

Installation Guide

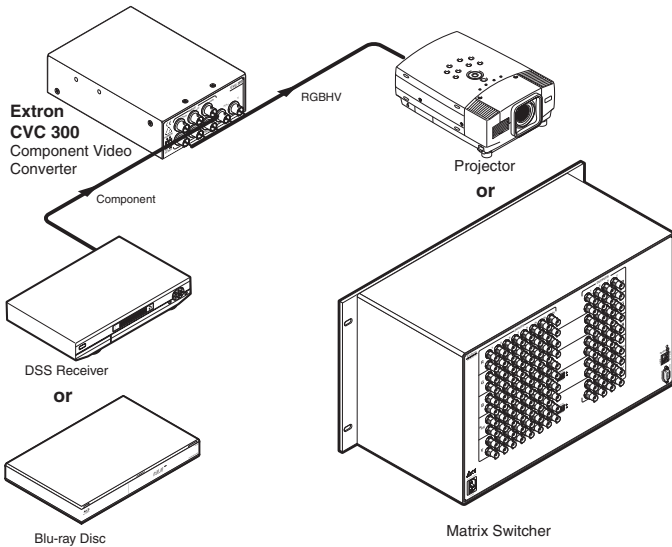


CVC 300

Component Video and HDTV to RGB Converter

Introduction

The Extron CVC 300 Component Video Converter converts all standard component video formats: NTSC/PAL, DVD, and Betacam®, to RGBHV or RGBS; and converts SMPTE HDTV component video to RGBHV. The CVC 300 can also strip sync-on-green (SOG) from RGSB video. The converter outputs RGBHV or RGBS video on BNC connectors. The figure below shows a typical CVC 300 application.



The component video input formats include SMPTE, HDTV and Betacam component video. The RGSB video input can be computer video or NTSC/PAL video.

Mounting

The 1U high, quarter rack width, CVC 300 converter can be mounted to a rack, under a desk or tabletop, or on a projector bracket. It can be rack mounted using one-quarter of a 1U Universal Rack Shelf, RSU 129 (part #60-190-01) or 1U Basic Rack Shelf, RSB 129 (part #60-604-01).

UL rack mounting guidelines

The following Underwriters Laboratories (UL) guidelines pertain to the installation of the CVC 300 into a rack.

1. Elevated operating ambient temperature — If the equipment is 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 converter in an environment compatible with the maximum ambient temperature ($T_{ma} = +104\text{ }^{\circ}\text{F}$, $+40\text{ }^{\circ}\text{C}$) specified by Extron.

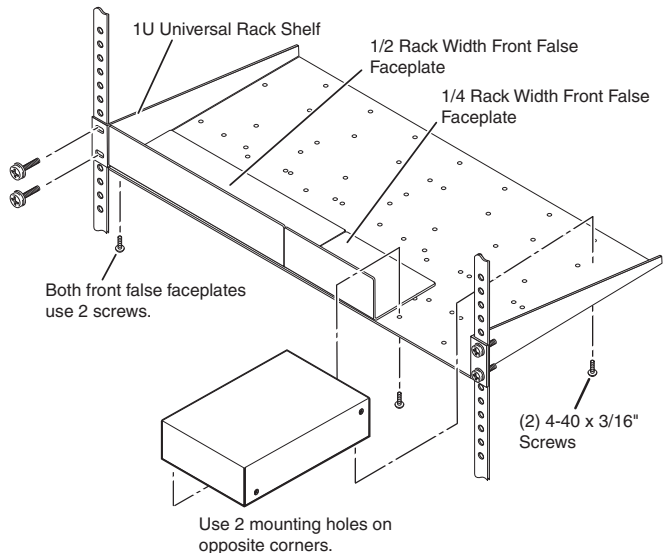
Mounting

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.
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 300 as follows:

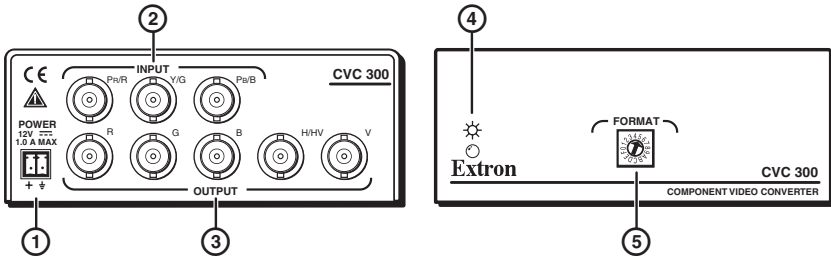
1. Remove the feet from the CVC, if they were previously installed.
2. Mount the CVC 300 on the rack shelf, using two 4-40 x 3/16" screws in opposite corners (under the shelf) to secure the converter to the shelf (see below).



