



KRAMER ELECTRONICS LTD.

USER MANUAL

MODELS:

WP-571

HDMI Line Transmitter

WP-572

HDMI Line Receiver

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1 Introduction

Welcome to Kramer Electronics! Since 1981, Kramer Electronics has been providing a world of unique, creative, and affordable solutions to the vast range of problems that confront the video, audio, presentation, and broadcasting professional on a daily basis. In recent years, we have redesigned and upgraded most of our line, making the best even better!

Our 1,000-plus different models now appear in 11 groups that are clearly defined by function: GROUP 1: Distribution Amplifiers; GROUP 2: Switchers and Routers; GROUP 3: Control Systems; GROUP 4: Format/Standards Converters; GROUP 5: Range Extenders and Repeaters; GROUP 6: Specialty AV Products; GROUP 7: Scan Converters and Scalers; GROUP 8: Cables and Connectors; GROUP 9: Room Connectivity; GROUP 10: Accessories and Rack Adapters and GROUP 11: Sierra Products.

Congratulations on purchasing your Kramer **WP-571 HDMI Line Transmitter** and/or **WP-572 HDMI Line Receiver** wall plates which are ideal for the following typical applications:

- Boardrooms, conference and training rooms
- Presentation systems
- Signal distribution and home theater

The package includes the following items:

- **WP-571 HDMI Line Transmitter** or **WP-572 HDMI Line Receiver**
- This User Manual
An up to date copy of this user manual can be downloaded from <http://www.kramerelectronics.com>
- Power adapter (12V DC output)

2 Getting Started

We recommend that you:

- Unpack the equipment carefully and save the original box and packaging materials for possible future shipment
- Review the contents of this user manual
- Use Kramer high performance, high resolution cables



Go to <http://www.kramerelectronics.com> to check for up-to-date user manuals, application programs, and to check if firmware upgrades are available (where appropriate).

2.1 Achieving the Best Performance

To achieve the best performance:

- Use only good quality connection cables to avoid interference, deterioration in signal quality due to poor matching, and elevated noise levels (often associated with low quality cables)
- Do not secure the cables in tight bundles or roll the slack into tight coils
- Avoid interference from neighboring electrical appliances that may adversely influence signal quality
- Position your Kramer **WP-571 HDMI Line Transmitter** and **WP-572 HDMI Line Receiver** away from moisture, excessive sunlight and dust

3 Overview

The **WP-571 HDMI Line Transmitter** and **WP-572 HDMI Line Receiver** together constitute an HDMI-to-twisted pair transmitter and receiver system, and can also be used in conjunction with other compatible DGKat transmitters and receivers and compatible switchers.

In particular, the **WP-571** and **WP-572** feature:

- A maximum data rate of 4.95Gbps (up to 1.65Gbps per graphics channel)
- HDTV compatibility
- HDCP compliance
- HDMI Support—HDMI (x.v.Color™, HDMI Uncompressed Audio Channels, Dolby TrueHD and DTS-HD)
- EDID PassThru that passes EDID/HDCP signals from source to display
- 3D pass-through
- System Range—Up to 90m (295ft) at 1080i, or up to 30m (98ft) at 1080p on shielded **BC-DGKat524** cable; 90m (295ft) at 1080i, or up to 70m (230ft) at 1080p on shielded **BC-DGKat623** cable; 100m (330ft) at 1080i or up to 90m (295ft) at 1080p on shielded **BC-DGKat7a23** cable
- Power Connect™ that feeds 12V DC over the TP cable from transmitter to receiver and visa-versa (see [Section 5](#))
- Wall plate size of 1-gang US/EU (the US version includes a removable wall plate frame)

3.1 About HDMI—General Description

HDMI (High-Definition Multimedia Interface) is an uncompressed all-digital audio/video interface, widely supported in the entertainment and home cinema industry. HDMI ensures an all-digital rendering of video without the losses associated with analog interfaces and their unnecessary digital-to-analog conversions. It delivers the maximum high-definition image and sound quality in use today. Note that Kramer Electronics Limited is an HDMI Adopter and an HDCP Licensee.

HDMI, the HDMI logo and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI licensing LLC.

