

**Color Controller: E-23C**  
**(Machine Code: D3BN)**

**Field Service Manual**



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# Safety Information

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

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## Safety During Operation

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In this manual, the following important symbols are used:

### **WARNING**

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

### **CAUTION**

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

### **WARNING**

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

### **CAUTION**

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

### **ACHTUNG (Deutsch)**

- Die batterie darf nur durch eine des gleichen Typs ersetzt werden, da anderenfalls Explosionsgefahr besteht.
- Sie die debrauchten Batterien entsprechend den gegebenen Anweisungen.

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## Power Cord Precautions

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

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

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## Power Supply

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

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## Netzanschluss (Deutsch)

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Die Wandsteckdose sollte in der Nähe Geräts installiert und leicht zugänglich sein.

### **WARNING**

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

## ⚠️ IMPORTANT SAFETY NOTICES

### PREVENTION OF PHYSICAL INJURY

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

### OBSERVANCE OF ELECTRICAL SAFETY STANDARDS

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

### SAFETY AND ECOLOGICAL NOTES FOR DISPOSAL

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

### Symbols:

Symbol	What it means
	Screw
	Connector
	Clamp

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# 1. Installation

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## Installation Requirements

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### Environment

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1. Temperature Range:  
5°C to 40°C (41°F to 104°F)
2. Humidity Range:  
10% to 85% RH
3. Ambient Illumination:  
Less than 1500 lux (do not expose to direct sunlight or strong light)
4. Ambient Dust:  
Less than 0.10 mg/m<sup>3</sup>
5. If the place of installation is air-conditioned or heated, do not place the machine where it will be:
  - 1) Subjected to sudden temperature changes
  - 2) Directly exposed to cool air from an air-conditioner
  - 3) Directly exposed to heat from a heater
6. Do not place the machine where it will be exposed to corrosive gases.
7. Do not install the machine at any location over 3,048 m (10,000 feet) above sea level.
8. Place the controller on a strong and level base.
9. Do not place the machine where it may be subjected to strong vibrations.
10. Do not connect the machine to a power source shared with another electrical appliance.
11. The machine can generate an electromagnetic field, which could interfere with radio or television reception.

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### Machine Level

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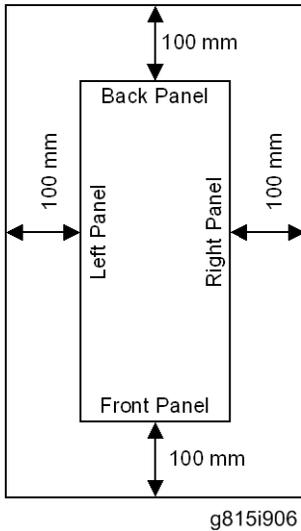
1. Front to back: Within  $\pm 5^\circ$  (0.2") away from level
2. Right to left: Within  $\pm 5^\circ$  (0.2") away from level

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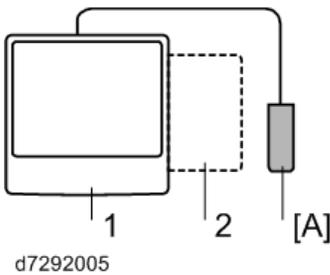
## Minimum Space Requirements

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1



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



1. Copier
2. Large Capacity Tray

You may place the machine [A] on the right side of the large capacity tray or copier as shown (top view) in the illustration.

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## Power Requirements

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### CAUTION

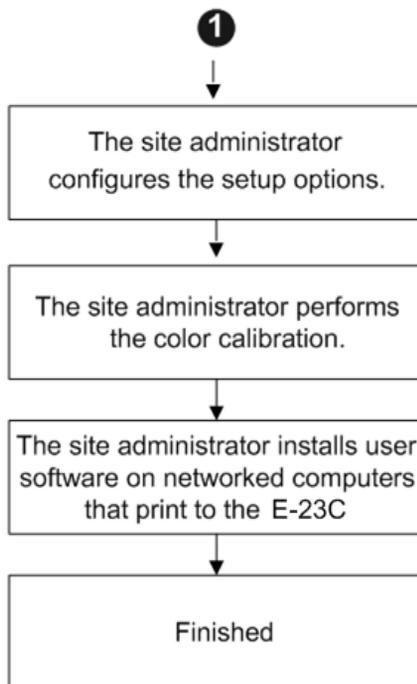
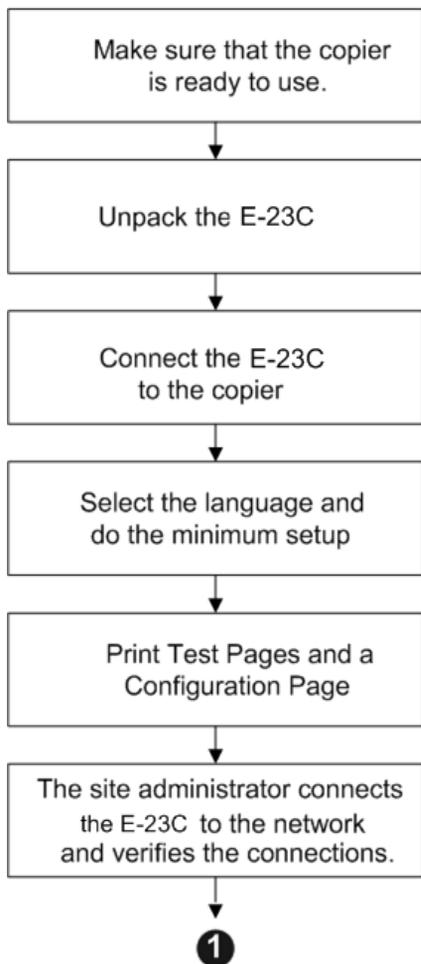
- Insert firmly the plug in the outlet.
- Avoid using an outlet extension plug or cord.
- Ground the machine. Avoid using a 3-pronged adapter in a 2-hole ungrounded outlet.
- Use the supplied AC power cord with this product.

1. Input voltage level: 100 - 240V, 50 - 60Hz; 3A
2. For Norway, this product is also designed for an IT power distribution system with phase-to-phase voltage 230V.
3. Do not put anything on the AC power cord.

# Installation Flow Chart

Recommended installation steps are as follows:

1



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# Machine Installation

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## Precautions for Installation

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1

### Important Notes on E-23C Installation

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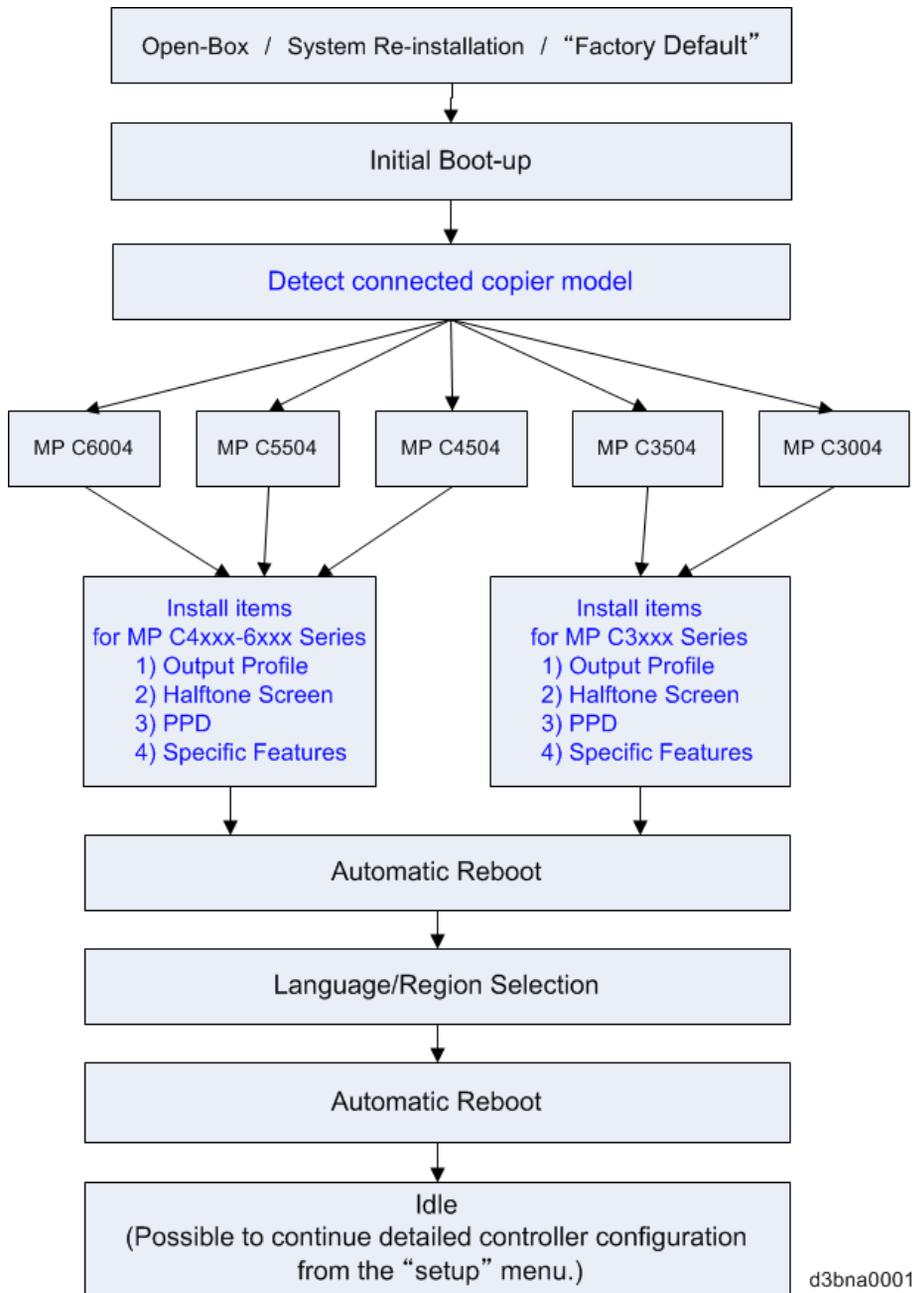
Once you install and connect the E-23C with the copier (MP C3004 / MP C3504 / MP C4504 / MP C5504 / MP C6004), E-23C will be configured as follows during the initial boot-up.

[RTB 1, page 1](#)

[Before installing the E-23C, make sure that the Met-C2 has these firmware versions or later](#)

[RTB 1, page 2](#)

[Change these SP settings in the Met-C2 before installing the E-23C Controller](#)



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Compatibility table

Copier to be used with E-23C	MP C6004	MP C5504	MP C4504	MP C3504	MP C3004
Copier connected during the initial boot-up of E-23C					
MP C6004	S	S	S	NS	NS
MP C5504	S	S	S	NS	NS
MP C4504	S	S	S	NS	NS
MP C3504	NS	NS	NS	S	S
MP C3004	NS	NS	NS	S	S

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**S:** Supported

**NS:** Not Supported. Execute "Factory Default" to support the copier.

Refer to the above compatibility table, if you plan to pre-install and pre-configure the E-23C before customer site installation, or if the copier model in use with the E-23C is to be changed.

For example, if the copier in use by the customer is C5504, E-23C needs to be pre-installed and pre-configured with C5504 or C6004 or C4504.

If the configured E-23C is connected to an incompatible copier model (= **NS** in the above table) at a later time, "Invalid engine configuration" error appears on the operation panel as shown below. Printing is not possible at this state.



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To enable printing, re-configure the E-23C with the copier in use, execute the "Factory Default" (Restoring the E-23C to Factory Defaults) and follow the installation procedure once again.

## How to Identify the Copier Model Initially Connected with the E-23C

Check the Output Profile name in the printed configuration sheet, Command WorkStation, etc.

<b>CMYK Processing Method</b>	Full (Output GCR)
<b>Separate RGB/Lab to CMYK source</b>	Off
<b>Use Media Defined Profile</b>	On
<b>Output Profile</b>	Fiery MP C3004-C3504 Normal v1F

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Copier connected during the initial boot-up of E-23C	Output Profile Name
MP C6004/5504/4504	Fiery MP C4504-C6004 Normal v1F
MP C3504/3004	Fiery MP C3004-C3504 Normal v1F

## Setting Customer Expectations

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

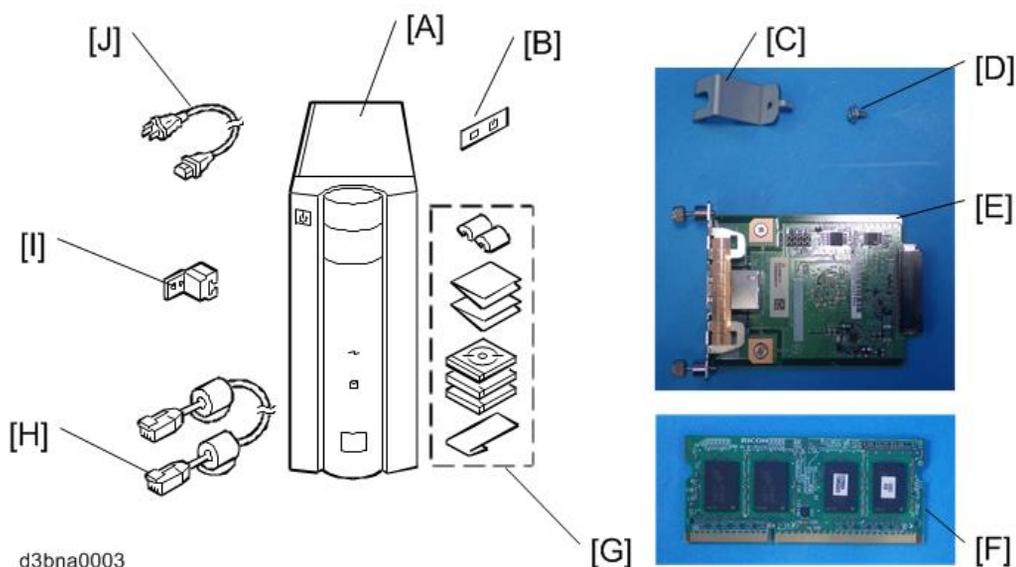
- Some nodes on the network may be unavailable for up to one hour.
- The copier may be unavailable for up to one hour
- The site administrator should be available during the installation for assistance with network connectivity issues.
- Equipment downtime and impact on the network can be minimized if the site administrator installs a network node for the E-23C and confirms network connection for the E-23C installation.
- The site administrator should have a networked computer available during the installation. The appropriate software should already be installed. Documentation for the networked computer and the network operating software should be available.
- The site administrator should install the user software shipped with the E-23C (user documentation is also included) onto the networked PCs and Mac OS computers that will print to the E-23C.

### Note

- This guide covers hardware installation and service. It provides general information on connecting the E-23C to the customer's network. For network setup and configuration information, refer the site administrator to the "Configuration and Setup" manual (<http://help.efi.com/ricoh/docs/>).

## Unpacking the E-23C

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

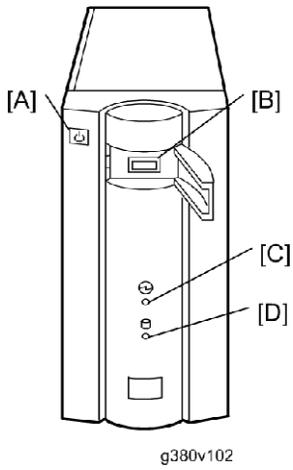


[A]: E-23C	[F]: 4 GB DIMM
[B]: Fierydriven Logo	[G]: Media Pack
[C]: Protection Plate (For Copier)	[H]: Interface Cable
[D]: Tapping Screw (3x6)	[I]: Protection Plate (For E-23C)
[E]: Gigabit Ethernet PCB	[J]: AC Power Cord

3. Give the Media Pack [G] to the site administrator.
4. Take the remaining components out of the top container.
5. Remove the top container and any packing materials.
6. Carefully lift the E-23C out of the box.

## Front and Back Panels

After unpacking the E-23C, familiarize yourself with the front and back panels before you connect the E-23C to the Copier.



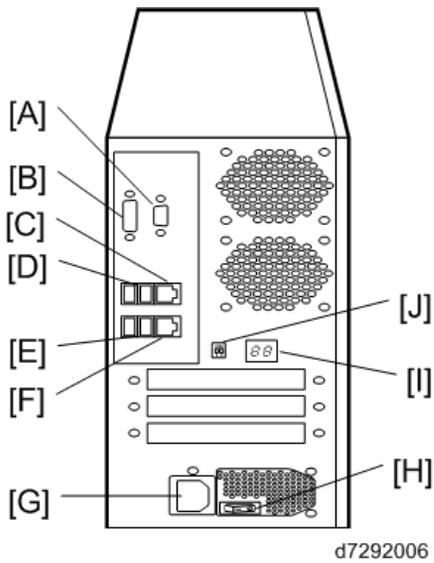
**Front Panel**

[A]: Soft Power Push Button

[B]: Front Panel USB Port

[C]: Power Indicator

[D]: HDD Access Indicator



**Back Panel**

[A]: Not used (monitor port)

[B]: Not used (monitor port)
[C]: LAN Connector (For customer use)
[D]: Back Panel USB Ports
[E]: Back Panel USB Ports
[F]: Gigabit Ethernet connector
[G]: Power Connector
[H]: Main Power Switch
[I]: Diagnostic LEDs (For service use only)
[J]: Service Switches (For service use only)

## Connecting E-23C to the Copier

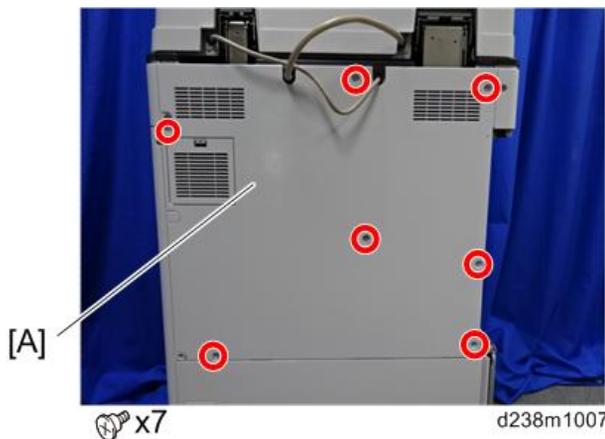
### Preparation for Installing E-23C

After you unpack the E-23C, connect the E-23C to the copier before you connect it to the network. This is to confirm that there are no problems with the hardware and controller itself.

#### **⚠ CAUTION**

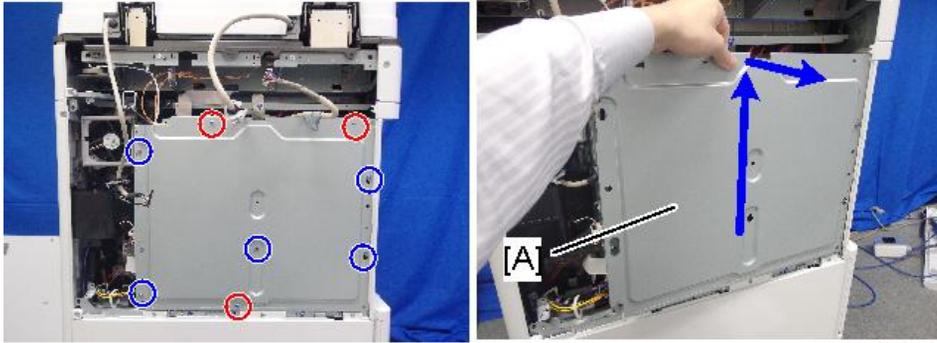
- Turn the controller main power switch and copier main power switch to off and disconnect the power cords before you do these procedures.

#### 1. Remove the rear cover [A].



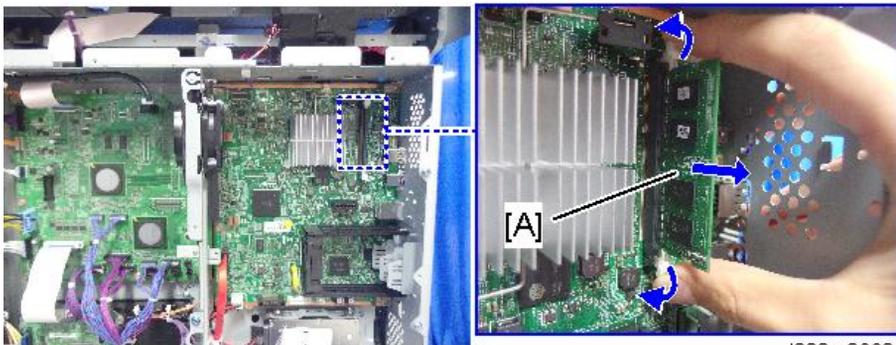
2. Remove the controller box cover [A].

Red Circle: Remove / Blue Circle: Loosen



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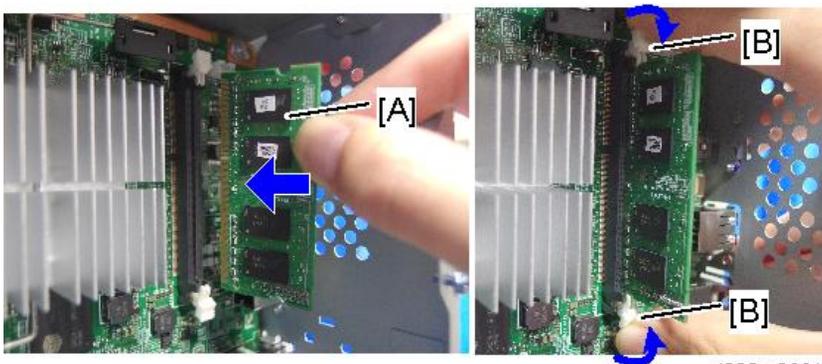
3. Release the latches and remove the standard 2GB DIMM [A].



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4. Insert the Memory Unit Type M19 4GB [A] into SDRAM socket.

Push the release latches [B] until they slip into the notch on the edge of the SDRAM.

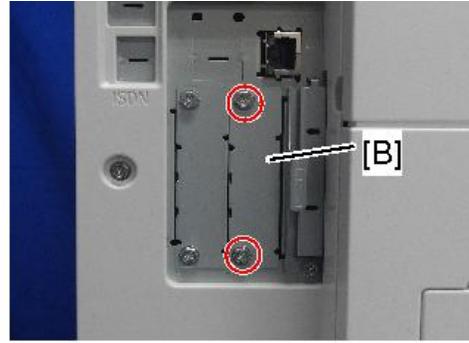
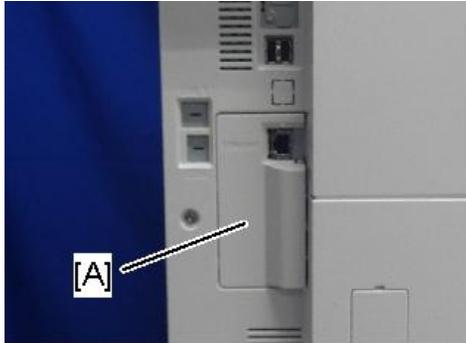


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5. Reattach the controller box cover and rear cover.

**6. Remove the slot covers [A].**

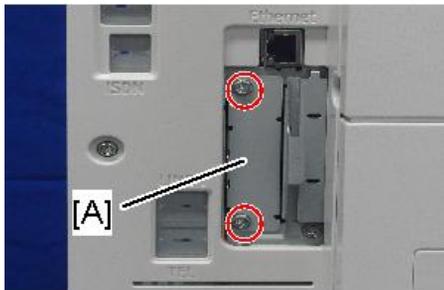
D240/D241/D242 [B: right slot].



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 x2

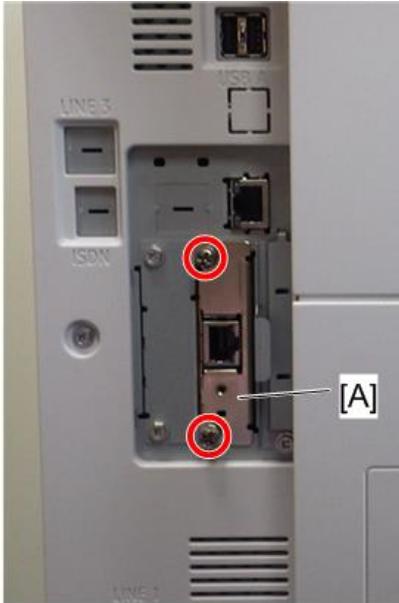
D238/D239:



d238m0657

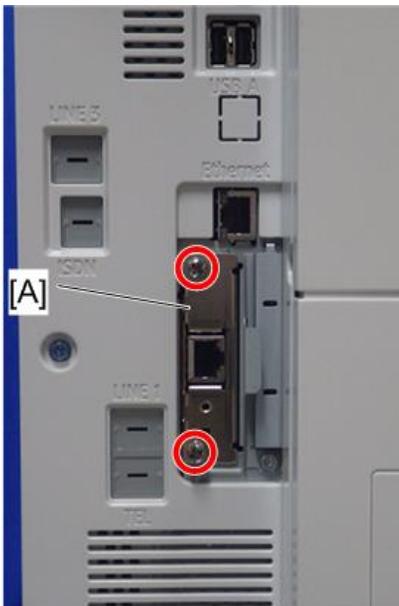
 x2**7. Insert the Gigabit Ethernet controller [A] and fasten it (knob-screw x 2).**

D240/D241/D242:



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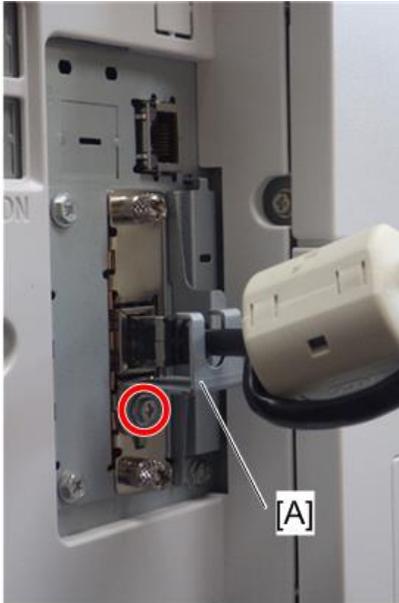
D238/D239:



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8. Connect the interface cable to the copier Gigabit Ethernet connector and then fix it with the protection plate [A] (1 x 1).

D240/D241/D242:



d3bna0009

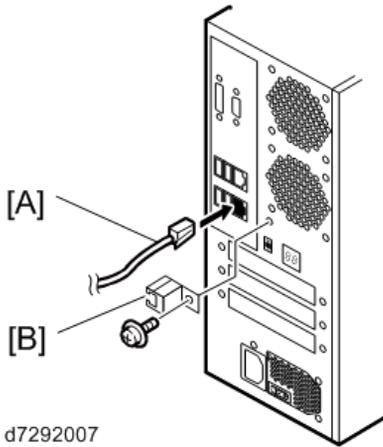
D238/D239:



d3bna0008

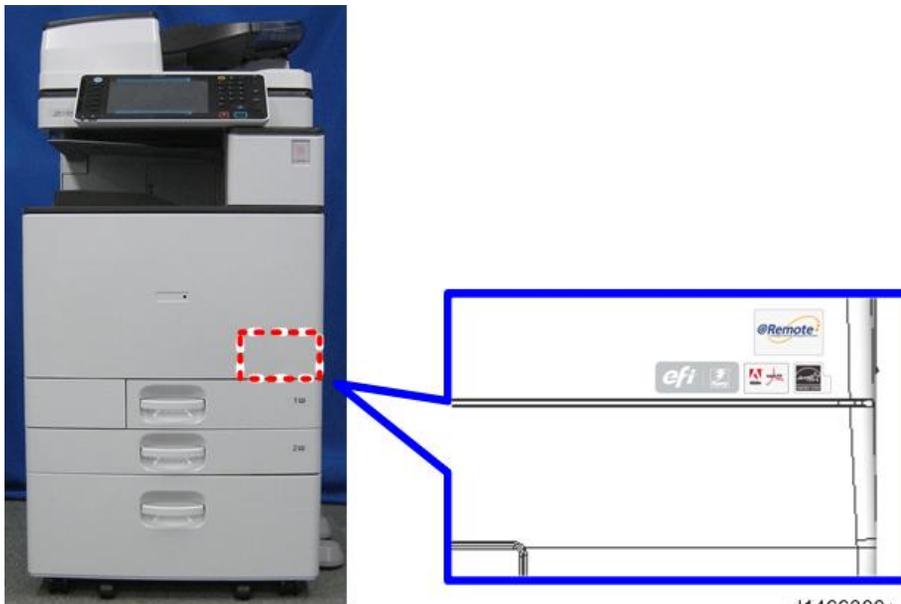
9. Connect the power cord of the copier to a power outlet.
10. Connect the interface cable [A] to the lower Ethernet connector of the E-23C.

11. Attach the protector plate [B] (⚙️ x1).



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12. Connect the appropriate AC power cord to the power connector at the back of the E-23C.
13. Attach the Fiery Decal to the copier front cover.



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## Startup and Initial Setup

1. Make sure that the power cord of the copier is connected to a power outlet and switch on the copier main power.
2. Enter SP mode.
3. Change the setting of SP5193-001 from "0" to "1".

4. Change the setting of SP5895-001 from "0" to "1".
5. Change the setting of SP4201-003 from "11" to "15".
6. Change the setting of SP4201-004 from "11" to "15".
7. Turn the copier main power switch off and wait until the main power indicator is off.
8. Turn the copier main power switch on.

**Note**

- The copier must be turned on before you turn the E-23C on.
- Make sure that all firmware modules for the copier are updated to the newest versions. If they are not, update them before you turn on the E-23C. (Copier Service Manual)

9. Turn the main power switch on the E-23C back panel to ON.
10. Press and release the soft power push button on the front panel of the E-23C.
11. Allow startup to proceed without interruption, while you watch the diagnostic LEDs on the back panel of the E-23C.
12. When the diagnostic LEDs remain at '00', go to the copier operation panel and press the Home button on the operation panel of the copier and wait for about 10 minutes.

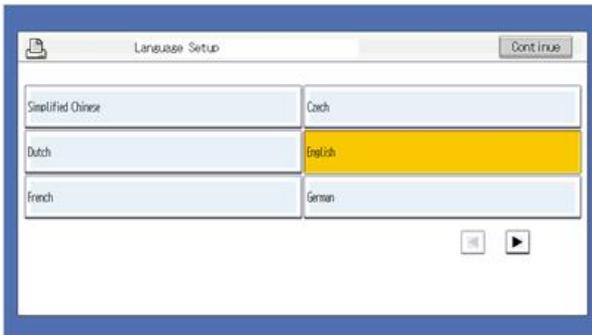
**Note**

- During the 10 minutes, the initial boot up of the controller will proceed as below, and Fiery icon will appear/disappear on the copier operation panel.

1. The controller boots up.
2. The controller connects to copier.
  - Fiery icon appears on the operation panel.
  - (There is no need to touch the icon at this stage)
3. The controller loads some settings.
4. The controller reboots automatically.
  - Connection with the copier is lost and Fiery icon will disappear.
5. The controller boots up and connects again to the copier.
  - Fiery icon appears again.

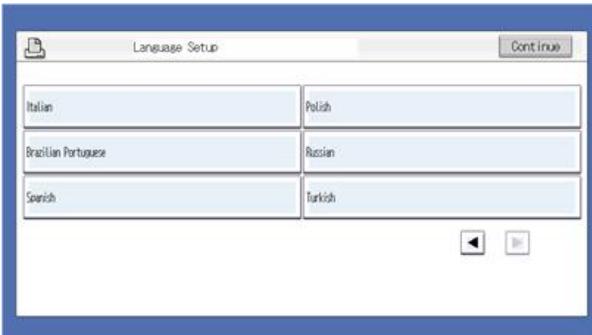
13. Touch the Fiery icon. "Please Wait!" will be shown on the copier operation panel for a while.
14. Within about three minutes, the language selection screen is shown. (If this screen is not shown, then press the Home button on the operation panel of the copier and then touch the Fiery icon again.)
15. Select the desired language button, and touch "Continue".
  - Simplified Chinese
  - Czech

- Dutch
- English
- French
- German
- Italian
- Polish
- Brazilian Portuguese
- Russian
- Spanish
- Turkish



d3bna0004

If the desired language is not displayed, switch screens using the ◀▶ buttons.



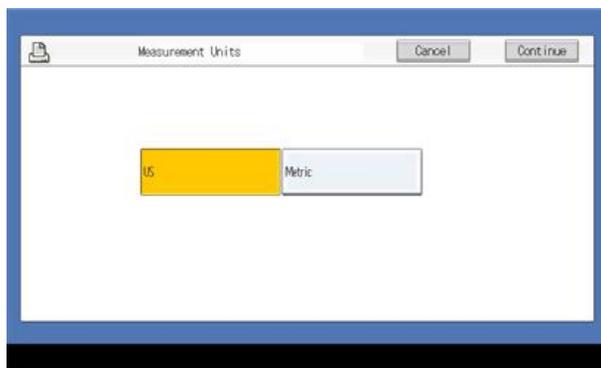
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The default settings for the E-23C depend on the language selection as follows:

	Selected Language & Measurement Unit
--	--------------------------------------

		English - US	English - Metric / Simplified Chinese / Czech / Dutch / French / German / Italian / Polish / Brazilian Portuguese / Russian / Spanish / Turkish
PS Setting	Default Paper Sizes	US	Metric
PCL Setting	Paper Size	Letter	A4
	Paper Size System Pages	US	Metric

If you selected **"English"** at the language selection screen, you are prompted to select the Measurement Units. Select either **"US"** or **"Metric"**, and then touch **"Continue"**.



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16. The System will reboot. Press the Home button on the copier operation panel and wait for 7-8 minutes until the Fiery icon appears on the Home screen.
17. Touch the Fiery icon and wait about a few minutes until the Fiery menu screen appears.
18. To confirm that the reboot was successful, press the Fiery tab.
19. Now the E-23C can be used with the default settings (minimum setup).

#### ⓘ Note

- The E-23C setup options should be configured later by the site administrator.
- Make sure that the system date and time, time zone has been adjusted before leaving from the customer site. (page 74 "Adjusting the System Date and Time")

## Disabling the GW Scanner (Customization)

The GW Scanner feature can still be used when a Fiery controller is installed.

However, if the customer wants to disable the GW Scanner feature (customization request), it can be disabled by the following procedure.

1. Change the setting of SP5895-002 from "0" to "1".

## Verifying the Connection (Local Test Print)

After you connect the E-23C to the copier, print the Test Page and the Configuration Page to verify that the connection between the E-23C and the copier is good.

