



MIX EFFECTS UPGRADE

# Installation Manual

071-8071-00

NOVEMBER 2000

**PROFILE FAMILY**  
VIDEO FILE SERVERS

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May 1996	Original Issue; Manual Part Number 070-9607-00
November 1996	Manual Part Number Rolled to 070-9607-01
November 2000	Revised Product Support contact information. Part Number 071-8071-00.

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# Grass Valley Group Product Support

You can get technical assistance, check on the status of problems, or report new problems by contacting our Product Support Group.

## United States and Canada

Monday–Friday 5:30AM–5:00PM Pacific Time  
(800) 547-8949

## Europe

Monday–Friday 9:00AM–5:30PM

France	01 45 29 73 00	United Kingdom	01628 405830
Germany	49 221 1791 234	Other	+44 1753 218 777
Italy	02 25086606		

## Asia and South America

Australia	02-9888 0100	Japan	81-3-3448-3111
- from overseas	61-2-9888 0100	Korea	82-2-528-5299
Beijing	86-10-62351230	Mexico	52-5-666-6333
	ext. 711	Singapore	65-356-3900
Brazil	55-11-3741-8422	Taiwan	886-2-27571571
Hong Kong	852-2585-6579		

## World Wide

**24-hour Emergency Hotline (530) 478-4148** (Contract and warranty customers)

<b>World Wide Web</b>	<a href="http://www.grassvalleygroup.com/support/">http://www.grassvalleygroup.com/support/</a>
<b>FTP Site</b>	<a href="ftp.grassvalleygroup.com">ftp.grassvalleygroup.com</a>
<b>E-mail</b>	<a href="mailto:profile-users@grassvalleygroup.com">profile-users@grassvalleygroup.com</a>



# Safety Summaries

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**WARNING:** *These instructions are for use by qualified service personnel only. To avoid personal injury, do not perform any servicing unless you are qualified to do so. Refer to all safety summaries before performing service.*

## General Safety Summary

Review the following safety precautions to avoid injury and prevent damage to this product or any products connected to it.

*Only qualified personnel should perform service procedures.*

## Injury Precautions

### **Use Proper Power Cord**

To avoid fire hazard, use only the power cord specified for this product.

### **Ground the Product**

This product is grounded through the grounding conductor of the power cord. To avoid electric shock, the grounding conductor must be connected to earth ground. Before making connections to the input or output terminals of the product, ensure that the product is properly grounded.

### **Do Not Operate Without Covers**

To avoid electric shock or fire hazard, do not operate this product with covers or panels removed.

### **Use Proper Fuse**

To avoid fire hazard, use only the fuse type and rating specified for this product.

### **Do Not operate in Wet/Damp Conditions**

To avoid electric shock, do not operate this product in wet or damp conditions.

### **Do Not Operate in an Explosive Atmosphere**

To avoid injury or fire hazard, do not operate this product in an explosive atmosphere.



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## Safety Summaries

### **Avoid Exposed Circuitry**

To avoid injury, remove jewelry such as rings, watches, and other metallic objects. Do not touch exposed connections and components when power is present.

## **Product Damage Precautions**

### **Use Proper Power Source**

Do not operate this product from a power source that applies more than the voltage specified.

### **Provide Proper Ventilation**

To prevent product overheating, provide proper ventilation.

### **Do Not Operate With Suspected Failures**

If you suspect there is damage to this product, have it inspected by qualified service personnel.

## **Safety Terms and Symbols**

### **Terms in This Manual**

These terms may appear in this manual:



**WARNING:** Warning statements identify conditions or practices that can result in personal injury or loss of life.



**CAUTION:** Caution statements identify conditions or practices that can result in damage to the equipment or other property.