In particular, HDMI:

- Provides a simple interface between any audio/video source, such as a set-top box, DVD player, or A/V receiver and video monitor, such as a digital flat LCD / plasma television (DTV), over a single lengthy cable
SIMPLICITY - With video and multi-channel audio combined into a single cable, the cost, complexity, and confusion of multiple cables currently used in A/V systems is reduced
LENGTHY CABLE - HDMI technology has been designed to use standard copper cable construction at up to 15m
- Supports standard, enhanced, high-definition video, and multi-channel digital audio on a single cable
MULTI-CHANNEL DIGITAL AUDIO - HDMI supports multiple audio formats, from standard stereo to multi-channel surround-sound. HDMI has the capacity to support Dolby 5.1 audio and high-resolution audio formats
- Transmits all ATSC HDTV standards and supports 8-channel digital audio, with bandwidth to spare to accommodate future enhancements and requirements
- Benefits consumers by providing superior, uncompressed digital video quality via a single cable, and user-friendly connector
HDMI provides the quality and functionality of a digital interface while also supporting uncompressed video formats in a simple, cost-effective manner
- Is backward-compatible with DVI (Digital Visual Interface)
- Supports two-way communication between the video source (such as a DVD player) and the digital television, enabling new functionality such as automatic configuration and one-button play
- Has the capacity to support existing high-definition video formats (720p, 1080i and 1080p @60), standard definition formats such as NTSC or PAL, as well as 480p and 576p

3.2 About HDCP—General Description

The High-Bandwidth Digital Content Protection (HDCP) standard developed by Intel, protects digital video and audio signals transmitted over DVI or HDMI connections between two HDCP-enabled devices to eliminate the reproduction of copyrighted material. To protect copyright holders (such as movie studios) from

having their programs copied and shared, the HDCP standard provides for the secure and encrypted transmission of digital signals.

3.3 About the Power Connect™ Feature

The Power Connect™ feature here means that only one unit in a system, the transmitter or receiver, needs to be connected to a power source when the devices are within 90m (270ft) of each other. The Power Connect™ feature applies as long as the cable can carry power. The distance does not exceed 90m on standard TP cable, for longer distances, heavy gauge cable should be used. TP cable is still suitable for the video/audio transmission, but not for feeding the power at these distances

If no input is connected to the **WP-571**, both the transmitter and receiver go into the power save mode automatically. When an input is connected to the **WP-571**, both devices go into the regular power on mode.

Note: When using the **WP-571** or **WP-572** in conjunction with any of the **VM-114xx** series devices, do not connect power to the wall plate. Power is supplied by the **VM-114xx** series device via the DGKat cable.

3.4 Using Twisted Pair Cable

Kramer engineers have developed special twisted pair cables to best match our digital twisted pair products; the Kramer **BC-DGKat524** (CAT 5 24 AWG), the Kramer **BC-DGKat623** (CAT 6 23 AWG cable), and the Kramer **BC-DGKat7a23** (CAT 7a 23 AWG cable). These specially built cables significantly outperform regular CAT 5/CAT 6/CAT 7a cables.

4 Defining the WP-571 and WP-572

4.1 Defining the WP-571

The Kramer **WP-571 HDMI Line Transmitter** accepts an HDMI signal, encodes it and transmits it over a TP cable to either the **WP-572** or another DGKat compatible device. The **WP-571** is available in the following versions:

- US (see [Section 4.1.1](#))
- EU (see [Section 4.1.2](#))

4.1.1 WP-571 US Version

[Figure 1](#) defines the front and rear panels of the **WP-571**.