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

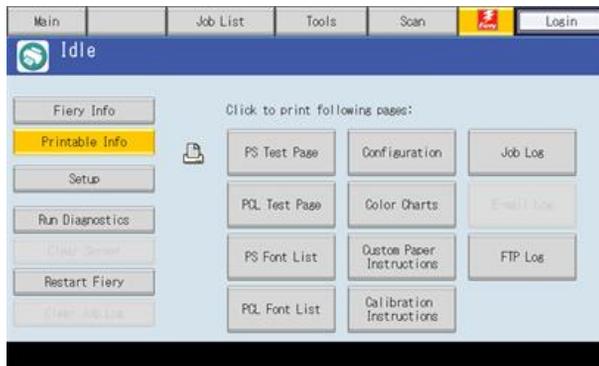
Setup Option	PS Setting Default Paper Size		PCL Setting Paper Size for System Setting	
	"US"	"Metric"	"US"	"Metric"
Configuration Page requires...	Letter	A4	-	-
PS Test Page requires...	Letter	A4	-	-
PCL Test Page requires...	-	-	Letter	A4

3. Press the Home button on the operation panel of the copier and wait for a few minutes until the Fiery icon appears on the Home screen.
4. Touch the Fiery icon to access to the Fiery menu screen.
5. Move to the "Fiery" tab.



d7292011

## 6. Touch "Printable Info".



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## 7. Print the following pages:

- Configuration Page
- PS Test Page
- PCL Test Page

## 8. Examine the quality of the test pages.

- All patches should be visible, but it is acceptable if they are very faint in the 5% and 2% ranges.
- Each patch set should show uniform gradation from patch to patch as the shade lightens from 100% to 0%.
- Poor image quality may indicate that the copier needs service. For more information, see the documentation provided with the copier.

## Verifying Connection to the Network

The E-23C provides twisted pair connectivity to an Ethernet network.

Cable requirements:

10BaseT (Ethernet): Unshielded Twisted Pair (UTP), Category 3 or higher

- 100BaseTX (Fast Ethernet): UTP, Category 5 or higher (4-pair/8-wire, short length)
- 1000BaseT (Gigabit Ethernet): UTP, Category 5e or higher (4-pair/8-wire, short-length)

### ↓ Note

- If the print engine is 230V, use a shielded network cable.

1. Turn off the E-23C power before connecting the E-23C to any network device.
2. Connect the network cable to the LAN connector on the E-23C.
3. Make sure that the copier power is switched on.

4. Turn the power switch on the E-23C back panel to ON.
5. Press and release the soft power push button on the front panel of the E-23C.
6. Allow startup to proceed without interruption, while you watch the diagnostic LED on the back panel of the E-23C. When the diagnostic LEDs show '00', go to the copier operation panel.
7. Press the Home button on the operation panel of the copier and wait for a few minutes until the Fiery icon appears on the Home screen.
8. Touch the Fiery icon and wait about a few minutes until the Fiery menu screen appears.
9. Move to the Fiery tab.
10. Touch "Setup".



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11. You are asked to enter an administrator password. (The default is "Fiery .1")
12. Ask the site administrator to configure the Setup options.

#### Note

- It is the site administrator's responsibility to configure the correct setup options for the network and user environment. The default settings in the setup may be adequate, but they may not be optimal for the user's environment. Refer the site administrator to the "Configuration and Setup" manual (<http://help.efi.com/ricoh/docs/>) for setup information.
- If more than one E-23C unit should be installed at the customer site with almost the same system settings, tell the site administrator that the "Backup and Restore" feature will be useful. (This feature is explained in the "Configuration and Setup" manual (<http://help.efi.com/ricoh/docs/>).)
- If initial setup (with the exclusion of changing the IP Address/DNS/WINS) is not yet done, Fiery Setup Wizard menu is selectable from WebTools and CommandWorkStation. For details of Fiery Setup Wizard, refer to the Configuration and Setup Guide (<http://help.efi.com/ricoh/docs/>).

The Fiery controller initial setup is not complete. [Click here to continue.](#)

w\_d7292066

13. After configuring the Setup options, verify the network connection.
14. Make sure that the system date and time, time zone has been adjusted before leaving from the customer site. (page 74 "Adjusting the System Date and Time")
15. Ask the site administrator to install the printer driver on a client PC, and to make a test print from that PC.

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## Enabling/Disabling Automatic Power Down

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To comply with the ErP (Energy-related Products) directive of the European Union countries, Automatic Power Down was added as a new energy saving feature. Factory default of this feature is set to Enabled.

### Automatic Power Down

In order to conserve energy, the Fiery controller will automatically power down after 2 hours, if no network activity is detected.

Detection of network activity mentioned above refers to the two ports at the rear of the E-23C, one for LAN and the other for connecting the E-23C to the copier. Power shuts down when both of the two ports do not detect any signals for two hours.

- If the E-23C is installed in a EU country:  
To comply with the ErP directive, do not change the default setting (Enabled) at installation.
- If the E-23C is installed in a non-EU country:  
Explain the site administrator about this new feature.

If the site administrator prefers to disable this feature, instruct the site administrator that it can be disabled from the "Configure" menu in Command WorkStation or WebTools.

# Installing Optional Features

1

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## Optional Features for E-23C

---

The following options can be purchased and installed to E-23C:

- Fiery Graphic Arts Basic Plus Package (B)
- Productivity Package (B)
- Spot-On (B)
- Auto Trapping (B)
- Hot Folders & Virtual Printers (B)
- Fiery Impose (A+B)
- Fiery Compose (A+B)
- Fiery Impose-Compose (A+B)  
(This is a package set of Fiery Impose and Compose.)
- EFI Color Profiler Suite (with ES-2000) (C)
- EFI Color Profiler Suite (Software only) (C)
- EFI Spectrometer ES-2000

Required Action:

A: Needs additional software installation.

(page 34 "Installing Software for EFI Impose/Compose")

B: Needs activation with a license code.

(page 35 "Activate Optional Features")

C: Needs software installation and activation in a unique way.

Please refer to the manual included in the software package

---

## Installing Software for EFI Impose/Compose

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To use the features of EFI Impose/Compose, install and activate the software in the following order.

- 1. Install Command WorkStation (from the User Software DVD of E-23C). (Utility manual)**
- 2. Activate Impose/Compose. (page 35 "Activate Optional Features")**
- 3. Install Adobe Acrobat and Enfocus PitStop (from the CD included in the option package). (Utility manual)**

---

## Activate Optional Features

---

Some of the options need to be activated (make ready for use through licensing), with an LAC (License Activation Code) which is provided with the optional feature box or envelope.

1

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### Optional Features Which Require Activation.

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#### Server Options:

The license file is stored in the key chip on the motherboard of E-23C.

- Fiery Graphic Arts Basic Plus Package
- Productivity Package
- Spot-On
- Auto Trapping
- Hot Folders & Virtual Printers

#### Client Options:

The license file is stored in the HDD of the Client PC.

- Fiery Impose
- Fiery Compose

---

### Preparation: Requirements for Activation

---

- LAC (License Activation Code)  
A unique code of 25 digits that is printed on a sheet when open the optional feature box/envelope.
- An installed E-23C.
- A PC with a web browser installed.
- Command WorkStation (Must be installed for Client Options)
- Internet Access Environment

#### Note

- If the customer has already a USB dongle for a Client Option (purchased for previous models, etc.), it can be used with E-23C

---

### Important Notes for Activation

---

1. If you have multiple Fiery options to activate, you must activate them one at a time. It is not possible to activate several options at once.

2. If the keychip (Server Options) or PC (Client Options) becomes defective, the following's are needed as evidence in order to get recovered.

- Defective key chip
- LAC
- Option Name
- Serial Number of E-23C
- OS on the client PC where the software was installed.
- The configuration page that shows that the defective key chip had the optional feature license installed.

Therefore, please be sure that you always print a configuration page and note the above information and keep them together when you activate a new optional feature on the E-23C.

## Automatic Activation and Manual Activation

---

There are two ways to activate the optional features: "Automatic" and "Manual".

### Required Environment for Automatic Activation:

<Server Options>

1. The E-23C must be connected to the Internet.

**Note**

- If the E-23C is not connected to the Internet directly, you can configure a proxy server for the connection.
2. At the same time, a PC that can access to E-23C with the web browser is needed.

**Note**

- You can also start the activation procedure with the Command WorkStation, but later web browser access is required.

<Client Options>

1. The PC where the optional feature will be installed and used must be connected to the Internet.
2. At the same time, the same PC needs to access to E-23C with Command WorkStation and web browser.

### Required Environment for Manual Activation:

<Server Options>

If the E-23C is not connected to the Internet, manual steps are required to transfer data between the E-23C and the EFI licensing website using another PC that is connected to the Internet.

1. The PC where the optional feature will be installed, must be connected to the Internet with web browser.

2. There is also another PC that can access to the E-23C with web browser is needed.

**Note**

- The above two PCs can be as same single PC (by switching the roles by changing the location/connection).

<Client Options>

If the PC where the optional feature will be installed, your PC is not connected to the Internet, manual steps are required to transfer data between the PC and the EFI licensing website using another PC that is connected to the Internet.

1. A PC where the optional feature will be installed, must be connected to E-23C with the Command WorkStation.
2. Another PC that can access to the Internet is needed.

**Note**

- The above two PCs can be the same single PC (by switching the roles by changing the location/connection).

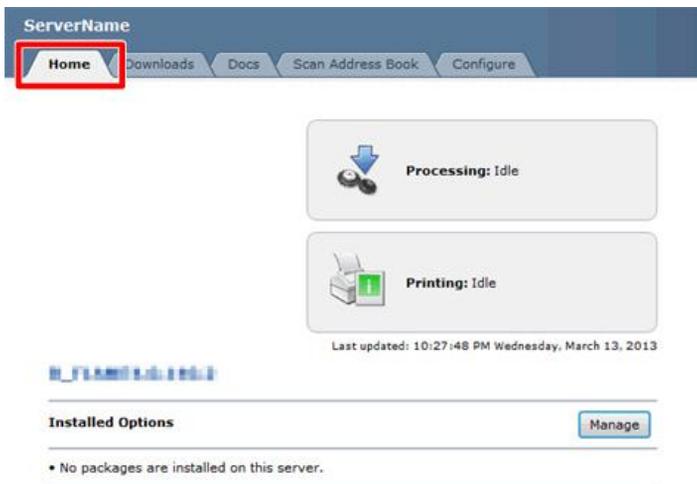
## Confirming the Activated Options

There are three ways to confirm the activated options for a particular unit of E-23C.

1. Print the configuration sheet.  
(page 69 "Printing the Configuration Page or Test Sheets")
2. Confirm from WebTools.

Launch the web browser and enter the IP address of E-23C in the URL column to execute the Web Tools.

Click the Home tab and confirm the installed options.



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3. Confirm from Command WorkStation.

Launch Command WorkStation and move to Device Center > General > General Info > Option/Package to confirm.



w\_d7292052

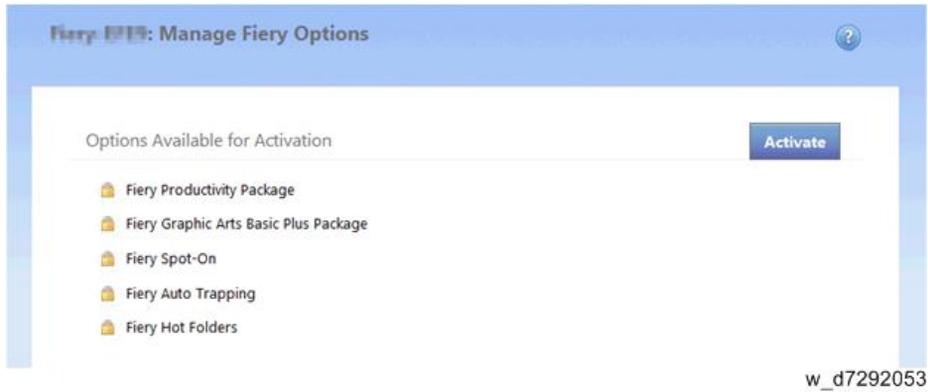
### Access to the Manage Options Window (Auto/Manual Activation)

Activation will be done from the Manage Fiery Options window.

**Note**

- The names of options shown on the following screen samples may differ from the names of options for E-23C.

<Manage Options window for Server Options>



<Manage Options window for Client Options>



The procedure to access to the Manage Fiery Options window differs between Server Options and Client Options.

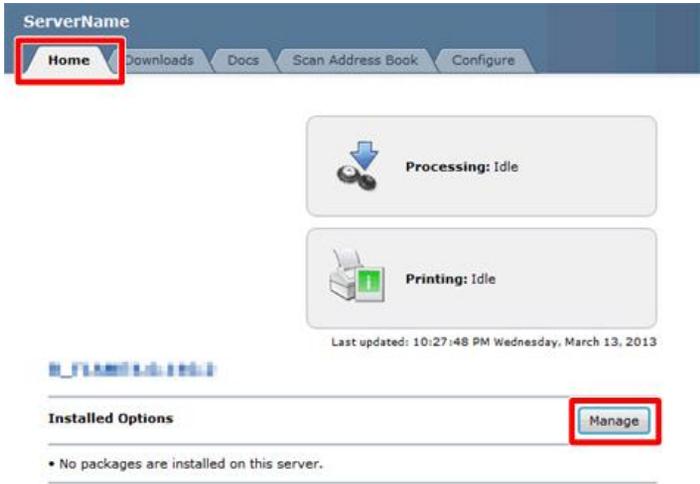
### Server Options' procedure

There are two ways to access to the Manage Server Options window.

1. Access from the WebTools.

Launch the web browser and enter the IP address of E-23C in the URL column to execute the Web Tools.

Click the Home tab and then click Manage.



w\_d7292055

2. Access from the Command WorkStation.

Launch Command WorkStation and move to Device Center > General > General Info > Option/Package and click Manage.



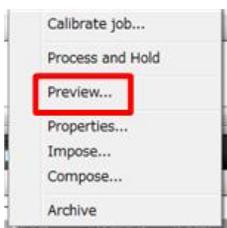
w\_d7292056

**Client Options' procedure**

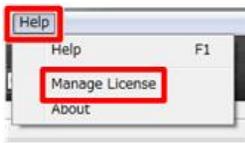
There are two ways to access to the Manage Client Options window.

1. Access from Command WorkStation.

Launch Command WorkStation, right-click a job and select Preview, and then select Help > Manage License.



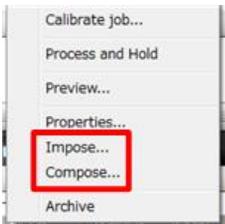
w\_d7292057



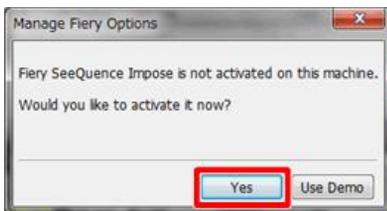
w\_d7292058

2. Access from Command WorkStation's Help.

Launch Command WorkStation, right-click a job and select Impose or Compose. If you are prompted to activate or not, click Yes.



w\_d7292059



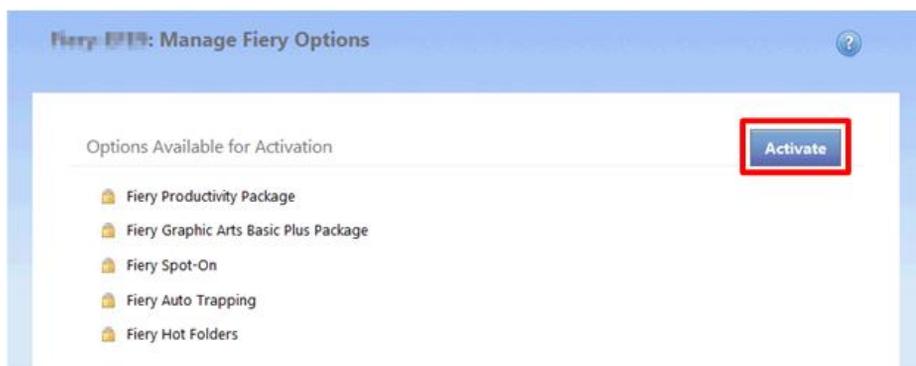
w\_d7292060

## Activation Procedure

### <Automatic Activation Procedure>

1. In the Manage Options window, click Activate.

<Manage Options window for Server Options>

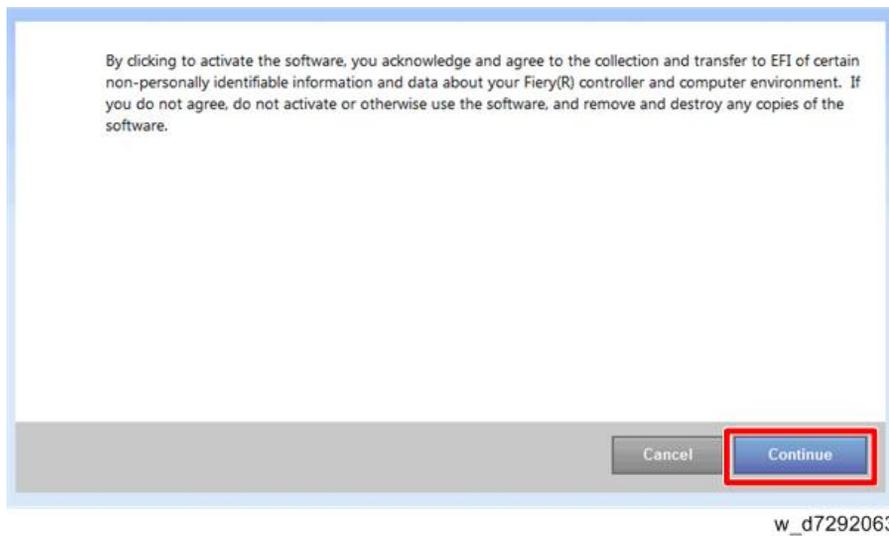


w\_d7292061

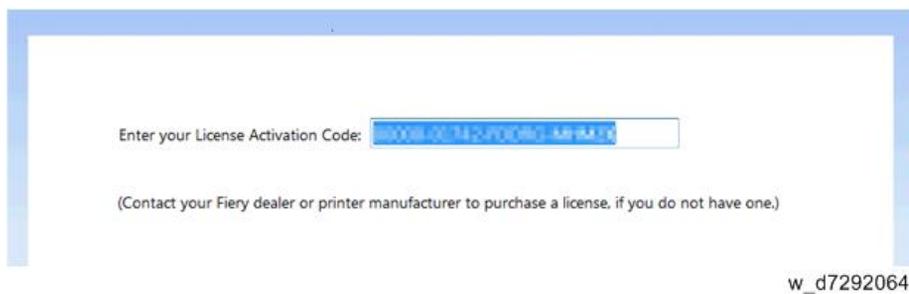
<Manage Options window for Client Options>



2. To agree to the terms and conditions of the license agreement, click Continue.



3. For License Activation Code, type the LAC and....

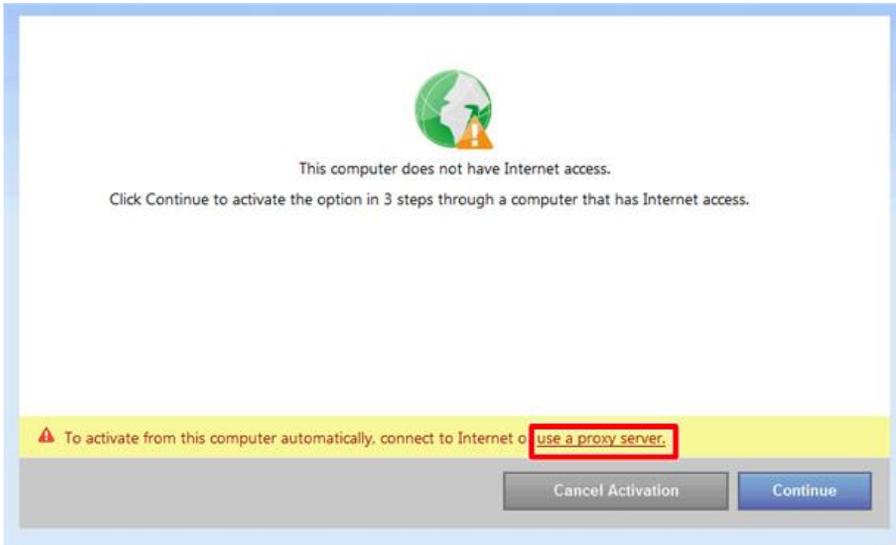


Server Options: click Activate.

Client Options: click Continue.

**Note**

- If the E-23C needs a proxy server to connect to Internet, the following screen may appear. In such case, click the link of "use a proxy server" and fill in the necessary information for proxy server, then click Apply. Then click Continue.

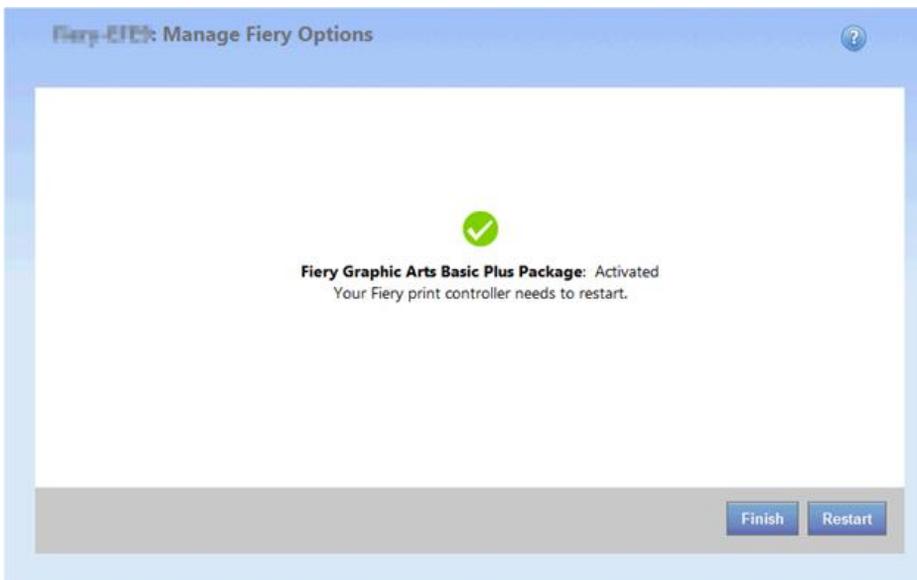


w\_d7292065

4. If the Fiery option name is correct, click Activate.

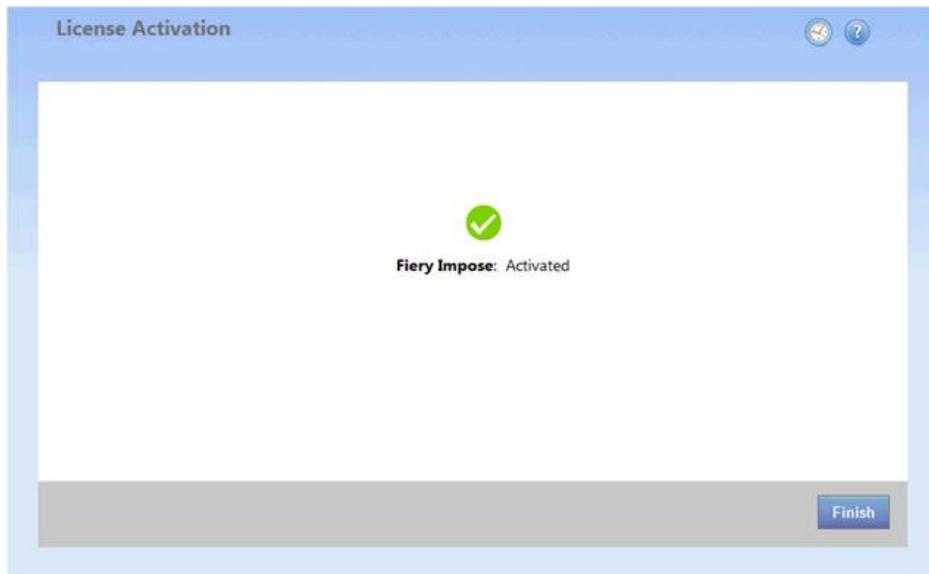
5. The Fiery option is activated.

<Server Option>



w\_d7292075

<Client Option>



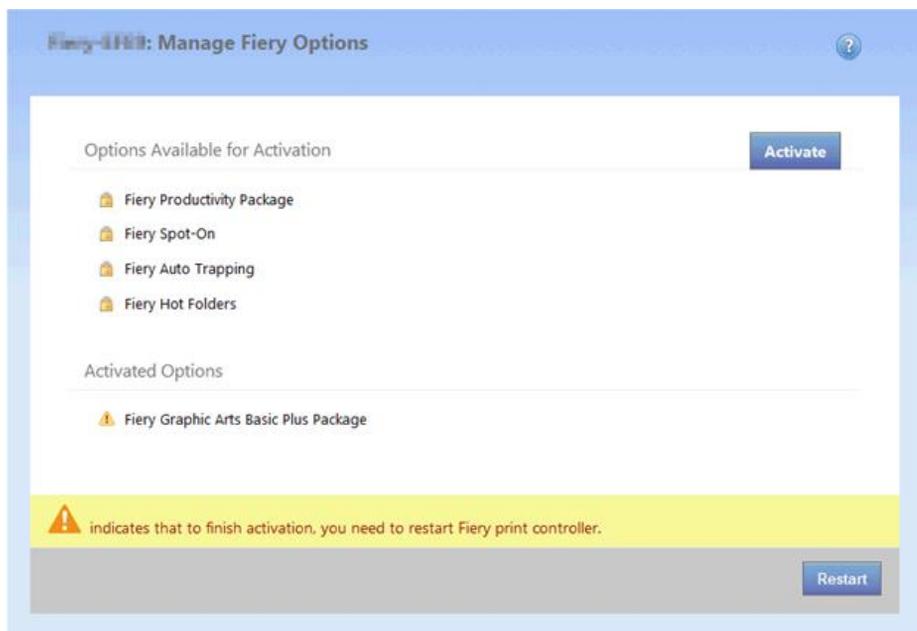
w\_d7292076

6. If the activation requires a restart of the Fiery print controller, click Restart to restart now, or click Finish to activate more options before restarting.

If the activation does not require a restart of the Fiery print controller, just click Finish.

If activation requires a restart:

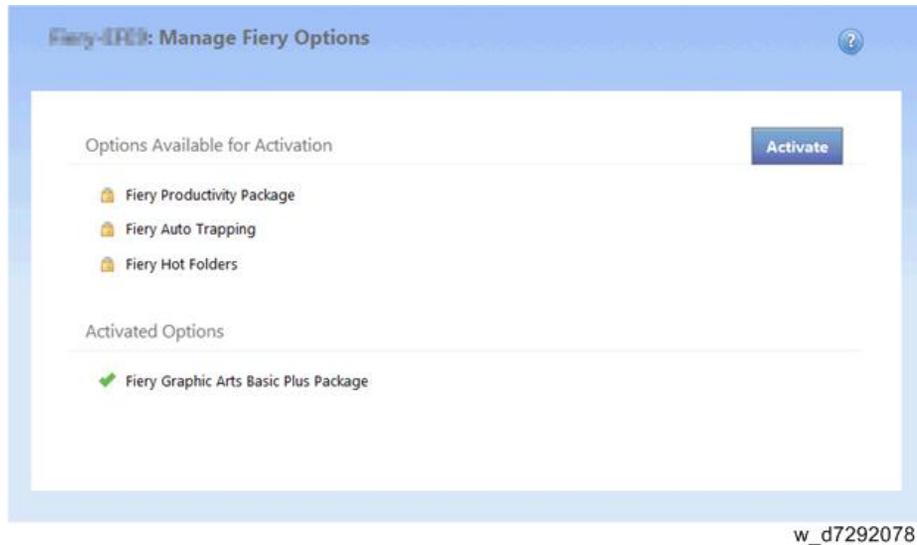
<Server Option>



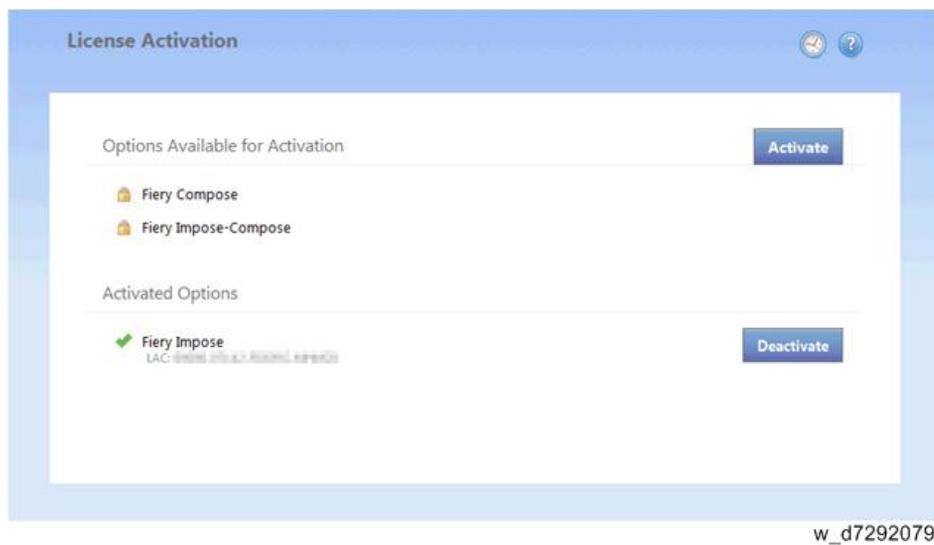
w\_d7292077

If activation does not require a restart:

<Server Option>



<Client Option>

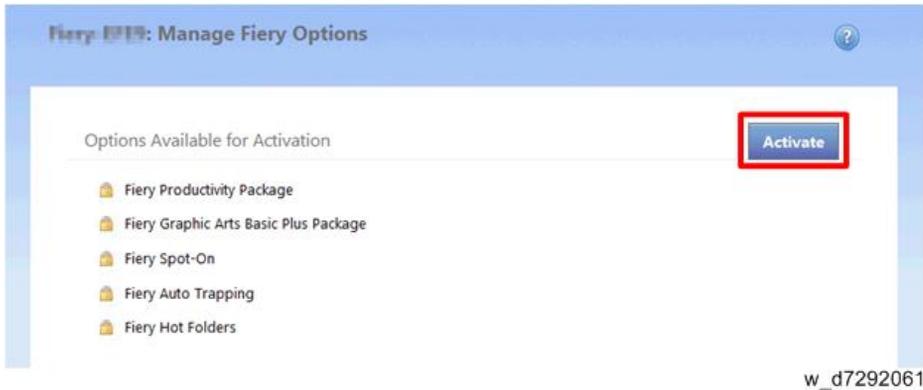


7. For Server Option only: Print the configuration sheet and keep it (for the case that the key chip becomes defective). (page 69 "Printing the Configuration Page or Test Sheets")

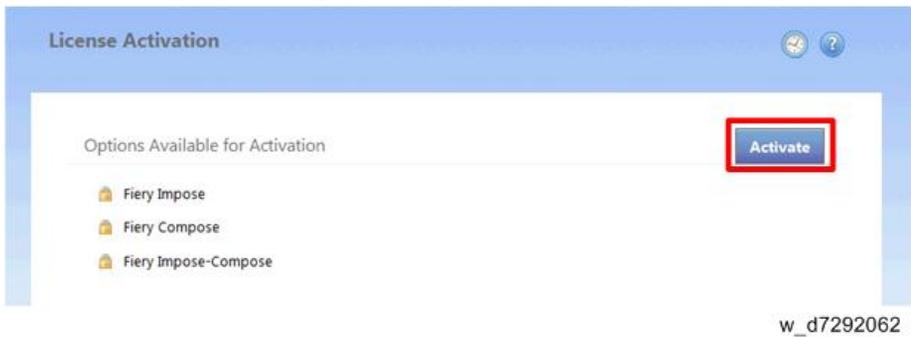
<Manual Activation Procedure>

1. In the Manage Options window, click Activate.

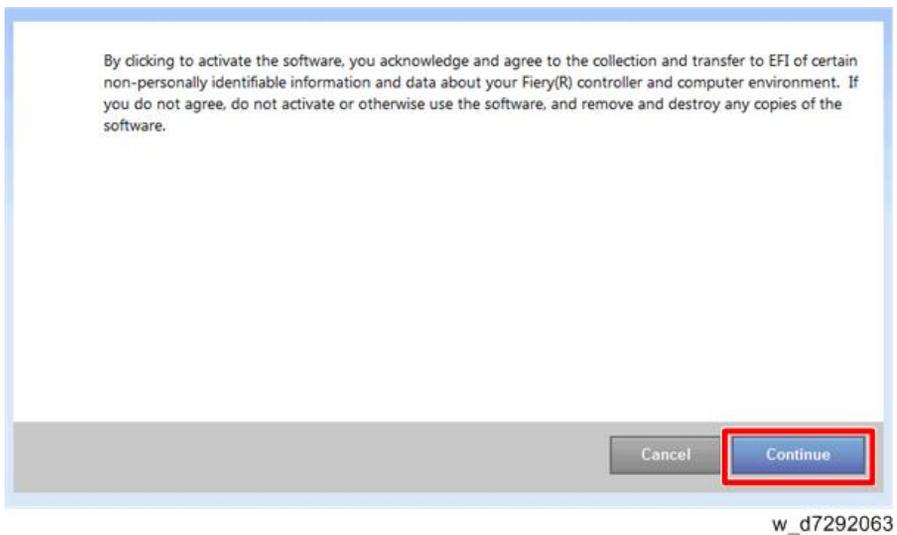
<Manage Options window for Server Options>



<Manage Options window for Client Options>



2. To agree to the terms and conditions of the license agreement, click Continue.



### 3. For License Activation Code, type the LAC and...

A screenshot of a software installation window. At the top, it says "Enter your License Activation Code:" followed by a text input field containing "XXXXXXXXXXXXXXXXXXXX". Below the input field, there is a note: "(Contact your Fiery dealer or printer manufacturer to purchase a license, if you do not have one.)".

w\_d7292064

Server Options: click Activate.

