menu is appeared in the Consumables menu on the OCP.

❐ Auto Winding

Can be set to enable or disable. When set to enable, the OPC Sheet is automatically winded every specific usage.

■ Tray Adjust

Following functions can be defined to each input tray independently.

❐ Side Nozzle

Defines the Side Nozzle functionality to desired input tray. The Side Nozzle is a supplementary function for paper pick mechanism in the Input Tray. This option can be set to Auto Select, Enable or Disable. Refer to Chapter 5 in the Engine Maintenance Manual for more information.

❐ Solenoid

Defines the Solenoid functionality to desired input tray. The Solenoid is a supplementary function for paper pick mechanism in the Input Tray. This option can be set to Auto Select, Enable or Disable. Refer to Chapter 5 in the Engine Maintenance Manual for more information.

M M	L	0 1	

■ Stacker Adjust

Following options can be defined to each output tray independently.

❐ Job Offset

Can be set to enable or disable. When set to enable, the Job Offset function is enabled.

❐ Front Jogger

Defines stop position and movement distance of the Front jogger. Valid range is ±10mm respectively.

❐ Rear Jogger

Defines stop position and movement distance of the Front jogger. Valid range is ±10mm respectively.

❐ Stopper

Defines stop position and movement distance of the Stopper. Valid range is ±10mm respectively.

❐ Offset

Defines offset distances of front and rear. Valid range is ±50step respectively.

Refer to Chapter 5 in the Engine Maintenance Manual for more information.

■ Wind Fuser Web

Defines the period of auto-winding of the Fuser Cleaning Web. Can be defined to 60, 40 or 20. For example, if defined to 60, The Fuser Cleaning Web is winded every 60 pages printing.

■ Heat Roller Tmp

Defines the temperature of the Heat Roller in the Fuser. Can be set to Higher, Normal and Lower. Refer to Chapter 5 in the Engine Maintenance Manual for more information.

■ Transfer Current

Defines the Transfer Current of the Transfer Unit. Can be set to Higher, Normal and Lower. Refer to Chapter 5 in the Engine Maintenance Manual for more information.

■ Engine Revision

Displays revisions of the Engine Micro Code.

■ Engine Data

Prints the memory dump of the engine.

■ Temp/Humid Ctrl

Can be set to enable or disable. When set to enable, the printer enables the Temperature/Humid control by using the sensor. Refer to Chapter 5 in the Engine Maintenance Manual for more information.

| M M | L | 0 3 | |

- ■ Thickness Setup

  Defines the thickness of the printing line. Can be set to Very Thick, Thicken, Normal or Thin. Refer to Chapter 5 in the Engine Maintenance Manual for more information.

- ■ Engine Diagnosis

  This menu is used for diagnose the various function of the engine. Following options are available in this menu.

  - ❐ Read/Write Memory
  - ❐ Power On Test
  - ❐ Driver Test 1
  - ❐ Driver Test 2
  - ❐ Heat Run Test 1
  - ❐ Heat Run Test 2
  - ❐ Sensor Test 1
  - ❐ Sensor Test 2
  - ❐ Adjustment Function

  Refer to Chapter 6 in the Engine Maintenance Manual for details.

- ■ Specific Log

  The Specific Log menu is used for specify the Engine Error Codes for capturing the Specific Engine Log.

  You can specify up to four error codes in this page. Available codes are from "E001" to "E4FF".

- ■ Post Device Config

  Defines device configuration for Post Device (Sheet Rorator, Cover Feeder and Binder). Set to "Installed" when relevant device is installed.

- ■ Set Time Mode

  Defines "Auto" or "Manual" for setting of waiting time of "End of Set" signal to post device.

- ■ Set Time

  Defines the waiting time of "End of Set" signal to post device when the "Set Time Mode" is "Manual".

PM Counter Reset

This menu is used for reset the PM (Preventive Maintenance) counter. If this menu is executed, the PM counter is reset to "800K".

MM	L	0 3	

System Software

This menu is used for updating the system software. Refer to the Upgrade Instructions of the new system software for details.

Backup/Restore

This menu is used for performing the Backup/Restore function. Refer to "Backup and Restore" on page 5-24 for details.

Halftone Selection

Can be set to enable or disable. When set to enable, the "Halftone" menu is appeared in the PostScript menu on the OCP.

Test Print

Touch to execute various kind of test print. Following options are available in this menu.

- Print Quality

  Following test patterns are available for checking the print quality.

  - ❒ Solid Black
  - ❒ Square Blk/Skew
  - ❒ Half Tone
  - ❒ Ghost G
  - ❒ Jitter
  - ❒ Large Letter
  - ❒ Diagonal Lines
  - ❒ Density Scale
  - ❒ Small to Large
  - ❒ Text File 4%
  - ❒ Cross Pattern

- Finishing Test

  - ❒ Jogging

    This test is for checking the offset stacking function of the container stacker.

  - ❒ Path Through

    This test is for chencking the Path Through mode of the Post Device.

  - ❒ Finishing

    This test is for checking the Post Device with finishing function.

| M M | L | 0 2 | |

Log Print

Touch to print various kind of Log Data.

- ■ Controller

  Following controller logs can be printed in this menu.

  - ❑ Error Log
  - ❑ Event Log
  - ❑ Software Log
  - ❑ Service Log

- ■ Engine

  Following engine logs can be printed in this menu.

  - ❑ Engine Log 1/2/3/4/5

    These logs are captured when the engine requests to capture the Log. These logs are located in order of the generation, and the "Engine Log 1" is a most recent record.

  - ❑ Specific Log 1/2/3/4/5

    These Logs are captured when prespecified engine errors are occurred. These logs are located in order of the generation, and the "Specific Log 1" is a most recent record. The error codes for these logs can be specified by "Specific Log" menu. Refer to "Specific Log" on page 3-15 for more information.

Config Print

Touch to print a list of various configuration parameters in the Service menu.

MIB Function

Can be set to "Standard" or "InfoPrint model". When set to "Standard", printer replies MIB objects as standard model. When set to "InfoPrint model", printer replies MIB objects as InfoPrint model.

Click Charge Count Value

Can be set to "Hide" or "Show". When set to "Show", the Click Charge Counter is appeared in the OCP, Web and the Status Page. When set to "Hide", the Click Charge Counter is disappeared.

Click Charge Double Count

Can be set to Enable or Disable. When set to Enable, counter counts +1 per page if paper length (feed direction) is shorter than 8.5 inches, or +2 per page if paper length is longer than 8.5 inches. When set to Disable, counter counts +1 per page regardless of page size.

Table 3-3. Service Menu Structure

Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7
Setup	Service	Input Password	Consumables	Report		
				UC Parts	Developer Mix	Exhaust
						Supply
					Heat Roll	
					OPC	Winding OPC Sheet
						Counter
					Backup Roll	
					Cleaner Brush	
					Transfer Belt	
					Fuser Web	
				PR Parts	TR WIRE/CLEANER	
					COROTRON CASE	
					CH WIRE/CLEANER	
					CHARGER GRID	
					CH WIRE HOLDER	
					DC WIRE/CLEANER	
					COROTRON WIRE	
					TC WIRE HOLDER	
					OZONE FILTER	
					BR SEPARATOR	
					HP L PICK BELT	
					HP U PICK BELT	
					AHP1 L PICK BELT (Note1)	
					AHP1 U PICK BELT (Note1)	
					AHP2 L PICK BELT (Note1)	
					AHP2 U PICK BELT (Note1)	
					ST1 ROLLER (L)	
					ST1 ROLLER (U)	
					ST2 ROLLER (L) (Note2)	
					ST2 ROLLER (U) (Note2)	
					AIR FILTER	
					FU1 AIR FILTER	
					FU2 AIR FILTER	
					DISCHARGER CASE	
					CARBON ELECTRODE	
					BRAKE PAD	
					REGIST ROLLER	
					TIMING ROLLER	
					HEATER LAMP	
					EARTH SPRING	
					SLEEVE BEARING	
					FEED ROLLER PHS	
			Passwords	System	Input Password	
				Service	Input Password	
			Factory Default			

Note 1: Only displayed when the HCF is installed.
Note 2: Only displayed when the Additional Stacker is installed.

M M	L	0 2	

Table 3-3. Service Menu Structure - Continued

Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7	Level 8	Level 9
Setup	Service	Input Password	Configuration	Unit Config	Container 1			
					Container 2 *(Note2)*			
					HCF1 *(Note1)*			
					HCF2 *(Note1)*			
					Transit Path Unit *(Note3)*			
				OPC Surface Volt	Enable/ Disable			
				OPC Mode	User Menu	Enable/Disable		
					Auto Winding	Enable/Disable		
				Tray Adjust	Side Nozzle	1	AutoSelect/ Enable/Disable	
						2	AutoSelect/ Enable/Disable	
						HCF1 Lower *(Note1)*	AutoSelect/ Enable/Disable	
						HCF1 Upper *(Note1)*	AutoSelect/ Enable/Disable	
						HCF2 Lower *(Note1)*	AutoSelect/ Enable/Disable	
						HCF2 Upper *(Note1)*	AutoSelect/ Enable/Disable	
					Solenoid	1	AutoSelect/ Enable/Disable	
						2	AutoSelect/ Enable/Disable	
						HCF1 Lower *(Note1)*	AutoSelect/ Enable/Disable	
						HCF1 Upper *(Note1)*	AutoSelect/ Enable/Disable	
						HCF2 Lower *(Note1)*	AutoSelect/ Enable/Disable	
						HCF2 Upper *(Note1)*	AutoSelect/ Enable/Disable	
				Stacker Adjust	Container 1 Lower	Job Offset	Enable/Disable	
						Front Jogger	Adjust Screen	
						Rear Jogger	Adjust Screen	
						Stopper	Adjust Screen	
						Offset	Front	Adjust Screen
							Rear	Adjust Screen
					Container 1 Upper	Job Offset	Enable/Disable	
						Front Jogger	Adjust Screen	
						Rear Jogger	Adjust Screen	
						Stopper	Adjust Screen	
						Offset	Front	Adjust Screen
							Rear	Adjust Screen
					Container 2 Lower *(Note2)*	Job Offset	Enable/Disable	
						Front Jogger	Adjust Screen	
						Rear Jogger	Adjust Screen	
						Stopper	Adjust Screen	
						Offset	Front	Adjust Screen
							Rear	Adjust Screen
					Container 2 Upper *(Note2)*	Job Offset	Enable/Disable	
						Front Jogger	Adjust Screen	
						Rear Jogger	Adjust Screen	
						Stopper	Adjust Screen	
						Offset	Front	Adjust Screen
							Rear	Adjust Screen
				Wind Fuser Web	60			
					40			
					20			

Note 1: Only displayed when the HCF is installed.
Note 2: Only displayed when the Additional Stacker is installed.
Note 3: Only displayed when the Transit Path Unit Type 156 is installed.

M M		L	0 2	

Table 3-3. Service Menu Structure - Continued

Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7	Level 8
Setup	Service	Input Password	Configuration	Heat Roller Tmp	Higher		
					Normal		
					Lower		
				Transfer Current	Higher		
					Normal		
					Lower		
				Engine Revision			
				Engine Data			
				Temp/Humid Ctrl	Enable/Disable		
				Thickness Setup	Very Thick		
					Thicken		
					Normal		
					Thin		
				Engine Diagnosis	Read/Write Memory	Enter Address	Enter Data
					Power On Test	ALL MODULE	
						PR MASTER	
						PR SLAVE	
						ST1	
						ST2	
						AHP	
					Driver Test 1	PR	Enter Device No.
						ST1	Enter Device No.
						ST2 *(Note2)*	Enter Device No.
						AHP *(Note1)*	Enter Device No.
						Transit Pass Unit *(Note3)*	Enter Device No.
					Driver Test 2	PR	Enter Device No.
						ST1	Enter Device No.
						ST2 *(Note2)*	Enter Device No.
						AHP *(Note1)*	Enter Device No.
						Transit Pass Unit *(Note3)*	Enter Device No.
					Heat Run Test 1	ALL MODULE	
						PR	
						ST1	
						ST2 *(Note2)*	
						AHP *(Note1)*	
					Heat Run Test 2	ALL MODULE	
						PR	
						ST1	
						ST2 *(Note2)*	
						AHP *(Note1)*	
					Sensor Test 1	PR	
						ST1	
						ST2 *(Note2)*	
						AHP *(Note1)*	
						Transit Pass Unit *(Note3)*	
					Sensor Test 2	Enter Device No.	
					Adjustment Function	Enter Device No.	
				Specific Log	Error Code 1	Enter Error Code	
					Error Code 2	Enter Error Code	
					Error Code 3	Enter Error Code	
					Error Code 4	Enter Error Code	
				Post Device Config *(Note3)*	Sheet Rotator	Installed/Not Installed	
					Cover Feeder	Installed/Not Installed	
					Binder	Installed/Not Installed	
				Set Time Mode *(Note3)*	Auto/Manual		
				Set Time *(Note3)*	0 - 250		

Note 1: Only displayed when the HCF is installed.
Note 2: Only displayed when the Additional Stacker is installed.
Note 3: Only displayed when the Transit Path Unit Type 156 is installed.

