TotalFlow Print Server R-61A
(Machine Code:M507)

Field Service Manual

Important Safety Notices

Warnings, Cautions, Notes

In this manual, the following important symbols and notations are used.

⚠ WARNING

- A Warning indicates a potentially hazardous situation. Failure to obey a Warning could result in death or serious injury.

⚠ CAUTION

- A Caution indicates a potentially hazardous situation. Failure to obey a Caution could result in minor or moderate injury or damage to the machine or other property.

⭐ Important

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

⬇ Note

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

General Safety Instructions

For your safety, please read this manual carefully before you use this product. Keep this manual handy for future reference.

Safety Information

Always obey the following safety precautions when using this product.

Safety During Operation

In this manual, the following important symbols and notations are used.

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[A]: ON

[B]: OFF

[C]: Push ON/Push OFF

[D]: Standby

Switches and Symbols

Where symbols are used on or near switches on machines for Europe and other areas, the meaning of each symbol conforms with IEC60417.

Safety

Prevention of Physical Injury

1. Before disassembling or assembling parts of the machine and peripherals, make sure that the machine and peripheral power cords are unplugged.

2. The plug should be near the machine and easily accessible.

3. Note that some components of the machine and the paper tray unit are supplied with electrical voltage even if the main power switch is turned off.

4. Always unplug the power cord from the power source before you move the product. Before you move the machine, arrange the power cord so it will not fall under the machine.

5. Disconnect all peripheral units (finisher, LCT, etc.) from the mainframe before you move the machine.

6. If any adjustment or operation check has to be made with exterior covers off or open while the main switch is turned on, keep hands away from electrified or mechanically driven components.

7. The machine drives some of its components when it completes the warm-up period. Be careful to keep hands away from the mechanical and electrical components as the machine starts operation.

8. The inside and the metal parts of the fusing unit become extremely hot while the machine is operating. Be careful to avoid touching those components with your bare hands.

9. To prevent a fire or explosion, keep the machine away from flammable liquids, gases, and aerosols.

10. Do not use flammable sprays or solvent in the vicinity of the machine. Also, avoid placing these items in the vicinity of the machine. Doing so could result in fire or electric shock.

11. To avoid fire or explosion, never use an organic cleaner near any part that generates heat.

12. Clean the floor completely after accidental spillage of silicone oil or other materials to prevent slippery surfaces that could cause accidents leading to hand or leg injuries.

13. Never remove any safety device unless it requires replacement. Always replace safety devices immediately.

14. Never do any procedure that defeats the function of any safety device.

15. Modification or removal of a safety device (fuse, switch, etc.) could lead to a fire and personal injury. Always test the operation of the machine to ensure that it is operating normally and safely after removal and replacement of any safety device.

16. For replacements use only the correct fuses or circuit breakers rated for use with the machine. Using replacement devices not designed for use with the machine could lead to a fire and personal injuries.

17. For machines installed with the ADF/ARDF:
    When a thick book or three-dimensional original is placed on the exposure glass and the ARDF cover is lowered, the back side of the ARDF rises up to accommodate the original. Therefore, when closing the ARDF, please be sure to keep your hands away from the hinges at the back of the ARDF.

18. When using a vacuum cleaner around the machine, keep others away from the cleaner, especially small children.

19. For machines installed with the anti-tip components:
    The anti-tip components are necessary for meeting the requirements of IEC60950-1, the international standard for safety. The aim of these components is to prevent the products, which are heavy in weight, from toppling as a result of people running into or leaning onto the products, which can lead to serious accidents such as persons becoming trapped under the product. (U.S.: UL60950-1, Europe: EN60950-1) Therefore, removal of such components must always be with the consent of the customer. Do not remove them at your own judgment.

Health Safety Conditions

1. For the machines installed with the ozone filters:
   - Never operate the machine without the ozone filters installed.
   - Always replace the ozone filters with the specified types at the proper intervals.

2. The machine, which use high voltage power source, can generate ozone gas. High ozone density is harmful to human health. Therefore, locate the machine in a large well ventilated room that has an air turnover rate of more than $50m^3$/hr/person.

3. Toner and developer are non-toxic, but if you get either of them in your eyes by accident, it may cause temporary eye discomfort. Try to remove with eye drops or flush with water as first aid. If unsuccessful, get medical attention.

Observance of Electrical Safety Standards

1. The machine and its peripherals must be installed and maintained by a customer service representative who has completed the training course on those models with exceptions on some machines where the installation can be handled by the user.

Safety and Ecological Notes for Disposal

1. Do not incinerate toner bottles or used toner. Toner dust may ignite suddenly when exposed to an open flame.

2. Dispose of used toner, developer, organic photoconductors, and AIO unit in accordance with local regulations. (These are non-toxic supplies.)

3. Dispose of replaced parts in accordance with local regulations.

4. 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.

5. The danger of explosion exists if a battery of this type is incorrectly replaced. Replace only with the same or an equivalent type recommended by the manufacturer. Discard used batteries in accordance with the manufacturer's instructions.

Handling Toner

- Work carefully when removing paper jams or replacing toner bottles or cartridges to avoid spilling toner on clothing or the hands.

- If toner is inhaled, immediately gargle with large amounts of cold water and move to a well-ventilated location. If there are signs of irritation or other problems, seek medical attention.

- If toner gets on the skin, wash immediately with soap and cold running water.

- If toner gets into the eyes, flush the eyes with cold running water or eye wash. If there are signs of irritation or other problems, seek medical attention.

- If toner is swallowed, drink a large amount of cold water to dilute the ingested toner. If there are signs of any problem, seek medical attention.

- If toner spills on clothing, wash the affected area immediately with soap and cold water. Never use hot water! Hot water can cause toner to set and permanently stain fabric.

- Always store toner and developer supplies such as toner and developer packages, cartridges, bottles (including used toner and empty bottles and cartridges), and AIO unit out of the reach of children.

- Always store fresh toner supplies or empty bottles or cartridges in a cool, dry location that is not exposed to direct sunlight.

- Do not use a vacuum cleaner to remove spilled toner (including used toner). Vacuumed toner may cause a fire or explosion due to sparks or electrical contact inside the cleaner. However, it is possible to use a cleaner designed to be dust explosion-proof. If toner is spilled over the floor, sweep up spilled toner slowly and clean up any remaining toner with a wet cloth.

Handling the development unit cooling system

For the machines installed the development cooling system:

1. The development unit cooling system circulates propylene glycol from a sealed tank through hoses that pass behind cooling plates on the sides of each development unit.

2. The coolant tank is located at the bottom of the cooling box on the back of the main machine.

3. Always obey local laws and regulations if you need to dispose of a tank or the propylene glycol coolant.

4. The tank must never be emptied directly into a local drainage system, river, pond, or lake.

5. Contact a professional industrial waste disposal organization and ask them to dispose of the tank.

Laser Safety

The Center for Devices and Radiological Health (CDRH) prohibits the repair of laser-based optical units in the field. The optical housing unit can only be repaired in a factory or at a location with the requisite equipment. The laser subsystem is replaceable in the field by a qualified Customer Engineer. The laser chassis is not repairable in the field. Customer engineers are therefore directed to return all chassis and laser subsystems to the factory or service depot when replacement of the optical subsystem is required.

⚠ WARNING

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

WARNING FOR LASER UNIT

WARNING:

Turn off the main switch before attempting any of the procedures in the Laser Unit section. Laser beams can seriously damage your eyes.

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_safe007

_safe008

Safety Instructions for the Color Controller

Fuse

The color controller uses a double pole fuse. If this fuse blows, be sure to replace it with an identical fuse.

Batteries

1. Always replace a battery with the same type of battery prescribed for use with the color controller unit. Replacing a battery with any type other than the one prescribed for use could cause an explosion.

2. Never discard used batteries by mixing them with other batteries or other refuse.

3. Always remove used batteries from the work site and dispose of them in accordance with local laws and regulations regarding the disposal of such items.

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1. Installation

Installation Requirements

Environment

1. Temperature Range:

   10°C to 32°C (50°F to 90°F)

2. Humidity Range:

   10% to 85% RH

3. Ambient Illumination:

   Less than 1,500 lux (do not expose to direct sunlight or strong light)

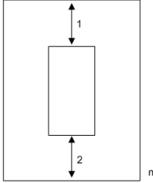4. Ambient Dust:

   Less than 0.10 mg/m^3

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.

Machine Level

1. Front to back: Within ±5° (0.2") away from level
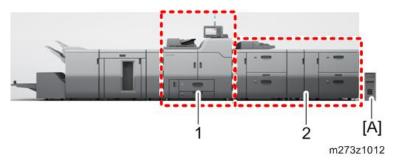
2. Right to left: Within ±5° (0.2") away from level

Minimum Space Requirements

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

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1: Rear (200 mm or more)

2: Front (200 mm or more)

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1: Printer

2: LCT

You may place the print server [A] on the right side of the large capacity tray or printer as shown in the illustration.
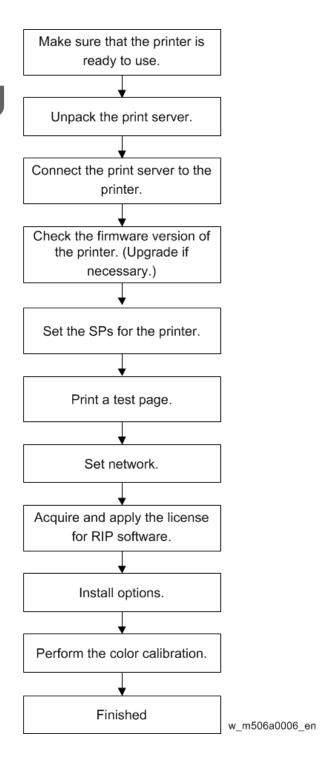
Power Requirements

⚠ WARNING

- 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.

- Input voltage level: 100-240V, 4.8A, 50/60 Hz

- Do not put anything on the AC power cord.

Installation Flow Chart

First install Pro C7110S/C7110/C7100S/C7100. (Hereinafter referred to as printer)

Then install TotalFlow Print Server R-61A. (Hereinafter referred to as print server)

Recommended installation steps are as follows:

Make sure that the printer is ready to use.

↓

Unpack the print server.

↓

Connect the print server to the printer.

↓

Check the firmware version of the printer. (Upgrade if necessary.)

↓

Set the SPs for the printer.

↓

Print a test page.

↓

Set network.

↓

Acquire and apply the license for RIP software.

↓

Install options.

↓

Perform the color calibration.

↓

Finished

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Machine Installation

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.

- Installation process will take about 80 minutes (with Microcode) / 70 minutes (without Microcode).

- 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 print server and confirms network connection for the print server 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 print server (user documentation is also included) onto the networked PCs and Mac OS computers that will print to the print server.
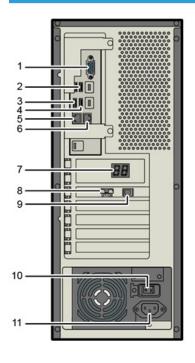
⬇Note

- This guide covers hardware installation and service. It provides general information on connecting the print server to the customer's network. For network setup and configuration information for the network administrator, refer to the instruction manual "Setup Guide".
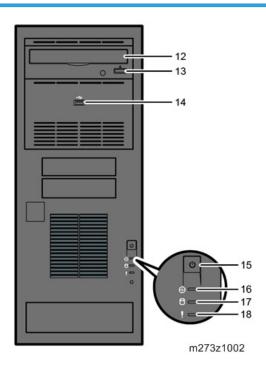
Accessory Check

No.	Description	Q'ty
1	Power Supply Cord	1
2	Giga Ether Cable	1
3	Power Interlock USB Cable	1
4	EULA	1
5	Release Note	1
6	Setup Guide	1
7	About the handling of the DVD	1

No.	Description	Q'ty
8	DVD: Operating Instructions	1

Connector/ Front Panel

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No.	Name	No.	Name
1	VGA monitor port	10	Main power switch
2	USB port (backup)	11	Power connector
3	USB port (keyboard/mouse)	12	DVD drive
4	USB port (keyboard/mouse)	13	Disc eject button
5	Gigabit Ethernet port (print server to network.)	14	Front USB port
6	Gigabit Ethernet port (printer to print server)	15	Power switch
7	Digital display (7-segment)	16	Power indicator

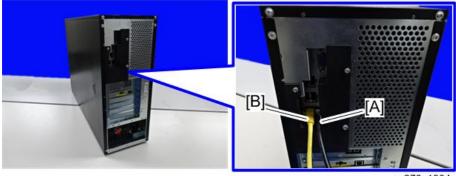| No.	Name	No.	Name
8	Power interlock switch	17	HDD access indicator
9	USB port for power interlock	18	System error indicator

Installation Procedure

⚠CAUTION

- Use two persons when installing this product. This product is 20 kg or more in weight.
- Turn OFF the print server power switch and printer main power switch, then disconnect the power cords before following procedure.

1. Connect the interface cable [A] to the Gigabit Ethernet port of the printer. (☞×1)

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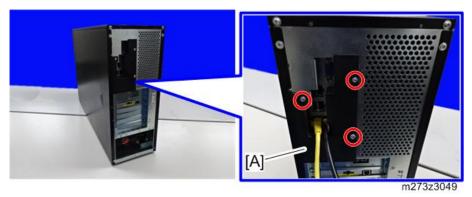
2. Connect the interface cable which is connected to the printer to the Gigabit Ethernet port (Right) [A] of the print server. (☞×1)

3. Connect the interface cable which is connected to a network to the Gigabit Ethernet port (Left) [B] of the print server. (☞×1)

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⬇Note

- To disconnect the interface cable, remove the I/O cover [A].

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4. Connect the power interlock USB cable to the slot on the controller box of the printer.

5. Connect the power interlock USB cable [A] to the USB port for power interlock on the print server.

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⬇Note

- Make sure that the ferrite core is attached firmly on the power interlock USB cable.

6. Set the power interlock switch to the ON position.

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7. Connect the power cord [A] to the print server.

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8. Plug the power cord of the print server to the outlet.

Initial Setting

Initial Setting for Printer

1. Turn ON the main power switch on the printer.
2. Enter the SP mode.
3. Check the following firmware at SP-7-801-255 (ROM No./ Firmware Version).
   - System/Copy Ver. 3.00 or higher
   - PowerSaving Sys Ver. 1.24 or higher
   - Engine Ver. 1.06 or higher
   - Web Support Ver. 1.03 or higher
   - OpePanel Ver. 2.02 or higher
4. Set the following SP.
   - "7" (Kurofune) at SP5-193-001 (External Controller Info. Setting)
   - "1" (invalid) at SP5-895-001 (Application invalidation/Printer) (If it is displayed)
5. Exit the SP mode.
6. Turn OFF the main power switch on the printer.
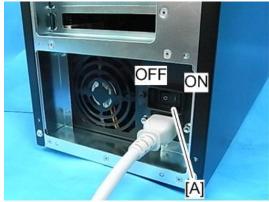
Initial Startup

The print server has a function to interlock the main power with the printer.

By turning this function on in the print server, the print server's power goes off when the printer is turned off.

When the interlock switch is set to OFF, the interlock function is turned off, and when the switch is set to ON, the interlock function is turned on.
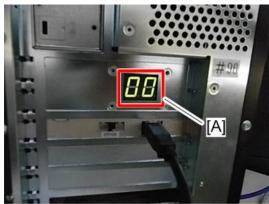
1. **Turn ON the main power switch [A] on the print server.**

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⚠️**CAUTION**

- Do not turn OFF immediately after the main power switch to ON. HDDs and memory might be damaged.

- Do not use the power button [⏻] to turn the print server ON. Otherwise the print server detects that the printer is OFF, and then the server automatically shut down by the power interlocking.

2. **Turn ON the main power switch on the printer.**

3. **Make sure the print server is automatically turned on and the power indicator comes on.**

4. **Make sure "00" is displayed on the digital display [A] at the rear side of the print server.**

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⬇️**Note**
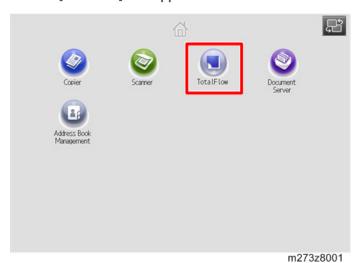
- If a code other than "00" is displayed, check the Service manual (LED ERROR CODES) for code description.

5. **Press the [Home] key on the operation panel of the printer and wait about five minutes until the [TotalFlow] icon appears on the Home screen.**
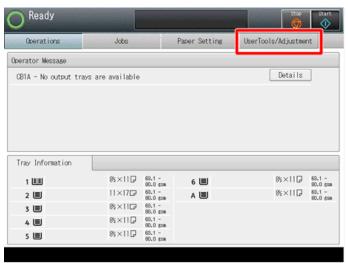

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Test Print
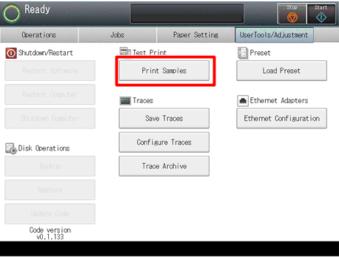
1. **Press the [TotalFlow] icon to access to the menu screen.**

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2. **Press [User Tools/Adjustment].**

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3. **Press [Print Samples].**

m273z8003

1
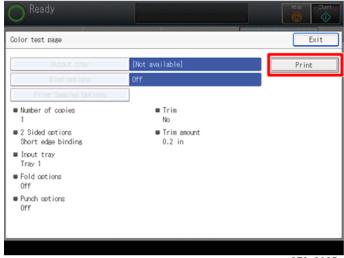
4. Press [Color test page].