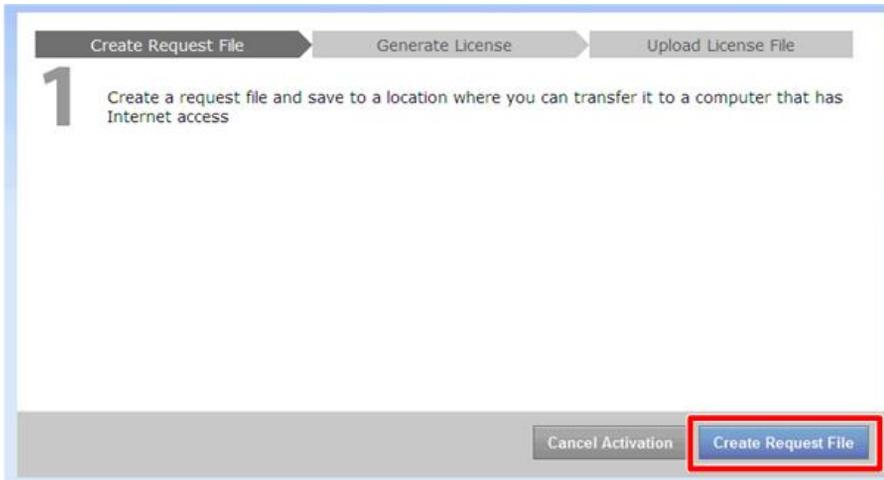
Client Options: click Continue.

### 4. Click Continue to proceed with the manual process.

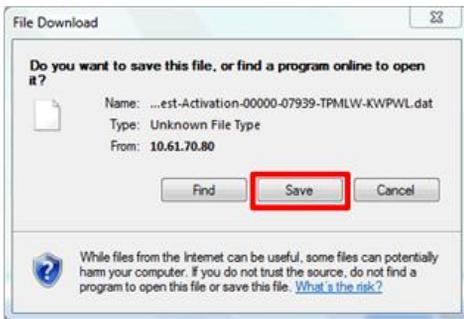
A screenshot of a software installation window. In the center, there is a globe icon with a green checkmark and a red 'X' over it. Below the icon, the text reads: "This computer does not have Internet access. Click Continue to activate the option in 3 steps through a computer that has Internet access." At the bottom, there is a yellow warning bar with a red triangle icon and the text: "To activate from this computer automatically, connect to Internet or use a proxy server." Below the warning bar, there are two buttons: "Cancel Activation" and "Continue". The "Continue" button is highlighted with a red rectangular box.

w\_d7292067

5. Click Create Request File and save the file.



w\_d7292068



w\_d7292069

6. Copy the request file to a PC that is connected to the Internet.

It is also possible that you use the same PC by changing the location/connection.

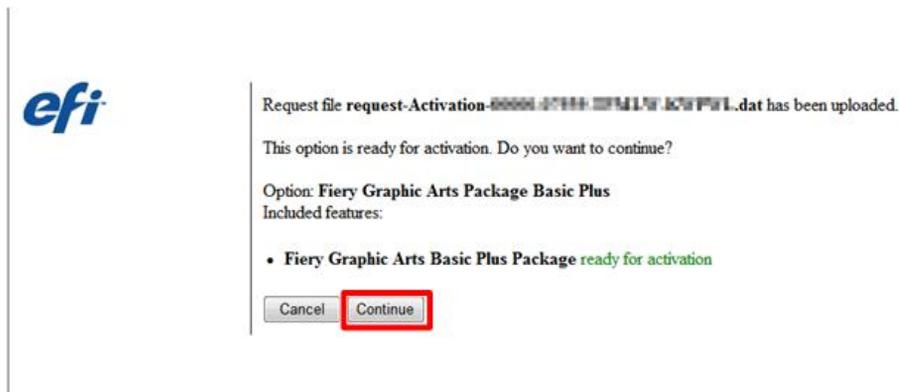
7. On the PC that is connected to the Internet, open a browser and go to [licensing.efi.com](http://licensing.efi.com).

8. Click Browse, select the request file, and then click Upload.



w\_d7292070

9. If the Fiery option name is correct, click Continue.



w\_d7292071

A license file is generated.

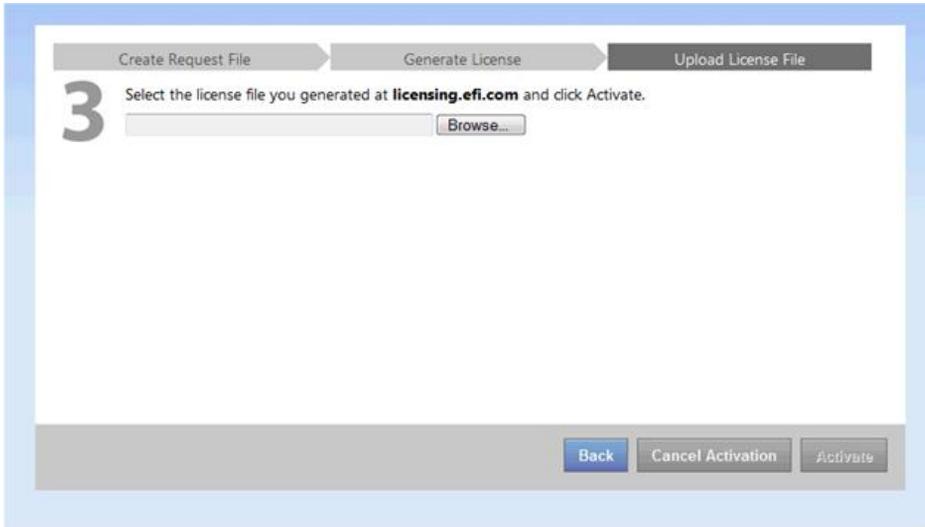
10. Click Download License File and save the file.



w\_d7292072

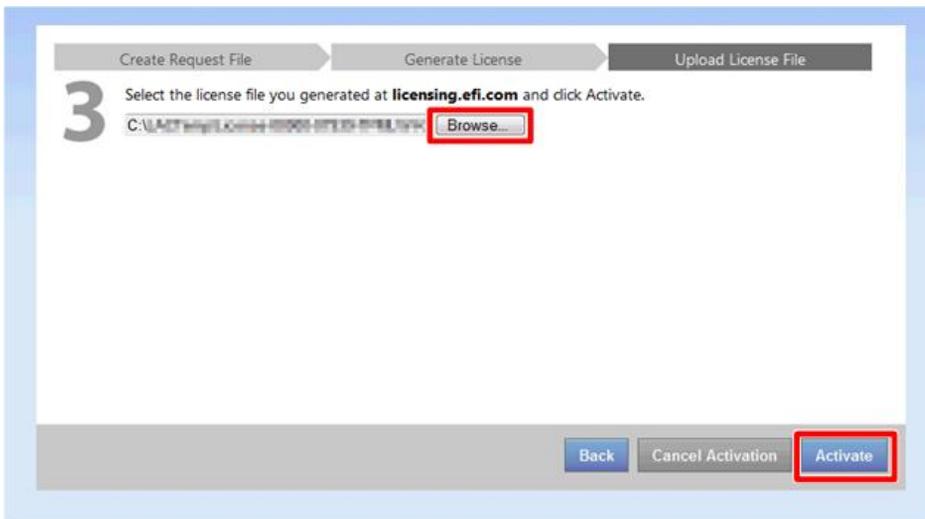
11. Copy the license file to the PC where you first entered the License Activation Code.
12. Return to the Generate License window and click Yes.

If you had closed that window, restart from step 1 (open the Manage Options window) and click Activate, to reach to the following window.



w\_d7292073

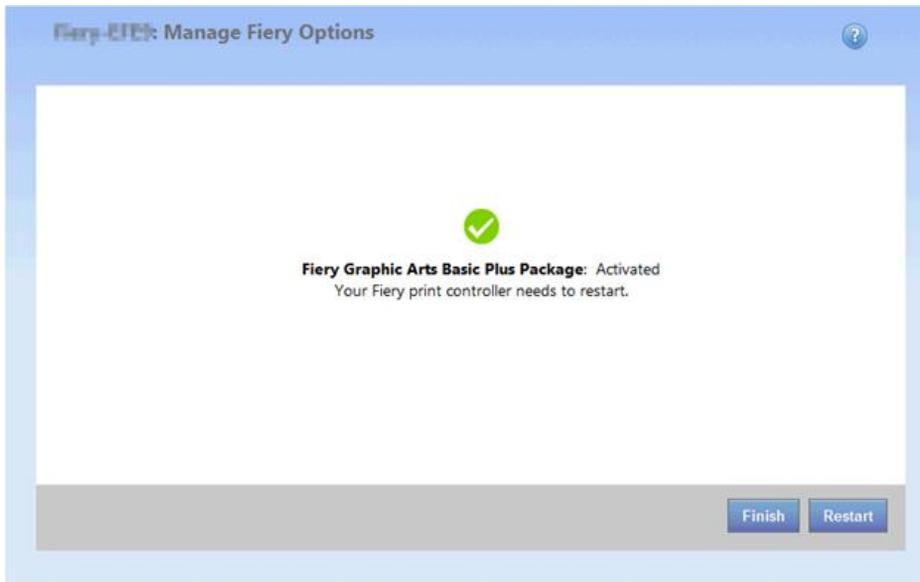
13. Click Browse, select and open the license file, and then click Activate.



w\_d7292074

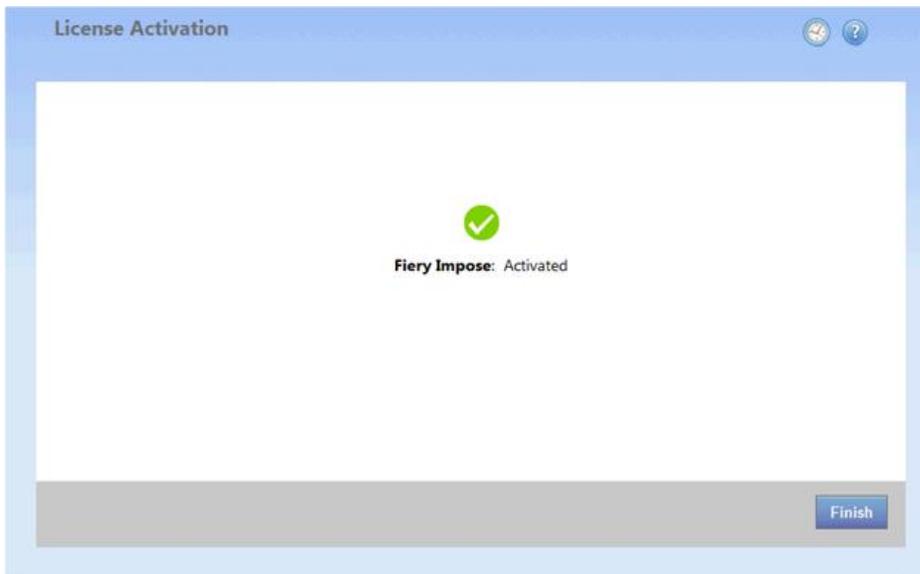
14. The Fiery option is activated.

<Server Option>



w\_d7292075

&lt;Client Option&gt;



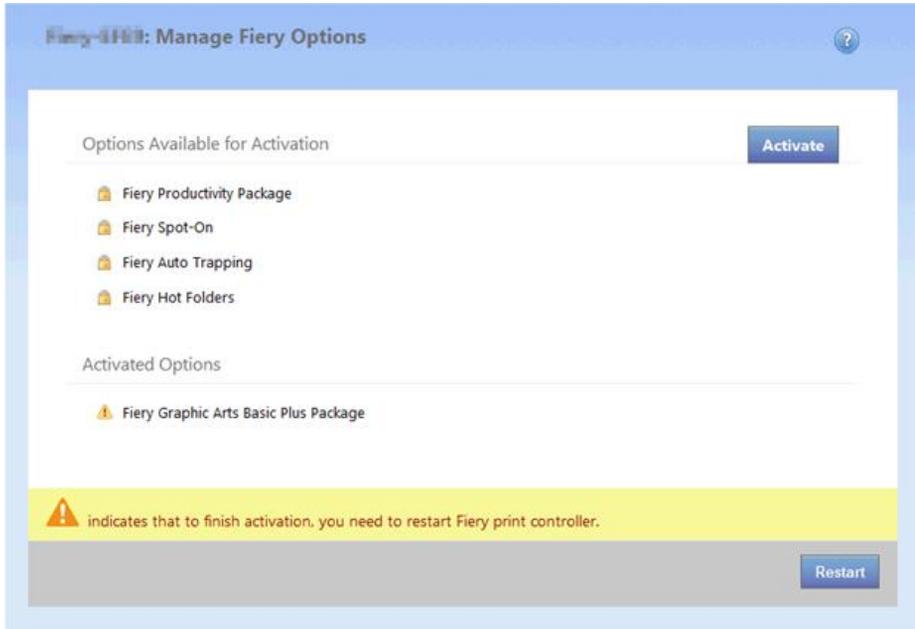
w\_d7292076

15. If the activation requires a restart of the Fiery print controller, click **Restart** to restart now, or click **Finish** to activate more options before restarting.

If the activation does not require a restart of the Fiery print controller, just click **Finish**.

If activation requires a restart:

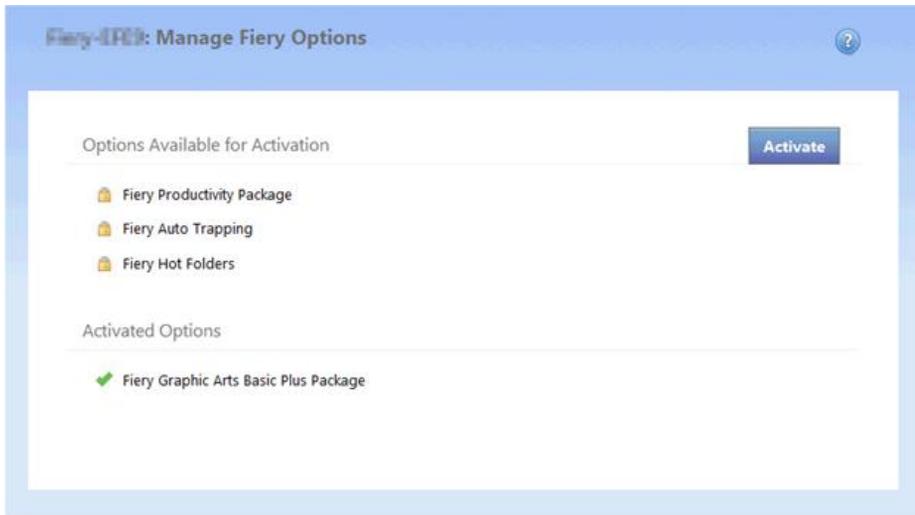
<Server Option>



w\_d7292077

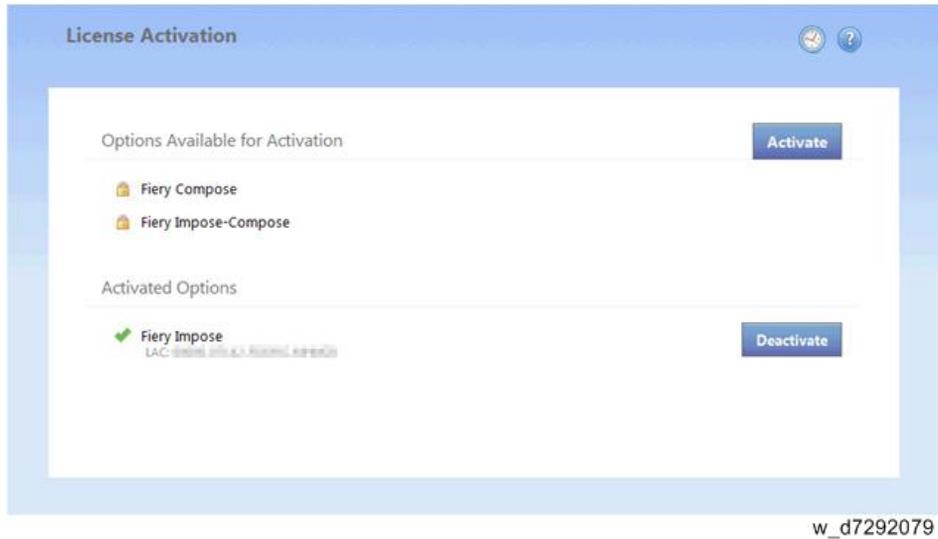
If activation does not require a restart:

<Server Option>



w\_d7292078

<Client Option>



**16. For Server Option only: Print the configuration sheet and keep it (for the case that the key chip becomes defective). (page 69 "Printing the Configuration Page or Test Sheets")**

## Deactivation of Client Options

If you want to transfer the license for a Client Option from one PC to another, you must first deactivate the option.

Deactivation makes the License Activation Code (LAC) for the option available again. You can activate the license on another PC using the LAC.

The deactivation process depends on whether your PC is connected to the Internet:

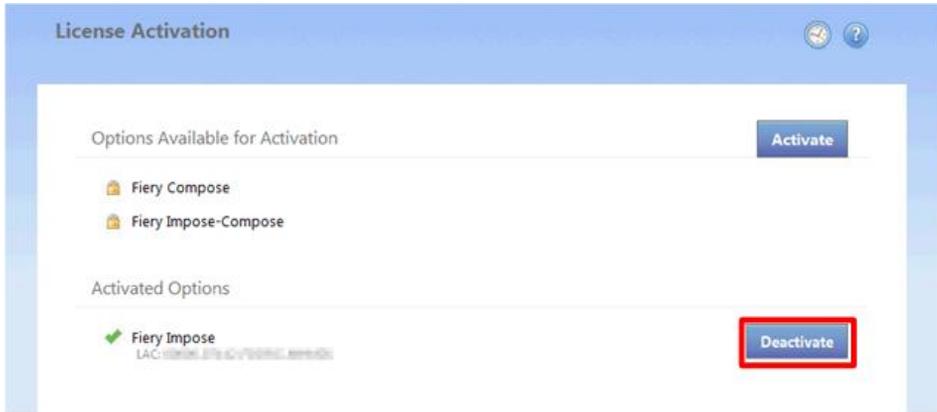
- If your PC is connected to the Internet: Use Automatic deactivation.
- If your PC is not connected to the Internet: Use Manual deactivation.

After deactivation is complete, you can View deactivation status and LAC of an option in the deactivation history.



<Automatic Deactivation Procedure>

1. In the Manage Client Options window, under Activated Options, click Deactivate next to the option that you want to deactivate.

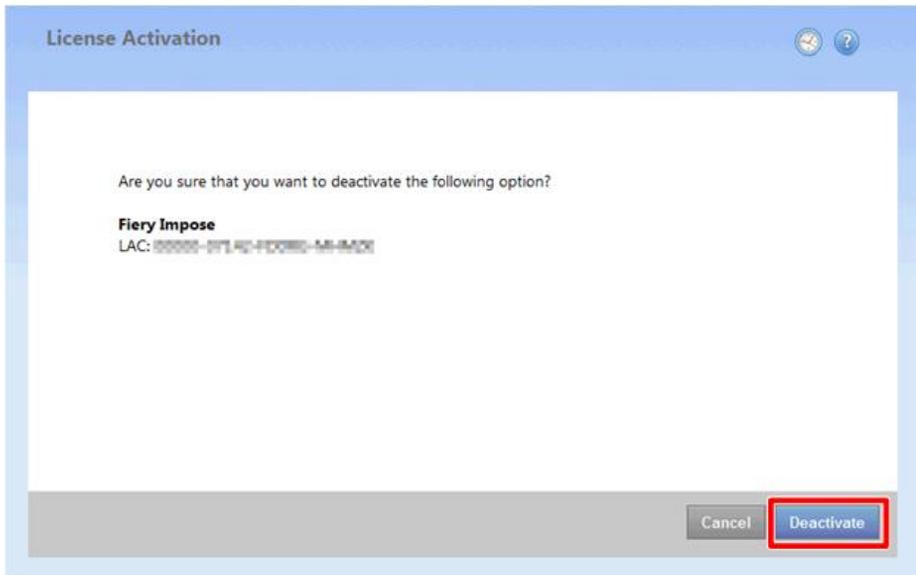


w\_d7292081

**Note**

- If there is no Deactivate button next to the option, the option is activated by a dongle.

2. Click Deactivate to confirm the deactivation.



w\_d7292082

The Client Option is deactivated, and the LAC is displayed.

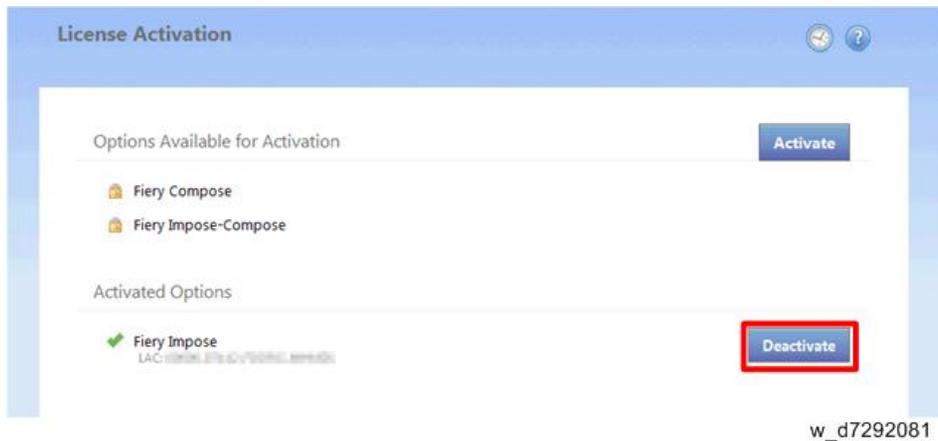
The LAC is available for reuse.



1

### <Manual Deactivation Procedure>

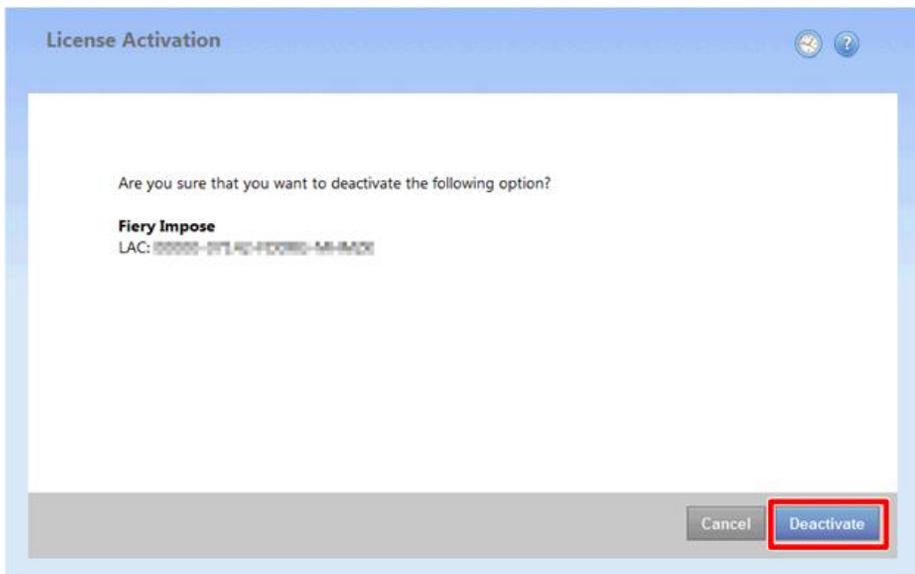
1. In the Manage Client Options window, under Activated Options, click Deactivate next to the option that you want to deactivate.



#### Note

- If there is no Deactivate button next to the option, the option is activated by a dongle.

2. Click Deactivate to confirm the deactivation.



w\_d7292082

3. Click Continue to proceed with the manual process.
4. Click Create Request File and save the file. The Client Option is deactivated, and the LAC is displayed.
5. Click Finish.
6. Copy the request file to a PC that is connected to the Internet.
7. On the PC that is connected to the Internet, open a browser and go to [licensing.efi.com](http://licensing.efi.com).
8. Click Browse, select the request file, and then click Upload.

The LAC is available for reuse.



w\_d7292083

## View Deactivation Status and LAC

1. In the Manage Client Options window, click the deactivation history icon.



Deactivated options and their corresponding LACs are listed. If an option is selectable, the deactivation may be incomplete.

To complete a deactivation, select the option, click Deactivate, and continue with manual deactivation.

See Manual deactivation for more information.

## Reactivation of Client Options

If the license for a Client Option is corrupted, the option does not function even though it appears to be activated. When your PC starts, it attempts to reactivate a corrupted license by contacting the licensing server. If reactivation fails (because of a network interruption, for example) you can try to reactivate the option in the Manage Client Options window. You do not need to enter the LAC.

The reactivation process depends on whether your PC is connected to the Internet:

- If your PC is connected to the Internet: Use Automatic reactivation.
- If your PC is not connected to the Internet: Use Manual reactivation.

### <Automatic Reactivation Procedure>

1. In the Manage Client Options window, under Activated Options, click Reactivate next to the option that you want to reactivate.

The Client Option is activated.

2. Click Finish.

### <Manual Reactivation Procedure>

1. In the Manage Client Options window, under Activated Options, click Reactivate next to the option that you want to reactivate.
2. Click Continue to proceed with the manual process.
3. Click Create Request File and save the file.
4. Copy the file to a PC that is connected to the Internet. (It is also possible to use the same PC by changing the location/connection.)
5. On the PC that is connected to the Internet, open a browser and go to [licensing.efi.com](http://licensing.efi.com).
6. Click Browse, select the request file, and then click Upload.

License file is generated.

7. Click **Download License File** and save the file.
8. Copy the license file to the PC where you are reactivating the license.
9. Return to the **Generate License** window and click **Yes**.
10. Click **Browse**, select and open the license file, and then click **Activate**.
11. The **Client Option** is reactivated.
12. Click **Finish**.

## Restoring Activated Client Options

---

If the licensing record for Client Options is not available (because you reinstalled the system software on your PC, for example) previously activated options do not appear to be activated. When your PC starts, it attempts to restore the licensing record by contacting the licensing server. If the restore fails (because of a network interruption, for example) you can try to restore the options in the Manage Client Options window.

The restore process depends on whether your PC is connected to the Internet:

- If your PC is connected to the Internet: Use Automatic restore
- If your PC is not connected to the Internet: Use Manual restore

### <Automatic Restore Procedure>

1. In the **Manage Client Options** window, click the link in the message about restoring licenses.

The Client Options are restored.

2. If you have no additional options to activate, click **OK**. Otherwise, to activate additional options, click **Continue**.

### <Manual Restore Procedure>

1. In the **Manage Client Options** window, click the link in the message about restoring licenses.
2. Click **Continue** to proceed with the manual process.
3. Click **Create Request File** and save the file.
4. Copy the file to a PC that is connected to the Internet. (It is also possible to use the same PC by changing the location/connection.)
5. On the PC that is connected to the Internet, open a browser and go to [licensing.efi.com](http://licensing.efi.com).
6. Click **Browse**, select the request file, and then click **Upload**.  
A license file is generated.
7. Click **Download License File** and save the file.
8. Copy the license file to the PC where you are restoring options.

9. Return to the **Generate License** window and click **Yes**.

10. Click **Browse**, select and open the license file, and then click **Restore**.

The Client Options are restored.

## Troubleshooting for Activation

If any error message or error code is shown during the activation procedure, take action as below table.

If the problem persists, prepare the following information for report your problem to technical support.

1. Serial Number of the controller.
2. Name of optional feature
3. LAC (License Activation Code)
4. OS of the PC

### Note

- The error code and required action on the below table are subject to change (added/removed/ revised). Latest information is provided in [help.efi.com](http://help.efi.com).

### Error messages and recommended actions: From the license activation software:

Message ID	Error message	Action
OFA0020	The LAC is not in the correct format. Try entering the LAC again. Refer to the LAC card if you have one.	The LAC is not in the correct format. Try entering the LAC again. Refer to the LAC card if you have one.
OFA0010	The license file you selected is invalid, select a different one and try again.	During manual activation, you obtained a license file from the EFI licensing website. Check that you selected the correct license file to upload.  If the error still occurs, you can restore Fieri options and try to activate again.
OFA0090	Internal error. Please call EFI technical support.	There is a problem with the license file. Try repeating the activation process from the beginning. If the error occurs again, restore the options and try to activate again. If the error still occurs, contact technical support and provide the error code shown in the message.

Message ID	Error message	Action
OFA0060	Error <number> Proxy configuration is incorrect or proxy server is down.	There is no Internet connection. Check that the proxy settings are correct and try again. If the problem persists, contact your network administrator.
OFA0030	Internet connection could not be established.	There is no Internet connection. Check that the proxy settings are correct and try again. If the problem persists, contact your network administrator.
OFA0080	Error <number> Licensing session expired. Start licensing session again.	The license activation software was used in a different browser window more recently than this one. To continue, close this window and open a new one.
OFA00105	Error <number> The license activation software module is corrupted and Fiery system software must be reinstalled.	The license activation software module is corrupted and Fiery system software must be reinstalled. Contact technical support and provide the error code shown in the message.
OFA0070	Error <number> The license activation software module is corrupted. Reinstall Command WorkStation and try again.	Reinstall Command WorkStation and try again.  On Windows, go to <b>Control Panel &gt; Add or Remove Programs</b> and start Fiery User Software in maintenance mode. Select the Repair option and then select Command WorkStation.  On Mac OS, use Fiery Software Uninstaller to uninstall Command WorkStation, and then reinstall Command WorkStation.
OFA0050	Sorry we cannot deactivate the option requested. Please contact support for more information.	Try to restore Fiery options and deactivate again. If the error still occurs, contact technical support.
OFA0040	Sorry we cannot reactivate the option requested. Contact support for more information.	Try to restore Fiery options and reactivate again. If the error still occurs, contact technical support.

Message ID	Error message	Action
OFA00115	None of the options could be restored.	No previously activated licenses were found for this computer. If you had licenses that were previously activated, contact technical support.

#### Error messages and recommended actions: From the EFI licensing server:

Message ID	Error message	Action
EBIS0004	The LAC is not recognized. Check that you entered the correct LAC. Refer to the LAC card if you have one.	The LAC is not recognized. Check that you entered the correct LAC. Refer to the LAC card if you have one.
EBIS0007	This option is already activated.	Check that the LAC is correct for the option that you want to activate.
EBIS0016	The license has already been activated for another computer.	The license has already been activated for another computer. You can deactivate the license on the other computer and then activate it on this one.
EBIS0018	You must first choose the Request File to upload.	You submitted the wrong request file or the request file is corrupted. Try submitting a different request file. If the error occurs again, try regenerating the request file.
EBIS0025	Unable to activate license: Error Code <number>	An error occurred on the EFI licensing server. Contact technical support and provide the error code shown in the message, the LAC, and the serial number of your Fiery Controller.
EBIS0002	The EFI licensing service is unavailable. Try again later.	The EFI licensing service is unavailable. Try again later.
EBIS0006	The License Activation Code (LAC) cannot be activated. Check that the feature(s) activated by the LAC are correct for your product.	Check that the feature(s) activated by the LAC are correct for your Fiery controller model.

Message ID	Error message	Action
EBIS0011	Your system does not support some of the features included in this option. Do you want to continue?	The LAC activates multiple features and one or more features is not supported, as shown in the list. Obtain a new LAC that has only features that are supported.  If you continue, you will not be able to use any unsupported features and you cannot use the LAC again.
EBIS0008	Some features of this option are already activated. Do you want to continue?	The LAC activates multiple features and one or more features is already activated, as shown in the list. Obtain a new LAC that has only features that are not already activated.  If you continue, you will be paying twice for the same feature.
EBIS0026	Unable to deactivate license: Error Code <number>	Try to restore Fiery options and deactivate again. If the error still occurs, contact technical support and provide the error code shown in the message.
EBIS0024	Unable to re-activate license: Error Code <number>	Try to restore Fiery options and reactivate again. If the error still occurs, contact technical support and provide the error code shown in the message.
EBIS0027	No licenses have been previously activated on this computer, so you cannot restore any licenses.	No licenses have been previously activated on this computer, so you cannot restore any licenses.

## 2. General Operations For Servicing

---

### Start-Up, Shut-Down, and Reboot

The copier and the E-23C have separate main power switches. During normal operation, you can leave the E-23C main power switch in the ON (I) position.

#### Note

- In order to conserve energy, if the Automatic Power Down option is enabled (default), the Fiery controller will automatically power down after 2 hours, if no network activity is detected. (page 33 "Enabling/Disabling Automatic Power Down")

---

#### Starting the Copier and the E-23C

---

1. Turn on the main power switch of the copier.
2. If the main power switch of the E-23C is OFF (O), turn on the main power switch of the E-23C.
3. Press and release the soft power push button on the front of the E-23C. The controller enters into the boot-up sequence.
4. After the E-23C and the copier become idle, press the Home button on the operation panel of the copier and then touch the Fiery icon. The Fiery menu screen will appear on the copier operation panel.

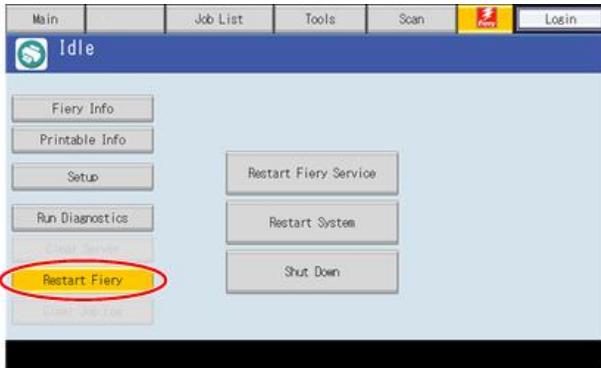
---

#### Shutting Down the Copier and the E-23C

---

1. Press the Home button on the operation panel of the copier and then touch the Fiery icon. The fiery menu screen appears.
2. Move to the Fiery tab.

**3. Touch “Restart Fiery”.**

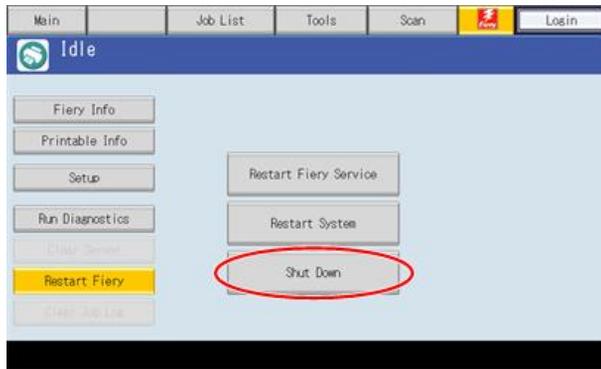


d7292013

**4. Touch “Shut Down” , then touch “OK” .**

The E-23C enters into the shut down sequence.