M M		L		0 3	

Table 3-3. Service Menu Structure - Continued

Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7	Level 8	Level 9
Setup	Service	Input Password	PM Counter Reset					
			System Software	Disk Test				
				Upgrade System	Input Password	Print Server		
						HCF		
						Container Stacker		
						Print Engine - FPGA		
						Print Engine- Slave		
						Print Engine- Master		
						Controller		
						OCP Logo		
						OCP		
			Backup/ Restore	Backup	All			
					HDD Data			
					Engine Data			
					Controller			
				Restore	HDD Data			
					Engine Data			
					Controller			
			Halftone Selectios	Enable / Disable				
			Test Print	Print Quality	Solid Black	Paper Source	Paper Destination	
					Square Blk/ Skew	Paper Source	Paper Destination	
					Half Tone	Paper Source	Paper Destination	
					Ghost G	Paper Source	Paper Destination	
					Jitter	Paper Source	Paper Destination	
					Large Letters	Paper Source	Paper Destination	
					Diagonal Lines	Paper Source	Paper Destination	
					Density Scale	Paper Source	Paper Destination	
					Small to Large	Paper Source	Paper Destination	
					Text File 4%	Paper Source	Paper Destination	
					Cross Pattern	Paper Source	Paper Destination	
				Finishing Test	Container	Jogging	Paper Source	Paper Destination
					Finisher	Path Through *(Note 1)*	Paper Source	
						Finishing *(Note 1)*	Paper Source	
			Log Print	Controller	Error Log			
					Event Log			
					Software Log			
					Service Log			
				Engine	Engine Log 1			
					Engine Log 2			
					Engine Log 3			
					Engine Log 4			
					Engine Log5			
					Specific Log 1			
					Specific Log 2			
					Specific Log 3			
					Specific Log 4			
					Specific Log 5			
			Config Print					
			MIB Function	Standard / InfoPrint model				
			Click Charge Count Value	Hide / Show				
			Click Charge Double Count (Note 2)	Enable / Disable				
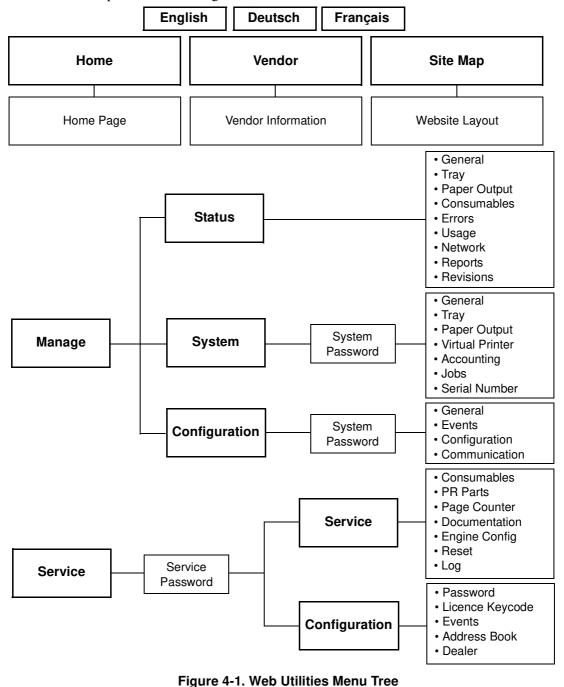
Note 1: Only displayed when the Transit Path Unit Type 156 is installed.
Note 2: Only displayed when the Click Charge Count Value is "Show".

M M	L	0 1	

Overview

The Web Utilities give you the power to access the printer through the Internet. For the purposes of this manual, only the Service area are shown. For a complete description of the Manage area, see the *User's Guide*.

English	Deutsch	Français

Home	Vendor	Site Map
Home Page	Vendor Information	Website Layout

Status
- General
- Tray
- Paper Output
- Consumables
- Errors
- Usage
- Network
- Reports
- Revisions

Manage → **System** → System Password
- General
- Tray
- Paper Output
- Virtual Printer
- Accounting
- Jobs
- Serial Number

Configuration → System Password
- General
- Events
- Configuration
- Communication

Service → Service Password → **Service**
- Consumables
- PR Parts
- Page Counter
- Documentation
- Engine Config
- Reset
- Log

Configuration
- Password
- Licence Keycode
- Events
- Address Book
- Dealer

Figure 4-1. Web Utilities Menu Tree

Often, the status of an item is indicated with a colored button or graphic. Three colors are used throughout the Web Utilities to graphically display the status of various items.

- Green indicates a normal condition.

- Yellow indicates a warning condition (e.g., low paper, low toner, consumable near end of life).

- Red indicates an obstacle to printing, such as an empty condition, consumable at end of life, paper jam, or door open.

Access and Security

Not all Web Utilities are available to every type of user. Access to certain utilities is limited by a password. Passwords provide security to the System and Service areas of the system. The Web Utilities provide three levels of access: Status, System, and Service, which are described below.

- Status Access

  Access to the Manage-Status area does not require a password. It allows the user to view all Status options.

- System Access

  Access to the Manage-System area and the Manage-Configuration area requires a system password and enables the user to perform System functions and Configuration functions. All user-accessible items are available as well.

- Service Access

  Service area requires a service password and enables unrestricted access to the system. All user-accessible and system-accessible items are available as well.

> **NOTES:**
>
> *It is the responsibility of the servicing dealer and/or system administrator to set and secure passwords in the Web Utilities.*
>
> *To access the Manage-System area and the Manage-Configuration area, enter the User Name* **system**. *To access the Service area, enter the User Name* **service**. *The default password for both areas is blank and should be changed when the printer is installed.*

M M	L	0 0	

Accessing the Web Utilities

To access the Web Utilities, enter the IP address or DNS name of the printer in the address bar of your Internet browser. The Home Page is the first page that will be displayed.
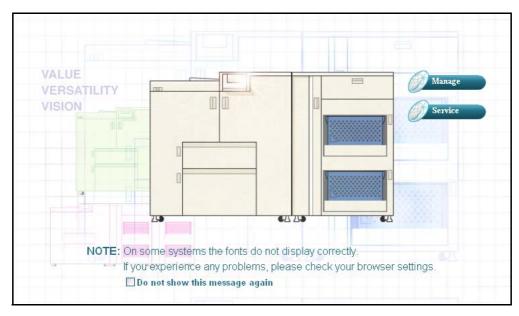
Figure 4-2. Accessing the Web Utilities

You can make a selection from the Home Page or wait 90 seconds for the Status-General page to be automatically displayed.

Web Page Organization

All Web pages have a common Top and Left bar. A description of these common areas follows.

Top Bar Options

Table 4-1. Top Bar Options

Option	Description
Language	The Web page default language is the language set on the Operator Control Panel. Select English, Deutsch, Français for the Web page display language.
Home	Click to return to the Home page.
Vendor	Displays vendor information including name, address, phone and URL address.
Site Map	Displays the overall layout of the Web pages. The Site Map is a useful tool for locating information.

Home

Click to return to the Home page. A sample is shown on page 4-3.

Vendor

Displays dealer information including, name, address, phone number and URL address.

Figure 4-3. Vendor
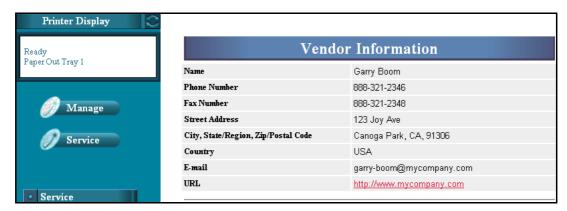
Site Map

This page displays the overall layout of the Web pages and is useful for locating information.

Figure 4-4. Site Map

MM   L   0 3

Left Bar Options

Table 4-2. Left Bar Options

Option	Description
Printer OCP Display	Displays the current printer Operator Control Panel (OCP) message including printer status and error messages.
Refresh	Click to refresh the current Web page.
Manage	Click to display the Manage Status, System and Configuration Web pages. For a list of Manage options, refer to the Site Map.
Service	Click to display the Service and Service Configuration Web pages. For a list of Service options, refer to the Site Map.

Printer Display

Figure 4-5. Printer Display

M M	L	0 0	

Service-Service Options

Each of the options available under Service-Service are described in the following table. You must have the Service password to access or update these Web pages.

NOTES:

It is the responsibility of the servicing dealer and/or system administrator to set and secure passwords in the Web Utilities.
*To access the Service area, enter the User Name **service**. The default password is blank and should be changed when the printer is installed.*

Table 4-3. Service-Service Options

Option	Description
Consumables	Displays all of the lifetime counters for the consumables. A status button graphically displays the condition of each consumable.
PR Parts	Displays all of the lifetime counters for the Periodic Replacement Parts of the printer. A status button graphically displays the condition of each consumable.
Page Counter	Displays counters for each input tray and each output tray. Also displays counts for total pages, process and click charge.
Documentation	Displays links to all service documentation.
Engine Config	Provides the ability to display or modify several engine configuration values.
Reset	Provides the ability to reset the system configuration.
Log	Provides access to Error, Event, Software and Service logs, and various Engine Logs. Allows you to enter a detailed description of a service visit, displays date and time of last modification, and allows download of the various logs.

M M	L	0 1	

Service-Consumables

The Service-Consumables page displays all of the lifetime counters for the consumables. The status buttons graphically display the condition of each consumable.

After you replace a consumable in the Item list, check the box in the Select column and click the **Reset Counter** button.

Figure 4-6. Service-Consumables

| M M | L | 0 1 | |

Service-PR Parts

The Service-PR Parts page displays all of the lifetime counters for the Periodic Replacement parts of the printer. The status buttons graphically display the condition of each Periodic Replacement Parts.

After you replace a Periodic Replacement Parts in the Item list, check the box in the Select column and click the **Reset Counter** button.
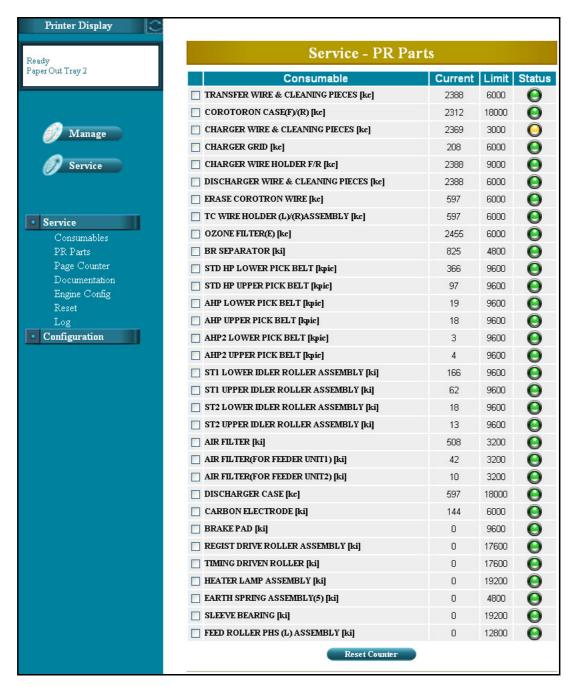
Figure 4-7. Service-PR Parts

| M M | L | 0 3 | |

Service-Page Counter

The Service-Page Counter page displays counters for each input tray and each output tray of the printer. This page also displays counts for total pages, process and click charge.
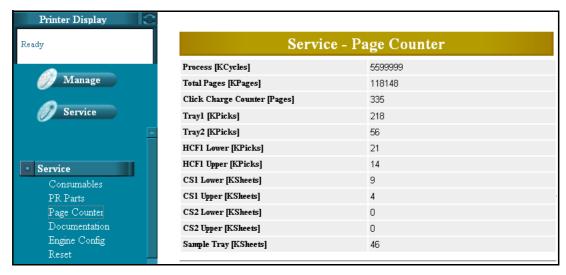
Figure 4-8. Service-Page Counter

Service-Documentation

Service documentation, such as the Engine Maintenance Manual, is not available through the Web pages. Service documentation can be found on the Software & Documentation CD-ROM that shipped with the printer.

To display links to User's documentation, such as the Printer User's Guide and this manual, click Documentation on the top menu bar.

Figure 4-9. Service-Documentation

M M	L	0 1	

Service-Engine Config

general

The General page provides the ability to display or modify several engine configuration settings. After making the desired changes, click **Submit** to update the settings.

Figure 4-10. Service-Engine Config-General

Unit Config

The Unit Config page displays current unit configuration of the printer engine.

If you disconnect any unit, check the box in the Select column and click the **Submit** button.

Figure 4-11. Service-Engine Config-Unit Config

| M M | L | 0 2 | |

Stacker Adjust

The Stacker Adjust page provides the ability to display or modify the several parameters for the Job Offset function. After making any desired changes, click **Submit** to update the setting.
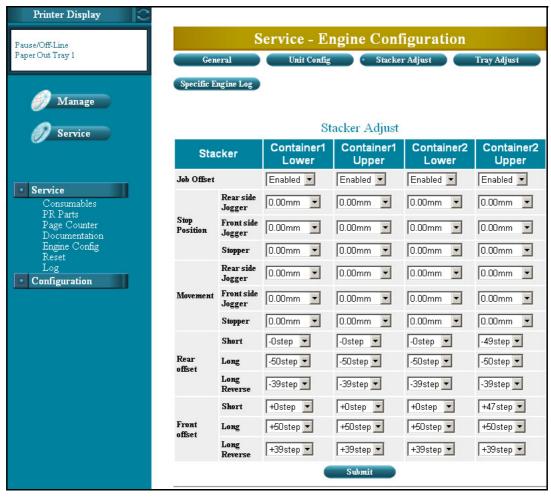
Figure 4-12. Service-Engine Config-Stacker Adjust

| M M | L | 0 1 | |

Tray Adjust

The Tray Adjust page provides the ability to display or modify the setting of the Side Nozzle function and the Solenoid function. After making any desired changes, click **Submit** to update the setting.

