REGULATORY COMPLIANCE

FSR'S ELECTRONIC PRODUCTS have been tested for compliance with: FCC Class A and CE The Power Adapter has been tested for compliance with: UL, CSA and CE.

WARRANTY POLICY

This product is warranted against failures due to defective parts or faulty workmanship for a period of one year after delivery to the original owner. During this period, FSR will make any necessary repairs or replace the unit without charge for parts or labor. Shipping charges to the factory or repair station must be prepaid by the owner, return-shipping charges, via UPS / FedEx ground, will be paid by FSR.

This warranty applies only to the original owner and is not transferable. In addition, it does not apply to repairs done by other than the FSR factory or Authorized Repair Stations.

This warranty shall be cancelable by FSR at its sole discretion if the unit has been subjected to physical abuse or has been modified in any way without written authorization from FSR. FSR's liability under this warranty is limited to repair or replacement of the defective unit.

FSR will not be responsible for incidental or consequential damages resulting from the use or misuse of its products. Some states do not allow the exclusion of incidental or consequential damages, so the above limitations may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Warranty claims should be accompanied by a copy of the original purchase invoice showing the purchase date (if a Warranty Registration Card was mailed in at the time of purchase, this is not necessary). Before returning any equipment for repair, please read the important information on service below.

SERVICE

Before returning any equipment for repair, please be sure that it is adequately packed and cushioned against damage in shipment, and that it is insured. We suggest that you save the original packaging and use it to ship the product for servicing. Also, please enclose a note giving your name, address, phone number and a description of the problem.

NOTE: all equipment being returned for repair must have a Return Authorization (RMA) Number. To get a RMA Number, please call the FSR Service Department (973-785-4347).

Please display your RMA Number prominently on the front of all packages.

Contact Information:

244 Bergen Boulevard,
West Paterson, NJ 07424

Tel: (973) 785-4347 · Fax: (973) 785-4207

E-Mail: sales@fsrinc.com · Web: http://www.fsrinc.com

issue date: 10-03

FSR

RGB - 4/6

400 MHZ VIDEO DISTRIBUTION AMPLIFIERS

OPERATIONS MANUAL

244 Bergen Boulevard, West Paterson, NJ 07424
Tel: (973) 785-4347 · Fax: (973) 785-4207
E-Mail: sales@fsrinc.com
Web: http://www.fsrinc.com

LIT1027

Operators Safety Summary

The general safety information in this summary is for operating personnel.

Do Not Remove Covers or Panels There are no user-serviceable parts within the unit. Removal of the top cover will expose dangerous voltages. To avoid personal injury, do not remove the top cover. Do not operate the unit without the cover installed.
Power Source This product is intended to operate from a power source that will not apply more than 230 volts rms between the supply conductors or between both supply conductor and ground. A protective ground connection by way of grounding conductor in the power cord is essential for safe operation.
Grounding the Product This product is grounded through the grounding conductor of the power cord. To avoid electrical shock, plug the power cord into a properly wired receptacle before connecting to the product input or output terminals. A protective-ground connection by way of the grounding conductor in the power cord is essential for safe operation.
Use the Proper Power Cord Use only the power cord and connector specified for your product. Use only a power cord that is in good condition. Refer cord and connector changes to qualified service personnel.
Use the Proper Fuse To avoid fire hazard, use only the fuse having identical type, voltage rating, and current rating characteristics. Refer fuse replacement to qualified service personnel.
Do Not Operate in Explosive Atmospheres To avoid explosion, do not operate this product in an explosive atmosphere.

