Extron® Electronics

INTERFACING, SWITCHING AND DISTRIBUTION

Installation Guide

CVC 200

Component Video and HDTV to RGB Converter

68-437-01 **Rev. D**
08 07

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Introduction

The CVC 200 Component Video Converter converts all SMPTE standard component video formats to RGBS or RGBHV video. The CVC 200 can also strip sync-on-green (SOG) from RGsB video. The converter outputs converted RGBS or RGBHV video on BNC connectors. Figure 1 shows a typical CVC 200 application.

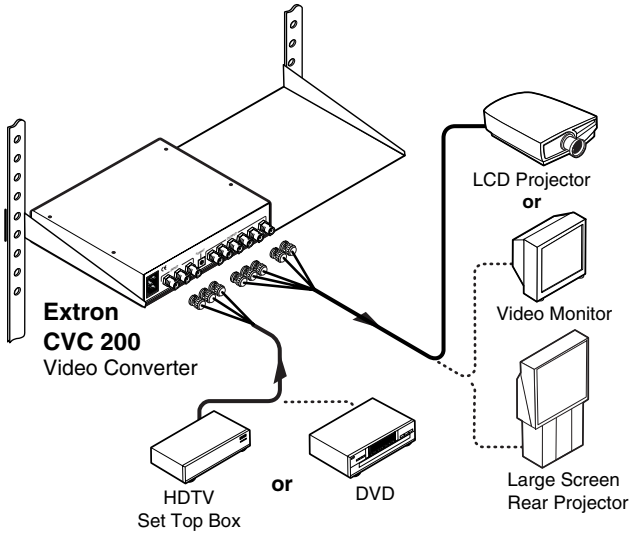

Figure 1 — Typical CVC 200 application

The component video input formats include DVD, Betacam® video, and HDTV component video. The RGsB video input can be computer video or NTSC/PAL video.

Mounting

The CVC 200 can be rack mounted using one side of a 1U Universal Rack Shelf (part **#60-190-01**) or 1U Basic Rack Shelf (part **#60-604-01**).

UL requirements

The following Underwriters Laboratories (UL) requirements pertain to the installation of the CVC into a rack.

1. **Elevated operating ambient temperature** — If the equipment installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than room ambient temperature. Therefore, install the CVC in an environment compatible with the maximum ambient temperature (Tma = +122 °F, +50 °C) specified by Extron.
2. **Reduced air flow** — Install the equipment in a rack so that the amount of air flow required for safe operation of the equipment is not compromised.

Mounting

3. **Mechanical loading** — Mount the equipment in the rack so that a hazardous condition is not achieved due to uneven mechanical loading.
4. **Circuit overloading** — Connect the equipment to the supply circuit and consider the effect that circuit overloading might have on overcurrent protection and supply wiring. Appropriate consideration of equipment nameplate ratings should be used when addressing this concern.
5. **Reliable earthing (grounding)** — Maintain reliable grounding of rack-mounted equipment. Pay particular attention to supply connections other than direct connections to the branch circuit (e.g. use of power strips).

Mounting instructions

Rack mount the CVC 200 as follows:

1. Remove the feet from the CVC, if they were previously installed.
2. Mount the CVC 200 on the rack shelf, using two 4-40 x 3/16" screws in opposite corners (under the shelf) to secure the CVC to the shelf (figure 2).

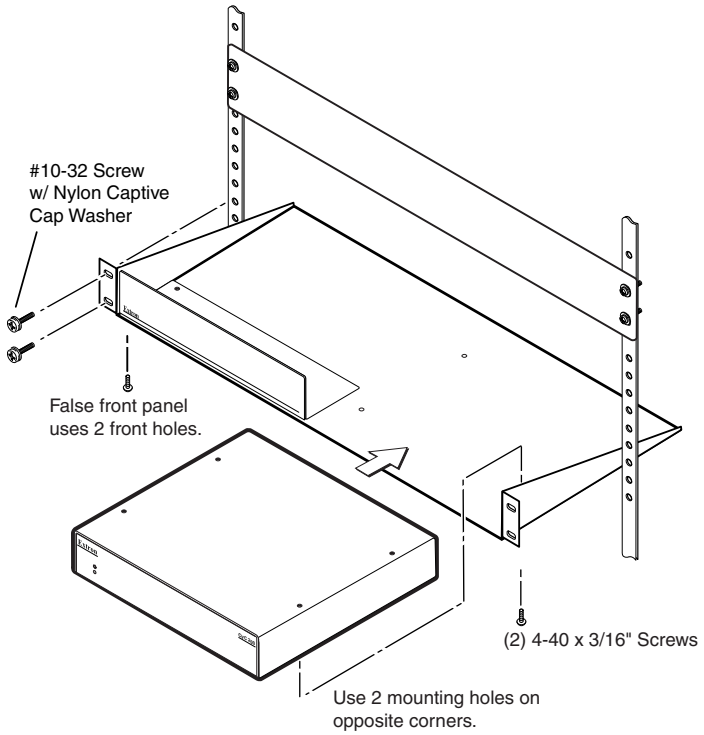

Figure 2 — Rack mounting the CVC 200

Cable Connection and Rate Selection

See figure 3 to identify the rear panel connections and Format rotary switch

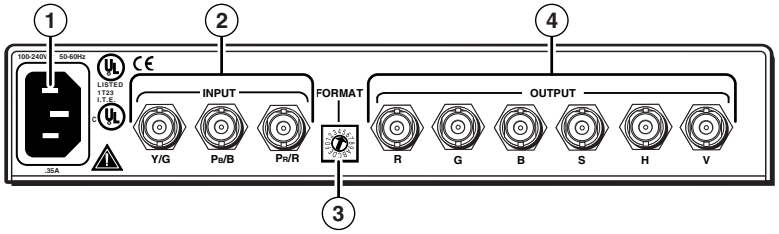

Figure 3 — CVC 200 rear panel features

① **Power connector —** Plug a standard IEC power cord into this connector to connect the CVC 200 to a 100 to 240VAC, 50 Hz or 60 Hz power source.