Figure 4-13. Service-Engine Config-Tray Adjust

Specific Engine Log

The Specific Engine Log page provides the ability to specify the Engine Error Codes for capturing the Specific Engine Log.

You can specify up to four error codes in this page. Available codes are from "E001" to "E4FF". After specifying any error codes, click Submit to update the setting. If you want to clear any codes, check the box in the "Clear" column and click the **Submit** button.

Figure 4-14. Service-Engine Config-Specific Engine Log

Service-Reset

The Service-Reset page provides the ability to reset the system configuration and PM counter, and clear the Logs.

Figure 4-15. Service-Reset

Service-Log

From this page you can log the details of a service visit and download the following logs.

- Error Log

- Event Log

- Software Log

- Service Log

- Engine Log

- Engine Log 1/2/3/4/5

- Specific Engine Log 1/2/3/4/5

- IPDS Log

The Engine Log 1/2/3/4/5 are captured when the engine requests to capture the Log. These logs are located in order of the generation, and the "Engine Log 1" is a most recent record.

The Specific Engine Log 1/2/3/4/5 are captured when prespecified engine errors are occurred. These logs are located in order of the generation, and the "Specific Engine Log 1" is a most recent record. The error codes for these logs can be specified by "Service-Engine Config-Specific Engine Log" menu.

If you want to capture the current Engine Log immediately, press the "**Create Engine Log**" button. The "Engine Log" file (no number) is created.

The IPDS Log is shown if the IPDS option is installed.

| M M | L | 0 2 | |
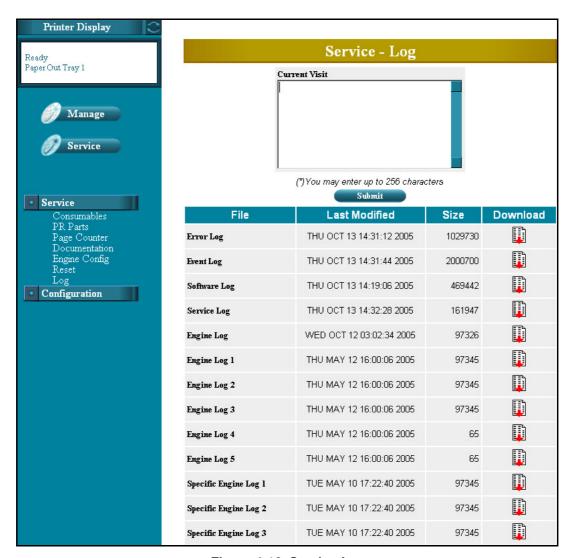
Figure 4-16. Service-Log

Service-Configuration Options

Each of the options available under Service-Configuration are described in the following table. You must have the Service password to access or update these Web pages.

> **NOTES:**
>
> *It is the responsibility of the servicing dealer and/or system administrator to set and secure passwords in the Web Utilities.*
> *To access the Service area, enter the User Name* **service***. The default password is blank and should be changed when the printer is installed.*

Table 4-4. Service-Configuration Options

Option	Description
Password	Allows you to set or change the Service password.
License Keycode	Allows you to enter a License Keycode.
Events	Use the Configuration Events page to set the value for reporting of the PM Warning, engine page count and event log.
Address Book	Displays the Address Book page used to set up E-mail recipients for event notification.
Dealer	Use this page to set up Dealer contact information. This information is displayed when the Vendor button is selected from the top bar.
Misc	Use this page to set some miscellaneous parameters.

Configuration-Password

The Configuration Password page provides the ability to enter or modify the service password. The service password provides security to restrict access to the Service area of the Web Utilities. Failure to set these passwords reduces the security of these sensitive areas, possibly allowing end users to gain access to servicing options.

Figure 4-17. Configuration-Password

Configuration-License Keycode

The License Keycode page provides the ability to enter or modify the keycode. The printer will reboot if the keycode is changed and any print data left in the printer will be lost.

This menu will be showed when the printer can support optional IPDS.
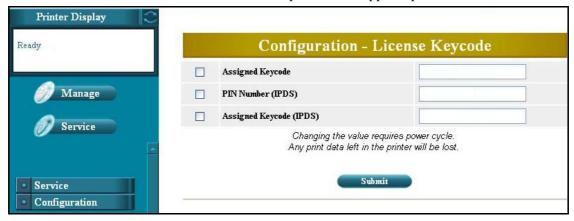
Figure 4-18. Configuration-License Keycode(1)

This menu will be showed when the printer can not support optional IPDS.
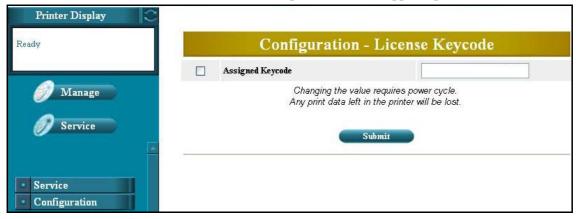
Figure 4-19. Configuration-License Keycode(2)

This License Keycode is set as unique integer by factory setting.

| M M | L | 0 2 | |

Configuration-Events

Use the Configuration Events page to set the value for reporting of the PM Warning, engine page count and event log. Use the checkbox to select E-mail notification for a specific event, then click the Rolodex icon to select the email recipients. Each event can have its own list of recipients. Click **Submit** to enter.
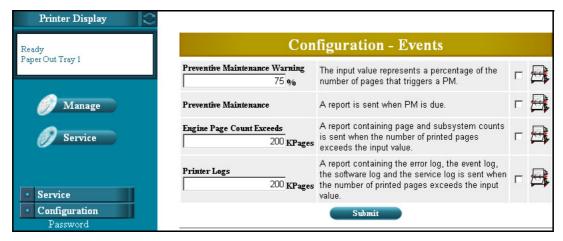
Figure 4-20. Configuration-Events

Address Book Pop Up

The Address Book pop-up is displayed when the Rolodex-icon on the Events page is clicked. Use the checkbox to select the recipients of an event notification.

You can also modify or delete names and addresses on this page. Use the trash can icon to delete an individual name, or the checkbox to delete multiple names.

Figure 4-21. Address Book Pop Up

NOTES:
Names appearing in light blue cannot be removed or modified. Use the Service-Configuration-Address Book page to add, remove or modify e-mail recipients.

Configuration-Address Book

Use the Address Book page to set up E-mail recipients for event notification. Use the checkbox to designate the corresponding name as a recipient that can be deleted only in the "Service/Configuration/Address Book" window. This will cause the name to appear light blue in other displays of the Address Book. Click the trash can icon to delete a single name, or use the checkbox to select multiple names for deletion, then click the **Delete Selected** button.

The maximum number of entries is 20. The maximum number of characters before and after the @ sign is 32.

Figure 4-22. Configuration-Address Book

| M M | L | 0 1 | |

Configuration-Dealer

The Configuration Dealer page contains the dealer's contact information. The information entered here is displayed on the Vendor page which is available to all users.

Figure 4-23. Configuration-Dealer

M M   L   0 1

Configuration-Misc

Use the Configuration Misc page to set some miscellaneous parameters. Click **Submit** to enter.
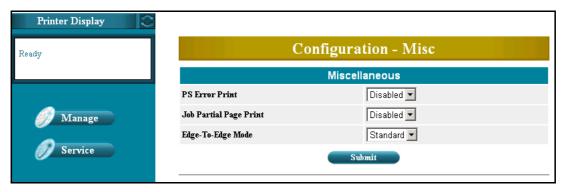
Figure 4-24. Configuration-Misc

- PS Error Print

    When enabled, PS error message will be printed on the Accounting Slip Sheet if PS error is happened.

- Job Partial Page Print

    Set Enable or disable the Job Partial Page Print function.

- Edge-to-Edge Mode

    Set to Standard or Enhance. When set to Standard, printer performs actual Edge-to-Edge print. When set to Enhance, printer defines very small print margin to the paper edge.

M M	L	0 1	

Chapter 5
Service Procedures

Generally, the controller assembly does not require regular service or maintenance. Use the procedures in this chapter to inspect, remove, reseat, or replace major hardware components and also to install system software.

Overview

This chapter includes information on servicing the following components:
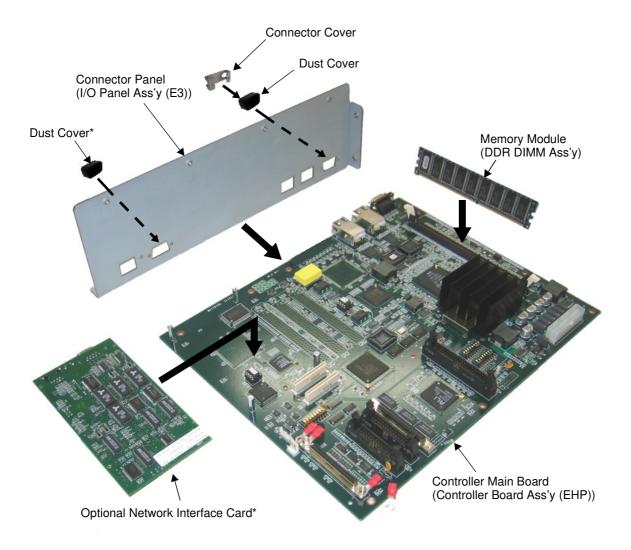
- Controller Main Board

- Controller internal cable connections

- Optional Network Interface Card

- Memory Module

- Hard disk drive (HDD)

- Fan

- Operator Control Panel (OCP)

- System software

See Figure 5-1 for an overview of controller assembly components. Replacement parts are available from your authorized service representative.

Before performing the procedures described in this chapter, see "Precautions" on page 1-3 and "Tools You Will Need" on page 1-5.

MM   L   0 0

Controller Assembly Diagram

Connector Cover

Dust Cover

Connector Panel
(I/O Panel Ass'y (E3))

Dust Cover*

Memory Module
(DDR DIMM Ass'y)

Controller Main Board
(Controller Board Ass'y (EHP))

Optional Network Interface Card*

* Exists only if the Multi-protocol Network Interface Option is installed.

** This figure shows the CL121 board.

Figure 5-1. Controller Assembly and Parts

Accessing the Controller Assembly

A diagram of the controller assembly is shown in Figure 5-1. When the entire controller assembly is installed inside the printer, the ports for external devices are accessible from the left side panel of the printer.

Always use the following procedures when accessing the controller assembly. Make sure you attach an ESD grounding wrist strap and follow standard ESD (electrostatic discharge) precautions before following this procedure.

Shutting Down the Printer

1. Make sure that the Operator Control Panel (OCP) is idle.

   When Processing appears on the OCP, the controller is currently processing. Ready/(blank), Ready/Heater Off Mode (Sleep Mode), or Pause/Off-line/Heater Off Mode(Sleep Mode) appears on the OCP when the controller has finished processing.

2. Turn off the power switch on front face, and turn off the AC switch on left side.

3. Unplug the power cable from the wall outlet.

⚠️ *WARNING!*

To avoid serious injury or death, disconnect the power cord from the power outlet. Do not attempt to perform any servicing operation when the power cord is connected to the power outlet. The AC line voltage is present inside the controller enclosure regardless of the main power switch position.

| M M | L | 0 0 | |

Accessing the Controller Assembly

1. Make sure you have shut down the printer and unplugged the power cable from the wall.

2. Remove all external cables connected to the left side panel.

3. Remove the Rear Cover (R) by removing the screws.
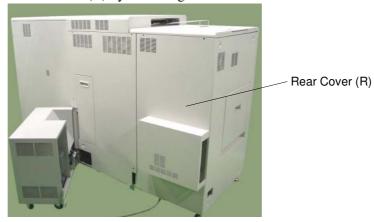
Figure 5-2. Accessing the Controller Assembly (1)

4. Remove the twelve screws that secure the Controller box (CE box) cover.
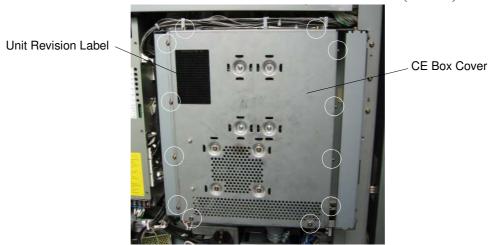
Figure 5-3. Accessing the Controller Assembly (2)

⚠️ *CAUTION!*

The Hard Disk Drive (HDD) is attached to the CE box cover and has a cable connection. Take precautions to not damage the HDD cable when removing the CE cover from the printer.

5. Open the CE Box Cover. The controller board is now accessible. A diagram of the controller assembly is shown in Figure 5-1.

| M M | L | 0 1 | |

Checking Internal Connections

The most common causes of hardware problems are faulty or loose connections. Once you conclude that all the external connections are good, check the internal connections.

1. Before you touch any parts inside the printer, attach an ESD grounding wrist strap.

2. Inspect the internal cables for any damage.

3. Make sure that the HDD Cable and the HDD Power Cable are certainly connected to the HDD.
And also check the contact point between the cable and the connector of the HDD Cable to ensure that they have not separated. If a cable is suspect, substitute it with a tested cable.

