

## User's Guide



## CVDA 6 EQ MX

### Composite Video Distribution/Equalization Amplifier

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Printed in the USA  
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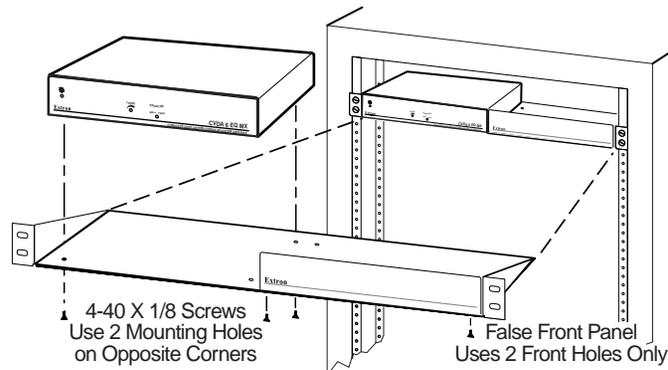
## Description

Extron's CVDA 6 EQ MX is a 1-input, 6-output composite video distribution amplifier with level adjustment and equalization capabilities and a buffered loopout. The adjustments can equalize a video signal up to 500 feet away on high quality cable such as Extron SuperFlex SHR Super High resolution coaxial cable. The buffered loopout is not equalized and is appropriate for connecting a second CVDA 6 EQ MX or a local monitor.

The CVDA 6 EQ MX is rack mountable and has an internal auto-switchable power supply that can accept 100VAC to 240VAC at 50 Hz to 60 Hz.

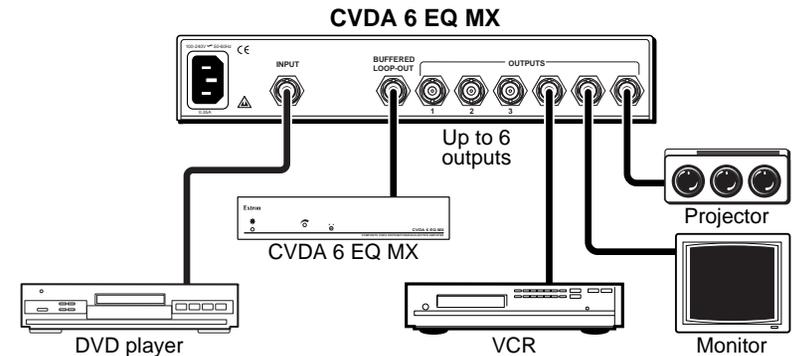
## Installation and Rear Panel Connections

- For optional rack mounting, mount the CVDA 6 EQ MX unit on the left or right side of a 19" 1U Universal Rack Shelf (Extron P/N 60-190-01) (figure 1).



**Figure 1 — Rack mounting the CVDA 6 EQ MX**

- If feet were previously installed on the bottom of the case, remove them.
  - Mount the CVDA 6 EQ MX on the rack shelf, using two 4-40 x 1/8 screws in opposite (diagonal) corners to secure the case to the shelf.
- Connect the composite video input to the input BNC connector on the rear of the CVDA 6 EQ MX (figure 2).
  - Connect the desired devices to the composite video output BNCs on the rear of the CVDA 6 EQ MX.
  - Connect power to the CVDA 6 EQ MX.

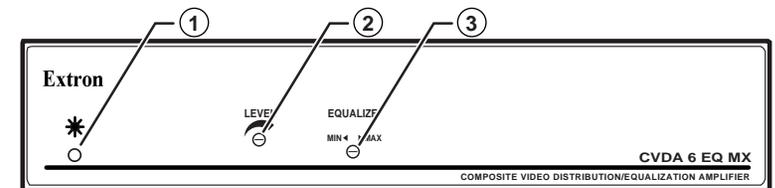


**Figure 2 — Typical CVDA 6 EQ MX application**

## Front Panel Controls and Operations

- Power LED** — This LED (figure 3) lights to indicate that the CVDA 6 EQ MX is receiving power.

**Operation** — After the CVDA 6 EQ MX and its connected devices are powered up, the system is fully operational. If any problems are encountered, verify that the cables are routed and connected properly.



