USER MANUAL
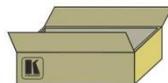
MODEL:

VP-427
HDBaseT to HDMI
Receiver/Scaler

VP-427 Quick Start Guide

This guide helps you install and use your product for the first time. For more detailed information, go to http://www.kramerelectronics.com/support/product_downloads.asp to download the latest manual or scan the QR code on the left.

Step 1: Check what's in the box

☑ **VP-427** HDBaseT to HDMI Receiver/Scaler
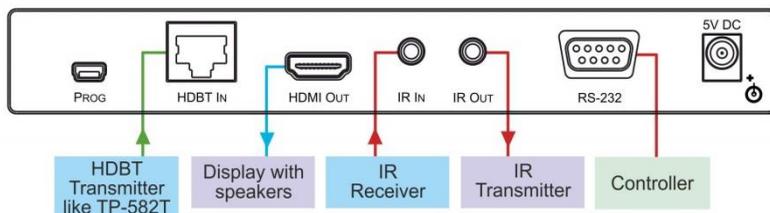☑ 1 Power supply (5V DC)
☑ 4 Rubber feet
☑ 1 Quick Start sheet

Save the original box and packaging materials in case you need to return your **VP-427** for service.

Step 2: Install the VP-427

Attach the rubber feet and place on a table or mount the **VP-427** in a rack (using an optional **RK-T2B** rack mount).

Step 3: Connect the inputs and outputs

Always switch off the power on each device before connecting it to your **VP-427**.

PROG	HDBT IN	HDMI OUT	IR IN	IR OUT	RS-232	5V DC

HDBT Transmitter like TP-582T	Display with speakers	IR Receiver	IR Transmitter	Controller

Always use Kramer high-performance cables for connecting AV equipment to the **VP-427.**

Step 4: Connect the power

Connect the 5V DC power adapter to the **VP-427** and plug the adapter into the mains electricity.

Step 5: Operate the VP-427

Set parameters using the front panel buttons or choose parameters from the OSD.

RESET TO XGA
MENU   ENTER   -   +
FREEZE
RESET TO 720P

Reset the resolution or freeze the frame.

PICTURE
ASPECT RATIO
OVER SCANNING
NOISE REDUCTION
OUTPUT
REFRESH RATE
HD OUTPUT COLOR
OSD SETTINGS
ADVANCED
FACTORY DEFAULT
INFO MENU
EXIT

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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 video, audio, presentation, and broadcasting professionals 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 14 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; GROUP 11: Sierra Video Products; GROUP 12: Digital Signage; GROUP 13: Audio; and GROUP 14: Collaboration.

Congratulations on purchasing your Kramer **VP-427** *HDBaseT to HDMI Receiver/Scaler*, which is ideal for the following typical applications:

- Home theater, presentation and multimedia applications
- Rental and staging

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

Go to http://www.kramerelectronics.com/support/product_downloads.asp 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 (we recommend Kramer high-performance, high-resolution 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 **VP-427** away from moisture, excessive sunlight and dust

This equipment is to be used only inside a building. It may only be connected to other equipment that is installed inside a building.

2.2 Safety Instructions

Caution: There are no operator serviceable parts inside the unit

Warning: Use only the Kramer Electronics input power wall adapter that is provided with the unit

Warning: Disconnect the power and unplug the unit from the wall before installing

2.3 Recycling Kramer Products

The Waste Electrical and Electronic Equipment (WEEE) Directive 2002/96/EC aims to reduce the amount of WEEE sent for disposal to landfill or incineration by requiring it to be collected and recycled. To comply with the WEEE Directive, Kramer Electronics has made arrangements with the European Advanced Recycling Network (EARN) and will cover any costs of treatment, recycling and recovery of waste Kramer Electronics branded equipment on arrival at the EARN facility. For details of Kramer's recycling arrangements in your particular country go to our recycling pages at *http://www.kramerelectronics.com/support/recycling/*.

3   Overview

The Kramer **VP-427** is a receiver/scaler for HDBaseT twisted pair, HDMI, bidirectional RS-232 and IR signals. The unit receives an HDBaseT signal that it converts to HDMI, IR and passed RS-232 signals. It up- or down-scales the picture to match the resolution of the HDMI monitor.

The **VP-427** also features:

- An HDBaseT input

- An HDMI output

- A bidirectional RS-232 port for embedding/de-embedding control commands in the HDBaseT data stream

- Infrared input and output ports for controlling devices over the HDBaseT data stream

- Embedded audio supporting LPCM 2CH

- Maintains constant sync on the output, even when the input video signal is lost or interrupted

- System range of up to 70m (230ft)

- A built-in ProcAmp for convenient signal adjustment

- An On-Screen Display (OSD) for easy setup and adjustment, accessible via the front-panel buttons

- A non-volatile memory that retains the last settings used

- A freeze button

- A USB connector for firmware upgrading

The machine is fed from an external 5V DC source, making it suitable for field operation.