HDD Cable

HDD

HDD Power Cable
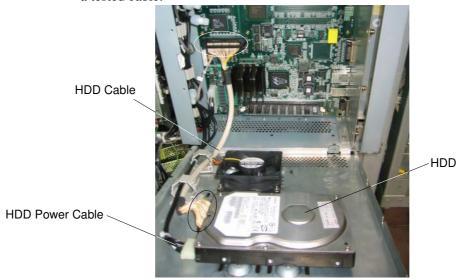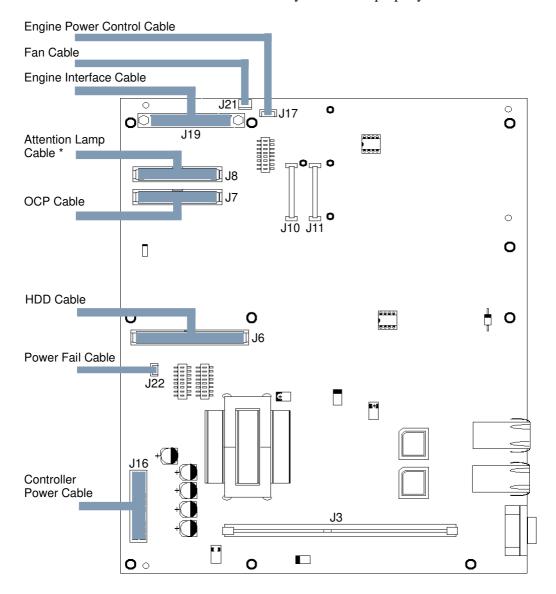
Figure 5-4. Checking Internal Connection (1)

| M M | L | 0 0 | |

4. Make sure that all cables shown below are certainly connected to the Controller Main Board.
And also make sure that the Memory Module are properly inserted into the socket.

Engine Power Control Cable

Fan Cable

Engine Interface Cable

Attention Lamp
Cable *

OCP Cable

HDD Cable

Power Fail Cable

Controller
Power Cable

J21
J17
J19
J8
J7
J10 J11
J6
J22
J16
J3

* Exists only if the Attention Lamp Option is installed.

Figure 5-5. Checking Internal Connection (2)

| M M | L | 0 1 | |

Table 5-1. Checking Internal Connection

Cable	From	To
HDD Cable	Controller Main Board	HDD
HDD Power Cable	Power Supply	HDD
Controller Power Cable	Power Supply	Controller Main Board
Power Fail Cable	AC011 P/K	Controller Main Board
OCP Cable	Controller Main Board	OCP
Attention Lamp Cable *	Controller Main Board	IF65x P/K *
Engine Interface Cable	Controller Main Board	OC34x P/K
Fan Cable	Controller Main Board	Fan
Engine Power Control Cable	Controller Main Board	Power Supply

* Exists only if the Attention Lamp Option is installed.

M M   L   0 0

Restoring Controller Functionality After Service

1. Reinstall any internal boards, cables, connectors, and other parts of the controller assembly that you removed during inspection or service.

2. Place back the power cable.

3. Reinstall any external cables you removed from the Connector Panel.

4. Verify controller operation as outlined below.

```
┌─────────────────────────────┐
│ Power on the printer and print the │
│    controller Status Page.   │
└─────────────────────────────┘
              │
              ▼
┌─────────────────────────────┐
│   Connect the controller to the   │
│ network and/or parallel port of a PC. │
│   See "Checking Connections" on   │
│           page 6-2.           │
└─────────────────────────────┘
```
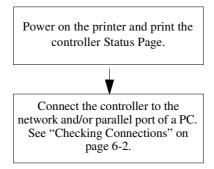
Figure 5-6. Controller Connection Verification Steps

| M M | L | 0 0 | |

Removing and Replacing Circuit Boards

This section describes the procedure for removing and replacing the following boards:

- Controller Main Board

- Memory Module

- Optional Network Interface Card*

- Operator Control Panel

Controller Main Board

This section includes instructions for replacing the Controller Main Board. The Controller Main Board is installed in the CE Box on permanent standoffs. Two kind of spare parts are supplied for this printer.

Table 5-2. Controllr Main Board

Parts No.	Parts Name	Board Name	For
G1551970	Controller Board Assy(EHP)	CL121	Unit Revision "M" not applied machine *
G1558970	Controller Board Assy(EHP)	CL146	Unit Revision "M" applied machine (RoHS machine) *

* Unit revision is shown in the Unit Revision Label. Refer to Figure 5-3 on page 5-4 for location of the Unit Revision Label.

Before you can remove the controller board you must remove:

- All cables connected to the Controller Main Board

- Memory Module

- Optional Network Interface Card **

** Exists only if the Multi-protocol Network Interface Option is installed.

Removing the Controller Main Board

⚠ *CAUTION!*

Do not exchange battery. There is danger of explosion if battery is replaced incorrectly. Dispose of used in accordance with local regulations. Do not dispose in fire.

1. Print the Status Page from the Reports menu.

   After you replace the Controller Main Board, you will need to:

   ❒ reinstall system software.

   ❒ install a new keycode if the printer has options installed. A new keycode is required to enable the printer options.

   Setup settings are reset to the default configuration when you reinstall system software. The Status page gives you current Setup information that you can refer to after you replace the controller board.

2. Note the PCL Font List from the Status page.

   The Font List details what fonts are installed on the controller HDD. Along with the fonts that are provided on the distribution CD, the customer may have installed additional fonts that will be deleted when you replace the controller board.

3. Shut down and open the CE Box Cover as described in "Accessing the Controller Assembly" on page 5-3.

4. Remove all external cables connected to the Connector Panel.

5. Disconnect following all cables from the Controller Main Board. (Refer to Figure 5-5 on page 5-6 for each cable locations, and refer to)

   ❒ Controller Power Cable from connector J16

   ❒ Engine Interface Cable from connector J19

   ❒ HDD Cable from connector J6

   ❒ OCP Cable from connector J7

   ❒ Attention Lamp Cable from connector J8 (If exist)

   ❒ Engine Power Control Cable from connector J17

   ❒ Fan Cable from connector J21

   ❒ Power Fail Cable from connector J22

6. Remove the 9 screws that mounts the Controller Main Board to the CE Box, and remove 2 screws that joints the Connector Cover and the Connector Panel to the Controller Main Board. If the Optional Network Interface Card is installed, also remove the 2 screws that joints the Connector panel to the Network Interface Card.

7. Remove the Connector Cover and the Dust Cover from the Connector.

8. Remove the Controller Main Board and place it on a flat surface.

9. Remove the Optional Network Interface Card (if installed) from the Controller Main Board by removing 4 screws (see "Network Interface Card" on page 5-13).

10. Remove the Memory Module from the Controller Main Board socket J3.

11. Place the Controller Main Board into an antistatic bag.

| M M | L | 0 2 | |

Replacing the Controller Main Board

1. Assemble the Optional Network Interface Card (if installed) onto the Controller Main Board connectors J10 and J11, and bind the screws. (see "Replacing the Network Interface Card" on page 5-13).

2. Assemble the Memory Module onto the Controller board connectors J2 (see "Replacing or Upgrading a Memory Module" on page 5-14.

3. Place the Controller Main Board into the CE Box, and bind the screws.

> **NOTES:**
> *Make sure that the Ethernet connectors are correctly aligned in the cutouts of the Connector Panel before you binding the screws.*

4. Connect following all cables to the Controller Main Board. (Connector locations of Controller Main Board is shown below. Refer to Figure 5-5 on page 5-6 for each cable locations.)

- ❑ Power Fail Cable to connector J22
- ❑ Fan Cable to connector J21
- ❑ Engine Power Control Cable to connector J17
- ❑ Attention Lamp Cable to connector J8 (If exist)
- ❑ OCP Cable to connector J7
- ❑ HDD Cable to connector J6
- ❑ Engine Interface Cable to connector J19
- ❑ Controller Power Cable to connector J16

M M	L	0 1	

J16

J22

J6

J17

J21

J19

J7

J8

* This figure shows the CL121 board.
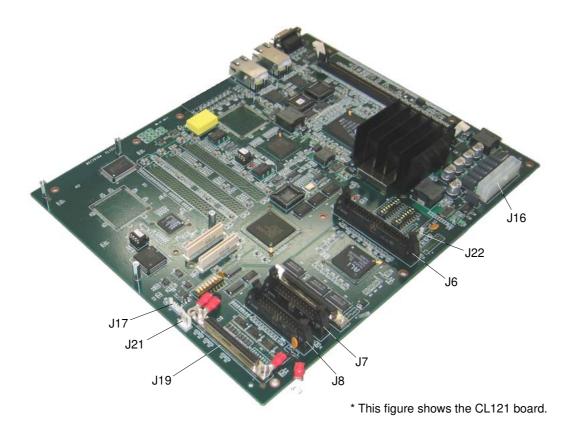
Figure 5-7. Connector Locations of Controller Main Board

5. Reassemble the printer as described in "Accessing the Controller Assembly" on page 5-4 or other documentation.

6. If the printer has options installed, you need to install a new keycode as described in "Backup and Restore" on page 5-24.

7. Verify controller operation as described in "Restoring Controller Functionality After Service" on page 5-8.

8. Perform the Backup/Restore function by operating following OCP menu.

❏ *Setup/Service/Backup/Restore/Restore/Controller*

❏ *Setup/Service/Backup/Restore/Backup/HDD Data*

| M M | L | 0 1 | |

Network Interface Card

This section contains instructions for replacing the optional Network Interface Card. The Network Interface Card is mounted onto controller board connectors J10 and J11 if the Multi-protocol Network Interface Option is installed.

Removing the Network Interface Card

1. Shut down and open the CE Box Cover as described in "Accessing the Controller Assembly" on page 5-3.

2. Remove 4 screws from the corners of the Network Interface Card, and remove 2 screws from the Connector Plate.

3. Remove the Network Interface Card from the controller board connectors J10 and J11.

4. Place the Network Interface Card into an antistatic bag.

Replacing the Network Interface Card

1. Reassemble the Network Interface Card in reverse order of disassembling it.

> *NOTES:*
>
> *Make sure that the connectors are lined up properly before pressing them into the controller board.*
>
> *Make sure that the ports are correctly aligned in the cutouts of the Connector Panel before you binding the screws.*

2. Reassemble the printer as described in "Accessing the Controller Assembly" on page 5-4 or other documentation.

3. Verify controller operation as described in "Restoring Controller Functionality After Service" on page 5-8.

| MM | L | 0 0 | |

Memory Module

Memory Module is held in place by levers at each end of its socket on the Controller main Board. Two kind of spare parts are supplied for this printer.

Table 5-3. Memory Module

Parts No.	Parts Name	Type	For
G1551969	DDR DIMM Assy	DDR DIMM 256MB	Unit Revision "M" not applied machine *
G1558969	DDR DIMM Assy	DDR DIMM 512MB	Unit Revision "M" applied machine (RoHS machine) *

* Unit revision is shown in the Unit Revision Label. Refer to Figure 5-3 on page 5-4 for location of the Unit Revision Label.

Figure 5-8 shows where Memory Module are installed on the Controller Main Board.

NOTE:

Approved Memory Module are available from your authorized service representative.

Replacing or Upgrading a Memory Module

1. Shut down and open the CE Box Cover as described in "Accessing the Controller Assembly" on page 5-3.

2. To release a Memory Module, push outward on the lever on each side of the Memory Module.

Figure 5-8. Releasing a DIMM

M M	L	0 1	

3. Slide the Memory Module out from the socket.

4. Insert a new Memory Module into the socket.

> **NOTE:**
> *The Memory Module fits the socket only one way. The notch on the bottom of the Memory Module should line up with the notch in the socket.*
>
> *Do not touch to the terminals on the edge of the Memory Module when inserting.*

5. Push the Memory Module into the socket until the levers snap into place.

> **NOTE:**
> *Avoid flexing the Controller Main Board and the Memory Module while you pushing the Memory module into the socket.*
>
> *Make sure that the levers close securely around the ends of the Memory Module and that the Memory Module is fully seated in its socket.*

6. Reassemble the printer as described in "Accessing the Controller Assembly" on page 5-4 or other documentation.

7. Verify controller operation as described in "Restoring Controller Functionality After Service" on page 5-8.

| M M | L | 0 1 | |

Removing and Replacing the Hard Disk Drive

The factory-installed hard disk drive (HDD) is formatted and stored with all controller software, including operating software, system software, and printer fonts. Because the HDD is used to store spooled print jobs, available disk space is displayed on the Info screen.

The HDD is secured to the CE Box Cover as shown in Figure 5-4 on page 5-5. Two kind of spare parts are supplied for this printer.

Table 5-4. Hard Disk Drive

Parts No.	Parts Name	For
G1551971	HDD Maintenance Assy(EHP)	Unit Revision "M" not applied machine *
G1555971	HDD Maintenance Assy(EHP)	All machine

* Unit revision is shown in the Unit Revision Label. Refer to Figure 5-3 on page 5-4 for location of the Unit Revision Label.

Proper Handling

Handle the HDD with care:

- Use proper ESD practices when grounding yourself and the controller.

- Keep magnets and magnetic-sensitive objects away from the HDD.

- Loosening the screws on the top of the HDD voids the warranty.

- Never drop, jar, or bump the HDD.

- Handle the HDD by its sides and avoid touching the printed circuit board assembly.

