



# Gefentv

Extender for **HDMI** Long Range

GTV-HDMI-CAT5LR

User Manual

[www.gefentv.com](http://www.gefentv.com)

## ASKING FOR ASSISTANCE

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**Rev X1**

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# INTRODUCTION

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Congratulations on your purchase of the Extender for HDMI Long Range. Your complete satisfaction is very important to us.

## **Gefen TV**

Gefen TV is a unique product line catering to the growing needs for innovative home theater solutions. We specialize in total integration for your home theater, while also focusing on going above and beyond customer expectations to ensure you get the most from your hardware. We invite you to explore our distinct product line and hope you find your solutions. Don't see what you are looking for here? Please call us so we can better assist you with your particular needs.

## **The Gefen TV Extender for HDMI Long Range**

The GefenTV HDMI CAT5-LR sends HDMI signals up to 825 feet (250m) away from your HDMI source using just two widely available and inexpensive CAT5 cables (only one cable if the display's EDID is remembered by source equipment). The HDMI CAT5-LR extender is also capable of supporting computer video (DVI-D) when used with a DVI-to-HDMI cable, adding versatility. There are no compromises with this solution -- video resolutions up to 1080p are delivered in perfect digital purity accompanied with 7.1 digital audio for a full multimedia experience at the remote destination.

## **How It Works**

The GefenTV HDMI CAT5-LR Sender sits next to the source (computer, set-top box or DVD player). The supplied cable connects an HDMI source to the HDMI CAT5-LR Sender unit. The GefenTV HDMI CAT5-LR Receiver sits next to the HDTV display -- up to 825 feet away. The HDTV display plugs into the GefenTV HDMI CAT5-LR Receiver. Two CAT5 cables link the HDMI CAT5-LR Sender and Receiver units to each other. Power is connected to HDMI CAT5-LR Sender and Receiver, and a vibrant HD picture results on the connected HDTV display at the receiver.

Note: The GefenTV HDMI CAT5-LR is HDMI 1.2 and DVI 1.0 compliant. It does not support HDCP.

## OPERATION NOTES

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### READ THESE NOTES BEFORE INSTALLING OR OPERATING THE EXTENDER FOR HDMI LONG RANGE

- The Extender for HDMI Long Range uses 2 CAT-5, CAT-5e or CAT-6 cables for extension. If field terminating cables, please adhere to the TIA/EIA-568-B specification.
- Maximum extension is 820 feet (250 meters) at a resolution of 1080p.
- HDMI 1.2 compliant
- Extender for HDMI Long Range is **NOT** HDCP compliant.

# FEATURES

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## Features

- Extends high definition displays up to 820 feet (250 meters) from the source at 1080p
- Supports resolutions up to 1080p, 2K, and 1920 x 1200
- Audio and video are transmitted over the CAT-5 cables with zero signal loss
- Eliminates equipment noise in the viewing environment
- Equalizer/Gain control for optimal picture quality
- Improved compensation for cable skew
- HDMI 1.2 compliant

## Package Includes

- (1) Extender for HDMI Long Range Sender
- (1) Extender for HDMI Long Range Receiver
- (1) One 6 Foot HDMI Cable (M-M)
- (2) 5V DC Power Supplies
- (1) Set of Wall Mounting Plates
- (1) User's Manual

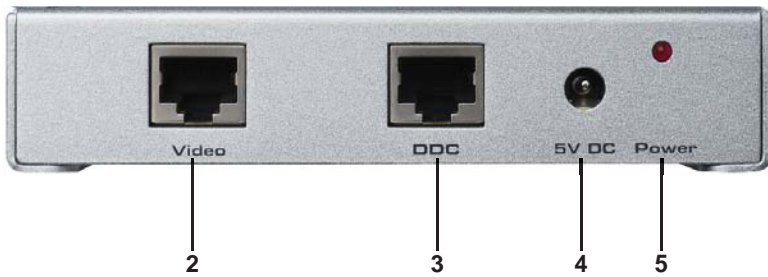
# SENDER UNIT PANEL LAYOUT

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## Front Panel



## Back Panel



## SENDER UNIT PANEL DESCRIPTIONS

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**1 HDMI Input**

Connect the HDMI source device to this input port.

