



COLOR CONTROLLER E-710 INSTALLATION AND SERVICE GUIDE

for Ricoh Aficio Color 6513
Savin SDC413
Gestetner CS213d
RexRotary CS813D
nashuatec CS513d
infotec 7513

A guide for service technicians

Part Number: 45021170

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This equipment has been tested and found to comply with the limits for a class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

Reorient or relocate the receiving antenna.

Increase the separation between the equipment and receiver.

Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

Consult the dealer or an experienced radio/TV technician for help.

In order to maintain compliance with FCC regulations, shielded cables must be used with this equipment. Operation with non-approved equipment or unshielded cables is likely to result in interference to radio and TV reception. The user is cautioned that changes and modifications made to the equipment without the approval of manufacturer could void the user's authority to operate this equipment.

Industry Canada Class B Notice

This Class B digital apparatus meets all the requirements of the Canadian Interference-Causing Equipment Regulations.

Avis de Conformation Classe B de l'Industrie Canada

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This equipment has been tested concerning compliance with the relevant RFI protection requirements both individually and on system level (to simulate normal operation conditions). However, it is possible that these RFI Requirements are not met under certain unfavorable conditions in other installations. It is the user who is responsible for compliance of his particular installation.

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Controller Interface Type I Installation Procedure

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About this guide

Preface

The *Installation and Service Guide* is intended for certified Color Controller E-710 and copier service technicians. If you have not received certification, you should not attempt to install or service the E-710. Electronics For Imaging does not warrant the performance of the E-710 if installed or serviced by non-certified personnel.

About this guide

This guide is divided into the following sections:

- “Preface”
Gives general information about this guide and general information that you should know before you attempt to install or service the E-710.
- Chapter 1, “Introduction.”
Provides general information about the E-710.
- Chapter 2, “Installation.”
Provides detailed instructions for installing the E-710 into the copier.
- Chapter 3, “Using the E-710 Operation Panel.”
Describes the E-710 Operation Panel and how to use it.
- Chapter 4, “Service Procedures.”
Describes removal and replacement procedures for E-710 components.
- Chapter 5, “Troubleshooting Procedures.”
Identifies the source of common problems and suggests ways of correcting them.
- Appendix A, “Specifications.”
Summarizes the hardware and networking features of the E-710 controller.
- Appendix B, “Controller Interface Type I.”
Provides the installation procedure for the Controller Interface Type I kit, which must be installed before installing the E-710.

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

About the illustrations in this guide

Illustrations in this guide reflect the E-710 at the time of publication. Components shown in these illustrations are subject to change. To receive information about any components that do not match illustrations in this guide, contact your authorized service/support center.

Preface

Terminology and conventions

The term copier refers to the following copiers in which the Controller Interface Type I kit and the E-710 Controller kit are installed:

Copier	Model
Ricoh	Aficio Color 6513
Savin	SDC413
Gestetner	CS213d
RexRotary	CS813D
nashuatec	CS513d
infotec	7513

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

The term “Fiery Operation Panel” describes the area within the copier Operation Panel that is dedicated to the E-710 printer controller. It includes the display window and the surrounding keys and activity lights.

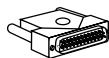
The term “PC” refers to any IBM PC or compatible computer running Windows over MS-DOS.

The term “E-710 board” refers to the E-710 motherboard (the main board in the E-710).

The term “100BaseT” is used throughout this manual to refer to 100BaseTX.

The term “HDD” refers to the hard disk drive that is part of the E-710 assembly.

The term “Controller Interface” refers to the hardware mounted on the back of the copier that encloses the E-710. See the *Controller Interface Type I Installation Procedure* for more information. This document is included in Appendix B, “Controller Interface Type I.”



The System Enablement key (*dongle*) drawing highlights areas in this document presenting information about the System Enablement key.

NOTE: The note indicator highlights important messages and additional information.



The caution icon indicates a need for special care and safety when handling the equipment.

Precautions

Precautions

Always observe the following general precautions when installing and servicing the E-710:

1. Report any shipping damage.

If there is any evidence of shipping or handling damage to packing boxes or their contents, save the damaged boxes and parts, call the shipper immediately to file a claim, and notify your authorized service/support center.

2. Never alter an existing network without permission.

The E-710 probably connects to an existing Local Area Network (LAN) based on Ethernet hardware. The network is the link between the customer's computer, existing laser printers, and other prepress equipment. Never disturb the LAN by breaking or making a network connection, altering termination, installing or removing networking hardware or software, or shutting down networked devices without the knowledge and express permission of the network administrator.

3. Never enter an IP address in Network Setup.

Only the network administrator should enter an IP address on a network device. Assigning an incorrect IP address to the E-710 can cause unpredictable errors on any or all devices.

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

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

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

- Attach a grounding strap to your wrist. Attach the other end to a good ground.
- When you remove an electronic component, place it into an antistatic bag immediately. Do not walk across a carpet or vinyl floor while carrying an unprotected board.
- Leave new electronic components inside their antistatic bags until you are ready to install them.
- When you unpack the electronic components, touch a metal area of the copier to discharge the static on your body. Place the components on a grounded antistatic surface, component-side up.

Preface

5. **Avoid flexing printed circuit boards and handle them by opposing edges (not corners) only.**
6. **Never set a cup of coffee—or any liquid—on or near any components or the copier.**

Tools you will need

To service the E-710, you should bring the following:

- ESD wrist grounding strap
- Antistatic mat
- #0, #1, and #2 Phillips head screwdrivers (non-magnetic)
- 3/16" hex nut driver (recommended)
- Small flat-blade screwdriver (non-magnetic)
- Small needlenose pliers
- Flashlight
- This guide and any technical notes you may have for the E-710.

1 Features

Chapter 1: Introduction

The E-710 is a high performance embedded color controller that provides computer connectivity and highly efficient color printing capability to digital color copiers. It is optimized for high-speed communications, processing, rasterization, and printing of continuous tone color and monochrome (black and white) pages. Users can print from networked Mac OS computers, from networked PCs running Windows NT, Windows 95/98, Windows 2000, Windows Me, and from UNIX workstations.

Features

As an integral part of the printing system, the E-710 enables users to:

- Send images over AppleTalk, TCP/IP, and Novell networks.
- Spool print jobs and select a printing priority for each job. Users can control spooled print jobs sent to the E-710 with user software running on networked Mac OS computers and PCs.
- Print files in color, grayscale, and black and white.
- Use PostScript fonts. The customer can download additional fonts, as needed.
- Use built-in ColorWise™ color management and NetWise™ networking features.

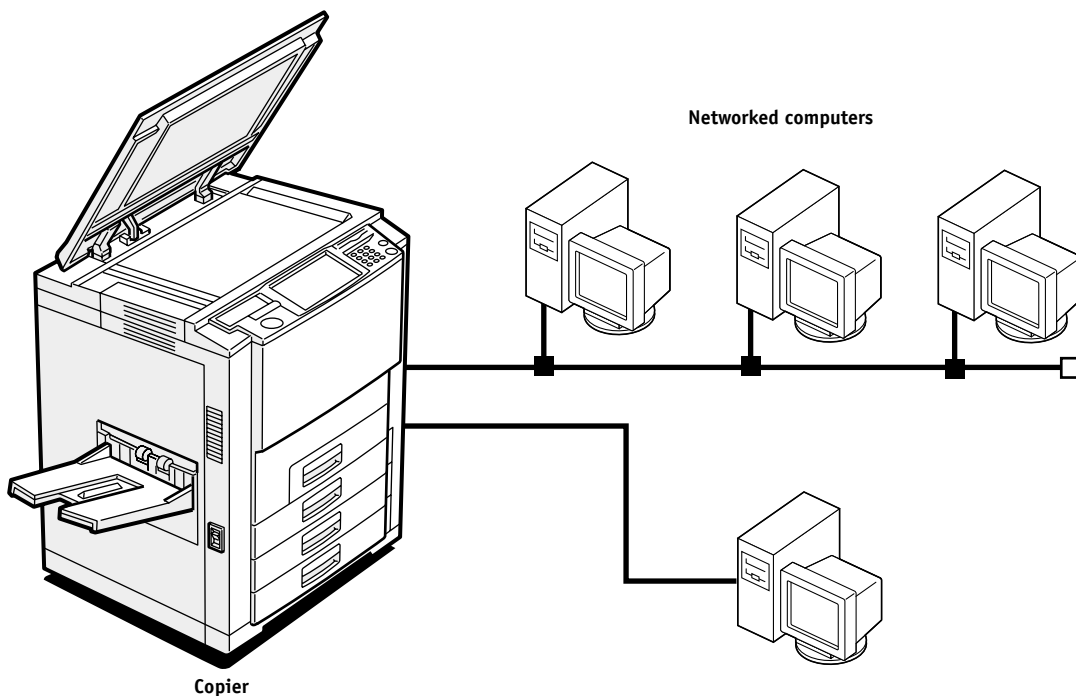


FIGURE 1-1 E-710 printing system

1 Introduction

How the E-710 operates

The E-710 provides efficient image processing and printing control. The E-710 board includes a 366MHz Intel Celeron CPU that runs the PostScript Interpreter. It interprets a page description file to produce the image pattern in memory. The RipChips™ on the board control data management and other system functions, freeing up the CPU for efficient image data processing.

Two high-speed DIMMs (dual in-line memory modules) on the E-710 board hold image data during printing. The standard memory configuration is 256MB.

With Fiery Scan software, the E-710 acquires RGB (red, green, blue) image data from the copier, stores it in memory, and transmits it to the computer that requested the scan.

The PCI-based video interface board provides communication with the color engine. Image data is sent from the video interface board on the E-710 board to the copier via the Controller Interface. Raster data is supplied to the laser in the copier at full copier rated speeds.

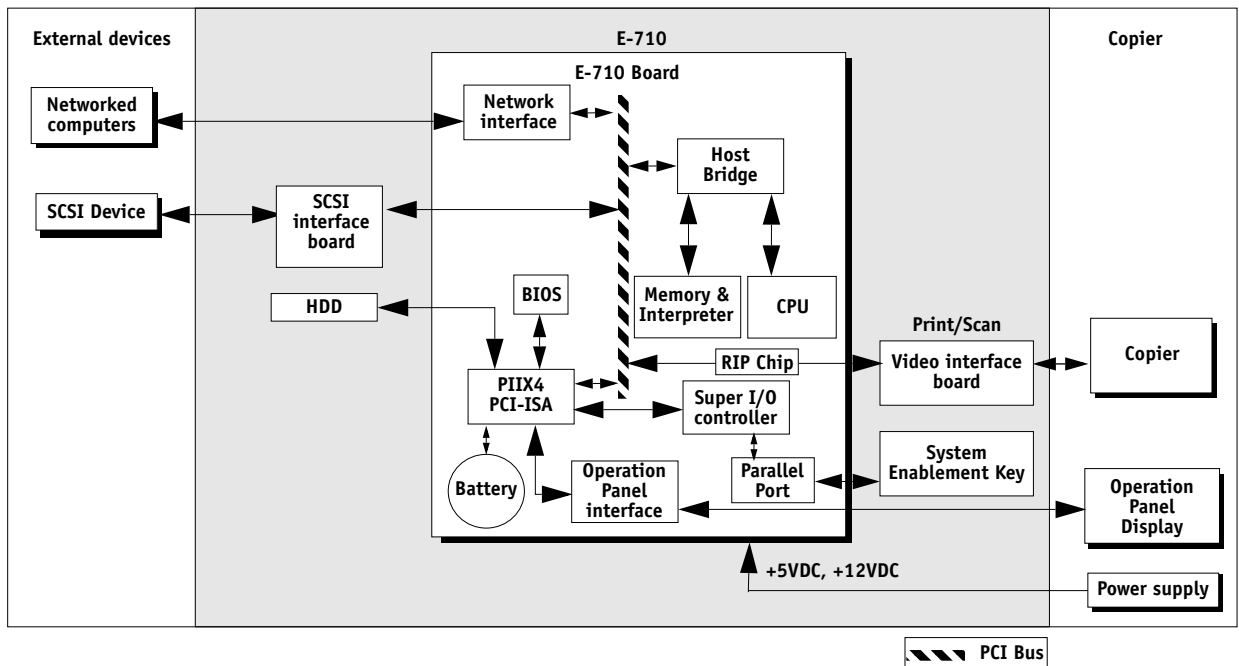


FIGURE 1-2 E-710 functional diagram

1 E-710 print options

E-710 print options

The E-710's efficient PostScript capabilities allow customers to use a variety of applications to create printed color or black and white pages of text and/or images. The E-710 operates over a network. Since the E-710 has the ability to print an image while processing the next image (RIP-While-Print™), it is capable of printing documents at full copier speeds.

Users can print documents directly from the applications in which they were created. In addition, the E-710 offers an efficient way to print files that have been saved in PostScript, EPS (Encapsulated PostScript), or PDF format. These files can be downloaded directly to the E-710 using the Fiery Downloader, a remote utility provided with E-710.

User software

User software is provided on the User Software CD. The network administrator or the user at the customer site is responsible for installing software onto computers that will use the E-710 over the network. See *Getting Started* for details.

The User Software CD includes:

Adobe PS Printer Driver	Enables users to print to the E-710 from Windows 95/98/Me, Windows NT 4.0, and Mac OS computers; also supports special E-710 and PostScript 3 features. NOTE: Windows 2000 users should use the Microsoft PostScript Printer Driver provided with Windows 2000.
PostScript Printer Description file (PPD)	For use with the PostScript printer driver that allows the E-710 to appear in popular applications' Print and Page Setup dialog boxes. The E-710 PPDs provide information about the E-710 and the user's particular copier model to the application and printer driver in use.
PostScript Fonts (Mac OS only)	PostScript screen and printer fonts that correspond to the 138 PostScript printer fonts installed on the E-710 (126 Adobe Type 1, 10 TrueType, and 2 Adobe Multiple Master). See the <i>Printing Guide</i> for a complete list of PostScript fonts installed on the E-710.
Fiery Downloader	Enables users to print PostScript files, Encapsulated PostScript (EPS) files, and Portable Document Format (PDF) files directly to the E-710 without opening the application in which they were created. Fiery Downloader also enables users to manage the printer fonts installed on the E-710.

1 Introduction

ColorWise Pro Tools	ICC-open color management and calibration tools; enables users to edit and download ICC profiles.
Fiery Scan	Plug-in modules for Photoshop that enable users to scan images from the copier directly into the application.
Fiery Link	Enables users to monitor the status of connected servers and the print jobs sent to them.
Command WorkStation software (available as an option on a separate CD)	Enables the operator to control E-710 functions from Windows workstations. For information on Command WorkStation software, see the <i>Job Management Guide</i> .
Color management files	ColorSync and ICM color management files that enables users to maintain consistent color from the original artwork to the colors displayed on the monitor to the printed output.
Color reference files	Reference pages that users can print to view the range of colors available on the E-710. For the most predictable color results, refer to these pages when defining colors in applications. For more information on color management, see the <i>Color Guide</i> .
Calibration files	Includes measurements files and targets to use with ColorWise Pro Tools. These files can be used to calibrate the E-710 if the users don't have a densitometer.
MRJ (Mac OS only)	Mac OS Runtime for Java installer v 2.1.4. MRJ is required by all Java-based Fiery utilities. When installing these utilities, if MRJ is not detected the MRJ installer is automatically launched.

Fiery WebTools

The E-710 supports Internet or intranet access with Fiery WebTools, which include Status, WebSpooler, WebLink, Installer, WebDownloader, and WebSetup. For more information on WebTools, see the *Configuration Guide* and *Getting Started*.

2

Setting customer expectations

Chapter 2: Installation

This chapter describes how to install the E-710 in the Controller Interface unit. Topics include setting customer expectations, unpacking the E-710, and performing the installation.

Setting customer expectations

The customer should be informed of the following:

- Some nodes on the network may be unavailable during the installation.
- The network administrator needs to be available during the installation for network connectivity.

Equipment downtime and impact on the network can be minimized if the network administrator installs a network connector for the E-710 and confirms network functionality with the connector in place before the date scheduled for the installation.

- The network 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 network administrator should install the user software shipped with the E-710 (a package of user documentation is also included) onto networked Mac OS computers and PCs that will print to the E-710.