### **Terms on the Product**

These terms may appear on the product:



**DANGER** indicates a personal injury hazard immediately accessible as one reads the marking.



**WARNING** indicates a personal injury hazard not immediately accessible as you read the marking.



**CAUTION** indicates a hazard to property including the product.

**Symbols on the Product**

The following symbols may appear on the product:



DANGER high voltage



Protective ground (earth) terminal



ATTENTION – refer to manual

## **Service Safety Summary**

**Do Not Service Alone**

Do not perform internal service or adjustment of this product unless another person capable of rendering first aid and resuscitation is present.

**Disconnect Power**

To avoid electric shock, disconnect the main power by means of the power cord or, if provided, the power switch.

**Use Care When Servicing With Power On**

Dangerous voltages or currents may exist in this product. Disconnect power and remove battery (if applicable) before removing protective panels, soldering, or replacing components.

To avoid electric shock, do not touch exposed connections



## **Certifications and Compliances**

### **Canadian Certified Power Cords**

Canadian approval includes the products and power cords appropriate for use in the North America power network. All other power cords supplied are approved for the country of use.

### **FCC Emission Control**

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense. Changes or modifications not expressly approved by Grass Valley Group can affect emission compliance and could void the user's authority to operate this equipment.

### **Canadian EMC Notice of Compliance**

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la classe A prescrites dans le Règlement sur le brouillage radioélectrique édicté par le ministère des Communications du Canada.

### **EN55022 Class A Warning**

For products that comply with Class A. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.



## **Laser Compliance**

### **Laser Safety Requirements**

The device used in this product is a Class 1 certified laser product. Operating this product outside specifications or altering from its original design may result in hazardous radiation exposure, and may be considered an act of modifying or new manufacturing of a laser product under US regulations contained in 21CFR Chapter 1, subchapter J or CENELEC regulations in HD 482 S1. People performing such an act are required by law to recertify and reidentify this product in accordance with provisions of 21CFR subchapter J for distribution within the U.S.A., and in accordance with CENELEC HD 482 S1 for distribution within countries using the IEC 825 standard.

### **Laser Safety**

Laser safety in the United States is regulated by the Center for Devices and Radiological Health (CDRH). The laser safety regulations are published in the “Laser Product Performance Standard,” Code of Federal Regulation (CFR), Title 21, Subchapter J.

The International Electrotechnical Commission (IEC) Standard 825, “Radiation of Laser Products, Equipment Classification, Requirements and User’s Guide,” governs laser products outside the United States. Europe and member nations of the European Free Trade Association fall under the jurisdiction of the Comité Européen de Normalization Electrotechnique (CENELEC).

For the CDRH: the radiant power is detected through a 7 mm aperture at a distance of 200mm from the source focused through a lens with a focal length of 100 mm.

For IEC compliance: the radiant power is detected through a 7 mm aperture at a distance of 100mm from the source focused through a lens with a focal length of 100 mm.



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## Certifications and Compliances

### FCC Emission Limits

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesirable operation. This device has been tested and found to comply with FCC Part 15 Class B limits for a digital device when tested with a representative laser-based fiber optical system that complies with ANSI X3T11 Fiber Channel Standard.

### Certification

Category	Standard
Safety	<i>Designed/tested for compliance with:</i> <b>UL1950</b> - Safety of Information Technology Equipment, including Electrical Business Equipment (Third Edition, 1995) <b>IEC 950</b> - Safety of Information Technology Equipment, including Electrical Business Equipment (Second edition, 1991) <b>CAN/CSA C22.2, No. 950-95</b> - Safety of Information Technology Equipment, including Electrical Business Equipment <b>EN60950</b> - Safety of Information Technology Equipment, including Electrical Business Equipment

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# Mix Effects Installation

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## Kit Description

This modification kit adds the Mix Effects circuit board to your Profile system.

In addition to these instruction, the Mix Effects kit consists of the Mix Effects board.