- Allow the HDD to reach room temperature before installation.

Before you decide that the HDD needs to be replaced, make sure that all cables are connected properly.

Removing the Hard Disk Drive

> **NOTE:**
> *The current controller software revision should be checked by following OCP menu before removing the HDD.*
> ***Information/Printer/Controller Revision***

⚠️ **CAUTION!**

Commercially-available fonts downloaded in the HDD become unuseable after replacing the HDD. Hence, the user must download the fonts to the HDD again after replacing. Explain and ask it to user before removing HDD.

1. Shut down and open the CE Box Cover as described in "Accessing the Controller Assembly" on page 5-3.

2. Disconnect following cables from the Controller Main Board. (Refer to Figure 5-5 on page 5-6 for each cable locations.)

   ❏ HDD Cable from connector J6

   ❏ Fan Cable from connector J21

3. Release the Fan Cable from the cable clamps in the CE Box.

4. Disconnect the HDD Power Cable from the HDD. (Refer to Figure 5-4 on page 5-5 for cable locations.)

5. Release the HDD Power Cable from the cable clamps on the CE Box Cover.

6. Remove the CE Box Cover from the CE Box.

7. Disconnect the HDD Cable from the HDD.

8. Remove the 4 screws that secure the HDD to the CE Box Cover.

9. Remove the HDD from the CE box cover and place the HDD in an antistatic bag.

NOTE:
Do not touch the drive with magnetic objects, such as magnetic screwdrivers.

Do not place items near the hard disk drive that are sensitive to magnets, such as credit cards and employee ID cards.

| M M | L | 0 1 | |

Replacing the Hard Disk Drive

1. Secure the HDD to the CE Box Cover using the 4 screws.

2. Connect the HDD Cable to the HDD.

3. Set the CE Box Cover to the CE Box. Inserts 2 latches of the CE Box into the hole of the CE Box Cover.

4. Connect the HDD Power Cable to the HDD.

5. Clamp the HDD Power Cable by the cable clamps on the CE Box Cover.

6. Connect the Fan Cable to the Controller Main Board connector J21.

7. Clamp the Fan Cable by the cable clamps in the CE Box.

8. Connect the HDD Cable to the Controller Main Board connector J6.

9. Reassemble the printer as described in "Accessing the Controller Assembly" on page 5-4 or other documentation.

10. Verify controller operation as described in "Restoring Controller Functionality After Service" on page 5-8.

11. If the replaced HDD has a same controller software revision, perform following Backup/Restore items. If the replaced HDD has a different revision, skip to next step.

    ❑ *Setup/Service/Backup/Restore/Restore/HDD Data*

    ❑ *Setup/Service/Backup/Restore/Backup/Engine Data*

    ❑ *Setup/Service/Backup/Restore/Backup/Controller*

12. If the replaced HDD has a different controller software revision, perform following Backup/Restore item.

    ❑ *Setup/Service/Backup/Restore/Backup/All*

Reinstalling the Keycode

If the optional IPDS is installed on the HDD, following procedures are needed.

1. Start your Internet Browser application.

2. To access the Web Tools, enter the IP address of the printer. (The IP address can be obtained from the OCP.)

3. Select Service.

4. In the Password dialog enter service in the User Name text box and enter the Password (if required). Click OK.

5. Select License Keycode from the Configuration menu to display the Configuration-Keycode window.

6. Enter IPDS Option PIN Number in PIN Number(IPDS) text box, and enter the keycode for IPDS in the Assigned Keycode(IPDS) text box.

7. Check the box in the select column, and click Submit.

8. The following message will be displayed:
   "Keycode was accepted. Reset in progress. It will take several minutes. Please wait."

| M M | L | 0 2 | |

Removing and Replacing the Fan

This section contains instructions for removing and replacing the Fan. The Fan is secured to the CE Box Cover as shown in the Figure 5-4 on page 5-5. Two kind of spare parts are supplied for this printer.

Table 5-5. Fan

Parts No.	Parts Name	For
G1551675	Fan Assy(CE)	Unit Revision "M" not applied machine *
G1555675	Fan Assy(CE)	All machine

* Unit revision is shown in the Unit Revision Label. Refer to Figure 5-3 on page 5-4 for location of the Unit Revision Label.

Removing the Fan

1. Shut down and open the CE Box Cover as described in "Accessing the Controller Assembly" on page 5-3.

2. Disconnect following cables from the Controller Main Board. (Refer to Figure 5-5 on page 5-6 for each cable locations.)

   ❐ HDD Cable from connector J6

   ❐ Fan Cable from connector J21

3. Release the Fan Cable from the cable clamps in the CE Box.

4. Disconnect the HDD Power Cable from the HDD. (Refer to Figure 5-4 on page 5-5 for cable locations.)

5. Release the HDD Power Cable and Fan Cable from the cable clamps on the CE Box Cover.

6. Remove the CE Box Cover from the CE Box.

7. Remove the 4 screws that secure the Fan to the CE Box Cover.

8. Remove the Fan from the CE Box Cover.

Replacing the Fan

1. Secure the Fan to the CE Box Cover using the 4 screws.

2. Connect the HDD Cable to the HDD.

3. Set the CE Box Cover to the CE Box. Inserts 2 latches of the CE Box into the hole of the CE Box Cover.

4. Connect the HDD Power Cable to the HDD.

5. Clamp the Fan Cable and the HDD Power Cable by the cable clamps on the CE Box Cover.

6. Connect the Fan Cable to the Controller Main Board connector J21.

7. Clamp the Fan Cable by the cable clamps in the CE Box.

8. Connect the HDD Cable to the Controller Main Board connector J6.

9. Reassemble the printer as described in "Accessing the Controller Assembly" on page 5-4 or other documentation.

10. Verify controller operation as described in "Restoring Controller Functionality After Service" on page 5-8.

| M M | L | 0 1 | |

Removing and Replacing the Operator Control Panel

This section contains instructions for removing and replacing the Operator Control Panel. Two kind of spare parts are supplied for this printer.

Table 5-6. Operator Control Panel

Parts No.	Parts Name	For
G1551514	Panel Assy	Unit Revision "M" not applied machine *
G1558514	Panel Assy	Unit Revision "M" applied machine (RoHS machine) *

* Unit revision is shown in the Unit Revision Label. Refer to Figure 5-3 on page 5-4 for location of the Unit Revision Label.

Removing the Operator Control Panel

1. Shut down the printer as described in "Shutting Down the Printer" on page 5-3.

2. Open the front cover of the printer.

3. Remove the Rear Cover (R) by removing the screws.

4. Open the Air System by removing screws.

Figure 5-9. Removing the Operator Control Panel (1)

5. Open the Filter Cover, and disconnect the wires by removing screws.
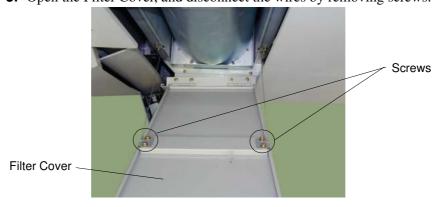
Figure 5-10. Removing the Operator Control Panel (2)

M M	L	0 1	

6. Remove the Rear Cover (L) by removing the screws.

7. Remove the Top Cover (R) by removing screws

Top Cover (R)   Screws
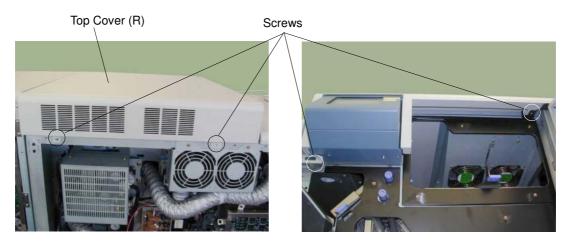
Figure 5-11. Removing the Operator Control Panel (3)

8. Remove the Panel Lower Cover by removing screws.

Panel Lower Cover   Screws
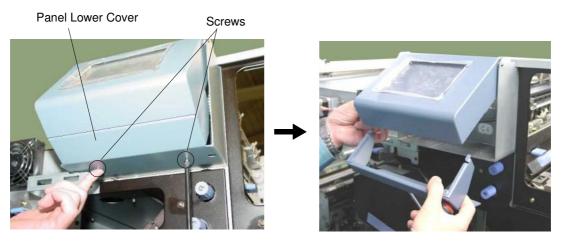
Figure 5-12. Removing the Operator Control Panel (4)

9. Disconnect the FG Cable by removing a screw.

Screw   FG Cable
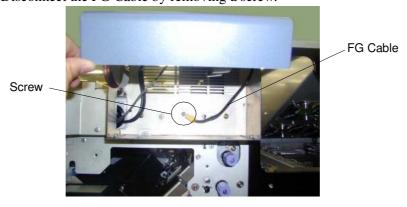
Figure 5-13. Removing the Operator Control Panel (5)

| M M | L | 0 1 | |

10. Disconnect the two cables from the OCP Ass'y.

Cables
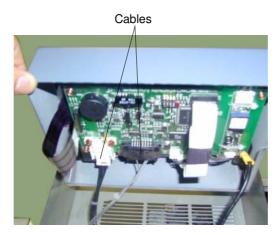
Figure 5-14. Removing the Operator Control Panel (6)

11. Remove the OCP Ass'y from the frame.

Figure 5-15. Removing the Operator Control Panel (7)

Replacing the Operator Control Panel

1. Replace the Operator Control Panel in the reverse order of "Removing the Operator Control Panel" above.

2. Verify controller operation as described in "Restoring Controller Functionality After Service" on page 5-8.

> **NOTE:**
>
> *Panel Assy is used the following Fuse(F1)*
> *Fuse(F1): BOURNS INC., Type MF-R110, Rated 30VDC/1.1A*
> *Fuse(F1 on Inverter): SKYGATE Co., Ltd., Type 20N0750mA-FS,*
> *Rated 125VAC/0.75A*

Backup and Restore

The Backup/Restore feature is used to save vital data during printer service. Internal printer configuration data is saved to different locations depending on its origin.
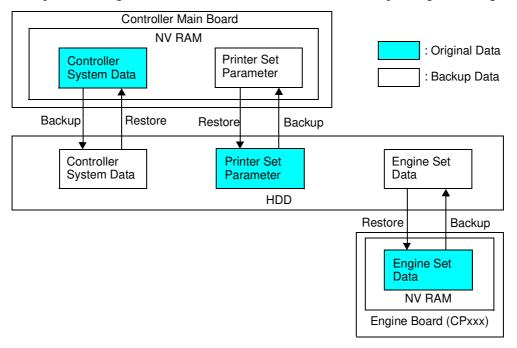
Figure 5-16. Backup and Restore

The printer data are backed up at the following opportunities:

1. When the printer initializes.

2. When the printer clock turns to 1:00 a.m (Default).
Backup Time (o'clock) can be modified by OCP.

3. When the OCP Backup/Restore manual backup function is used.

The automatic backup function is only executed if the original time and backup time are the same. If the original time and backup time are different or the Backup/Restore menu displays "unavailable", then the OCP Backup/Restore Manual Backup Function "All" must be used.

Restoring previously saved data to a HDD containing a different version of the controller software may render the printer unusable

*When the HDD is replaced, the **Restore/HDD Data** should be selected. Also, the **Backup/ENGINE** and **CONTROLLER** functions should be selected.*

*When the CPxxx Assembly is replaced, the **Restore/ENGINE Data** should be selected.*

*When the Controller Main Board is replaced, the **Restore/CONTROLLER Data** should be selected.*

The table below shows the source and destination of data for the Backup/Restore function as well as the menu hierarchy.

Table 5-7. Backup and Restore

Service	Option	Option	Source/Destination
Backup/Restore	Backup	All	(Backup all data)
		HDD Data	HDD to NVRAM
		Engine Data	Engine Controller to HDD
		Controller	Egret NVRAM to HDD
	Restore	HDD Data	NVRAM to HDD
		Engine Data	HDD to Engine Controller
		Controller	HDD to Egret NVRAM

If you see the word *unavailable* next to an item during a backup/restore, it means that the backup procedure has never been completed and, therefore, there is no backup data to restore. When a backup has been completed, a date is next to the item, indicating when the backup was performed.

M M	L	0 2	

Installing a New Keycode

A new keycode is required to enable IPDS option. The keycode is obtained from Customer Support and is installed via the Web Tools.

To obtain a new keycode, contact Customer Support and have the following information available:

- Printer serial number.

Installing the Keycode

1. Start your Internet Browser application.

2. To access the Web Tools, enter the IP address of the printer. (The IP address can be obtained from the OCP.)

3. Select Service.

4. In the Password dialog enter **service** in the User Name text box and enter the Password (if required). Click OK.

5. Select License Keycode from the Configuration menu to display the Configuration-Keycode window.

6. Enter IPDS Option PIN Number in PIN Number(IPDS) text box, and enter the keycode for IPDS in the Assigned Keycode(IPDS) text box.

7. Check the box in the select column, and click Submit.

8. The following message will be displayed:
   "Keycode was accepted. Reset in progress. It will take several minutes. Please wait."

| M M | L | 0 3 | |

Chapter 6
Troubleshooting Procedures

This chapter focuses on the troubleshooting process and identifies the source of common problems that may occur with the controller assembly and suggests ways of correcting them. This chapter does not attempt to provide troubleshooting information for attached computers such as Windows, for printers, or for extensive networks. Refer problems in these areas to the appropriate service departments and network administrators.