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5. Press [Print].

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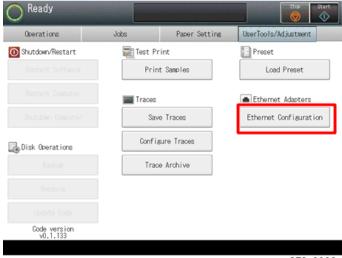6. Make sure that test page is printed normally.

Network Settings

1. Press the [TotalFlow] icon to access to the menu screen.
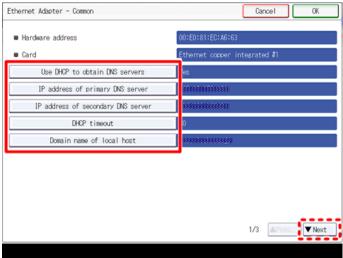
1

2. Press [User Tools/Adjustment].

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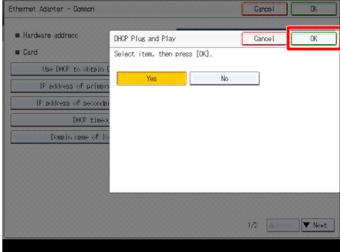
3. Press [Ethernet Configuration].

m273z8006

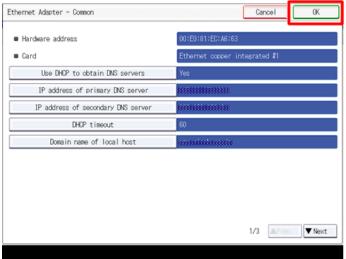**4. Configure the network settings.**

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5. Configure in accordance with network environment, then press [OK].

m273z8008

6. **After completing configuration of the network fields, press [OK].**

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General Operations for Servicing

Power Interlock Switch

The print server has a function to interlock the main power with the printer.

By turning this function, the print server's power goes OFF when the printer is turned off.

When the interlock switch is set to OFF, the interlock function is turned OFF, and when the switch is set to ON, the interlock function is turned ON.

The power interlock switch is located at the rear side of the print server. It is recommended for use in ON.

m273z1011

Switching Procedure of Power Interlock

1. Turn OFF the power switch of the print server and the printer.
2. Turn OFF the main power switch of the print server.
3. Wait for about one minute.

4. **Switch the power interlock switch.**

⭐ **Important**

- After the main power switch to OFF the internal voltage left for a while. Therefore, wait for about one minute before switching.

5. **Turn ON the main power switch of the print server.**

## Starting the Print Server

⭐ **Important**

- When the power interlock function is enabled, the print server turns OFF/ON the power in tandem with the printer's operation.

- When the power interlock function is disabled, first turn ON the printer, and then turn ON the print server. Otherwise, the print server will not work correctly.

When the power interlock function is disabled, start the print server in the following procedure:

1. **Turn ON the main power switch of the printer.**

2. **Turn ON the main power switch (rear side) [A] of the print server.**

⭐ **Important**

- Do not turn OFF the main power switch of the print server immediately after turning it ON. Doing so may result in damage to the hard disk or memory, leading to malfunctions.

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3. **Push down the power switch (front side) of the print server.**

The power indicator lights up.

The [TotalFlow] icon appears on the home screen of the control panel of the printer.

4. **Press the [Home] key on the operation panel of the printer and wait about five minutes until the [TotalFlow] icon appears on the home screen.**

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Shutting Down or Restarting the Print Server

⭐ Important

- Do not turn OFF the main power switch of the print server when the power indicator is lit.
- If the print server is shut down while another user is editing job properties, the edited data will be lost.

⬇ Note

- If the shutdown sequence of the print server is suspended, the job will be resumed from where it was suspended after the print server restarts.

Shutting Down the Print Server
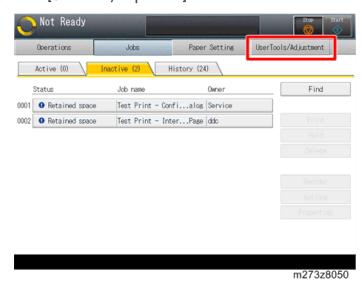
⭐ Important

- When the power interlock function is enabled, the print server turns OFF/ON the power in tandem with the printer's operation.
- When the power interlock function is enabled, you cannot shut down the print server using the control panel of the printer.
- When the power interlock function is disabled, turn OFF the print server first, and then turn OFF the printer.

If the power interlock switch is OFF, shut down the print server in the following procedure:

1. Press the [Home] key on the operation panel of the printer and then press the [TotalFlow] icon.
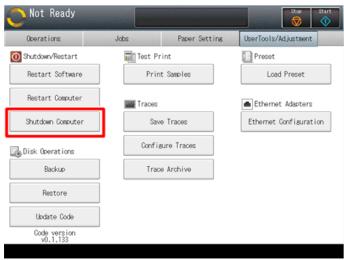
2. Press [Stop] to suspend the printer operation.

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3. Press [User Tools/Adjustment].
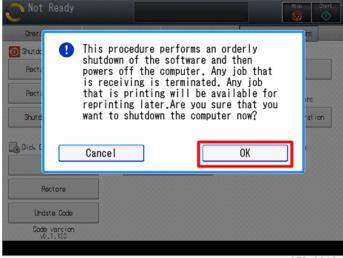

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4. **Press [Shutdown Computer].**

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5. **Press [OK].**

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6. **To shut down the print server, make sure that the power indicator is turned OFF, and then turn OFF the main power switch of the print server.**

⭐**Important**

- Do not turn OFF the main power switch of the printer until the power indicator of the print server goes out. Doing so may result in damage to the hard disk or memory, leading to malfunctions. After turning off the main power switch of the print server, wait for two minutes or more before turning it on again.

7. **Turn OFF the printer.**

1

Restarting the Print Server
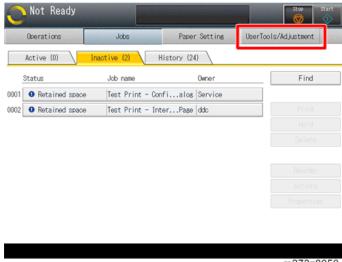
When restarting the print server to recover from a problem, try this procedure first. However, this procedure will only restart the print server application software. To reboot the system OS, see the next section "Rebooting the Print Server".
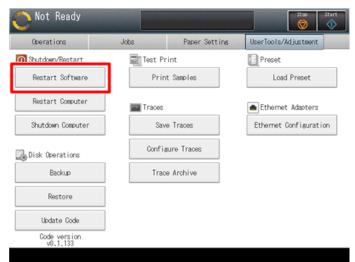
1. **Press [Stop] to suspend the printer operation.**
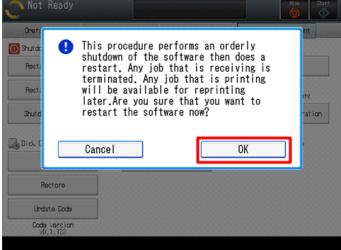

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2. **Press [User Tools/Adjustment].**

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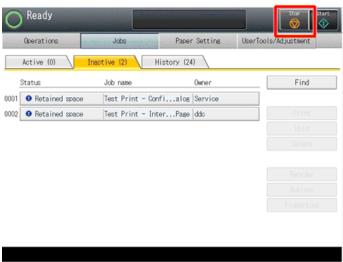3. Press [Restart Software].

m273z8013

4. Press [OK].

m273z8014

Rebooting the Print Server
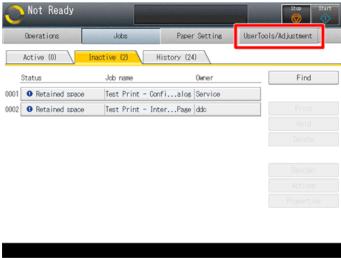
Use this procedure to reboot the system OS.

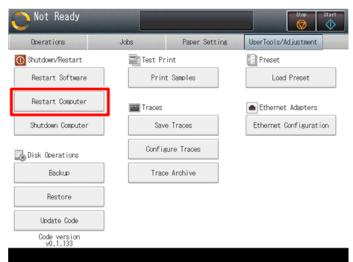1. **Press [Stop] to suspend the printer operation.**
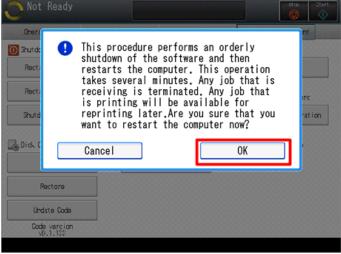

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2. **Press [User Tools/Adjustments].**

m273z8050

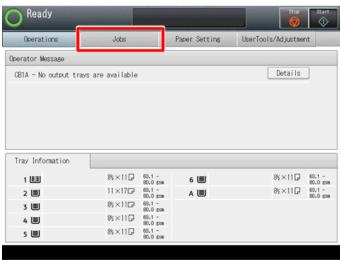3. **Press [Restart Computer].**

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4. **Press [OK].**

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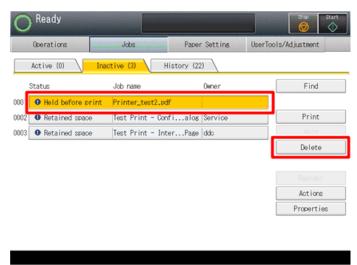## Canceling the Current Print Job

1. **Press the [Home] key on the operation panel of the printer and then press the [TotalFlow] icon.**

1

2. Press [Jobs].

m273z8017

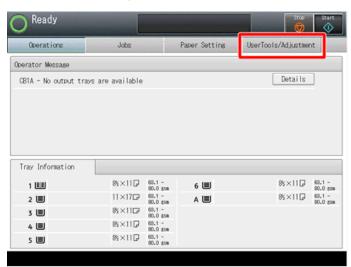3. Select the job that you want to cancel.
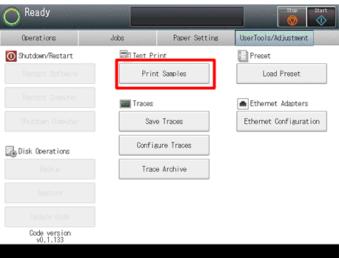

m273z8018

Test Print

1. Press the [Home] key on the operation panel of the printer and then press the [TotalFlow] icon.

2. Press [User Tools/Adjustment].

m273z8002

3. Press [Print Samples].

m273z8003

4. Select the test page you want to print.

m273z8004a

⬇Note
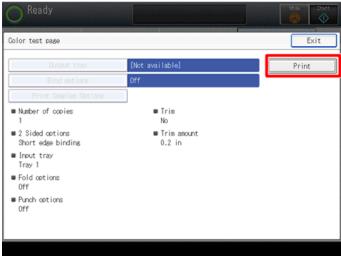
- You can select the following test pages:
    - Color test page
    - Tray adjustment
    - CMYK colors
    - CMY colors
    - RGB colors
    - Blank page

5. **Press [Print].**

m273z8005

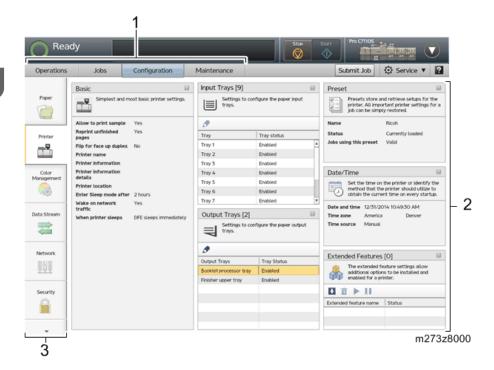## How to Access Consoles (Operation Screen)

Overview

You can access to the print server from the consoles in the following ways:

- Local Console

  By connecting a commercially available monitor, keyboard, and mouse to the print server, you can directly operate the print server with the local console.

- Remote Console

  You can operate the print server from a web browser of the client computer. To use the remote console, connect the client computer and print server to a network. To access the print server using the remote console, log in to the print server.

The layout of the console screen is the same even if accessed from either. (Some in remote access, there is a restricted function.)

You can manage such as logging, network and maintenance on the console screen.

m273z8000

1. Hub

   This is the main operational menu. Machine details or the configuration screen appear when you click the items.

2. Pod

   Indicates each item in a panel.

3. Tab

   Appears on the left side of the screen when the [Configuration] hub is open. Each tab has pods.

For more information on display and setting items of the console screen, refer to "Operating Instructions".
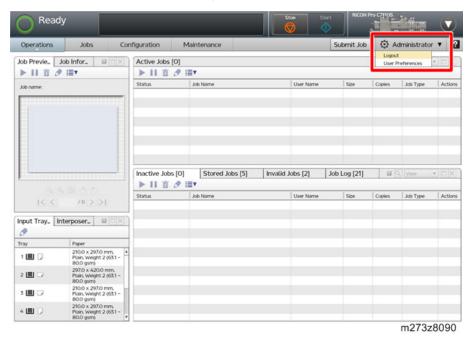
Local Console

To use the local console, attach a monitor, keyboard and mouse to the print server.

After print server starts, the console screen is displayed.

Switch to the service authority after the print server starts, because you are logged in automatically with administrator in the local console.

1. **Click [Administrator] and select "Logout" on the console screen.**

m273z8090

2. **After the login screen appears, select "Service" to log in from [User name:].**

3. **Enter the password in [Password:].**

4. **Click [Login].**

⬇️ **Note**

- The initial password is blank. Set the password after the initial login. For details about how to change the password, see "Operating Instructions".

m273z8026

Console screen appears after login.

Remote Console

1. **Launch the web browser.**

2. **Enter "http://(IP address or host name of the print server)/" in the address bar.**

3. **Press the [Enter] key.**

   The login screen appears.

   m273z8025

4. **Select a user to log in from [User name:].**

5. **Enter the password in [Password:].**

6. **Click [Login].**

   ⬇ Note

   - Customer engineers select "Service" for user name.

   - The initial password is blank. Set the password after the initial login. For details about how to change the password, see "Operating Instructions".
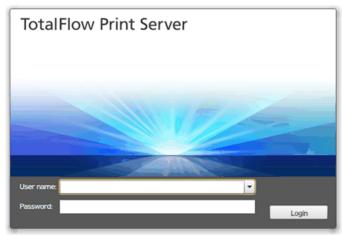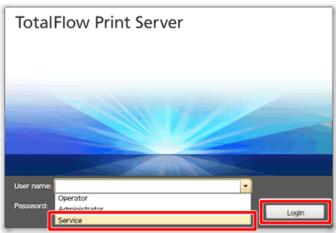
m273z8026

Console screen appears after login.

Backing up Data/ Restoring Data

You can use the backed-up data to restore the data after a hard drive failure or to copy the configuration data to another installation of the print server. (page 76 "Backing up Data/ Restoring Data")

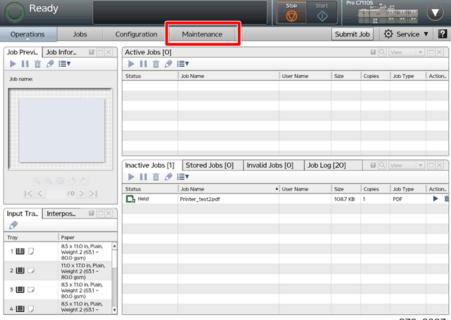### Automatic Backup for Configuration Data

To back up the configuration data automatically, insert a writable USB memory into the rear USB port of the print server.

When printing 1,000 sheets or more, it will back up them automatically per 24 hours after booting.
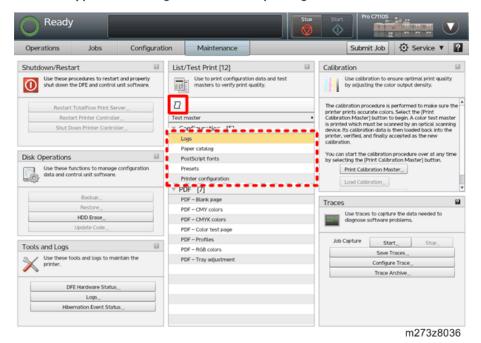

m273z6002

39

Printing Configuration

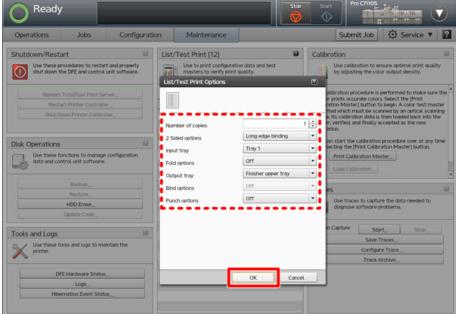1. **Access to the print server by the local or remote console.**

2. **Click [Maintenance].**

m273z8027

3. **Select the type of the configuration data for printing.**

m273z8036

4. **Select the option items if necessary and click [OK].**

m273z8037

Calibration

This product is provided with calibration targets using ColorPort. Below shown are two types of calibration targets stored in the folder on the driver CD-ROM provided.

- Folder

  Calibration

- File names

  - Calibration_Target_Standard.xml (Standard accuracy target)

  - Calibration_Target_High.xml (High accuracy target)

Before calibrating a printer, import the xml files using ColorPort. For details about how to calibrate a printer, see "Calibrating the Printer", Operating Instructions, and the help in ColorPort.