② **Input connectors —** Connect a component video input device (HDTV, W-VHS [Y, PR, PB], SMPTE [Y, R-Y, B-Y]), Betacam® [Y, R-Y, B-Y]) or an RGsB input device to these female BNC connectors. Use high-resolution cable, such as Extron's BNC-4 mini HR, RG59/HR, or RG6/SHR cable. Connect the input device as shown in figure 4.

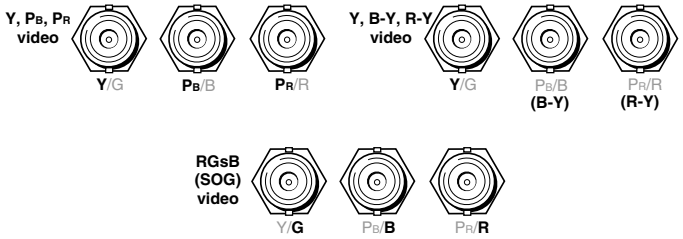

Figure 4 — Input connections

③ **Format rotary switch** — Use an Extron Tweeker or other small screwdriver to set the Format rotary switch to match the video input format. The table below shows the switch settings and their assigned input video formats.

Format switch

Position	Input format(s)	Standard or rate
0	Not used	
1	Y, Pb, Pr	NTSC/PAL
2	Y, Pb, Pr	HDTV (480p, 576p, 720p, 1035i, 1080i)
3	Y, Pb, Pr	Betacam
4	Not used	
5	RGsB	NTSC/PAL
6	RGsB	Computer rates
7	Y, Pb, Pr	NTSC/PAL
8	Y, Pb, Pr	HDTV (720p)
9	Y, Pb, Pr	HDTV (1080i)
A	Y, Pb, Pr	HDTV (1080p)
B-F	Not used	

④ **Output connectors —** Connect an RGBHV or RGBS display to these female BNC connectors. Use high-resolution cable, such as Extron's BNC-4 or BNC-5 mini HR, RG59/HR, or RG6/SHR cable. Connect the display as shown in figure 5.

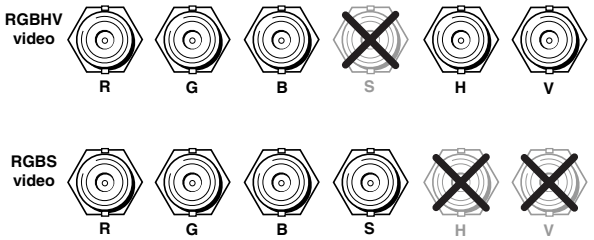

Figure 5 — Output connections

Specifications

Video

Gain	Unity
Bandwidth	55 MHz (-3 dB)

Video input

Number/signal type	1 component video [HDTV, W-VHS (Y, P_R, P_B), SMPTE (Y, R-Y, B-Y), and Betacam® (Y, R-Y, B-Y)] or RGsB
Connectors	3 BNC female
Nominal level	1V p-p for Y of component video 0.3V p-p for R-Y and B-Y of component video 0.7V p-p for P_B P_R
Minimum/maximum levels	Y: 0.5 V to 1.5 Vp-p with no offset at unity gain P_B P_R: 0.4 V to 1.0 Vp-p with no offset at unity gain
Impedance	75 ohms
Horizontal frequency	15.75 kHz to 100 kHz according to selected mode
Vertical frequency	60 Hz
Return loss	<-25 dB @ 5 MHz
DC offset (max. allowable)	±2 V (maximum)

Video output

Number/signal type	1 RGBHV, RGBS
Connectors	6 BNC female
Nominal level	0.7 Vp-p for RGB
Minimum/maximum levels	RGB: 0.4 V to 1.0 Vp-p
Impedance	75 ohms
Return loss	<-30 dB @ 5 MHz
DC offset	0.1 V with input at 0 offset

General

Power	100 VAC to 240 VAC, 50/60 Hz, 12 watts, internal, autoswitchable
Temperature/humidity	Storage -40° to +158°F (-40° to +70°C) / 10% to 90%, noncondensing Operating +32° to +122°F (0° to +50°C) / 10% to 90%, noncondensing
Rack mount	Yes, with optional rack shelf, part #60-190-01 or #60-604-01
Enclosure type	Metal
Enclosure dimensions	1.6" H x 8.75" W x 9.4" D (1U high, half rack wide) 4.1 cm H x 22.2 cm W x 23.9 cm D (Depth excludes connectors.)
Product weight	2.8 lbs (1.3 kg)
Shipping weight	5 lbs (3 kg)
Vibration	ISTA 1A in carton (International Safe Transit Association)
Listings	UL, CUL
Compliances	CE
MTBF	30,000 hours
Warranty	3 years parts and labor

NOTE *All nominal levels are at ±10%.*

NOTE *Specifications are subject to change without notice.*