## Tools Required

Installation of the kit requires the following tools, which are not supplied:

- Torx screwdriver with T10 and T15 magnetic tips
- Grounding strap(s)

## Handling Precautions



***CAUTION: This product contains components that are highly sensitive to electrostatic discharge. To protect these components from damage and to maintain product reliability, take the following precautions when handling the circuit boards:***

***Handle all circuit boards in a static-protected area capable of controlling static charge on conductive materials, people, and non-conductive materials. Static-protected areas include non-static table tops and non-static floor mats.***

***Handle the circuit boards only by the edges. Avoid touching the printed wires on the back of the circuit board as much as possible.***

***Leave the board in its static-shielded bag until you are ready to install the board.***



## Installation Instructions

**NOTE:** *Product upgrades and repairs should only be attempted by qualified service personnel. For further assistance call your nearest Grass Valley Group Service Center.*

Label wiring connections prior to removal to facilitate reassembly.

### Removing the Chassis from the Rack

To remove the chassis from the rack:

1. Shut down the Profile system and disconnect the power cord and all cables from the rear panel.
2. Loosen the front-panel retaining screw.
3. Grasp the handles and pull the chassis out until the stop latches engage.



**WARNING:** *The Profile chassis is too heavy for one person to remove from an equipment rack. To avoid possible injury, get help when removing the chassis from the rack.*

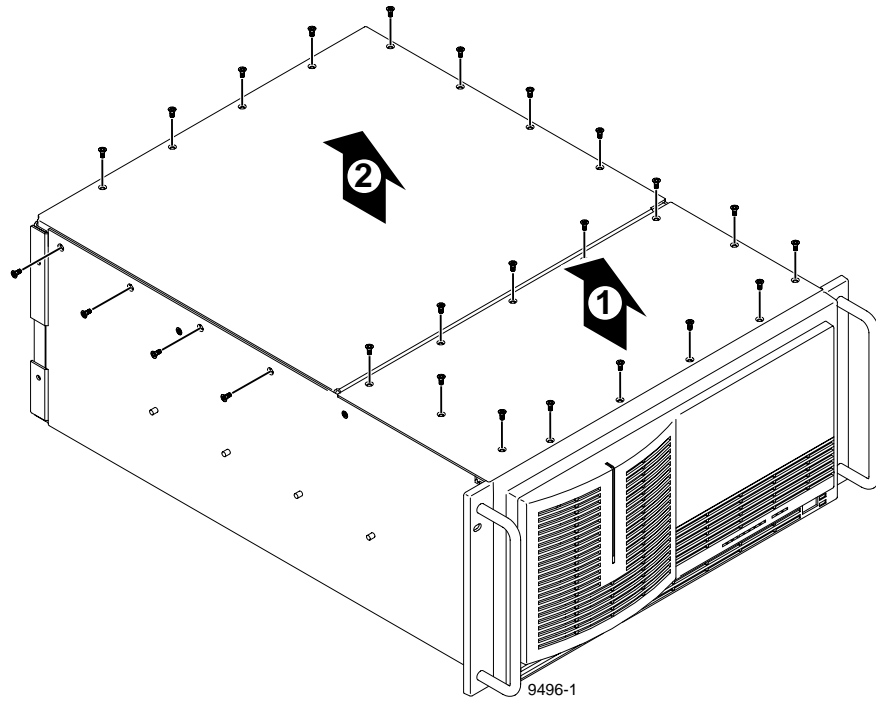
4. Press both track stop latch buttons (visible in the stop latch holes) and with a helper carefully slide the chassis out of the rack and place on a flat, level work surface.