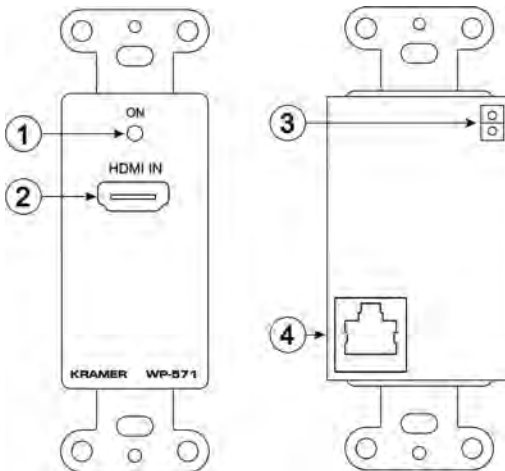


Figure 1: WP-571 HDMI Line Transmitter US Front and Rear Panels

#	Feature	Function
1	ON/LED	Indicates the following: <ul style="list-style-type: none">• Lights red when receiving power only• Lights orange when power and either input or output are attached• Lights green when both an active input and output are attached Note: If no input is connected to the transmitter the device goes into the power save mode automatically (see Section 3.3)
2	HDMI IN Connector	Connect to the HDMI source
3	2-pin Terminal Block	Connect to the supplied 12V DC power adapter (see Section 3.3)
4	RJ-45 CAT-5 Connector	Connect to the DGKat receiver using DGKat cable (see Section 5)

4.1.2 WP-571 EU Version

The EU version is available in UK and Belgium sizes (see [Section 6](#)).

[Figure 2](#) defines the front and rear panels of the **WP-571**.

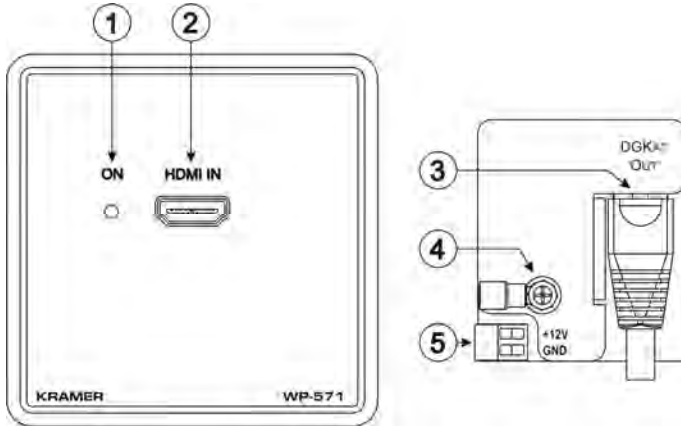


Figure 2: WP-571 HDMI Line Transmitter EU Front and Rear Panels

#	Feature	Function
1	ON LED	Indicates the following: <ul style="list-style-type: none"> • Lights red when receiving power only • Lights orange when power and either input or output are attached • Lights green when both an active input and output are attached Note: If no input is connected to the transmitter the device goes into the power save mode automatically (see Section 3.3)
2	HDMI IN Connector	Connect to the HDMI source
3	DGKat OUT RJ-45 TP Connector	Connect to the DGKat receiver using DGKat cable (see Section 5)
4	Earth Terminal	Optional—connect to the common ground
5	2-pin Power Terminal Block	Connect to the supplied 12V DC power adapter (see Section 3.3)

4.2 Defining the WP-572

The Kramer **WP-572 HDMI Line Receiver** accepts an encoded signal over TP cable from the **WP-571** (or any other DGKat compatible transmitter), decodes it and converts it to an HDMI output.

The **WP-572** is available in the following versions:

- US (see [Section 4.2.1](#))
- EU (see [Section 4.2.2](#))

4.2.1 WP-572 US Version

[Figure 3](#) defines the front and rear panels of the **WP-572**.

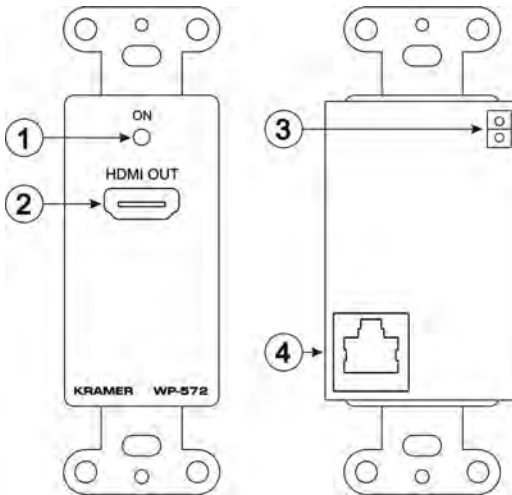


Figure 3: WP-572 HDMI Line Receiver US Front and Rear Panels

#	Feature	Function
1	ON/LED	Indicates the following: <ul style="list-style-type: none">• Lights red when receiving power only• Lights orange when power and either input or output are attached• Lights green when both an active input and output are attached Note: If no input is connected to the transmitter the device goes into the power save mode automatically (see Section 3.3)
2	HDMI OUT Connector	Connect to the HDMI acceptor
3	2-pin Terminal Block	Connect to the supplied 12V DC power adapter (see Section 3.3)
4	RJ-45 CAT-5 Connector	Connect to the DGKat transmitter using DGKat cable (see Section 5)

4.2.2 WP-572 EU Version

The EU version is available in UK and Belgium sizes (see [Section 6](#)).