3.1 Defining the VP-427 HDBaseT to HDMI Receiver/Scaler
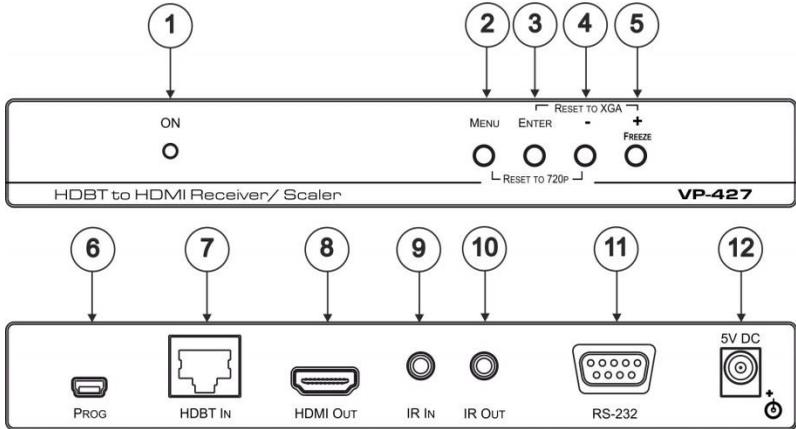
This section defines the **VP-427**.

Figure 1: VP-427 HDBaseT to HDMI Receiver/Scaler

#	Feature	Function
1	*ON* LED	Lights green when the unit is powered on
2	*MENU* Button	Press to enter/escape the on-screen display (OSD) menu. Press together with the – button to reset to 720p
3	*ENTER* Button	In OSD, press to choose the highlighted menu item. Press together with the + button to reset to XGA
4	–	In OSD, press to move backward through the list or to decrement the parameter value
5	*+/FREEZE* Button	In OSD, press to move forward through the list or to increment the parameter value. When not in OSD, press to freeze the display
6	*PROG* USB Connector	Connects to a PC for programming upgrade
7	*HDBT IN* RJ-45 Connector	Connects to an HDBaseT transmitter
8	*HDMI OUT* Connector	Connects to an HDMI acceptor
9	IR IN 3.5mm Mini Jack	Connects to an IR receiver
10	IR OUT 3.5mm Mini Jack	Connects to an IR emitter
11	RS-232 9-pin D-sub Connector	Connects to a controller
12	*5V DC*	+5V DC connector for powering the unit

4 Connecting the VP-427

Always switch off the power to each device before connecting it to your **VP-427**. After connecting your **VP-427**, connect its power and then switch on the power to each device.

To connect the **VP-427** as illustrated in the example in Figure 2:

1. Connect the output from an HDBaseT transmitter (for example, an TP-582T) to the HDBT IN RJ-45 connector.

2. Connect the HDMI OUT connector to an HDMI acceptor (for example, a display).

3. Connect an IR receiver to the IR IN 3.5mm mini jack.

4. Connect the IR OUT 3.5mm mini jack to an IR emitter.

5. Connect the RS-232 9-pin D-sub connector to an RS-232 port (for example, a display).

6. Connect the 5V DC power adapter to the power socket and connect the adapter to the mains electricity (not shown in Figure 2).
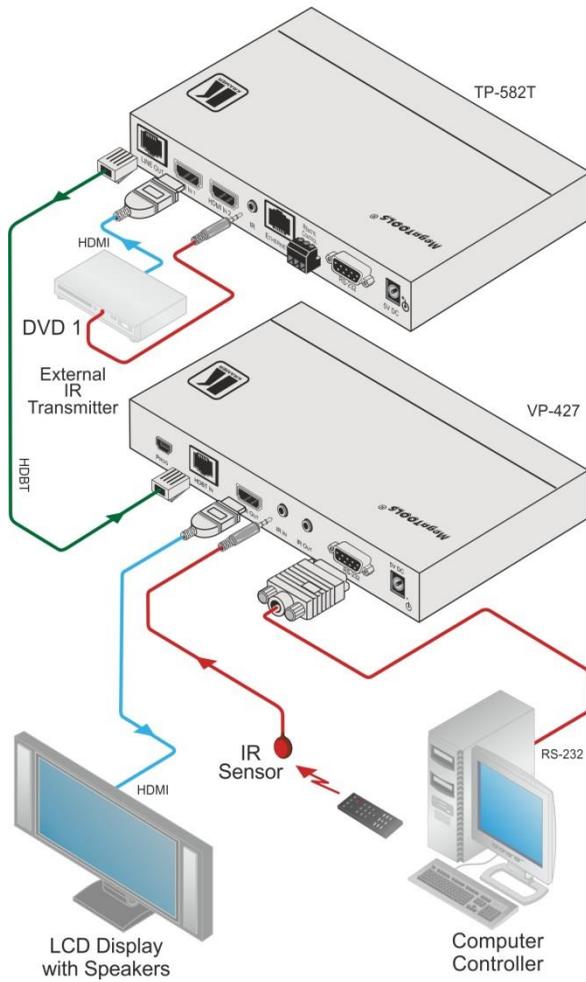
Figure 2: Connecting the VP-427 HDBaseT to HDMI Receiver/Scaler

5 Operating the VP-427

The **VP-427** is operated directly using the front panel buttons and the OSD menu (see Section 5.2).

