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PURPOSE



# INSTRUCTION MANUAL

MODEL: PAV-EX40-HDR



100% PERFORMANCE  
GUARANTEE



DAILY IN-STOCK  
PROMISE



SEAMLESS  
SUPPORT



3 YEAR  
WARRANTY



GIVES BACK  
TO CHARITY

# OVERVIEW

- The PAV-EX40-HDR-KIT is an HDMI extender featuring HDBaseT technology, allowing for the extension of 4K HDR HDMI signals up to 40 Meters. Equipped with Bi-directional POC, IR, RS232, and comprehensive EDID management the PAV-EX40-HDR-KIT is an unmatched tool in any installation.

## MODEL NUMBERS

- PAV-EX40-HDR-T – HDBaseT Transmitter w/ IR and RS232
- PAV-EX40-HDR-R – HDBaseT Receiver w/ IR and RS232

## FEATURES

- HDMI 2.0b
- Max Resolution 4K60 4:4:4
- HDCP 1.X/2.2 Support
- CEC Pass-Through
- Up to 40M (Cat6a) at 4K
- Up to 70M (Cat6a) at 1080p
- Bi-Directional POC
- 3-20V IR Support with Direct Control System Support
- Bi-Directional RS232 Transport
- Supports audio formats up to uncompressed LPCM 7.1, Dolby TrueHD (including Atmos), and DTS (up to DTS:X)

## PACKAGE CONTENTS

- Power Supply
- X2 IR Target (Eye/Receiver)
- X2 IR Blaster (Emitter)
- X2 Velcro Strip
- Mounting Brackets
- X2 3.5MM TRS (Stereo) to Open Cable

# SPECIFICATIONS

## VIDEO

<b>Video Resolutions</b>	Up to 4K60 4:4:4
<b>VESA Resolutions</b>	Up to 4096X2160 (DCI 4K)
<b>Chroma Supported</b>	4:4:4, 4:2:2, 4:2:0, RGB (Limited and Full)
<b>Deep Color</b>	Up to 16 Bit (1080p) Up to 12 Bit (4K)
<b>HDR Support</b>	HDR10, HDR10+, HLG, Dolby Vision

## AUDIO

<b>LPCM (Up to 192KHz 24 bit)</b>	2.0, 5.1, 7.1
<b>Dolby</b>	Dolby Digital, Dolby Digital Plus, Dolby TrueHD, Dolby Atmos
<b>DTS</b>	DTS 6.1 ES, DTS HRA, DTS Master Audio, DTS:X

## HDBASET DISTANCE (CAT 6A)

<b>4K Resolutions</b>	40 Meters (131 Feet)
<b>1080p Resolutions</b>	70 Meters (230 Feet)

# TRANSMITTER

## INDICATOR LIGHTS (FRONT OF UNIT)

Power LED – Indicates that power is connected to the unit.

1. Light is On = Power Supply/POC Connected and Unit is operating
2. Light is Off = Power Supply is not connected, or no power is present

HDMI Sync LED – Indicates that an HDMI Source is connected to the Transmitter.

1. Light is On = HDMI Source is Active on the HDMI Input
2. Light is Off = HDMI Input sense no active HDMI Source

HDBaseT Link LED – Indicates that the HDBaseT Transmitter is linked with an HDBaseT Receiver.

1. Light is On = Unit has linked with an HDBaseT Receiver and is sending Data
2. Light is Off = Unit has not linked with an HDBaseT Receiver

## DIP SWITCH TABLE (POSITION: 0 = UP | 1 = DOWN)

EDID		IR	
DipSwitch 1-4	EDID	Dipswitch 5	IR Input Selection
0000	EDID Bypass	0	IR Target (Eye)
0001	1080p 444 2CH	1	IR from Control System
0010	1080p 444 6CH		
0011	1080p 444 8CH		
0100	4K30 444 2CH		
0101	4K30 444 6CH		
0110	4K30 444 8CH		
0111	4K30 HDR 2CH		
1000	4K30 HDR 6CH		
1001	4K30 HDR 8CH		
1010	4k60 444 2CH		
1011	4k60 444 6CH		
1100	4k60 444 8CH		
1101	4k60 HDR 2CH		
1110	4k60 HDR 6CH		
1111	EDID Copy		

# RECEIVER

## INDICATOR LIGHTS (FRONT OF UNIT)

Power LED – Indicates that power is connected to the unit.

1. Light is On = Power Supply/POC Connected and Unit is operating
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HDMI Sync LED – Indicates that an HDMI Source is connected to the Transmitter.

1. Light is On = HDMI Output is connected to an active HDMI Input
2. Light is Off = HDMI Output does not sense an active HDMI Input

HDBaseT Link LED – Indicates that the HDBaseT Transmitter is linked with an HDBaseT Receiver.