**2 RJ-45 Port (Video)**

This port accepts an CAT-5, CAT-5e or CAT-6 cable for transmission of the video and audio signals to the receiver.

**3 RJ-45 Port (DDC)**

This port accepts an CAT-5, CAT-5e or CAT-6 cable for connection to the receiver. This cable will be used for DDC and HDCP data.

**4 5V DC Power Input**

Connect the included 5V DC power supply between this input and an open wall power socket.

**5 Power LED indicator**

The LED will become active once the included 5V DC power supply has been properly connected.



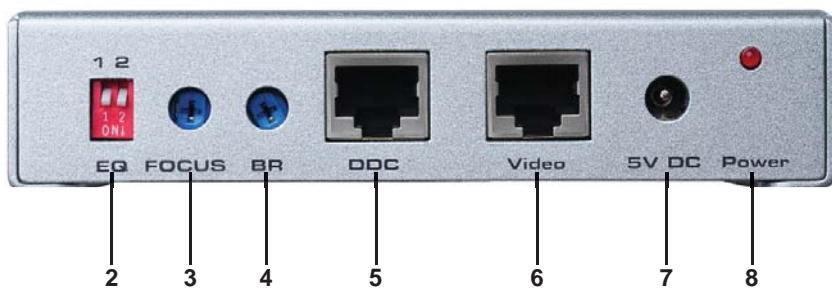
# RECEIVER UNIT PANEL LAYOUT

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## Front Panel



## Back Panel



## RECEIVER UNIT PANEL DESCRIPTIONS

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### **1 HDMI Output**

Connect the HDMI capable device to this output port.

### **2 Distance Control Dip Switches**

These 2 Dip Switches are used to adjust the video/audio signal for specific CAT-5 cable lengths. Please use the table on page 9 for more information on this setting.

### **3 Equalization Trim Pot**

This Trim Pot is used to adjust the amount of equalization that is applied to the incoming signal. This setting must be adjusted to receive the best possible quality.

### **4 Gain Trim Pot**

This Trim Pot is used to adjust the amount of gain that is applied to the incoming signal. This setting is meant to adjust the brightness of the incoming video signal.

### **5 RJ-45 Port (Video)**

This port accepts an CAT-5, CAT-5e or CAT-6 cable for receiving of the video and audio signals from the sender.

### **6 RJ-45 Port (DDC)**

This port accepts an CAT-5, CAT-5e or CAT-6 cable for connection to the sender. This cable will be used for DDC and HDCP data.

### **7 5V DC Power Input**

Connect the included 5V DC power supply between this input and an open wall power socket.

### **8 Power LED indicator**

The LED will become active once the included 5V DC power supply has been properly connected.

# CONNECTING THE EXTENDER FOR HDMI LONG RANGE

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## How to Connect the Extender for HDMI Long Range

1. Connect the HDMI source device to the Extender for HDMI Long Range sender unit using the supplied HDMI cable.
2. Connect one pair of CAT-5, CAT-5e or CAT-6 cables between the sender and receiver unit's RJ-45 Video and DDC ports.

**NOTE:** If the source device does not require an EDID, or if an EDID is provided by some other means, a single CAT-5 cable can be used for extension. This single cable solution will only use the CAT-5 cable connected between the RJ-45 Video ports on the sender and receiver units. An EDID storage device, such as a DVI detective (part# EXT-DVI-EDIDN) can be used to record the display EDID and placed between the source device and the sender unit.

3. Connect the HDMI capable device to the Extender for HDMI Long Range receiver unit using a user supplied HDMI cable.
4. Connect the included 5V DC power supplies to both the sender and receiver units.
5. Power on the HDMI capable device connected to the receiver first and the HDMI source device connected to the sender second.

## **CONFIGURING THE EXTENDER FOR HDMI LONG RANGE**

The Extender for HDMI Long Range receiver has adjustment settings that may need to be made before an optimal video quality is achieved. The available adjustment options are listed below.