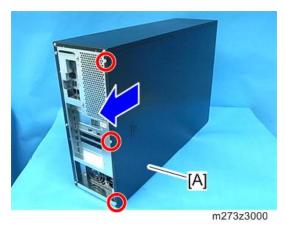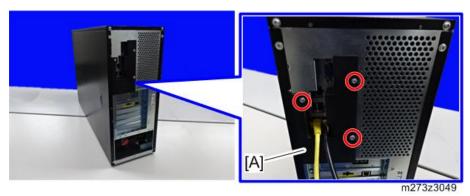# 2. Replacement

Cover Removal

Left Cover

1. Slide the left cover backward [A]. (🔩×3)

m273z3000

Right Cover

1. I/O cover [A] (🔩×3)

m273z3049

⬇️**Note**
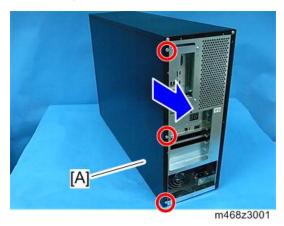
- To disconnect the interface cable, remove the I/O cover.

2. **Slide the right cover backward [A]. (🔩×3)**

m468z3001

Front Cover

1. **Left cover (page 43)**
2. **Right cover (page 43)**
3. **Front cover [A] (🔩×6)**

m468z3002

Unit Removal

⚠ WARNING

- Unplug the power cord from the power source before attempting any of the procedure in this section.

HDD

The print server has three HDDs. One for operating system [A] and the other two are for data storage [B].

m273z3046

HDD (for Operation System)

1. Left cover (**page 43**)
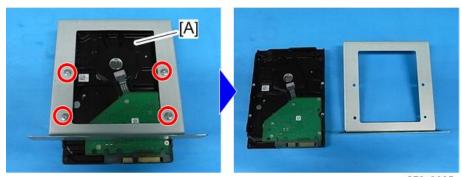2. Remove the connectors and clamp from the HDD (for operation system) [A]. (🖘×2, ⌦ ×1)

m273z3003

3. **Remove the HDD (for operation system) [A] with the bracket. (🔩×3)**

m273z3004

4. **HDD [A] (🔩×4)**

m273z3005

◆Note

- When replacing the HDD, install the system software from the system software DVD packed with the new HDD.

- When the IPDS is activated, reactivate the IPDS after replacing the HDD. (page 158 "How to Reactivate")

HDD (for Data Storage)
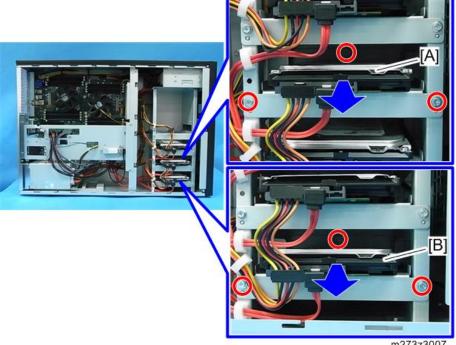
⚠️CAUTION

- Be sure to install the system software to reconfigure the system setting, due to these HDDs are RAID 0 structure. (page 91 "System Software Installation Procedure")

1. **Left cover (page 43)**

2. Remove the connectors and clamps from the HDD (for data storage) [A] [B]. (🖱×4, 🗳 ×3)
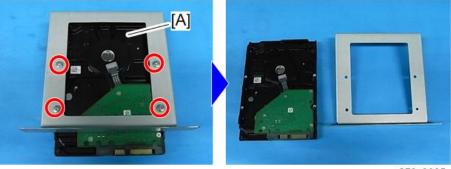
m273z3006

3. Remove the HDD (for data storage) [A] [B] with the bracket. (🔩×6)

m273z3007

4. **HDD (for data storage) (🔩×4)**

m273z3005

⬇Note

- When replacing the HDD, install the system software from the system software DVD packed with the new HDD.
- When the IPDS is activated, reactivate the IPDS after replacing the HDD. (page 158 "How to Reactivate")

PSU

1. **Left cover (page 43)**
2. **Lay down the machine.**

m273z3008

3. **Remove the connectors and clamp from the PSU [A]. (🗝×5, 📥×1)**

m273z3009

⬇Note

- All connectors have a locking mechanism on the lower side. Remove the connector by releasing the lock in the figure below of the order.

m273z3010

2

4. Remove the screws of the PSU [A]. (🔩×5)

m273z3011

5. Remove the PSU [A] in the following order.

m273z3012

PIC Board

⚠CAUTION

- Do not touch the terminal part of the PIC board. Clean with alcohol in case of touching the terminal.

m273z3019

1. Left cover (**page 43**)
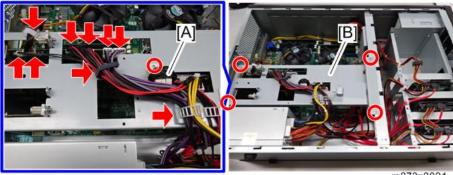
2. Lay down the machine.

m273z3008

3. Remove the USB socket [A] with the USB dongle. (🔩×2)

m273z3020
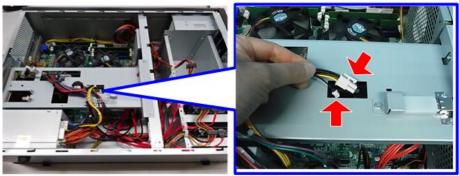
4. Release the ferrite core [A]. (🔩×1)

5. Remove the connector that is connected to the PIC board, and then remove the bracket [B]. (🖐️×6, 🔩×3, �©×4)

m273z3021

⬇️ Note

- There are two unconnected connectors that are not used in the R-60A. Put them into the hole in the bracket.

m273z3022

6. Remove the PIC board [A] with the bracket. (🔩×1)

m273z3023

7. PIC board [A] (🔩×2)

m273z3024

Cooling Fans

1. Left cover (**page 43**)

2. Lay down the machine.

m273z3008

3. Remove the USB socket [A] with the USB dongle. (🔩×2)

m273z3020

4. Remove the ferrite core [A]. (🔩×1)

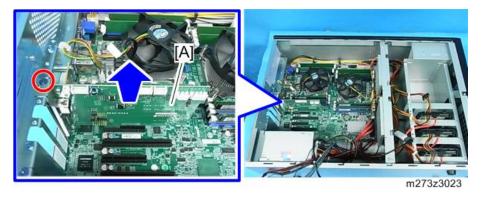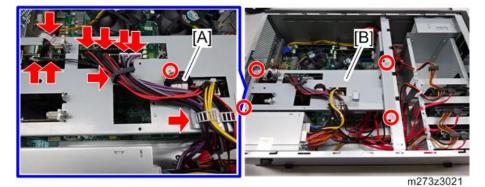5. **Remove the connector that is connected to the PIC board, and then remove the bracket [B]. (⌒×6, ⬚×3, ⬚×4)**

m273z3021
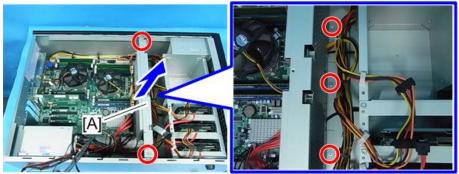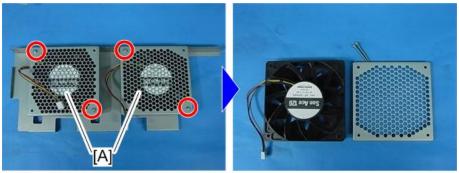
6. **Remove the connectors from the cooling fans [A]. (⌒×2)**

m273z3025

7. **Remove the cooling fans with the bracket [A]. (⬚×5)**

m273z3026

8. Cooling fans [A] (each ⌾×2)

m273z3027

🠗Note
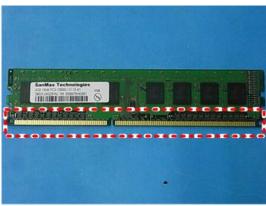
- When installation, attach to the bracket so that the fan label is the same direction as the photo.

DIMM

⚠CAUTION
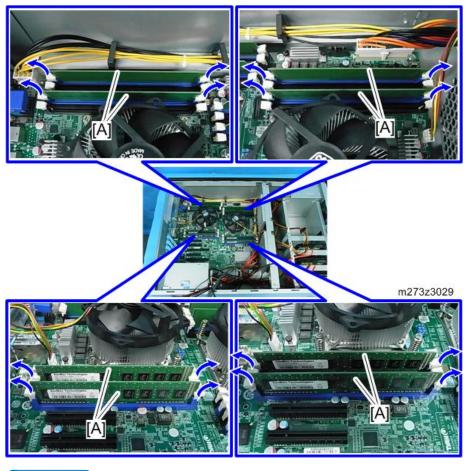
- Do not touch the terminal part of the DIMM. Clean with alcohol in case of touching the terminal.

m273z3028

1. PIC board (page 50)

2. **Open the both sides of the lever, and pull out DIMM (×8) [A] from the sockets.**

m273z3029

Note

- When installing, gently slide the DIMM straight down into the socket and push into the slot. Make sure that the levers close securely around the ends of the DIMM.

- DIMMs fit in the socket only one way.

7SEG Board

1. **PIC board (page 50)**

2

2. Remove the 7SEG board [A] with the bracket. (⌾×1)

m273z3030

3. 7SEG board [A] (⌾×4, ⌾×1)

m273z3031

USB Dongle

1. Left cover (page 43)

2. Remove the dongle cover [A] and pull out the USB dongle [B]. (⌾×1)

m273z3047

Motherboard

⭐ **Important**
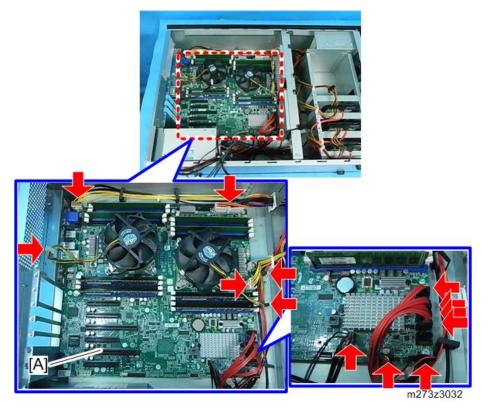
- The license key is registered in the USB dongle. At initial startup the serial number of the motherboard is written to the USB don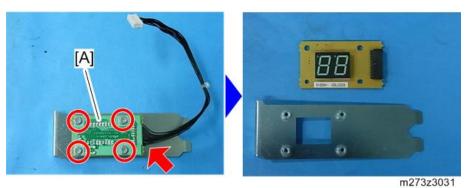gle to prevent unauthorized use. The print server does not start when the serial number does not match. Therefore, when you replace the motherboard, USB dongle also need to be replaced at the same time (New USB dongle is packed with the motherboard).
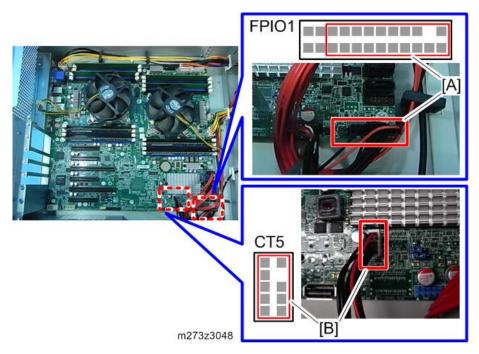
Removal Procedure

1. 7SEG board (**page 56**)
2. Cooling fan bracket (**page 53**)
3. Remove the clamps and connectors around the motherboard [A]. (🗑️×3, 🗲×10)

m273z3032

🔽 **Note**

- When installing the motherboard, make sure the harness (20 pins) is connected to FPIO1 connector (23 pins) [A] and the harness (10 pins) is connected to CT5 connector (9 pins) [B].

m273z3048

4. **Remove the electrostatic tape [A] on the LAN adapter.**

m273z3050

↓Note
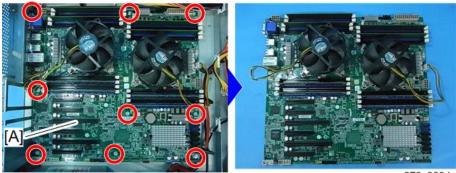
- After installing a new motherboard, put the electrostatic tape on as before.

5. **Motherboard [A] (🔩×9)**

⚠**CAUTION**

- Remove the motherboard carefully to prevent the harness and connectors from damage.

m273z3034

↓Note

- When installing a new motherboard, make sure to remove the CPU cooling fans, CPUs and DIMMs from the old motherboard and install them on the new motherboard.

6. **Remove the old USB dongle and install the new one. (page 57 "USB Dongle")**

Operation Checking after Motherboard Replacement

1. **Make sure that the print server is in the following states:**

   - Main power is turned OFF

   - Anything not in the DVD drive

   - Connected to the printer

2. **Turn ON the main power on the rear of the print server, and turn ON the power on the front of the print server.**

3. **Make sure that the print server is standby status.**

4. **Print a test page from the operation panel of the printer and make sure whether correctly can be printed. (page 32 "Test Print")**

Time Setting

Set the date and time in the BIOS or console of the print server after replacing the motherboard.

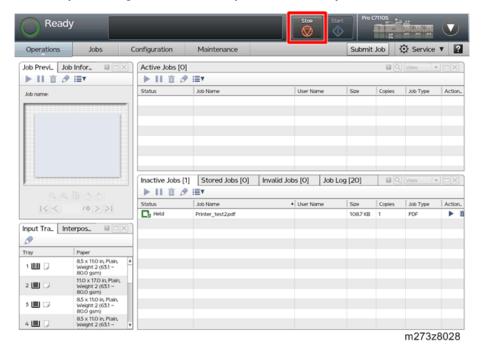**Setting date and time in BIOS**

In order to set the time in the BIOS screen, connect a monitor and keyboard to the print server.

1. **After the print server boots, immediately press the [F2] key.**

2. **Select the [Main] tab, and then set [System Date]/[System Time] with the arrow keys and the numeric keypad.**

3. **Select the [Save & Exit] tab with the arrow keys, and press the [F4] key (Save & Exit).**

4. **Select [Yes] in the pop-up screen, and then press the [Enter] key.**

5. **The BIOS screen is closed, and the print server startup sequence is started.**

Setting date and time in the console of the print server
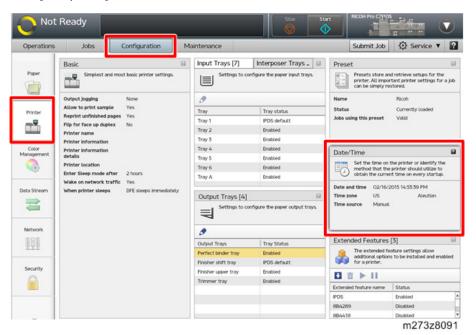
1. **Access to the print server by the local or remote console.**

2. **Click [Stop] to change the status of the printer [Not Ready].**

m273z8028

3. **Select [Configuration] → [Printer].**

4. Click [Date/Time].

m273z8091
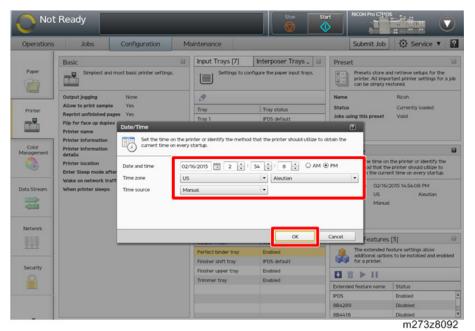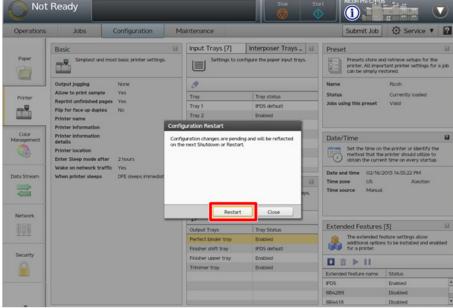
5. Set the date and time, and then click [OK].

m273z8092

6. "Configuration Restart" popup displays to reflect changes and click [Restart].

The print server automatically restarts.

m273z8093

Procedures for Re-setting Options

When the IPDS is activated, reactivate the IPDS after replacing the motherboard. (page 158 "How to Reactivate")

Lithium Battery

⚠️CAUTION

- There is danger of explosion if the battery is replaced with the incorrect type. Replace with only 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. **Left cover (page 43)**

2. **Lay down the machine.**

m273z3008

3. **Remove the USB socket [A] with the USB dongle. (🔩×2)**

m273z3020

4. **Remove the ferrite core [A]. (🔩×1)**

5. **Remove the connector that is connected to the PIC board, and then remove the bracket [B]. (🔌×6, ⚡×3, 🔩×4)**
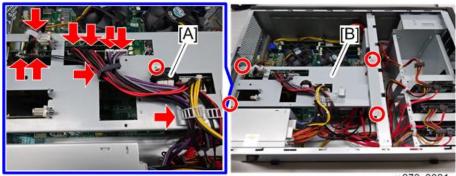

m273z3021

6. **Lithium Battery [A]**

m273z3035

Note

- When installing the lithium battery, set as "+" side is visible. Re-configure the system date and time after booting.

d726d4123

CPU/ CPU Cooling Fan
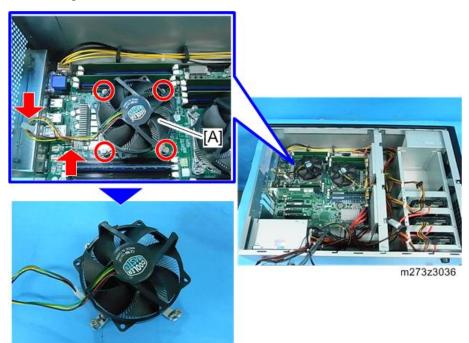
⚠CAUTION
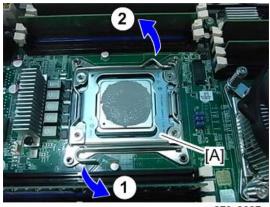
- The CPU cooling fan becomes extremely hot during operation. Since touching the high temperature component risks burns, perform the replacement operations after a temperature inside the machine is sufficiently dropped.

