

RGB-4/6 Video Distribution Amplifiers

**Ultra High Resolution
Ultra High Bandwidth**



FSR

Video Products Group

RGB-4/6

Touchboards

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FEATURES

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 permitting 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 bandwidth but they also have the unique FSR advanced synchronizing 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 +/- 0.5 dB flatness to 130 Mhz. A 0.2V p-p input signal yields 316 MHz of bandwidth and +/- 0.75 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.

You spend a significant amount of time generating the best possible image, don't trust that image to long cable runs. The first two channels on both these distribution amplifiers permit independent equalization allowing you to deliver your image to two different locations with the same color and clarity that you created it with. High bandwidth, flat frequency response, and advanced sync processing - just what you need. In addition the RGB-4 and RGB-6 have a universal built in power supply suitable for operation anywhere in the world.

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 products that make any video installation quick and professional.

At FSR, we have what you need.

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KEY FEATURES

- Minimum 400 MHz of bandwidth fully loaded
- +/- 0.5 dB flatness to 300 MHz typical
- Advanced synchronizing 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

APPLICATIONS

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

SOME NOTES ON BANDWIDTH

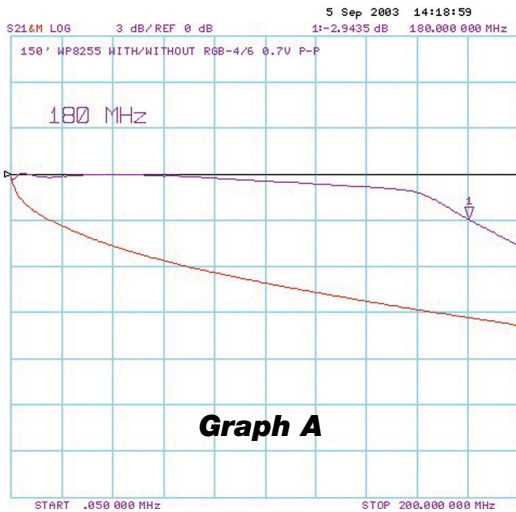
Typically, the bandwidth of a device is measured to its -3dB point, but how you get there is equally important. Frequency response should be as flat as possible throughout the response curve. Some manufacturers will boost a signal through a particular frequency range as much as 6 to 12dB in order to extend the -3dB point. Excessive peaking in competitive products will cause aberrations in the picture such as noise, color blooming and bright banding at the edge of an object in the image. It can also overdrive the input stage of any downstream equipment causing image distortion.



The above graph illustrates the typical frequency response of the RGB - 4/6. Notice that the curves represent a fully loaded unit and show the response to a 0.7V p-p and a 0.2V p-p input signals. It is important to observe that the overall flatness and upper limits are fairly independent of signal amplitude. This is an extremely important characteristic.

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.

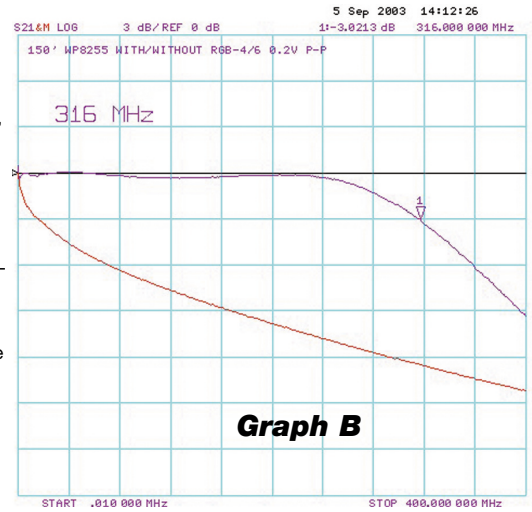


Graph A

Graph B shows the response of a 150' section of WP8255 mini-coax with and without the RGB-4/6, with a reduced level 0.2V p-p signal.

Notice that the RGB-4/6 maintains it's exceptionally flat response characteristics, even with a low level signal.

Again, notice that the cables' -3dB bandwidth is only 17 MHz, but is restored to 316MHz when driven by the RGB-4/6.



Graph B

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 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 potentiometer
- Impedance: 75 ohms
- Design Cable: West Penn WP8255 or equal

Video Output

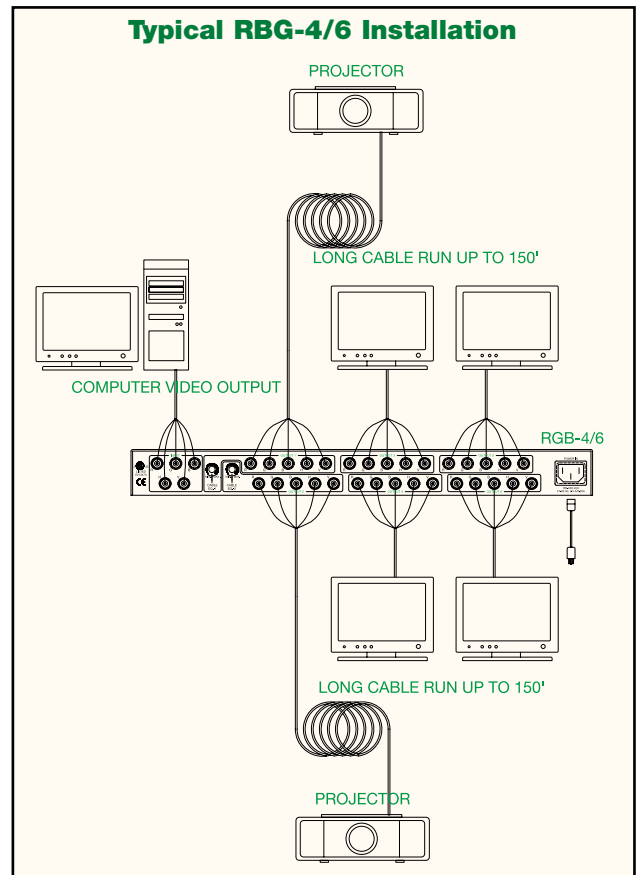
- Number/type: 2 (RGB-4), 4 (RGB-6), RGBHV, RGBS, RGsB, RsGsBs, component video, S-video, or 3 CV
- Connectors: All female BNC
- Bandwidth: 400 MHz @ -3 dB (minimum) fully loaded with a 0.7V p-p input signal
- Flatness: +/-0.5 to 300 MHz (typical) fully loaded with a 0.7V p-p input signal
- Gain: Unity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

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 .65A/115V, .4A/230V
- Enclosure: Metal 1 Rack Unit



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