The diagnostic LEDs on the back panel of the E-23C will turn off.



d7292014

**5. Turn the copier main power switch off.**

**6. If the E-23C is being taken out of service, turn off the E-23C using its main power switch. (For example, if someone needs to move the E-23C, disconnect cables, or open the chassis.)**

---

## Shutting Down the E-23C Only

---

1. Press the Home button on the operation panel of the copier and then touch the Fiery icon. The Fiery menu screen appears.
2. Move to the Fiery tab.
3. Touch “Restart Fiery”.

**4. Touch “Shut Down”, then touch “OK”.**

The E-23C enters into the shut down sequence.

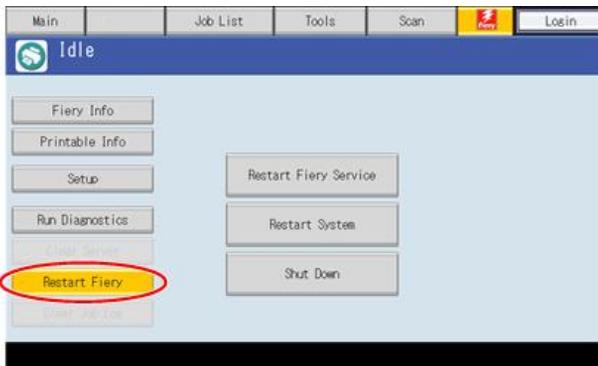
The diagnostic LEDs on the back panel of the E-23C will turn off.

**5. If the E-23C is being taken out of service, turn off the E-23C using its main power switch. (For example, if someone needs to move the E-23C, disconnect cables, or open the chassis.)**

## Restarting the E-23C

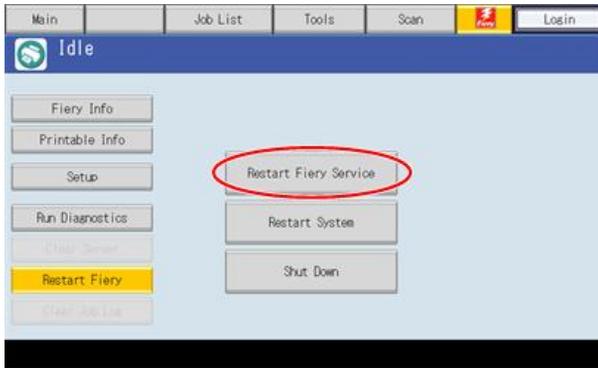
When restarting the E-23C to recover from a problem, try this procedure first. However, this procedure will only restart the E-23C application software that is now running on the system OS. To reboot the system OS (for example, after downloading a patch), see the next section “Rebooting the E-23C” (page 66 “Rebooting the E-23C”).

1. Make sure that the E-23C is not in use.
2. Press the Home button on the operation panel of the copier and then touch the Fiery icon. The Fiery menu screen appears.
3. Move to the Fiery tab.
4. Touch “Restart Fiery”.



d7292013

**5. Touch “Restart Fiery Service”**



d7292015

**6. Wait until the E-23C becomes idle.**

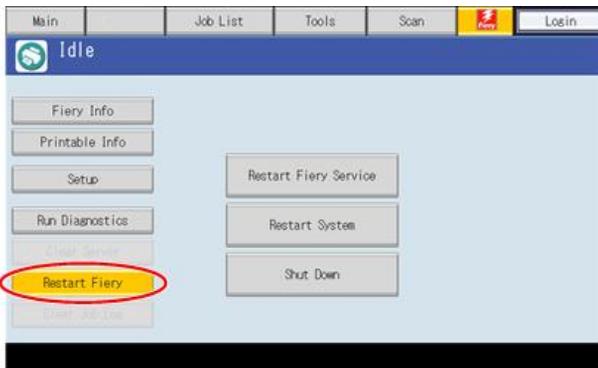
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## Rebooting the E-23C

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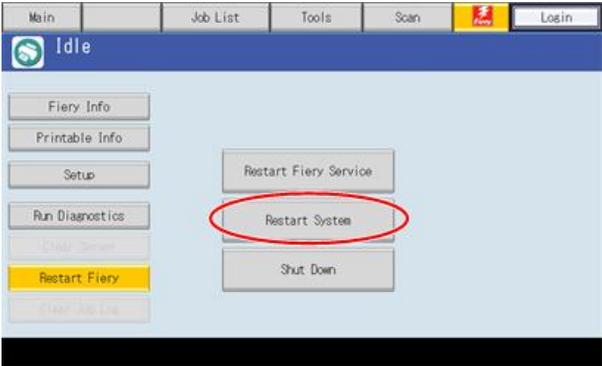
Use this procedure to reboot the system OS (for example, after downloading a patch).

1. Make sure that the E-23C is not in use.
2. Press the Home button on the operation panel of the copier and then touch the Fiery icon. The Fiery menu screen appears.
3. Move to the Fiery tab.
4. Touch “Restart Fiery”.



d7292013

5. Touch "Restart System"



d7292016

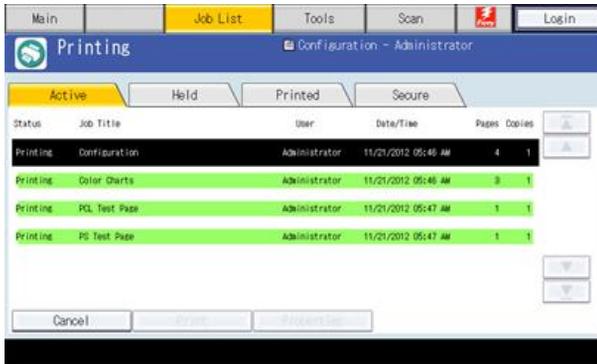
6. Wait until the E-23C becomes idle.

# Cancelling the Current Print Job

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

1. Press the Home button on the operation panel of the copier and then touch the Fiery icon to access the Fiery menu screen.
2. Move to the Job list tab.

2



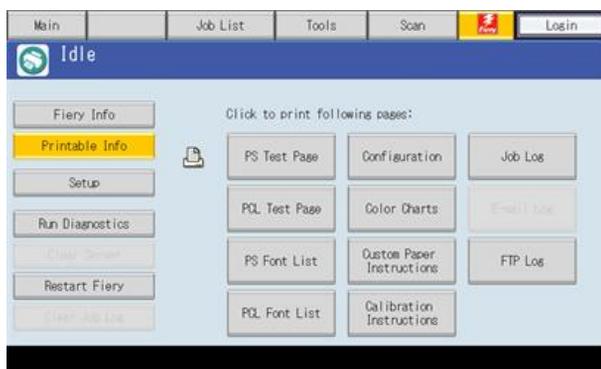
d7292017

3. From the Job List, touch the job that you want to cancel.
4. Touch "Cancel".

# Printing the Configuration Page or Test Sheets

1. Make sure that the E-23C is not in use.
2. Press the Home button on the operation panel of the copier and then touch the Fiery icon to access the Fiery menu screen.
3. Move to the Fiery tab.
4. Touch "Printable Info", then touch the desired key.
  - Configuration Page
  - PS Test Page
  - PCL Test Page

2



d7292012

## Note

- The configuration sheet can also be saved as a PDF or TXT file from the Command WorkStation.
- Procedure: Launch Command WorkStation, login as Administrator, go to Device Center > General > Server Configuration, and press the Save As button.

## Running the E-23C Setup

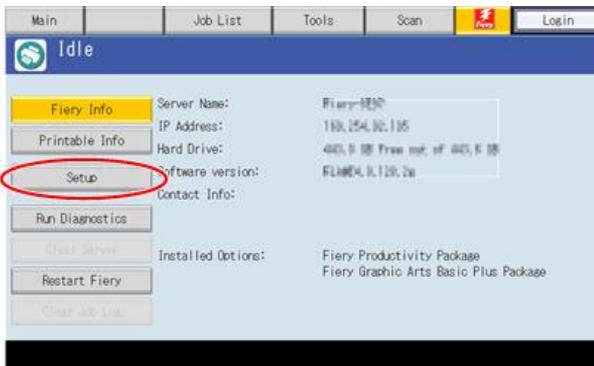
The following procedures show how to access the Setup menu from the Fiery menu screen.

### Note

- When the network settings (protocol, IP Address, etc.) are already configured and the "Enable Web Service" option is set to ON, you can also configure the E-23C setup from "Configure Webtools" (page 72 "Accessing Configure").
- When you try to get access to the Setup menu, you are always asked to input an administrator password. (The default password is "Fiery.1") Ask the site administrator to input the administrator password when you must get access to the Setup menu.

### To Access the Setup Menu

1. Make sure that the E-23C is not in use.
2. Press the Home button on the operation panel of the copier and then touch the Fiery icon to access the Fiery menu screen.
3. Move to the Fiery tab.
4. Touch "Setup".



d7292018

5. You may be asked to enter an administrator password. (Ask the site administrator to enter the password. The default password is "Fiery.1")
6. The main setup screen appears. For the details of each setup option value, refer to the "Configuration and Setup" manual (<http://help.efi.com/ricoh/docs/>).

### To Exit from the Setup Menu

1. At the main setup screen, touch "Exit Setup". The Fiery menu screen will disappear.

2. When you are prompted "System Requires to Reboot for Changes to Apply", touch "Reboot now".

# Accessing Configure

Fiery System Settings can be configured/changed from the client PC using Configure, which can be accessed from the following locations:

- WebTools (with a supported Internet browser)
- Command WorkStation (utility software included in the User DVD)

---

## Accessing Configure from WebTools

---

### ↓ Note

- The network settings (protocol, IP Address, etc) and the "Enable Web Service" option should be set to ON (default) in order to access Configure from WebTools.

### 1. Open an Internet browser and type the IP address of the controller.

Supported Internet browsers:

Windows: Internet Explorer 8 or later, Firefox 31.0 or later, Chrome 37.0 or later

Mac OS: Safari 7 or later, Firefox 31.0 or later, Chrome 37.0 or later

### ↓ Note

- Microsoft releases frequent updates to Internet Explorer. Because support cannot be guaranteed for all versions, use the specified version for best results.
- On Mac OS, some versions of Firefox may not allow you to enter passwords into Configure. If this occurs, use Safari instead.

### 2. In WebTools, on the Configure tab, click Launch Configure.

### ↓ Note

- If a message about untrusted connections appears, or you are asked whether you want to proceed, you can safely ignore the message and proceed anyway. For more information about these messages, see Configuration and Setup (<http://help.efi.com/ricoh/docs/>).

3. Log on with Administrator privileges. The default password is Fiery.1.

## Fiery Configure

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### ↓ Note

- After changing some settings, make sure to click the "Save" button and then click Restart on the upper bar, to effect the changes.

ⓘ Changes made require a restart to take effect. Once you are finished, click Restart. Restart

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## Accessing Configure from Command WorkStation

1. Make sure that Command WorkStation is installed in the client PC.
2. Launch Command WorkStation.
3. Connect to the controller and log in as Administrator.
4. Do one of the following to start Configure:
  - In Device Center, on the General tab, click the Configure button.
  - In Device Center, on the Users tab, click the Configure button.
  - In the Server menu, click Configure.
5. If the Fiery Setup dialog box displays, click Configure.

### ↓ Note

- After changing some settings, make sure to click the "Save" button and then click Restart on the upper bar, to effect the changes.

# Adjusting the System Date and Time

The system date and time should be adjusted by the field technician in the following cases, before leaving the customer site. Also, confirm that the E-23C is set to the correct time zone.

- At installation
- After replacing the motherboard
- After replacing the lithium battery on the motherboard
- After clearing the CMOS for troubleshooting purposes

1. Access to Configure. (page 72 "Accessing Configure")
2. Select Fiery Server > Regional Settings.
3. Confirm correct Time Zone, Date and Time. If not, adjust the settings and click Save.

**Regional Settings**

Configure the date, time and default paper sizes.

Language:

Server Language:  
English

Date & Time:

Time Zone:  
London (GMT)

Set Date and Time Automatically [Manage](#)

Date:  
03/03/2016

Time:  
11:40 AM

Others:

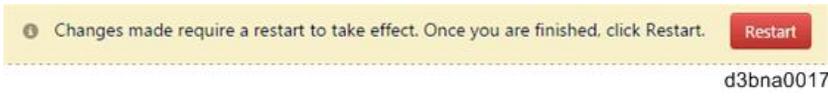
Default Paper Sizes:  
Default sizes for printing system pages.

Inches  Metric

Cancel Save

d3bna0019

**4. Click Restart on the bar at the top for the changes to take effect.**



# Backup and Restore

## Overview

As a careful practice, **Backup and Restore** and **Fiery Clone Tool** can be used in combination to back up settings and files on the E-23C HDD and later restore when necessary.

- Backup / Restore (User Tool, also introduced in the User manual)
- Fiery Clone Tools (Service Tool)

Since the **Fiery Clone Tool** creates a clone image containing the system software and patches applied to the E-23C, using the Fiery Clone Tool regularly will help reduce workload and downtime when the system needs to be re-installed to recover from system software or HDD related problems.

**Note**

- The explanations provided here are purposed for Backup and Restore performed on the **same E-23C unit**.
- As long as the key chip on the motherboard of E-23C is the same, the unit will be identified as the same E-23C unit even if certain components have been replaced.  
However, if the key chip has been replaced, the unit is no longer identified as the same E-23C unit. If restored to a different E-23C unit, customized settings and files will not be completely restored.

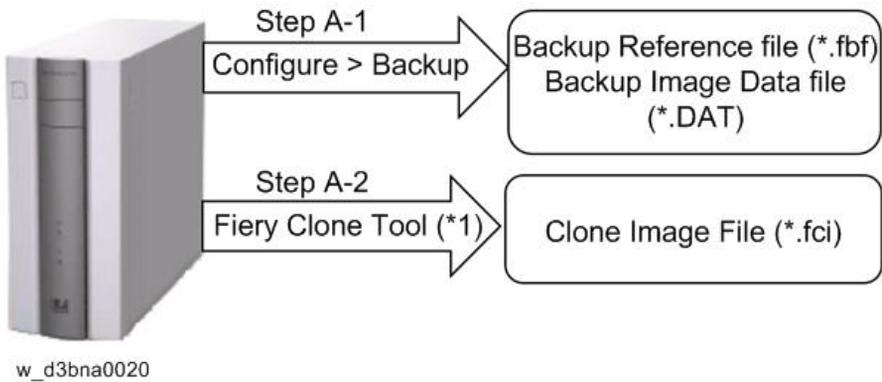
	Backup/Restore (User Tool)	Fiery Clone Tool (Service Tool)
Backup Items	<ul style="list-style-type: none"> <li>• Fiery System Settings</li> <li>• Color Settings</li> <li>• Preflight Presets</li> <li>• Scan Settings</li> <li>• Virtual Printers</li> <li>• Server Presets</li> <li>• Fonts</li> <li>• Job Log</li> </ul>	<ul style="list-style-type: none"> <li>• Everything in the E-23C HDD, except the contents of the jobs sitting in the queues.</li> <li>• The Backup file will contain the Fiery system software with patches applied.</li> </ul>
Important Notice	For information on items that can be restored and workaround for items that cannot be restored when using only the Backup/Restore feature without the Fiery Clone Tool, refer to the Configuration and Setup manual ( <a href="http://help.efi.com/ricoh/docs/">http://help.efi.com/ricoh/docs/</a> ).	Since some of the Fiery system settings cannot be restored and will return to default, <b>it is recommended to use the Backup/Restore (User Tool) feature as a set.</b> (See next page.)

	Backup/Restore (User Tool)	Fiery Clone Tool (Service Tool)
Tools and required items	Backup/Restore feature included in the "Configure" menu (Webtools or Command WorkStation)	<ul style="list-style-type: none"> <li>• Utilities for Windows PC (Provided via Firmware download site) <ul style="list-style-type: none"> <li>• Fiery Clone Tools</li> <li>• Fiery USB Setup Tool</li> </ul> </li> <li>• USB 2,0 flash drive (8GB-32GB)</li> <li>• Windows PC with USB port and 256MB available memories.</li> </ul>
Created Backup Files (required when Restore)	<ul style="list-style-type: none"> <li>• Backup Reference file (*.fbf)</li> <li>• Backup Image Data file (*.DAT)</li> </ul>	<ul style="list-style-type: none"> <li>• Clone Image File (*.fci)</li> </ul>
Remarks	The current date and time are not restored, but time zone and time server settings are restored.	<ul style="list-style-type: none"> <li>• HDD will be formatted when the clone image is restored.</li> <li>• Some of the system setting will return to default when the clone image is restored.</li> </ul>

### A. Creating Backup Files

When.....

- E-23C is installed with patches.
- New patches and updates are installed.
- Fiery System Settings are changed from "Configure" or "Setup" menu.

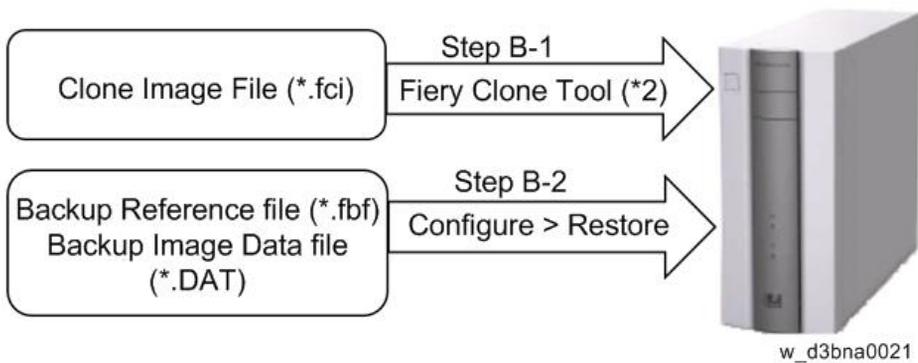


Note \* 1: User data on the Hold/Printed queues will not be backed up.

### B. Restoring Backup Files

When....

- Restore an E-23C with a specific setup configuration.
- Examples,
- after HDD replacement.
  - downgrade the system (= worth removing the latest patches).
  - Remedy a system failure, such as software corruption or HDD failure.



Note \*2: The HDD of E-23C will be formatted before the clone image file is transferred to E-23C.

**Note**

- If the motherboard has been replaced, adjust the system date and time after Step B-2. (page 74 "Adjusting the System Date and Time")

## Using the "Backup / Restore" Feature

You can back up and restore the entire E-23C configuration or selected settings. Backing up the settings creates a configuration file containing the current settings. Restoring the settings does not require reinstallation of any software.

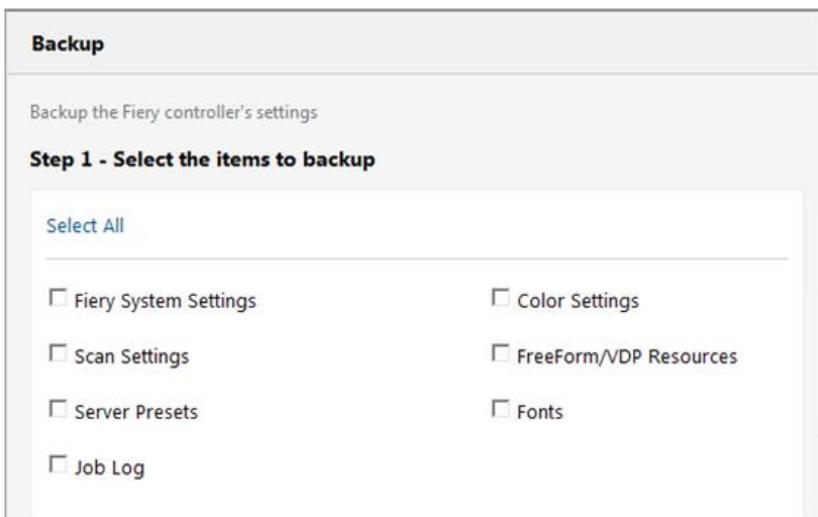
### Accessing the Backup/Restore feature

- Either from Webtools or Command WorkStation, go to Configure > Fiery Server > Backup or Restore.
- From the Command WorkStation, go to the Device Center tab > General > Tools > "Backup&Restore".

The following is the procedure when starting from Configure.

### Creating Backup files

1. **Print a configuration sheet and confirm the date, time, and time zone are correct.**  
If not, correct the date and time. (page 74 "Adjusting the System Date and Time")
2. **Choose Configure. (page 72 "Accessing Configure")**
3. **Choose Fiery Server.**
4. **Click Backup.**
5. **Select the items to backup.**



**Backup**

Backup the Fiery controller's settings

**Step 1 - Select the items to backup**

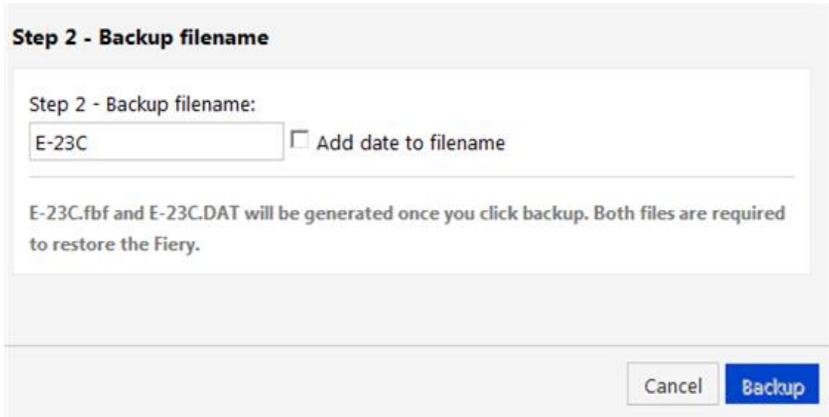
Select All

<input type="checkbox"/> Fiery System Settings	<input type="checkbox"/> Color Settings
<input type="checkbox"/> Scan Settings	<input type="checkbox"/> FreeForm/VDP Resources
<input type="checkbox"/> Server Presets	<input type="checkbox"/> Fonts
<input type="checkbox"/> Job Log	

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**6. Specify the backup filename.**

It is recommended to specify the "Add date to filename" option.



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**7. Click Backup.**

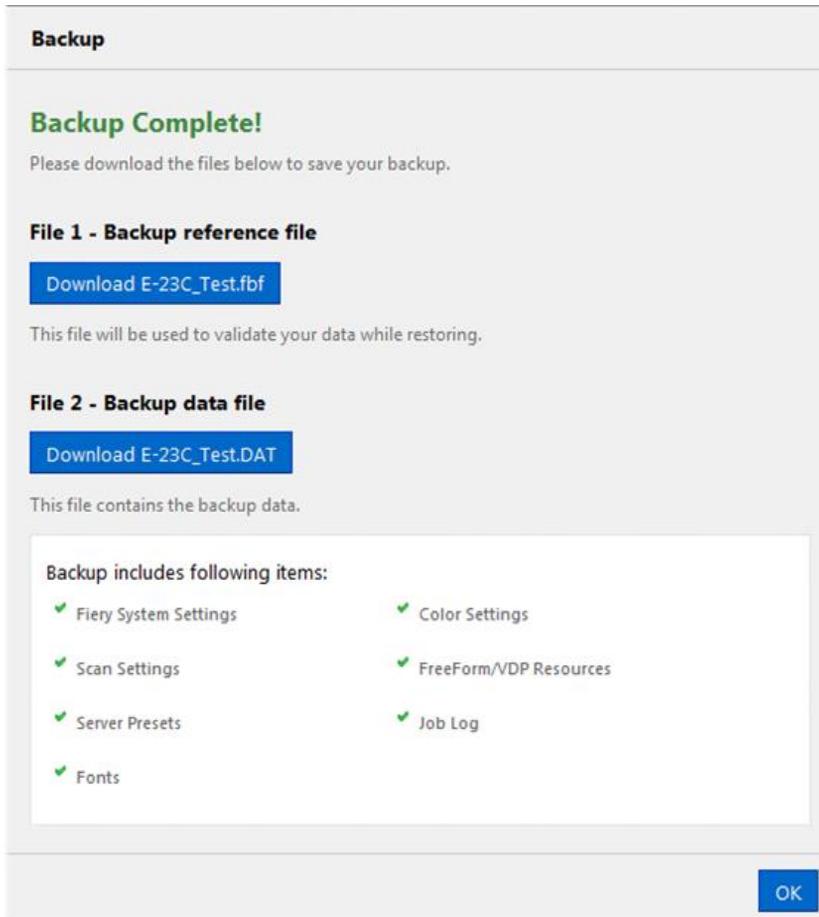
**Note**

- Make sure that two files (\*.fbf and \*.DAT) are generated. Both files are required to restore the Fiery.

**8. Backup will start. When completed, the following screen appears.**

**⚠ CAUTION**

- Do not close this window or press OK before you download the two files.



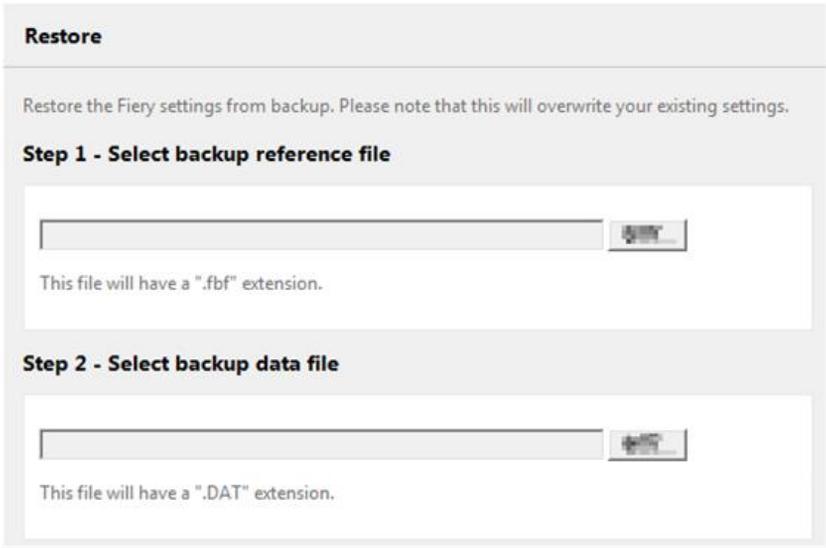
d3bna0024

9. Download the Backup reference file (\*.fbf) and Backup data file (\*.DAT) by clicking the "Download" buttons and save them to the HDD on the client PC.

## Restoring Backup files

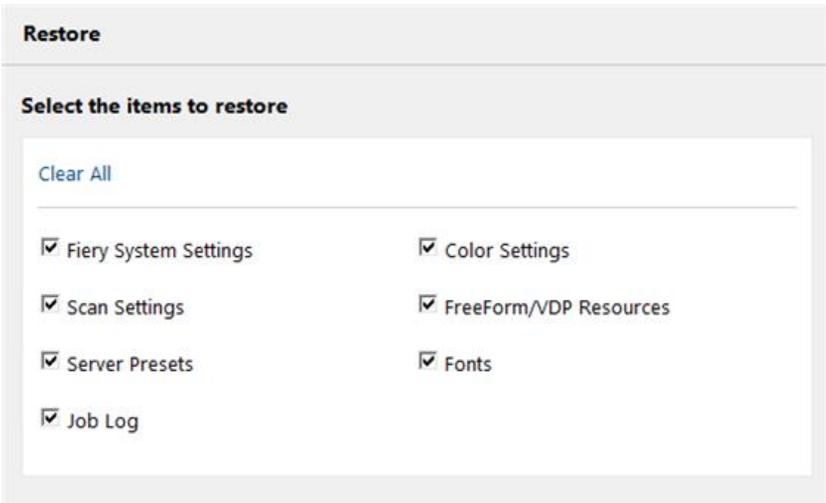
1. Choose Configure. (page 72 "Accessing Configure")
2. Choose Fiery Server.

3. Click Restore.



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4. Select backup reference (\*.fbr) file and backup data (\*.DAT) file from your client PC, and click Next.



d3bna0026

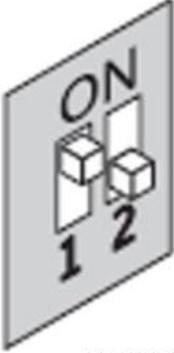
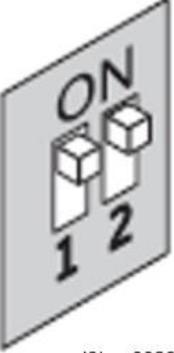
5. Select the items to restore and click Restore.

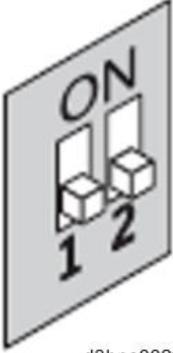
6. After a while, the following screen will appear. Click Reboot.

## Using the Fiery Clone Tool

The Fiery Clone Tool allows you to clone the entire Fiery system to an image file and save it in a folder on a USB flash drive connected to the E-23C. You can restore the image file to the same E-23C (with same key chip) in order to restore the system to a previous configuration.

The Fiery Clone Tool functions with the service switches and the diagnostic LEDs of the back panel of the E-23C to communicate the status, error, progress and actions required. The service switches are used to apply an action. The diagnostic LEDs flash codes in one second intervals to prompt required actions and to indicate progress and completion of a process, and in half-second intervals to indicate error statuses.

Service switch position	LED status code	Description
Boot  d3bna0027	AA, 00	<ul style="list-style-type: none"> <li>To boot the E-23C from the USB flash drive.</li> <li>The diagnostic LEDs flash "AA" then "00" and repeats to indicate boot status.</li> </ul> <p><b>Note</b></p> <ul style="list-style-type: none"> <li>This setting must be performed before you start and using the Fiery Clone Tool.</li> </ul>
Backup  d3bna0028	b0	<ul style="list-style-type: none"> <li>To back up the E-23C by creating an image file.</li> <li>When you start the backup process, the diagnostic LEDs flash "b1", "b2", "b3" in one second intervals, and repeats the cycle to indicate backup is in progress.</li> <li>When the backup process is complete, the diagnostic LEDs cycle "bC", "00" in one second intervals and repeats to indicate completion status. Remove the USB flash drive at backup completion.</li> </ul>

Service switch position	LED status code	Description
<p>Restore</p>  <p>d3bna0029</p>	<p>C0</p>	<ul style="list-style-type: none"> <li>• To restore the E-23C with the image file.</li> <li>• When you start the restore process, the diagnostic LEDs flash "C1", "C2", "C3" in one second intervals, and repeats the cycle to indicate restore is in progress.</li> <li>• When the restore process is complete, the diagnostic LEDs cycle "CC", "00" in one second intervals and repeats to indicate completion status. Remove the USB flash drive at restore completion.</li> </ul>

### Preparation

Before using Fiery Clone Tool, you must prepare a bootable USB flash drive for backing up and restoring from image files. This can be done with the **Fiery USB Setup Tool**, version 2.x.x or later.

#### Items to Prepare:

- Fiery USB Setup Tool (\* 1)
- Fiery Clone Tool for Embedded Servers (\* 1)
- Windows PC with the following specification.
  - OS: Windows XP or SP3 or later
  - Supports USB 2.0
  - 256MB of available memory
- USB 2.0 flash drive, at least 8GB capacity (Max: 32GB)

\* 1: The tools can be downloaded via the firmware download site.

#### Creating a bootable USB flash drive installed with the Fiery Clone Tool:

1. **Download the Fiery Clone Tool from the firmware download site and extract it.**  
The Fiery Clone Tool file is provided in \*.ISO format.
2. **Install the USB Setup Tool on your client PC, if is not already installed.**
  1. Download the USB Setup Tool from the firmware download site and extract it.
  2. Double-click the Fiery\_USBSetupTool.exe to start the installer.
  3. When the setup wizard is launched, click Next.

4. Accept the terms of the license agreement and then click Next.

Wait while the installer verifies the installation requirements.

 **Note**

- If the PC does not already have .Net framework installed, click Accept to accept the terms of the license agreement that appears on the screen. Wait up to 10 minutes as the .Net framework files are installed.
5. At the next screen, accept or change the destination location, and then click Next.
  6. When prompted, click Install to begin the installation.  
Wait while the application is installed on the PC.
  7. At the InstallShield Wizard Complete screen, click Finish.

 **Note**

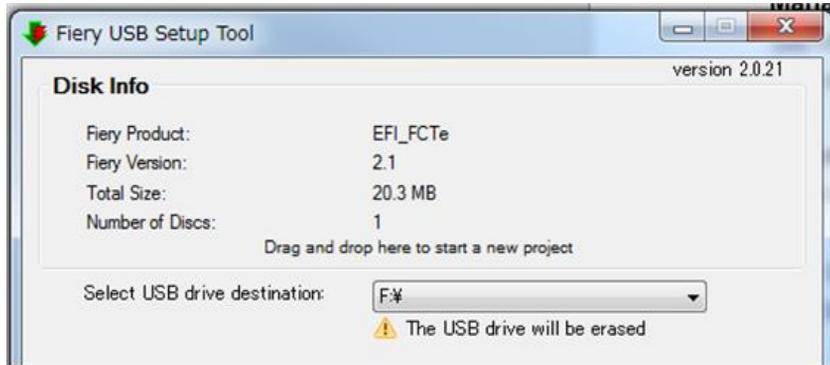
- The version information is displayed on the top-right corner of the Fiery USB Setup Tool main window. More information about the Fiery USB Setup Tool version can be found in Control Panel > Add or Remove Programs. In Windows 7, click Control Panel > Programs and Features.

### 3. Create a bootable USB flash drive with the Fiery Clone Tool program included.

1. Start the USB setup tool application by clicking Start and choosing All Programs > EFI > Fiery USB Setup Tool.
2. Insert the USB flash drive into a USB port of the Windows PC.

 **CAUTION**

- All data on the USB flash drive will be erased when the drive is reformatted during the preparation procedure. Make sure that no valuable data resides on the USB flash drive.
3. Follow the on-screen prompts.
    - Start screen - Specify the location from which to copy the Fiery Clone Tool software (the drive letter of the media drive). Specify the drive to copy to (the drive letter of the USB flash drive). Proceed when the Proceed button appears. Click OK to begin formatting the USB flash drive and make the USB flash drive bootable.



d3bna0030

- Prepare screen - The progress bar shows that the contents of the software are being copied. Do not cancel. After all of the contents have been copied, click the Proceed button when it appears to continue.
  - Finish screen - Confirm that the contents of the software are being copied. Click Finish to exit Fiery USB Setup Tool.
4. Confirm on the Windows PC that the USB flash drive has now the following files included.



d3bna0031

**Note**

- Copying these files to an empty USB flash drive will not substitute Steps 3-1 through 3-3. Always do Steps 3-1 through 3-3 for the bootable USB flash drive containing the Fiery Clone Tool to work properly.
5. Remove the USB flash drive in a safe way from the PC.