- When replacing the CPU, be sure to replace both the CPU and the CPU cooling fan. When replacing only the CPU, there is a possibility of overheating.

- When replacing the CPU, make sure that the pin of the CPU socket are not bent. When the pin of the CPU socket is bent, it can cause operating failure of the print server.

- Be careful not to damage the motherboard, the CPU, or the CPU socket when replacing the cooling fan.

CPU/ CPU Cooling Fan (Left)
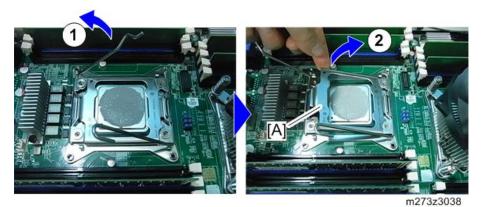
1. PIC board (**page 50 "PIC Board"**)

2. CPU cooling fan (left) [A] (✏️×1, ☞×1, 🔩×4)

m273z3036

3. Unlock the upper/lower of the CPU socket [A].

m273z3037

4. **Open the socket cover [A].**

m273z3038
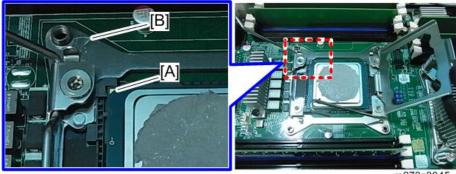
5. **Grasp the edges of the CPU [A] and remove from the CPU socket.**

m273z3039

⬇Note

- When installing a new CPU cooling fan, coat properly the thermal compound of accessories between the fan and CPU.

- When installing a CPU, adjust the position of the CPU (marking [A]) and CPU socket (marking [B]) as shown in the figure below.
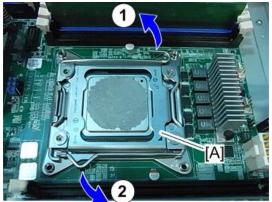
m273z3045

CPU/ CPU Cooling Fan (Right)

1. PIC board (**page 50**)
2. Cooling fan bracket (**page 53**)
3. CPU cooling fan (right) [A] (🗑×2, 🔩×1, 🔩×4)

m273z3040
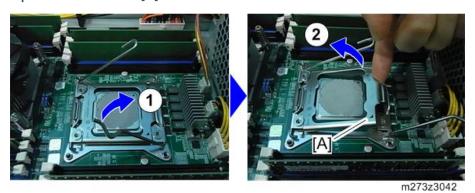
4. Open the socket cover [A].

m273z3041

5. Open the socket cover [A].
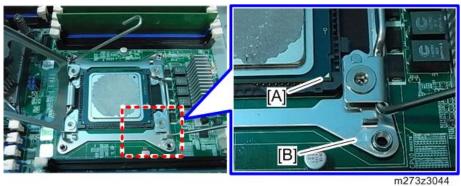
m273z3042

6. **Grasp the edges of the CPU [A] and remove from the CPU socket.**

m273z3043

⬇ Note

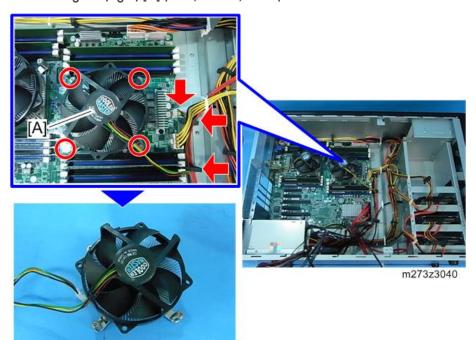- When installing a new CPU cooling fan, coat properly the thermal compound of accessories between the fan and CPU.

- When installing a CPU, adjust the position of the CPU (marking [A]) and CPU socket (marking [B]) as shown in the figure below.

m273z3044

DVD Drive

1. **Front cover (page 44)**

2. **Remove the fixing screws of the DVD drive [A]. (🔩×4)**

m273z3013
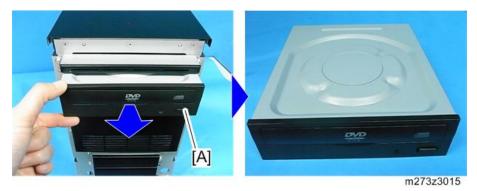
3. **Remove the connectors that are connected to the DVD drive [A]. (🔌×2)**
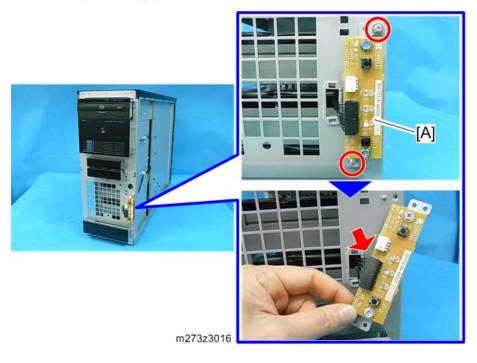
m273z3014

4. **Pull out the DVD drive [A].**

m273z3015
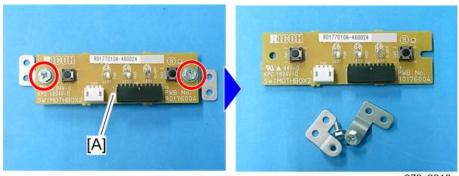
Power Supply SW Board

1. **Front cover (page 44)**

2. **Remove the power supply SW board [A] with the bracket. (🔩×2, 🔧×1)**

m273z3016

3. **Power supply SW board [A] (⌗×2)**

m273z3018

2

3. Software Maintenance

Software Maintenance

Operation is required after replacing the HDD (for operating system), HDD (for data storage), and motherboard. Reference to the following:

| Items	HDD (Operation System)	HDD (Data Storage)	Motherboard	Details
Reinstalling system software installation	Required	Required		Installation of basic OS Initialization for HDD (restructuring of RAID) (page 91 "System Software Installation Procedure")
Updating system software installation	A/N	A/N		Update to the latest Microcode (page 94 "Updating System Software")
Reinstalling optional products	A/N	A/N	A/N	IPDS activation (page 147 "IPDS")
Resetting configuration	A/N	A/N		Restoring or manual setting
Replacing dongle			Required	
Resetting time			Required	Time setting
Reinstalling fonts	A/N	A/N		Reinstalling the customer own fonts other than the pre-installed fonts (Usually user operation)

A/N: As needed

Backing up Data/ Restoring Data

Overview

Backing up and restoring data can be operated from the printer and the console screen.

You can backup following data:

- Configuration data
- User-created ICC profiles

Operating from the console screen can also backup and restore the following data:

- Logs
- Traces
- Jobs

⊕ **Note**

- Fonts cannot be backed up.

- Backup data of TotalFlow Print Server R-60 cannot be restored to R-60A.

Backing up Data

Operation from the Printer Screen

⊕ **Note**
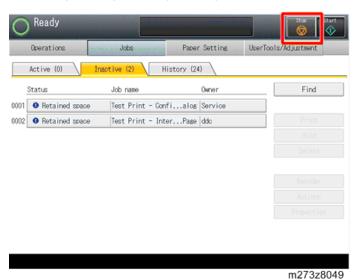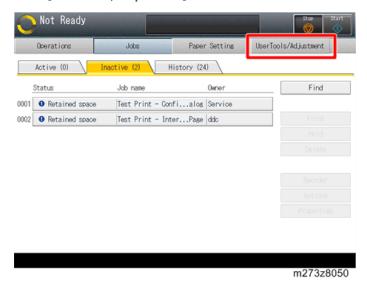
- When performing a backup from the printer, you can back up only the configuration data and user-created ICC profiles.

- When performing a backup from the printer, the destination of the backup is limited to USB memory.

1. **Press the [Home] key on the operation panel of the printer and then press the [TotalFlow] icon.**

2. **Press [Stop] to suspend the printer operation.**

m273z8049

3. **Press [User Tools/Adjustment].**

m273z8050

4. **Insert a USB memory into the front USB port of the print server.**

🔽Note

- It is not recognized in the rear USB ports of the print server.
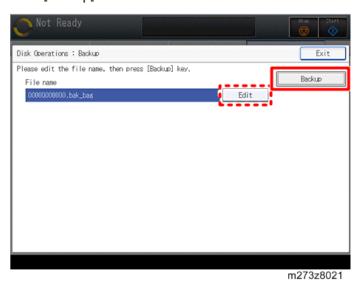
5. **Press [Backup].**

m273z8019

6. **Press [Backup].**

m273z8021

⬇Note
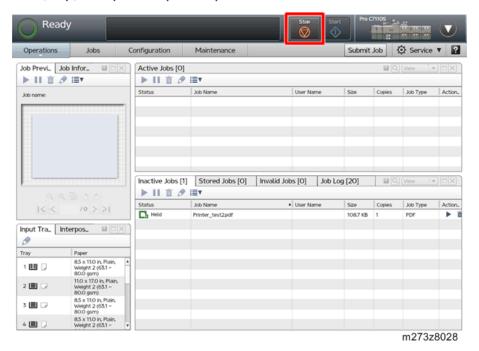
- You can change the file name by pressing [Edit].

Operation from the Console Screen on the Print Server
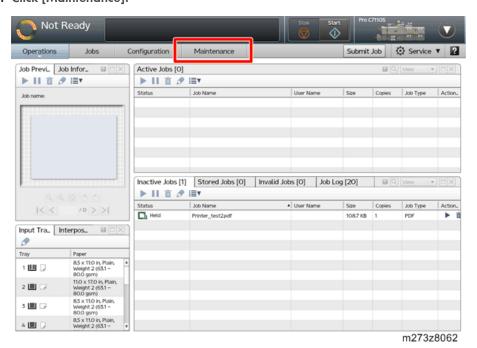
1. **Access to the print server by the local or remote console.**

2. **Click [Stop] to suspend the printer operation.**

m273z8028

3. **Click [Maintenance].**

m273z8062
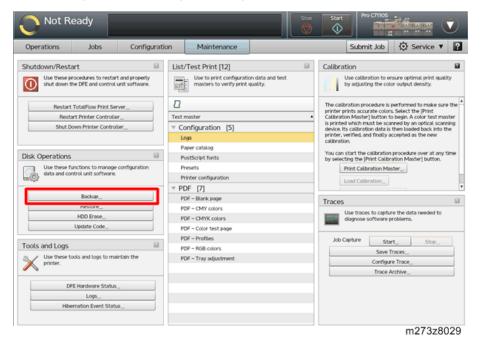
4. **Click [Backup] on the [Disk Operations] pod.**

m273z8029
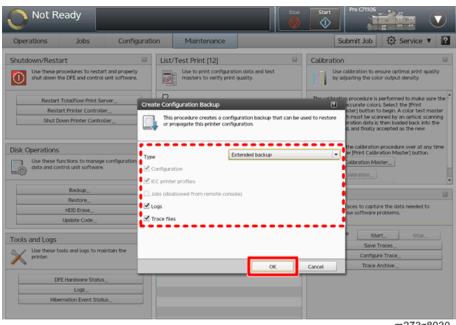
5. **Select the method of backup to perform and click [OK].**

   - [Normal] includes configuration data and user-created ICC profiles.

   - [Extended backup] adds logs, trace, or both to [Normal] data.

   - [Extended backup (include Jobs)] adds jobs to [Extended backup] data. It is only available at the local console.

   ⬇️Note

   - Executing [Extended backup (include Jobs)] reboots the print server.
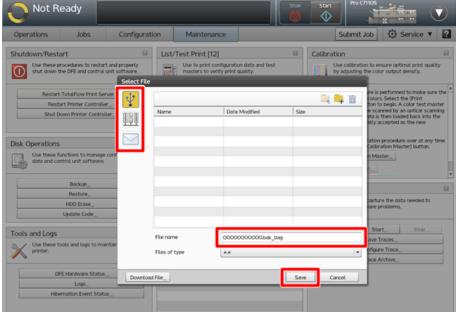
m273z8030

6. **Specify the destination (USB memory/network/email) of the data and enter the file name.**
   Click [Save].

m273z8031

⤓Note
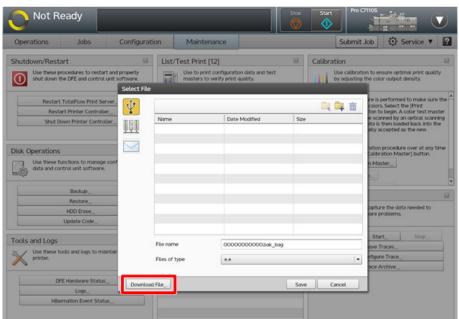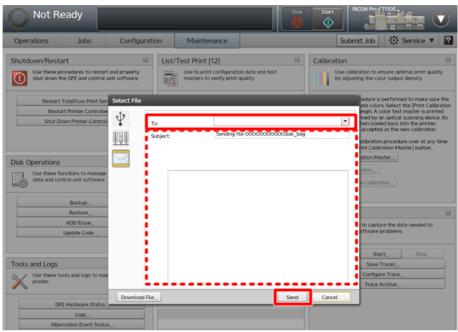
- When saving the data to a USB memory, insert it into the front USB port of the print server. It is not recognized in the rear USB ports of the print server.
- Clicking [Download File] when accessing from the remote console allows you to save the data to the client PC.

m273z8083

⤓Note

- When sending email, enter the email address, and enter the message text or subject. Click [Send].

m273z8063

Restoring Data

Operation from the Printer Screen
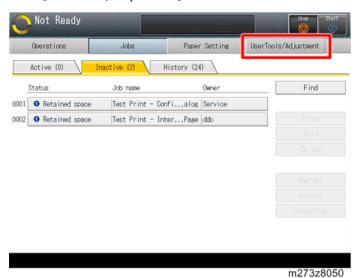
1. Press the [Home] key on the operation panel of the printer and then press the [TotalFlow] icon.

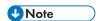**2.** Press [Stop] to suspend the printer operation.
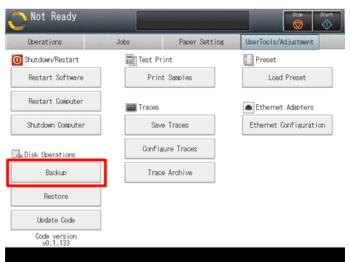

m273z8049

3. Press [User Tools/Adjustment].

m273z8050

4. Insert a USB memory into the front USB port of the print server.

↓Note
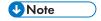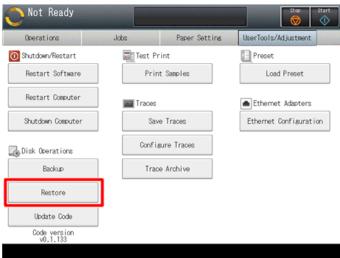
- It is not recognized in the rear ports of the print server.
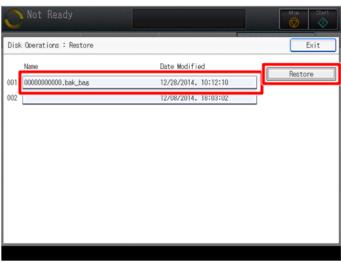
5. **Press [Restore].**

m273z8022

6. **Select the data that you want to restore and press [Restore].**

m273z8023
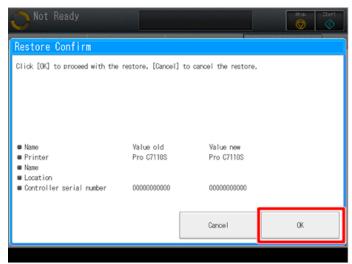
⬇️**Note**

- If the backup file contains other than the configuration data and user-created ICC profiles, you can restore only the configuration data and user-created ICC profiles.
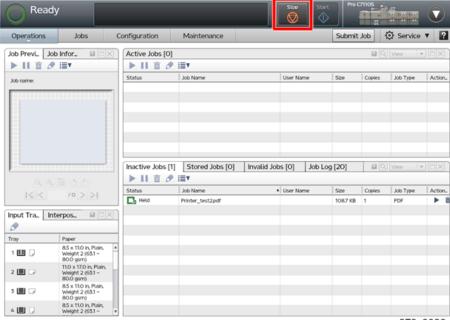
7. **Confirm the contents and then press [OK].**

m273z8024
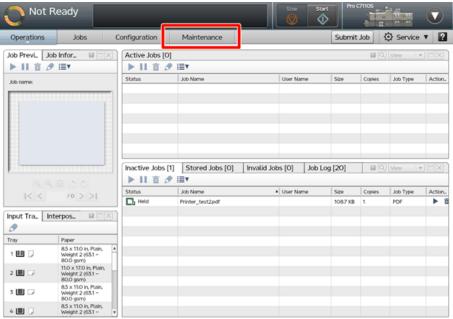
Operation from the Console Screen on the Print Server