**Figure 3 — CVDA 6 EQ MX front panel**

- Level adjustment** — This control is similar to a TV's brightness control. The level adjustment compensates for signal amplitude losses caused by cable resistance. The control adjusts the composite video output signal gain, through one full turn, from -6dB through +6dB.

**Operation** — With a waveform monitor connected to the far end of one of the output cables, adjust the level so that the level is 100 IRE.

If no waveform monitor is available, adjust the level to boost the level to achieve the best possible image.

## Operation

- ③ **Equalize adjustment** — This control is similar to a TV's sharpness control. The equalization adjustment compensates for losses due to capacitance over long cable runs. The control adjusts the peaking, through multiple turns, between 0 and +4dB.

**Operation** — With a waveform monitor connected to the far end of one of the output cables, adjust the equalization so that the color burst ranges between -20 IRE and +20 IRE.

If no waveform monitor is available, adjust the equalization to restore the frequency response and achieve the best possible image.

**NOTE** *The equalize adjustment is a 15-turn potentiometer with a soft mechanical stop at the high or low end. If you have reached the high or low end of the adjustment, the potentiometer makes a clicking sound as you turn it, and no change is apparent on the display.*

**NOTE** *The level and equalization adjustments affect all six output channels simultaneously and equally. For maximum effectiveness of the level and equalization controls, all display devices should be connected with cables of equal length.*

**NOTE** *The level and equalization adjustments have no effect on the buffered loopout, which should not be run the long distances as the amplified outputs.*

## Specifications

### Video

Equalization/gain .....	0dB to +4dB (over a 0.5 MHz to 8 MHz range)
Level adjust.....	-6dB to +6dB
Bandwidth .....	30 MHz (<±0.5dB)
Differential phase error .....	1°, 3.58 MHz
Differential gain error .....	0.05%, 3.58 MHz
Crosstalk .....	-50dB @ 3.58 MHz

### Video input

Number/signal type .....	1 NTSC, PAL, SECAM composite video
Connectors .....	1 BNC female
Minimum/maximum levels .....	Analog ..... 0.4V to 2.0V p-p with no offset at unity gain
Impedance .....	75 ohms
Return loss .....	-40dB minimum, 0 to 10 MHz
Maximum DC offset .....	1.0V

## Specifications, cont'd

### Video output

Number/signal type .....	7 composite video .... 6 amplified for distribution 1 buffered loop-through
Connectors .....	7 BNC female
Minimum/maximum levels .....	0.4V to 2.0V p-p
Impedance .....	75 ohms
DC offset .....	±20mV maximum with input at 0 offset

### Sync

Standards .....	NTSC 3.58, NTSC 4.43, PAL, SECAM
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### General

Power .....	100VAC to 240VAC, 50/60 Hz, 12 watts, internal, auto-switchable
Temperature/humidity .....	Storage -40° to +158°F (-40° to +70°C) / 10% to 90%, non-condensing Operating +32° to +122°F (0° to +50°C) / 10% to 90%, non-condensing
Rack mount .....	Yes, with optional 1U rack shelf, part #60-190-01
Enclosure type .....	Metal
Enclosure dimensions .....	1.75" H x 8.75" W x 9.4" D (1U high, 1/2 rack width) 4.4 cm H x 22.2 cm W x 23.9 cm D (Depth excludes connectors.)
Product weight .....	2.9 lbs (1.3 kg)
Shipping weight .....	5 lbs (2.3 kg)
Vibration .....	ISTA/NSTA 1A in carton (International Safe Transit Association)
Listings .....	UL, CUL
Compliances .....	CE, FCC Class A
MTBF .....	30,000 hours
Warranty .....	3 years parts and labor

*Specifications are subject to change without notice.*

### Optional Accessories

• Extron 19" 1U Universal Rack Shelf	60-190-01
• Extron BNC male to RCA female adapter	10-264-01
• Extron Superflex SHR Super High resolution coaxial cable	26-383-xx
• Bulk SHR-1 bulk Super High resolution cable, 500'	22-098-02
• Bulk SHR-1 bulk Super High resolution cable, 1000'	22-098-03
• SHR termination kit	60-073-02

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