NOTE: This guide covers E-710 hardware installation and service. It provides general information on connecting the E-710 to the customer's network. Network setup and configuration information go beyond the scope of this guide. For network setup and configuration information, the network administrator should refer to the *Configuration Guide*.

In order to install the E-710, the Controller Interface Type I kit must first be installed on the copier. See the installation procedure in Appendix B, "Controller Interface Type I."

2 Installation

Unpacking the E-710

The E-710 is assembled and shipped from the factory in a box that includes items shown in Figure 2-1.

TO UNPACK THE E-710

1. **Open the shipping box and remove any packing materials.**
2. **Remove the contents of the shipping box and inspect them for visible damage.**

If you notice shipping damage, have the shipping box ready to show the carrier if necessary. Call the carrier immediately to report the damage and file a claim, then call your authorized service/support center. The shipping box includes the following items:

- E-710
- Ferrite clamp (see Appendix B)
- System Enablement key (or *dongle*)
- Media package that contains the following:
 - User Software CD (see page 1-3 for contents)
 - User documentation (which includes *Getting Started*, the *Printing Guide*, the *Job Management Guide*, the *Color Guide*, the *Configuration Guide*, and Release Notes)
 - Kodak Color Separation and Gray Scale (small)

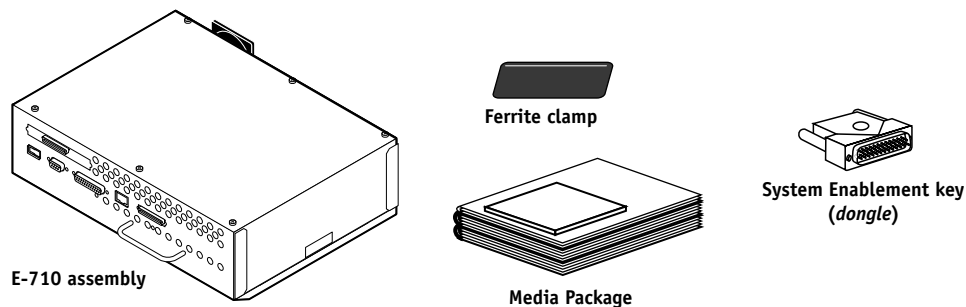


FIGURE 2-1 Contents of shipping box

3. **Give the media package to the network administrator.**

Let the network administrator know that in order to take full advantage of the E-710, the user software must be installed on computers that will print to it.
4. **Give the Kodak Color Separation and Gray Scale (small) to the person at the customer site responsible for calibration.**
5. **Remove any protective plugs that may be installed on the E-710's external connectors.**

2

Preparing for installation

Preparing for installation

Before installing the E-710, do the following:

Test copier functionality.

Copy the copier test page before you install the E-710.

If the copied image indicates that the copier needs adjustment, inform the customer. After getting approval, complete the copier service needed.

Check the network.

Verify that the network is functioning before you attach the E-710.

- Ask the network administrator to print a document on a shared printer over the network.
- Ask the network administrator to verify the computer and network requirements as specified in *Getting Started*, one of the documents provided in the Media Package.

Remove the Controller Interface cover.

See the procedure on page 2-4.

Install the Controller Interface Type I kit.

See the installation procedure in Appendix B, “Controller Interface Type I.”

Removing the Controller Interface cover

In order to access the Controller Interface and install the E-710, first remove the Controller Interface cover.



Before removing the Controller Interface cover, shut down the copier according to the following procedure. Follow standard ESD (electrostatic discharge) precautions while handling components.

TO SHUT DOWN THE COPIER WHEN THE E-710 IS NOT INSTALLED

NOTE: Only use this procedure when the E-710 is not installed in the copier. To shut down the copier when the E-710 is installed, see “To shut down the system” on page 2-11.

1. **Make sure the copier is not in use. Power off the copier using the main power switch on the side of the copier.**
2. **Disconnect the copier power cable from the wall outlet, then disconnect any external cables.**

2 Installation

TO REMOVE THE CONTROLLER INTERFACE COVER

1. Make sure the copier is powered off (see page 2-3).
2. Remove the Controller Interface cover from the back of the copier (4 screws).
Set aside the Controller Interface cover and screws so you can replace them later.

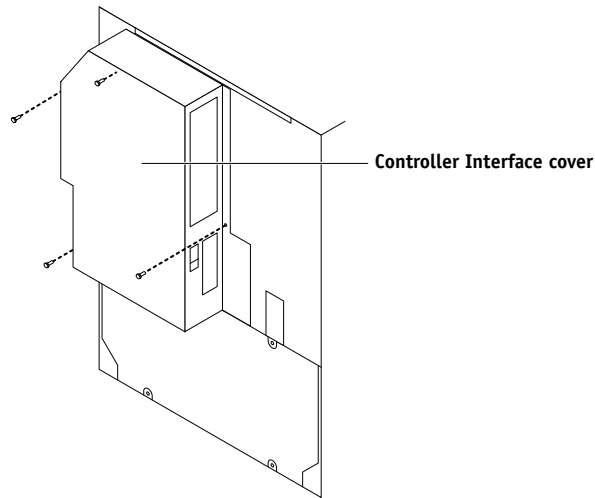


FIGURE 2-2 Removing the Controller Interface cover

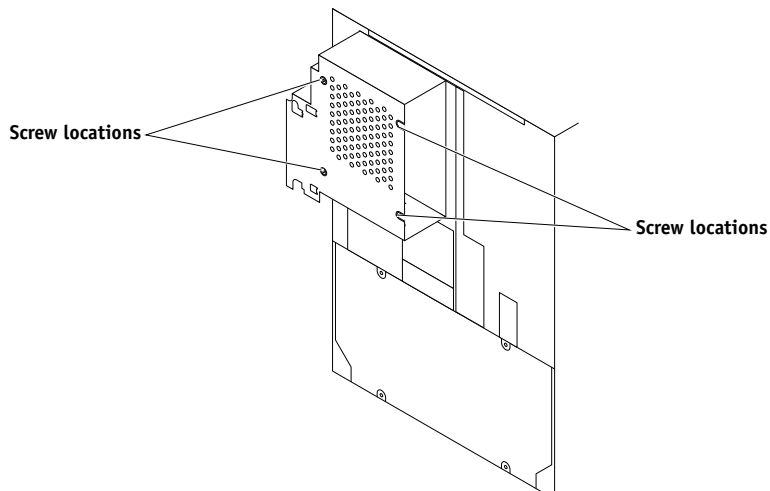


FIGURE 2-3 E-710 screw locations

The area for the E-710 is now accessible, as shown. When installed, the E-710 is secured to the Controller Interface by 4 screws. Make sure the entire Controller Interface Type I kit is installed before attempting to install the E-710. See Appendix B, "Controller Interface Type I."

2

Removing the Controller Interface cover

Installing the E-710 in the copier

TO INSTALL THE E-710

1. **Observe the top and bottom slide guides inside the Controller Interface unit and on the outside of the E-710.**

Make sure the slide guides inside the Controller Interface have approximately a 30 degree lead-in angle. If necessary, bend them to create the proper angle (see Figure 2-4).

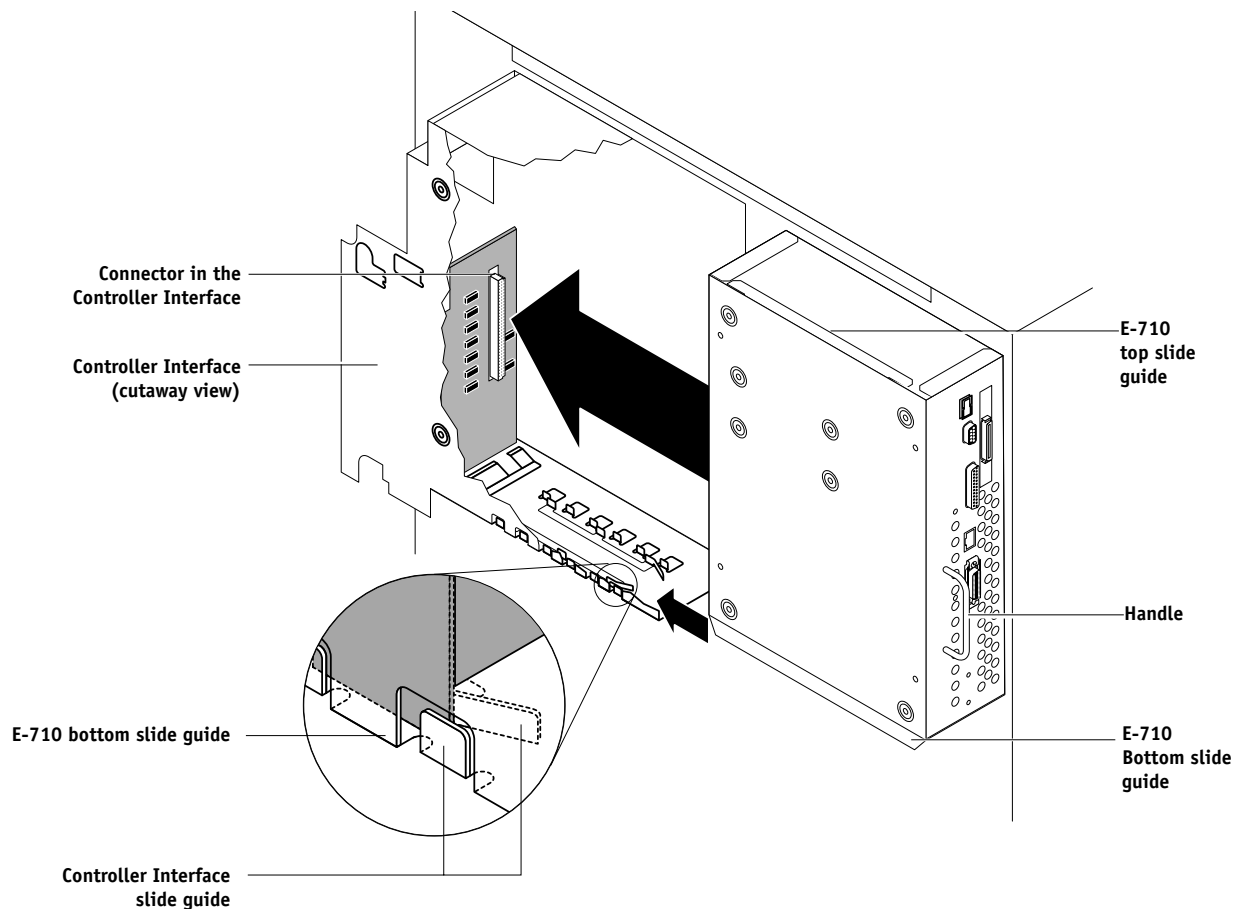


FIGURE 2-4 Installing the E-710 in the Controller Interface

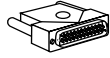
2. **Hold the E-710 by the handle and slide it into the Controller Interface. Use the slide guides on the E-710 and inside the Controller Interface to align the E-710.**



Make sure the E-710 is aligned inside both the top and bottom slide guides. If misaligned, the copier interface connector on the video interface board can be damaged.

3. **Push the E-710 until its copier interface connector mates securely to the connector in the Controller Interface.**

2 Installation



Installing the System Enablement key

This section describes how to install the System Enablement key on the E-710.

TO INSTALL THE SYSTEM ENABLEMENT KEY



NOTE: The E-710 will not function without the System Enablement key installed. Do not remove or install the System Enablement key while the E-710 is powered on.

1. **Unpack the System Enablement key that shipped with the E-710.**
2. **With the system powered off, install the System Enablement key directly to the parallel port on the E-710 (see Figure 2-5).**

Tighten the two screws on the System Enablement key to secure it to the parallel port.

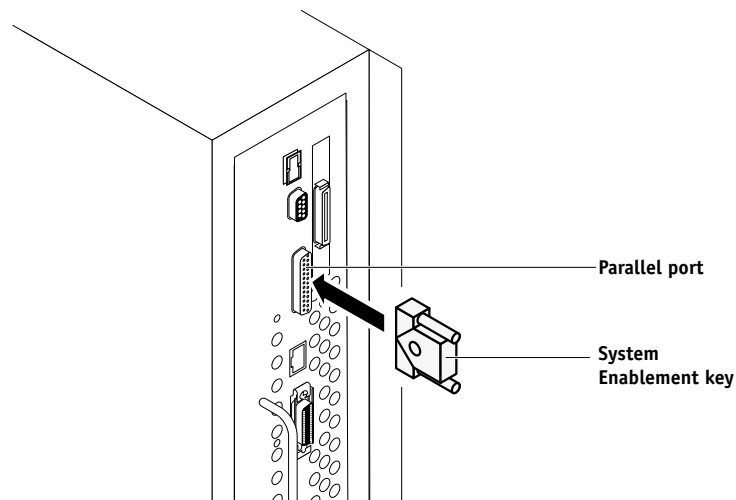


FIGURE 2-5 Installing the System Enablement key

Reassembling the copier

Fully reassemble the copier before applying power to verify E-710 functionality.

TO REASSEMBLE THE COPIER

1. **Secure the E-710 to the Controller Interface with the 4 screws that shipped with the E-710.**
For the screw locations, see Figure 2-3 on page 2-4.
2. **Replace the Controller Interface cover (4 screws).**
See Figure 2-2 on page 2-4.
3. **Connect the main power cable to the wall outlet and to the copier.**

2 Reassembling the copier

Initial startup

Once the E-710 is installed in the copier, you are ready to start the unit up.

TO STARTUP THE E-710

1. **Power on the copier.**
2. **If the Select Language screen is displayed, display the language of your choice, press the Enter key, then wait for the Setup screen to display.**

The first time the copier is powered on following installation of Controller Interface Type I components and the E-710 (or following the reinstallation of system software), you are prompted to select the language to be used for both the E-710 Operation Panel and special E-710 pages, such as the Configuration page. Use the up and down arrows to cycle through the languages available.

The language you choose also determines the default paper size of the special E-710 pages (such as the Configuration page). Except for English, any language you choose sets the default paper size of the special pages you print to metric (A4, B4). When English is selected, you are prompted to specify “UK” or “other.” Specifying “UK” sets the default paper size to metric (A4, B4); specifying “other” sets the default paper size to Letter (see the *Configuration Guide* for more details).

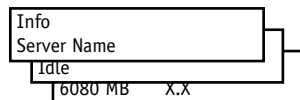
If you select a different language, the prompt to reboot appears in the language you selected. Press the Enter key to reboot then wait for the Setup screen to be displayed. To change the language again, you must reinstall system software.

3. **If the Setup screen is displayed, select Server, Printer, Network, and Exit Setup.**

Before you can exit Setup, you must first enter Server Setup, Network Setup, and Printer Setup and save changes. Enter each Setup, press the Cancel key, and when prompted to save changes, select Yes.

It is the network administrator’s responsibility to configure Setup according to the network and user environment. At this stage, default settings in Setup are adequate although they may not be optimal for the user’s environment. Refer the network administrator to the *Configuration Guide* for Setup information.

4. **Allow the system to proceed to the Info screen to confirm that the E-710 is operating normally. Scroll down to display E-710 status.**



Once the E-710 reaches the Info screen, you are ready to print a Test Page and then connect the E-710 to the network (see “Printing a Test Page” on page 2-8).

2 Installation

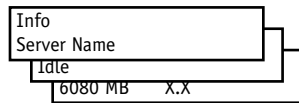
Printing a Test Page

Before connecting the E-710 to the network, print a Test Page to verify that the E-710 is embedded properly in the copier and working. The Test Page is a file that resides on the E-710 hard disk drive.

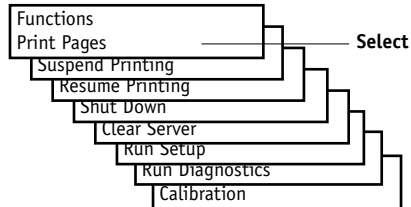
TO PRINT A TEST PAGE

1. **If the copier is powered off, power it on.**
2. **Wait while the E-710 and the copier perform their startup sequences.**

The E-710 displays the Info screen when ready. The copier beeps when ready. Scroll down to display E-710 status.