1. **Access to the print server by the local or remote console.**
2. **Click [Stop] to suspend the printer operation.**

m273z8028

3. Click [Maintenance].
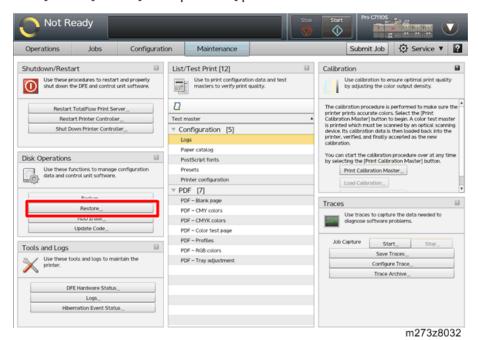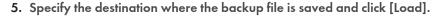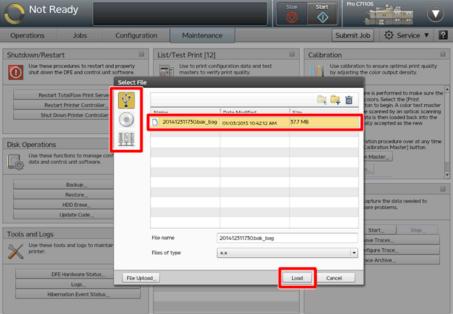
m273z8062

4. Click [Restore] on the [Disk Operations] pod.

m273z8032

3

5. **Specify the destination where the backup file is saved and click [Load].**

m273z8033

↓Note
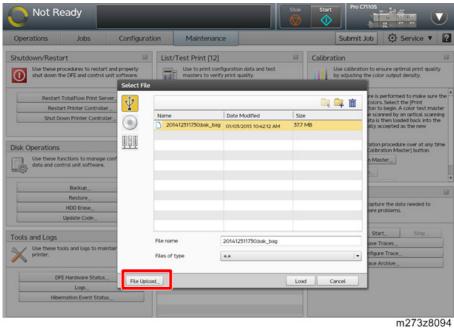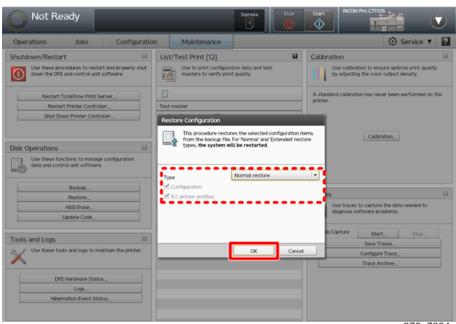
- If you restore the data from a USB memory, insert it into the front USB port of the print server. It is not recognized in the rear USB ports of the print server.

- Clicking [File Upload] when accessing from the remote console allows you to restore the data from the client PC.

m273z8094

6. **Select the method of restore to perform and click [OK].**
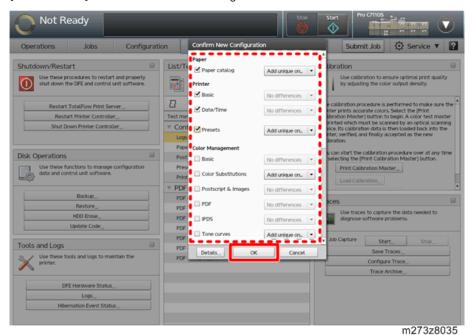
- [Normal]: includes configuration data and user-created ICC profiles.

- [Extended restore]: adds logs, trace, or both to [Normal] data.

- [Partial restore]: select the items. See the following Note.

m273z7034

↓Note

- [Partial restore]: select the items for restoring.

m273z8035

System Software Installation Procedure

System software should be installed when:

- You replace the HDD with a new one.

- You update to a more recent version of the BOS.

- You have problem with the system software (e.g. software corruption).

Backing up Data

When reinstalling the system software, the saved configuration and job data are deleted. Before you start system installation, print the configuration (page 40 "Printing Configuration") and back up the data (page 76 "Backing up Data").

Reinstalling the System Software

It takes about 30 minutes to install the system software excluding the set-up time.

↓Note

- Before using the printer during installing the system software, disconnect the interface cable connected to the printer.

- Before installing the system software, disconnect any USB memory connecting to the print server. If there is a USB memory connected, errors may occur in installation process.

1. **Get the installation iso data from the firmware download site for the system software, and barn the data into a blank DVD to create a system software DVD.**
   Alternatively, use a system software DVD packed with the new HDD for replacement.

2. **Turn OFF the interlock switch if the switch is set to ON. (page 23 "Power Interlock Switch")**

3. **Make sure that the print server is turned OFF.**

4. **Disconnect the interface cable which is connected to a network from the print server.**

   ↓Note
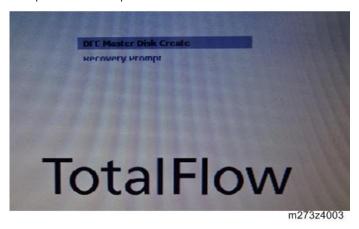
   - This prevents from receiving a print job during the installation.

5. **Turn ON the power switch [⏻] of the print server.**

6. **Immediately press the disc eject button to open the DVD drive.**

7. **Insert the system software DVD into the tray of the DVD drive by the end of the startup sequence.**

   ↓Note

   - The installation process begins automatically.
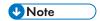
- If a monitor is connected to the print server, the following screen is displayed.
- Make sure that [DFE Master Disk Create] is selected. Pressing [Enter] starts the installation process immediately. The machine automatically starts the installation process when there is no input for a certain period of time.

m273z4003
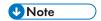
8. **Make sure that the print server shuts down after completing the writing successfully.**

   🔸Note

   - It takes about 10 minutes from power switch ON to shut down.

9. **Connect the interface cable which is connected to the printer to the print server (if disconnected).**

10. **Turn ON main power switch on the printer.**

11. **Press the power switch [⏻] located at the front of the print server.**

12. **Immediately press the disc eject button to open the DVD drive.**

    🔸Note

    - Otherwise, the installation process starts again.

13. **Take the system software DVD out of the tray and close it.**

    🔸Note

    - After the print server starts, the system software installation process continues.
    - The print server reboots twice during the installation process. It takes about 12 minutes to reboot twice.

14. **Make sure that the print server starts up successfully and is in standby state.**

15. **Connect the interface cable which is connected to a network to the print server.**

16. **Turn ON the power interlock switch if the power interlock switch is disabled in step2.**

Restoring Data

Restore the system settings with the backup data after reinstalling the system software. (page 83 "Restoring Data")

3

Updating System Software

Update Procedure
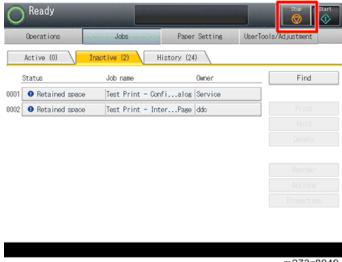
Updating the system software can be operated from the printer and the console screen.

It takes about 10 minutes to complete updating with rebooting the print server.

Operation from the Printer Screen

Note
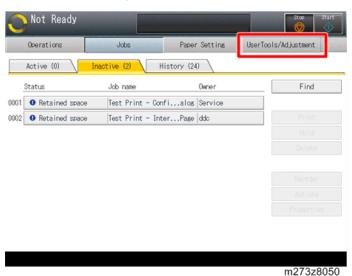
- When operating from the printer, the updating data is limited to USB memory.

1. **Press the [Home] key on the operation panel of the printer and then press the [TotalFlow] icon.**

2. **Press [Stop] to suspend the printer operation.**

m273z8049

3. Press [User Tools/Adjustment].

m273z8050
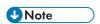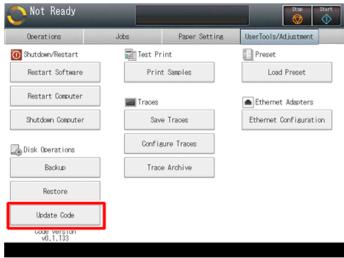
4. Insert the USB memory which you saved the update data to the front USB port of the print server.

⬇Note
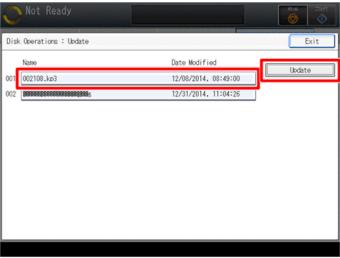
- It is not recognized in the rear USB ports of the print server.

5. Press [Update Code].

m273z8038
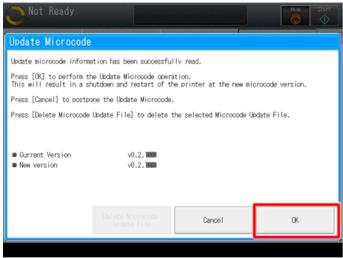
6. **Select the update file and press [Update].**

m273z8039

Note

* The update file is a .kp3 file.

7. **Check the current and update version of and then press [OK].**

m273z8040
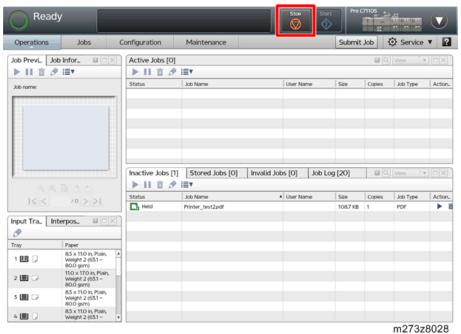
The print server automatically reboots after completing the update.
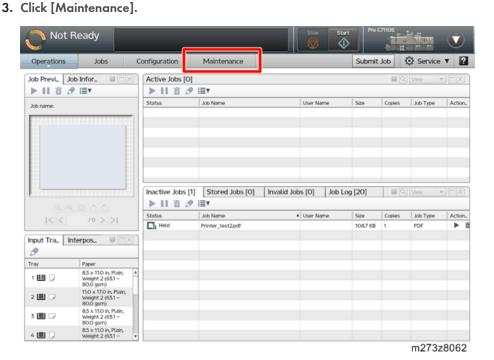
Operation from the Console Screen on the Print Server

1. **Access to the print server by the local or remote console.**

2. **Click [Stop] to suspend the printer operation.**

m273z8028

3. **Click [Maintenance].**

m273z8062
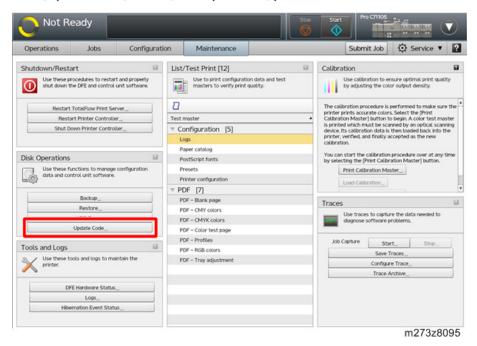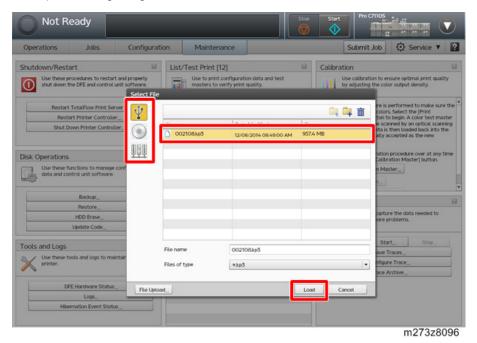
4. **Click [Update Code] on the [Disk Operations] pod.**

m273z8095
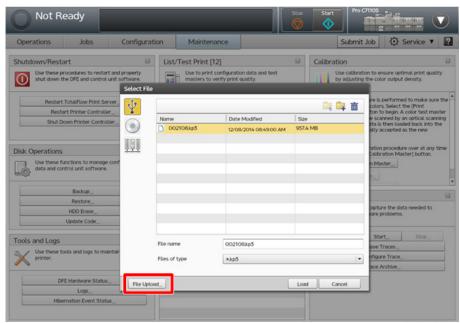
5. **Specify the destination (USB memory/ DVD drive/ network) where the update file is saved, and click [Load].**

m273z8096

↓Note
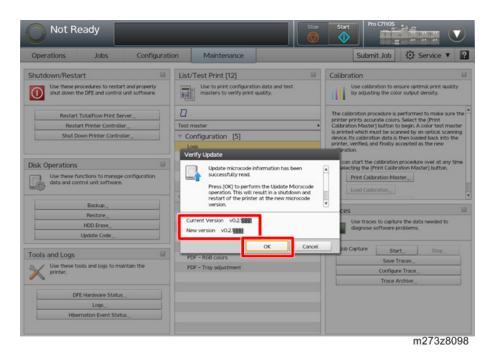
- The update file is a .kp3 file.

- When updating the data from a USB memory, insert it into the front USB port of the print server. It is not recognized in the rear USB ports of the print server.

- Clicking [File Upload] when accessing from the remote console allows you to update the data from the client PC.

m273z8097

6. **Verify the update version and click [OK].**

   The screen shows the current and new versions.

m273z8098

The print server automatically reboots after completing the update.

4. Troubleshooting

Overview

When a problem occurs with the print server, check in the following order:

- Reboot the print server, and check if the print server can start properly. If turned ON the main power of the printer, reboot the print server as well.

- Make sure that the network is functioning.

- Make sure that the print server and its connection with the printer have no problem by printing test pages. (page 32 "Test Print")

- Check that all cables, connectors, and replacements are present, appear undamaged and are correctly installed and connected.

- Check if a newer version of system software for the print server has been released. If so, install it. (page 94 "Updating System Software")

- When the problem is not resolved, reinstall the system software. (page 91 "Reinstalling the System Software")

- When the problem is still not resolved, replace parts of the hardware. (page 45 "Unit Removal")

4

LED Error Code

Overview

The print server has 7-segment LED to display the self-diagnosis results of the operation system startup.

If the operation system is started without any problems, the LED displays "00".

When the code other than "00" is displayed, there is a possibility that failed to start. When startup failure, check the diagnostic code table to deal.

How to Deal with an Error Code

When an error code is displayed, apply with following procedure. If you do not observe the procedure, the print server may not reboot properly.

Print Server OFF/ON

1. Press and hold the power switch of the front side until the print server turns OFF.

2. Wait for 30 seconds.

3. Press (but do not hold) the power switch.

4. Wait for a while and check whether or not the print server reaches standby status.

Diagnostic Code Table

When an error code is displayed again after rebooting the print server, one of the CPU, DIMM, or motherboard might be crashed.

Refer to the following list to identify the crashed part. For details of CPU and DIMM, see page 106 "How to Identify the Location of CPU/DIMM/HDD Errors".

Code	Description	Replace:		
		CPU	DIMM	Mother board
0C-0d	Reserved for future AMI SEC error codes			✔
0E	Microcode not found	✔		
0F	Microcode not loaded	✔		
50	Memory initialization error. Invalid memory type or incompatible memory speed		✔	

Code	Description	Replace:		
		CPU	DIM M	Mother board
51	Memory initialization error. SPD reading has failed		✓	
52	Memory initialization error. Invalid memory size or memory modules do not match.		✓	
53	Memory initialization error. No usable memory detected		✓	
54	Unspecified memory initialization error.		✓	
55	Memory not installed		✓	
56	Invalid CPU type or speed	✓		
57	CPU mismatch	✓		
58	CPU self-test failed or possible CPU cache error	✓		
59	CPU micro-code was not found or micro-code update failed	✓		
5A	Internal CPU error	✓		
5b	Reset PPI is not available			✓
5C-5F	Reserved for future AMI error codes			✓
d0	CPU initialization error	✓		
d1	North bridge initialization error	✓		
d2	South bridge initialization error			✓
d3	Some of the architectural protocols are not available	✓		
d4	4PCI resource allocation error. Out of resources			✓
d5	No space for legacy option ROM			✓
d6	No console output devices were found			✓
d7	No console input devices were found			✓
d8	Invalid password			✓
d9	Error loading boot option (Load image returned error)			✓

4

Code	Description	Replace:		
		CPU	DIMM	Mother board
dA	Boot option failed (Start image returned error)			✓
db	Flash update failed			✓
dC	Reset protocol is not available			✓
EC-EF	Reserved for future AMI error codes			✓
F8	Recovery PPI was not available			✓
F9	Recovery capsule was not found			✓
FA	Invalid recovery capsule			✓
Fb-FF	Reserved for future AMI error codes			✓

Following codes are displayed during startup sequence, so no correspondence needed.

Code	Description
06	Microcode loading
10	PEI Core is started
15	Pre-memory North Bridge initialization is started
19	Pre-memory South Bridge initialization is started
32	CPU post-memory initialization is started
36	CPU post-memory initialization. System Management Mode (SMM) initialization
39	Post-Memory North Bridge initialization (North Bridge module specific)
4F	DXE IPL is started
60	DXE Core is started
61	NVRAM initialization
63	CPU DXE initialization is started
70	South Bridge DXE initialization is started

Code	Description
79	CSM initialization
92	PCI Bus initialization is started
95	PCI Bus Request Resources
96	PCI Bus Assign Resources
99	Super IO Initialization
9A	USB initialization is started
9C	USB Detect
A0	IDE initialization is started
A2	IDE Detect
A8	Setup Verifying Password
A9	Start of Setup
AA	Reserved for ASL
AE	Legacy Boot event
AF	Exit Boot Services event
b0	Runtime Set Virtual Address MAP Begin
b1	Runtime Set Virtual Address MAP End

4

How to Identify the Location of CPU/ DIMM/HDD Errors

How to Identify the Location of CPU/DIMM/HDD Errors

This product has two CPUs, eight DIMMs, and three HDDs. When an error occurs in these parts, identify the location of errors in BIOS.