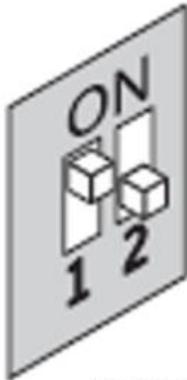
**Important**

- **Do not leave the USB flash drive connected to the Windows PC. If the Windows PC starts up or reboots with the USB flash drive connected, system corruption may occur.**
6. Attach a label to the USB flash drive with a description of identification, for example, "Fiery Clone Tool." The USB flash drive is now ready and can be used to enable the option.

## Backup: Creating Clone Image Files from E-23C

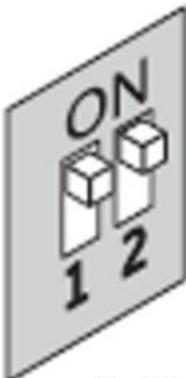
### Note

- Before creating the clone image, make sure you have created the two Backup files "\*.frf" and "\*.DAT" using the Backup / Restore feature on the E-23C. (page 79 "Creating Backup files")
1. **Print a configuration sheet and confirm the date, time, and time zone are correct.**  
If not, adjust the date and time. (page 74 "Adjusting the System Date and Time")
  2. **Shut down the E-23C. (page 64 "Shutting Down the E-23C Only")**
  3. **Connect the bootable USB flash drive created with the Fiery USB Setup Tool containing the Fiery Clone Tools, to an available USB port on the E-23C.**
  4. **Set the service switches as shown below ("1". ON, "2": OFF).**



d3bna0027

5. **Power on the E-23C.**
6. **Allow the E-23C to boot from the USB flash drive to start Fiery Clone Tool.**
7. **Wait until the diagnostic LEDs on the back panel of the E-23C flash "AA" then "00" repeatedly to indicate ready status.**
8. **Set the service switches to the following position ("1". ON, "2": ON).**



d3bna0028

- The diagnostic LEDs flash "b0" to indicate that the E-23C is ready to be backed up.
- After setting the service switch positions, you have 10 seconds to revert to ready status (service switch back to "1": ON, "2": OFF) before Fiery Clone Tool begins creating an image file.

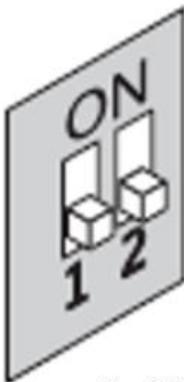
**9. Wait for the Fiery Clone Tool to create the image file.**

- The diagnostic LEDs circulate "b1, b2, b3" to indicate backup is in progress.
- When the backup process is complete, the diagnostic LEDs flash "bC", then "00" in one second intervals and repeats to indicate completion status.
- With E-23C, it will take about 12-20 minutes to complete the backup process. The duration will vary depending on the model and the specification of the USB flash drive models, caused by the transfer speed specification of the USB flash drive. (The USB port of E-23C supports only USB 2.0)

**Note**

- If an error occurs during the backup process, the diagnostic LEDs flash "EE", then the error code in half-second intervals. To troubleshoot the error, see page 92 "LED Error Codes Related To the Fiery Clone Tools".

**10. While the diagnostic LEDs are flashing "bC" then "00" repeatedly, return the service switches to the normal position ("1": OFF, "2": OFF).**



d3bna0029

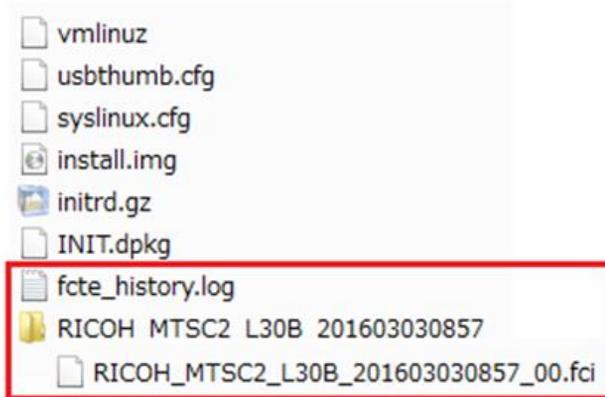
- 11. Remove the USB flash drive from the USB port.**
- 12. Press and release the power switch on the front panel of E-23C.**

The controller will automatically move to the shutdown procedure.

- 13. Insert the USB flash drive to a USB port on the Windows PC.**
- 14. In Windows Explorer, open the USB flash drive to check the files.**

When a backup is created with the Fiery Clone Tool, a new folder is created on the USB flash drive, containing the created clone image file (\*.fci).

Also, history log is saved on the USB flash drive as fcte\_history.log.



d3bna0032

### ★ Important

- NEVER rename or delete the filename and the extension of the clone image file (\*.fci), or restoration will fail.
- The folder and file created are named with a pre-fix "RICOH MTSC2\_L30B" followed by the date and time the clone image was created.
- Multiple clone image files of the same product can be saved on the same USB flash drive. Every clone image file will have a different date and time stamp.

#### 15. Rename the folder to enable easy identification of the clone image file, for example, as shown in below:

CustomerName\_ModelName\_Version\_SerialNumber\_Date

e.g: Susie\_E-23C\_V1\_SN00000000111\_201603030857

- You can rename the folders, and move the folders anywhere on the USB drive, or on any other storage location. Make sure to keep the \*.fci file in the folder.
- Use a descriptive and consistent approach when renaming folder names.

#### 16. Remove the USB flash drive in a safe way from the PC.

### ★ Important

- Do not leave the USB flash drive connected to the Windows PC. If the Windows PC starts up or reboots with the USB flash drive connected, system corruption may occur.

## Restore: Transferring Clone Image Files to E-23C

### ↓ Note

- If you will be replacing hardware components of the E-23C, it is best to complete the replacements before using the Fiery Clone Tool.
- The Fiery Clone Tool cannot restore an image to a smaller capacity replacement HDD.

- If the USB flash drive used for the restoration process is different from the one used to create the backup or has been reformatted or have been deleted or transferred of then files, recreate a bootable USB flash drive installed with the Fiery Clone Tool. Then drag and drop the entire folder containing the clone image file to the USB flash drive.

**1. On a Windows PC, verify that the USB flash drive has the correct clone image file.**

- Insert the USB flash drive to a USB port on the Windows PC.
- From Windows Explorer, open the USB flash drive and verify the clone image file.

**★ Important**

- When restoring the E-23C with a USB flash drive that contains multiple clone image files, the Fiery Clone Tool selects the most recently created file. To restore with an older file, make sure to remove the newer file(s) from the USB flash drive in advance.
- If the USB flash drive contains clone image file(s) created on a different E-23C unit, the Fiery Clone Tool selects the most recently created file among all files regardless of the unit. The Fiery Clone Tool does not distinguish the units on which the clone images were created. To prevent restoration with the wrong file, make sure the USB flash drive contains clone images created on the same unit.

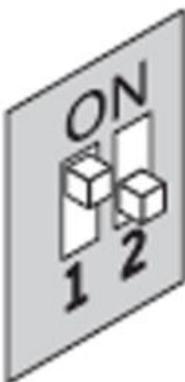
**2. Remove the USB flash drive in a safe way from the PC.**

**★ Important**

- Do not leave the USB flash drive connected to the Windows PC. If the Windows PC starts up or reboots with the USB flash drive connected, system corruption may occur.

**3. Insert the USB flash drive to a USB port on the E-23C.**

**4. Set the service switches as show below. ("1": ON, "2": OFF).**



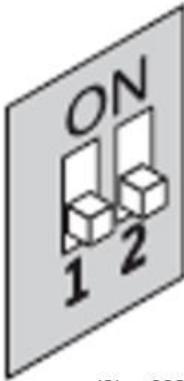
d3bna0027

**5. Power on the E-23C.**

**6. Allow the E-23C to boot from the USB flash drive to start Fiery Clone Tool.**

**7. Wait until the diagnostic LEDs on the back panel of the E-23C flash "AA" then "00" repeatedly to indicate ready status.**

**8. Set the service switches as show below ("1": OFF, "2": OFF).**



d3bna0029

- The diagnostic LEDs display "C0" to indicate that the Fiery Server is ready to be restored.
- After setting the service switch positions, you have 10 seconds to revert to ready status (service switch back to "1": ON, "2": OFF) before Fiery Clone Tool begins restoring from the image file.

**9. Wait for the Fiery Clone Tool to format the HDD and restores the image file.**

- The diagnostic LEDs circulate "C1, C2, C3" to indicate the format and restore procedure is in progress.
- When the restore process is complete, the diagnostic LEDs flashes "CC", then "00" in one second intervals and repeats to indicate completion status.
- If an error occurs during the restore process, the diagnostic LEDs flashes "EE", then the error code in half-second intervals. To troubleshoot the error, see page 92 "LED Error Codes Related To the Fiery Clone Tools".

**10. Remove the USB flash drive from the USB port.**

**11. Press and release the power switch on the front panel of E-23C.**

E-23C will automatically move to the shutdown procedure.

**12. Reboot the E-23C.**

**13. Restore the backup reference file (\*.frf) and backup image data file (\*.Dat). (page 81 "Restoring Backup files").**

**★ Important**

- If this step is skipped, some of the settings may not be restored.

## LED Error Codes Related To the Fiery Clone Tools

LED error code	Operation type	Description	Suggested action
11	-	Failed to retrieve product information.	<ul style="list-style-type: none"> <li>It is not a Fiery Controller.</li> <li>If the Fiery Controller is found, the hardware might not have initialized properly to retrieve the product name.</li> </ul>
02	-	Unsupported Fiery Controller	Product information is found, but Fiery Clone Tool does not support this product.
03	-	Incorrect number of disks detected.	<p>Check the Fiery Controller to verify HDD installation.</p> <p>An incorrect disk configuration was detected, which is not supported by Fiery Clone Tools for Embedded Servers.</p>
05	Backup	Insufficient USB flash disk space	Make sure that the USB flash drive has enough space for the cloned image when you back up the Fiery Controller.
08	Backup	File operation error. I/O error when writing to the USB.	<ol style="list-style-type: none"> <li>Run Windows Disk Error Check on the USB flash drive.</li> <li>Prepare the USB flash drive again using the Fiery USB Setup Tool.</li> </ol>
09	-	Missing HDD	Check the Fiery Controller to verify HDD installation.
0F	Backup	Failed to write to USB flash drive, or error reading from HDD.	<ol style="list-style-type: none"> <li>Run Windows Disk Error Check on the USB flash drive.</li> <li>Prepare the USB flash drive again using the Fiery USB Setup Tool.</li> <li>Check the HDD if USB flash drive is working properly, then try again.</li> </ol>
10	-	Failed to read service switch position	Check if the service switch cable is connected properly to the motherboard.

20	Backup	Encountered an unsupported file system on the Fiery Controller	<p>The Fiery Controller is not properly installed. Reinstall the Fiery Controller.</p> <p><b>Note</b></p> <ul style="list-style-type: none"> <li>If Fiery Clone Tool cannot read the HDD partition, then the backup procedure cannot be performed.</li> </ul>
21	Backup and restore	Failed to mount HDD partition	<p>The Fiery Controller is not properly installed. Reinstall the Fiery Controller. If Fiery Clone Tool cannot mount the HDD partition, then the backup procedure cannot be performed.</p>
30	Backup	Some Fiery files are missing (corrupt installation).	<p>The Fiery Controller might not be running properly. Reinstall the Fiery Controller.</p>
31	Backup	Detected multiple USB drives (only allow one USB flash drive to be inserted).	<p>Remove all USB flash drives that are connected to the Fiery Controller, and insert only the bootable USB flash drive for the backup or restore process.</p>
40	Restore	No valid image(s) to restore	<p>Check the USB flash drive to verify that you have the correct cloned image file for the Fiery Controller.</p>
41	Restore	Cloned image file is for the correct product, but feature set does not match.	<p>Check the USB flash drive to verify that you have the correct cloned image file that match the same feature set for the Fiery Controller.</p>
42	Restore	Cloned image file is for the correct product, but HDD is too small.	<p>Make sure to install the HDD that has the default factory size for storage (meets the minimum HDD space requirement for Fiery Clone Tool), or greater.</p>
43	Restore	Failed to format HDD	<p>Replace the HDD.</p>

44	Restore	The USB flash drive may have a corrupted cloned image file, or your HDD cannot be accessed.	<ol style="list-style-type: none"> <li>1. Run Windows Disk Error Check on the USB flash drive.</li> <li>2. Prepare the USB flash drive again using the Fiery USB Setup Tool.</li> <li>3. Use another computer with an external connection to format the HDD, if Fiery Clone Tool cannot write to the HDD.</li> <li>4. If the above actions do not work, replace the HDD.</li> </ol>
45	-	Failed to install bootloader	<ol style="list-style-type: none"> <li>1. Use another computer with an external connection to format the HDD, if Fiery Clone Tool cannot write to the HDD.</li> <li>2. If the above actions do not work, replace the HDD.</li> </ol>

**Note**

- If you must log a support request, please include the History Log, which contains details on the backup or restore performed, such as the image file used, duration, error codes. The History Log helps EFI identify the source of the error and may lead to a quicker problem resolution.
- The History Log is saved on the USB flash drive as fcte\_history.log and can be viewed with a text reader, for example, the Wordpad.

# 3. Replacement

---

## General Caution

### **WARNING**

- Turn off the power and unplug the E-23C before attempting any of the procedures in this section.

Before accessing internal components, position the E-23C so that it is resting on its right-hand side on a flat, anti-static surface.

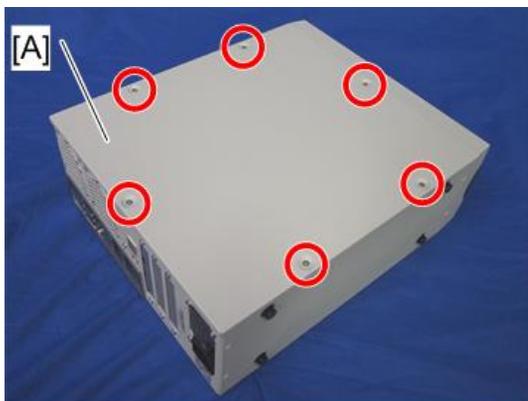
# Cover Removal

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## Side Cover for the E-23C

---

1. Side cover [A] (⚙️ x 6)

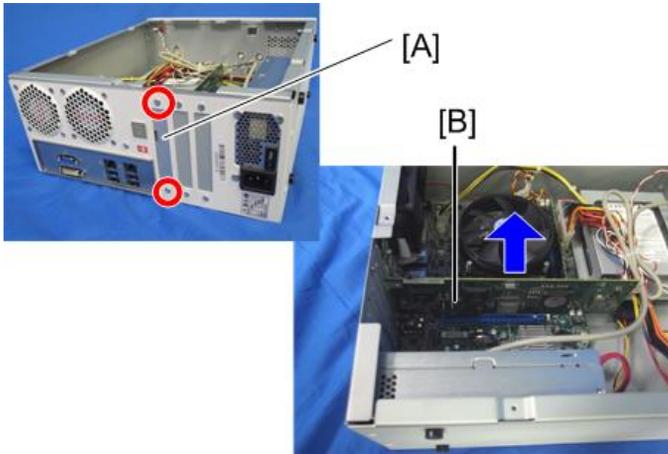


d7292024

# Unit Removal

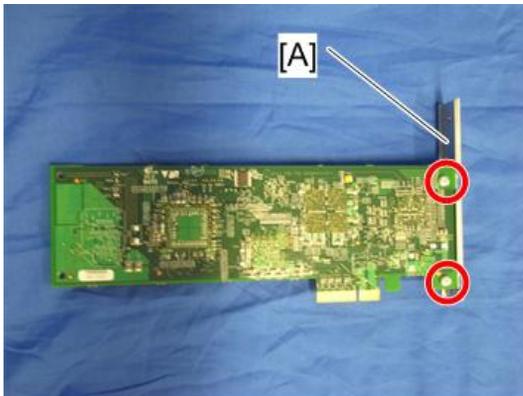
## Video Board

1. Remove the Video board with bracket [A] (⚙️ x 2)
2. Pull the Video board [B].



d7292025

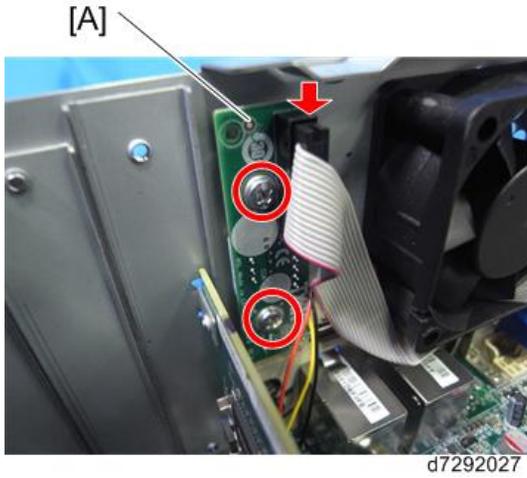
3. Bracket [A] (⚙️ x 2)



d7292026

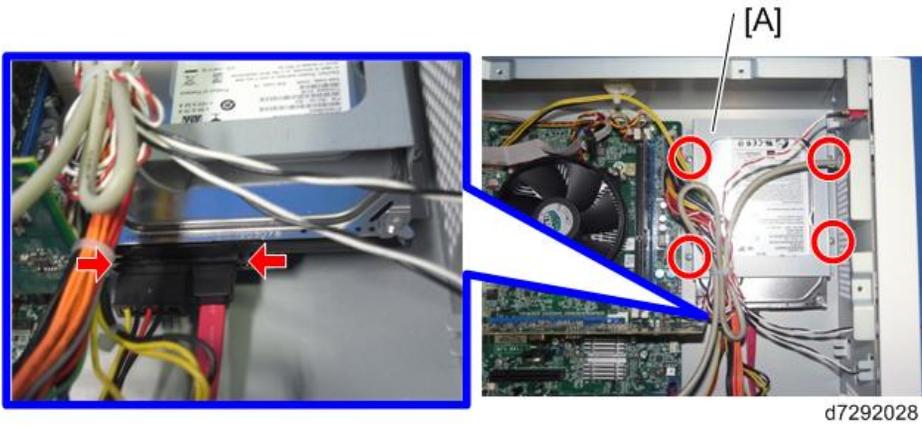
## Diagnostic LED Board

1. Diagnostic LED board [A] (⚙️ x 2, 📏 x 1)

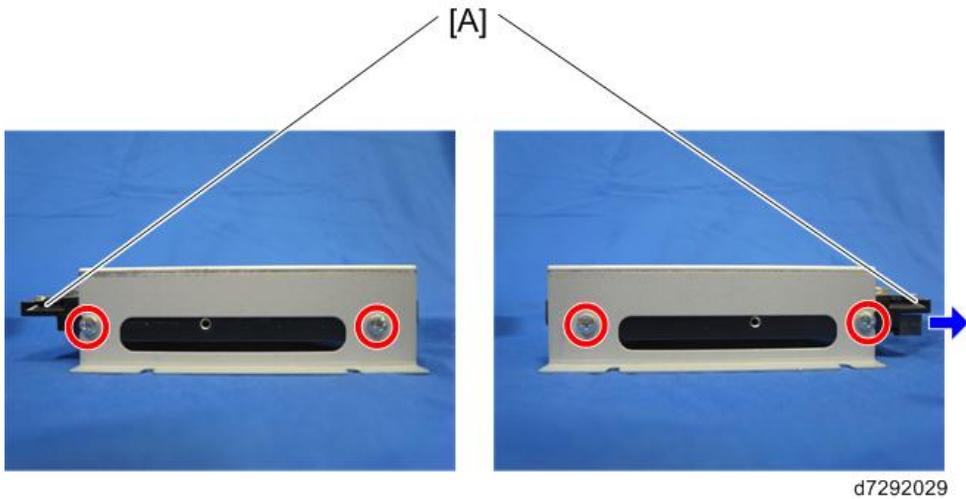


## Hard Disk Drive (HDD)

1. HDD with bracket [A] (⚙️ x 4, 📏 x 2)



## 2. HDD [A] (⚙️ x 4)

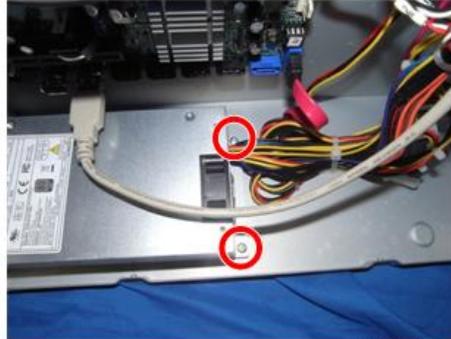
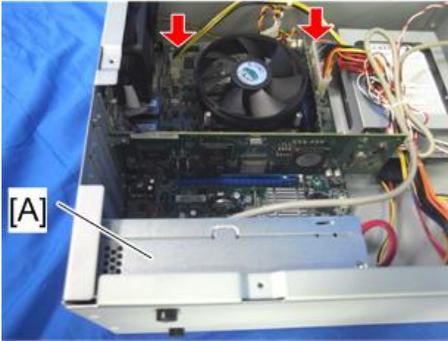


### ↓ Note

- System software is not included on replacement HDDs. After installing a new HDD, be sure to install system software (page 126 "System Software Installation Procedure").
- If you notice that the E-23C takes longer than usual to start up after installing a new HDD and system software, clear the CMOS. For details, see "Clearing Procedure for CMOS" shown below (page 119 "Clearing Procedure for CMOS").

## Power Supply Unit

1. Power supply unit [A] (🔧 x 5, 📏 x 3).

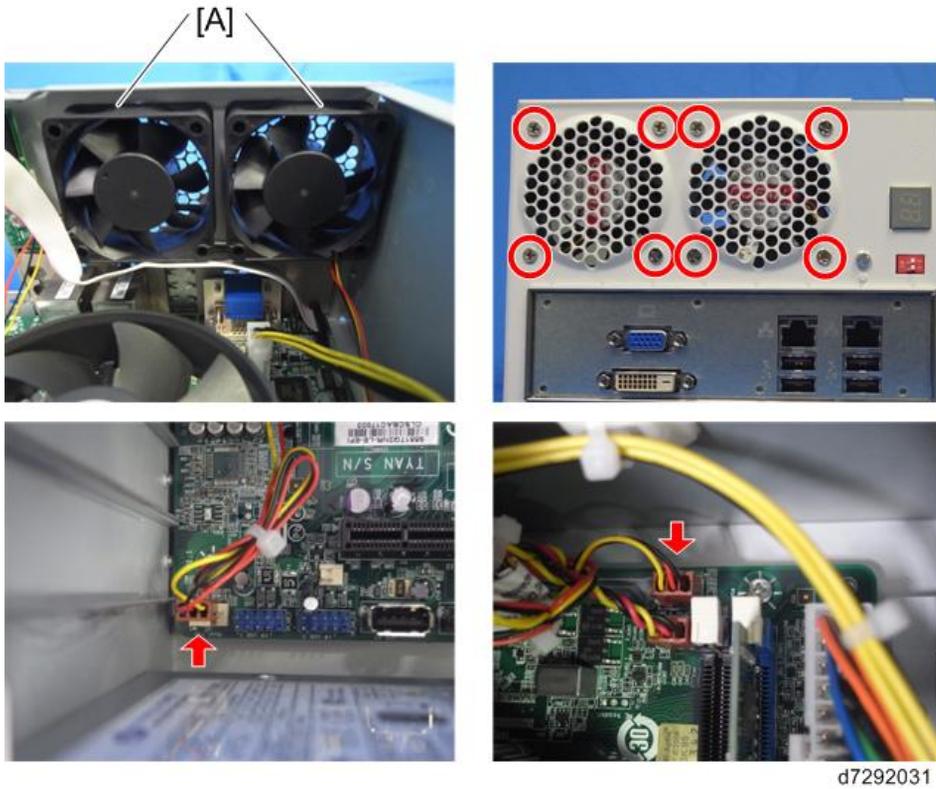


d7292030

## Fans

1. Video board (page 97 "Video Board")

## 2. Fans [A] (🌀 x 8, 🖱️ x 2)



3

## Motherboard

You need to re-configure the system date, time, and time zone. (page 74 "Adjusting the System Date and Time")

### 1. Video board (page 97 "Video Board")

### 2. Cables (🖱️ x 8):

24-pin power connector from ATX24P\_1 [A].

4-pin power connector from ATX POWER [B].

DIAG cable from PORT80 HDR [C].

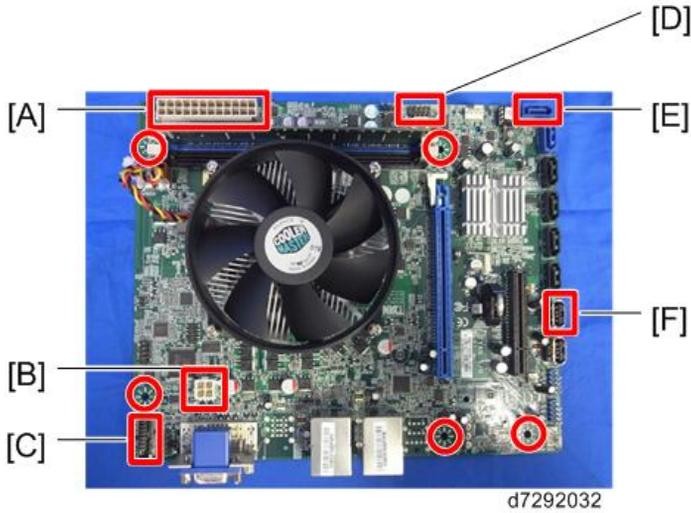
Front panel cable from J20 [D].

PIN 1 & 3	HDD LED
PIN 2 & 4	Power LED
PIN 6 & 8	Soft Switch

SATA data cable from SATA 6G0 [E].

USB cable from USB A1 [F].

**3. Remove the Motherboard (🔧 x 5)**



**4. Remove the Memory (page 106 "Memory – 2GB DIMM (E-23C)")**

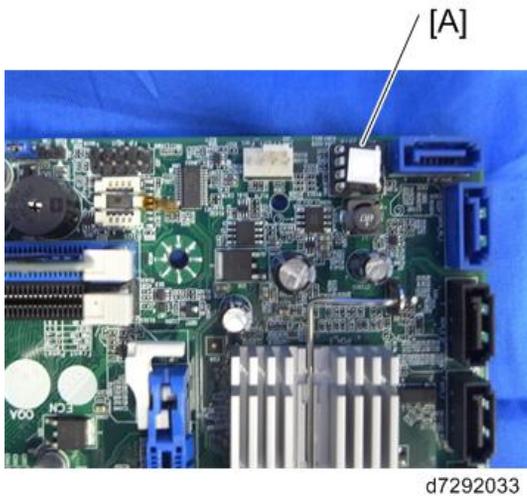
**5. Remove the CPU Cooling Assembly (page 109 "CPU and Cooling Assembly")**

**6. Remove the CPU (page 109 "CPU and Cooling Assembly")**

**Note**

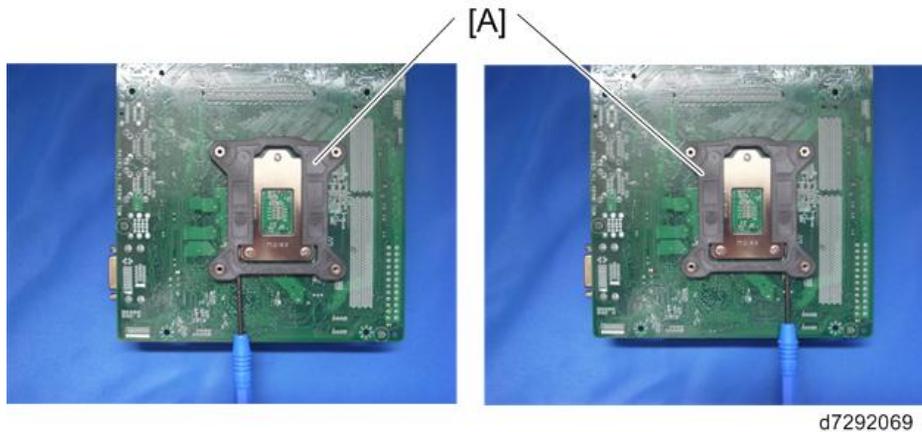
- When you replace the motherboard, remove the CPU and memory and attach them to the new motherboard (page 109 "CPU and Cooling Assembly").

**7. Keychip [A].**



## 8. CPU holder bracket (on the back side of the motherboard) [A]

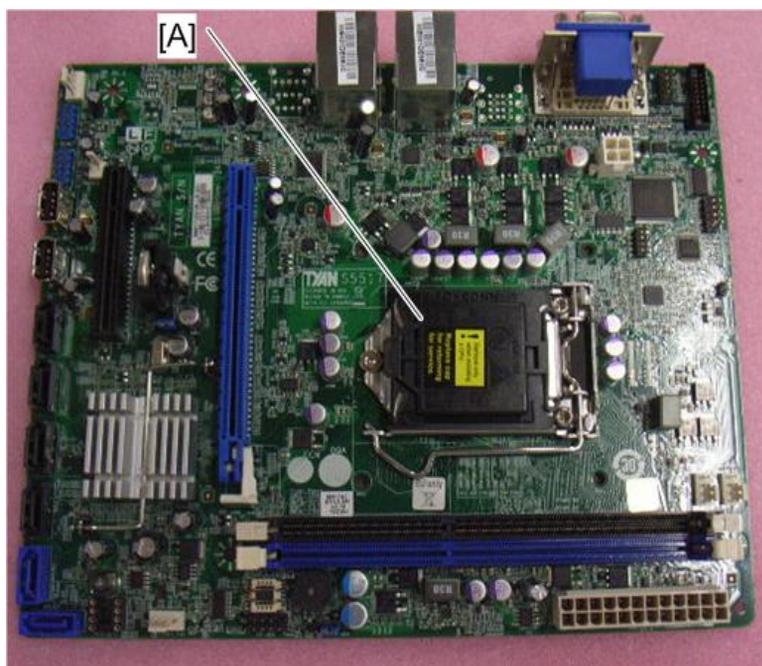
The CPU holder bracket is attached to the motherboard with two strips of double-sided tape. In order to prevent the motherboard from being damaged, put a small screwdriver between the bracket and the motherboard as shown below and twist the screwdriver to detach the CPU holder bracket.



d7292069

### ↓ Note

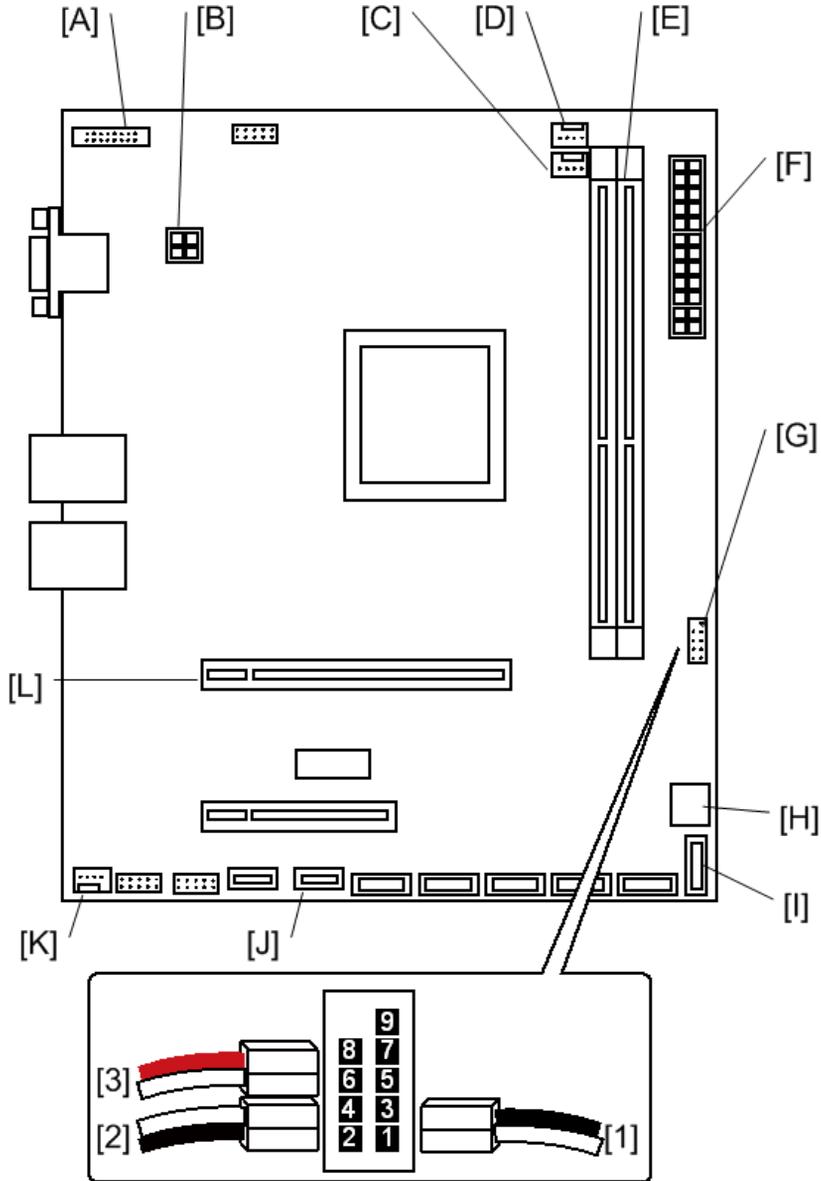
- When you replace the motherboard, move the CPU, CPU cooling assembly, video board, Keychip, and the CPU holder bracket from the old board to the new board. The Keychip contains option upgrade information and licensing information for the E-23C.
- A new motherboard comes with a protective cover [A] on the CPU slot. Remove it before using the motherboard.



d7292067

**For reassembling:**

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



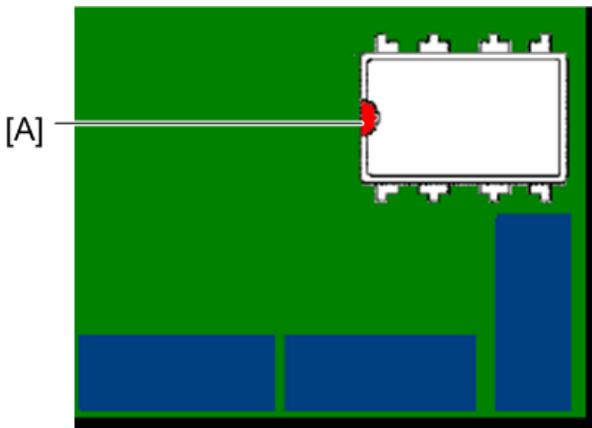
d7292034

	Connector	Location
[A]	DIAG cable	PORT80 HDR
[B]	4-pin power	ATX POWER
[C]	CPU fan	CPU_FAN
[D]	Top chassis fan	SYS_FAN

[E]	Memory	DIMM A1		
[F]	24-pin power	ATX24P_1		
[G]	Soft power button cable and activity LED cables	J20	1	For HDD LED
			2	For Power LED
			3	For Soft Switch
[H]	Keychip	J12		
[I]	SATA data cable	SATA 6G0		
[J]	Front panel USB port	USB A1		
[K]	Bottom chassis fan	Rear Fan		
[L]	Video interface board	PCIE_x16		

### When Installing the Keychip

Make sure you install the Keychip in the correct direction. Installing it in the wrong direction may damage the pins. The cutout [A] must be facing toward the center of the motherboard.