3. **Press the Menu key to access the Functions screen.**
4. **Select Print Pages.**



5. **Select Test Page.**
6. **Examine the Test Page.**

Successfully printing the Test Page allows you to confirm that the E-710 is functional and connected properly to the copier. Poor quality may indicate a need to service or adjust the copier, not the E-710.

2 Printing the Configuration page

Printing the Configuration page

The Configuration page can be helpful during installation, setup, and service. After installation of the E-710 and before any default settings are changed, you can obtain a record of the defaults by printing the Configuration page.

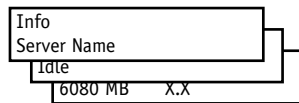
After the physical connection to the network is made, the network administrator can customize Setup options according to the network and user environment. Using the Configuration page as a guide can help speed up this process. For more information, see the *Configuration Guide*.

Before you perform any service procedure, you should print the E-710 Configuration page, if possible, so that you are prepared to return the settings to their former configuration, if necessary.

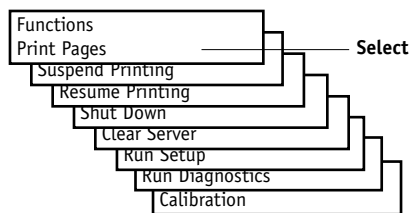
TO PRINT THE CONFIGURATION PAGE

1. If the copier is powered off, power it on.
2. Wait while the E-710 and the copier perform their startup sequences.

The E-710 displays the Info screen when ready. The copier beeps when ready. Scroll down to display E-710 status.



3. Press the Menu key to access the Functions screen.
4. Select Print Pages.



5. Select Configuration.
6. Save the Configuration page for future reference.

2 Installation

Connecting the E-710 to the network

The E-710 board provides connectivity to an Ethernet network, either thinnet, thicknet, or twisted pair.

Ethernet network connection

The E-710 board has an external Ethernet 10BaseT/100BaseT RJ-45 connector for attaching a Category 3 or Category 5 unshielded twisted pair (UTP) network cable (see Figure 2-6). Category 5 is required for 100BaseT.

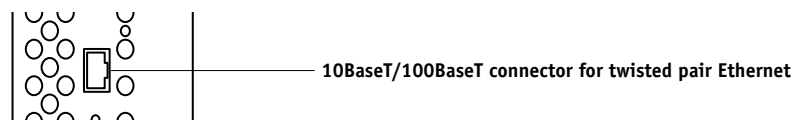


FIGURE 2-6 E-710 network connectors

TO CONNECT A TWISTED PAIR CABLE TO THE E-710

A Category 5 unshielded twisted pair (UTP) network cable must be used for 100BaseT. The cable connects to the RJ-45 connector on the E-710.

1. **Before connecting the E-710 to any network device, power off the copier according to the section “Rebooting, shutting down, and restarting the E-710” on page 2-11.**
2. **Connect the network cable to the RJ-45 connector on the E-710.**
3. **Power on the system, then wait for the E-710 Operation Panel to display Idle.**
4. **Configure Setup options.**

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

5. **After configuring Setup options, verify the network connection.**

Once the network connection has been made and the E-710 has the correct Setup configuration and is Ready, the E-710 should be available on the network.

The network administrator should perform any additional network Setup, verify the network connection, verify that the E-710 appears in the list of printers, and print a few test documents from a networked computer that will use the E-710.

See the *Configuration Guide* for more information.

2

Connecting the E-710 to the network

Rebooting, shutting down, and restarting the E-710

Generally, you can leave the E-710 and the copier running all the time. This section describes how to reboot, shut down, and restart the system when necessary.



Warning: To avoid damaging the E-710 hard disk when the E-710 is installed in the copier, you must use the procedures in this section when you shut down the system or power off the copier.

You shut down the E-710 by selecting menu options in the E-710 Operation Panel. Make sure the E-710's Operation Panel displays Idle before you begin the shut down process.

There are three ways to shut down the E-710:

- Restart Server—Resets the E-710.
- Shut Down System—Shuts down the E-710.
- Reboot System—Shuts down and then reboots the E-710.

TO RESTART THE E-710

1. Wait until the Operation Panel displays Idle.
2. On the Operation Panel press the Menu key to access the Functions menu.
3. Use the Down arrow to scroll to Shut Down. Press the Enter key.
4. Use the Down arrow to scroll to Restart Server. Press the Enter key.

If an error occurs during startup, the activity light flashes red. Check the Operation Panel display for details of the error.

TO SHUT DOWN THE SYSTEM

1. Wait until the Operation Panel displays Idle.
2. On the Operation Panel press the Menu key to access the Functions menu.
3. Use the Down arrow to scroll to Shut Down. Press the Enter key.
4. Use the Down arrow to scroll to Shut Down System. Press the Enter key.

The message “Shut down in progress” appears, followed by the message “It is now safe to power off system.” After both messages have displayed, turn off the copier using the main power switch.

2

Installation

TO REBOOT THE SYSTEM

1. Wait until the Operation Panel displays Idle.
2. On the Operation Panel press the Menu key to access the Functions menu.
3. Use the Down arrow key to scroll to Shut Down. Press the Enter key.
4. Use the Down arrow key to scroll to Reboot System. Press the Enter key.

3 Overview

Chapter 3: Using the E-710 Operation Panel

This section describes the functions on the E-710 Operation Panel. The E-710 Operation Panel is an area dedicated to E-710 functions. It is located on the top left side of the copier Operation Panel. The keys on the E-710 Operation Panel allow you to access and monitor different features of the E-710. This guide does not attempt to describe all functions of the Operation Panel, only those functions that pertain to the E-710. For information on installing the E-710 Operation Panel, see the installation procedure in Appendix B, “Controller Interface Type I.”

Overview

Current status and Setup information are displayed on the E-710 Operation Panel. Print activity can be monitored in the display window and specific E-710 functions (such as printing a Test Page) are controlled using the keys on the E-710 Operation Panel. Three LEDs assist in providing status information.

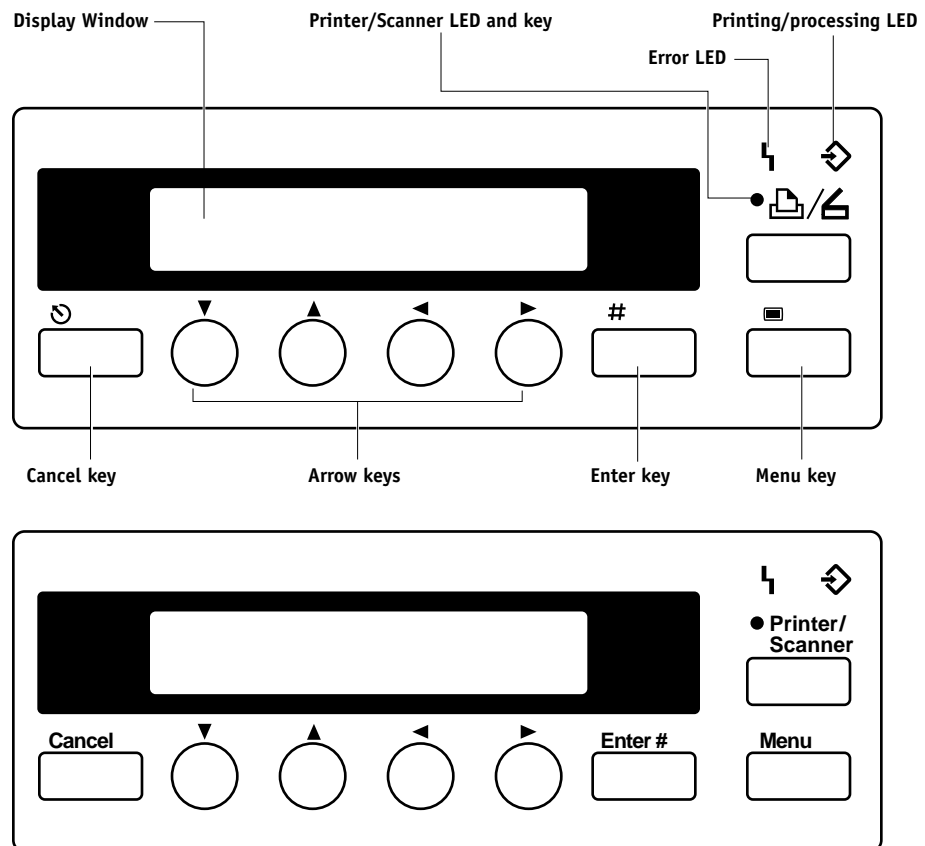










FIGURE 3-1 E-710 Operation Panel (International and U.S. models)

3

Using the E-710 Operation Panel






Keys

Once the E-710 board is installed in the copier, use the E-710 keys on the Operation Panel to perform the following functions:

Key (International)	Key (U.S.)	Description:
	Menu	From the Info screen, display the Functions screen when idle and the run-time screen when a job is in process.
	Enter #	Select the currently displayed menu item and proceed to the next screen. Cancel a job from the printing or processing screen.
	▼	Scroll down the screen to display menu items or part of a text message. After the bottom of the screen is reached, the top of the screen is displayed.
	▲	Scroll up the screen to display the previous menu item or part of a text message. When the top of the screen is reached, the bottom of the screen is displayed.
	▲	Backspace the cursor to the text-entry position to the left. In a text field, it deletes the character to the left.
	▶	Advance the cursor to the text-entry position to the right.
	Cancel	In the menus, return to previous level.
	Printer/Scanner	Switch from copier mode to Printer/Scanner mode. This feature is available only when SP mode 6-910-000 is set to 1.

Activity indicators

Once the E-710 board is installed in the copier, the red and green activity lights on the E-710 Operation Panel turn on and stay solid or flash on and off to indicate the following:

Activity indicator (International)	Activity indicator (U.S.)	Description:
		<ul style="list-style-type: none">Flashing red—An error prevents the E-710 from processing a job (see the <i>Printing Guide</i> for more information).Solid red (more than 30 seconds)—A communication error has occurred between the E-710 and the copier.
		<ul style="list-style-type: none">Flashing green—The E-710 is processing a job or communicating with a remote computer.
	Printer/Scanner	<ul style="list-style-type: none">Solid green—The E-710 is using the copier to print or scan a job.

3 Screens

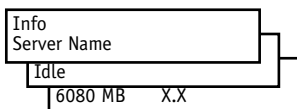
Screens

When the copier is idle, E-710 status information and functions are available from the E-710 Operation Panel. You can monitor print activity, control E-710 functions, and access the E-710 Setup menus.

When a job is sent to the copier, the E-710 Operation Panel cycles through the RIP and Print screens, and then displays the Info screen. If an error occurs, the Alert screen is displayed with a message describing the error. A Startup screen is also available. It is made available when the system is powered on or when you reboot the system. It has options for setting up the printer, rebooting the E-710, and installing system software.

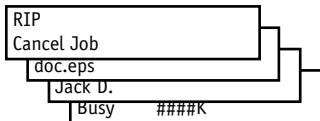
These screens contain the following information:

Info status screen



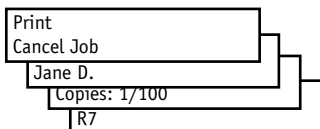
The first line of this screen displays the printer's name on the network. Scrolling down displays the status of the E-710, the amount of disk space available on the hard disk drive, and the current system software version. Normally, if no jobs are currently being processed or printed, the Info screen displays Idle (a job may be between processing and printing). The Info screen is the default screen. Press the Menu key to display the Functions screen.

RIP status screen



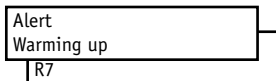
Appears when a job is being processed. Displays the name of the file, the name of the user who sent the job, the status, and the amount of the job in kilobytes that has been processed so far. To cancel the job, display Cancel Job and press the Enter key. Press the Cancel key to display the Functions screen.

Print status screen



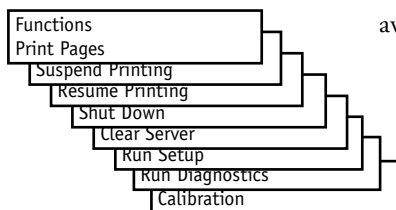
Appears when a job is being printed. Displays the name of the user who sent the job, the number of copies printed so far, and the number of copies requested. To cancel the job, display Cancel Job and press the Enter key. Press the Cancel key to display the Functions screen.

Alert screen



Displays a message if an error or other Alert condition arises. Pressing the down arrow key may be necessary to view the entire error message. If other screens are being accessed, the Alert screen is redisplayed frequently until the condition is resolved. Press the Cancel key to display the Functions screen.

Functions screen



Gives you access to administrative functions not normally performed from a remote workstation (see "Functions screen" below for information on the available functions). Press the Cancel key to display the Info screen.

3

Using the E-710 Operation Panel

Functions screen

The Functions screen allows you to perform a variety of administrative functions that do not affect print jobs of other users. Use the up and down arrow keys to scroll through the menu items. Press the Enter key to select the menu item displayed. Press the Cancel key or do nothing to return to the Info screen. The following options are available from the Functions screen:

Print Pages—Enables you to print special pages from the copier:

- **Test Page**—Prints the Test Page resident on the E-710 hard disk drive. The Test Page confirms that the E-710 is properly installed in the copier and allows you to view information about color and grayscale to troubleshoot E-710 functions. Test Page information includes but may not be limited to: Server name, Printer name, Calibration, Measurements, Target, Date & Time, CMYK Simulation, RGB Source, Rendering Style, Color Mode. For more information see the *Printing Guide* and the *Configuration Guide*.
- **Configuration**—Prints the current device configuration, including information about all current Setup settings, calibration profile, and the Ethernet address of the E-710 board.
- **Job Log**—Prints the log of the last 55 jobs. For more information about the job log, see the *Printing Guide*.
- **Help Map**—Prints the E-710 Control Panel Map, useful when navigating through the different E-710 Setup screens.
- **Color Charts**—Prints the color reference charts, including swatches of the RGB, CMY, and Pantone colors available from the E-710.
- **Font List**—Prints a list of all the fonts resident on the E-710 hard disk drive.

Suspend Printing— This option interrupts the current print job so you can use the copier to make copies. If it has not finished processing, the RIP continues but the job won't print. You can then select Resume Printing.

Resume Printing—Resumes printing after interrupting the print job in order to make copies.

Shut Down—This option gives you a choice of three shut down levels for the E-710:

- **Restart Server**—Resets the E-710.
- **Shut Down System**—Shuts down the E-710.
- **Reboot System**—Shuts down and then reboots the E-710.

Clear Server—Enables you to clear all queued print jobs from the E-710.

3 Screens

- **Run Setup**—Allows you to access E-710 Setup options in order to configure the network and printing environment. Typically it is the network administrator's responsibility to configure Setup according to the network and user environment. Setup is required the first time the copier is powered on after new E-710 system software is installed. You must enter and save changes to Server, Network, and Printer Setup after installing system software.

Setup options include: Server, Network, Printer, PS Setup, Color Setup, Job Log Setup, and Change Password. See the *Configuration Guide* for detailed information on Setup.

NOTE: Make sure the network administrator is available to customize Setup options according to the network and user environment.

Run Diagnostics—Select this option to access:

- **Video Diagnostics**—Runs diagnostics on the E-710 video interface (see “Video interface board diagnostics” on page 5-7).

Calibration—Allows the network administrator to calibrate the E-710 using the copier's built-in scanner as a densitometer. See the *Color Guide* for detailed information on calibration.

4

Overview

Chapter 4: Service Procedures

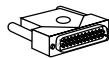
Generally, the E-710 does not require regular maintenance. Use the procedures in this chapter to inspect, remove, reseal, or replace major hardware components and also to install system software.

Overview

This chapter includes information on the following:

- Cable connections (page 4-5)
- E-710 board (page 4-8)
- E-710 board components
 - Video interface board (page 4-11)
 - SCSI interface board (page 4-13)
 - DIMMs (page 4-14)
 - Battery (page 4-15)
 - CPU fan (page 4-16)
- Exhaust fan (page 4-17)
- Hard disk drive (page 4-18)
- System software (page 4-23)

For information on how to install the Controller Interface that encloses the E-710, see the installation procedure in Appendix B, “Controller Interface Type I.”