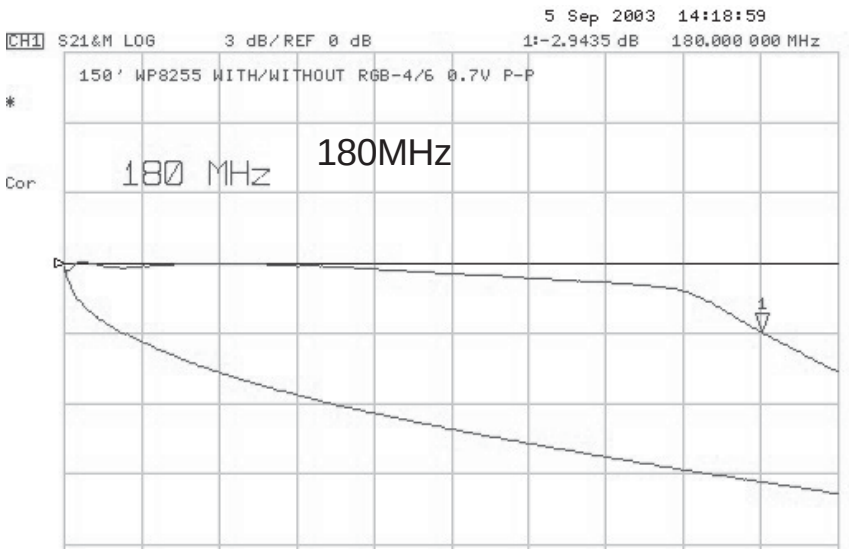
Sync

Input level:	0.5 Vp-p to 5.0 Vp-p
Output level:	5.0 Vp-p into Hi-Z, 2.4 Vp-p into 75 ohm
Delay Time:	15nS
Rise & Fall Time:	1nS
Input Impedance:	75 ohms
Output impedance:	75 ohms
Polarity:	Positive or negative
Horizontal frequency:	15 kHz - 200 kHz
Vertical frequency:	50 Hz - 150 Hz

General

Power:	100VAC to 240VAC, 50/60 Hz, internal,
autoswitch	0.65A/115V, 0.4A/230V
Enclosure:	Metal 1 Rack Unit

Graph A shows the response curves of a 150 foot section of West Penn 8255 mini-coax cable with and without the RGB-4/6 being driven by a full .7V signal. Notice that by itself, the cable's -3dB bandwidth is only 17 MHz, but when used with the RGB-4/6, the bandwidth is restored to 180 MHz at the end of the150 foot cable.



TECHNICAL SPECIFICATIONS

Video Input

Number/Type: 1 RGBHV, RGBS, RGsB, RsGsBs, component video, S-video, or 3 CV Connectors 5 female BNC
Impedance: 75 Ohms
Output Offset: +/-20 mv
Level (nominal): Analog 0.7V p-p
Level (maximum): 2V p-p

Equalized Video Output

Number/Type: 2 (each independent of the other) RGBHV, RGBS, RGsB, RsGsBs, component video, S-video, or 3 CV
Connectors: 2 by 5 female BNC
Bandwidth: This performance data is based on the CDA-2EQA plus the specified length of WP8255 (West Penn) cable with a **full amplitude (0.7V p-p) signal applied.**

50' cable 325 MHz (-3dB) 0-261 MHz +/-0.75dB
100' cable 245 MHz (-3dB) 0-200 MHz +/-0.75dB
150' cable 180 MHz (-3dB) 0-133 MHz +/-0.75dB

This performance data is based on the CDA-2EQA plus the specified length of WP8255 (West Penn) cable with a **small amplitude (0.2V p-p) signal applied.**

50' cable 360 MHz (-3dB) 0-300 MHz +/-0.75dB
100' cable 335 MHz (-3dB) 0-285 MHz +/-0.75dB
150' cable 316 MHz (-3dB) 0-262 MHz +/-0.75dB

Level (nominal): Unity / User adjustable via potientiometer
Impedance: 75 ohms
Design Cable: West Penn WP8255 or equal

Video Output

Number/type: 2 (RGB-4), 4 (RGB-6), RGBHV, RGBS, RGsB, RsGsBs, component video, S-video, or 3 CV
Connectors: All female BNC
Bandwidth: 400 MHz @ -3 dB (minimum) fully loaded with a 0.7V p-p input signal
Flatness: +/-0.5 to 300 MHz (typical) fully loaded with a 0.7V p-p input signal
Gain: Unity (buffered)
Impedance: 75 Ohms
Differential Gain 0.04%
Differential Phase 0.15 degrees

INTRODUCTION

The all new RGB - 4 and 6 are ultra high resolution, ultra high bandwidth 1 x 4 and 1 x 6 video distribution amplifiers suitable for applications requiring the highest possible video quality. The first two output channels on each unit have independent cable equalization permiting long cable runs while maintaining excellent signal integrity for even the highest video resolutions.

Not only do these two units have over 400 MHz of band-width but they also have the unique FSR advanced sychronizing circuitry to ensure a rock stable video image at any resolution and signal level.

The first two outputs are independently equalized to maintain excellent signal integrity for all video resolutions. Cable runs of up to 175 feet are possible with 180 MHz of full amplitude bandwidth and +/- 0.75 dB flatness to 130 Mhz. A 0.2V p-p input signal yields 316 MHz of bandwidth and +/- 0.5 dB flatness to 250 MHz. This means that the signal you feed into the RGB-4 or RGB-6 will arrive at the far end of the cable with an almost immeasurable amount of loss and no distortion due to peaking effects.

Even using standard 75 ohm BNC connectors the RGB-4 and 6 are housed in a 1RU metal enclosure freeing up valuable rack space.

FSR also manufactures many other signal handling prod-ucts
that make any video installation quick and professional.