↓Note
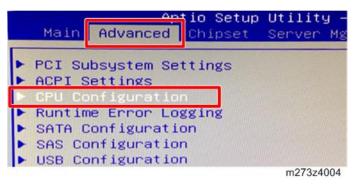
- In order to access in BIOS screen, connect a monitor and keyboard to the print server.
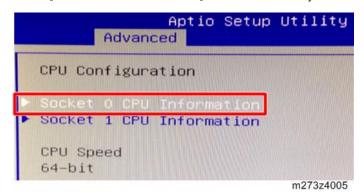
CPU

1. **After the print server boots, immediately press the [F2] key.**

   Select the [Advanced] tab in the BIOS screen, and then select [CPU Configuration] with the arrow keys.

   m273z4004
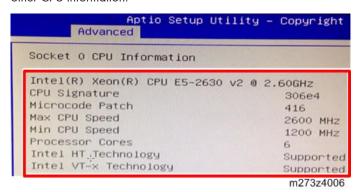
2. **Select [Socket 0 CPU Information] with the arrow keys and check the CPU information.**

   m273z4005

Note
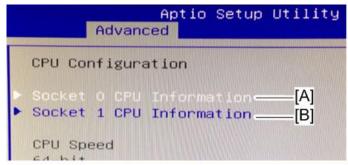
- When the details are displayed as below, there is no error in the CPU (Socket 0). Check the other CPU information.

m273z4006
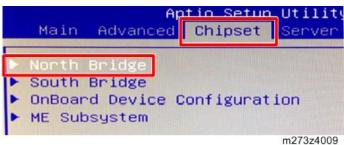
- [A] to [B] on the list corresponds to the CPU on the motherboard.

m273z4013
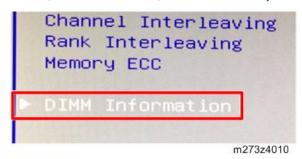
DIMM

1. **After the print server boots, immediately press the [F2] key.**

2. **Select the [Chipset] tab in the BIOS screen, and then select [North Bridge] with the arrow keys.**

m273z4009
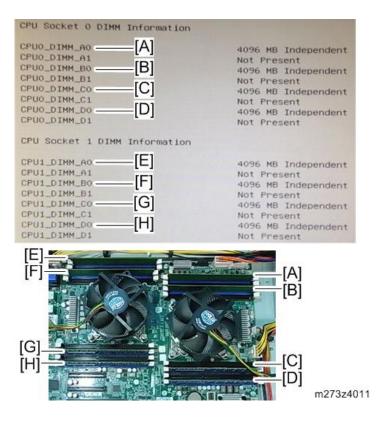
3. **Select [DIMM Information] with the arrow keys and check the DIMM information.**

m273z4010

↓ Note
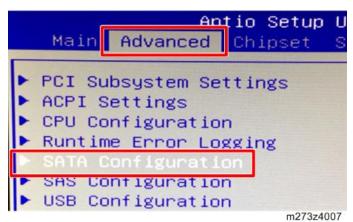
- If no details of a DIMM are displayed, it is judged that there is an error in the DIMM on the motherboard. [A] to [H] on the list corresponds to the DIMM on the motherboard.

m273z4011
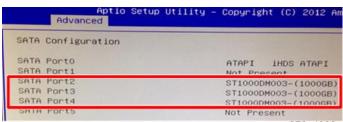
HDD
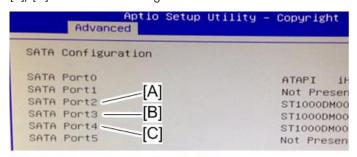
1. After the print server boots, immediately press the [F2] key.

2. Select the [Advanced] tab in the BIOS screen, and then select [SATA Configuration] with the arrow keys.

m273z4007

3. **Check [SATA Port2] to [SATA Port4] of the list.**

m273z4008

Note

* When the details of a SATA port are not displayed, it is judged that the HDD breaks down.

* [A] to [C] on the list corresponds to the HDD.
  [A]: HDD for operation system
  [B]/[C]: HDD for data storage

m273z4012
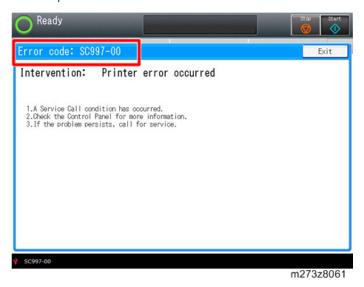
How to Solve When an Error Occurs

How to Solve When an Error Occurs

When the Printer SC Occurs

When the printer SC occurs, the SC code is displayed on the operation panel of the printer. For more details about causes and solutions, refer to page 114 "Service Call (SC) Tables".

- Printer Operation Panel
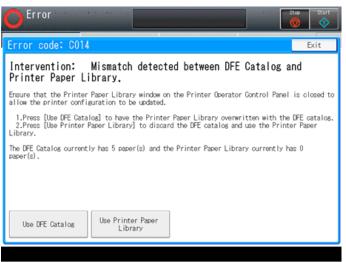
When the Print Server Error Occurs
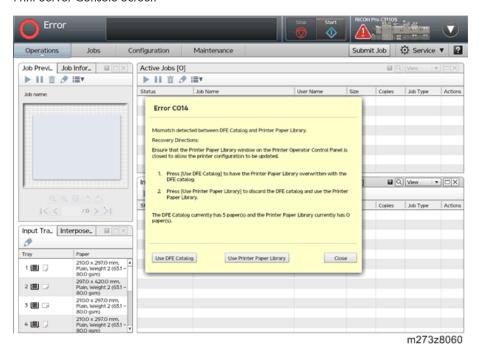
When the print server error occurs, the same message appears on the operation panel of the printer and console screen of the print server.

Follow the instructions to solve the error.

- Printer Operation Panel

m273z8059

• Print Server Console Screen

m273z8060
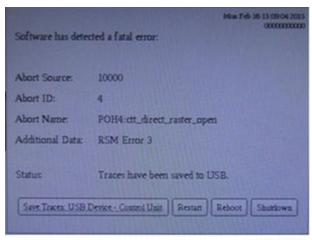
When a fatal error occurs

You can select the following action from the fatal error dialog:

1. Saving the traces to the USB memory

2. Restarting the software

3. Rebooting the print server

4. Shutting down the print server

When selecting "1", you can save the traces to the USB memory into the front USB port of the print server.

m273z8107

Service Call (SC) Tables

This section explains the SC for Print Server R-60A.

If the other SC occurs, see the printer's field service manual.

Service Call Conditions

Pattern	Display	How to reset	SC call or SC alarm in customer support system
A	The SC is displayed on the operation panel, and the machine cannot be used (safety-related SC).	Execute CE reset SP mode, and switch main power from OFF to ON.	Occurrence & alarm count ↓ Immediate alarm
B	When a function is selected, the SC is displayed on the operation panel, and the machine cannot be used (down-time mitigation).	Switch main power from OFF to ON.	Occurrence & alarm count ↓ Power OFF → ON ↓ Alarm count and alarm only if recurrence
C	No display on the operation panel, and use is permitted.	Count only logging.	Occurrence ↓ Logging count & alarm count
D	The SC is displayed on the operation panel, and the machine cannot be used (machine-error SC).	Switch main power from OFF to ON.	Occurrence & alarm count ↓ Power OFF → ON ↓ Alarm count and alarm only if recurrence

Service Call (SC911)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC911-06	D	Ethernet TCP/IP: Invalid configuration during enable
		Configuration error involved in the communication with the IPDS host system (only occurs when the IPDS installed)
		If rebooting the print server does not solve the problem, replace the motherboard.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC911-10	D	Internal printing: File system error
		File system error of the internal print (such as file corruption)
		If rebooting the print server does not solve the problem, do the following. 1. Update to the latest version of the print server system software. 2. Re-install the system software.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC911-11	D	Unexpected network condition
		• Unexpected errors for the network environment • Motherboard defective • The configuration file or device driver corruption
		If rebooting the print server does not solve the problem, replace the motherboard.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC911-20	D	Program check - Type 1
SC911-21	D	Program check - Type 2
SC911-22	D	Program check - Type 3
		Programming error
		Reboot the print server.

115

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC911-24	D	CPU0 Temperature Alert
		CPU0 temperature error by H/W checking • CPU or CPU cooling fan defective • Connection error between the CPU and CPU cooling fan • Exhaust heat port of the housing is blocked
		• Check the connection between the CPU and CPU cooling fan. • Check the exhaust heat port and clean it up. • Replace the CPU and CPU cooling fan. • Replace the motherboard.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC911-26	D	CPU1 Temperature Alert
		CPU1 temperature error by H/W checking • CPU or CPU cooling fan defective • Connection error between the CPU and CPU cooling fan • Exhaust heat port of the housing is blocked
		• Check the connection between the CPU and CPU cooling fan. • Check the exhaust heat port and clean it up. • Replace the CPU and CPU cooling fan. • Replace the motherboard.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC911-42	D	Memory configuration has changed.
		This error rarely occurs at the initial startup after the software installation because of memory shortage.
		If rebooting the print server does not solve the problem, replace the DIMM or the motherboard.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC911-43	D	Invalid features defined
		Invalid features defined
		Turn the main power off and on.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC911-44	D	Recommended amount of memory not found
		DIMM defective
		If rebooting the print server does not solve the problem, replace the DIMM.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC911-45	D	Recommended number of processors not found
		CPU or motherboard defective
		If rebooting the print server does not solve the problem, replace the CPU/ CPU cooling fan or motherboard.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC911-46	D	File read error, hard disk
		System files corruption
		If rebooting the print server does not solve the problem, do the following. 1. Re-install the system software. 2. Replace the HDD.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC911-47	D	File write error, hard disk
		System files corruption
		If rebooting the print server does not solve the problem, do the following. 1. Re-install the system software. 2. Replace the HDD.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC911-48	D	Checksum error on configuration file.
		System files corruption
		If rebooting the print server does not solve the problem, re-install the system software.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC911-49	D	Hard disk backup to USB storage device failure
		Abnormal termination due to incomplete backup to the USB memory
		If rebooting the print server does not solve the problem, replace the USB memory for backup.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC911-50	D	Software update failed.
		Abnormal termination due to the system software update file failure
		If rebooting the print server does not solve the problem, re-install the update file.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC911-57	D	License key H/W error
		• USB dongle (included a license key) defective • Connection fault
		• Reboot the print server. • Re-insert the USB dongle. • Replace the USB dongle.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC911-58	D	License error
		• License key defective (nonconformity, file corruption and so on) • Unauthorized use of USB dongle (used once to another device, falsification, etc.)
		If rebooting the print server does not solve the problem, replace the USB dongle.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC911-60	D	Brand mismatch
		An invalid USB dongle is inserted.
		If rebooting the print server does not solve the problem, replace the USB dongle.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC911-61	D	Command timeout communicating with the printer.
		No response of command level from the printer.
		• Check the printer power is turned on. • Check the cable connection between the print server and the printer. • Restart the printer and the print server in the correct procedure.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC911-62	D	Print Engine communication error.
		• Connection fault • Motherboard (onboard NIC) defective
		• Check the printer power is turned on. • Check the cable connection between the print server and the printer. • Restart the printer and the print server in the correct procedure. • Replace the connection cable or motherboard.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC911-63	D	A file system access error occurred in the ASCII temporary disk cache.
		System files corruption
		If rebooting the print server does not solve the problem, re-install the system software.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC911-64	D	Page processing timeout
		Time-out error occurs during the page processing for print job.
		If rebooting the print server does not solve the problem, there may be a problem with the job.

Traces

Managing Archived Traces

The print server automatically captures all the data needed to diagnose software problems when it encounters a program check or fatal error. You can also save a trace whenever you find anything unusual.
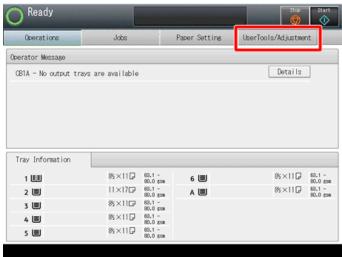
Trace data includes event logs, printer configuration, software component traces, and optionally captured data. The trace information is saved to an archive file system for using by service representative. In some cases the service representative might need to access this archive.

Saving traces can be operated from the printer and the console screen.
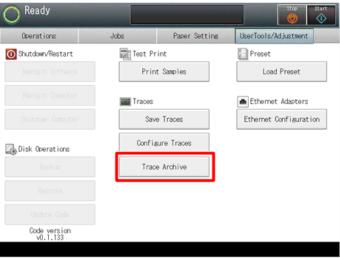
Operation from the Printer Screen

⬇️ Note

• When operating from the printer, the destination of the tracing file is limited to USB memory.

1. **Press the [Home] key on the operation panel of the printer and then press the [TotalFlow] icon.**

2. **Press [User Tools/Adjustment].**

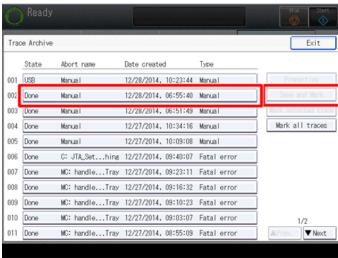m273z8002

3. **Press [Trace Archive].**

m273z8051

4. **Insert the USB memory into the front USB port of the print server.**

   ↓Note

   • It is not recognized in the rear USB ports of the print server.

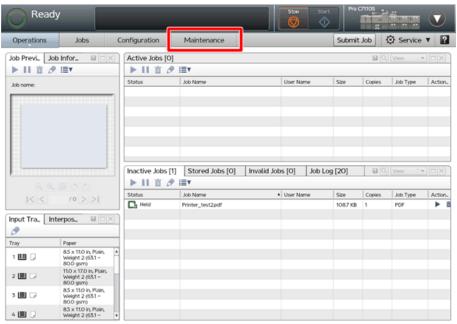5. **Select the file you want to download in the list, and then press [Save and Mark].**

m273z8052

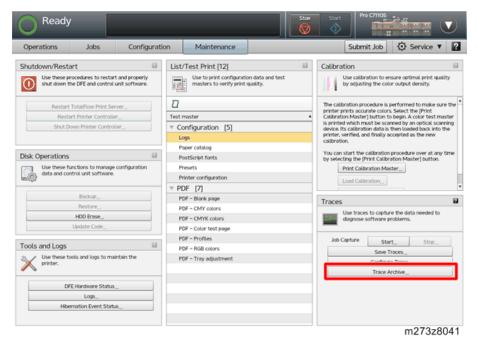## Operation from the Console Screen on the Print Server

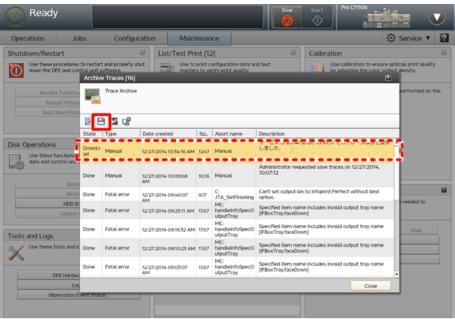1. **Access to the print server by the local or remote console.**
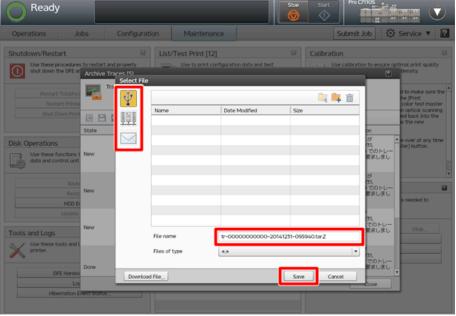
2. Click [Maintenance].

m273z8027

3. Click [Trace Archive].

m273z8041

4. Select the file you want to download in the list, and then click the "Save" icon.
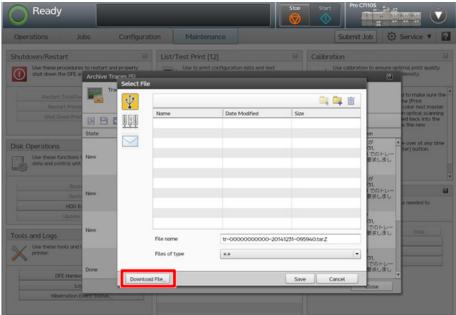

m273z8042

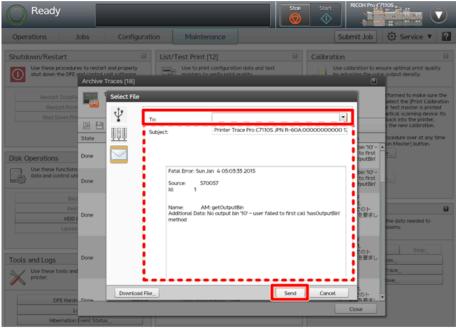5. Select the destinations (USB memory/network/email), and then input a file name. Click [Save].

m273z8043

↓Note

- When selecting the USB memory, insert the USB memory into the front USB port of the print server. It is not recognized in the rear USB ports of the print server.