For information about the System Enablement key connected to the E-710's parallel connector, see “Installing the System Enablement key” on page 2-6.

See Figure 4-1 on page 4-2 for an overview of E-710 board components. Replacement parts are available from your authorized service representative.



When performing the procedures described in this chapter, see “Precautions” on page -xv and “Tools you will need” on page -xvi.

The E-710 system software is installed on the hard disk drive at the factory. You need to re-install system software if you:

- Replace the hard disk drive
- Upgrade to a more recent version of the system software

4 Service Procedures

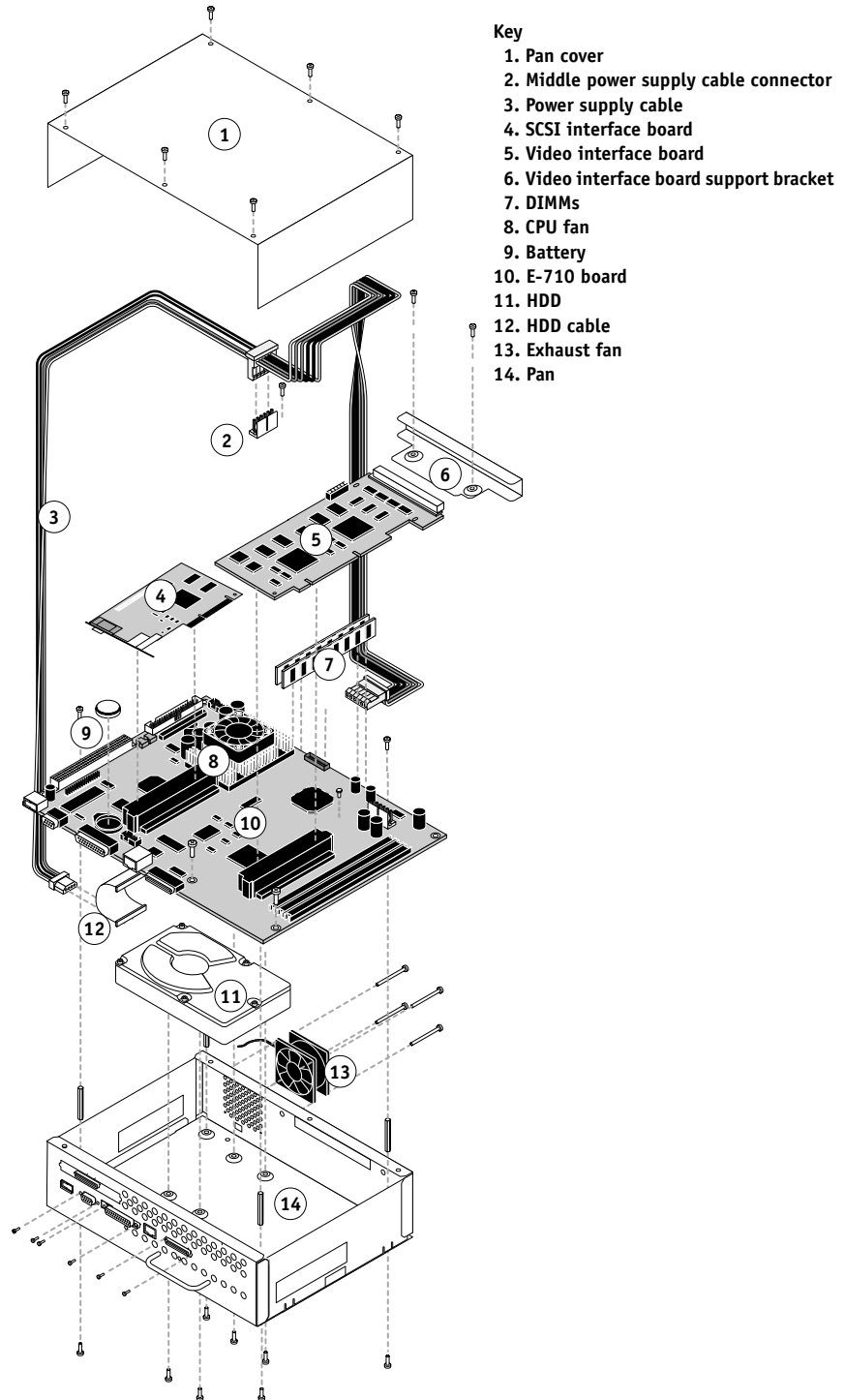


FIGURE 4-1 Exploded view of E-710

4 Overview

Accessing the E-710

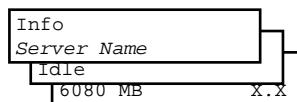


Be sure to review the section “Rebooting, shutting down, and restarting the E-710” on page 2-11 before unplugging the copier and removing the E-710. Always use the following procedures when accessing the E-710. Make sure you attach an ESD grounding wrist strap and follow standard ESD (electrostatic discharge) precautions before following this procedure.

TO SHUT DOWN THE COPIER

1. **Make sure that the E-710 Operation Panel displays Idle. Review the section “Rebooting, shutting down, and restarting the E-710” on page 2-11 before powering off the copier.**

When Printing or Ripping appears on the E-710 Operation Panel, the E-710 is currently processing. Ready appears in the Info screen when the E-710 has finished processing and is idle.



2. **Power off the copier using the power switch on the side of the copier.**
3. **Unplug the power cable from the wall outlet.**

TO ACCESS THE E-710

1. **Shut down the E-710 as described in “To shut down the system” on page 2-11.**
2. **Power off the copier.**
3. **Remove the Controller Interface cover from the back of the copier (4 screws).**
Set aside the Controller Interface cover and screws so you can replace them later.

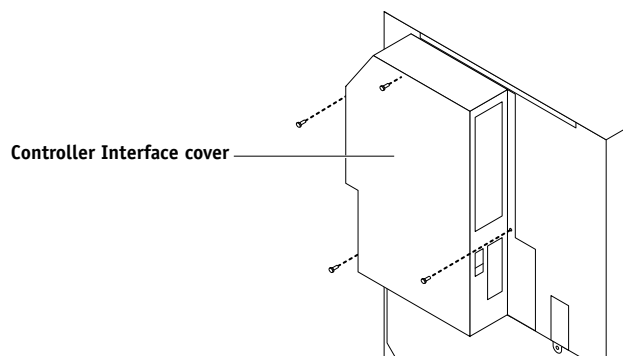


FIGURE 4-2 Removing the Controller Interface cover

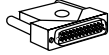
4 Service Procedures

4. Remove the 4 screws that attach the E-710 to the Controller Interface.

Set aside the screws so you can replace them later.

5. Use the handle to pull out the E-710 from the Controller Interface.

Set the E-710 on a stable static-free surface.



6. Remove the System Enablement key attached to the parallel connector.

For information about the System Enablement key connected to the E-710's parallel connector, see "Installing the System Enablement key" on page 2-6.

7. Remove the six screws that secure the pan cover. Lift off the pan cover and set it aside.

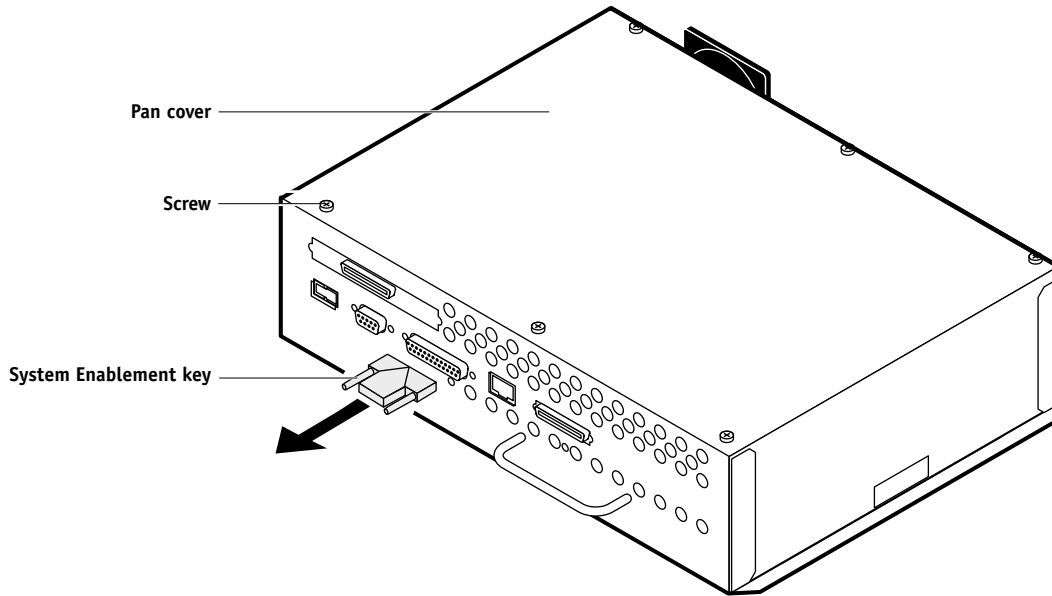


FIGURE 4-3 Removing the pan cover

4

Overview

Checking E-710 internal connections

The most common causes of hardware problems are faulty and loose connections. Before you conclude that any board or component has failed, remove, inspect, and reseal all appropriate connections, and then verify that the problem still occurs.

TO CHECK BOARD AND CABLE CONNECTIONS



- 1. Before you touch any parts inside the E-710, attach a grounding wrist strap. Touching the pan also discharges static electricity.**
- 2. Place the E-710 so the internal components of the E-710 are facing up.**
- 3. Make sure the DIMMs are properly installed (see “To replace a DIMM” on page 4-14 for the proper procedure).**
- 4. Make sure the battery is properly installed (see “To replace the battery” on page 4-15).**
- 5. Make sure the video interface board is properly installed (see “To replace the video interface board” on page 4-12).**

- 6. Inspect the copier interface connector on the video interface board.**

If any pins are pushed in or bent, gently fix them with a pair of small needlenose pliers.

- 7. Make sure the SCSI interface board is properly installed (see “To replace the SCSI interface board” on page 4-13).**

- 8. Inspect the HDD cable to make sure it is intact.**

Faulty ribbon cables are easily overlooked. Check the contact point between the cable and the connector to ensure that they have not separated. If a ribbon cable is suspect, substitute it with a tested cable.

- 9. Check the fan cables of the exhaust fan and the CPU fan.**

Make sure the cables are intact. Also, check airflow direction. When the fans are installed properly:

- An arrow on the exhaust fan points away from the E-710
- The top side of the CPU fan faces up and away from the CPU heatsink. Identify the top side of the CPU fan by locating its large, counter-sunk screw holes.

- 10. Make sure the power cable is intact and properly connected to the HDD, video interface board, and E-710 board.**

The power cable has 3 connectors. For the best fit inside the chassis, the middle connector is attached to the video interface board and the 6-wire end connector is attached to the E-710 board. The 4-wire end connector (to the HDD) is keyed, however, the connectors to the video interface board and the E-710 board are not keyed.

4 Service Procedures



Make sure the connectors to the video interface board and the E-710 board are installed so that the lip of the connector fits under the ridge of the board connector. If oriented backwards, the boards can be damaged. See the figures below.

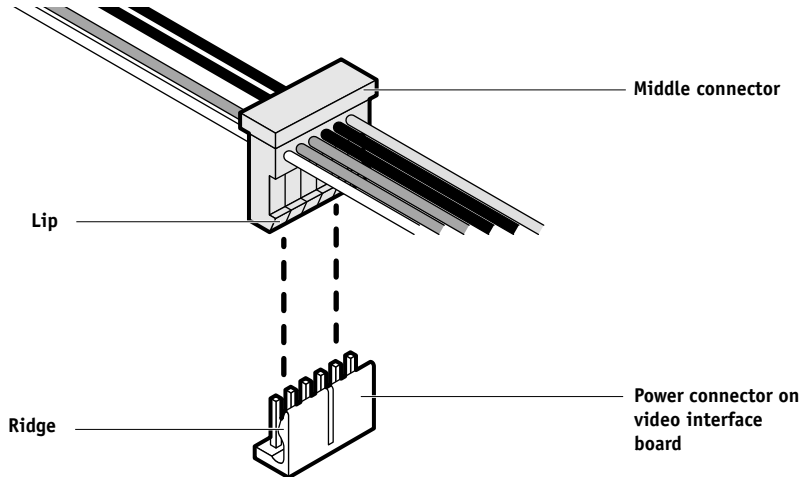


FIGURE 4-4 Power cable middle connection

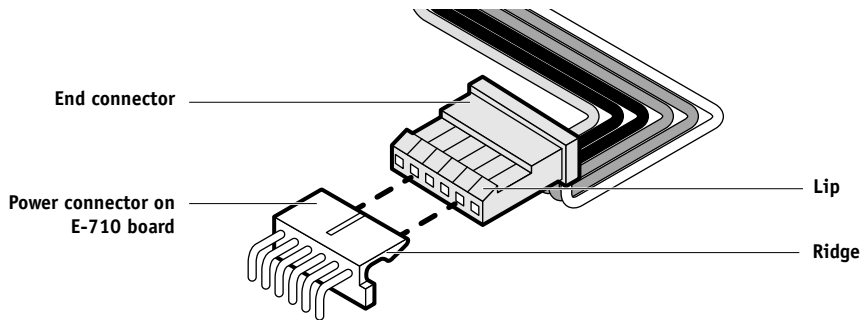


FIGURE 4-5 Power cable end connection

4

Overview

Replacing parts of the E-710

The E-710 board has a 366MHz Intel Celeron CPU. The E-710 board provides the Ethernet networking interface, controls hard disk drive functions, and handles the communication between the E-710 and external devices. The E-710's video interface board controls the video image data transferred to and from the copier.

When replacing any of its components, make sure to protect the E-710 board from excessive bending and flexing. When possible, remove the E-710 board from the pan, remove the standoffs from the board's corners, and lay the E-710 board flat before servicing.

Following are instructions for accessing, removing, and replacing the following parts of the E-710:

- E-710 board
- E-710 board components including
 - Video interface board
 - SCSI interface board
 - DIMMs
 - Battery
 - CPU fan
- Exhaust fan attached to the pan
- HDD

NOTE: For information about the System Enablement key connected to the E-710's parallel connector, see "Installing the System Enablement key" on page 2-6.



Make sure to attach an ESD grounding wrist strap and follow standard ESD (electrostatic discharge) precautions before following this procedure.

4 Service Procedures

E-710 board

The E-710 board is installed in the pan on four standoffs. This section includes instructions for replacing the E-710 board and E-710 board components.

