
Ross Video Limited



Synergy Display Replacement Installation Guide



Live Production Technology

Synergy Display Replacement Installation Guide

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Important Regulatory and Safety Notices to Service Personnel

Before using this product and associated equipment, refer to the “Important Safety Instructions” listed here and in the front of the Vision Engineering Manual, to avoid personnel injury and to prevent product damage.

Products may require specific equipment, and/or installation procedures to be carried out to satisfy certain regulatory compliance requirements. Notices have been included in these publications to call attention to these specific requirements.

Important Safety Instructions

Use only manufacturer approved Power Supplies and Power Cords supplied with this product.

The power supply adapter(s) included with this product use a protective earth connection to reduce the risk of electrical shock to the operator and or service personnel. A grounding conductor in the equipment's supply cord provides this protective earth connection and must be reliably connected to a facilities protective earth.

Do not defeat safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The third prong is provided for your safety. If the provided plug does not fit in to your outlet, consult an electrician for replacement of the obsolete outlet.

Protect the product's power cord(s) and replace any cord(s) which shows signs of physical damage or ware.

The product's power supply cord(s) is (are) used as a means to disconnect the power supply from the AC Mains. Ensure either the appliance inlet or the mains plug of the power supply cord, remains readily operable.

This product is designed for Indoor Use:

“WARNING - TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPERATUS TO RAIN OR MOISTURE”.

General Handling Guidelines

- Careful handling, using proper ESD precautions, must be observed.
- Power down the system before PCB removal.



ESD Susceptibility — *Avoid handling the switcher circuit boards in high static environments such as carpeted areas, and when synthetic fiber clothing is worn. Touch the frame to dissipate static charge before removing boards from the frame, and exercise proper grounding precautions when working on circuit boards.*

Environmental Information

The equipment that you purchased required the extraction and use of natural resources for its production. It may contain hazardous substances that could impact health and the environment.

To avoid the potential release of those substances into the environment and to diminish the need for the extraction of natural resources, Ross Video encourages you to use the appropriate take-back systems. These systems will reuse or recycle most of the materials from your end-of-life equipment in an environmentally friendly and health conscious manner.

The crossed-out wheeled bin symbol invites you to use these systems.



If you need more information on the collection, reuse, and recycling systems, please contact your local or regional waste administration.

You can also contact Ross Video for more information on the environmental performances of our products.

Package Contents

The contents of the **Synergy Display Replacement** kit are listed below. If any items are missing, or damaged, contact Ross Video Technical Support.

Qty	Part#	Item
1	70-00124	Display
1	30-00104	3-Pin Display Power Connector Cap
1	4000ER-033-01	EEPROM U62, Issue 7

Synergy Display Replacement

To install the new display in the control panel, you must power down the control panel and remove the old display, install the cap on the 3-pin power connector, and install the new display, and set the contrast for the new display.

Once the new display has been installed, you must upgrade the EEPROM installed on the control panel CPU board.

Removing the Synergy Display

To remove the display, you will need a pair of small needle-nose pliers and a Phillips screw driver.

1. Power down the control panel. The frame can remain on during this procedure. Refer to your switcher documentation for information on shutting down the control panel.
2. Unplug the Primary and Redundant (if installed) power from the control panel.



Warning Hazardous Voltage — *Hazardous voltages are present in the control panel as long as any of the power supplies are connected to the AC power.*

3. Lift up on the control panel lid to gain access to the control panel tub.
4. Identify the board (**Function Switch Board**) that the **3-Pin Display Power** and **15-Pin Data Cables** from the display connect to. It is located behind the F1-F6 buttons inside the control panel. The name and shape of this board is different, depending on the control panel you have.
 - **Synergy 2 — Function Switch Board (4317A-037)**
 - **Synergy 3 — Function Switch Board (4735A-037)**
 - **Synergy 4 — Function Switch Board (4735A-037)**
5. Locate the **15-Pin Data Cable** going from the display to the **Function Switch Board**. Where the cable connects to the display, take note of the orientation of the connector with relation to pin 1 screened on the board. You must install the cable onto the new display in the same way.
6. Disconnect the **15-Pin Data Cable** from the connector on the display.