- Clicking [Download File] when accessing from the remote console allows you to save the trace log to the client PC.
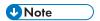

m273z8084

- When sending email, enter the email address, and inputs the message text or subject. Click [Send].

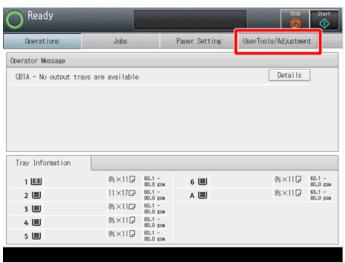m273z8064

Saving Traces

Saving traces can be manually operated from the printer and the console screen.

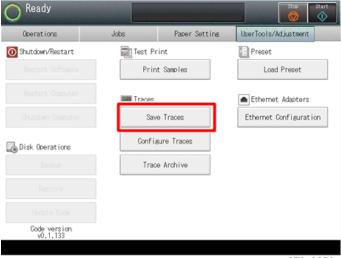### Operation from the Printer Screen

📥Note

- When operating from the printer, the destination of the tracing file is limited to USB memory.

1. **Press the [Home] key on the operation panel of the printer and then press the [TotalFlow] icon.**

2. Press [User Tools/Adjustment].
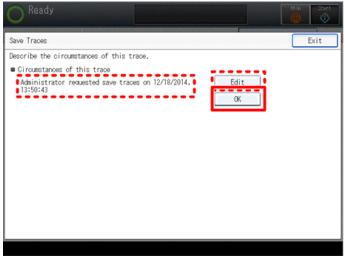

m273z8002

3. Press [Save Traces].

m273z8053

Note

- You can select the tracing items from the [Configure Traces] key.

4. Insert the USB memory into the front USB port of the print server.

Note

- It is not recognized in the rear USB ports of the print server.

5. If necessary, press [Edit] to describe the situation.

6. **Press [OK].**

m273z8054

⬇Note

- It takes about 20 seconds to save the traces.
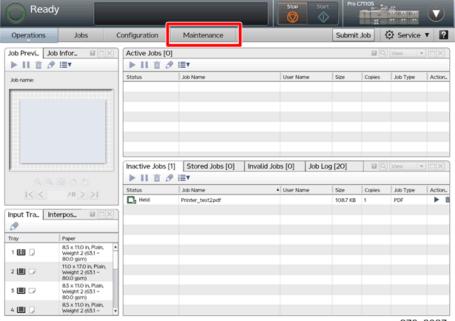
7. **Press [Save].**
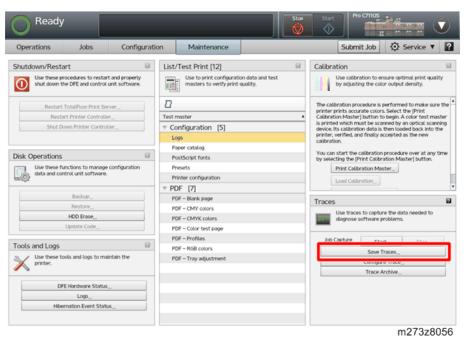

m273z8055

⬇Note

- You can change the file name by pressing [Edit].

- The tracing file is saved as a .tar file.

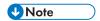## Operation from the Console Screen on the Print Server

1. **Access to the print server by the local or remote console.**
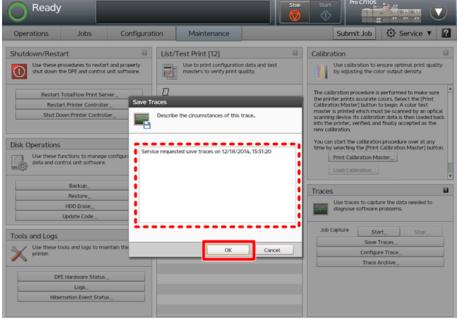
2. **Click [Maintenance].**

m273z8027

3. **Click [Save Traces].**
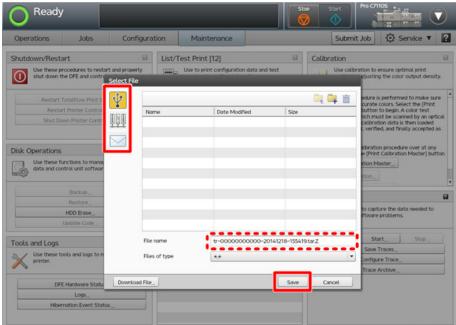

m273z8056

4. **Click [OK].**

⬇️ **Note**
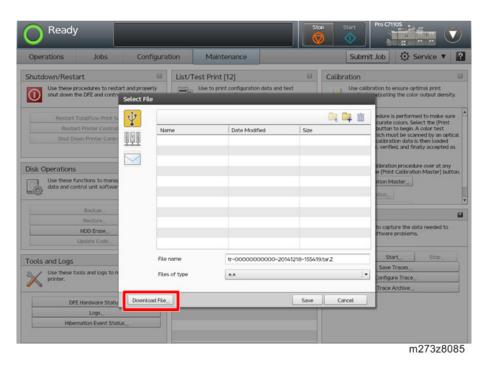
- You can describe the situation.

m273z8057

Note

- It takes about 20 seconds to save the traces.

5. **Select the destinations (USB memory/network /email), and then enter the filename. Click [Save].**
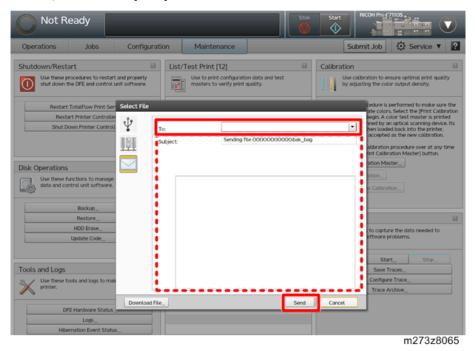

m273z8058

Note

- When selecting the USB memory, insert a USB memory into the front USB port of the print server. It is not recognized in the rear USB ports of the print server.

- The tracing file is saved as a .tar file.

- Clicking [Download File] when accessing from the remote console allows you to save the traces to the client PC.

m273z8085
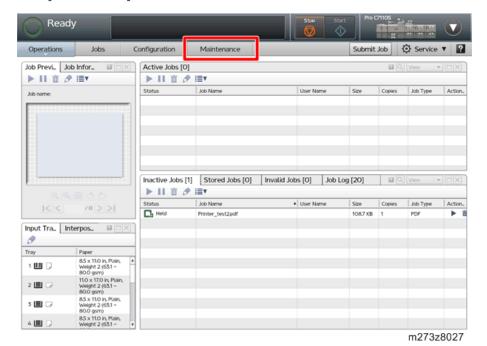
- When using the email, enter the email address in the following screen. Also enter the subject and text, and then click [Send].

m273z8065

Capturing a Print Job

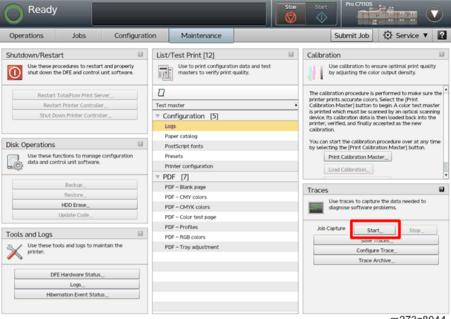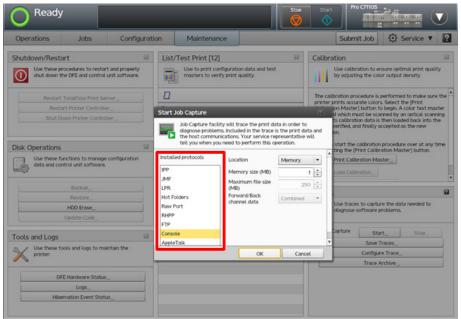Job Captures include print data and host communications as well as trace data which described before. Service representatives use this function to diagnose problems.

1. **Access to the print server by the local or remote console.**

2. **Click [Maintenance].**

m273z8027

3. **Click [Start] at [Job Capture].**

m273z8044
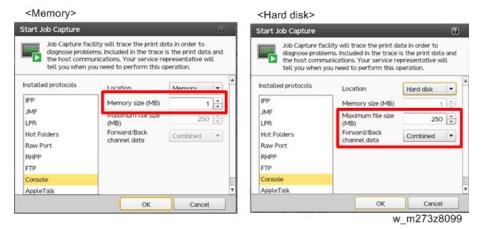
4. **Select the protocol that you send the job in [Start Job Capture].**

m273z8045
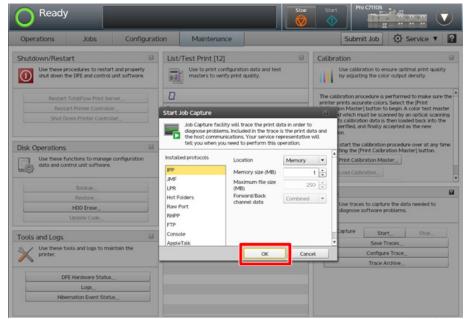
5. **Select the destination (Memory/ Hard disk) to save at "Location".**

w_m273z8099

↓Note

- When selecting the "Hard disk", you can set "Forward/Back channel data". The "Forward/ Back channel data" defines whether the trace data is saved in one file or divided files.

6. **Click [OK].**

m273z8100
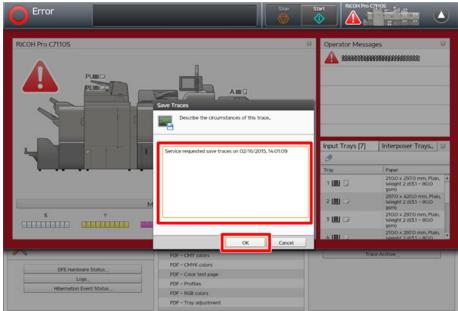
↓Note

- During the capturing data, the console screen shows "Tracing". The capturing data often slows down the operation of the print server.

m273z8047

7. **Send the job that you want to analyze.**

8. **Click [OK] after the problem occurs in the job.**

m273z8101

Note
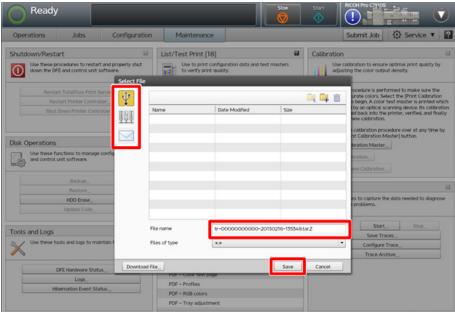
- You can enter the job details at the save traces screen.

- During the tracing job, the following screen appears:

m273z8102
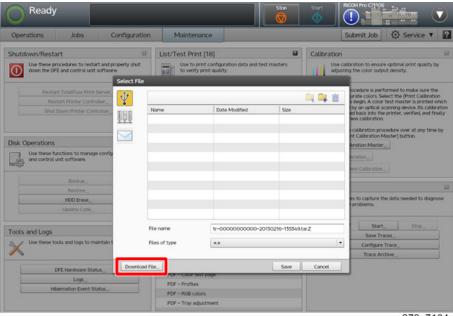
9. **Select the destinations (USB memory/network/email), and then enter the filename.**

Click [Save].

m273z8103

↓Note

- When selecting the USB memory, insert a USB memory into the front USB port of the print server. It is not recognized in the rear USB ports of the print server.

- Clicking [Download File] when accessing from the remote console allows you to trace data to the client PC.

m273z7104

- When sending email, enter the email address, and enter the message text or subject. Click [Send].

- The tracing file is saved as a .tar file.

Image Trouble
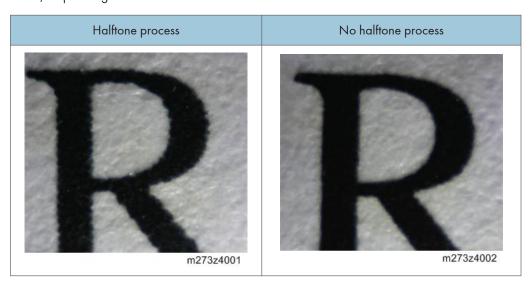
Cannot Get the Solid BK 100% When Selecting PureBlack/RichBlack

🔽 **Note**

- This problem occurs only for using TotalFlow Print Server R-60A, not for using R-60

Symptom

Even though [PureBlack]/[RichBlack] is set on the console screen of the print server or the printer driver, output image is not solid BK 100% but halftone

Halftone process	No halftone process
m273z4001	m273z4002

Solution

Adjust the image density for the printer.

1. **Start the [Adjustment Settings for Skilled Operators] menu.**

2. **Decrease the value in following setting item:**

No.	Item	Value
0204	Adjust Maximum ImageDensity	-5 to +5

3. **Execute the calibration.**

   For details about how to calibrate a printer, see "Calibrating the Printer", Operating Instructions, and the help in ColorPort.

4. Troubleshooting

Troubles That Related to the Optional IPDS

Cannot Exit SP Mode While Establishing a Session with the IPDS Print Server

Symptom

When printing from the IPDS host system, the IPDS keeps the session after the print job completes. If the customer engineers enter into the SP mode in this condition, they cannot exit the SP mode until the session is disconnected.

Solution

Do not enter the SP mode during the session of the IPDS is established.

Do one of the following when you cannot exit the SP mode:

- Terminate the session through the IPDS host system such as Infoprint Manager.

- Disconnect the network cable that connects to the print server. (This can terminate the IPDS session)

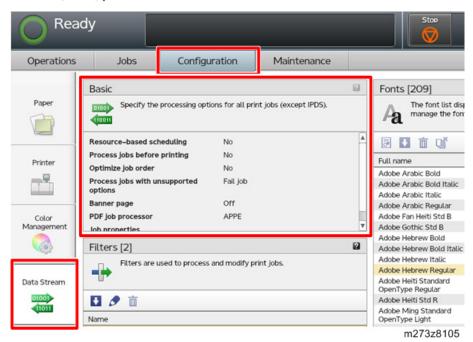# Troubles That Related to External Printing Software

Data Cannot Be Sent Properly When Using Prinect

Symptom

Data cannot be sent properly when using Prinect.

Solution

1. **Access to the print server by the local or remote console.**

2. **Click [Configuration] – [Data Stream].**

3. **Click the [Basic] pod.**

m273z8105
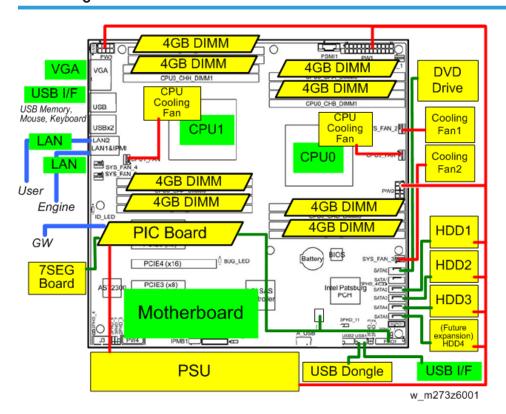
4. **Select "APPE" (Not "CPSI") at [PDF ¡wob processor].**

m273z8106

5. Detailed Section Descriptions

Block Diagram and Functions

Block Diagram

w_m273z6001

Functions

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)

PIC Board

When the power interlock switch is ON at the print server, it can recognize the power ON/OFF status of the printer.

When the USB cable for power interlock is connected, it can recognize the power ON/OFF status of the printer.

HDD

The print server has three HDDs.

- HDD 1 for operation system
- HDD 2/HDD 3 for data storage with RAID0
- HDD 4 is not installed. (Future expansion)

Mother Board

- CPU: 2.6GHz × 2
- SDRAM: 4GB (1,600MHz DDR3, 240 pin) × 8, Total 32GB.
- Performs a self-diagnosis by BIOS and displays the error code to the digital display board (7-segment).

Digital Display Board

Displays the status of the print server by 7-segment.

USB Dongle

Stores product information such as a license.

The print server cannot be used without USB dongle.

DVD Drive

The DVD drive can read the items below:

- Print data
- File for system updating
- User created ICC profiles
- Font data

Note that these data cannot be written into the DVD, because the DVD drive is read only.

USB I/F

USB I/F are used in the following purpose.

Front USB port

1. Reading the following data are saved in the USB memory:

   - Print data

   - File for system updating

   - User created ICC profiles

   - Font data

2. Writing the following data to USB memory:

   - Tracing data

   - Logging data

USB port (keyboard/mouse)

Attaching a keyboard and mouse

USB port (memory)

Backing up automatically for the configuration data

5

6. Option

IPDS

Activating the IPDS

Activating the IPDS with the following steps is required to use the IPDS features.

1. **Go to the certificate site on the internet to generate a license file with the following two items:**

    - System Fingerprint: an identifier that is provided for each print server.

    - EID (Entitlement ID): an identifier provided for the customer when they purchase the option.

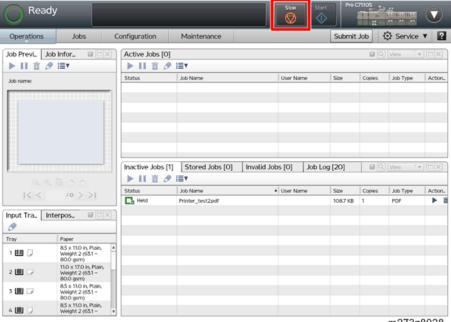2. **Install the license file generated to the print server.**

The license file generated is installed in the print server.