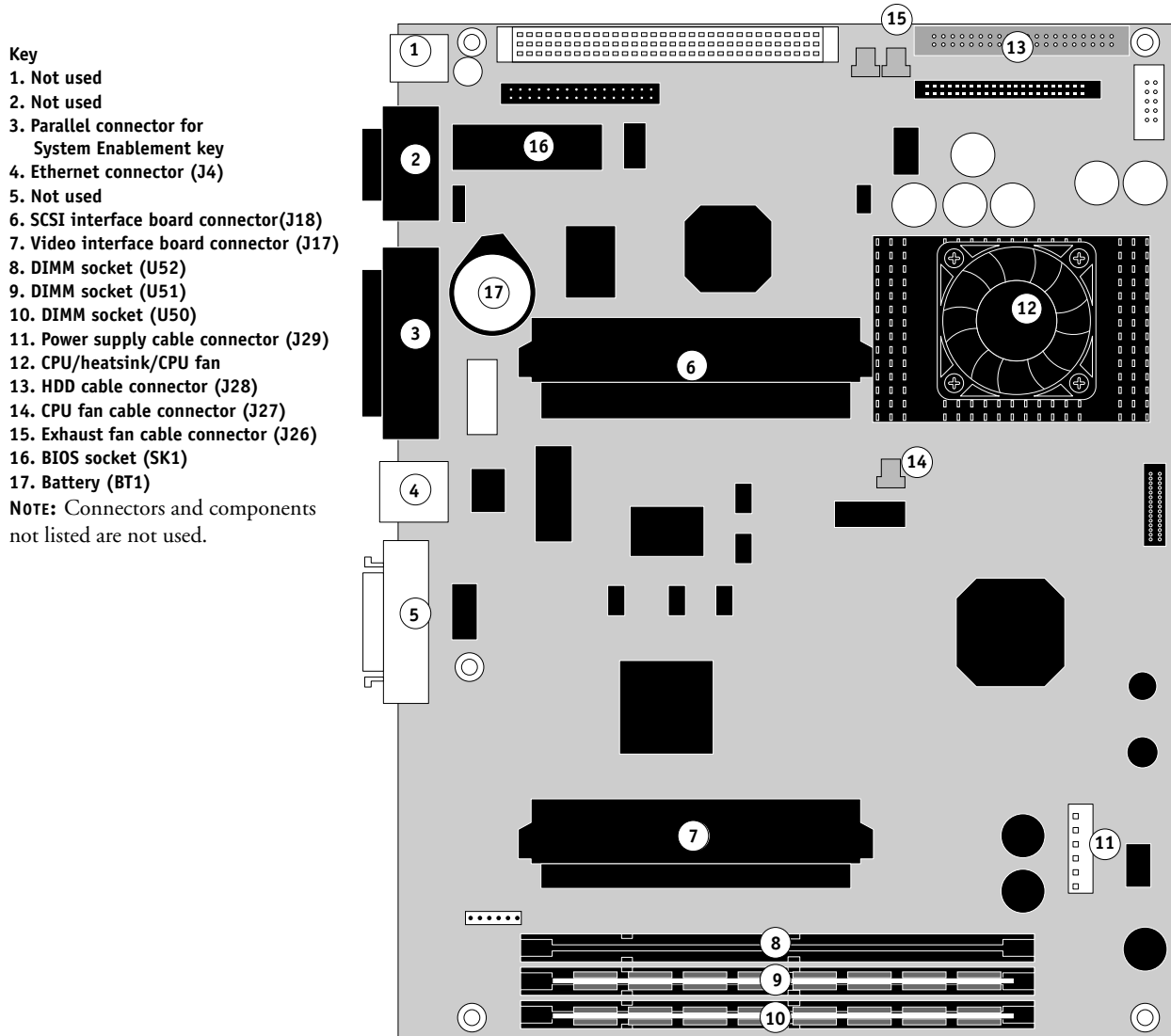


FIGURE 4-6 E-710 board layout

4 Overview

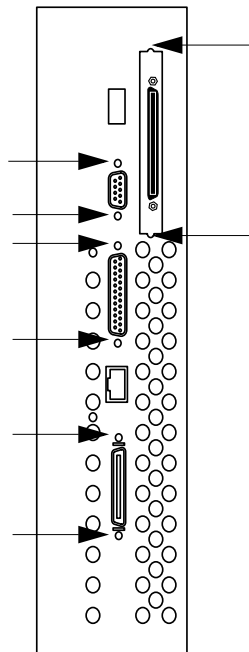
TO REMOVE THE E-710 BOARD

1. Shut down the E-710 as described in the section "Rebooting, shutting down, and restarting the E-710" on page 2-11.
2. Power off the copier
3. Access the E-710 as described on page 4-3.
4. Remove the screws on the face plate that secure the board connectors to the face plate as shown below.

Make sure to keep each set of screws together.

5. Remove the video interface board from E-710 board connector J17 (see page 4-11).
6. Remove the SCSI interface board from E-710 board connector J18 (see page 4-13).
7. Remove the video interface board support bracket from the pan (see Figure 4-1 on page 4-2 for bracket location). Set the two screws and the support bracket aside so you can replace them later.
8. Remove the exhaust fan cable from E-710 board connector J26 (see "Exhaust fan" on page 4-17).
9. Remove the HDD cable from E-710 board connector J28.

Using a ribbon cable connector extractor is recommended.



NOTE: Use a #1 Phillips screwdriver for the SCSI connector and the parallel connector.

NOTE: Use a 3/16" hex nut driver to remove the standoffs on the 9-pin D connector and the 25-pin D connector.

FIGURE 4-7 External E-710 connectors

4

Service Procedures

10. Remove and set aside the four screws that secure the E-710 board to the standoffs.
11. Remove the power cable from E-710 board connector J29.
12. Completely remove the E-710 board from the pan. Place the board on a stable antistatic work surface or into an antistatic bag.

Tilt the board as necessary to make sure the connectors clear the pan as you remove the board.

TO REPLACE THE E-710 BOARD

NOTE: To ensure the copier interface connector (on the video interface board) is properly aligned, do not tighten screws until all components are in place.

1. Place the E-710 board inside the pan so the external connectors fit into the pan cutouts.
2. Connect the end connector of the power cable to E-710 board connector J29.



Improper connection of the power cable can damage the E-710. See “Checking E-710 internal connections” on page 4-5 and Figure 4-5 on page 4-6.

3. Align the E-710 board with the pan standoffs and then replace the four mounting screws into the pan standoffs.
4. Install the screws (and washers, if present) and standoffs that attach the external connectors to the pan (see Figure 4-7 on page 4-9).

Use a 3/16” hex nut driver to install the standoffs on the 9-pin D connector and the 25-pin D connector. Use a #1 Phillips screwdriver for the SCSI connector and the parallel connector.

5. Connect the HDD cable to E-710 board connector J28.
6. Connect the exhaust fan cable to E-710 board connector J26.
7. Attach the video interface board support bracket to the pan (see Figure 4-1 on page 4-2) using the two screws you removed earlier.
8. Install the video interface board in E-710 board connector J17 (see “To replace the video interface board” on page 4-12).
9. Install the SCSI interface board in board connector J18 (see “To replace the SCSI interface board” on page 4-13).
10. Reassemble the copier and verify functionality as described in “Restoring E-710 functionality after service” on page 4-21.
11. If you replaced the E-710 motherboard with a new one, install system software (see page 4-23). If a startup error occurs when you power on the copier, check E-710 connections. If a startup error still occurs, call your authorized service/support center.

4

Overview

Video interface board

The video interface board provides the interface between the E-710 and the copier. It connects to video interface connector J17 on the E-710 board (see Figure 4-1 on page 4-2). Print data is sent out the E-710 copier interface connector to the copier via the connector in the Controller Interface enclosure (see Figure 2-4 on page 2-5).

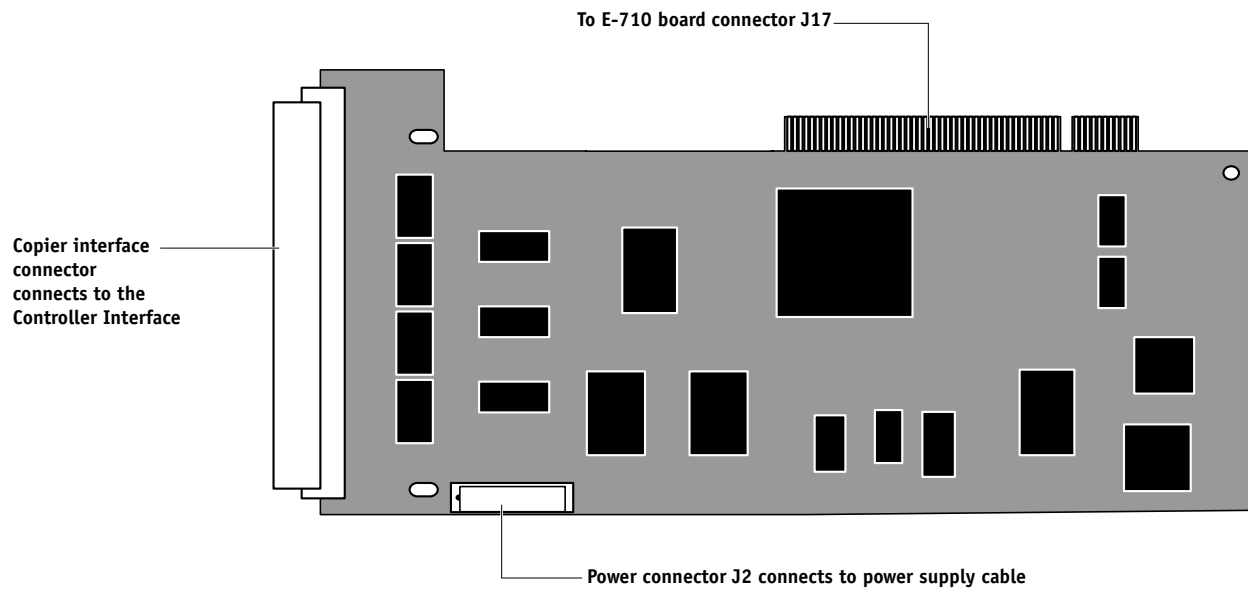


FIGURE 4-8 Video interface board layout

TO REMOVE THE VIDEO INTERFACE BOARD

1. Shut down the E-710 as described in "To shut down the system" on page 2-11.
2. Power off the copier.
3. Access the E-710 as described on page 4-3.
4. Remove the power cable from video interface board connector J2.
5. Remove and set aside the two screws that attach the video interface board to the support bracket (for screw locations, see Figure 4-1 on page 4-2).
6. Gently remove the video interface board from E-710 board connector J17.
Grasp the board at the sides. Gently pull the board straight out of the connector.
7. Carefully tilt the video interface board out of the pan.
8. Place the board in an anti-static bag.

4

Service Procedures

TO REPLACE THE VIDEO INTERFACE BOARD

NOTE: To ensure that the copier interface connector is properly aligned, do not tighten the screws until all components of the E-710 are in place.

1. **Remove the board from the anti-static bag.**
2. **Carefully tilt the video interface board into the pan and insert the video interface board into E-710 board connector J17.**

Grasp the board at the sides. Gently push the board straight into the connector. Check the visible portion of the gold fingers of the connector on the video interface board to determine if the connection is aligned properly and secure.

3. **Align the mounting holes in the video interface board with the holes in the support bracket and attach the video interface board to the support bracket (see Figure 4-1 on page 4-2) using the two screws you removed earlier.**
4. **Connect the middle connector of the power cable to video interface board connector J2.**

To avoid bending and flexing the video interface board, firmly seat the cable connector by pressing from the bottom of the board as you press the cable connector into J2.



Improper connection of the power cable can damage the E-710. See “Checking E-710 internal connections” on page 4-5 including Figure 4-5 on page 4-6.

5. **Reassemble the copier and restore functionality as described on page 4-21.**

When you reassemble the E-710, make sure to tighten all screws completely.

4

Overview

SCSI interface board

The SCSI interface board provides the interface between the E-710 and an external CD-ROM drive or other external SCSI device. It connects to connector J18 on the E-710 board (see Figure 4-1 on page 4-2).

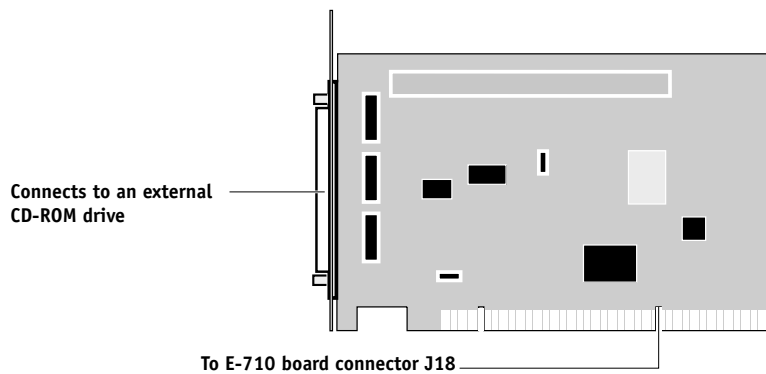


FIGURE 4-9 SCSI interface board layout

TO REMOVE THE SCSI INTERFACE BOARD

1. Shut down the E-710 as described in "To shut down the system" on page 2-11.
2. Power off the copier, then access the E-710 as described on page 4-3.
3. Remove and set aside the two screws that attach the SCSI interface board to the face plate (see Figure 4-7 on page 4-9).
4. Gently remove the SCSI interface board from E-710 board connector J18.
Grasp the board at the sides. Gently pull the board straight out of the connector.
5. Carefully lift the SCSI interface board out of the pan.
6. Place the board in an anti-static bag.

TO REPLACE THE SCSI INTERFACE BOARD

1. Remove the board from the anti-static bag.
2. Insert the SCSI interface board into E-710 board connector J18.
Grasp the board at the sides. Gently push the board straight into the connector. Check the visible portion of the gold fingers of the connector on the SCSI interface board to determine if the connection is aligned properly and secure.
3. Attach the SCSI interface board to the face plate (see Figure 4-7 on page 4-9) using the two screws you removed earlier.
4. Reassemble the copier and restore functionality as described on page 4-21.

4 Service Procedures

DIMMs

There are three DIMM sockets on the E-710 board: U52, U51, and U50. Each DIMM (dual in-line memory module) is held in place by levers at each end of its socket on the E-710 board.

NOTE: Approved DIMMs are available from your authorized service representative.

TO REPLACE A DIMM

1. To release a DIMM, push outward on the lever on each side of the DIMM.

See the following figure.

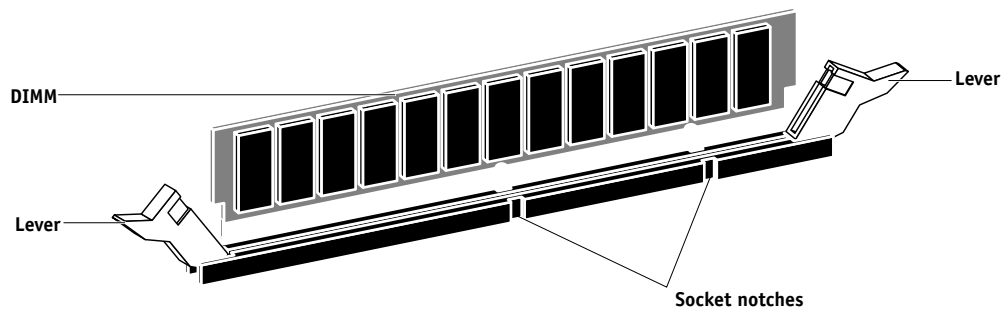


FIGURE 4-10 Releasing a DIMM

2. Slide the DIMM out of the socket.
3. To install a DIMM, slide it into the socket until the levers snap into place.

The DIMM fits the socket only one way. The two notches on the bottom of the DIMM should line up with the notches in the socket.



To avoid bending and flexing the E-710 board, firmly seat the DIMM by pressing from the bottom of the E-710 board as you press the DIMM into its socket.

Make sure that the levers close securely around the ends of the DIMM and that the DIMM is fully seated in its socket.

4. Reassemble the copier and verify functionality as described in "Restoring E-710 functionality after service" on page 4-21 or other documentation.
5. Print a Configuration page to verify the amount of memory.

4 Overview

Battery

The battery on the E-710 board is located at BT1. To replace it, use a 3V manganese dioxide lithium coin cell battery (Panasonic CR2032 or equivalent).



CAUTION: There is danger of explosion if the battery is replaced with the incorrect type. Replace only with the same type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.

ACHTUNG: Es besteht Explosionsgefahr, wenn die Batterie durch eine Batterie falschen Typs ersetzt wird. Als Ersatz dürfen nur vom Hersteller empfohlene Batterien gleichen oder ähnlichen Typs verwendet werden. Verbrauchte Batterien müssen entsprechend den Anweisungen des Herstellers entsorgt werden.

ATTENTION: Il y a risque d'explosion si la pile est remplacée par un modèle qui ne convient pas. Remplacez-la uniquement par le modèle recommandé par le constructeur. Débarrassez-vous des piles usées conformément aux instructions du constructeur.

TO REPLACE THE BATTERY

1. **Locate the battery on the E-710 board (see Figure 4-6 on page 4-8).**
2. **Carefully lift up the clip that holds the battery.**

Use caution when lifting up the clip; excessive force could cause the clip to lose its tension.

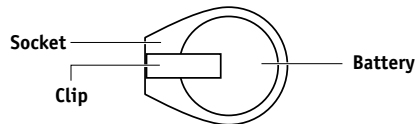


FIGURE 4-11 E-710 battery

3. **Pull the battery out of its socket and release the clip.**
4. **To insert a new battery, slide the battery into the socket under the clip with the positive (+) side facing up.**

Make sure the clip holds the battery securely in the socket.