The Troubleshooting Process

The troubleshooting process is designed to eliminate the most obvious causes of failure before progressing to more complex issues. "Where Problems Occur" on page 6-1 gives an overview of the controller components and indicates areas most likely to require troubleshooting.

If the controller fails to complete its Start-up sequence and the printer does not reach Idle, the most likely cause is a loose cable or board connection. See "Errors During Start-up Diagnostics" on page 6-2 for the different error messages that are reported to the Control Panel and "Checking Internal Connections" on page 5-5.

- Try a phone check before you go to the customer site.

  "Before You Go to the Customer Site" on page 6-2 suggests areas you should check out before making a service call to the customer site. With a phone call, you can find out if the problem is a simple operating failure or a failure caused by a network or configuration change. You can ask the customer to check for loose cables on the side of the printer and loose connections at a power strip or outlet.

- Check for obvious causes of problems.

  "Preliminary On-site Checkout" on page 6-2 takes you through the initial visual checkouts you should make when you arrive at the customer site. You should check the Control Panel for an error message and see if the activity lights indicate an error condition. Then inspect the printer externally and internally for the most common problems, such as loose or faulty cables.

- Check network connections.

  "Checking Network Connections" on page 6-9 provides guidelines for checking the network connections between the printer and the computers to which it is connected as well as information on several printing problems.

Where Problems Occur

The controller as a built-in print server for the printer is generally part of a configuration like the one shown in Figure 2-1. Problems may occur in one of the following areas:

- The interface between the controller board and the printer

- The interface between the controller and computers that print to it

- The controller board or printer itself

| M M | L | 0 0 | |

Before You Go to the Customer Site

Before you make a service call to a customer site, talk to the customer on the phone and check out the following items:

1. Does the printer work?

If the printer works, but the user cannot print the controller Status Page, have the customer check for any error messages in the Control Panel. If the Control Panel reports an error, check the printer interface cables between the controller and the printer.

2. Has the customer made any network changes?

If network changes have occurred, request that the customer's network administrator verify the controller network requirements.

3. Is the user having printing problems with a particular image file?

If there are problems with files from particular applications, the user may be more successful using different print settings.

If your telephone call fails to clear up the problem, proceed to the next phase, the preliminary on-site checkout.

Preliminary On-site Checkout

Your goal in the preliminary on-site checkout is to eliminate obvious problems, such as loose or missing cables and connectors.

Checking Connections

Before you remove the printer cover to inspect cables:

■ If a PC is attached to the controller network port, make sure that the network cable is properly connected.

■ Make sure the printer power cable is plugged into the wall outlet and that the printer is powered on.

After above, check internal cable connection refer to "Checking Internal Connections" on page 5-5.

If all the connectors are in place and the problem still exists when the printer is powered on, then proceed to the next stage of troubleshooting.

Errors During Start-up Diagnostics

When you power on the printer, the system goes through a series of diagnostic tests that check the controller board.

If an error occurs during the Start-up diagnostics, the OCP keep displaying the Printer Logo screen, and the printer does not come up to the Ready state.

M M	L	0 0	

When you encounter any of these conditions, power off and open the printer and inspect the controller for an obviously loose part or cable. Then check the other components as suggested below. For all service, refer to "Accessing the Controller Assembly" on page 5-4. When you are done, refer to "Restoring Controller Functionality After Service" on page 5-8.

General Controller System Errors
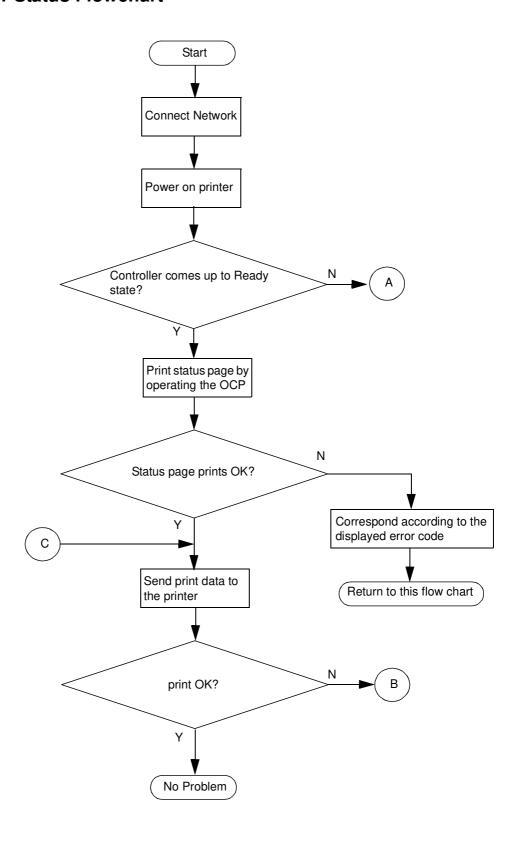
When you start up the system or when you install system software, you may encounter error conditions that are not reported during the Start-up diagnostics. Table 6-1 lists some of these error conditions and suggests corrective action.

When you first encounter any of these error conditions, power off and open the printer and inspect the controller assembly for any obviously loose parts or cables. Then check other components as suggested below.

Table 6-1. General Controller System Error Conditions and Messages
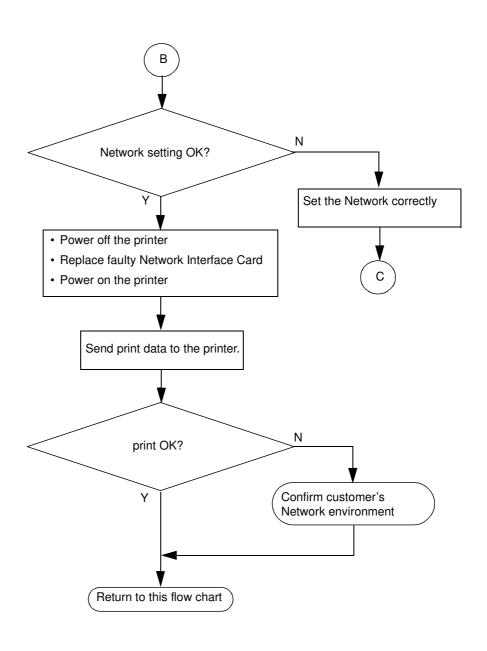
Symptom	Probable Cause	Suggested Action
Controller does not start up.	Power supply cable is not properly connected.	• Make sure that the printer power supply cable is connected to the controller assembly.
	Controller power supply has failed.	• Replace the controller power supply.
Touch pads do not work on the Operator Control Panel.	Connection to the OCP is faulty or the OCP is bad.	• Check the OCP cable connections to the controller board.
		• Power on the printer.
		• If the problem persists, replace the OCP cable.
		• If the problem still persists, replace the OCP.
	Faulty chip on the controller.	• Replace the controller board.
Nothing appears on the Operator Control Panel when the printer is powered on, or during operation.	Power connection to the OCP is faulty or the OCP is faulty.	• Check the power cable connection to the OCP board and the power supply.
		• Power on the printer.
		• If the problem persists, replace the OCP cable.
		• If the problem persists, replace the OCP.
	Faulty controller power supply.	• Check power supply cable connections to the power supply. (Refer to the Engine Maintenance Manual.)
		• If problem persists, replace the power supply.
Controller hangs when the printer is powered on, or during operation.	Faulty HDD.	• Replace the HDD.
	Faulty controller board.	• Replace the controller board.
Printer does not print.	Faulty controller board	• Replace the controller board.
	Faulty HDD.	• Replace the HDD.
	Faulty Network Interface Card.	• Replace the Network Interface Card (If installed).

M M	L	0 0	
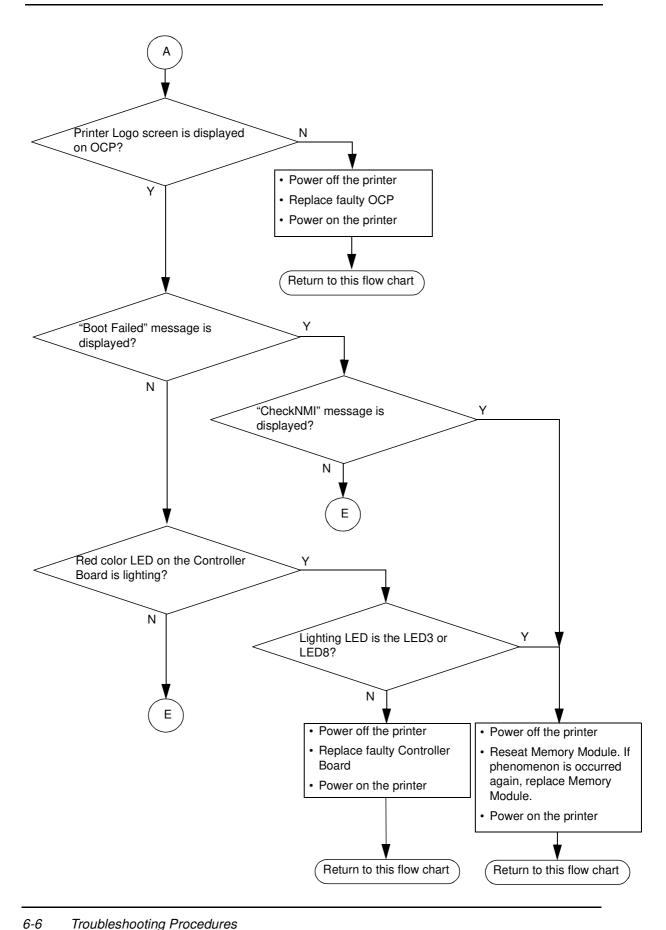
The Controller Status Flowchart

```
                    ( Start )
                       │
                       ▼
              ┌──────────────────┐
              │ Connect Network  │
              └──────────────────┘
                       │
                       ▼
              ┌──────────────────┐
              │ Power on printer │
              └──────────────────┘
                       │
                       ▼
               ◇ Controller comes up to Ready ◇ ──N──▶ ( A )
               ◇        state?              ◇
                       │
                       Y
                       ▼
              ┌──────────────────┐
              │ Print status page by │
              │ operating the OCP │
              └──────────────────┘
                       │
                       ▼
               ◇ Status page prints OK? ◇ ──N──▶ ┌────────────────────────┐
                       │                          │ Correspond according to the │
                       Y                          │ displayed error code   │
        ( C ) ──────▶ │                           └────────────────────────┘
                       ▼                                      │
              ┌──────────────────┐                           ▼
              │ Send print data to │                  ( Return to this flow chart )
              │ the printer       │
              └──────────────────┘
                       │
                       ▼
               ◇     print OK?     ◇ ──N──▶ ( B )
                       │
                       Y
                       ▼
                 ( No Problem )
```

```
                              ┌───┐
                              │ B │
                              └─┬─┘
                                │
                                ▼
                         ╱─────────────╲
                        ╱               ╲        N
                       ╱ Network setting ╲────────────────┐
                       ╲     OK?         ╱                 │
                        ╲               ╱                  ▼
                         ╲──────┬──────╱          ┌──────────────────┐
                            Y   │                 │ Set the Network  │
                                │                 │ correctly        │
                                ▼                 └────────┬─────────┘
                   ┌───────────────────────────┐          │
                   │ • Power off the printer    │          ▼
                   │ • Replace faulty Network   │        ┌───┐
                   │   Interface Card           │        │ C │
                   │ • Power on the printer     │        └───┘
                   └─────────────┬─────────────┘
                                 │
                                 ▼
                   ┌───────────────────────────┐
                   │ Send print data to the     │
                   │ printer.                    │
                   └─────────────┬─────────────┘
                                 │
                                 ▼
                          ╱─────────────╲
                         ╱               ╲      N
                        ╱   print OK?     ╲──────────────┐
                        ╲               ╱                │
                         ╲──────┬──────╱                 ▼
                            Y   │              ╭──────────────────────╮
                                │              │ Confirm customer's   │
                                │              │ Network environment  │
                                │              ╰──────────┬───────────╯
                                ▼◄───────────────────────┘
                      ╭───────────────────────╮
                      │ Return to this flow    │
                      │ chart                   │
                      ╰───────────────────────╯
```

A

Printer Logo screen is displayed on OCP? —N→

- Power off the printer
- Replace faulty OCP
- Power on the printer

Return to this flow chart

Y

"Boot Failed" message is displayed? —Y→

"CheckNMI" message is displayed? —Y→

N

E

N

Red color LED on the Controller Board is lighting? —Y→

Lighting LED is the LED3 or LED8? —Y→

N

E

N

- Power off the printer
- Replace faulty Controller Board
- Power on the printer

Return to this flow chart

- Power off the printer
- Reseat Memory Module. If phenomenon is occurred again, replace Memory Module.
- Power on the printer

Return to this flow chart

```
                        ┌───┐
                        │ E │
                        └───┘
                          │
                          ▼
            ╱─────────────────────────────╲
           ╱  Has this printer exchanged the ╲        Y
          ⟨   Controller Board Before?        ⟩──────────────┐
           ╲                                 ╱               │
            ╲─────────────────────────────╱                 │
                          │ N                                │
                          ▼                                  ▼
        ┌─────────────────────────────┐      ┌─────────────────────────────────┐
        │ • Power off the printer      │      │ • Power off the printer          │
        │                              │      │                                  │
        │ • Replace faulty Controller  │      │ • Replace faulty AC011 (Refer    │
        │   Board                      │      │   to Engine Maintenance          │
        │                              │      │   Manual) and HDD                │
        │ • Power on the printer        │      │                                  │
        │                              │      │ • Power on the printer           │
        └─────────────────────────────┘      └─────────────────────────────────┘
                          │                                  │
                          ▼◄─────────────────────────────────┘
              ╭─────────────────────────────╮
              │  Return to this flow chart   │
              ╰─────────────────────────────╯
```

| M M | L | 0 0 | |

Printing the Status Page

Print the Status Page to make sure that the interface between the printer and the controller is working properly.