FEATURES

•Minimum 400 MHz of bandwidth fully loaded
• +/- 0.5 dB flatness to 300 MHz
• Advanced sychronizing circuitry
• (5) 75 Ohm BNC connectors for the input and each output
• Independent cable equalization control for the first two output channels
• Compatible with all RGB-HV and HD TV standards
• Internal universal power supply

APPLICATIONS

- *Boardrooms*
- *Houses of Worship*
- *Control Rooms*
- *Classrooms*
- *Staging and Rental*

INSTALLATION and OPERATION

Do not connect the power line cord until all the video connections are completed.

Mount the unit in the equipment rack.

Connect alll the video cables per the diagram.

Connect the power cord.

Adjust the cable equalization, available on the first two output channels, with the variable control (one for each of the two output channels) for minimum distortion using an appropriate test signal or full motion video.

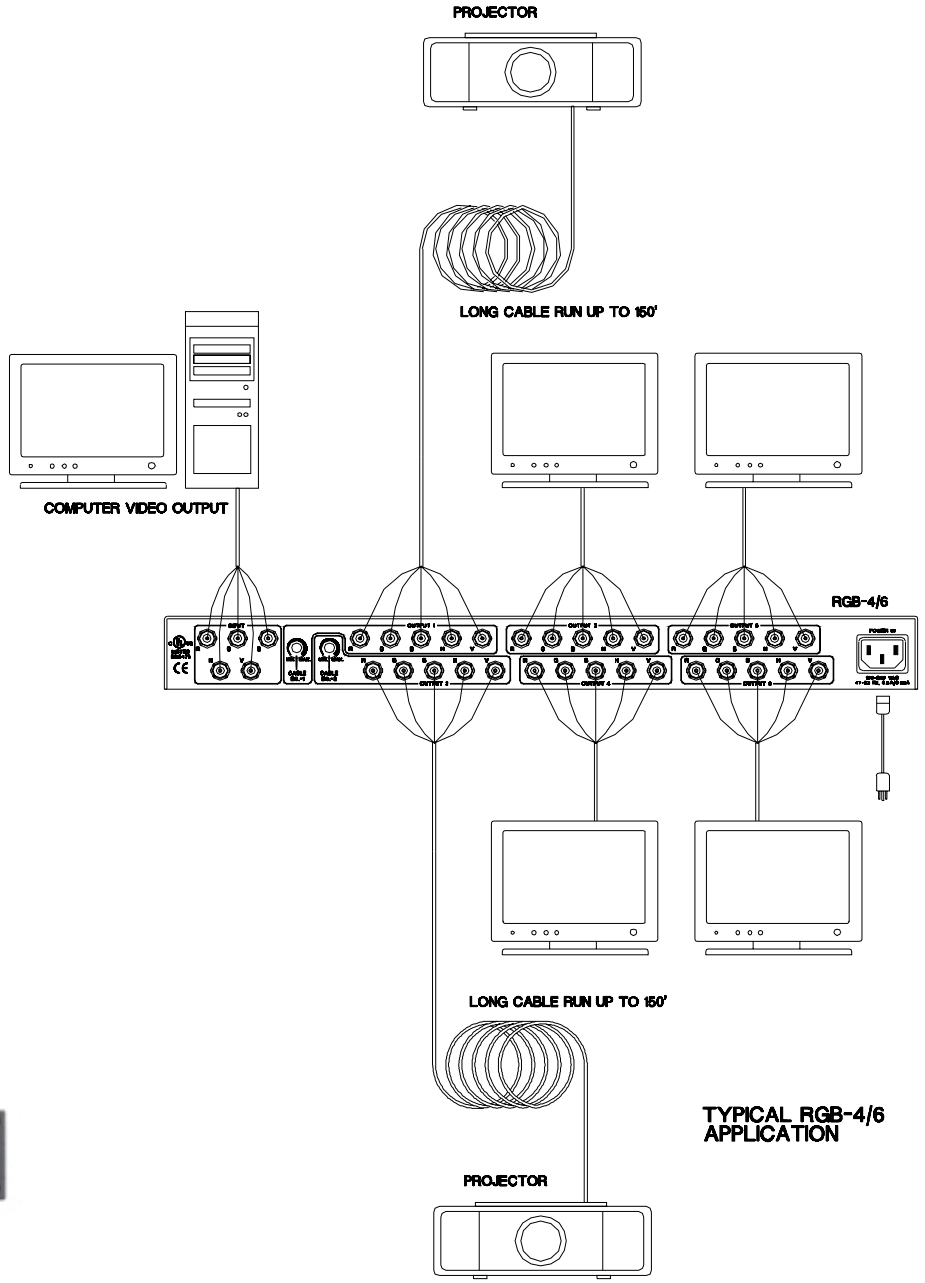
Perform the final operational check.

FRONT AND REAR PHOTOS OF THE EQUIPMENT

RGB - 4

RGB - 6

TYPICAL APPLICATION



TYPICAL RGB-4/6 APPLICATION