5. **Reassemble the copier and verify functionality as described in "Restoring E-710 functionality after service" on page 4-21 or other documentation.**

NOTE: When you power on, let the Start-up diagnostics complete, then power off and power on again to initialize the realtime clock.

The date and time of day are lost when the old battery is removed. See the *Configuration Guide* for instructions on entering Server Setup to program the system date and time.

4 Service Procedures

CPU fan

An air intake fan attached to the CPU heat sink runs continuously when the copier is on.

TO REMOVE THE CPU FAN

1. Shut down the E-710 as described in “To shut down the system” on page 2-11.
2. Power off the copier.
3. Access the E-710 as described on page 4-3.
4. Remove the CPU fan cable from board connector J27.
5. Using a Phillips screwdriver, remove the four screws that attach the CPU fan to the CPU heatsink. Set aside the screws so that you can replace them later.

When using the screwdriver, make sure not to apply excessive pressure on the board.

6. Remove the CPU fan and set it aside.

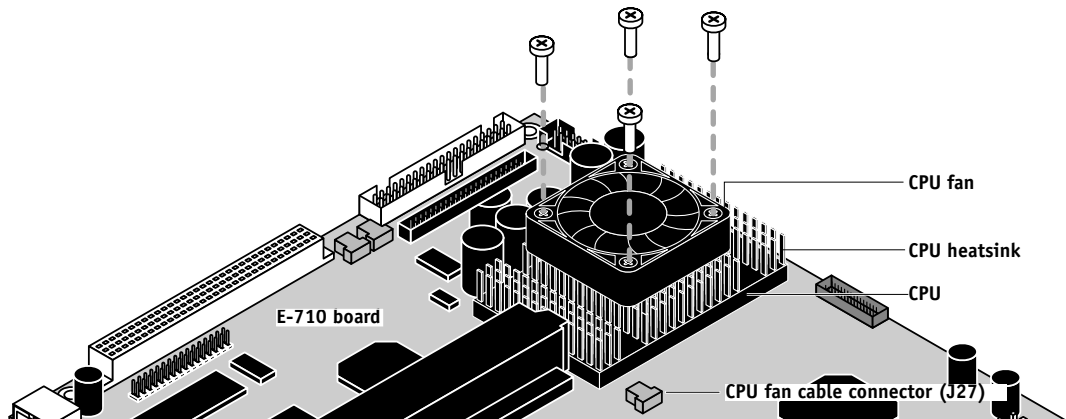


FIGURE 4-12 Removing the CPU fan

TO INSTALL THE CPU FAN

1. Position the CPU fan on top of the CPU heatsink so that the top side of the fan faces up and away from the heatsink.

The top side of the fan has large, counter-sunk screw holes.

2. Attach the CPU fan to the CPU heatsink with the four screws you removed earlier.

When using the screwdriver, make sure not to apply excessive pressure on the board.

3. Connect the CPU fan cable to connector J27.
4. Reassemble the copier and verify functionality as described in “Restoring E-710 functionality after service” on page 4-21.

4

Overview

Exhaust fan

The exhaust fan is mounted on the side of the E-710 pan and pulls warm air out of the E-710. Two arrows on the side of the fan indicate fan rotation and airflow direction. One arrow should point away from the E-710 board. The exhaust fan cable connects to E-710 board connector J26.

TO REMOVE THE EXHAUST FAN

1. Shut down the E-710 as described in “To shut down the system” on page 2-11.
2. Power off the copier.
3. Access the E-710 as described on page 4-3.
4. Remove the exhaust fan cable from E-710 board connector J26.
5. Remove the fan cable from the pan cutout.



Carefully cut any tie-wraps that join the fan cable to the power cable and to the standoff for the E-710 board. Avoid cutting either cable.

6. Remove the four screws that secure the exhaust fan to the side of the E-710 pan.
Set aside the screws and fan.

TO REPLACE THE EXHAUST FAN

1. Align the exhaust fan with the four holes in the side of the pan.
Make sure that a direction arrow imprinted on the side of the fan is pointing away from the E-710.
2. Insert the fan cable through the pan cutout.
3. Replace the four screws through the fan into the side of the pan.
4. Replace the exhaust fan cable on E-710 board connector J26.



5. Drape the cable low and fully inside the pan to prevent the cable from being cut by the pan cover when you reassemble the E-710.

Tie-wraps can be used to join the fan cable to the power cable and to the lower part of the standoff for the E-710 board.

6. Reassemble the copier and verify functionality as described in “Restoring E-710 functionality after service” on page 4-21.

4

Service Procedures

Hard disk drive

The factory-installed hard disk drive (HDD) is formatted and loaded with all E-710 software, including operating software, system software, network drivers, and printer fonts. Because the HDD is used to store spooled print jobs, available disk space is displayed on the Info screen. Disk space is also listed on the Configuration Page (see “Printing the Configuration page” on page 2-9).

If you are replacing the HDD, you need:

- The appropriate System Software CD and documentation
- The latest version of user software (for networked computers that g be printing to the E-710)

Proper handling

Handle the HDD with care:

- Use proper ESD practices when grounding yourself and the E-710.
- Keep magnets and magnetic-sensitive objects away from the HDD.
- Loosening the screws on the top of the HDD voids the warranty.
- Never drop, jar, or bump the HDD.
- Handle the HDD by its sides and avoid touching the printed circuit board.
- Allow the HDD to reach room temperature before installation.

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

If the HDD needs to be replaced, install the system software on the new HDD. Replacement drives are shipped without E-710 system software installed.



Make sure you attach an ESD grounding wrist strap and follow standard ESD (electrostatic discharge) precautions before handling E-710 components.

4 Overview

TO REMOVE THE HDD

1. Print the following from the Functions menu:

- Configuration page —records the customer's current Setup configuration. After you install a new drive, you install system software on the drive. The Setup configuration is reset to the default configuration when the HDD is replaced.
- Font List— details the fonts that are resident on the E-710 HDD. The installed fonts need to be reinstalled when the HDD is replaced.

2. Shut down the E-710 as described in "To shut down the system" on page 2-11.

3. Shut down the copier, then access the E-710 as described on page 4-3.

4. Remove the HDD cable from E-710 board connector J28.

5. Remove the E-710 board from the pan (see "To remove the E-710 board" on page 4-9).

6. With the pan on its side, remove the four screws on the bottom of the pan that secure the HDD (see Figure 4-13).

Hold the HDD with one hand while you remove the screws.

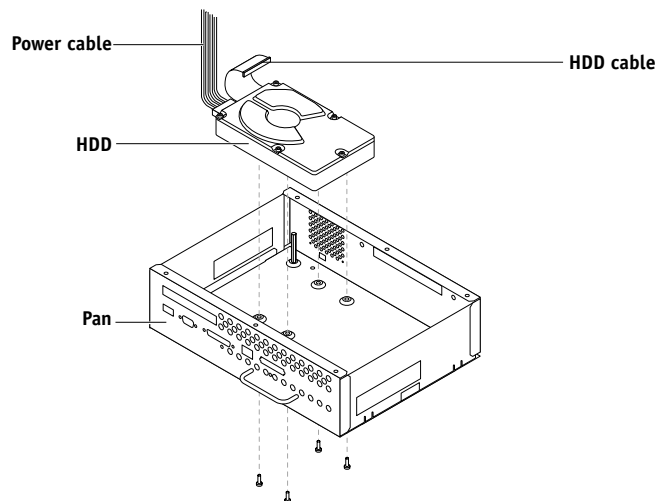


FIGURE 4-13 Replacing the HDD

7. Remove the power cable from the HDD.

8. Remove the HDD from the pan, remove the HDD cable from the HDD, and place the HDD into an antistatic bag.

Do not touch the drive with magnetic objects, such as magnetic screwdrivers. Do not place items near the hard disk drive that are sensitive to magnets, such as credit cards and employee ID cards. See "Proper handling".

4

Service Procedures

TO REPLACE THE HARD DISK DRIVE



Make sure you attach an ESD grounding wrist strap and follow standard ESD (electrostatic discharge) precautions before handling E-710 components.

1. **Remove the HDD from the antistatic bag, connect the HDD cable to the HDD, and insert the HDD into the pan.**
2. **Connect the 4-wire connector of the power cable to the HDD.**
The connector is keyed to fit only when properly oriented.
3. **With the pan on its side, align the four holes in the bottom of the HDD with the holes in the bottom of the pan and replace the four screws you removed earlier (see Figure 4-13 on page 4-19).**
4. **Replace the E-710 board (see “To replace the E-710 board” on page 4-10).**
5. **Replace the HDD cable to E-710 board connector J28.**
6. **Reassemble the copier and verify functionality as described in “Restoring E-710 functionality after service” on page 4-21 and other copier documentation.**



Improper connection of the power cable can damage the E-710. See “Checking E-710 internal connections” on page 4-5 including Figure 4-5 on page 4-6.

7. **If you replaced the HDD with a new drive, install system software (see page 4-23). If a startup error occurs when you power on the copier, check E-710 connections. If a startup error still occurs, call your authorized service/support center.**

4 Overview

Restoring E-710 functionality after service

TO RESTORE FUNCTIONALITY

1. Reinstall any boards, cables, connectors, and other parts of the E-710 that you loosened during inspection or service.



Improper connection of the power cable can damage the E-710. See “Checking E-710 internal connections” on page 4-5 and Figure 4-5 on page 4-6.

2. Tighten the screws you loosened during inspection or service.

Make sure all components are aligned properly as you tighten the screws.



3. Replace the pan cover on the pan, fitting the sides of the pan cover into the tabs.

Make sure all cables are low and fully inside the pan before you replace the pan cover.

4. Install the six screws you removed earlier.

5. Install the E-710 in the Controller Interface and reassemble the copier (see “Installing the E-710 in the copier” on page 2-5).

6. Connect any external cables that you removed during inspection or service.

7. Connect the System Enablement key in the parallel connector as shown (see “Installing the System Enablement key” on page 2-6).

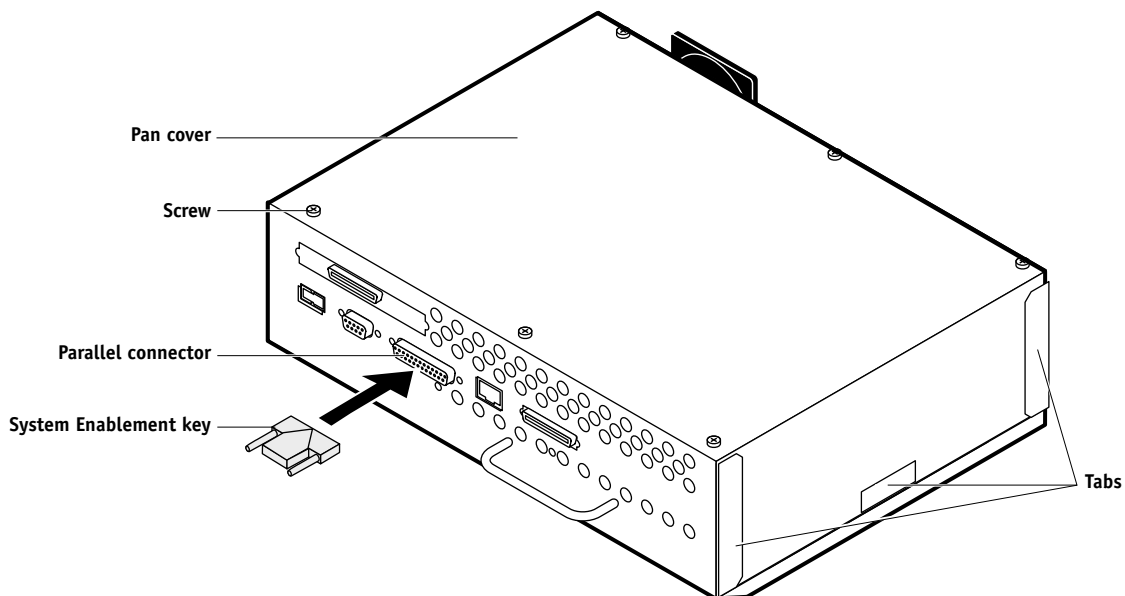


FIGURE 4-14 Replacing the pan cover

4 Service Procedures

8. Before you leave the customer site, verify E-710 operation (see Figure 4-15 on page 4-22).

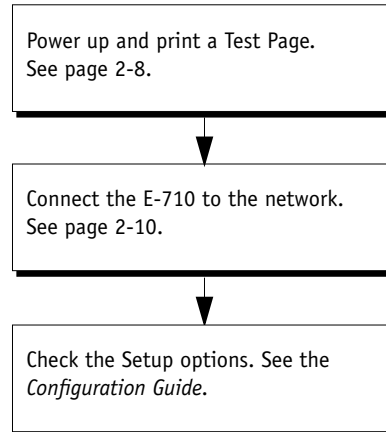


FIGURE 4-15 E-710 connection verification steps

4

Overview

E-710 system software

System software is installed from a CD-ROM drive connected to the SCSI interface connector (see page 4-24). The E-710 System Software CD includes the system software and fonts. Use the System Software CD when:

- You replace the E-710 HDD
- You upgrade to a more recent version of the system software

The latest user software must be installed onto all computers that print to the E-710. Using incompatible versions of the system and user software may result in system problems.

System software installation reminders

Keep in mind the following when installing system software:

- **Job Log**—Installing system software deletes the list of jobs in the Job Log and any jobs in the queues. The network administrator can use Fiery Spooler to save a current list of jobs (not the actual jobs) from the Job Log.
- **Fonts**—Installing system software deletes all fonts installed on the E-710 HDD. Resident fonts are restored during system software installation. If any additional fonts were downloaded to the E-710, the network administrator can reinstall the fonts using Fiery Downloader.

To determine which additional fonts were downloaded to the E-710, print the font list before you install system software. Any fonts *not listed* after installation need to be reinstalled. See the *Printing Guide* for more information.

- **Language**—Screens for installing system software are always displayed in English even if the E-710 is configured for another language.
- **Compatibility**—The latest user software should be installed onto all computers that print to the E-710. Using incompatible versions of the system and user software may result in system problems.

4 Service Procedures

Installing system software using the SCSI interface connector

To install system software, you need:

- An external CD-ROM drive, properly terminated, with SCSI ID set to a number other than 0 (zero) or 7
- A SCSI cable to connect the CD-ROM drive to the E-710 SCSI interface connector

NOTE: Make sure that the copier's AOF setting is OFF, using the User Tools on the copier. If the AOF setting is ON, the copier could enter Sleep Mode during system software installation and the installation could fail.

TO INSTALL SYSTEM SOFTWARE

1. Print the following from the E-710 Functions menu:

- Configuration page—records the customer's current Setup configuration. When you install a new hard disk drive, you must install system software on the drive. The Setup configuration is reset to the default configuration when system software is installed.
- Font List—details the fonts that are resident on the E-710 HDD. The installed fonts need to be reinstalled when system software is installed.

2. Power off the E-710 as described in "To shut down the system" on page 2-11.

3. Make sure that the CD-ROM drive is powered off, then attach one end of the SCSI cable to the CD-ROM drive and the other end to the E-710 SCSI interface connector.

4. Power on the CD-ROM drive and insert the System Software CD once the drive is inactive.

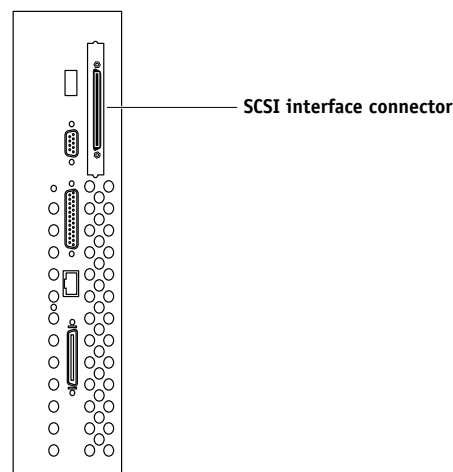


FIGURE 4-16 SCSI interface connector

4 Overview

5. Power on the E-710; "Please Wait..." flashes on the Operation Panel as the E-710 boots from the System Software CD. System software installation begins immediately.

Please Wait

6. Wait as the Operation Panel displays "Copying started, please wait" and "Copying from CD". The Operation Panel also shows "Copied xxxxxK", with xxxxx increasing as the installation proceeds.

