



engineered by
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OWNER'S MANUAL

**BINARY SINGLE CAT 5E/6 HDMI 1.4
EXTENDER FOR USE WITH
B-300 HDMATRIX SERIES SWITCHERS**

B-300-HDMATRIX-RCVR



IMPORTANT SAFETY INSTRUCTIONS

WARNING: To reduce the risk of fire or electric shock, do not expose this apparatus in or near rain or moisture.

1. Read and follow all instructions and warnings in this manual. Keep for future reference.
2. Do not install near any heat sources such as radiators, heat registers, stoves or other apparatus (including amplifiers).
3. Do not install the unit near water or where moisture is present.
4. Clean with a dry cloth.
5. Unplug this apparatus during lightning storms or when unused for long periods of time.
6. Protect the power cord from being walked on or pinched particularly at plug, convenience receptacles, and the point where it exits from the apparatus.
7. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as when the power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
8. To completely disconnect this equipment from the AC mains, disconnect the power supply cord plug from the AC receptacle.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of un-insulated dangerous voltage within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

OVERVIEW

The B-300-HDMATRIX-RCVR extends HDMI from a B-300-HDMATRIX series switcher over single Cat5e/6 130 feet at 1080P60 24Bit color,t including all HDMI 1.4a 3D formats.

PACKAGE CONTENTS

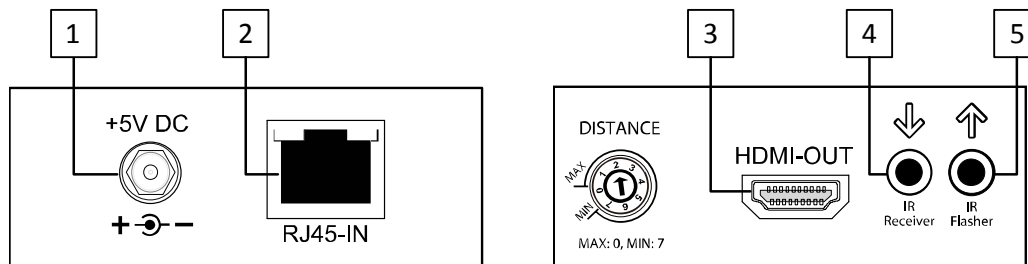
- (1) B-300-HDMATRIX-RCVR
- (1) +5V 4A DC power supply
- (1) User manual
- (1) IR Adapter

FEATURES

- Support for HDMI 1.4a 3D formats
- Extends the transmission up to 200 ft. from the HDMI source at HD 1080i or 720p 24-Bit
- Extends the transmission up to 130 ft. from the HDMI source at Full HD 1080p 24-Bit
- Extends the transmission up to 65 ft. from the HDMI source at Full HD 1080p 36-Bit
- HDCP 2.0 compliant
- DTS-HD Master and Dolby TrueHD audio support
- Bi-directional IR pass-through
- Supports full-frequency IR signal from 20kHz to 60kHz

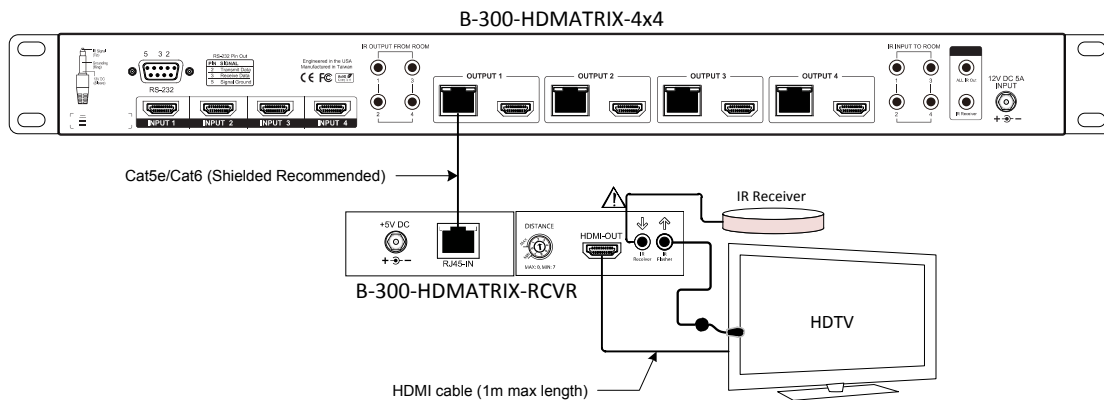
⚠ See Important Connection Notes! for cautions regarding connection and operation.