Reactivating the IPDS is required when you re-install the system software for troubleshooting or parts replacement. For details, refer to "How to Reactivate". (page 158 "How to Reactivate")

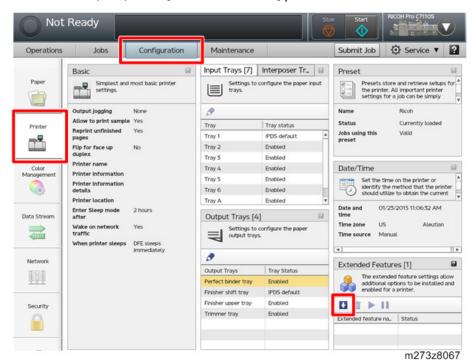### Activation Procedure

⭐ **Important**

- Make sure that you have the EID (Entitlement ID) issued when the customer purchases this option.

1. **Access to the print server by the local or remote console.**
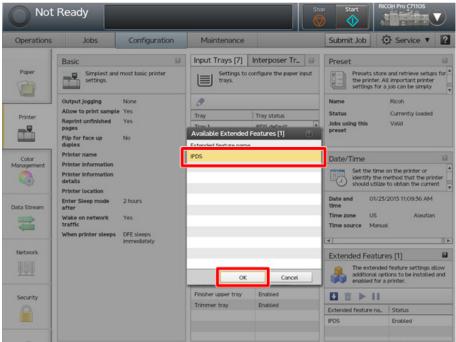
2. Click [Stop] to suspend the printer operation.

m273z8028

3. Select [Configuration] – [Printer].

4. Click "Arrow" (Add) at the [Extended Features] pod.
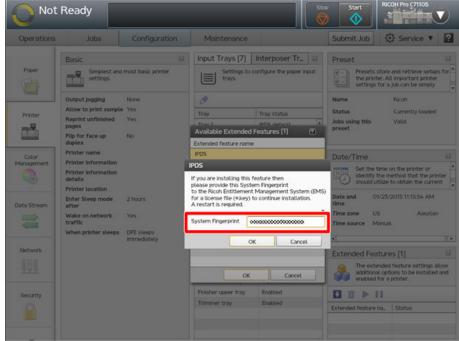

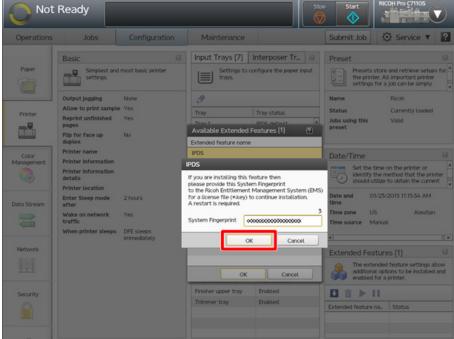m273z8067

5. Select [IPDS] and click [OK].

m273z8068

6. Write down the string that is shown at [System Fingerprint].

m273z8069

7. **Click [OK].**

   The console screen is in this status, then set from a web browser.

   m273z8074

8. **Start the web browser, and access the website below:**
   https://www.ricohsoftware-entitlements.com

9. **Select the "EID" at the [Login/Using] field.**

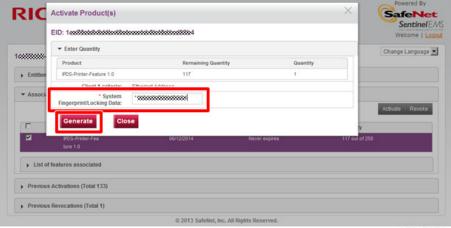10. **Enter the EID (Entitlement ID) at the [EID] field.**

    m273z7070

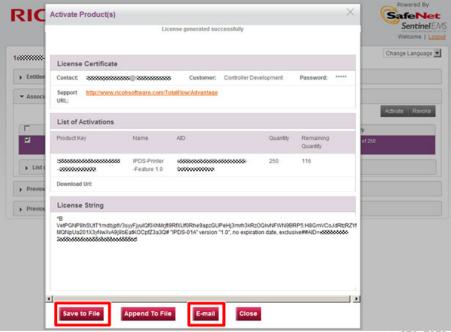11. **Put a check mark in "IPDS-Product Feature" and click [OK].**

m273z7071

12. **In the [System Fingerprint/Locking] field, enter the "System Fingerprint" that was ahead in step 6 to IPDS pop-up screen, and click [Generate].**

m273z7072
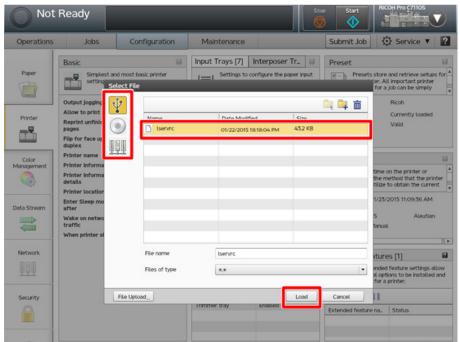
13. **Click [Save to File] and save the generated license file.**

Alternatively, send the license file to the email address you registered.

m273z7073

14. **Change the extension of the license file to ".key".**

    Return to the console screen.

15. **Select the destination icon of the saved license file (USB memory/ DVD/network), and select the license file.**
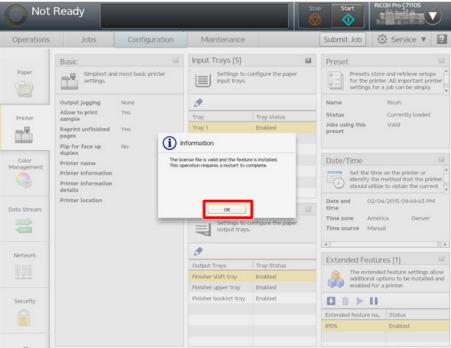
16. Click [Load].

m273z8077

↓Note

- When loading from the USB memory, insert a USB memory into the front USB port of the print server. It is not recognized in the rear USB ports of the print server.

- Clicking [File Upload] when accessing from the remote console allows you to upload the license file from the client PC.

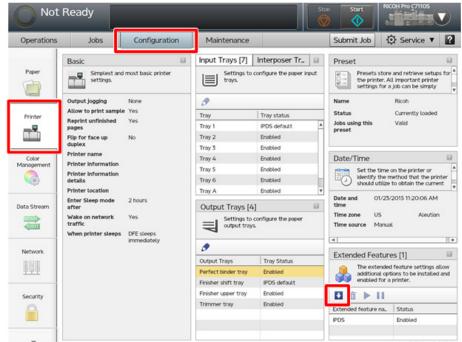**17. After activation completion message is displayed, click [OK].**

m273z8076

18. Reboot the print server.

Optional Features for IPDS

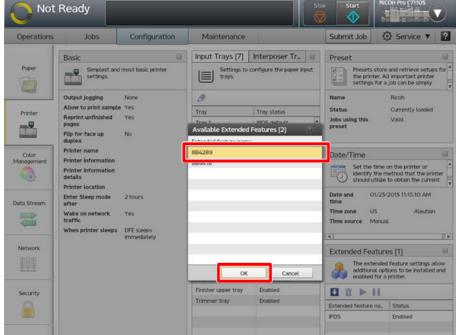After activating the IPDS, activate the optional features below:

- Suppress Off Page Errors (8B4289)

  This feature allows a user to specify the number of pixels (pels) that are allowed to be outside of the printable area of a page without generating an error to the host system. If activated, a menu item (Suppress Off Page Errors) appears in the IPDS data stream configuration area.

- IPDS 2-pass G4 compression (8B4418)

  For IPDS, reinterpret each image using the second of two possible RIDIC values, if the first interpretation fails. Enabling this feature may avoid image processing errors. There are no console menu changes when this feature is activated.

1. Access to the print server by the local or remote console.

2. Select [Configuration] – [Printer].

3. Click "Arrow" (Add) at the [Extended Features] pod.
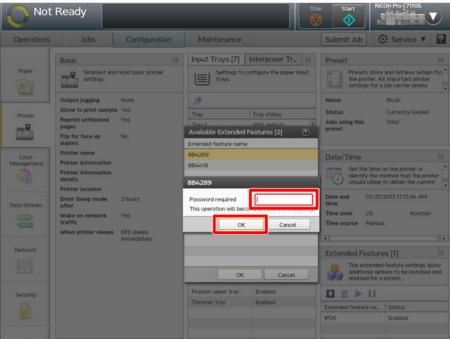

m273z8078
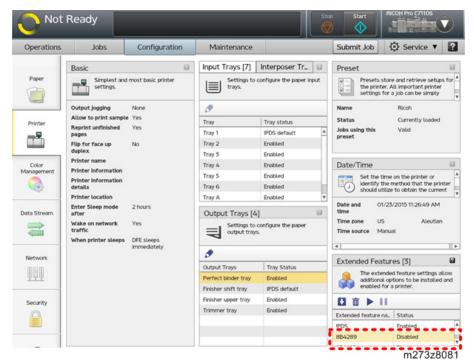
4. Select the extended features that you want to activate.

m273z8079

5. **Enter the following password, and then click [OK].**
   2halo: (for 8B4289 (Suppress Off Page Errors))
   2passup: (for 8B4418 (IPDS 2-pass G4 compression))

m273z8080

6. **Verify the optinal features at the [Extended Features] pod.**

m273z8081

↓Note

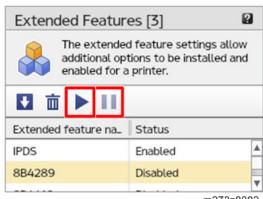- When the optional feature to [Enabled], click the [▶] button.

- When set to [Disabled], click the [Stop] button.

m273z8082

How to Reactivate

When Replaced HDD, or Re-installed the system software

As the System Fingerprint does not change, you can reactivate the IPDS with the same license file as the one used for last activation. If the license file is lost, log in to the certificate site with the same EID as the one used for last activation, and then download the license file again.

When Replaced the Motherboard

As the System Fingerprint changes, you cannot reactivate the IPDS with the same license file as the one used for last activation. Activate the IPDS with a new System Fingerprint and EID.

RIP Software

Activating the RIP Software

Activating the RIP software with the following steps is required to use the RIP features.

1. **Go to the certificate site on the internet to generate a license file with the following two items:**

   - System Fingerprint: an identifier that is provided for each print server.

   - EID (Entitlement ID): an identifier provided for the customer when they purchase the option.

2. **Install the license file generated to the print server.**

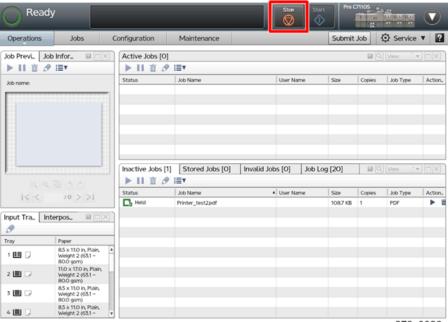The license file generated is installed in the print server.

Reactivating the RIP software is required when you re-install the system software for troubleshooting or parts replacement. For details, refer to "How to Reactivate". (page 165 "How to Reactivate")
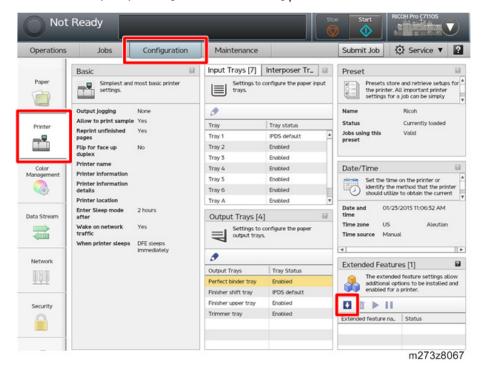
Activation Procedure

⭐**Important**

- Make sure that you have the EID (Entitlement ID) issued when the customer purchases this option.

1. **Access to the print server by the local or remote console.**

2. Click [Stop] to suspend the printer operation.

m273z8028

3. Select [Configuration] – [Printer].

4. Click "Arrow" (Add) at the [Extended Features] pod.

m273z8067

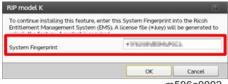5. **Select the RIP software and click [OK].**

m506a0001

6. **Write down the string that is shown at [System Fingerprint].**

m506a0002

7. **Click [OK].**

   After this screen is shown, operate from the web browser.
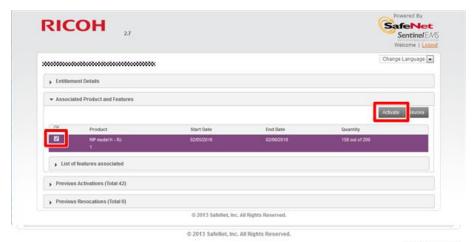

m506a0003

8. **Start the web browser, and access the website below:**
   https://www.ricohsoftware-entitlements.com

9. **Select the "EID" at the [Login/Using] field.**

10. **Enter the EID (Entitlement ID) at the [EID] field, and then click [Login].**
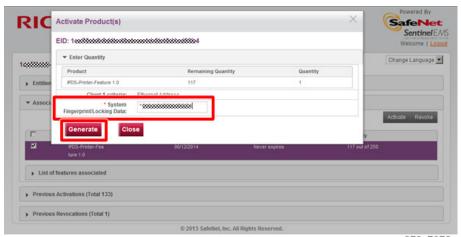

m273z7070

11. **Put a check mark in "RIP model *" and click [Activate].**

m506a0004
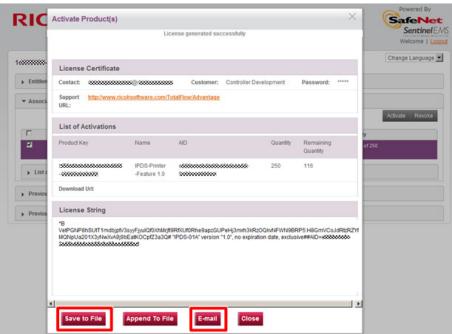
12. In the [System Fingerprint/Locking] field, enter the "System Fingerprint" that was obtained in step 6 to RIP model * pop-up screen, and click [Generate].

m273z7072

13. Click [Save to File], select the desired destination icon, and then save the generated license file.
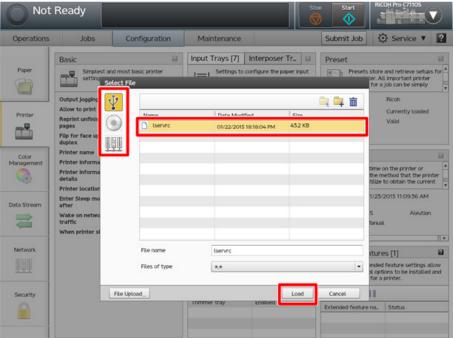Alternatively, send the license file to the email address you registered.

m273z7073

14. Change the extension of the license file to ".key".

Return to the console screen.

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15. **Select the destination icon of the saved license file (USB memory/ DVD/network), and select the license file.**

16. **Click [Load].**

m273z8077

🔽Note

- When loading from the USB memory, insert a USB memory into the front USB port of the print server. It is not recognized in the rear USB ports of the print server.

- Clicking [File Upload] when accessing from the remote console allows you to upload the license file from the client PC.

17. **When you are prompted to restart the system, click [Restart].**

m506a0005

How to Reactivate

When HDD is replaced or System Software (BOS) is re-installed:

As the System Fingerprint does not change, you can reactivate the RIP software with the same license file as the one used for last activation. If the license file is lost, log in to the certificate site with the same EID as the one used for last activation, and then download the license file again.

When the Motherboard is replaced:

As the System Fingerprint changes, you cannot reactivate the RIP software with the same license file as the one used for last activation. Activate the RIP software with both of them below.

- the same EID as the one used for the last activation

- a new System Fingerprint.

Note

- The license can be easily activated without the need of a new EID for the defective DFE. The person in charge of EDI can simply increase the number of avaialbe activations allocated to the original EID. In other words, a new EID for replacement Motherboards will not be required.

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7. Specifications

Specifications

General Specifications

Item	Description
CPU	Intel Xeon E5-2630v2 2.6GHz ×2
Memory	32 GB (4 GB ×8)
HDD	SATA connection 1TB3.5 inch HDD (7,000 rpm) ×3
DVD Drive	SATA connection DVD-ROM drive
Interface	Gigabit Ethernet ×2 (100BASE-TX/10BASE-T/1000BASE-T), USB2.0 Type-A ×4 (Front ×1, Rear ×3), USB2.0 Type-B, VGA
Protocol	FTP, LPR, Port 9100, TCP-IPDS, IPP, RHPP, HTTP, Dynamic DNS, SMB, AppleTalk, WSD
Print Resolution	1,200 dpi (2bit)
Input Data Streams	- IPDS - PostScript Level3 - PDF -Version1.7 - TIFF -TIFF AFPC Subset - JPEG -AFPC JPEG Subset - PDF/VT-1 - PDF/X (PDF/X-1a, PDF/X-3, PDF/X-4) - PPML –Version2.2
Built-in Fonts	Roman PS font: 136 fonts
Power Source	100-240V, 4.8A, 50/60 Hz
Power Consumption	400W
Dimensions (W x D x H)	178 × 650 × 444 mm (7.0 × 25.6 × 17.5 inches)
Weight	Approximately 22 kg (4.41 lbs.)

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MEMO