[Figure 4](#) defines the front and rear panels of the **WP-572**.

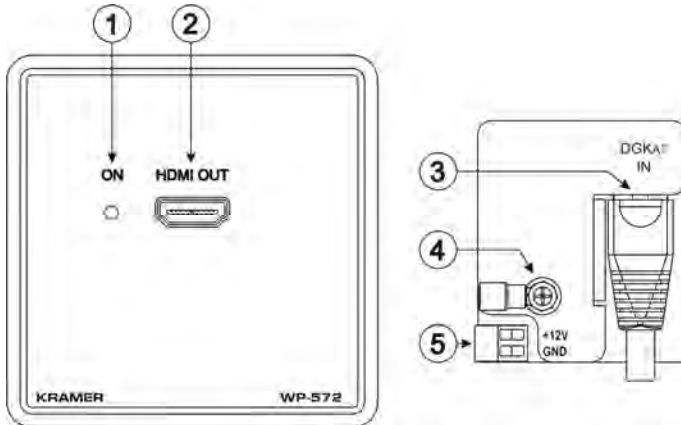


Figure 4: WP-572 HDMI Line Receiver EU Front and Rear Panels

#	Feature	Function
1	ON LED	Indicates the following: <ul style="list-style-type: none"> • Lights red when receiving power only • Lights orange when power and either input or output are attached • Lights green when both an active input and output are attached Note: If no input is connected to the transmitter the device goes into the power save mode automatically (see Section 3.3)
2	HDMI OUT Connector	Connect to the HDMI acceptor
3	DGKAT IN RJ-45 TP Connector	Connect to the DGKAT transmitter using DGKAT cable (see Section 5)
4	Earth Terminal	Optional—connect to the common ground
5	2-pin Power Terminal Block	Connect to the supplied 12V DC power adapter (see Section 3.3)

5 Connecting the WP-571 and WP-572



Always switch off the power to any device before connecting it to your **WP-571** or **WP-572**. After connecting your **WP-571** and **WP-572**, connect the power to either one or both the **WP-571** and **WP-572** and then switch on the power to each device.

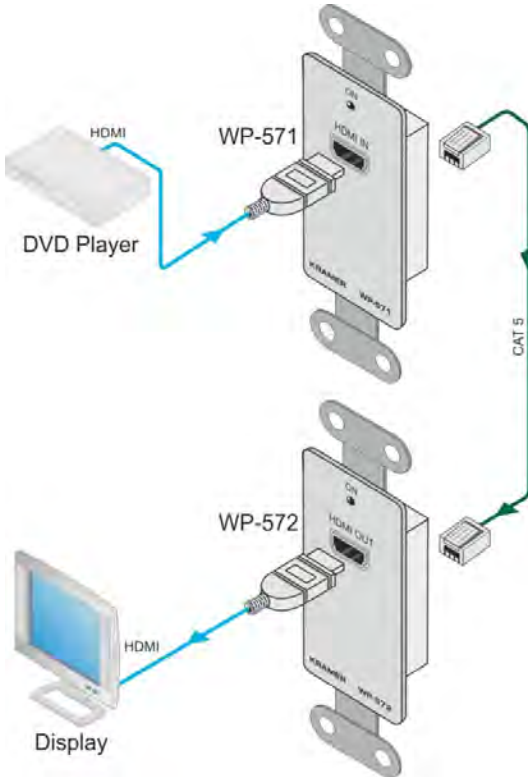


Figure 5: Connecting the WP-571 and WP-572

The example in [Figure 5](#) illustrates connection of the US version. Connection of the EU versions follows the same principle.