CONNECTIONS



1. **Latch-locking power jack:** Connect to included 5V 4A DC power supply.
2. **RJ45:** Plug in a Cat5e/6 cable from B-300-HDMATRIX Output.
3. **HDMI OUT:** Connect to an HDMI display with a HDMI male-to-male cable.
4. **IR Receiver:** Infrared 3.5mm jack for IR receiver.
5. **IR Flasher:** Infrared 3.5mm jack for IR flasher

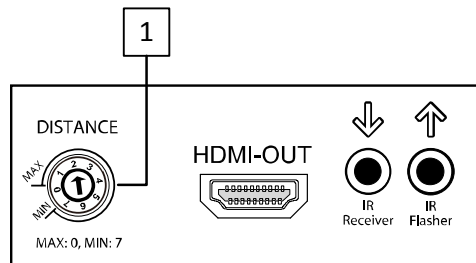
BASIC CONNECTIONS



! IMPORTANT CONNECTION NOTES!

- **CAUTION:** The IR Receiver 3.5mm jack provides 12V power for IR receivers that can damage flashers and control systems. Check carefully before plugging an IR Flasher or IR Receiver into the respective IR sockets. Manufacturer's Warranty will not cover the damage. See IR Control Connections section for proper cabling.
- To reduce video dropout problems from ceiling fans and other EMI issues, it is strongly recommended that shielded CAT5e/CAT6 and shielded RJ45 connectors are used with this extender product. "EZ-end" connectors are not recommended for use with HDMI extenders.
- The transmission distance is subject to the grade of installed cable(s), source device, and display. Any keystone jack along the transmission path will reduce the transmission performance significantly
- 1 meter or shorter HDMI cable is recommended for connecting the B300-HDMATRIX-RCVR to the display.

CALIBRATION



1. **Distance control:** Adjust the 8-level equalization control to the received HDMI signals. The HDMI signal level varies from 0 (strongest) to 7 (weakest) for respective transmission length from longest possible range to short distance.

! CAUTION: Inappropriate signal level setting may cause an overpowering issue that would shorten the product life significantly. Follow the steps below to adjust the distance setting in order to avoid overdriving.

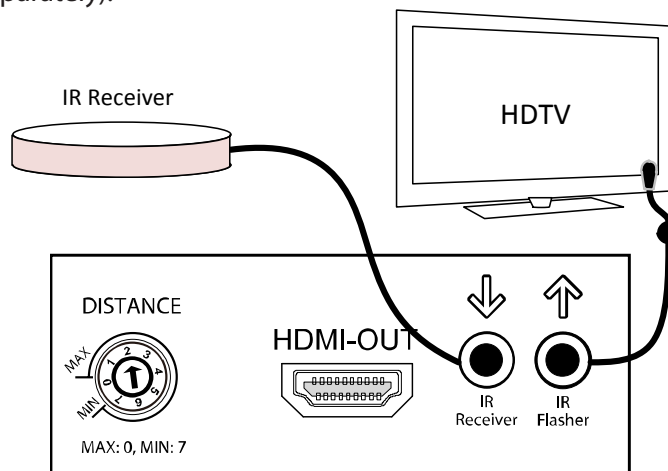
ADJUSTING FOR DISTANCE

1. Set the distance control to 7 (Weakest).
2. Select a source that is outputting the highest-quality video that will be transmitted over the extender. If you see flickering or blinking images on the display:

Adjust the signal level from 7 to 0 one step at a time, and stop turning the rotary switch when the audio/video is playing normally.

IR PASS-THROUGH

Bi-directional IR signals are also transmitted between the B-300-HDMATRIX-RCVR and the B-300-HDMATRIX-4x4 or B-300-HDMATRIX-8x8 switchers over the Cat5e/6 cable. Each B-300-HDMATRIX-RCVR will need an IR Receiver to send IR from the RCVR to the switch, and an IR flasher to use IR sent from the switch to the RCVR (sold separately).



NOTE: This product was specifically engineered for Episode® IR products. Use of the following products is highly recommended (not included):



IR Flasher
(Episode® IRF-1
or Episode® IRF-2)



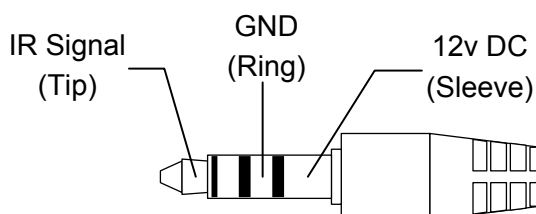
IR Receiver
(Episode® IR-SM-3660
or Episode® IR-TT-3660)

IR CONTROL CONNECTIONS

CAUTION: Before connecting an IR Receiver or an IR control system, verify that the B-300-HDMATRIX-RCVR is OFF to avoid damaging the unit.

Pin out configurations for IR receivers and control systems vary. Before connecting to this input, review this section carefully in order to match the pin outs for the HDMatrix.

Before connecting an IR Receiver or to an IR control system, verify that the HDMatrix is OFF to ensure proper operation when connected.