### Removing the Covers

1. Use the Torx tool with the T10 tip to remove the screws that secure the top covers to the chassis. See Figure 1.

**NOTE:** *Take care not to lose these cabinet screws. They are required to meet the EMI specifications for the Profile system.*

2. Set the covers aside.

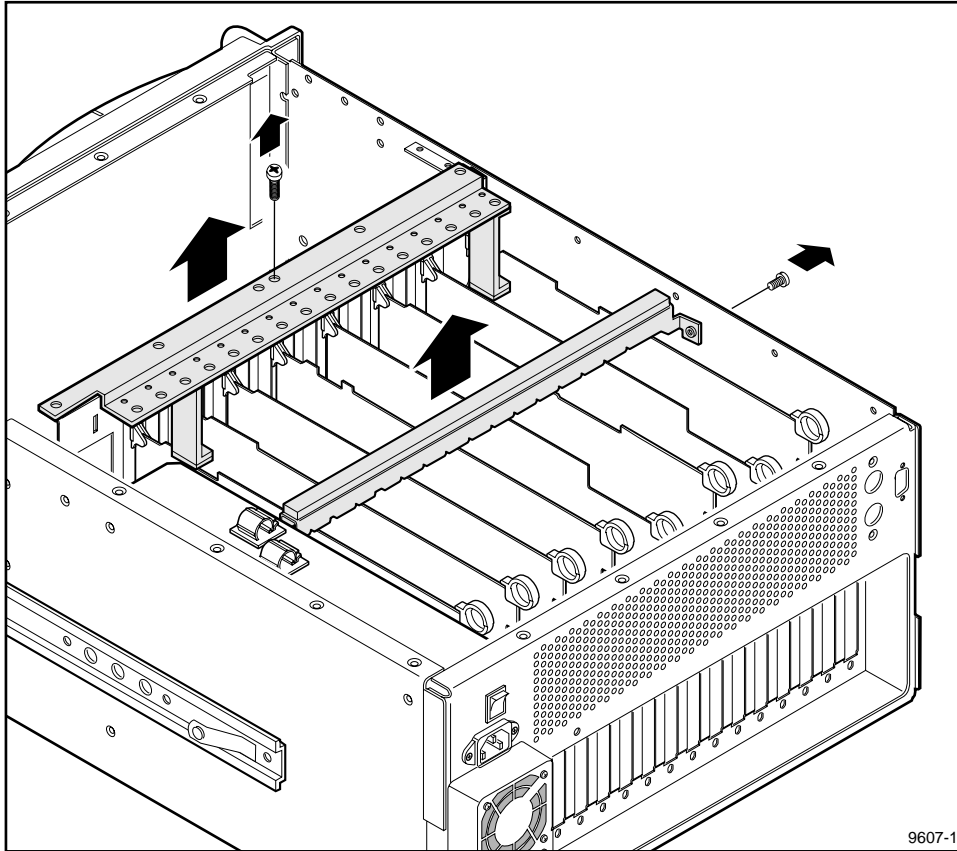


**Figure 1. Removing the Top Covers**



## Remove the Circuit Board Retainers

1. Take out the two screws shown in Figure 2 and then remove each board retainer.



**Figure 2. Circuit Board Retainer Brackets**



## Installing the Mix Effects Circuit Board

1. Select the slot to install your Mix Effects board based on the following:

The Mix Effects board may only be installed in slots 6 and 7. If a Mix Effects board is installed in slot 6 no video output board may be installed in slot 5. If a Mix Effects board is installed in slot 7 no video output board may be installed in slot 8. These restrictions exist because the Mix Effects board shares Video Router connections between slots 6 and 5, and between slots 7 and 8. Other boards such as the Audio Input/Output or the Analog Composite Input can be installed next to the Mix Effects board.

The following tables illustrate valid installation configurations.

**Table 1. Mix Effects Installed in Slot 6**

Slot 5	Slot 6	Slot 7	Slot 8
Any Board Except a Video Output Board	Mix Effects	Any Board	Any Board

**Table 2. Mix Effects Installed in Slot 7**

Slot 5	Slot 6	Slot 7	Slot 8
Any Board	Any Board	Mix Effects	Any Board Except a Video Output Board

**Table 3. Mix Effects Installed in Slots 6 & 7**

Slot 5	Slot 6	Slot 7	Slot 8
Any Board Except a Video Output Board	Mix Effects	Mix Effects	Any Board Except a Video Output Board