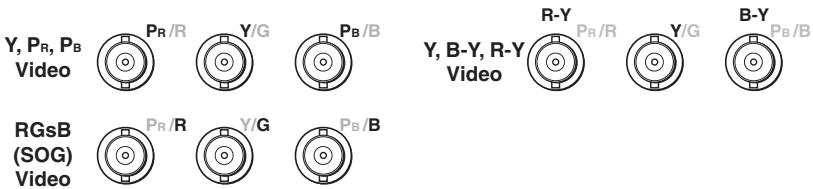
Cable Connection and Rate Selection

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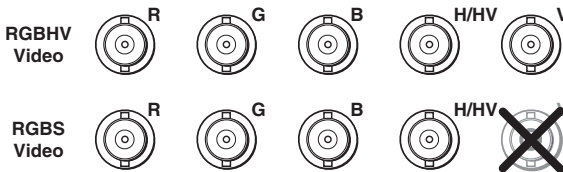
See the illustrations below to identify the panel connections.



- 1 Power connector** — Plug the external 12 VDC power supply here using the included 2-pole captive screw connector (See "Power supply wiring").
- 2 Input connectors** — Connect a component (SMPTE, HDTV, or Betacam) or RGB video input device to these female BNC connectors. Connect the input device as shown below.



- 3 Output connectors** — Connect an RGBHV or RGBS display to these female BNC connectors. Connect the display as shown below.



- 4 Power LED** — Green when power is applied and an active video input is detected. Amber if power is available but no input signal is present.

Cable Connection and Rate Selection (Cont'd)

- ⑤ **Input Format rotary switch** — Use an Extron Tweeker or other small screwdriver to set the Format rotary switch to match the video input format. The following table shows switch settings and their assigned input video formats.



Position	Input	Resolutions	Output
Position 0	Reserved for future use		
Position 1 (Default):	YUVp/HD	480p, 576p, 720p, 1080i, 1080p	RGBHV
Position 2:	RGsB	480i/p, 576i/p, 640x480 to 1920x1200	RGBHV
Position 3:	YUVi	480i, 576i	RGBHV
Position 4:	RGsB HD	720p, 1080i, 1080p	RGBHV
Position 5:	Betacam 50	480i, 576i	RGBHV
Position 6:	Betacam 60	480i, 576i	RGBHV
Position 7:	YUVp	480p, 576p	RGBS
Position 8	RGsB	480i/p, 576i/p, 640x480 to 1920x1200	RGBS
Position 9:	YUVi	480i, 576i	RGBS
Position A:	RGsB HD	720p, 1080i, 1080p	RGBS
Position B:	Betacam 50	480i, 576i	RGBS
Position C:	Betacam 60	480i, 576i	RGBS
D, E and F	Reserved for future use		

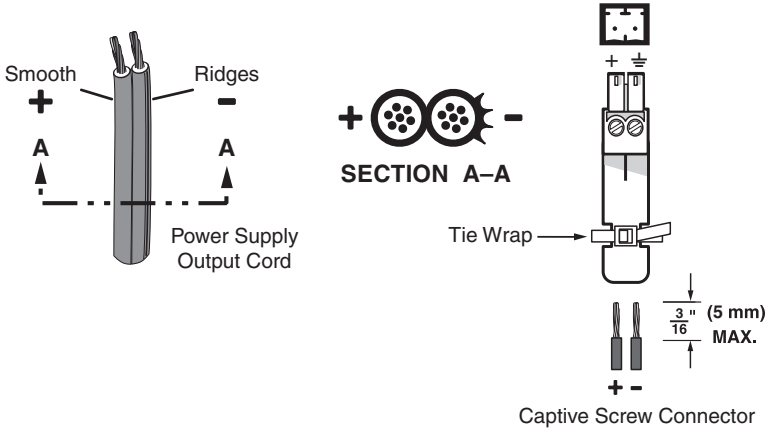
Input Format Table (Rotary Switch)

Power Supply Wiring

Power supply wiring

NOTE This product is intended to be powered by a UL Listed power supply with an output rated at 12 VDC, 2 A.