If the Status Page does not print at all or has a low-quality image, the controller board, or printer interface cables may be faulty, or the printer may not be functioning properly. In these cases, you should first check controller board connections. If the Status Page still shows there is a problem, run the appropriate Custom diagnostics.

Follow the steps below to print the Status Page.

1. Power on the printer and allow it to warm up.

2. Before proceeding, make sure that the printer is not in use.
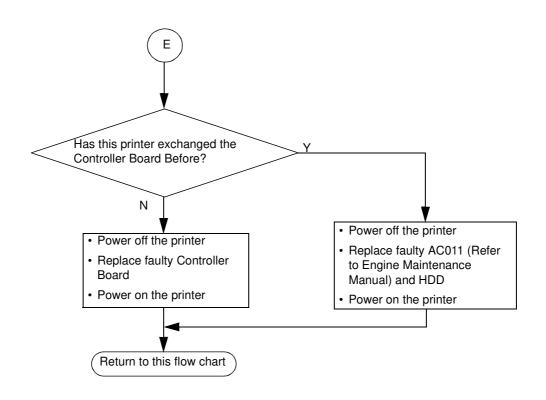
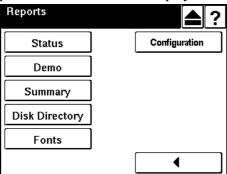3. Touch the Reports icon on the OCP to display the Reports menu (shown below).

Figure 6-1. Report menu

4. Touch Status.

    The controller sends the Status Page to the printer and displays Ready.

5. Examine the quality of the Status Page from the printer.

    The Status Page confirms that the connection between the controller and the printer is good.

| M M | L | 0 1 | |

Checking Network Connections

Printing problems may arise if the network hardware or software is not set up properly or does not match network settings on the controller. Problems may also arise when printing from a specific application or printing a particular file.

Most of these problems show up as printing problems and do not necessarily indicate a controller malfunction. The customer's network administrator can eliminate many printing problems without requiring you to make a service call. The network administrator deals with:

■   Print device error conditions

■   Network connection problems that result in the printer not appearing in the list of printers on the customer's computers

> **NOTE:**
> *If the printer does not appear in the list of printers on the network, there may be another device on the network with the same Ethernet hardware address.*

■   Conflicting network settings in Setup and on the customer's computers

■   Printing problems caused by inappropriate Setup options

■   Application-specific printing errors caused by missing or incorrectly installed printer description files

Printing to the Controller

If the customer can print a controller Status Page but cannot print a job from a computer on the network, you may have to make a service call. However, first make sure the network administrator has done the following:

■   Checked all components of the network including cables, connectors, terminators, network adapter boards, and network drivers.

■   Activated the network and used it to communicate with other printers.

■   Confirmed that the applicable network settings in Setup (such as IP address, Subnet mask, Gateway address, and HTTP port) match the settings used in the network.

When you make a service call, check the controller ports on the back panel of the printer to make sure that the appropriate network connection is in place.

Print quality problems are difficult to trace. Before you try to troubleshoot print quality problems, print a test page to make sure that the printer does not need servicing or adjusting. Also, make sure the correct paper is being used in the printer.

| M M | L | 0 0 | |

OCP Display Messages

The OCP displays the printer status with 1- to 2-line messages that appear on the LCD screen. There are three types of messages: status, warning, and error messages. The following tables lists the messages. Each message is explained and a corrective action is given when applicable.

Printer Status Message

Following table shows printer status messages.

Table 6-2. Printer Status Message

Message	Description	Corrective Action
Ready	The printer has warmed up and initialized and is idle while waiting for data.	None.
Pause/Offline	The printer was taken offline.	Touch ▶ to return to Ready status.
Printing *xxx* / *yyy*	Status message. Displays the number of copies printed / the number of copies requested.	Wait for the printer to return to a Ready state.
Printing	Status message. The printer is printing job.	Wait for the printer to return to a Ready state.
Processing	Status message. The printer is processing print job data.	Wait for the printer to return to a Ready state.
Wait	Status message.	Wait for the printer to return to a Ready state.
Waiting for data	Status message. May appear if: 1) a large file is being processed, 2) the network connection is slow, or 3) a print job was not terminated correctly.	Wait for the printer to return to Ready state.
Warming up	Status message. Displayed during the power up cycle.	Wait for the printer to reach a Ready state.
Loading Network	Status message. Network control is loading.	Wait for the printer to reach a Ready state.
Enter new password	Passwords are for use by System Administrator and Service Technicians only.	Enter a new password.
Enter new password again	Passwords are for use by System Administrator and Service Technicians only.	Enter a new password again.
Enter service password	You must provide the service password to gain access to the selected menu item.	Enter a service password.
Enter system password	You must provide the system password to gain access to the selected menu item.	Enter a system password.

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Table 6-2. Printer Status Message - Continued

Message	Description	Corrective Action
Paper Out *Tray Name*	The specified paper tray is out of paper	Load paper into the Tray.
Tray Name Active	Displayed during printing.	None
Input Keycode	A valid keycode is required to activate this feature.	Enter a Keycode.
Resetting	Status message. The printer is resetting the configuration.	Wait for the printer to return to Ready state.
Sleep Mode	The Energy Save time has been reached and the printer is in energy saving mode.	Touch the OCP to initialize the printer.
Duplex Always	Duplex-Always mode is enabled.	None
Spooling	The printer is spooling print data.	None
Preserving Parameters	The printer is saving user settings.	None
Deleting Jobs	Status Message. The selected jobs are being deleted from the print queue.	Wait for the printer to return to Ready state.
Spool directory is full	The disk space for LPD/RawTCP (Spool) is insufficient.	Refer to "Corrective Action to the Messages" on page 6-12.
Job too big - Data flushed	The disk space for RawTCP (spool) is insufficient	Refer to "Corrective Action to the Messages" on page 6-12.
Insufficient Disk Space One Copy Job *1	Since the capacity of a hard disk space is insufficient for MOP (Multiple Original Printing). Only one copy is printed.	Refer to "Corrective Action to the Messages" on page 6-12.

*1: The standard of the printing number of pages restrictions at the time of MOP (Multiple Original Printing) and Reverse Page Order is as follows.
However, following printing number of pages may change depending on actual printing environment.

Table 6-3. Printing number of pages of MOP and Reverse Page Order

Paper Size	Number of Pages	
	Duplex	Simplex
B5	3000	1500
Letter/A4	3000	1500
B4	2000	1500
Ledger/A3	2000	1500

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Printer Warning Message

Following table shows printer warning messages.

Table 6-4. Printer Warning Message

Message	Description	Corrective Action
Network Load Failed	Network connection error.	Check the Ethernet cable of the NIC.
Invalid password	A valid password is required to access this area of the OCP.	Retry password. If incorrect, create a new password.
Invalid value	Incorrect value entered.	Re-enter value.
Invalid Time Server Address	Incorrect value in time server IP address field.	Check the time server IP address via the Web Utilities.
PM Counter Exceeded	Printer exceeds a preventive maintenance period. Preventive maintenance is required.	Preventive Maintenance should be done. When Preventive Maintenance is done, the PM Counter should be reset. Refer to "PM Counter Reset" on page 3-16.
PM Counter Warning	Printer reaches a defined Preventive Maintenance Warning period.	Warning period can be defined by the Web. Refer to "Configuration-Events" on page 4-23.

Printer Error Message

Printer displays error message on OCP when the printer error is occurred.
When the Print Engine and Interface Error (EC#xx)is occurred, refer to the next section.
When the error occurred regarding print engine (Exxx) or non-fatal error, refer to the User's Guide or the Engine Maintenance Manual.

Corrective Action to the Messages

Followings are corrective action to some specific messages.

If this message appeared	Try this
• Spool directory is full • Job to big - data flushed • Insufficient Disk Space One Copy Job	• Wait until all of previous spooled job are printed, and resend the job. • Divide the job or reduce the amount of job data (acceptable amount of job data is up to 2GB).

Controller Error Codes

An extensive system of tests and checks are performed by the printer during the power-up cycle and normal operations. Most errors cause a message or an error code to be displayed. This section lists the errors with possible solutions.

The EC#xx error codes show errors and conditions that occur during communications between the controller and print engine. In some cases the errors may be cleared by pressing Continue. Printer operations may continue, but data may be lost.
All other EC errors and other controller errors are fatal errors that require the cycling of printer power.

For correcting of the controller errors, see "Corrective Action to the Controller Error Codes" .

Table 6-5. Terms Used in Error Codes

Term	Definition
CE	Controller.
CPF	Paper feed.
Cx..	Controller-generated signals.
DD	Device data.
DORMANT	Control command. CE issues this to PR which sets the Wait Status.
DSE	Stacker exit (paper has arrived at specific stacker).
DTPD	Top of paper, Duplex. (The PR is Print Data Acceptable Condition.)
DTPS	Top of paper, Simplex. (The PR is Print Data Acceptable Condition.)
Dx..	Engine-generated signals.
PR	Printer.

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Table 6-6. Controller Error Codes

OCP Line 1	OCP Line 2	Error Name	Brief Description
Call for Service	EC#01	EC_NO_DETAIL_ERROR_CODE	Invalid error code has been reported by the Engine (error code is other than xEXXX).
Call for Service	EC#02	EC_ACTIVATE_TIMEOUT_ERROR	ACTIVATE status bit time-out is detected.
Call for Service	EC#03	EC_DORMANT_TIMEOUT_ERROR	DORMANT status bit is not set after the DORMANT command is sent
Call for Service	EC#04	EC_MODE_SET_TIMEOUT_ERROR	DUPLEX/SIMPLEX mode is not set after the DUPLEX/SIMPLEX command is sent.
Call for Service	EC#05	EC_DTPS_TIMEOUT_ERROR	DTPS signal time-out is detected.
Call for Service	EC#06	EC_DTPD_TIMEOUT_ERROR	DTPD signal time-out is detected.
Call for Service	EC#07	EC_EOP_TIMEOUT_ERROR	End of Page has not been reported by the engine device driver after the previous DTPx receipt.
Call for Service	EC#08	EC_DSE_TIMEOUT_ERROR	DSE signal time-out is detected.
Call for Service	EC#09	EC_PRINT_TIMEOUT_ERROR	PRINT status bit time-out is detected.
Call for Service	EC#0A	EC_PAGE_OFFSET_ERROR	Invalid HV print position data is set by the Engine.
Call for Service	EC#0B	EC_NO_PAPER_SIZE_MATCH_ERROR	No right size paper is loaded in designated hoppers.
Call for Service	EC#0C	EC_NO_PAPER_TYPE_MATCH_ERROR	No right type paper is loaded in designated hoppers.
Call for Service	EC#10	EC_BAD_PJD_PARAMETER_ERROR	Invalid print parameter is set in PAGEOBJ.
Call for Service	EC#11	EC_NO_HOPPER_MATCH_ERROR	No proper hopper is designated in PAGEOBJ.
Call for Service	EC#12	EC_NO_STACKER_MATCH_ERROR	No proper stacker is designated in PAGEOBJ.
Call for Service	EC#13	EC_CANNOT_FIND_PBLK_ERROR	There is no PBLK in the fifo.
Call for Service	EC#14	EC_FIFO_OVERFLOW_ERROR	There is no free space in FIFO to put a new sheet.
Call for Service	EC#15	EC_IMAGE_LOCK_ERROR	Image Lock error is detected.
Call for Service	EC#16	EC_IMAGELOCK_TIMEOUT_ERROR	Image Lock time-out is detected.
Call for Service	EC#17	EC_INCORRECT_EMU_CMD_ERROR	The Finisher command was specified.
Call for Service	EC#18	EC_INVALID_COMMAND_ERROR	Invalid command has been received by the Engine.