1. Light is On = Unit has linked with an HDBaseT Transmitter and is receiving Data
2. Light is Off = Unit has not linked with an HDBaseT Transmitter

## RS232 CONFIGURATION

- RS232 can be used to pass control signals bi-directionally between any two RS232 compatible devices. Commonly used in extending control from a control system
- The RS232 ports on the PAV-EX40-HDR-KIT are pinned null modem:

Control System	RS232 Port	3.5MM TRS PIN
Receive	Transmit	Tip
Ground	Ground	Ring
Transmit	Receive	Sleeve

# IR CONFIGURATION

IR COMMUNICATION CAN BE SENT TWO WAYS

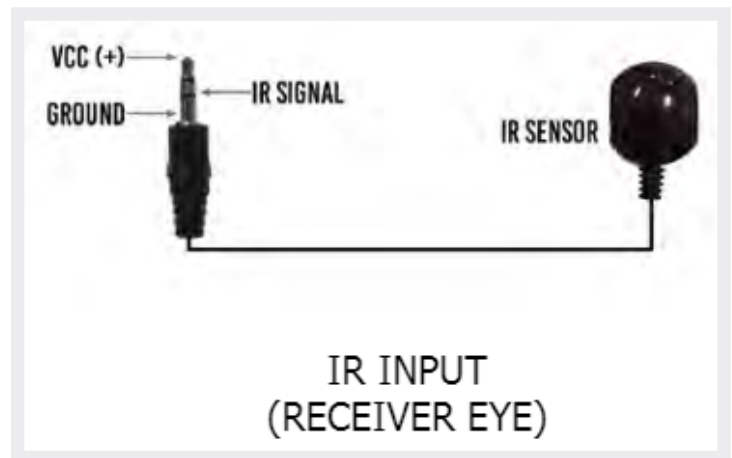
## 1. Downstream (From transmitter)

- Plug an IR Receiving Eye or Control System IR output direct into the IR Sensor port of the PAV-EX40-HDR-T to pass infrared signals to the IR Out port on the Receiver
- Set IR Dipswitch according to input signal device
- Connect the IR Out Port of the Receiver to an IR Emitter or Direct IR Input

## 2. Upstream (From Receiver)

- Plug an IR Receiving Eye into the IR Sensor port of the PAV-EX40-HDR-R to pass infrared signals to the IR Out port on the Transmitter
- Connect the IR Out Port of the Transmitter to an IR Emitter or Direct IR Input

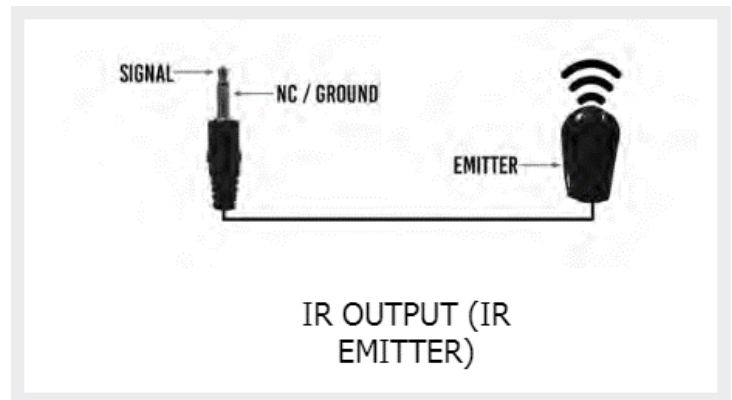
- IR Input (Receiving Eye) (Dipswitch 5 = 0)



- IR Direct Input from Control System (Transmitter Only) (Mono Tip to Tip/ Sleeve to Sleeve) (Dipswitch 5 = 1)



- IR Output to Emitter



## TROUBLESHOOTING

### TRANSMITTER

#### No Power LED

1. Ensure PSU is sending proper voltage
2. If using POC, ensure that the unit sending POC is connected to power
3. If using POC, try powering the unit direct to ensure unit operates stand alone

#### No HDMI LED

1. Plug Source direct into display to ensure operability
2. Change the resolution of the source device to 1080p or 4K30 (No HDR)
3. Set a canned EDID. Source may require power cycle
4. Swap HDMI cable between Transmitter and Source. HDMI Handshakes with cables under 2 Meters may not sync properly

#### No HDBT Link

1. Check cable Length. Max Distances are 40M at 4K or 70M at 1080p. HDBaseT Recommends Cat 6A; Cat 6 and Cat 5e may experience a 5-20% loss of distance
2. Remove Excess Service Loops and Bundles of Cable. HDBaseT Recommends up to 6 runs of Cat in a single bundle
3. Bypass all patch-panels and punch down blocks
4. Re-terminate connectors. IP Continuity testers may indicate correct pinouts; However, HDBaseT Signals are transmitted differently than Ethernet Signals

# TROUBLESHOOTING

## RECEIVER

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2. Remove Excess Service Loops and Bundles of Cable. HDBaseT Recommends up to 6 runs of Cat in a single bundle
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4. Re-terminate connectors. IP Continuity testers may indicate correct pinouts; However, HDBaseT Signals are transmitted differently than Ethernet Signals

## RS232 TRANSMISSION

- Ensure correct pinout between both the transmitter and receiver side. A null modem adaptor may be used for quick pinout changing

## IR TRANSMISSION

- If sending downstream, ensure dipswitch is in the correct position for Input device type
- The Visible IR Emitters can be used to ensure signal is being sent from one point to the other