To connect the **WP-571** and **WP-572** as illustrated in the example in [Figure 5](#):

1. Connect the RJ-45 connector on the rear panel of the **WP-571** to the RJ-45 connector on the rear panel of the **WP-572**. See [Section 3.4](#) for cable requirements.
2. Connect a power supply to the **WP-571** and if necessary, to the **WP-572**, (see [Section 3.3](#)).
3. Mount the **WP-571** and **WP-572** in suitable wall boxes.
4. Connect the HDMI source to the HDMI IN connector on the front panel of the **WP-571**.
5. Connect the HDMI OUT connector on the front panel of the **WP-572** to the HDMI acceptor.

5.1 Wiring the TP RJ-45 Connectors

Connect/solder the cable shield to the RJ-45 connector shield. [Figure 6](#) defines the TP pinout using a straight pin-to-pin cable with RJ-45 connectors.

EIA /TIA 568B	
PIN	Wire Color
1	Orange / White
2	Orange
3	Green / White
4	Blue
5	Blue / White
6	Green
7	Brown / White
8	Brown
Pair 1	4 and 5
Pair 2	1 and 2
Pair 3	3 and 6
Pair 4	7 and 8

Figure 6: TP Pinout Wiring



6 Technical Specifications

		WP-571	WP-572
INPUTS:		1 HDMI connector	1 RJ-45 connector
OUTPUTS:		1 RJ-45 connector	1 HDMI connector
BANDWIDTH:		Up to 4.95Gbps data rate (1.65Gbps per graphics channel)	
COMPLIANCE WITH HDMI STANDARD:		Supports HDMI and HDCP	
POWER CONSUMPTION:	US	12V DC, 190mA (single device); 360mA total (when one device supplies the power to both devices)	
	UK, BG	12V DC, 150mA (single device); 310mA total (when one device supplies the power to both devices)	
DIMENSIONS:	US	3.3cm x 3.6cm x 10.4cm (1.3" x 1.42" x 4.1") W, D, H	
	UK	8.63cm x 4.5cm x 8.63cm (3.4" x 1.77" x 3.4") W, D, H	
	BG	8.04cm x 4.5cm x 8.04cm (3.17" x 1.77" x 3.17") W, D, H	
WEIGHT:		0.08kg (0.18lbs) approx.	
ACCESSORIES:		1 Power supply per device	
OPTIONS:		Kramer BC-DGKat524 (CAT 5 24 AWG), BC-DGKat623 (CAT 6 23 AWG) and BC-DGKat7a23 (CAT 7a 23 AWG) cables	

LIMITED WARRANTY

The warranty obligations of Kramer Electronics for this product are limited to the terms set forth below.

What is Covered

This limited warranty covers defects in materials and workmanship in this product.

What is Not Covered

This limited warranty does not cover any damage, deterioration or malfunction resulting from any alteration, modification, improper or unreasonable use or maintenance, misuse, abuse, accident, neglect, exposure to excess moisture, fire, improper packing and shipping (such claims must be presented to the carrier), lightning, power surges, or other acts of nature. This limited warranty does not cover any damage, deterioration or malfunction resulting from the installation or removal of this product from any installation, any unauthorized tampering with this product, any repairs attempted by anyone unauthorized by Kramer Electronics to make such repairs, or any other cause which does not relate directly to a defect in materials and/or workmanship of this product. This limited warranty does not cover cartons, equipment enclosures, cables or accessories used in conjunction with this product.

Without limiting any other exclusion herein, Kramer Electronics does not warrant that the product covered hereby, including, without limitation, the technology and/or integrated circuit(s) included in the product, will not become obsolete or that such items are or will remain compatible with any other product or technology with which the product may be used.

How Long Does this Coverage Last

Seven years as of this printing; please check our Web site for the most current and accurate warranty information.

Who is Covered

Only the original purchaser of this product is covered under this limited warranty. This limited warranty is not transferable to subsequent purchasers or owners of this product.