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Table 6-6. Controller Error Codes (Continued)

OCP Line 1	OCP Line 2	Error Name	Brief Description
Call for Service	EC#19	EC_ENGINE_CODE_READ_ERR	Engine micro code file read error is detected.
Call for Service	EC#20	EC_HARDWARE_INITIALIZE_ERROR	Engine Adapter card failed to be initialized.
Call for Service	EC#21	EC_OVERRUN _ERROR	Overrun error is detected on a receiving serial data (DD-data).
Call for Service	EC#22	EC_FRAMING_ERROR	Framing error is detected on a receiving serial data (DD-data).
Call for Service	EC#23	EC_PARITY ERROR	Parity error is detected on a receiving serial data (DD-data).
Call for Service	EC#24	EC_DRIVER_TIMEOUT_ERROR	DD time-out is detected by the device driver.
Call for Service	EC#25	EC_PCI_TARGET_ABORT_ERROR	PCI Target Abort error is detected.
Call for Service	EC#26	EC_PCI_MASTER_ABORT_ERROR	PCI Master Abort error is detected.
Call for Service	EC#27	EC_DECOMPRESSION_ERROR	Decompression error is detected.
Call for Service	EC#28	EC_DIOF_ERROR	Decompression Input FIFO Overflow is detected.
Call for Service	EC#29	EC_DOUF_ERROR	Decompression Output FIFO Overflow is detected.
Call for Service	EC#2A	EC_BD_CHECK_ERROR	BD signal error is detected.
Call for Service	EC#2B	EC_BD_GAP_ERROR	BD signal gap error is detected.
Call for Service	EC#2C	EC_SFFEMP_ERROR	Synchronous FIFO Empty error is detected.
Call for Service	EC#2D	EC_PRINT _CLOCK_ERROR	Print Clock error is detected.
Call for Service	EC#2E	EC_SFFRD_ERROR	Synchronous FIFO Read error is detected.
Call for Service	EC#2F	EC_DTPS_FIFO_EMPTY_ERROR	DTPS FIFO Empty error is detected.
Call for Service	EC#30	EC_DTPD_FIFO_EMPTY_ERROR	DTPD FIFO Empty error is detected.
Call for Service	EC#31	EC_DTPS_FIFO_FULL_ERROR	DTPS FIFO Full error is detected.
Call for Service	EC#32	EC_DTPD_FIFO_FULL_ERROR	DTPD FIFO Full error is detected.
Call for Service	EC#33	EC_BUSY_TIMEOUT_ERROR	The marking engine did not clear a busy condition within the allotted time.
Call for Service	EC#38	EC_OVERFLOW_ERROR	Invalid serial data (DD-data) is detected.
Call for Service	EC#39	EC_READ_ERROR	Controller program error

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Table 6-6. Controller Error Codes (Continued)

OCP Line 1	OCP Line 2	Error Name	Brief Description
Call for Service	EC#40	EC_DHSYNC_TIMEOUT_ERROR	DHSYNC signal time-out is detected.
Call for Service	IF#01	NIC interface error	The PostScript task can not send the status message to the Network Interface Card.
Call for Service	IF#02	NIC interface error	The Network Interface Card does not reply a response.
Call for Service	IF#03	NIC sumcheck error	Data from Network Interface Card is invalid.
Call for Service	IF#04	NIC memory error	Memory data from Network Interface Card is invalid.
Call for Service	IF#1x	AppleTalk error	Internal AppleTalk processing error.
Call for Service	OP#01	OCP error	The invalid Menu Number was read.
Call for Service	OP#02	OCP error	The OCP Display Data did not read from the HDD.
Call for Service	BR#11	Backup/Restore error	Restore HDD Data: Revision Mismatch.
Call for Service	BR#12	Backup/Restore error	Restore HDD Data: No backup data.
Call for Service	BR#13	Backup/Restore error	Restore HDD Data: Backup data read error.
Call for Service	BR#14	Backup/Restore error	Restore HDD Data: Data write error.
Call for Service	BR#15	Backup/Restore error	Restore HDD Data: Insufficient memory.
Call for Service	BR#16	Backup/Restore error	Restore HDD Data: Restore time write error.
Call for Service	BR#21	Backup/Restore error	Restore Engine Data: No backup data.
Call for Service	BR#22	Backup/Restore error	Restore Engine Data: Backup data read error.
Call for Service	BR#23	Backup/Restore error	Restore Engine Data: Data write error.
Call for Service	BR#24	Backup/Restore error	Restore Engine Data: Restore time write error.
Call for Service	BR#31	Backup/Restore error	Restore Controller Data: No backup data.
Call for Service	BR#32	Backup/Restore error	Restore Controller Data: Backup data read error.
Call for Service	BR#33	Backup/Restore error	Restore Controller Data: Data write error.
Call for Service	BR#34	Backup/Restore error	Restore Controller Data: Restore time write error.
Call for Service	BR#41	Backup/Restore error	Backup HDD Data: Data Compression Error.
Call for Service	BR#42	Backup/Restore error	Backup HDD Data: Data read error.
Call for Service	BR#43	Backup/Restore error	Backup HDD Data: Backup data write error.
Call for Service	BR#44	Backup/Restore error	Backup HDD Data: Backup time write error.
Call for Service	BR#45	Backup/Restore error	Backup HDD Data: Revision mismatch.
Call for Service	BR#46	Backup/Restore error	Backup HDD Data: Backup time mismatch.
Call for Service	BR#47	Backup/Restore error	Backup HDD Data: Backup time incorrect on Controller Board.

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Table 6-6. Controller Error Codes (Continued)

OCP Line 1	OCP Line 2	Error Name	Brief Description
Call for Service	BR#48	Backup/Restore error	Backup HDD Data: Backup time incorrect into HDD.
Call for Service	BR#51	Backup/Restore error	Backup Engine Data: Data read error.
Call for Service	BR#52	Backup/Restore error	Backup Engine Data: Backup data write error.
Call for Service	BR#53	Backup/Restore error	Backup Engine Data: Backup time write error.
Call for Service	BR#54	Backup/Restore error	Backup Engine Data: Backup time mismatch.
Call for Service	BR#55	Backup/Restore error	Backup Engine Data: Backup time incorrect into HDD.
Call for Service	BR#56	Backup/Restore error	Backup Engine Data: Backup time incorrect into CPxxx Ass'y.
Call for Service	BR#61	Backup/Restore error	Backup Controller Data: Data read error.
Call for Service	BR#62	Backup/Restore error	Backup Controller Data: Backup data write error.
Call for Service	BR#63	Backup/Restore error	Backup Controller Data: Backup time write error.
Call for Service	BR#64	Backup/Restore error	Backup Controller Data: Backup time mismatch.
Call for Service	BR#65	Backup/Restore error	Backup Controller Data: Backup time incorrect into HDD.
Call for Service	BR#66	Backup/Restore error	Backup Controller Data: Backup time incorrect on Controller Board.
Call for Service	Task Exit		Controller program error
Call for Service	PPC Exception		Controller program error
Call for Service	PCL FONT LOAD ERROR		The loading of the PCL font was failed.
Call for Service	HDD Error		HDD access error
Call for Service	NMI		Controller hardware error
ecError	—		The printer was unable to boot.
Boot Failed	—		The printer was unable to boot.
Suspended Task	—		Controller program error
CheckNMI	—		Controller hardware error
IPDS Internal Error	100 ~ 999A	IPDS Internal Error	IPDS Logical Programming Error.
IPDS Database Error		IPDS Database Error	IPDS Font Resource abnormal data found.

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Corrective Action to the Controller Error Codes

EC#01 / EC#02 / EC#03 / EC#04 / EC#18 / EC#19 / EC#21 / EC#22 / EC#23 / EC#2F / EC#30 / EC#33 / EC#38 / BR#23 / BR#51 / BR#53

Problem Cause	Corrective Action
1. Disconnected cable or connector is not properly connected	Check connection of CE I/F Cable or replace cable.
2. Faulty Controller Main Board	Replace Controller Main Board.
3. Faulty CPxxx Assy	Replace CPxxx Assy (Refer to Engine Maintenance Manual).

EC#05 / EC0#6

Problem Cause	Corrective Action
1. Faulty sensor.	Check timing sensor or replace timing sensor (Refer to Engine Maintenance Manual).
2. Disconnected cable or connector is not properly connected	Check connection of CE I/F Cable or replace cable.
3. Faulty Controller Main Board	Replace Controller Main Board.
4. Faulty CPxxx Assy.	Replace CPxxx Assy (Refer to Engine Maintenance Manual).

EC#07 / EC#0A / EC#0C / EC#20 / EC#25 / EC#26 / EC#27 / EC#28 / EC#29 / EC#2D / EC#2E / BR#12 / BR#13 / BR#16 / BR#33 / BR#43 / BR#61 / BR#63

Problem Cause	Corrective Action
1. Faulty Controller Main Board	Replace Controller Main Board

EC#08

Problem Cause	Corrective Action
1. Faulty DVxxx Assy	Replace DVxxx Assy (Refer to Engine Maintenance Manual).
2. Disconnected cable or connector is not properly connected	Check connection of CE I/F Cable or replace cable.
3. Faulty Controller Main Board	Replace the Controller Main Board
4. Faulty CPxxx Assy	Replace CPxxx Assy (Refer to Engine Maintenance Manual).

EC#09

Problem Cause	Corrective Action
1. Faulty CPxxx Assy	Replace CPxxx Assy (Refer to Engine Maintenance Manual).

EC#0B

Problem Cause	Corrective Action
1. Disconnected cable or connector is not properly connected	Check connection of CE I/F Cable or replace cable.
2. Faulty Controller Main Board	Replace the Controller Main Board

EC#10

Problem Cause	Corrective Action
1. Disconnected cable or connector is not properly connected	Check connection of CE I/F Cable or replace cable.
2. Faulty Memory Module	Replace Memory Module.
3. Faulty Controller Main Board	Replace the Controller Main Board

EC#11 / EC#12

Problem Cause	Corrective Action
1. Hopper or Stacker that was chosen is not connected.	Cancel job, choose the correct hopper or stacker.
2. Disconnected cable or connector is not properly connected	Check connection of CE I/F Cable or replace cable.
3. Faulty Memory Module	Replace Memory Module.
4. Faulty Controller Main Board	Replace the Controller Main Board

EC#13 / EC#14 / EC#15 / EC#16 / EC#31 / EC#32 / EC#39 / EC#40 / Task Exit / PPC Exception / OP#01 / OP#02 / Suspended Task / NMI / CheckNMI

Problem Cause	Corrective Action
1. Faulty Memory Module	Replace Memory Module.
2. Faulty Controller Main Board	Replace the Controller Main Board

EC#2A / EC#2B

Problem Cause	Corrective Action
1. Paper Jam	Remove jammed paper. Press ▶ button on the OCP.
2. Disconnected cable or connector is not properly connected	Check connection of CE I/F Cable or replace cable.
3. Faulty Controller Main Board	Replace the Controller Main Board
4. Faulty OCxxx Assy	Replace OCxxx Assy (Refer to Engine Maintenance Manual).

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EC#24 / ecError

Problem Cause	Corrective Action
1. Faulty Power Supply	Replace Engine Power Supply (Refer to Engine Maintenance Manual).
2. Disconnected cable or connector is not properly connected	Check connection of CE I/F Cable or replace cable.
3. Faulty CE Board	Replace the Controller Main Board
4. Faulty OCxxx Assy	Replace OCxxx Assy (Refer to Engine Maintenance Manual).

PCL Font Load Error

Problem Cause	Corrective Action
1. Faulty HDD	Replace HDD.

HDD Error / Boot Failed / BR#14 / BR#21 / BR#22 / BR#24 / BR#31 / BR#32 / BR#34 / BR#42 / BR#44 / BR#52 / BR#62

Problem Cause	Corrective Action
1. Faulty HDD	Replace HDD.

BR#56

Problem Cause	Corrective Action
1. Disconnected cable or connector is not properly connected.	Check connection of CE I/F Cable or replace cable.
2. Faulty OCxxx Assy.	Replace OCxxx Assy (Refer to Engine Maintenance Manual).
3. Engine Data is not restored after replacing CPxxx Ass'y.	Restore "Engine Data".
4. Controller Data is not backed up after replacing CPxxx Ass'y.	Back up "Controller".

BR#11 / BR#45

Problem Cause	Corrective Action
1. Revision mismatch between backup HDD data and new replacing HDD.	1. Check connection of CE I/F Cable or replace cable. 2. Set the user setting manually and back up the "HDD Data".
2. Revision mismatch between backup HDD data and new upgrading software.	Follow the procedure of upgrading the System Software.
3. HDD Data is not backed up after replacing Controller Main Board.	Back up "HDD Data".

BR#46 / BR#54 / BR#64

Problem Cause	Corrective Action
1. HDD data is not backed up after replacing Controller Main Board.	Back up "HDD Data".
2. HDD data is not restored after replacing HDD.	Restore "HDD Data".
3. Engine data is not backed up after replacing HDD.	Back up "Engine Data".
4. Engine data is not restored after replacing CPxxx Ass'y.	Restore "Engine Data".
5. Controller data is not backed up after replacing HDD.	Back up "Controller".
6. Controller data is not restored after replacing Controller Main Board.	Restore "Controller".

BR#41 / BR#47 / BR#66

Problem Cause	Corrective Action
1. Faulty CE Board.	Replace the Controller Main Board.
2. HDD data is not backed up after replacing Controller Main Board.	Back up "HDD Data".
3. Controller data is not restored after replacing Controller Main Board.	Restore "Controller".
4. HDD data compression error.	Replace the Controller Main Board.

BR#48 / BR#55 / BR#65

Problem Cause	Corrective Action
1. HDD is not properly connected.	Connect the HDD correctly.
2. Faulty HDD.	Replace HDD.
3. HDD data is not restored after replacing HDD.	Restore "HDD Data".
4. Engine data is not backed up after replacing CPxxx Ass'y.	Back up "Engine Data".
5. Controller data is not backed up after replacing HDD.	Back up "Controller".
6. HDD data is not backed up after executing "Factory Default".	Restore "HDD Data".

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IPDS Internal Error

Problem Cause	Corrective Action
1. IPDS Logical Programming Error.	Switch off and on the main power.

IPDS Database Error

Problem Cause	Corrective Action
1. IPDS Font Resource abnormal data found.	Switch off and on the main power. Execute "Printer > IPDS > Reset IPDS Fonts".

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