NOTE: System software installation takes approximately 35 minutes using a 2X CD-ROM drive.

Copied xxxxxK

7. When the installation file has completely copied from the CD, "Copying Complete, Please Wait..." appears.

Copying Complete
Please Wait . . .

8. The System Software CD is ejected from the CD-ROM drive when "Remove CD" is displayed.

Remove CD

9. After the System Software CD is ejected, "Installing System, Do Not Power Off" appears on the Operation Panel. Do not press any keys or power the E-710 off when this screen is displayed.

Installing system
Do not power off

10. When the language selection options appear on the LCD, select the desired language.

If you select English, "Select Market Region" displays. Press Enter to select "UK", or scroll down to select "Other." Specifying "UK" sets the default paper size to metric (A4, B4); specifying "other" sets the default paper size to inches (Letter).

Select Market Region
UK
Other

Once you have selected the language, the system boots up using that language.

11. After the system has started up completely, remove the SCSI cable from the E-710 SCSI interface connector.

The system is now ready for customer use.

5

The troubleshooting process

Chapter 5: Troubleshooting Procedures

This chapter focuses on the troubleshooting process, identifies the source of common problems that may occur with the E-710 assembly, and suggests ways of correcting them.

The troubleshooting process

The troubleshooting process is designed to eliminate the most obvious causes of failure before progressing to more complex issues. “Where problems occur” on page 5-2 gives an overview of the E-710 components and indicates areas most likely to require troubleshooting.

If the E-710 fails to complete its Start-up sequence and the E-710 does not reach the Idle screen, the most likely cause is a loose cable or board connection. See “Checking E-710 internal connections” on page 4-5. Also, make sure the System Enablement key is installed in the E-710’s parallel connector. See “Installing the System Enablement key” on page 2-6.

- Try a phone check before you go to the customer site.
“Before you go to the customer site” on page 5-3 suggests areas you should check out before making a service call to the customer site. With a phone call, you can find out if the problem is a simple operating failure or a failure caused by a network or configuration change. You can ask the customer to check for loose cables on the side of the copier and loose connections at a power strip or outlet.
- Check for obvious causes of problems.
“Preliminary on-site checkout” on page 5-4 takes you through the initial visual checkouts you should make when you arrive at the customer site. You should check the Operation Panel for an error message and see if the LEDs indicate an error condition. Then inspect the copier externally and internally for the most common problems, such as loose or faulty cables, or a missing System Enablement key.
- Check network connections.
“Checking network connections” on page 5-9 provides guidelines for checking the network connections between the copier and the computers to which it is connected as well as information on several printing problems.

5 Troubleshooting Procedures

Where problems occur

The E-710 as a built-in print server for the copier is generally part of a configuration like the one shown in Figure 5-1. Problems may occur in one of the following areas:

- The interface between the E-710 board and the copier
- The interface between the E-710 and computers on the same network
- The board or copier itself

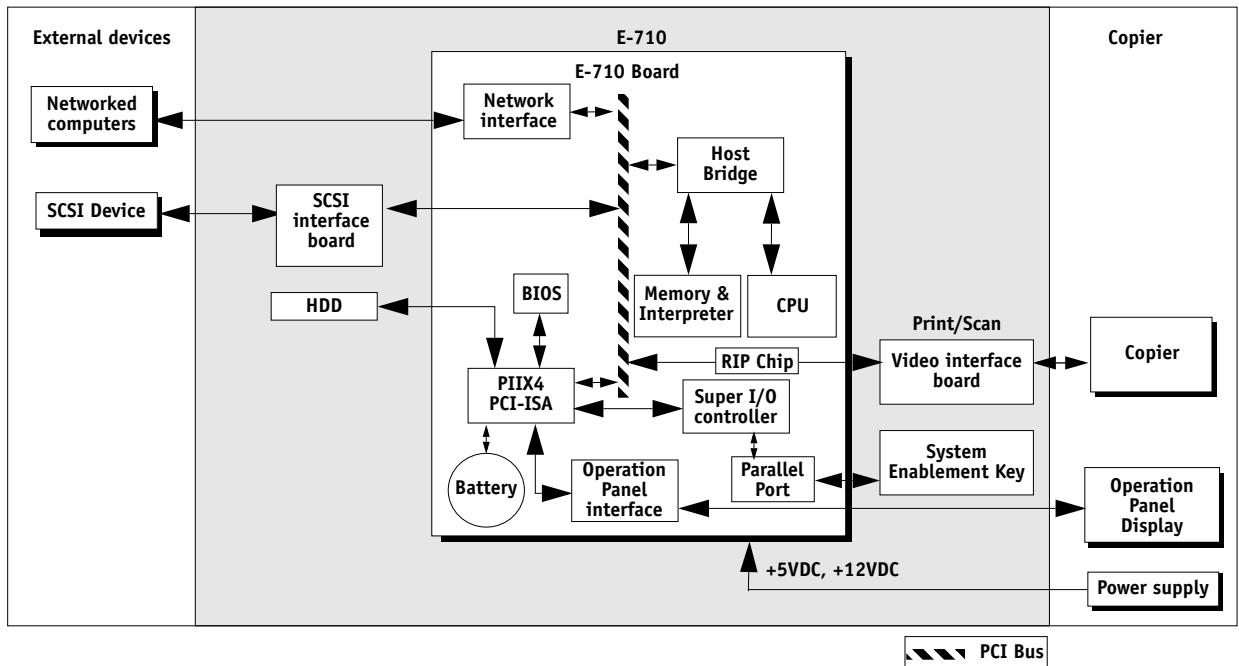


FIGURE 5-1 E-710 functional diagram

This chapter does not attempt to provide troubleshooting information for extensive networks. You should refer problems in these areas to the appropriate service departments and network administrators.

5

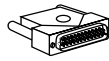
The troubleshooting process

Before you go to the customer site

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

1. Does the copier work?

If the copier works, but the user cannot print the E-710 Test Page, have the customer check the Message LED and any error messages in the Operation Panel. If the E-710 Operation Panel reports an error, have the customer check the copier interface cable between the E-710 and the copier.



If the copier works, but the keys on the E-710 Operation Panel do not work and the E-710 does not appear on the network, have the customer check that the System Enablement key is installed in the E-710's parallel connector. The E-710 will not function without the System Enablement key installed (see "Installing the System Enablement key" on page 2-6).



Only remove or install the System Enablement key when the E-710 is powered off.

2. Is the failure caused by a simple operating problem?

- Is there a printing problem?
 - Does the E-710 Test Page fail to print?
 - Does the E-710 fail to respond to a print command?
 - Does printing seem to take a long time?
 - Is print quality poor?
 - Does the E-710 fail to appear in the list of printers and the System Enablement key is installed?

- Has the customer noted any error messages on the copier Operation Panel?

If the answer to any of these questions is yes, have the customer refer to the Troubleshooting Appendix in the *Printing Guide*.

If the customer has followed the corrective actions in the *Printing Guide* and has failed to solve the problem, be prepared to make a service call. Keep a log of the failures and messages the customer has observed.

3. Has the customer made any network changes?

If network changes have occurred, request that the customer's network administrator verify the E-710 network requirements.

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

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

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

5 Troubleshooting Procedures

Preliminary on-site checkout

Your goal in the preliminary on-site checkout is to eliminate obvious problems, such as loose or missing cables, or possibly a missing System Enablement key.

Checking connections

Before you remove the Controller Interface cover to inspect cables:

- Check that external interface cables are plugged into the proper connectors at the side of the copier.
- Check that the System Enablement key is installed in the E-710's parallel connector (see "Installing the System Enablement key" on page 2-6).

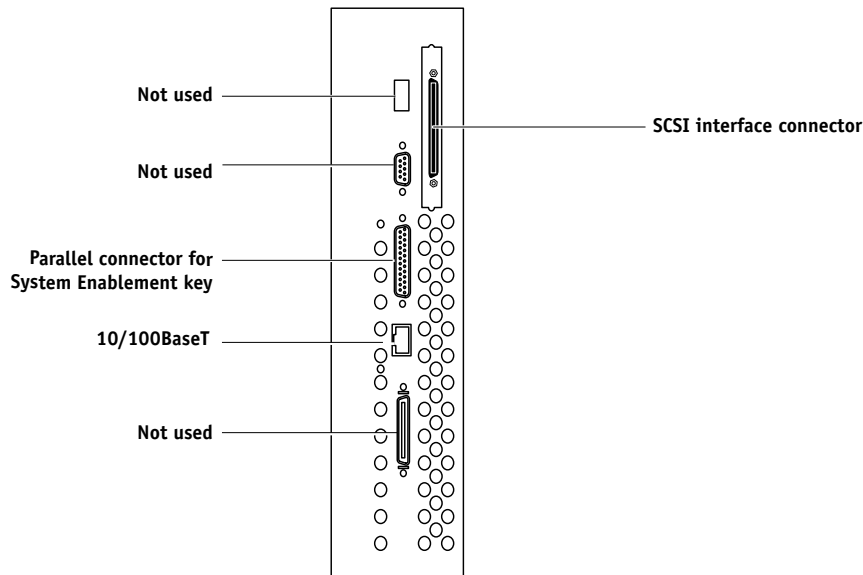


FIGURE 5-2 External connectors

- Make sure the power cable is plugged into the wall outlet and that the copier is powered on.
- Make sure the copier power supply cable is attached to the copier.
- Make sure the LCD harness is attached to the Operation Panel (see "To install the E-710 operation panel" on page B-4).

Also, see "Checking E-710 internal connections" on page 4-5 and "Installing the System Enablement key" on page 2-6. See other documentation for guidelines when disassembling, checking, and reassembling the copier. If all the connectors are in place and the problem still exists when the copier is powered on, then proceed to the next stage of troubleshooting.

5

The troubleshooting process

General E-710 system errors

When you start up the system or when you install system software, you may encounter error conditions that are not reported during the Start-up diagnostics. Table 5-1 lists some of these error conditions and suggests corrective action.

When you first encounter any of these error conditions, power off the copier according to the section “Rebooting, shutting down, and restarting the E-710” on page 2-11 and inspect for an obviously loose part or cable. Then check other components as suggested below. For service procedures, refer to Chapter 4.

TABLE 5-1 General E-710 system error conditions and messages

Symptom:	Probable cause:	Suggested action:
E-710 does not start up.	Power cable is not properly connected.	<ul style="list-style-type: none"> • Make sure the power cable is intact and properly connected to the HDD, video interface board, and E-710 board.
	Power supply has failed.	<ul style="list-style-type: none"> • Replace the copier power supply.
E-710 starts up but the CPU fan is not working or the CPU is overheating.	CPU fan is not properly connected.	<ul style="list-style-type: none"> • Check CPU fan connection to E-710 connector J27 (see “CPU fan” on page 4-16). • If problem persists, replace the CPU fan.
CPU fan is working but does not blow air away from the E-710.	CPU fan is installed upside down.	<ul style="list-style-type: none"> • Remove the CPU fan and reinstall it in the proper orientation (see “CPU fan” on page 4-16).
Keys do not work on the E-710 Operation Panel.	Connection to the Operation Panel is faulty or the Operation Panel is bad.	<ul style="list-style-type: none"> • Check the cable connection to the E-710 Operation Panel.
	System Enablement key is not installed.	<ul style="list-style-type: none"> • Make sure the System Enablement key is installed in the E-710’s parallel connector (see “Installing the System Enablement key” on page 2-6).
	Faulty chip on the E-710.	<ul style="list-style-type: none"> • If the problem persists, you may have to replace the E-710 assembly.

5 Troubleshooting Procedures

TABLE 5-1 General E-710 system error conditions and messages (Continued)

Symptom:	Probable cause:	Suggested action:
Nothing appears on the E-710 Operation Panel when the copier is powered on.	Connections to the Operation Panel are faulty or the Operation Panel is faulty.	<ul style="list-style-type: none"> • Check the connection between the copier and the E-710 (see “Installing the E-710 in the copier” on page 2-5). • Power on the copier and the E-710. • If the problem persists, remove and then reinstall the E-710 into the copier. • If the problem still persists, replace the E-710.
	Faulty power supply.	<ul style="list-style-type: none"> • Check power supply cable connections to the E-710 (see “Checking E-710 internal connections” on page 4-5). • If problem persists, replace the copier power supply.
	System Enablement key is not installed.	<ul style="list-style-type: none"> • Make sure the System Enablement key is installed in the E-710’s parallel connector (see “Installing the System Enablement key” on page 2-6).
	Bad DIMM connections.	<ul style="list-style-type: none"> • Open the E-710 to make sure that the DIMMs are seated correctly. • If the problem persists, try switching the DIMMs to other slots. • If problem still persists, replace DIMMs.
Problem when installing system software.	No CD is inserted or the wrong CD is inserted in the CD-ROM drive connected to the E-710.	<ul style="list-style-type: none"> • Check the CD inserted in the CD-ROM drive.
	Faulty System Software CD, HDD, or CD-ROM drive.	<ul style="list-style-type: none"> • Check HDD connections. • If the problem persists, use a tested CD-ROM drive cable. • If the problem persists, try installing software using a different System Software CD. • If the problem still persists, you may need to replace the HDD or us a different CD-ROM drive.

5

The troubleshooting process

Video interface board diagnostics

One of the menu items in the Functions screen on the E-710 Operation Panel is Run Diagnostics. Select Run Diagnostics to run Video Diagnostics if you think there may be a problem with the E-710 video interface board (for example, the print quality of output is poor). Video Diagnostics loops data internally, comparing data sent with data received to make sure no errors have occurred.

TO RUN VIDEO DIAGNOSTICS

1. **Power on the copier. Once the E-710 has reached the Idle screen, press the Menu key on the Operation Panel to view the Functions menu.**
2. **Use the Down arrow to scroll to the Run Diagnostics menu. Press the Enter key.**
3. **At the Video Diagnostics screen, press the Enter key.**
The test starts immediately.
4. **If “Video Diags passed” appears, press the Cancel key to return to the Functions menu.**
5. **If “Video Diags failed” appears, then to fix the problem you may have to replace the E-710 board.**

5 Troubleshooting Procedures

Printing the Test Page

If the Test Page prints as a low-quality image or does not print at all, the E-710 board may be faulty, the connection between the E-710 and the copier may be faulty, or the copier may not be functioning properly.

TO PRINT THE TEST PAGE

1. Power on the copier and allow it warm up.

Messages appear on the E-710 Operation Panel as the E-710 runs through its Start-up diagnostics.

2. At the Ready screen, press the Menu key once to display the Functions menu.

3. Select Print Pages then Test Page.

Press the Enter key to select the option displayed. Press the down arrow key to display each option.



The E-710 sends the Test Page to the copier and displays the RIP and Print status screens so you can monitor the job.

4. Examine the quality of the Test Page from the copier.

If the Test Page prints successfully with good image quality, then the E-710 print engine is functional and the connection between the E-710 and the copier is good.

5

The troubleshooting process

Checking network connections

Printing problems may arise if the network hardware or software is not set up properly or does not match network settings on the E-710. Problems may also arise when printing from a specific application or printing a particular file.

Most of these problems show up as printing problems and do not necessarily indicate a E-710 malfunction. The customer's network administrator can eliminate many printing problems without requiring you to make a service call. The network administrator deals with:

- Print device error conditions
- Network connection problems that result in the copier not appearing in the list of printers on the customer's computers

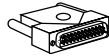
NOTE: If the copier does not appear in the list of printers on the network, there may be another device on the network with the same Ethernet hardware address, or the System Enablement key may not be installed in the E-710's parallel connector (see "Installing the System Enablement key" on page 2-6).

- Conflicting network settings in Setup and on the customer's computers
- Printing problems caused by inappropriate Setup options
- Application-specific printing errors caused by missing or incorrectly installed printer description files.

5 Troubleshooting Procedures

Printing to the E-710

If the customer can print a E-710 Test Page but cannot print a job from a computer on the network, you may have to make a service call. However, first make sure the network administrator has done the following:



- Checked all components of the network including cables, connectors, terminators, network adapter boards, and network drivers.
- Checked that the System Enablement key is installed in the E-710 parallel connector.
- Activated the network and used it to communicate with other printers.
- Checked the corrective actions listed in “E-710 Error Messages” in the *Printing Guide*.
- Confirmed that the applicable network settings in Setup (such as AppleTalk zone, IP address, Subnet mask, and Gateway address) match the settings used in the network.