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## Mix Effects Installation

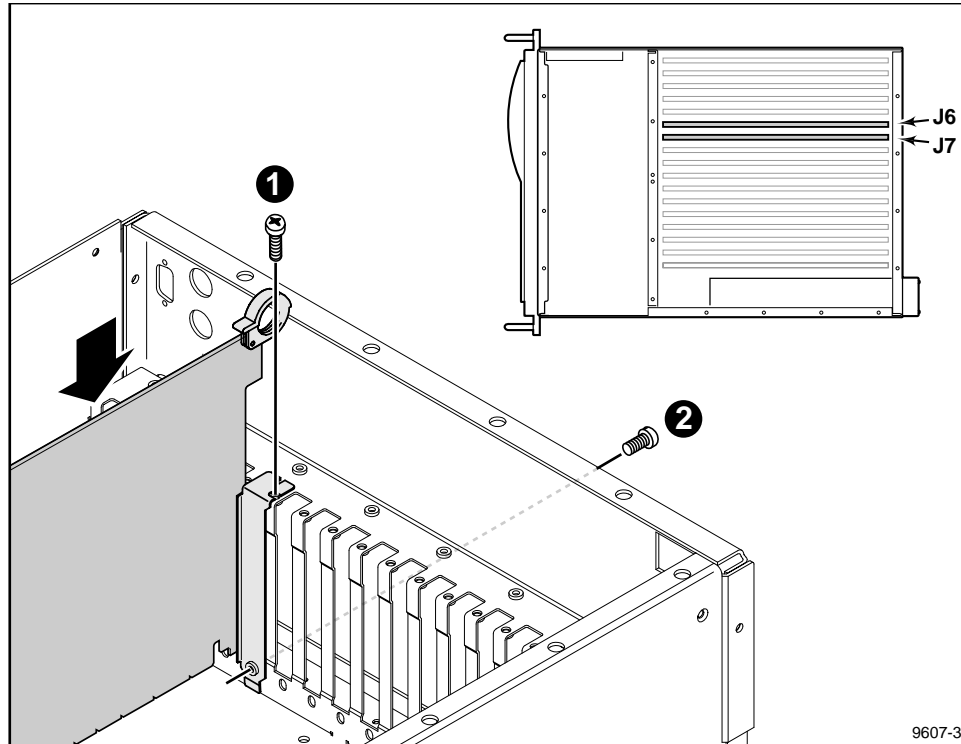
2. Remove any circuit board or rear panel bracket installed in the desired Mix Effects slot. See Figure 3.

**CAUTION:** *To avoid damage to the circuit board when removing or installing it:*

- Do not rock the circuit board in the EISA Bus connector — pull straight up to remove.
  - Do not grasp or push on the rear-panel connectors when removing or installing circuit boards in the card slots.
3. Remove any video output board in the slot adjacent to the Mix Effects.
  4. Align the Mix Effects board with the connectors on the Mother Board. Make sure the extractor on the front end of the board is in the up position, then press down on the board firmly until the board is seated. As you push the board into the connectors, you will feel the board engage first one, then a second set of contacts in the connector. The board is properly seated when the top of the rear mounting bracket is resting on the rear cabinet wall shelf.
  5. Install the mounting screws shown in Figure 3.
  6. If necessary, install blank circuit board brackets in any empty board slots.
  7. Reconfigure the front circuit board retainer as necessary, moving or removing short board extensions. Install the retainer. See Figure 2.
  8. Reinstall the rear circuit board retainer. See Figure 2.
  9. Install the top covers on the PDR 100.

**NOTE:** *When reinstalling the covers, do not tighten any of the screws until all the screws have been started.*

10. Install the PDR 100 in the instrument rack and reconnect the video and power cables..



**Figure 3. Circuit Board Retaining Screws**



## **Verification**

Install the software upgrade. See the Software Upgrade instructions supplied with this kit.