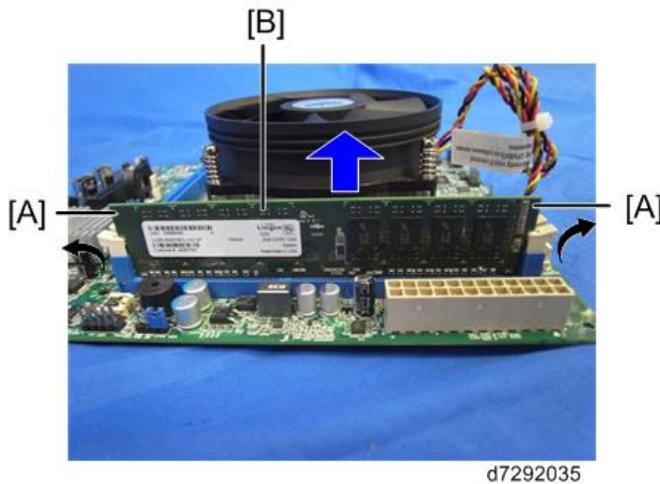


d7292068

### Memory – 2GB DIMM (E-23C)

1. Push outward on the levers [A] on each side of the DIMM.

2. Slide the DIMM [B] straight out of the socket.

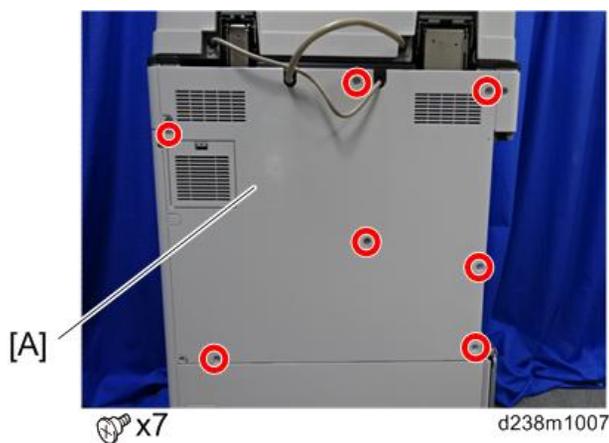


**Note**

- Always attach the DIMM [B] to the DIMM A1 socket.
- Gently slide the DIMM straight down into the socket and press so that the levers lock the DIMM into place. Make sure that the levers close securely around the ends of the DIMM.
- DIMMs fit in the socket only one way.

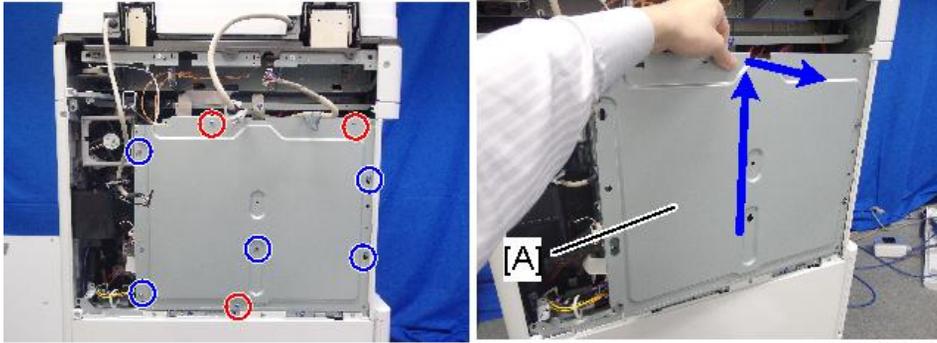
## Memory – 4GB DIMM (Copier)

1. Remove the rear cover [A].



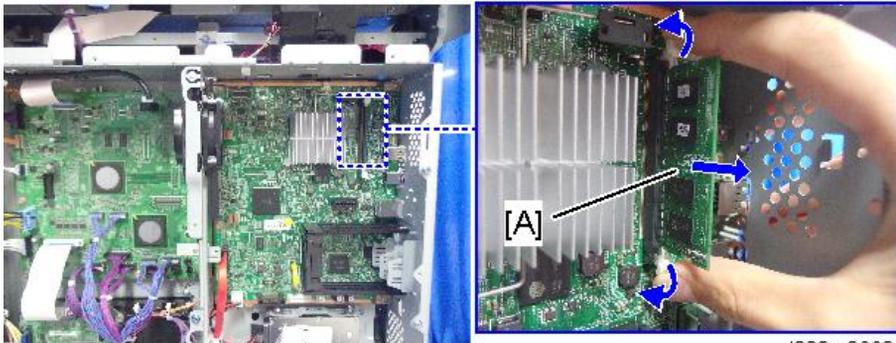
2. Remove the controller box cover [A].

Red Circle: Remove / Blue Circle: Loosen



d238m0614

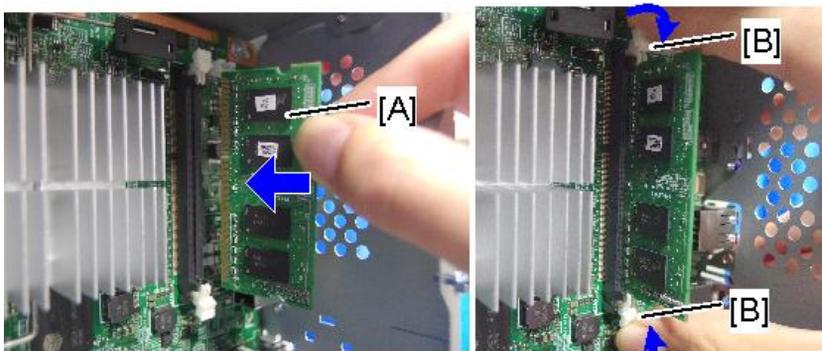
3. Release the latches and remove the 4GB DIMM [A].



d238m0660

For Re-installation:

While inserting the Memory [A] into SDRAM socket, push the release latches [B] until they slip into the notch on the edge of the SDRAM.



d238m0661

---

## CPU and Cooling Assembly

---

### Overview

---

You can replace the following parts.

- Cooling Assembly only
- CPU and Cooling Assembly (as a set). If you replace the CPU, you must replace the cooling assembly also, as a set.

The cooling assembly consists of a fan with heat sink and a clip assembly.

#### Note

- Be careful not to damage the motherboard, the CPU, or the CPU socket when you replace the cooling assembly. Remove the memory before you remove the cooling assembly.
- When you want to replace the CPU, replace the CPU and the cooling assembly as a set. This is very important, because the thermal pad that is attached to a new heat sink will make a good contact between the CPU and the heat sink when heated. If you attach a used cooling assembly to a new CPU by mistake, the heat sink will not contact the CPU properly, and this will cause the CPU to overheat.
- When replacing the CPU holder bracket on the back side of the motherboard, remove the release paper from the double-sided tape on the new CPU holder bracket first. Then, attach the CPU holder bracket to the motherboard using the double-sided tape.

### Cooling Assembly Removal Procedure

---

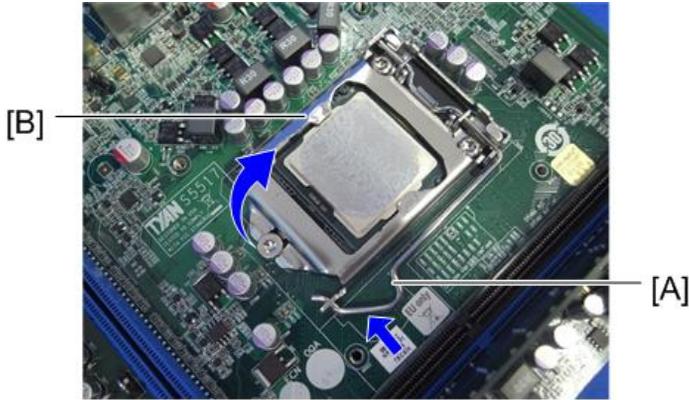
1. Cooling assembly [A] ( x 4,  x 1).



d7292036

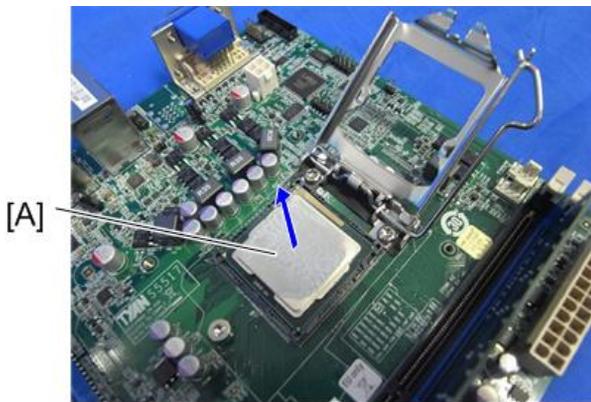
## CPU Removal Procedure

1. Push the lever [A] to release the loadplate [B].



d7292037

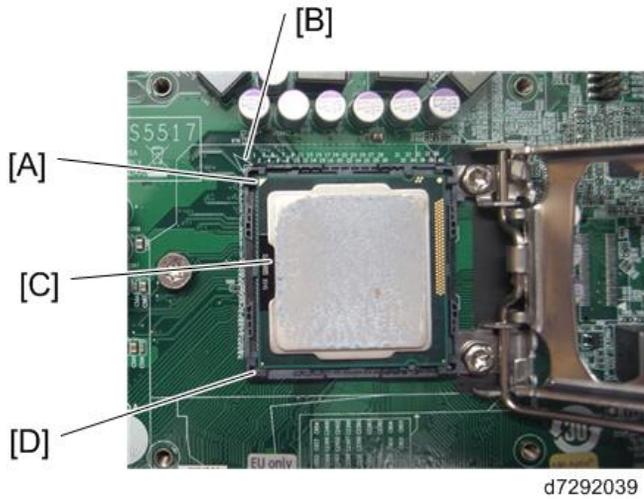
2. Grasp the CPU [A] by its edges and gently lift it from the socket.



d7292038

### For Re-attaching:

- Check the location of the arrow [A] on the CPU [C] and align it with the arrow on the motherboard [B] when you insert the CPU into the socket [D]. (See the illustration below.)



d7292039

- Be careful not to bend the pins when you insert the CPU into the socket.
- Set the CPU in the socket completely and without forcing it.

## Lithium Battery

### ⚠ CAUTION

- There is danger of explosion if the battery is replaced with the incorrect type. Replace with only with the same lithium battery supplied as a spare part.
- Discard the used motherboard battery in accordance with the manufacturer's instructions and local regulations.

#### 1. Lithium Battery [A].



d7292040

For Re-assembling:

You need to re-configure the system date, time, and time zone. (page 74 "Adjusting the System Date and Time")

---

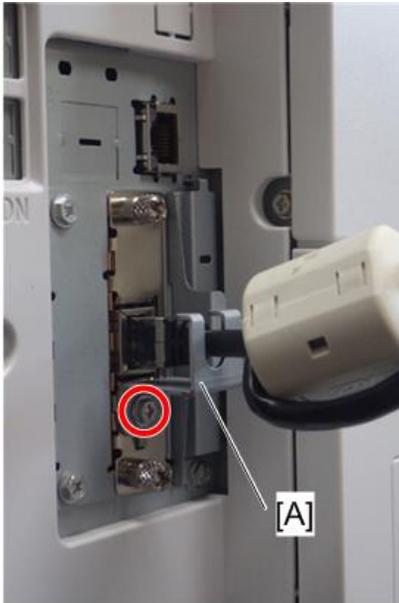
## Gigabit Ethernet Controller

---

1. Remove the protection plate [A] and pull out the interface cable from the copier Gigabit Ethernet connector [A] (⌀ x 1).

D240/D241/D242:

3



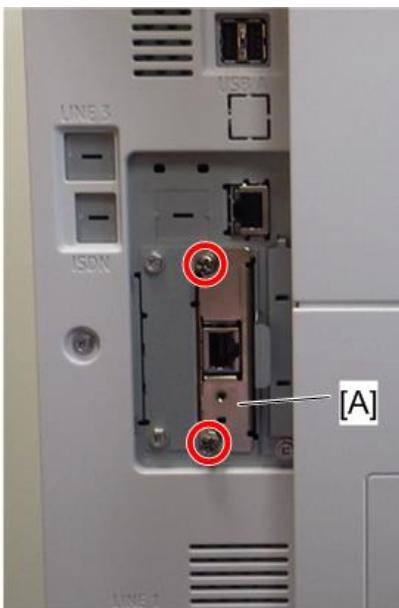
d3bna0009

D238/D239:



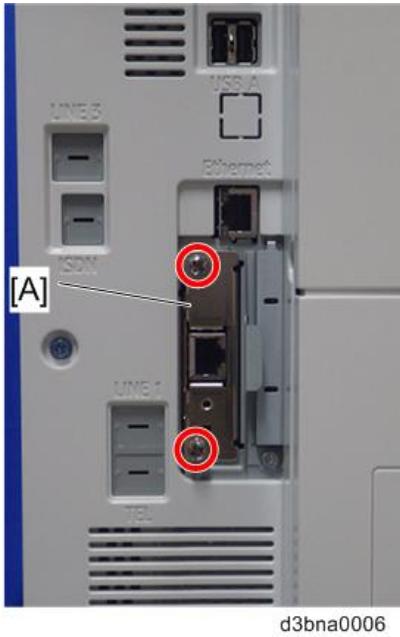
d3bna0008

2. Remove the Gigabit Ethernet controller [A] (knob-screw x 2).  
D240/D241/D242:



d3bna0007

- D238/D239:



**For Re-assembling:**

- Make sure that the Gigabit Ethernet controller is inserted straight.

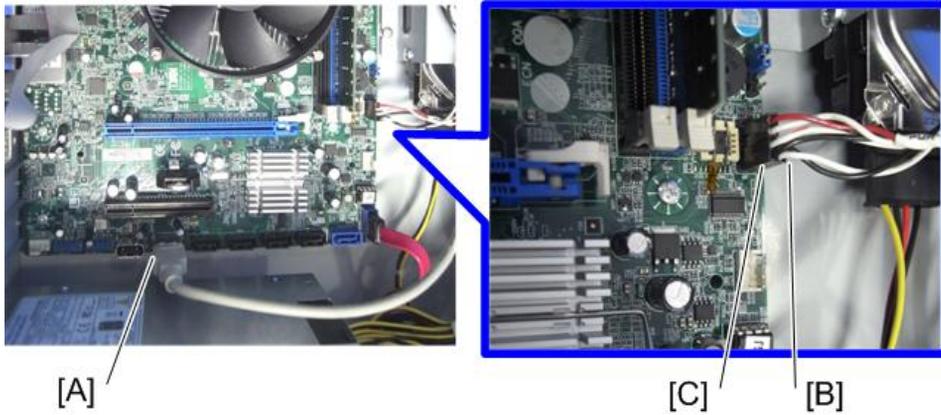
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**Cables Connected to the Front Panel**

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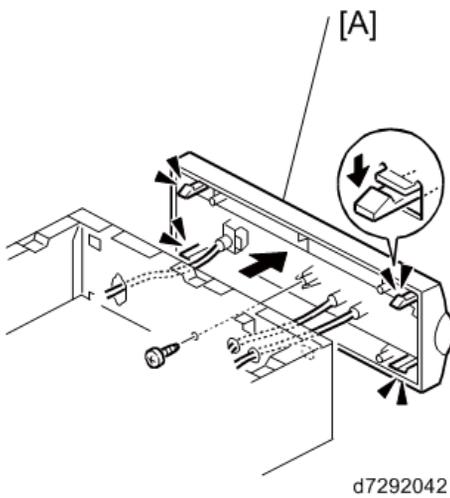
1. Side cover
2. Video board (page 97 "Video Board")
3. Front panel USB port cable [A] from USB A1
4. HDD LED cable [B] from J20

## 5. Power LED cable [C] from J20



d7292041

## 6. Front panel [A] (⚙️ x 1)



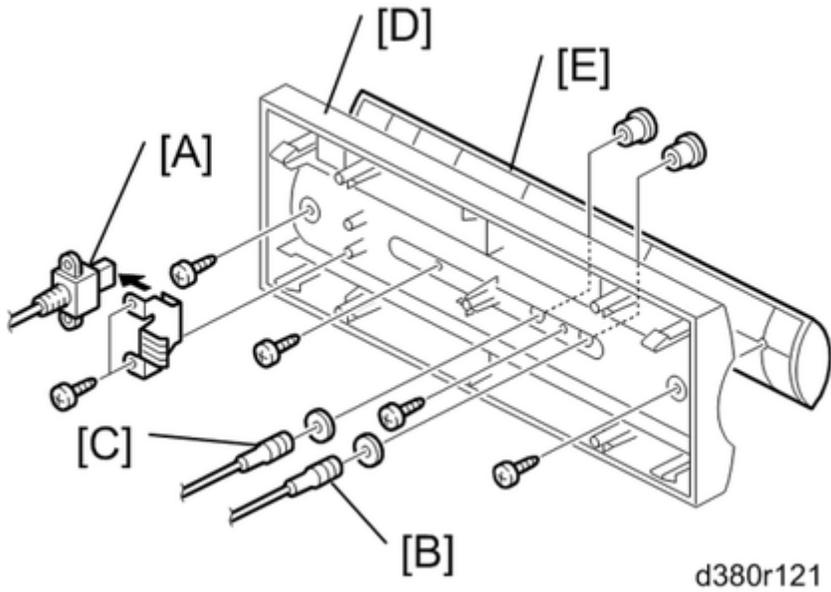
d7292042

## 7. Front panel USB port cable [A] from front panel (⚙️ x 2).

## 8. HDD LED cable [B] from front panel.

## 9. Power LED cable [C] from front panel.

10. Center panel [E] from the front panel [D] (⚙️ x 4)



**For Re-assembling:**

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

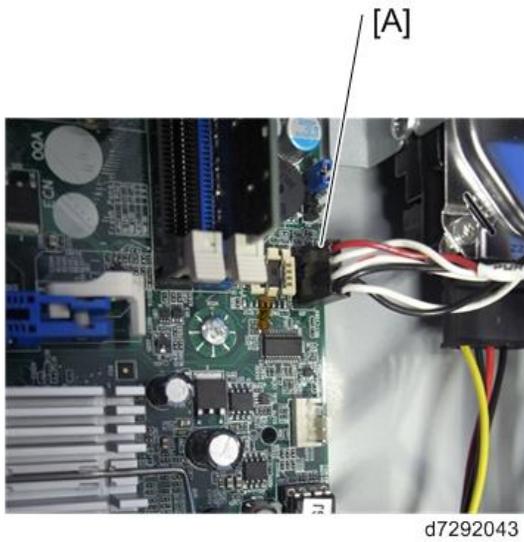
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## Soft Power Push Button

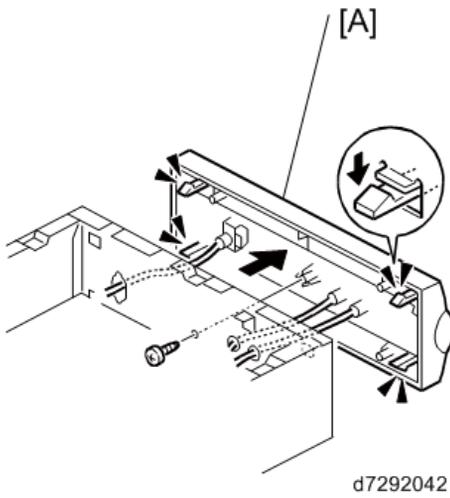
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1. Side cover
2. Video board (page 97 "Video Board")

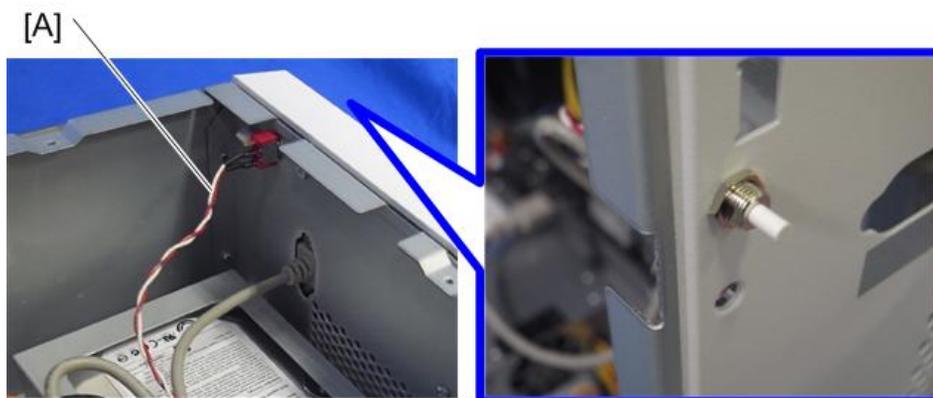
### 3. Soft Power Push Button cable [A] from J20



### 4. Front panel [A] (⚙ x 1)



5. Soft power button cable [A] from the front panel.



d7292044

**For Re-assembling:**

- Make sure of where to connect the connectors for each cable.

# Clearing Procedure for CMOS

1. Make sure that the external power cable is removed from the back panel of the E-23C.
2. Remove the battery (page 111 "Lithium Battery").
3. Wait two minutes to allow the motherboard electrical components to fully discharge.
4. Reinstall the battery (page 111 "Lithium Battery").
5. After reassembling the E-23C, reconfigure the system date, time, and time zone. (page 74 "Adjusting the System Date and Time")



# 4. Software Maintenance

## General Notes and Cautions

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

- Clear Server: Deletes all queued print jobs from the E-23C
- Factory Defaults: Restores the E-23C to the factory defaults
- System Software Reinstallation

The following table shows whether the current data on the E-23C will remain or be deleted when each of these is used.

	"Clear Server"	"Factory Defaults"	System Software Reinstallation / Upgrade
Job Log	Not Deleted	Deleted	Deleted
Queued Jobs	Deleted	Deleted	Deleted
Scanned Jobs	Deleted	Deleted	Deleted
MailBox	Deleted	Deleted	Deleted
Archived Jobs	Deleted	Deleted	Deleted
FreeForm masters	Deleted	Deleted	Deleted
Resident Fonts	Not Deleted	Not Deleted	Deleted
Downloaded Fonts	Not Deleted	Deleted	Deleted
Language Selection	Not Deleted	Deleted	Deleted
Setup Options	Not Deleted	Deleted	Deleted
Patches	Not Deleted	Not Deleted	Deleted
Administrator Password	Not Deleted	Not Deleted	Deleted
Option Activation	Not Deleted	Not Deleted	Not Deleted

**Note**

- In "System Software Reinstallation/Upgrade", "Upgrade" refers to replacing the software with a new version. It does not refer to the application of patches. When you apply a patch, data is not deleted.

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

**Job Log:**

The list of jobs in the Job Log and all jobs in the queues are deleted. The site administrator can use E-23C Spooler to save a current list of jobs from the Job Log (the actual jobs are not saved, only a list of them).

**Queued Jobs:**

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

**Archived Jobs and Free Form masters:**

Archived jobs on the E-23C HDD and FreeForm masters are deleted. The lists of archived jobs and FreeForm masters are deleted as well.

**Fonts:**

All fonts on the HDD are deleted when you reinstall the system software. Resident fonts are reinstalled when you reinstall the system software. Any customer-supplied fonts will need to be reinstalled by the site administrator using E-23C Downloader.

**Administrator Password:**

The administrator password will be deleted when system software is re-installed. (The administrator password will return to "Fiery.1" after the system software is re-installed.)

**Configuration:**

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

**Compatibility:**

When you upgrade the system software, make sure the latest user software is installed onto all computers that print to the E-23C. Using incompatible versions of the system and user software can result in system problems.

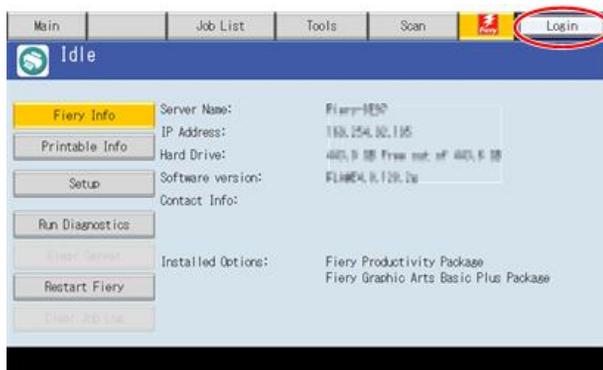
# Clearing the Queued Print Jobs in the E-23C

The "Clear Server" command allows you to clear all queued print jobs from the E-23C; which means jobs from the E-23C Print, Hold, and Printed queues. Clear Server also clears all jobs archived on the E-23C HDD, the index of archived jobs, and finally, all E-23C FreeForm masters and the index of E-23C FreeForm masters.

## ↓ Note

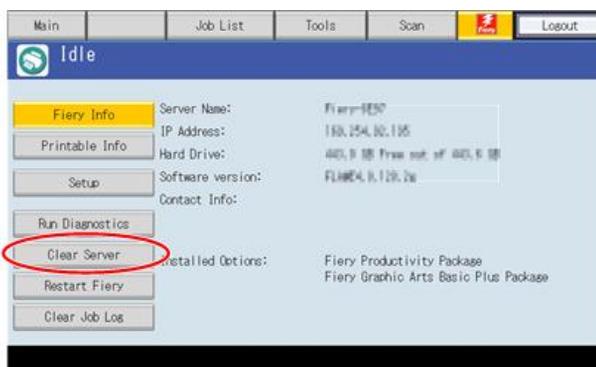
- Before using Clear Server, inform the site administrator that data on the E-23C HDD will be deleted.

1. Make sure the E-23C is not in use.
2. Press the Home button on the operation panel of the copier and then touch the Fiery icon to access the Fiery menu screen. (page 70 "Running the E-23C Setup")
3. Move to the Login tab.



d7292019

4. You are asked to enter an administrator password. (The default password is "Fiery.1".)
5. Move to Fiery tab.
6. Touch "Clear Server". Then touch "Clear Server" again.



d7292020

7. When you are prompted "Clear all jobs from all queues?", touch "OK"
8. The Fiery menu screen will disappear and data will be cleared before the system restarts.
9. Press the Home button on the operation panel of the copier and then touch the Fiery icon. Check if the E-23C becomes idle.

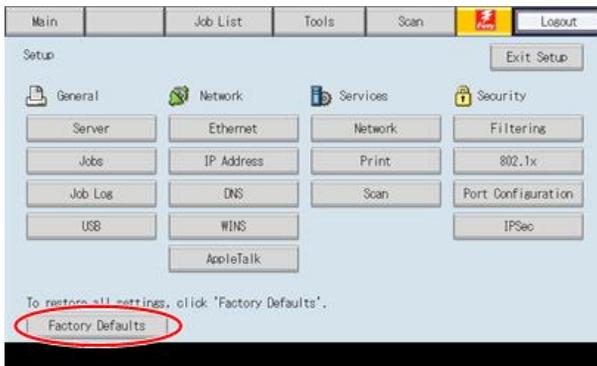
# Restoring the E-23C to Factory Defaults

To restore the default settings of E-23C and delete all the data stored on the HDD, use the "Factory Defaults" feature.

## Note

- Before using "Factory Defaults", inform the site administrator that all data (including the downloaded fonts) stored on the HDD and setup options will be deleted.
- Performing "Factory Defaults" will not delete the current administrator password, which was set for the E-23C (the initial password is "Fiery.1"). Before performing "Factory Defaults", check if the site administrator can input the current administrator password after the system software is restored.
- If a unique administrator password is already set for the E-23C, but the site administrator does not remember the password, you must re-install the system software from the DVD (or from a prepared the USB flash drive).

1. Make sure the E-23C is not in use.
2. Print a configuration page (you may refer to this configuration page when you re-enter the setup options). (page 69 "Printing the Configuration Page or Test Sheets")
3. Access the setup menu. (page 70 "Running the E-23C Setup")
4. Touch "Factory Defaults".



d7292021

5. When you are prompted "Change all settings (including network) back to Factory Defaults and Reboot?", touch "Continue".
6. Wait for the diagnostic LEDs on the E-23C to turn off.
7. Wait for more than 5 minutes.
8. Press the Home button on the operation panel of the copier and then touch the Fiery icon.
9. The language selection screen will appear. Start to configure the E-23C. (For details, go to step 25 of the system software installation procedure. (page 126 "System Software Installation Procedure")

# System Software Installation Procedure

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## Overview

---

System software should be installed in the following cases:

- You replace the HDD with a new one (on which the System Software is not installed)
- You update to a more recent version of the system software (this is not necessary when you apply a patch; it is necessary when you install a major version change)
- You have trouble with the system software (e.g. software corruption) and the problem cannot be solved by performing "Factory Defaults".
- The site administrator forgets the administrator password for the E-23C.

The system software is provided as follows:

- **System Software DVD:**

System software and an installation program for the network port method are included.

- **USB Setup Tool:**

Windows application program for copying the image file on the system software DVD to the USB flash drive, and at the same time making the USB flash drive bootable.

There are two ways to install/reinstall system software on the E-23C:

- **Installing system software over the network port:**

Connect a PC to the E-23C directly, or through a hub using two network cables. Install the system software from the System Software DVD.

- **Installing system software by booting the E-23C from a USB flash drive:**

Use the USB Setup Tool program to install the USB Setup Tool Windows application on a PC. Then use the system software DVD, a USB flash drive, and the USB Setup Tool Windows application on the PC to make a bootable USB flash drive that includes E-23C system software. At the customer site, connect the USB port and turn the power ON. System installation will be done automatically.

 **Note**

- Before you start system installation, give the site administrator the opportunity to print the Job Log and to save any custom simulations.
- Also, print the **Configuration Page** and **Font Lists**.
- Backup and Restore feature are sometimes useful in order to reduce the time to re-configure the E-23C system settings after the system installation (page 79 "Using the "Backup / Restore" Feature").

## Installing System Software over the Network Port

The system software DVD contains the system software and E-23C System Software Installer. To install system software using the LAN port on the E-23C, you need:

**Either:**

Two Ethernet cables and an isolated hub/switch

Cables must be 4-pair/8-wire, short-length Cat 5 (for 100BaseT) or Cat 5e (for 1000BaseT)

**Or:**

- For 100BaseTX: One Category 5 or higher Ethernet cross-over cable (4-pin/8-wire, short-length)
- For 1000BaseT: One Category 5e or higher Ethernet cross-over cable (4-pin/8-wire, short-length)

**A Windows Vista/7/8/10 computer ("PC") with:**

- CD/DVD drive, built in or attached
- Support for 100BaseTX or 1000BaseT

**Note**

- This procedure describes using one cross-over cable. Instead of using a cross-over cable, you may use two Ethernet cables and an isolated hub/switch. (Do not connect any other devices to the hub/switch. Do not put the hub/switch on the LAN. Do not use the hub's optical port or uplink switch.)
- If the print engine is 230V, use shielded network cables.

1. **Print the Configuration Page (page 69 "Printing the Configuration Page or Test Sheets").**
2. **If possible, back up the system settings with the Backup/Restore feature (page 79 "Using the "Backup / Restore" Feature").**
3. **Perform the shut down procedure from the copier operation panel (page 64 "Shutting Down the E-23C Only").**
4. **When the E-23C power is down (that is when the diagnostic LEDs are off), turn the main power switch of the E-23C to OFF.**
5. **Disconnect all cables from the E-23C connector panel.**
6. **Connect the Ethernet cross-over cable to the LAN port and to the Windows Vista/7/8/10 PC.**
7. **Turn on the PC's power and do the following procedure:**
  - Close all software applications.
  - Stop all File Transfer Protocol (FTP) and Trivial FileTransfer Protocol (TFTP) services.
  - Disable all anti-virus and anti-spyware programs.
  - Make sure that the PC is configured to obtain its IP address automatically (DHCP).
  - Remove any network cables between the PC and the customer network.
  - Disable all wireless network connections.

- Turn off the Windows Firewall.
- Disable all power-save and hibernation settings.

8. Insert the system software DVD into the PC's CD/DVD drive.

9. Navigate to the CD/DVD drive and click the icon for the Installer.vbs file, if it does not start automatically.

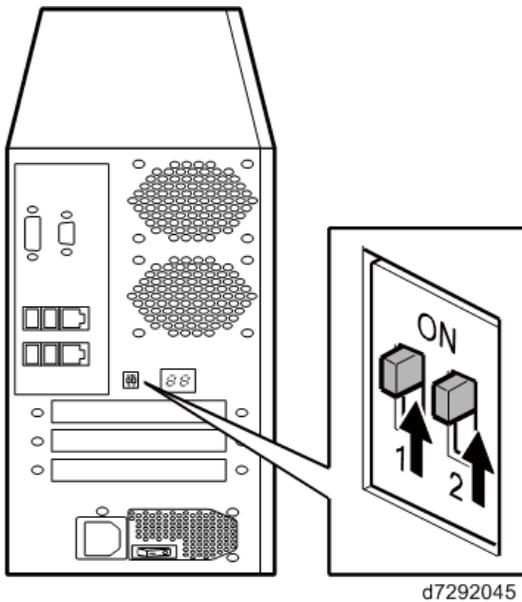
10. Click Next at the Welcome screen. Read the Software License Agreement and click the "I Agree" checkbox if you wish to continue the installation process, then click Next.

11. At the Connection Type screen, make sure Ethernet is selected. Click Next to advance to the Confirmation screen.

12. Set the E-23C service switches to the service mode position: ON.

**Note**

- Ignore the steps shown on the PC screen because they may be confusing at this stage of the procedure. Please continue to follow the steps of this procedure.



13. Turn the main power switch of the E-23C to ON, then press and release the soft power push button on the front of the E-23C.

14. Wait 10 seconds, then click Next on the PC screen.

15. At the Installation screen, click Next to start the installation. Wait while the files are copied and installed.

- The progress is slow at first.