### **Distance Control**

The Dip Switches related to distance control will allow the user to set the proper signal output for the length of CAT-5 cable used with the Extender for HDMI Long Range system. Please use the table below to set the proper setting:

<b>Cable Length</b>	<b>Dip Switch Setting</b>	
	<b>Dip Switch 1</b>	<b>Dip Switch 2</b>
0 - 165 Feet	OFF	OFF
166 - 330 Feet	ON	OFF
331 - 495 Feet	OFF	ON
496 - 820 Feet	ON	ON

**NOTE:** These length settings are guidelines. Actual settings may vary depending on the quality of cabling used. If there is no image after using the recommended settings above, please try the setting listed either below or above the one currently being used.

### **Equalization**

The equalization Trim Pot will eliminate video noise that may be present in the video signal. Follow the steps below to adjust the equalization:

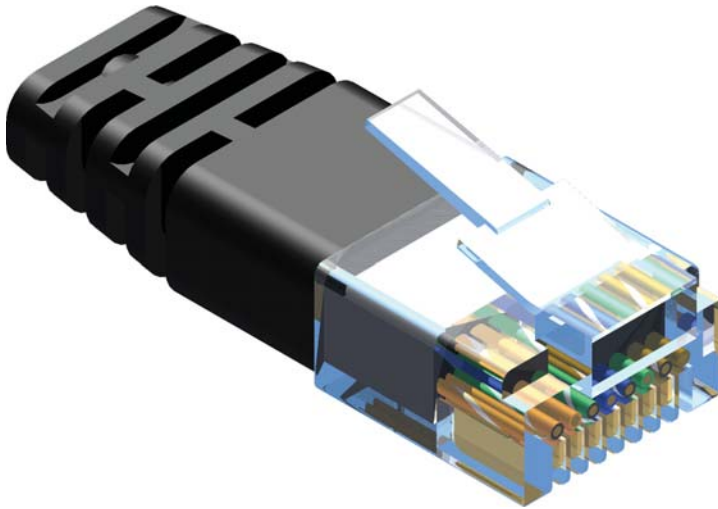
1. Locate the equalization Trim Pot on the front panel of the receiver and insert a small adjustment tool, such as a small flat headed screwdriver, into the hole.
2. Turn the Trim Pot in either a clockwise or counter-clockwise direction until the video noise is eliminated.
3. Remove the adjustment tool.

### **Gain (Brightness)**

The gain Trim Pot will control the brightness level of the video signal. Follow the steps below to adjust the gain:

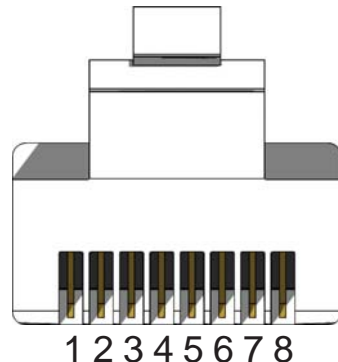
4. Locate the gain Trim Pot on the front panel of the receiver and insert a small adjustment tool, such as a small flat headed screwdriver, into the hole.
5. Turn the Trim Pot in either a clockwise or counter-clockwise direction until the desired brightness is achieved.
6. Remove the adjustment tool.

## NETWORK CABLE WIRING DIAGRAM



Gefen has specifically engineered their products to work with the TIA/EIA-568-B specification. Please adhere to the table below when field terminating cable for use with Gefen products. Failure to do so may produce unexpected results and reduced performance.