What Kramer Electronics will do

Kramer Electronics will, at its sole option, provide one of the following three remedies to whatever extent it shall deem necessary to satisfy a proper claim under this limited warranty:

1. Elect to repair or facilitate the repair of any defective parts within a reasonable period of time, free of any charge for the necessary parts and labor to complete the repair and restore this product to its proper operating condition. Kramer Electronics will also pay the shipping costs necessary to return this product once the repair is complete.
2. Replace this product with a direct replacement or with a similar product deemed by Kramer Electronics to perform substantially the same function as the original product.
3. Issue a refund of the original purchase price less depreciation to be determined based on the age of the product at the time remedy is sought under this limited warranty.

What Kramer Electronics will not do Under This Limited Warranty

If this product is returned to Kramer Electronics or the authorized dealer from which it was purchased or any other party authorized to repair Kramer Electronics products, this product must be insured during shipment, with the insurance and shipping charges prepaid by you. If this product is returned uninsured, you assume all risks of loss or damage during shipment. Kramer Electronics will not be responsible for any costs related to the removal or re-installation of this product from or into any installation. Kramer Electronics will not be responsible for any costs related to any setting up this product, any adjustment of user controls or any programming required for a specific installation of this product.

How to Obtain a Remedy under this Limited Warranty

To obtain a remedy under this limited warranty, you must contact either the authorized Kramer Electronics reseller from whom you purchased this product or the Kramer Electronics office nearest you. For a list of authorized Kramer Electronics resellers and/or Kramer Electronics authorized service providers, please visit our web site at www.kramerelectronics.com or contact the Kramer Electronics office nearest you.

In order to pursue any remedy under this limited warranty, you must possess an original, dated receipt as proof of purchase from an authorized Kramer Electronics reseller. If this product is returned under this limited warranty, a return authorization number, obtained from Kramer Electronics, will be required. You may also be directed to an authorized reseller or a person authorized by Kramer Electronics to repair the product.

If it is decided that this product should be returned directly to Kramer Electronics, this product should be properly packed, preferably in the original carton, for shipping. Cartons not bearing a return authorization number will be refused.

Limitation on Liability

THE MAXIMUM LIABILITY OF KRAMER ELECTRONICS UNDER THIS LIMITED WARRANTY SHALL NOT EXCEED THE ACTUAL PURCHASE PRICE PAID FOR THE PRODUCT. TO THE MAXIMUM EXTENT PERMITTED BY LAW, KRAMER ELECTRONICS IS NOT RESPONSIBLE FOR DIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM ANY BREACH OF WARRANTY OR CONDITION, OR UNDER ANY OTHER LEGAL THEORY. Some countries, districts or states do not allow the exclusion or limitation of relief, special, incidental, consequential or indirect damages, or the limitation of liability to specified amounts, so the above limitations or exclusions may not apply to you.

Exclusive Remedy

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IF ANY PRODUCT TO WHICH THIS LIMITED WARRANTY APPLIES IS A "CONSUMER PRODUCT" UNDER THE MAGNUSON-MOSS WARRANTY ACT (15 U.S.C.A. §2301, ET SEQ.) OR OTHER APPLICABLE LAW, THE FOREGOING DISCLAIMER OF IMPLIED WARRANTIES SHALL NOT APPLY TO YOU, AND ALL IMPLIED WARRANTIES ON THIS PRODUCT, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR THE PARTICULAR PURPOSE, SHALL APPLY AS PROVIDED UNDER APPLICABLE LAW.

Other Conditions

This limited warranty gives you specific legal rights, and you may have other rights which vary from country to country or state to state.

This limited warranty is void if (i) the label bearing the serial number of this product has been removed or defaced, (ii) the product is not distributed by Kramer Electronics or (iii) this product is not purchased from an authorized Kramer Electronics reseller. If you are unsure whether a reseller is an authorized Kramer Electronics reseller, please visit our Web site at www.kramerelectronics.com or contact a Kramer Electronics office from the list at the end of this document.

Your rights under this limited warranty are not diminished if you do not complete and return the product registration form or complete and submit the online product registration form. Kramer Electronics thanks you for purchasing a Kramer Electronics product. We hope it will give you years of satisfaction.



For the latest information on our products and a list of Kramer distributors, visit our Web site where updates to this user manual may be found.

We welcome your questions, comments, and feedback.

Web site: www.kramerelectronics.com

E-mail: info@kramerel.com



SAFETY WARNING

Disconnect the unit from the power supply before opening and servicing



P/N 2900-300228



Rev 1