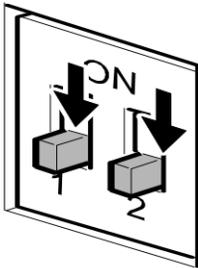
For most computers, you must wait approximately 30 min. Do not click Cancel.

- **If you do click Cancel:** Click **Finish** then turn the main power switch of the E-23C to OFF. Wait 10 seconds, and then repeat this procedure from the beginning. If the installation terminates abnormally, you may need to reboot the PC also.

**Note**

- If Windows detects more than one NIC card in the PC, Windows will prompt you to choose the NIC card that is connected to the E-23C. The NIC card to choose may be a card that is associated with IP Address 0.0.0.0.

16. Click **Next** when installation is completed.
17. Click **Exit** and close the installer
18. Turn the main power switch of the E-23C to **OFF**.
19. Set the service switches in the normal position (not ON).



g815r021

20. Disconnect the cross-over cable from the LAN port and the Windows Vista/7/8/10 PC.
21. Reconnect all cables that you removed earlier from the E-23C panel.
22. Turn on the main power switch of the copier.
23. Turn the main power switch on the E-23C back panel to **ON**.
24. Press and release the soft power push button on the front panel of the E-23C.
25. Allow startup to proceed without interruption, while you watch the diagnostic LEDs on the back panel of the E-23C.
26. When the diagnostic LEDs remain at '00', go to the copier operation panel and press the Home button on the operation panel of the copier and wait for about 10 minutes.

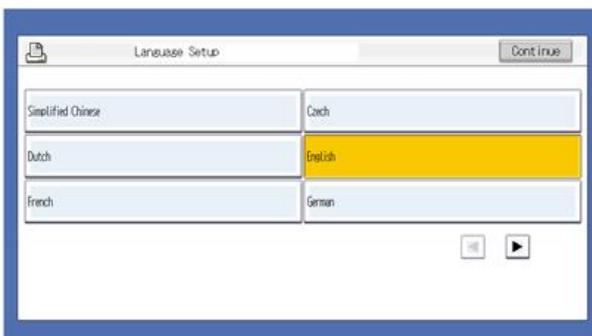
**Note**

- During the 10 minutes, the initial boot up of the controller will proceed as below, and Fiery icon will appear/disappear on the copier operation panel.

1. The controller boots up.
2. The controller connects to copier.
  - Fiery icon appears on the operation panel.
 (There is no need to touch the icon at this stage)

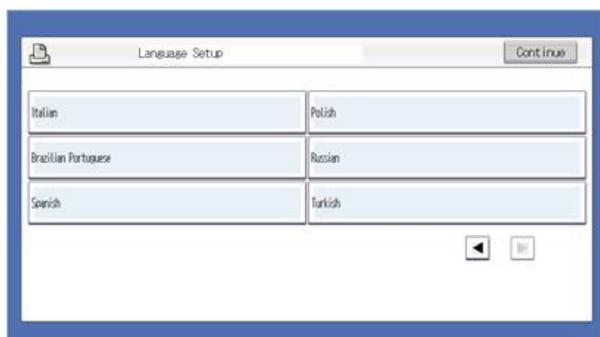
3. The controller loads some settings.
4. The controller reboots automatically.
  - Connection with the copier is lost and Fiery icon will disappear.
5. The controller boots up and connects again to the copier.
  - Fiery icon appears again.

27. Touch the Fiery icon. "Please Wait!" will be shown on the copier operation panel for a while.
28. Within about three minutes, the language selection screen is shown. (If this screen is not shown, then press the Home button on the operation panel of the copier and then touch the Fiery icon again.)
29. Select the desired language, and touch "Continue".
  - Simplified Chinese
  - Czech
  - Dutch
  - English
  - French
  - German
  - Italian
  - Polish
  - Brazilian Portuguese
  - Russian
  - Spanish
  - Turkish



d3bna0004

If the desired language is not displayed, switch screens using the ◀▶ buttons.

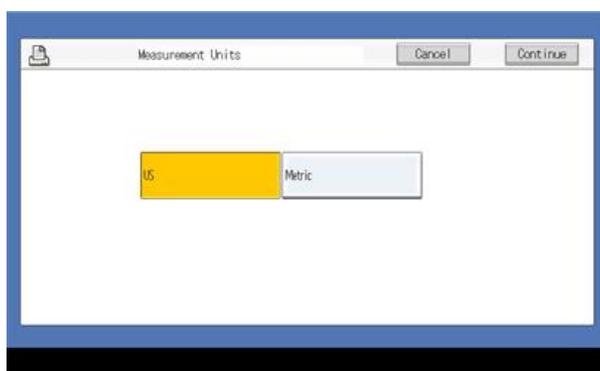


d3bna0005

The default settings for the E-23C depend on the language selection as follows:

		Selected Language & Measurement Unit	
		English - US	English - Metric / Simplified Chinese / Czech / Dutch / French / German / Italian / Polish / Brazilian Portuguese / Russian / Spanish / Turkish
PS Setting	Default Paper Sizes	US	Metric
PCL Setting	Paper Size	Letter	A4
	Paper Size System Pages	US	Metric

If you selected "**English**" at the language selection screen, you are prompted to select the Measurement Unit. Select either "**US**" or "**Metric**", and then touch "**Continue**".



d7292010

30. Wait for a short time, then press the Home button on the operation panel of the copier and then touch the Fiery icon. Repeat if necessary until "Please wait" no longer appears.

31. Press the Fiery tab to access Setup, and press Setup at the Fiery menu screen.
32. You are asked to enter the administrator password. (The default password is "Fiery.1".)
33. Input the customer's settings from the Configuration pages that you printed earlier. If a backup exists of configuration settings file, restore it after the network configuration is completed. (page 79 "Using the "Backup / Restore" Feature")

**Note**

- Ask the site administrator for the other settings that are not on the Configuration pages, You must reboot the E-23C to apply the settings. For more information, see the "Configuration and Setup" manual (<http://help.efi.com/ricoh/docs/>).

34. If you have been given any patches (system update files) for the version of system software you have just installed, install the patches now. See the instructions provided with each patch.

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## Installing System Software Using a USB Flash Drive

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### Preparation

---

To prepare a USB flash drive, which is bootable and includes system software, the following items should be prepared:

- E-23C System Software DVD
- USB Setup Tool program
- USB flash drive, at least 8 GB capacity (Max. 32GB)  
Example: Seagate USB 2.0 Pocket Hard Drive, model number ST650211
- Windows 7/8/10 computer ("PC") with:
  - DVD drive, built-in or attached  
A DVD drive is not required if an image file (\*.ISO) of the system software is provided.
  - Minimum 500MB of available memory.
  - USB port (support for USB 2.0 or later is recommended)

**Note**

- USB 1.x can also be used, but it will take more time to copy the system software.

### Installation Procedure

---

1. Install the USB Setup Tool application on the PC, if is not already installed.
  1. Download the USB Setup Tool from the firmware download site and extract it.

2. Double-click the Fiery\_USBSetupTool.exe to start the installer.
3. When the setup wizard is launched, click Next.
4. Accept the terms of the license agreement and then click Next.

Wait while the installer verifies the installation requirements.

#### Note

- If the PC does not already have .Net framework installed, click Accept to accept the terms of the license agreement that appears on the screen. Wait up to 10 minutes as the .Net framework files are installed.
5. At the next screen, accept or change the destination location, and then click Next.
  6. When prompted, click Install to begin the installation.  
Wait while the application is installed on the PC.
  7. At the InstallShield Wizard Complete screen, click Finish.

#### Note

- The version information is displayed on the top-right corner of the Fiery USB Setup Tool main window. More information about the Fiery USB Setup Tool version can be found in Control Panel > Add or Remove Programs. In Windows 7, click Control Panel > Programs and Features.

## 2. Prepare a bootable USB flash drive with system software included.

1. Start the USB Setup Tool application by clicking Start and choosing All Programs > EFI > Fiery USB Setup Tool.
2. Attach the USB flash drive to the PC. All data on the USB flash drive is lost when the drive is reformatted during the preparation procedure. Make sure that no valuable data resides on the USB flash drive.
3. Insert the System Software DVD into the media drive of the PC. (If you have a image file of the System Software DVD (\*.ISO), skip this step.)
4. Drag the system software contents and drop it onto the Fiery USB Setup Tool window in the following way.
  - A. If preparing with the System Software DVD:  
Open My Computer and select the DVD drive (for example, DVD-RW drive E:), and drag and drop the drive onto the Fiery USB Setup Tool window.
  - B. If preparing with the image file (\*.ISO) of the system software.  
From the Windows Explorer, select the image (\*.ISO) file, drag and drop the file onto the Fiery USB Setup Tool window.
5. On the Disk Info screen, confirm the Fiery Product and Fiery Version are shown as desired. Then, select the drive letter for the USB flash drive, and click Next.

The USB will be formatted in a special way, and then data on the DVD (or image file) will be transferred to the USB flash drive.

The progress bar and time remaining show that the files are being copied. Copying the file usually takes 15-20 minutes, but may take considerably longer depending on your PC. Do not cancel.

6. When a message appears indicating that the USB flash drive is prepared, click Close to exit the Fiery USB Setup Tool.
7. Remove the USB flash drive in a safe way from the PC.

(For example, with Windows 7, use "Safely Remove Hardware and Eject Media" menu.)

 **CAUTION**

- Do not leave the prepared USB flash drive attached to the PC. If the drive is still attached when the PC starts up or reboots, system corruption may result.

8. If needed, remove the DVD from the media drive of the PC.
9. Label the prepared USB flash drive with identifying information.

**3. Power on the copier and the E-23C and print the configuration page.**

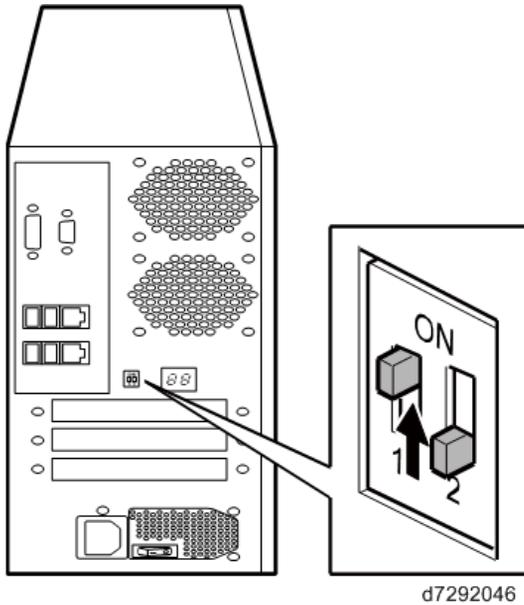
**4. If possible, back up the system settings to a configuration settings file with the backup feature (page 79 "Using the "Backup / Restore" Feature").**

**5. Perform the shut down procedure from the copier operation panel (page 64 "Shutting Down the E-23C Only").**

**6. When the E-23C power is down (that is when the diagnostic LEDs are off), turn the main power switch of the E-23C to OFF.**

**7. Disconnect all cables from the E-23C connector panel.**

8. Set the E-23C service switches as shown below. ("1" ON, "2" OFF)



9. Attach the prepared USB flash drive to one of the USB ports on the E-23C.

**Note**

- If dust covers are attached to the USB Type A connectors, remove one dust cover using needle-nosed pliers.

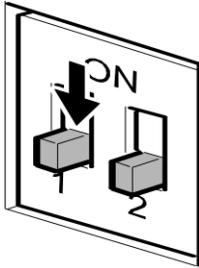
10. Turn the main power switch of the E-23C to ON, then press and release the soft power push button on the front of the E-23C and wait until installation is complete. (The E-23C shuts down automatically after installation is complete.)

The diagnostic LEDs increment quickly to initialize, then the diagnostic LEDs display 00 and increment every 30 seconds while the files transfer.

Installation takes approximately 15-25 minutes. The LED on the USB flash drive should show that files are being transferred.

11. Turn the main power switch of the E-23C to OFF and remove the USB flash drive from the E-23C.
12. Reconnect all cables that you removed earlier from the E-23C panel.

**13. Set the service switches in the normal position. (Not ON)**



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**14. Turn on the main power switch of the copier.**

**15. Turn the main power switch on the E-23C back panel to ON.**

**16. Press and release the soft power push button on the front panel of the E-23C.**

**17. Allow startup to proceed without interruption, while you watch the diagnostic LEDs on the back panel of the E-23C.**

**18. When the diagnostic LEDs remain at '00', go to the copier operation panel and press the Home button on the operation panel of the copier and wait for about 10 minutes.**

**Note**

- During the 10 minutes, the initial boot up of the controller will proceed as below, and Fiery icon will appear/disappear on the copier operation panel.

1. The controller boots up.

1. The controller connects to copier.

→ Fiery icon appears on the operation panel.

(There is no need to touch the icon at this stage)

2. The controller loads some settings.

3. The controller reboots automatically.

→ Connection with the copier is lost and Fiery icon will disappear.

4. The controller boots up and connects again to the copier.

→ Fiery icon appears again.

**19. Touch the Fiery icon. "Please Wait!" will be shown on the copier operation panel for a while.**

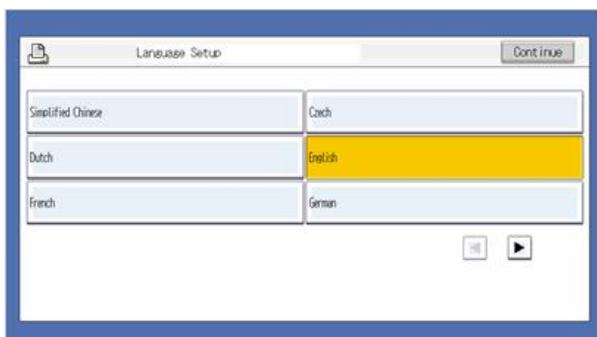
**20. Within about three minutes, the language selection screen is shown. (If this screen is not shown, then press the Home button on the operation panel of the copier and then touch the Fiery icon again.)**

**21. Select the desired language, and touch "Continue".**

- Simplified Chinese

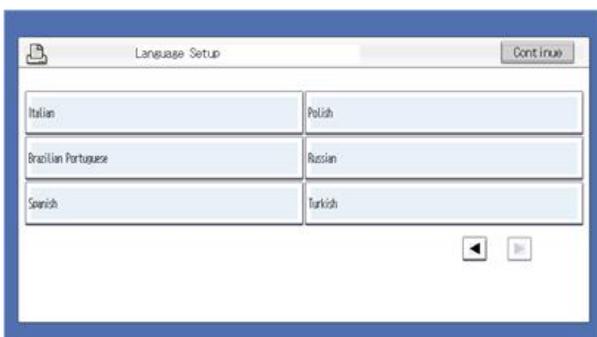
- Czech
- Dutch
- English
- French
- German
- Italian
- Polish
- Brazilian Portuguese
- Russian
- Spanish
- Turkish

4



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If the desired language is not displayed, switch screens using the ◀ ▶ buttons.



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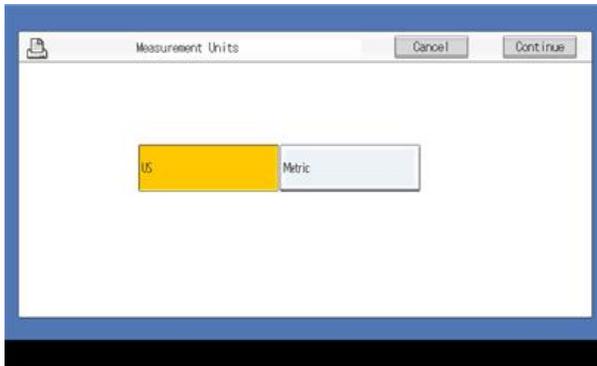
The default settings for the E-23C depend on the language selection as follows:

	Selected Language & Measurement Unit
--	--------------------------------------

		English - US	English - Metric / Simplified Chinese / Czech / Dutch / French / German / Italian / Polish / Brazilian Portuguese / Russian / Spanish / Turkish
PS Setting	Default Paper Sizes	US	Metric
PCL Setting	Paper Size	Letter	A4
	Paper Size System Pages	US	Metric

4

If you selected **"English"** at the language selection screen, you are prompted to select the Measurement Unit. Select either **"US"** or **"Metric"**, and then touch **"Continue"**.



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22. Wait for a short time, then press the Home button on the operation panel of the copier and then touch the Fiery icon. Repeat if necessary until "Please wait" no longer appears.
23. Press the Fiery tab to access Setup, and press Setup at the Fiery menu screen.
24. You are asked to enter the administrator password. (The default password is "Fiery.1".)
25. Input the customer's settings from the Configuration pages that you printed earlier. If there exists a backed up configuration settings file, restore it after the network configuration is completed. (page 79 "Using the "Backup / Restore" Feature")

**Note**

- Ask the site administrator for the other settings that are not on the Configuration pages. You must reboot the E-23C to apply the settings. For more information, see the "Configuration and Setup" manual (<http://help.efi.com/ricoh/docs/>).
26. If you have been any patches (system update files) for the version of system software you have just installed, installed the patches now. See the instructions provided with each patch.

# Patch Installation Procedure

When a software bug is found and fixed, or a new feature is added, a patch file (\*.ps file) may be additionally released.

There are two ways to update the system with the patch files as below:

- Using the System Updates (Automatic Update) feature.
- Applying the patches manually.

## Enabling the System Updates (Automatic Update)

With the "System Updates" feature, the following things are possible.

- Patches are downloaded and applied to the controller automatically at the scheduled date and time when the controller is connected to the internet.
- The controller checks for and downloads only the items that have not been applied yet. (There is no need to manually search for unapplied patches.)
- This feature automatically checks for prerequisite patches. (There is no need to determine the patch installation order.)

### Notes and limitations:

- The default setting is disabled.  
The feature can be enabled from the Configure menu by the site administrator.
- System Updates works only periodically on a schedule basis, for example, every day or every week, and works silently in the background (full automatic).
- Time can be set on an hourly basis only.  
It is not possible to set the feature to work immediately.
- For the following reasons, it is recommended to schedule the updates when the controller will not be in use, for example, at midnight and during weekends.
  - During the installation process, the controller will be automatically rebooted one or more time(s).
  - Printing/scanning is not possible during System Updates.
  - There are no notifications of start and completion of System Updates.
  - If the controller is rebooted manually by a user during System Updates, the system software will corrupt.
- There is no method to check the System Updates results.
- If "Start page" is set to ON, the page will be printed when the controller is started by the user. However, it will also be printed when the controller automatically reboots during System Updates.

- Patch installations performed by System Updates are logged in the Job Log as below.

Job Log			
Server: Fiery			
Status	Document	User	Notes 01
OK	PS Test Page	Guest	
Canceled	Configuration	Guest	
OK	Configuration	Guest	
OK	Startup	Administrator	
OK	TEST_000.ps	System_Update	
OK	TEST_000.ps	System_Update	
OK	TEST_000.ps	System_Update	
OK	Startup	Administrator	
OK	TEST_000.ps	System_Update	
OK	TEST_000.ps	System_Update	
OK	Startup	Administrator	
OK	Startup	Administrator	
OK	Configuration	Guest	

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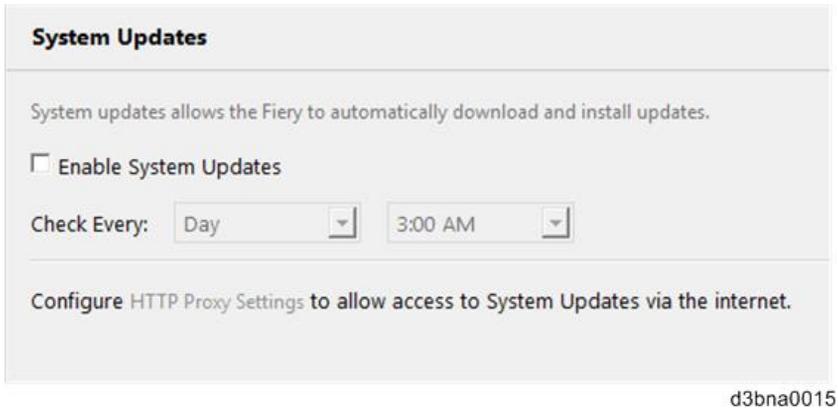
**Note**

- The following URL allows you to access the Update Server to view all available updates for E-23C.  
<https://liveupdate.efi.com/webupdater/default.aspx?sid=0e97062c9a5b32492795345160f8e6a8EF527419.PPD>
- Items marked with "Criticality: Critical" and "Criticality: Recommended" will be downloaded and applied automatically to the controller, when the System Updates feature is enabled. "Criticality: Optional" will not be applied via the System Updates feature.

### Setup Procedure for Scheduled Automatic Updates

1. Make sure that the clock (date and time) of the controller is correctly set with the controller.
  - Date and time can be confirmed by printing a configuration sheet.
  - Date and time can be adjusted from Configure > Fiery Server > Regional Settings
2. Access the Configure menu. (page 72 "Accessing Configure")
3. Choose Configure > Fiery Server > System Updates.

#### 4. Check "Enable System Updates".



**System Updates**

System updates allows the Fieri to automatically download and install updates.

Enable System Updates

Check Every:

Configure [HTTP Proxy Settings](#) to allow access to System Updates via the internet.

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4

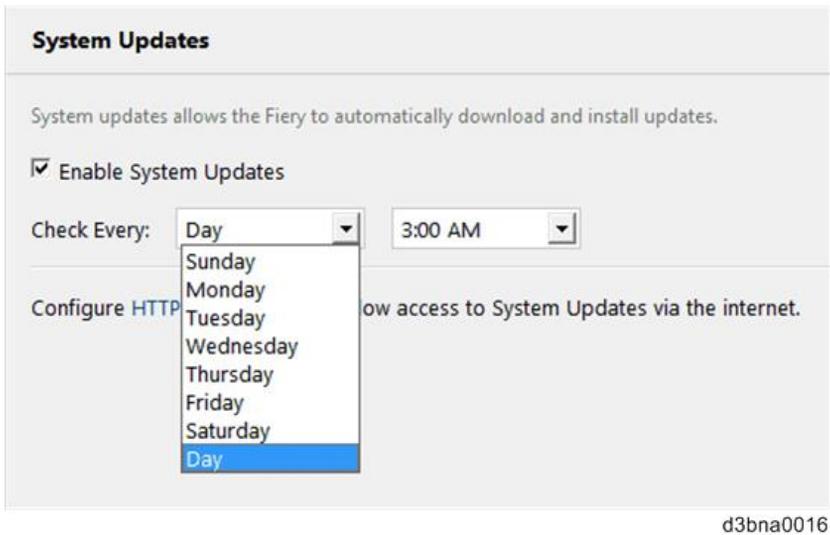
#### 5. Select the desired day and time.

The interval can be set as daily or weekly.

The default day and time settings are "Every Day" + "3:00AM".

#### Note

- Make sure to schedule the updates when the E-23C will not be in use. (Midnights or weekends, for example.)



**System Updates**

System updates allows the Fieri to automatically download and install updates.

Enable System Updates

Check Every:

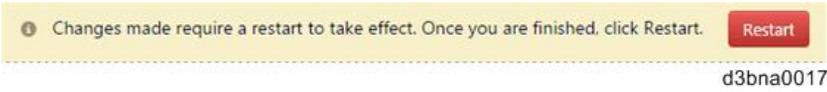
Configure [HTTP Proxy Settings](#) to allow access to System Updates via the internet.

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6. When a proxy server is used for internet connection, click "HTTP proxy Settings" and set up information for the proxy server authentication.

7. Click Save.

**8. Click Restart on the upper bar to make the changes take effect.**



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## Manual Update Procedure

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Patches are provided via the firmware download site.

The patch installation procedure may vary depending on the patch; the download destination queue or system rebooting procedure may be different.

Some patches may require prerequisite patches.

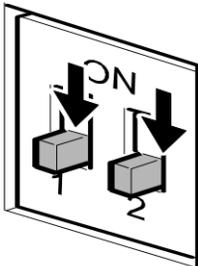
Therefore, when you install a patch, make sure to carefully read the attached release note and follow the instructions.

# 5. Troubleshooting

## Overview

When a problem occurs during normal operation, check in the following order.

1. Verify that the service switches are in normal operation mode, not in a service mode. (The switches should be in the lower position.)



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2. Check that the Fiery menu appears on the copier's operation panel.
3. Verify that the network is functioning, no unauthorized software or hardware is installed on the E-23C, and there are no problems with a particular print job or application. The site administrator can help you to verify these issues.
4. Verify that the E-23C and its connection with the copier has no problem by printing test pages. (page 69 "Printing the Configuration Page or Test Sheets")
5. If the E-23C can boot, check if the diagnostic LEDs on the back panel of E-23C stop on a particular diagnostic code. (page 144 "LED Diagnostic Codes")
6. Check that all cables, connectors, and replacements are present, appear undamaged and are correctly installed and connected. (page 95 "Replacement")
7. Try to solve the problem by performing "Clear Server" or "Factory Defaults". Inform the site administrator that the data stored in the HDD will be deleted. (page 123 "Clearing the Queued Print Jobs in the E-23C" and page 125 "Restoring the E-23C to Factory Defaults")
8. Check if a newer version of system software, firmware, or patch for the E-23C and copier has been released. If so, install it. (page 126 "System Software Installation Procedure")
9. If the problem will not disappear, reinstall the system software. (page 126 "System Software Installation Procedure")
10. If the problem will still not disappear, you may need to replace parts of the hardware. (page 148 "Errors and Suggested Actions")

# LED Diagnostic Codes

During startup, the E-23C advances through a standard diagnostic sequence. Each diagnostic code flashes rapidly on the LED display during this sequence until the E-23C reaches the Idle condition. In the Idle condition, the LED display shows the 00 code. This shows that the E-23C is in normal operation mode. The E-23C may flicker or drift from 00 during normal operation, but it will always return to 00.

If the LED display stops on a diagnostic code before the E-23C completes the boot up process, one or more diagnostic tests may have failed. Look up the diagnostic code in the following table to determine the troubleshooting actions that you should take.

## Note

- A component may be faulty without an error code being displayed. Also, it is possible for an error code to indicate a defective component but that component may not be defective. Use the error codes only as a guide for what to investigate further.

5

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## Overview

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Try the following procedures if the E-23C is hanging up on a diagnostic code.

### 1: Rebooting the E-23C

---

When the E-23C is already ON and hanging up on a diagnostic code, reboot the E-23C properly to see if the problem persists. Results are unpredictable when the E-23C is rebooted incorrectly.

1. **Press and hold the soft power button until the E-23C turns off.**
2. **Wait a full 30 seconds.**
3. **Press (but do not hold) the soft power button.**
4. **Wait to see if the E-23C reaches idle.**

### 2: Checking the Components

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Always check the unit for visible problems.

1. **Check the interior for foreign objects.**
2. **Check the cables to make sure they are intact, with no visible damage, and that each is the correct cable, and correctly installed.**
3. **Check all connectors for visible damage.**
4. **Check the replaceable parts for visible damage, and that each is the correct part and correctly installed.**

### 3: Turn On the E-23C Power

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After you reassemble the unit, turn on the E-23C power properly to see if the problem persists. Results are unpredictable when the E-23C power is turned on incorrectly.

1. **Connect the AC power cord to the AC power outlet.**
2. **Toggle the AC power switch to the ON position.**
3. **Wait a full 30 seconds.**
4. **Press (but do not hold) the soft power button.**
5. **Wait to see if the E-23C reaches the idle status.**

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## LED Diagnostic Code Tables

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\* 1: Try in the listed order. If the problem persists, try the next one.

LED codes	Possible cause	Suggested action
00	<p>When the Color Controller E-23C is in the Idle state and in Operational mode, the LED display shows 00.</p> <p>If the LED display shows 00, but the system is not functioning properly, one or more of the following may be the cause of the problem:</p> <ul style="list-style-type: none"> <li>• Faulty connection between the Color Controller E-23C and the copier</li> <li>• Service switches are set to an incorrect mode</li> <li>• Improper service board cable connection</li> <li>• Corrupted system software</li> <li>• Missing, faulty, or dead battery</li> <li>• Corrupted BIOS settings on the motherboard</li> <li>• Missing or faulty chassis fan</li> <li>• Faulty CPU and/or CPU cooling assembly</li> <li>• Faulty HDD or HDD connection</li> <li>• Faulty motherboard</li> </ul>	<ol style="list-style-type: none"> <li>1. Check and reseal all cable connections between the Color Controller E-23C and copier.</li> <li>2. Make sure that the Color Controller E-23C service switches are set to OFF (both away from ON).</li> <li>3. If the server date/time cannot be set or responds slowly, replace the battery on the motherboard, and then update the date/time in Server Setup.</li> <li>4. Shut down and open the Color Controller E-23C, and do the following: Reseat the power and data cables to the HDD. Make sure that the data cable is connected to the proper connector on the motherboard.</li> <li>5. Clear the CMOS.</li> <li>6. Reinstall system software.</li> <li>7. If no airflow or fan noise is evident at the vent holes of the chassis where the chassis fan is located, replace the chassis fan.</li> <li>8. Replace external cables, one at a time.</li> <li>9. Check and reseal the CPU cooling assembly, and then clear the CMOS.</li> <li>10. Replace the CPU cooling assembly.</li> <li>11. Replace the CPU, and then clear the CMOS.</li> <li>12. Replace the HDD data cable.</li> <li>13. Replace the HDD.</li> <li>14. Replace the motherboard.</li> </ol>
FF, A7, A8	<p>Possibly one of the following:</p> <ul style="list-style-type: none"> <li>• Corrupted security chip</li> <li>• Faulty motherboard</li> <li>• Faulty or missing CPU</li> </ul>	<ol style="list-style-type: none"> <li>1. Clear the CMOS.</li> <li>2. Replace the motherboard.</li> <li>3. Replace the CPU, and then clear the CMOS.</li> </ol>

LED codes	Possible cause	Suggested action
3b, 50, 52, E1	Possibly one of the following: <ul style="list-style-type: none"> <li>• Corrupted security chip</li> <li>• Missing or faulty DIMM</li> <li>• Faulty motherboard</li> </ul>	<ol style="list-style-type: none"> <li>1. Clear the CMOS.</li> <li>2. Replace the motherboard.</li> </ol>
55	Possibly one of the following: <ul style="list-style-type: none"> <li>• Missing or faulty DIMM</li> <li>• Faulty motherboard</li> </ul>	<ol style="list-style-type: none"> <li>1. Check and reseat the DIMMs.</li> <li>2. Replace the DIMMs.</li> <li>3. Replace the motherboard.</li> </ol>
90	Possibly one of the following: <ul style="list-style-type: none"> <li>• Corrupted security chip</li> <li>• Faulty motherboard</li> </ul>	<ol style="list-style-type: none"> <li>1. Clear the CMOS.</li> <li>2. Replace the motherboard.</li> </ol>
Any other code that the system hangs on before reaching the idle state	Possibly one of the following: <ul style="list-style-type: none"> <li>• Corrupted security chip on the motherboard</li> <li>• Faulty motherboard</li> </ul>	<ol style="list-style-type: none"> <li>1. Clear the CMOS.</li> <li>2. Make sure that you resealed the internal cable connections and verified system components.</li> <li>3. Replace the motherboard.</li> </ol>

## Errors and Suggested Actions

The most common causes of hardware problems are loose connections. Before you decide to replace any parts of E-23C, make sure that the parts and connectors are correctly and firmly installed. (page 95 "Replacement")

### Start-Up Problems

The following symptoms are described in the tables below:

1. When the main power switch is turned on, no power is supplied to the E-23C.
2. The E-23C main power switch can be turned on, but the E-23C will not continue to boot-up.
3. The E-23C starts up and reaches 00 on the LED display. But after 5 minutes, the Fiery menu still does not appear on the copier operation panel when you press the Home button on the operation panel of the copier and then touch the Fiery icon.
4. The CPU cooling fan is not working.
5. The CPU cooling fan is making noise.
6. If the Fiery menu screen does not appear on the copier operation panel when you press the Home button on the operation panel of the copier and then touch the Fiery icon.

#### Start-Up Problem-1

**Symptom:**

When the main power switch is turned on, no power is supplied to the E-23C.

**Possible cause:**

- The AC power cord of the E-23C is not connected.
- The soft power push button is not pressed.
- Defective power supply

**Start-Up Problem-1****Suggested action:**

1. Connect the AC power cord.
2. Press and release the soft power push button.
3. Check if the connector of the power supply unit is correctly inserted into the motherboard ATX24P\_1 socket.
4. If the connector is inserted correctly, replace the parts in the following order.
  - 1) AC Power cord
  - 2) Power supply unit
  - 3) Motherboard

**Start-Up Problem-2****Symptom:**

The E-23C main power switch can be turned on, but the E-23C will not continue to boot-up.

**Possible cause:**

- Motherboard, Memory or CPU is incorrectly installed.
- Motherboard defective
- Memory defective
- CPU defective
- Power supply unit defective

**Suggested action:**

1. Disconnect the AC power cord to the E-23C.
2. Check if the memory installed in the DIMM A1 socket, and is it installed firmly and correctly.
3. Check if CPU installed properly (no pins of the CPU bent or broken)
4. Check if cable of the CPU cooling assembly connected to the CPU\_FAN socket.
5. Try to install the following parts correctly, and then try to replace the parts in the following order:
  - Power supply unit
  - CPU
  - Memory
  - Motherboard

### Start-Up Problems-3

**Symptom:**

The E-23C starts up and reaches 00 on the LED display. But after 5 minutes, the Fiery menu still does not appear on the copier operation panel when you press the Home button on the operation panel of the copier and then touch the Fiery icon.

-or-

The E-23C shuts down after reaching idle (00).

**Possible cause:**

- System software corruption.
- Defective video board.
- Missing or defective security chip

**Suggested action:**

1. Replace the interface cable. (page 21 "Connecting E-23C to the Copier")
2. Reinstall the system software. (page 126 "System Software Installation Procedure")
3. Make sure that the key chip is correctly installed on the video board.
4. Replace the video board.
5. Replace the key chip.

### Start-Up Problems-4

**Symptom:**

The CPU cooling fan is not working.

**Possible cause:**

- Incomplete cable connection.
- CPU cooling fan defective.

**Suggested action:**

1. Check if the cable of the CPU cooling assembly is connected firmly to CPU\_FAN.
2. Replace the CPU cooling assembly.

### Start-Up Problems-5

**Symptom:**

The CPU cooling fan is making noise.

### Start-Up Problems-5

**Possible cause:**

- Dirty cooling fan.

**Suggested action:**

1. Remove the cooling fan, clean it, and re-attach it.

### Start-Up Problems-6

**Symptom:**

The Fiery menu screen does not appear on the copier operation panel when you press the Home button on the operation panel of the copier and then touch the Fiery icon.