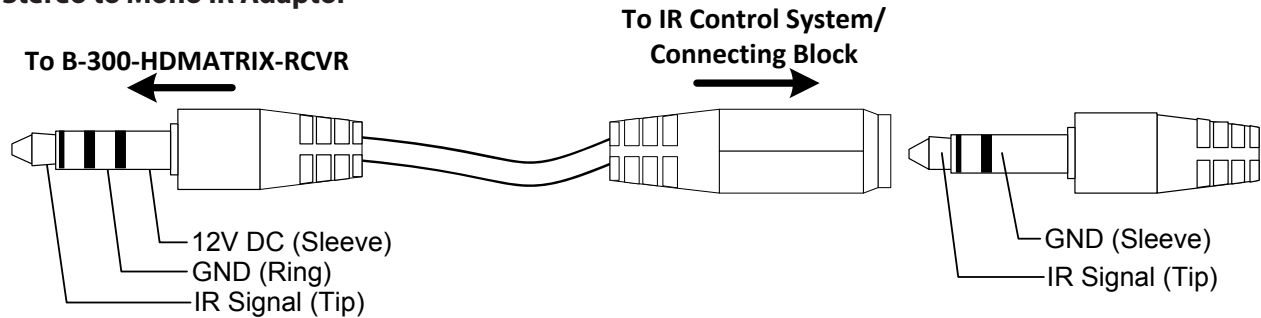


IR Signal	Tip
GND	Ring
12v DC	Sleeve

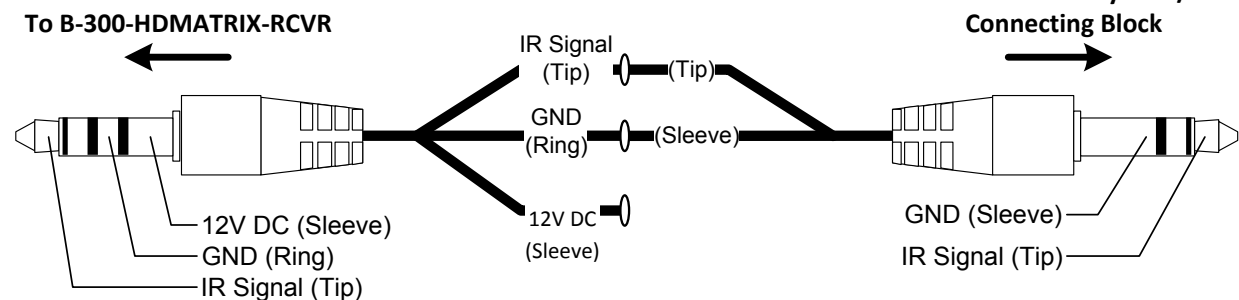
CONNECTING A CONTROL SYSTEM OR IR CONNECTING BLOCK

When connecting a control system or connecting block to the IR Receiver jack, the 12V DC (Sleeve) must not be connected. Connections of this type require the use of the included Stereo to Mono IR Adaptor or a custom cable made. A mono 3.5mm cable should not be used as it will short out the 12 VDC to GND and will make the connection inoperable.

Stereo to Mono IR Adaptor



Custom Cable Construction



INSTALLATION

1. Connect a HDMI source (such as a Blu-ray Disc player) to the B-300-HDMATRIX switcher.
2. Connect a HDMI display (such as a LCD TV) to the receiver.
3. Connect IR Flasher/Receiver as needed to the receiver-300-HDMATRIX-RCVR and he B-300-HDMATRIX switcher.
4. Connect a Cat5e/6 cable between the units.
5. Connect the 5V 4A DC power supply unit to the power jack of the B-300-HDMATRIX-RCVR.
6. Adjust the Distance setting on the B-300-HDMATRIX-RCVR as described above in Distance Control.

SPECIFICATIONS

Technical		
HDMI Compliance		Full HD 1080P60, Deep Color (36bit), 3D (1.4a)
HDCP Compliance		Yes
Video Bandwidth		Single-link 225MHz (6.75Gbps)
Video Support		1080p / 1080i / 720p / 480p / 480i up to 36-bit color
HDMI over UTP Transmission (24-bit)		Full HD (1080p)-130ft (CAT5e) / 165ft (CAT6) HD (720p/1080i)- 165ft (CAT5e) / 200ft (CAT6)
Audio Support		Surround sound (up to 7.1ch) or stereo digital audio
Distance Control		8-level control
Signal Input		1x RJ45
HDMI Output		1x HDMI Type A
IR Pass-Through	Type:	Bi-directional
	Carrier frequency:	20-60kHz
IR Receiver		3.5mm Stereo (powered)
IR Flasher		3.5mm Mono (unpowered)
Mechanical		
Housing		Metal enclosure
Dimensions (L x W x H)		2.9" x 3.5" x 1"
Weight		1.1 lbs
Power Supply		5V 4A DC
Power Consumption		3 Watt (max)
Operation Temperature		32~104°F
Storage Temperature		-4~140°F
Relative Humidity		20~90% RH (no condensation)
Certifications		CE,FCC,RoHs

WARRANTY

Two-Year Limited Warranty

This Binary™ product has a 2-year limited Warranty. This warranty includes parts and labor repairs on all components found to be defective in material or workmanship under normal conditions of use. This warranty shall not apply to products which have been abused, modified or disassembled. Products to be repaired under this warranty must be returned to SnapAV or a designated service center with prior notification and an assigned return authorization number (RA).