7. Use a pair of small needle-nose pliers to disconnect the **3-Pin Display Power Cable** from the power connector on the **Function Switch Board**.
8. Remove the retaining screws from each corner of the display and put them in a safe place. You will need them to install the new display.
9. Carefully remove the display from the inside of the control panel.

Installing the Synergy Display

To install the new display, you will need a pair of small needle-nose pliers and a Phillips screw driver.

1. Use a pair of small needle-nose pliers to install the **3-Pin Display Power Connector Cap (30-00104)** into the power connector on the **Function Switch Board**. The new display does not require a separate power connector.



Warning Hazardous Voltage — You must install the **3-Pin Power Connector Cap** to protect the live power pins in the connector. Failure to do so could result in personal injury or damage to equipment.

2. Carefully install the new display into the hole that the old display was removed from.
3. Install the retaining screws into each corner of the display. Do not over-tighten the screws.
4. Connect the **15-Pin Data Cable** to the data connector on the display. Ensure that the orientation of the connector, with relation to pin 1, is the same as it was when the cable was connected to the old display.



Caution — You must install the **15-Pin Data Cable** onto the new display in the same orientation as it was removed from the old display. Installing the cable incorrectly could damage the display and the switcher.

Control Panel EEPROM Upgrade

To upgrade the EEPROM on the control panel CPU Board, you must open the CPU enclosure in the control panel, remove the old EEPROM, and install the new EEPROM in the same socket.

Upgrading the Control Panel EEPROM

To upgrade the EEPROM, you will need a DIP Extraction Tool and a Phillips screw driver.

1. Power down the control panel. The frame can remain on during this procedure. Refer to your switcher documentation for information on shutting down the control panel.
2. Unplug the Primary and Redundant (if installed) power from the control panel.



Warning Hazardous Voltage — *Hazardous voltages are present in the control panel as long as any of the power supplies are connected to the AC power.*

3. Lift up on the control panel lid to gain access to the control panel tub.
4. Remove the screws securing the top of the CPU Enclosure inside the control panel tub and remove the top.
5. On the **Panel CPU Board (4000AR-033)**, locate the **EEPROM U62 (4000ER-033-01)**. Note the orientation of the EEPROM in the socket. The new EEPROM will have to be installed in the same orientation.
6. Use the **DIP Extraction Tool** to remove the old **EEPROM U62 (4000ER-033-01)** from the socket.



Caution — *Refer to the documentation that came with your DIP Extraction Tool for information on proper use of this tool. Improper use of the tool could damage the board, the socket, or both.*

7. Install the new **EEPROM U62** into the socket in the same orientation as the old EEPROM.
8. Locate the **J7** jumper at the front of the **Panel CPU Board** and move the jumper cap from **DOWN** (default) to **UP**.
9. Re-install the top of the CPU Enclosure and re-connect the power supplies to the control panel.

Setting the Display Contrast

The default contrast of the new display is different than the old display. When the new display is installed, you must adjust the contrast so that the menus on the display are visible.

1. Press **HOME** ⇒ **More** ⇒ **F6 (Setup)** ⇒ **F1 (Display)** ⇒ **F1 (Large Display)**.
2. Use the middle (**Contrast**) knob to select **70.0%**, or the contrast that best works for you.

Notes

Notes

Contact Us

Contact our friendly and professional support representatives for the following:

- Name and address of your local dealer
- Product information and pricing
- Technical support
- Upcoming trade show information

PHONE	General Business Office and Technical Support	613 • 652 • 4886
	After Hours Emergency	613 • 349 • 0006
	Fax	613 • 652 • 4425
E-MAIL	General Information	solutions@rossvideo.com
	Technical Support	techsupport@rossvideo.com
POSTAL SERVICE	Ross Video Limited	8 John Street, Iroquois, Ontario, Canada K0E 1K0
	Ross Video Incorporated	P.O. Box 880, Ogdensburg, New York, USA 13669-0880

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