**Possible cause:**

- Controller not ready
- Loose connection of the Gigabit Ethernet PCB.
- Gigabit Ethernet PCB defective
- System software corruption
- Copier SP is not properly set.

**Suggested action:**

1. Check if the Gigabit Ethernet PCB is inserted straight and connected firmly into the C slot on the copier. (page 21 "Connecting E-23C to the Copier")
2. If the above checks do not solve the problem, replace the interface cable or Gigabit Ethernet PCB
3. Check if SP5-193-001 is set to "1".
4. Check if SP5-895-001 is set to "1".

## System Problems

The following symptoms are described in the tables below:

1. The system date on the configuration page will always be returned to an old date (factory defaults date) after you turn on the E-23C; or the time and date settings that appear on the configuration page are sometimes earlier or later than the actual time and date.
2. The system performs slowly or stops sometimes.

**System Problem-1****Symptom:**

The system date on the configuration page will always be returned to an old date (factory defaults date) after you turn on the E-23C; or the time and date settings that appear on the configuration page are sometimes earlier or later than the actual time and date.

- BIOS settings were lost due to a dead battery.
- Motherboard defective

**Suggested action:**

1. Replace the lithium battery on the motherboard, and re-configure the system time and date.
2. Replace the motherboard.

## 5

**System Problem-2****Symptom:**

The system performs slowly or stops sometimes.

**Possible cause:**

- DIMM defective or faulty DIMM connection
- HDD defective
- CPU overheated and/or defective
- Motherboard defective

**Suggested action:**

1. Reconnect the DIMM.
2. Replace the DIMM.
3. Check if the connectors of the power supply unit and HDD are firmly inserted in the sockets.
4. Replace the soft power push button cable or activity LED cables.
5. Replace the HDD.
6. Make sure that the CPU on the motherboard is connected correctly and that the fan cable is connected.
7. Replace the CPU.
8. Replace the motherboard

## System Software Installation

The following symptoms are described in the tables below:

1. The E-23C start page fails to print from the copier after the installation is complete.
2. One of the following:
  - Installer screen hangs up at Waiting for E-23C to be ready, FTP/TFTP Setup, or Transferring boot file for longer than 15 minutes.
  - Installation fails repeatedly.
3. Installation stalls for 5 minutes (or longer) while downloading.
4. Cannot load the contents of the System Software onto the USB flash drive using the USB Setup Tool program.
5. When installing the system software from the USB flash drive, the E-23C remains on for 30 minutes (or longer) after beginning the installation.
6. When installing the system software from the USB flash drive, the LED on the USB flash drive remains off or on (not blinking).

5

System Software Installation-1
<p><b>Symptom:</b></p> <p>The E-23C start page fails to print from the copier after the installation is complete.</p>
<p><b>Possible cause:</b></p> <ul style="list-style-type: none"> <li>• The copier is not loaded with the required paper stock.</li> </ul>
<p><b>Suggested action:</b></p> <ol style="list-style-type: none"> <li>1. Load the copier tray with the size of paper that is appropriate for the national language selected for the E-23C system.</li> </ol>

## Network Port Method

System Software Installation-2
<p><b>Symptom:</b></p> <p>One of the following:</p> <ul style="list-style-type: none"> <li>• Installer screen hangs up at Waiting for E-23C to be ready, FTP/TFTP Setup, or Transferring boot file for longer than 15 minutes.</li> <li>• Installation fails repeatedly.</li> </ul>

**System Software Installation-2****Possible cause:**

- There is a conflict between the installer or the security settings on the PC.
- Incorrect or defective RJ-45 cable
- The installer is not compatible with the PC.

**Suggested action:**

1. Check again that you have disabled all software programs and network and security settings on the PC. Then retry the installation. Before you retry the installation, turn off the E-23C power using its dedicated AC power switch and wait 10 seconds.
2. Make sure you are using a cross-over RJ-45 cable. As an alternative, you can use two straight-through RJ-45 cables and a network hub. Connect only the PC and the E-23C to the hub. If the cable appears damaged, replace it.
3. If the problem persists, retry the installation using a different PC.

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**System Software Installation-3****Symptom:**

Installation stalls for 5 minutes (or longer) while downloading.

**Possible cause:**

- The service switches are set to normal mode
- Incorrect or defective RJ-45 cable
- Motherboard defective

**Suggested action:**

1. Make sure the E-23C service switches are set to service mode (toward "ON").
2. Make sure you are using a cross-over RJ-45 cable. As an alternative, you can use two straight-through RJ-45 cables and a network hub. Connect only the PC and the E-23C to the hub. If the cable appears damaged, replace it.
3. Replace the motherboard.

## USB Flash Drive Method

System Software Installation-4
<b>Symptom:</b> Cannot load the contents of the System Software onto the USB flash drive using the USB Setup Tool program.
<b>Possible cause:</b> <ul style="list-style-type: none"><li>• The USB flash drive and/or PC do not meet the minimum system requirements.</li><li>• There is a conflict between the USB Setup Tool program and the USB flash drive.</li></ul>
<b>Suggested action:</b> <ol style="list-style-type: none"><li>1. Make sure that the USB flash drive and the PC meet the minimum system requirements described in this manual (page 132 "Installing System Software Using a USB Flash Drive")</li><li>2. If the problem persists, try using a different PC. If you have been using a laptop PC, try a desktop PC instead.</li><li>3. If the problem persists, try using a different USB flash drive.</li></ol>

System Software Installation-5
<b>Symptom:</b> When installing the system software from the USB flash drive, the E-23C remains on for 30 minutes (or longer) after beginning the installation.
<b>Possible cause:</b> <ul style="list-style-type: none"><li>• The position of the service switches are incorrect.</li><li>• HDD defective</li><li>• Motherboard defective</li><li>• USB flash drive defective.</li></ul>

### System Software Installation-5

**Suggested action:**

1. Make sure that the service switches are set to 1=ON 2=OFF during the USB flash drive system software installation.
2. Check the LED on the USB flash drive. If the LED is not blinking (remains off or on), the drive may be connected incorrectly. Turn off the E-23C main power switch, and reconnect the drive. Then turn the main power switch on, and press and release the soft power push button and allow the installation to resume.
3. Check the connection of the power and SATA data cables.
4. Replace the SATA data cable.
5. Replace the HDD.
6. Replace the motherboard.
7. Replace the CPU.
8. Retry the installation with a different USB flash drive.

### System Software Installation-6

**Symptom:**

When installing the system software from the USB flash drive, the LED on the USB flash drive remains off or on (not blinking).

**Possible cause:**

- USB flash drive defective or not correctly connected
- Motherboard defective
- HDD defective

**Suggested action:**

1. Turn off the E-23C main power switch and reconnect the USB flash drive. Then turn the power on, and press and release the soft power push button and allow the installation to resume.
2. Retry the installation with a different USB flash drive.
3. Replace the motherboard.
4. Check the connection of the power and SATA data cables.
5. Replace the SATA data cable.
6. Replace the HDD.

## Network Problems

The following symptoms are described in the tables below:

1. E-23C does not communicate with the network.
2. Unable to connect to the network; or no LED on the 10/100/1000BaseT network connector is lit.
3. The system starts up slowly (seems to stop); and the Configuration Page shows an error on the "IP Address" line under "Network Setup".

Network Problem-1
<p><b>Symptom:</b></p> <p>The E-23C does not communicate with the network.</p>
<p><b>Possible cause:</b></p> <ul style="list-style-type: none"> <li>• Wrong cables because the cross-over cable and the straight through network cable look alike.</li> </ul>
<p><b>Suggested action:</b></p> <ol style="list-style-type: none"> <li>1. Check the labeling on the cable connectors and /or the wire color sequence on the connectors to make sure you are using a network straight-through cable to the customer's LAN from the RJ-45 second from the bottom.</li> </ol>

Network Problem-2
<p><b>Symptom:</b></p> <p>Unable to connect to the network; or no LED on the 10/100/1000BaseT network connector is lit.</p>
<p><b>Possible cause:</b></p> <ul style="list-style-type: none"> <li>• The cable is connected to a port that is not used.</li> <li>• Defective network cable or connection</li> <li>• Network problem</li> <li>• Defective Ethernet interface on the motherboard</li> </ul>

### Network Problem-2

#### Suggested action:

1. Make sure the network cable is the correct type and connected to the correct network port on the E-23C.
2. Check the cable connection to the network port.
3. Replace the cable with a new or tested cable.
4. Ask the network administrator to check other devices on the network.
5. If other devices are not functioning, it could be a problem with the network.
6. If the rest of the network operates correctly and the problem persists, replace the motherboard.

### Network Problem-3

#### Symptom:

The system starts up slowly (seems to stop); and the Configuration Page shows an error on the "IP Address" line under "Network Setup".

#### Possible cause:

Normal behavior. The system is searching for a nonexistent DHCP server. DHCP is enabled by default on the E-23C, but the customer's network is not using DHCP.

If the customer's network is using DHCP:

- Defective network cable or connection.
- Network problem.
- Defective Ethernet interface on the motherboard.

#### Suggested action:

1. If the problem persists, ask the network administrator to change the default in the E-23C network setup.
2. If no LED is lit on the E-23C's network port, check the cable connection to the E-23C and the network. Make sure the cable is the correct type.
3. Ask the network administrator to check other devices on the network.
4. If other devices are not functioning, it could be a problem with the network.
5. If the rest of the network operates correctly and the problem persists, replace the motherboard.

## Printing Problems

The following symptoms are described in the tables below:

1. A test page or configuration page cannot be printed, or the images on the printed pages are abnormal.
2. The E-23C appears on the list of printers on the customer's workstation, but certain jobs do not print.
3. A print job stops after one or few pages.
4. Print Quality is poor.
5. Pages come out blank, or tinted with green or some other color.

### Printing Problem-1

**Symptom:**

A test page or configuration page cannot be printed, or the images on the printed pages are abnormal.

**Possible cause:**

- The copier is not ready to print.
- Copier problem
- Loose cable connection
- Interface cable defective
- Loose connection of the Gigabit Ethernet PCB
- Gigabit Ethernet PCB defective
- Video board defective
- Corrupted system software.
- HDD defective.

### Printing Problem-1

**Suggested action:**

1. Make sure the copier main power switch is on and the copier is ready to print.
2. Check the copier operation panel for indications or messages about the copier status.
3. Check that the copier operates correctly. (Check if you can make hard copies without any problem)
4. Make sure the E-23C main power switch is in the "ON" position.
5. Shut down the Copier and the E-23C. Then power on the Copier and the E-23C in this order.
6. Make sure the Fiery menu screen appears when you press the Home button on the operation panel of the copier and then touch the Fiery icon.
7. Check if the Gigabit Ethernet PCB is inserted straight and connected firmly into the C slot on the copier. (page 21 "Connecting E-23C to the Copier")
8. Check again that the video board is present and properly connected to the motherboard.
9. Replace the Gigabit Ethernet PCB.
10. Replace the video board.
11. If the problem persists, you may need to service the copier.
12. Try "Clear Server", "Factory Defaults", or re-install the system software. (page 123 "Clearing the Queued Print Jobs in the E-23C"/page 125 "Restoring the E-23C to Factory Defaults")
13. Replace the HDD
14. If replacing the HDD does not correct the problem, make sure you install the old HDD back in the E-23C.

### Printing Problem-2

**Symptom:**

The E-23C appears on the list of printers on the customer's workstation, but certain jobs do not print.

**Possible cause:**

- PostScript error
- Application problem

### Printing Problem-2

**Suggested action:**

1. Make sure 'Print to PostScript Error' in Setup is set to Yes. Check for error messages on the E-23C output.
2. Print a job from a different application to determine if the problem is associated with a particular application.
3. Make sure the connection between the E-23C and the workstation is operating. To do this, download a test page from the workstation or print a simple test file.
4. Resend the problem file.

### Printing Problem-2

**Symptom:**

The configuration page is completely or mostly blank.

**Possible cause:**

- Defective DIMM
- Corrupted system software

**Suggested action:**

1. Check the DIMM and reconnect it, to remove oxidation on the connectors.
2. Reinstall the system software. (page 126 "System Software Installation Procedure")
3. Replace the DIMM.

### Printing Problem-3

**Symptom:**

A print job stops after one or few pages.

**Possible cause:**

- Normal process, if this occurs when printing the first copy of a multi-copy print job.
- PostScript or application error
- Defective DIMM.

### Printing Problem-3

**Suggested action:**

1. The working area memory became full during ripping, and the printer switched to rip-only mode until all pages were ripped.
2. Cancel the E-23C print job.
3. If this fails to clear the problem, turn on and off the Copier and E-23C.
4. If the problem persists, perform Clear Server. (page 123 "Clearing the Queued Print Jobs in the E-23C")
5. Check the DIMM and reconnect it, to remove oxidation on the connectors.
6. Reinstall the system software. (page 126 "System Software Installation Procedure")
7. Replace the DIMM.

### Printing Problem-4

**Symptom:**

Print Quality is poor.

**Possible cause:**

- Missing or outdated printer description file.
- The application cannot find the necessary printer description file.
- Problem with the copier
- Out of calibration or calibration information/curves on the active partition are corrupted.
- Calibration information/curves on the active partition are corrupted.

### Printing Problem-4

#### Suggested action:

1. Make sure the necessary printer description file is installed.
2. Test the copier and service it if necessary (see the copier service manual).
3. Start ColorWise Pro Tools from a client computer and click the Calibrator icon. Then click Restore Device in the calibrator window. Restore Device restores the E-23C calibration information to the factory defaults. If restoring the default calibration does not solve the problem, you may need to service the copier.
4. If restoring the default calibration corrects the color quality, a custom calibration may have been the cause of the problem. Ask the site administrator to recalibrate the E-23C.
5. If the problem persists after recalibration, the calibration information on the HDD may be corrupted. Reinstall the system software. (page 126 "System Software Installation Procedure")
6. If the problem persists, the HDD may be corrupted. Verify that all HDD cabling is correct.
7. If HDD cabling is correct, you may need to replace the HDD.

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### Printing Problem-5

#### Symptom:

Pages come out blank, or tinted with green or some other color.

#### Possible cause:

- Bad connection between the E-23C and the Copier.
- Problem with the copier.

#### Suggested action:

1. Turn on and off the Copier and E-23C.
2. Test the copier and service it if necessary (refer to the copier service manual).

If the customer can print the Configuration Page from the copier operation panel but cannot print a job from a computer on the network, ask the network administrator to do the following:

- Check all components of the network, including cables, connectors, network adapter boards, and network drivers.
- Activate the network and use it to communicate with other printers.
- Confirm that the applicable network setting in Setup (such as AppleTalk zone, IP address, Subnet mask, and Gateway address) match the settings used in the network.

 **Note**

- EPS file generation is not fully standardized among applications. Some users may encounter problems while printing certain EPS files.

# Test the Voltage Supplies

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

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

REF. D.	PIN NO.	SIGNAL	WIRE COLOR
P1	1	+3.3V	ORANGE
	2	+3.3V	ORANGE
	3	COM	BLACK
	4	+5V	RED
	5	COM	BLACK
	6	+5V	RED
	7	COM	BLACK
	8	PW-OK	GRAY
	9	+5V <sub>ab</sub>	PURPLE
	10	+12V	YELLOW
	11	+12V	YELLOW
	12	+3.3V	ORANGE
	13	+3.3V	ORANGE
		+3.3V <sub>S</sub>	BROWN
	14	-12V	BLUE
	15	COM	BLACK
	16	PS-ON	GREEN
	17	COM	BLACK
	18	COM	BLACK
	19	COM	BLACK
	20	-	-
	21	+5V	RED
	22	+5V	RED
	23	+5V	RED
24	COM	BLACK	

REF. D.	PIN NO.	SIGNAL	WIRE COLOR
P2	1	COM	BLACK
	2	COM	BLACK
	3	+12V	YELLOW
	4	+12V	YELLOW

# Collecting Troubleshooting Information

When there is a job error, system fault, or unexpected output while printing a job, collecting the following information can help technical support to provide efficient solutions:

- Explanation of the symptom
  - If unexpected output is observed, indicate the problem area with a circle on the output sample.
- Steps needed to reproduce the problem
- Expected result and actual (unexpected or defective) result
- Error messages / codes (if applicable)
- Frequency of occurrence
- Information as listed below:
  - If the error occurs only when printing a specific file.
  - If the error occurs only when printing the job in a particular way.
    - For instance,
    - a) When printing from an application with a printer driver
    - b) When importing jobs to and printing from Command WorkStation
    - c) When changing settings from Command WorkStation
  - If the customer is using more than two E-23C units, whether or not the same symptom can be observed with more than one unit.
- Environmental information
  - Client OS version
  - Printer Driver version (if applicable)
  - Command WorkStation version (if applicable)
  - Application software version (if applicable)
- Configuration sheets of E-23C
  - Note**
    - The configuration sheet will be automatically included when the Job Error Report is created.
  - SMC (Configuration sheets of the copier)  
SP5-992-001 (Import all to SD card) or SP5-990-001 (Print all)
  - Note**
    - The SMC can be included (optional) when obtaining the Device Logs (page 175 "Obtaining the Device Logs (Copier)")

**★ Important**

- **Make sure to shut down and reboot the copier once before importing or printing the SMC. Otherwise, the latest settings on the copier side may not be collected when the SMC is imported or printed.**
- Screenshot/picture/movie that shows the steps, symptom or error message/code.
- Archived file, if the symptom occurs with a specific file.

**↓ Note**

- The archived file will be automatically included when the Job Error Report is created.
- Original Source file

**↓ Note**

- The original source file can be included (optional) when the Job Error Report is created.
- A set of following 3 items:
  - Job Error Report (E-23C)  
For the procedure of how to create a Job Error report, see page 170 "Creating a Job Error Report (E-23C)".
  - Device logs (Copier)  
For the procedure of how to capture the Device logs, see page 175 "Obtaining the Device Logs (Copier)".
  - Date and time that the error/symptom occurred

**★ Important**

- **The Job Error Report and the Device Logs must be collected at the same time, to improve the possibility of successful problem diagnosis.**
- **The error log entries included in the Job Error Report and Device Logs are overwritten after a period of time. To ensure the error logs contain the relevant information, capture these items as soon as possible after the error is observed.**
- **Also for smooth and efficient investigation, make sure to provide the technical support with the 3 items as a set.**
- Action already taken at the customer site
- Others (comments / requirements / conditions / findings, etc.)

## Creating a Job Error Report (E-23C)

### Overview

When you create a job error report, Command WorkStation creates a zip file of the current job files, logs and information about the E-23C. You can generate an error report even if the print job is not in an error state.



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### Items that will be generated

	Explanation	Items To be included	Notes
Basic	The file size is kept down to a reasonable size.	Fiery Archived Job (folder)	Even if a RIPPed job is selected, the raster data will not be included.
		Configuration Sheet (PDF)	
		Fiery job log (CSV)	
		E-mail log and FTP logs	
		'Steps.txt' Text File	With the information typed in the text box.
		Engineering logs	Encrypted, for EFI use only. The maximum size: 128MB. When the data gets over 128MB, the older data is deleted.

	Explanation	Items To be included	Notes
Advanced (Optional)	Caution: File size may greatly be increased by selecting these options.	Raster data	This menu is selectable only for RIPPed jobs
		Color Profiles used in the job saved as ICC files	This menu is selectable only for RIPPed jobs
		Original source files	Files formatted in the original application, such as a Word doc or InDesign file.  Any file format can be attached, and multiple files can be attached.

### ★ Important

- The Engineering log entries are overwritten after a period of time. To ensure the Engineering logs contain the relevant information, create the Job Error Report as soon as possible after the error is observed. Create the Job Error Report before rebooting the E-23C and if possible, before any additional print jobs are processed or printed.
- The maximum size of the zip file is 2GB.

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## Procedure for Creating the Job Error Report

You can create a job error report for any jobs in the Held or Printed lists.

1. In Command WorkStation, select a job in the Printed or Held list.
  - Only one job error report can be created at a time. If multiple jobs are selected in Job Center, the Create Error Report button is not available.
  - If a print job is affected, select the particular job from the Printed or Held list.
  - If the affected print job cannot be found in the list (because an error occurred during processing, etc), select another job in the list. Creating the Job Error Report by selecting another job will also store the latest logs in the zip file, except for Fiery Archived Job (folder).
2. If using a Windows computer, press Ctrl and right-click the job. If using a Mac computer, press Command and right-click the job.
3. In the shortcut menu, click Create Error Report.

## 4. Enter information about the job error.

Create Error Report

Add/select the information you want to include in the error report.

Comments:

Error Date and Time: March 14, 2017  
 Error code: None  
 Expected Result: Image orientation should...

Original file attachments:

A4\_1Page\_Test.docx

Rasters  
 Color Profiles  
 Email log

Save Cancel

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## a. Enter any comments and additional details in the "Comments" field.

If possible, write in English.

It is recommended to include the following information:

- Date and time error occurred
- Observed error codes, if any
- Description of expected result
- Description of incorrect result
- Steps for how error occurred
- Frequency of error (Such as single event, rarely, sometimes, frequently, always)
- Whether the error has occurred with more than one file
- Whether the file selected for the report is the same file that had the error.

b. **Optional: To include the raster data of the processed file in the report, select Rasters.**

- Normally when creating the Job Error Report without selecting the Raster option, regardless of whether the selected job on the Command WorkStation is RIPped data or not, the data will be automatically archived without the Raster data.
- The raster data can be useful to include if the file is not processed correctly. However, it may exceed the allowed size of the report. In this case, it may be useful to provide the Raster file separately.

To provide the Raster data separately:

1. In Command WorkStation, look for the file that caused the problem.

If it is already RIPped, it will be in the held job list and will have an icon with an arrow.

If the job is not yet RIPped (no arrow in the icon), select the job and right-click, and from the short-cut menu, select "Process and Hold". The job is RIPped and an arrow is added to the icon.

2. Right-click on the job, and from the short-cut menu, select Archive (do not select 'Server Internal').



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<p>c.</p>	<p><b>Optional: To include the specific color profile, select Color Profile.</b></p> <ul style="list-style-type: none"> <li>When the color profiles are included in the Job Error Report, there is also a 'report.txt' file created and included. This shows the names of the profiles that were used for the job.</li> <li>The color profile may be useful to include if the issue occurs only with a custom color profile. However, it may exceed the allowed size of the report. In this case, it may be useful to provide the Color Profile file separately.</li> </ul> <p>To provide the color profile(s) separately:</p> <p>If using standard profiles (not custom profiles), there is no need to attach them. If using custom or edited profiles, then they can be exported from the Command WorkStation.</p> <p>From the Device Center tab, select Resources &gt; Profiles.</p> <p>Just select the particular profile from the list and Export it.</p>  <p style="text-align: right;">d3bna0036</p>
<p>d.</p>	<p><b>Optional: To include the email log in the report, select Email log.</b></p> <p>The email log can be useful to include if the file was submitted by email.</p>
<p>e.</p>	<p><b>Optional: To include the original source file in the report, click Add+.</b></p> <p>The original source file can be useful to include if the job does not process or print. However, it may exceed the allowed size of the report. In this case, it may be useful to provide the original source file separately.</p>

**5. Attach any additional related files to the report.**

The job error report has a maximum file size of 2GB. If the selections and attachment result in a report larger than 2GB, the report size must be reduced, such as by deselecting options or removing additional files.

## 6. If the customer considers any print jobs to be confidential, remove the job files before sending the zip file to technical support.

- If the customer does not wish to provide the original file, then the original file should not be selected or should be removed from the zip file.
- If the customer does not wish to provide the print job, then the archived job (automatically saved when creating the JER) must be removed.
- If the customer does not wish to provide the Job Log (which usually contains the Job title and the User name), it should be removed.

## 7. Save the Job Error Report.

## Obtaining the Device Logs (Copier)

### ★ Important

- This section only covers the procedure of what to collect from the copier side, when a job error, system fault, or unexpected output while printing a job occurs with E-23C.
- For the overall explanation and procedure of collecting the device logs from the copier, please refer to the copier service manual.

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## Overview

As a default setting, the device logs are stored in the HDD of the copier.

With the SP settings, you can obtain the stored logs from the HDD and have them copied to an SD card.

For investigating the E-23C issues, please collect at least the following logs as a set with the Job Error Report.

### Items that is recommended to collect from the copier HDD for E-23C issues

Type	Storage Timing to HDD (* 1)	Destination (maximum storage capacity)
Controller device log including operation log	Saved at all times	When the data gets over 4.0 GB, the older data is deleted.
Engine device log	When an engine SC occurs When paper feeding/output stops because of a jam When the machine doors are opened during normal operation	The maximum data that can be stored is 300. When the data is stored over 300 times, the oldest data is deleted.

\* 1 The following setting is the factory default.

- SP5-858-001 (Save Device Log): 1 (Enable)
- SP5-858-002 (Target): 0 (HDDw)

If the settings on the copier have been changed at the customer site, the SP values should be changed back to the defaults and you must wait for the issue to be reproduced again, before you start the procedure of copying the logs to the SD card.

For details, refer to the copier service manual.

#### Note

- Device logs are not saved in the following conditions:
  - While erasing all memory
  - While data encryption equipment is installed
  - While changing the firmware configuration
  - Forced power OFF (accidentally disconnecting the outlet)
  - While the copier is shutting down
  - When the power supply to the HDD is off because of energy saving (engine OFF mode/STR mode)
  - When one of the following SCs occurs: SC672, SC816, SC819, SC878, SC899, SC859, SC860, SC861, SC863, or SC864

#### Note

- The following logs are not saved:
  - Logs related to the energy saver mode (Engine-off, suspend-mode, or other cases)
    - Network communication log
    - Logs related to NRS
    - Access log for unauthorized users (guests)
  - HTTP session timeout log
  - Auto log-out log

## Obtaining the Device Logs (and SMC) with an SD card

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### Preparation

#### 1. Check the date and time that the issue occurred.

Later, when providing the device logs to your technical support, inform the date and time, so that the engineers can find the area of the logs to investigate.

#### 2. Prepare an SD card and format it.

For the recommended SD card, please refer to the copier service manual.

If the SD card is used for the first time for log retrieval, format it by using SD Formatter from Panasonic: [https://www.sdcard.org/downloads/formatter\\_3/](https://www.sdcard.org/downloads/formatter_3/) (free software)

### Procedures for obtaining the logs

#### 1. Turn OFF the main power of the copier.

##### ★ Important

- Make sure to power off the copier before proceeding the following steps.
- Otherwise, the latest settings on the copier side may not be collected when the SMC is exported to the SD card.

#### 2. Insert the SD card into the slot on the side of the operation panel or the service slot.

#### 3. Turn ON the main power.

#### 4. Enter SP mode.

#### 5. Specify the date that the issue occurred in SP5-858-101 (Start Date).

The setting must be entered in year-month-day calendar format.

e.g.: March 14, 2017, input "20170314" (yyyymmdd)

#### 6. Specify the number of days to collect the logs in SP5-858-102 (Days of Tracing).

e.g.: SP5-858-101: "20170314" + SP5-858-102: "2 (default)"

Result: The logs of March 13, 2017 through March 14, 2017 will be obtained.

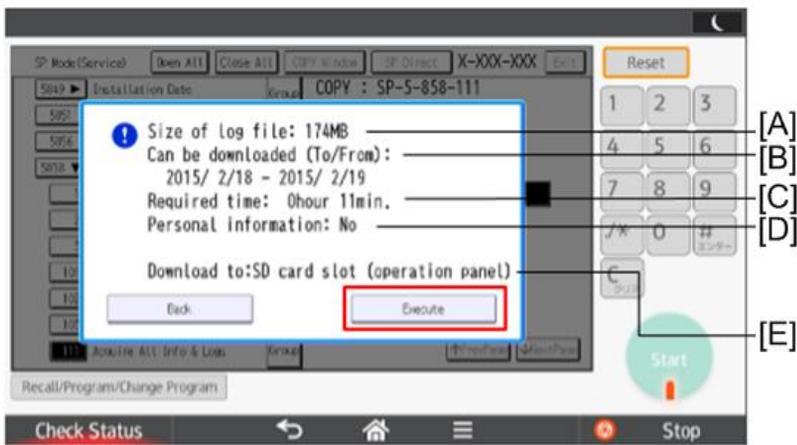
#### 7. Execute SP5-858-111 or SP5-858-141 to copy all of the device logs from the HDD and create an SMC file on the SD card.

SP	Collectable Information and/or Logs
SP5-858-111	All of the device information and device logs that are collected by executing the SPs from SP5-858-121 to SP5-858-145, and SMC.
SP5-858-121	Configuration page *2
SP5-858-122	Font page *2
SP5-858-123	Print settings list *2
SP5-858-124	Error log *2
SP5-858-131	Fax information (whether the fax destinations are included or not depends on the setting of SP5-858-103.)
SP5-858-141	All of the following: Controller log, engine log, operation panel log, FCU log, and SMC.
SP5-858-142	Controller log

SP	Collectable Information and/or Logs
SP5-858-143	Engine log
SP5-858-144	Operation panel log
SP5-858-145	FCU log

\*2 Applicable for Ricoh printers only. These items cannot be obtained when the E-23C is connected to a copier.

**8. After executing the SP for copying the logs (and SMC), wait for a confirmation screen to appear.**



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[A]: File size

[B]: Period to copy

[C]: Estimated time to copy

[D]: If "Fax Contact" is displayed, it means that the fax destinations will be included in the fax information

[E]: Where the data will be copied

**Note**

- The approximate time it takes to transfer the device log is as follows. Transfer time may be affected by the type or format of the SD card.
  - Controller device log (GW device log): 2 - 20 minutes
  - Engine device log: 2 minutes
  - Operation panel device log: 2 - 20 minutes

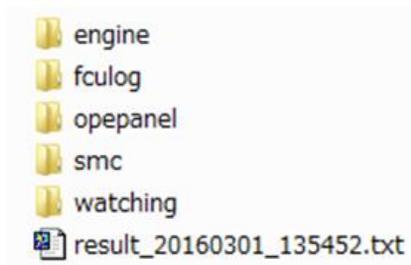
If the estimated time is not calculated due to an error, an error code will be displayed.

Error Code	Description
-1	Other.
-2	No SD card is inserted in the service slot or in the SD slot on the side of the operation panel. In this case, insert an SD card into either of the SD slots.
-3	The SD card is locked and is not possible to write any data. In this case, unlock the SD card.

9. Wait for the information and/or logs to be copied to the SD card.
10. After a message stating that the process has completed appears on the operation panel, confirm that the LED light next to the SD card slot is not flashing and then remove the SD card.
11. Make sure that the SD card access LED is off, then remove the SD card.

**Note**

- The process of retrieving logs fails in the following cases:
    - When the size of the logs to obtain exceeds the amount of space available on the SD card.
    - When the SD card is removed while the logs are being copied to it.
    - When the SD card is not formatted.
  - If 'failed' appears on the touch panel display, turn the power off, and then recover from step 1 again.
12. Confirm that the "LogTrace" folder is created in the SD card with sub folders with the following names.



d3bna0037

13. Zip the LogTrace folder to provide it to your technical support.





## Networking

Cable requirements:

- 10BaseT (Ethernet): Unshielded Twisted Pair (UTP), Category 3 or higher
- 100BaseTX (Fast Ethernet): UTP, Category 5 or higher (4-pair/8-wire, short length)
- 1000BaseT (Gigabit Ethernet): UTP, Category 5e or higher (4-pair/8-wire, short-length)

### Note

- If the print engine is 230V, use a shielded network cable.

## Video Board

The Video Board functions include:

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

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

- Hardware decompression
- Print quality enhancement technologies

## HDD

The HDD is used to optimize many parts of the printing system as well as improving throughput and ease-of-use. The HDD stores the following information:

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

## Non-Volatile Memory

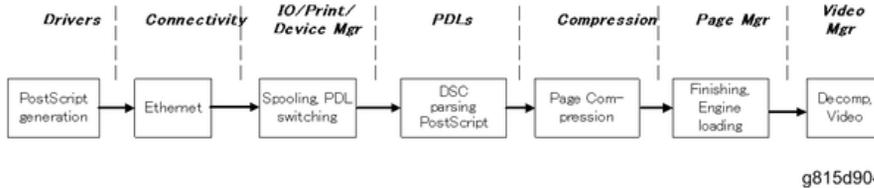
- The 8MB Flash Memory contains the BIOS, etc.
- The 1 Kbit EEPROM holds the MAC address data.

## Volatile Memory

- SDRAM is one 2GB, PC3-10600, Double Data Rate 3 (DDR3), 240-pin.

# Print Data Processing

## Flow Chart



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

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



# 7. Specifications

## General Specifications

Configuration:	External Type Printer Controller Unit
Motherboard:	CPU: Intel® Pentium® Processor G850 2.9GHz Network Interface: RJ-45 Network port (1000-Base/100-Base/10-BaseT)
Memory:	2GB x 1 (DDR3-1333-999) PC3-10600
HDD:	Internal HDD: 500GB
Operating System:	Linux
Network Protocols:	AppleTalk (for downloading fonts) TCP/IP (IPv4/IPv6) SMB
Printer Description Languages:	Adobe PostScript3 (Standard), PCL6/5c (Standard)
Supported Driver Language:	English, Simplified Chinese, Czech, Dutch, French, German, Italian, Polish, Brazilian Portuguese, Russian, Spanish, Turkish
Print Resolution:	1200dpi (2bit), 600dpi (4bit) * 1200dpi (2bit) is not available on PCL5c driver.
Gradation:	1 bit/pixel, 4 bits/pixel
Scan Resolution:	Max. 600 dpi
Scan Source:	ADF / Exposure Glass
Scan Sides:	Simplex / Duplex
Scan Destination:	Hold Queue / MailBox / Email / FTP Server/ Internet Fax Client PC Disk (E-23C Remote Scan only)
Scan Format:	PDF/ TIFF/ JPEG

Printing Speed:	MP C3004 + E-23C: 30ppm MP C3504 + E-23C: 35ppm MP C4504 + E-23C: 45ppm MP C5504 + E-23C: 55ppm MP C6004 + E-23C: 60ppm
Resident Fonts:	PostScript: 138 fonts PCL: 80 AGFA fonts
Power Consumption:	Rated: 80W
Noise Emission: (Sound Power Level)	Sound Power Level: Less than 51 db(A) Sound Pressure Level: Less than 41 db(A)
Dimensions (W x D x H):	124.3mm x 362.5mm x 294.6mm, 4.9" x 14.3" x 11.6"
Weight:	5.6 kg (12.4 lb)

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MEMO

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MEMO