When you make a service call, check the E-710 faceplate at the side of the copier to make sure that the appropriate network connection is in place.

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

NOTE: EPS file generation is not completely standardized among applications. Some users may encounter problems while printing certain EPS files.

5

The troubleshooting process

General printing problems

If the copier is working properly, and the corrective actions listed in the *Printing Guide* have not solved a printing problem, check the items listed in Table 5-2.

TABLE 5-2 Printing problems - General

Error Message or Condition:	Probable cause:	Suggested action:
E-710 Test Page quality is poor.	Copier and E-710 require calibration.	<ul style="list-style-type: none"> Perform Auto Color Calibration (Print Mode) at the copier (see the Copier service documentation for more information). Perform E-710 AutoCal (see the <i>Color Guide</i> for information).
E-710 does not appear in the list of printers on the customer's workstation.		<ul style="list-style-type: none"> Make sure the System Enablement key is installed in the E-710's parallel connector (see "Installing the System Enablement key" on page 2-6). See the Troubleshooting Appendix in the <i>Printing Guide</i>.
E-710 appears in the list of printers on the customer's workstation, but certain jobs do not print.	A PostScript error	<ul style="list-style-type: none"> Make sure Print up to PostScript Error in Setup is set to Yes. Check for printed error messages in the copier output bin.
	An application problem	<ul style="list-style-type: none"> Try printing a job from a different application to determine if the problem is associated with a particular application.
A print job stalls.	A PostScript or application error	<ul style="list-style-type: none"> Cancel the E-710 print job. If this fails to clear the problem, reboot the E-710.
Printing stops after one or a few pages.	Faulty DIMM(s)	<ul style="list-style-type: none"> Reboot the copier and allow the Start-up diagnostics to run. If faulty DIMMs are detected, replace the faulty DIMMs. If this fails to clear the problem, try reinstalling the system software.
Color quality is uneven.	A copier problem	<ul style="list-style-type: none"> Use the copier to copy a sample copier test page. If the quality is poor, service the copier.
	A file or application problem	<ul style="list-style-type: none"> Print the E-710 Test Page. If the quality of the E-710 Test Page is good, there may be a file or an application problem.
Print quality is poor.	A missing or outdated printer description file The application cannot find the appropriate printer description file.	<ul style="list-style-type: none"> Make sure the appropriate printer description file is installed. See <i>Getting Started</i> for a list of printer files used by various applications.
Job never prints and the RIP screen is active.	The network cable was plugged in when the copier was already on.	<ul style="list-style-type: none"> Turn off the copier and turn it back on again. Make sure Setup is configured correctly.

A

Hardware features

Appendix A: Specifications

This chapter summarizes the hardware and networking features of the E-710.

Hardware features

- 366MHz Intel Celeron CPU
- 256MB memory
- 8.4GB HDD
- SCSI interface connector for attaching a CD-ROM drive
- Adobe PostScript Level 3
- Battery—3V manganese dioxide lithium coin cell (Panasonic CR2032 or equivalent)

Networking and connectivity

The E-710 has the following networking features:

- Supports AppleTalk, TCP/IP, and IPX protocols simultaneously
- RJ-45 port for twisted pair (10BaseT/100BaseTX) network connection

User software

A complete description of E-710 user software is provided in *Getting Started*. For optimal E-710 performance, current versions of the user software should be maintained on every network computer that might print to the E-710.

Safety and emissions compliance

The E-710 board has been certified to meet or surpass the following standards:

Safety approvals

- UL, C-UL
- EN 60950 (TÜV Bauart geprüft)

EMI approvals

- FCC Class B
- VCCI Class A
- EN 55022 Class B
- AS/NZS 3548 Class B
- EN 50082-1
- AS/NZS 42521

A Specifications

Output voltage



On the E-710, the SCSI and USB connectors output +5V DC. The other external connectors on the E-710, including the copier interface connector, have no output voltage (see Figure A-1).

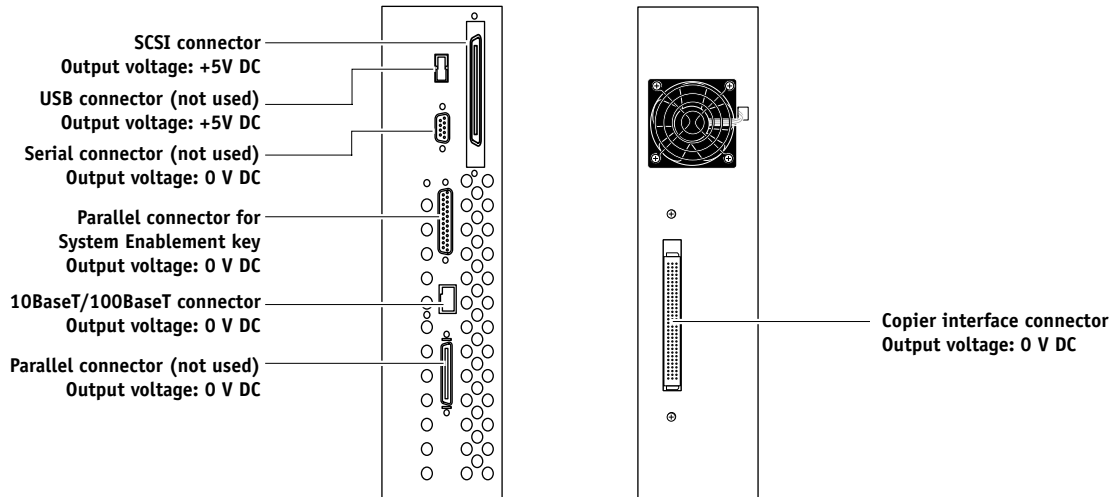


FIGURE A-1 E-710 output voltage

PTC Rating

R158, R135, R159

Rated hold current 0.75A

Rated trip current 1.5A

Max. voltage +15V DC

B

Controller Interface Type I Installation Procedure

Appendix B: Controller Interface Type I

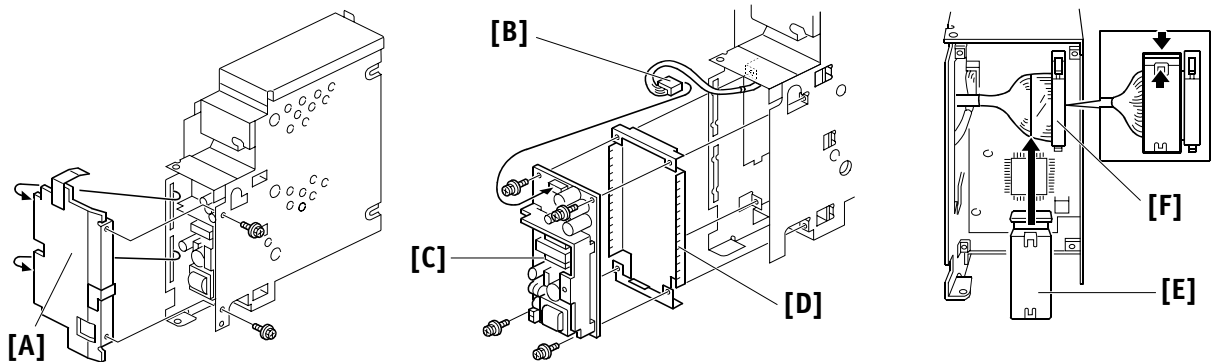
This appendix provides the *Controller Interface Type I Installation Procedures*. Instructions for removing the Controller Interface cover from the copier and installing the E-710 are provided in Chapter 2, “Installation.”

Controller Interface Type I Installation Procedure

The Controller Interface is an enclosure that you install on the copier. It provides the mechanical and electrical interface between the copier and the E-710. Use the following procedures to install the ferrite clamp, the Controller Interface, and the E-710 Operation Panel.

TO INSTALL THE FERRITE CLAMP

Before installing the Controller Interface, you must first secure a ferrite clamp to the video interface cable inside the unit. The ferrite clamp helps protect the E-710 from electromagnetic interference.

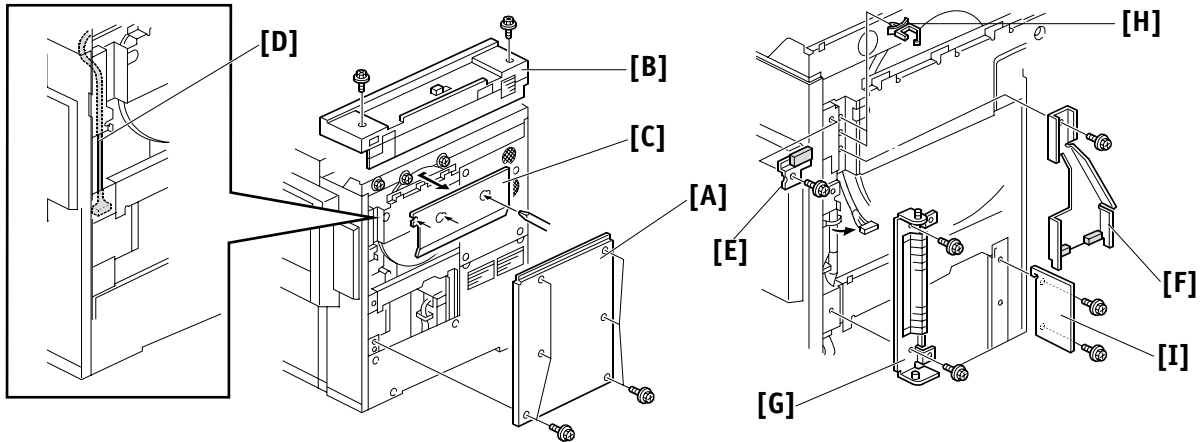


1. Remove the front cover [A] of the power supply unit (2 screws).
2. Disconnect the DC power supply harness [B] from the connector on the power supply unit [C]. Remove the power supply unit [C] and the power supply unit cover [D] (4 screws).
3. Secure the ferrite clamp [E] to the video interface cable as close as possible to the cable connector [F].
4. Reinstall the power supply unit cover [D] and power supply unit [C], plug the DC power supply harness [B] into the connector on the power supply unit [C], and reattach the front cover [A].

B

Controller Interface Type I

TO PREPARE THE COPIER FOR CONTROLLER INTERFACE INSTALLATION

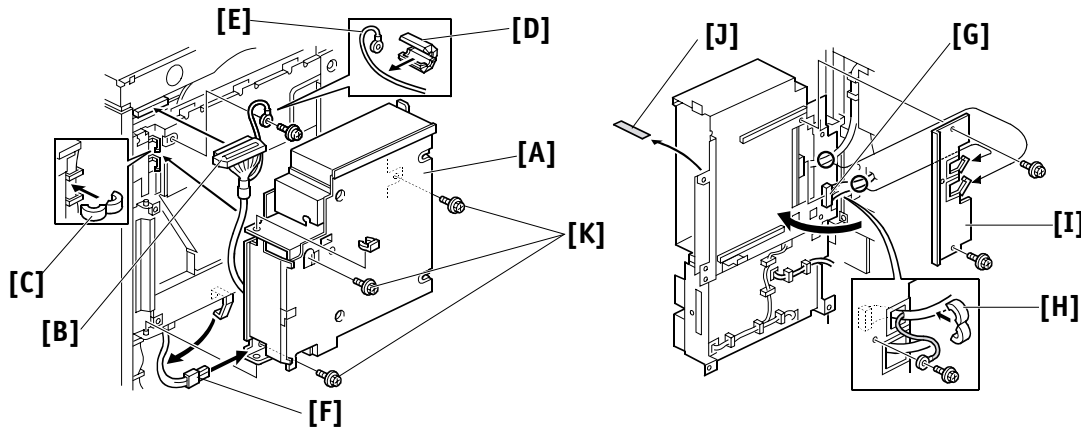


1. Shut down the copier as described in the procedure "To shut down the copier when the E-710 is not installed" on page 2-3.
2. Ready the copier for the Controller Interface by removing the three covers:
 - Rear right cover [A] (6 screws)
 - Rear upper cover [B] (2 screws)
 - LD control board cover plate [C] (2 screws)
3. Remove the harness [D] from the harness clamp.
NOTE: You will connect this harness to the Controller Interface later.
4. Install the upper grounding bracket [E] (1 screw).
5. Install the harness guide bracket [F] (1 screw and 2 hooks).
6. Install the interface support bracket [G] (2 screws).
7. Install the harness clamps [H].
8. Install the cover bracket [I] (2 screws).

B

Controller Interface Type I Installation Procedure

TO INSTALL THE CONTROLLER INTERFACE



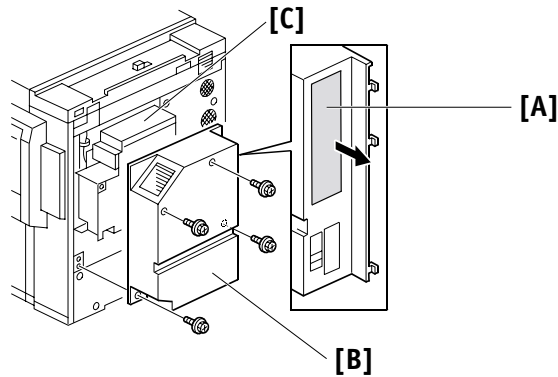
1. Install the Controller Interface case [A] (2 hooks, 1 snap ring).
2. Connect the Controller Interface case harness [B] to the LD control board (2 clamps, 1 ground screw).
3. Attach the ferrite core type-A [C] to the Controller Interface harness.
4. Attach the ferrite core type-B [D] to the grounding harness [E].
5. Disconnect the harness [F] from the clamp and run the harness as shown (1 connector).
6. Locate the harness [G] you removed from the clamp in step 3 of the procedure "To prepare the copier for Controller Interface installation" on page B-2. Connect the harness to the Controller Interface. Attach the ferrite core type-A [H] to the harness [G].
7. Install the harness cover [I] (2 clamps, 3 screws, and 1 ground wire).
8. Reattach the LD control board cover plate you removed in step 2 of the procedure "To prepare the copier for Controller Interface installation" on page B-2.
9. Remove the strip of filament tape [J].
10. Swing the Controller Interface case against the copier and secure it with 3 screws [K], as shown.

NOTE: Do not put a screw in the oval hole at the lower-right corner. You will use this hole later to hold the Controller Interface case and Controller Interface cover together.

B

Controller Interface Type I

TO INSTALL THE CONTROLLER INTERFACE COVER

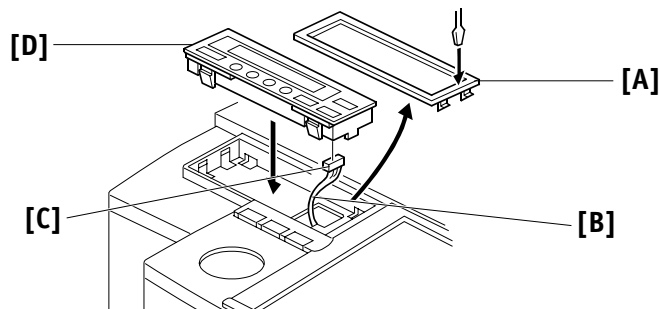


1. On the Controller Interface cover, cut off and remove the cap [A] for the E-710.
2. Position the Controller Interface cover [B] over the Controller Interface [C] and secure it with 4 screws, as shown.

NOTE: Attach the Controller Interface cover to the Controller Interface case by installing one of the screws into the oval hole at the lower-right corner.

3. Reattach the rear right cover and rear upper cover you removed in step 2 of the procedure "To prepare the copier for Controller Interface installation" on page B-2.

TO INSTALL THE E-710 OPERATION PANEL



1. Remove the operation panel cover [A] from the copier.
2. Locate the LCD harness [B].
3. Plug the connector [C] into the mating connector on the operation panel [D]. Reinstall the operation panel into the copier.
4. Power on the copier, access the SP mode 6-910-000 ("Printer/Scanner key setting"), and change the setting from "0" to "1".

See the *Configuration Guide* for setup information.

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