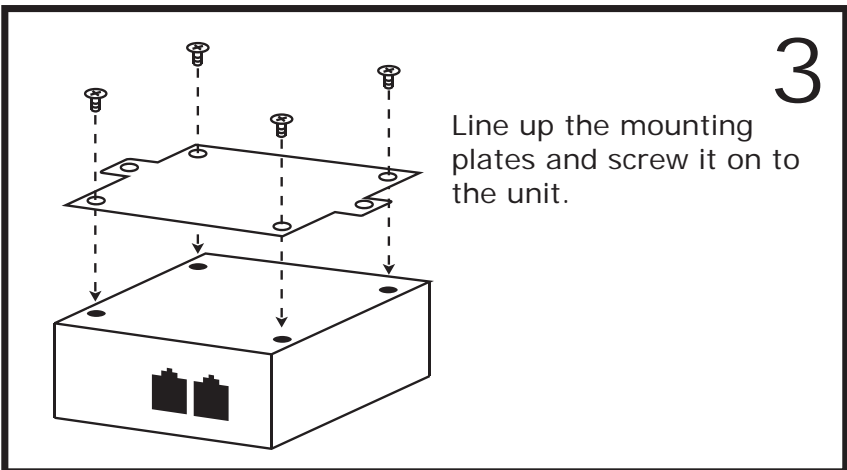
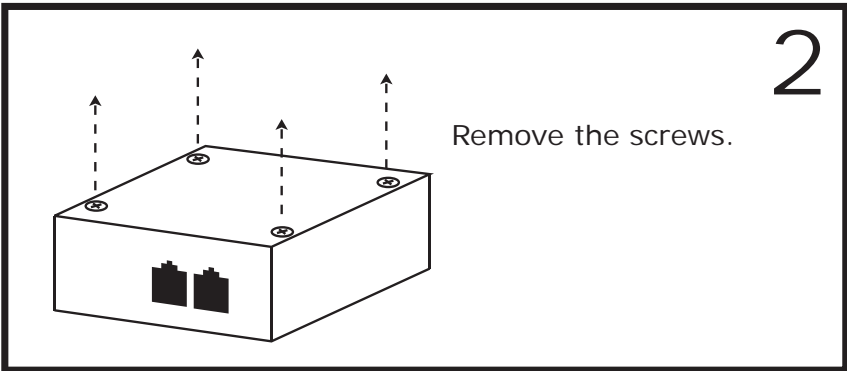
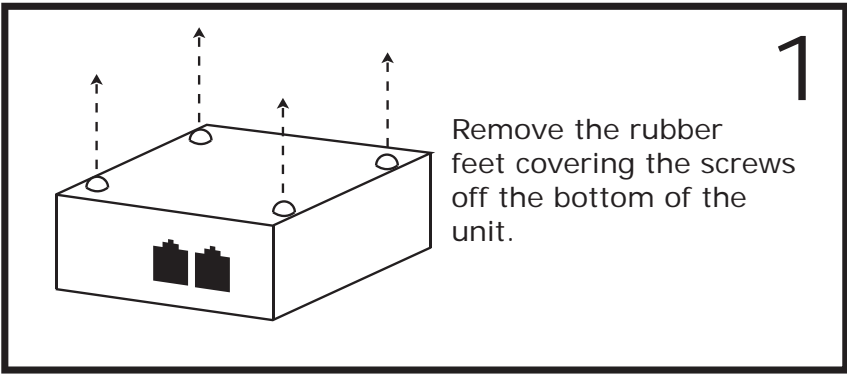
Pin	Color
1	Orange / White
2	Orange
3	Green / White
4	Blue
5	Blue / White
6	Green
7	Brown / White
8	Brown



CAT-5, CAT-5e, and CAT-6 cabling comes in stranded and solid core types. Gefen recommends using solid core cabling. CAT-6 cable is also recommended for best results.

Each cable run must be one continuous run from one end to the other. No splices or use of punch down blocks.

# Mounting Plate Installation



## SPECIFICATIONS

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Video Amplifier Bandwidth .....	165 MHz
Single Link Range/Max. Resolution .....	1080p/1920 x 1200
Input Video Signal .....	1.2 Volts p-p
Input DDC Signal .....	5 Volts p-p (TTL)
HDMI Connector .....	Type A, 19 Pin Female
Link Connector .....	RJ-45 Shielded
Power Supply/Power Consumption .....	5V DC / 20 watts max.
Dimensions .....	5" W x 1" H x 5" D
Shipping Weight .....	3 lbs.

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