Wire the supplied male power connector (plug) as shown below.



CAUTION Power supply voltage polarity is critical. Incorrect polarity can damage the power supply and the product. Identify the power cord negative lead by the ridges on the side of the cord.

NOTE The length of the exposed (stripped) copper wires is important. The ideal length is $\frac{3}{16}$ " (5 mm). Longer bare wires can short together. Shorter wires are not as secure in the captive screw connectors and could be pulled out.

Do not tin the stripped power supply leads. Tinned wires are not as secure in the captive screw connectors and could be pulled out.

To verify the polarity before connection, plug in the power supply with no load and check the output with a voltmeter.

WARNING The two power cord wires must be kept separate while the power supply is plugged in. Remove power before wiring.

As an alternative, an Extron PS 123 Universal 12 VDC Power Supply, part #60-814-01, can power multiple Extron 12 VDC devices using only one AC power connector.

Insert the wired plug into the power connector on the rear panel, then connect AC power.

Specifications

Video input

Number/signal type.....	1 component video [HDTV (Y, P _R , P _B), SMPTE (Y, R-Y, B-Y), or Betacam® (Y, R-Y, B-Y)] or RGsB
Connectors	3 BNC female
Nominal level	1 Vp-p for Y of component video and for G of RGsB 0.7 Vp-p for P _B , P _R , R-Y and B-Y of component video, and for R and B of RGsB
Minimum/maximum levels.....	0 V to 1.5 Vp-p with no offset
Impedance.....	75 ohms
Horizontal frequency.....	15 kHz to 100 kHz according to selected mode
Vertical frequency.....	50 Hz to 120 Hz
Resolution range	640x480 to 1920x1200, 480i/p, 576i/p, 720p, 1080i/p
Return loss.....	<-35 dB @ 10 MHz

Video output

Number/signal type.....	1 RGBHV, RGsB
Connectors	5 BNC female
Nominal level	0.7 Vp-p for RGB
Minimum/maximum levels.....	RGB: 0.0 V to 0.7 Vp-p
Impedance.....	75 ohms
Return loss.....	<-45 dB @ 10 MHz
Vertical frequencies.....	Locked to the detected input rate

Sync

Input type.....	RGsB; YUV; Y, R-Y, B-Y
Output type.....	RGBHV, RGsB
Standards.....	SMPTE 170M (NTSC), SMPTE 274M (1080i/p), SMPTE 293M (480p), SMPTE 296M (720p)
Input level	0.3 V to 1.0 Vp-p (sync + video)
Output level.....	0.0 V to 5.0 Vp-p
Input impedance	75 ohms (on Y or Gs connector)
Output impedance	75 ohms (on H/HV and V connectors)

Specifications (Cont'd)

General

External power supply	100 VAC to 240 VAC, 50-60 Hz, external; to 12 VDC, 2 A, regulated
Power input requirements	12 VDC, 1.0 A
Temperature/humidity	Storage: -40 to +158 °F (-40 to +70 °C) / 10% to 90%, noncondensing Operating: +32 to +104 °F (0 to +40 °C) / 10% to 90%, noncondensing
Cooling	Convection, no vents
Mounting	
Rack mount	Yes, with optional 1U, 9.5" deep rack shelf (RSU 129, #60-190-01; RSB 129, 60-604-01); or 1U, 6" deep rack shelf (RSU 126, #60-190-10; RSB 126, 60-604-10)
Furniture mount	Yes, with optional MBU 125 Under Desk Mount kit (70-077-01) or MBU 129 Through Desk Mount kit (70-077-02)
Enclosure type	Metal
Enclosure dimensions	1.7" H x 4.3" W x 6.0" D (1U high, quarter rack wide) (4.3 cm H x 10.9 cm W x 15.2 cm D) (Depth excludes connectors.)
Product weight	0.8 lbs (0.4 kg)
Shipping weight	2 lbs (1 kg)
Vibration	ISTA 1A in carton (International Safe Transit Association)
Regulatory compliance	
Safety	CE, CUL, UL
EMI/EMC	CE, C-tick, FCC Class A, ICES, VCCI Class A
MTBF	30,000 hours
Warranty	3 years parts and labor

NOTE All nominal levels are at $\pm 10\%$.

NOTE Specifications are subject to change without notice.

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