5.1 Operating the VP-427 from the Front Panel Buttons

During normal operation (without the OSD), the front panel buttons perform the following functions:

- Pressing MENU opens the on-screen display (OSD) main menu (see Section 5.2), the next press closes the OSD

- Pressing +/FREEZE freezes the display, the next press unfreezes the display

- Pressing MENU and –/AUTO ADJUST together resets the display to 720p

- Pressing ENTER and +/FREEZE together resets the display to XGA

5.2 Using the OSD

You can use the OSD to set a wide variety of parameters. When the MENU button is pressed, the main menu opens (see Section 5.2.2) allowing access to all the device settings.

5.2.1 Operating the OSD from the Front Panel Buttons

While the OSD is open, the front panel buttons perform the following functions:

- Pressing - and + move forward and backward through the menu items and decrement or increment the parameter values

- Pressing ENTER selects and activates a menu item or accepts the parameter value set

- Pressing MENU closes the OSD menu
  The menu times out by default after 10 seconds. To change the OSD display time, adjust the OSD/TIMER parameter.

As an example of setting parameters, to increase the contrast on the display:

1. From normal operation, press MENU.

   The OSD main menu appears on the screen.

2. Press the + or – button to highlight CONTRAST.

   CONTRAST changes to green when highlighted.

3. Press ENTER.

   The contrast value parameter changes to red.

4. Press the + button to increase the value (increase the contrast) or

   the – button to decrease the value (decrease the contrast).

   The value ranges from 0 to 100.

5. Press ENTER to set the value.

   The contrast value parameter changes back to white.

6. To return to normal operation, highlight EXIT and press ENTER, press

   MENU, or wait until the menu times out.

5.2.2   The OSD Menu Structure

Main Menu	Submenu	Values	Notes
Picture	Contrast	0-100	Adjusts the contrast
	Brightness	0-100	Adjusts the brightness level
	Saturation	0-100	Adjusts the color saturation level
	Hue	0-100	Adjusts the color hue setting
	Sharpness	0-100	Adjusts the sharpness (edge contrast)
	Picture Reset		Resets picture settings to their default values
	Exit		Select to exit to the Main Menu
Aspect Ratio		Best Fit	Shows the largest sized picture without distorting the aspect ratio
		Full	The output picture fills the screen
		16:9	Forces a 16:9 aspect ratio
		4:3	Forces a 4:3 aspect ratio
Over Scanning		5% 10% 15% 20% OFF	Allows enabling and sizing selection of overscanned output
Noise Reduction		Off Min Typ Max	Enable video noise reduction, and selection of strength of noise filter

Main Menu	Submenu	Values	Notes
Output		Native 480p 570p 720p 1080i 1080p 640x480 800x600 1024x768 1280x800 1280x1084 1360x768 1400x1050 1440x900 1600x1200 1680x1050 1920x1200	Select the desired resolution (Native is recommended)
Refresh Rate		60Hz 50Hz Follow	Select that the output refresh rate follows the input refresh rate (recommended), or force it to 50Hz or 60Hz
HD Output Color		RGB YPbPr	Select the output colorspace
OSD Settings	H-Position	0-100	Adjusts the horizontal position of the OSD on the screen
	V-Position	0-100	Adjusts the vertical position of the OSD on the screen
	Transparency	0-100	Adjusts the transparency of the OSD background from black to totally transparent
	Menu Timeout	5-100	Adjusts the length of time in seconds the OSD appears on the screen before timing out
	Info Timeout	from 5 to 50, OFF	Set the INFO timeout period in seconds
	Info Display	ON, OFF, INFO	Select the information shown on the screen during operation: **ON** - the information is shown permanently **OFF** - the information is not shown **INFO** - the information is shown for the time period set in INFO. TIMEOUT following any change in the resolution
	Exit		Select to exit to the Main Menu

Main Menu	Submenu	Values	Notes
Advanced	Auto Sync Off	On Off	Turns ON/OFF the auto sync. When ON, after a short period of not detecting a valid video signal on the input(s), the unit disables the two outputs until a valid input is again detected or any keypad is pressed
	HDCP on Input	On Off	Selects the HDCP option for the HDMI input: either ON (the default) or OFF. Setting HDCP support on the HDMI input to disable (OFF) allows the source to transmit a non-HDCP signal if required (for example, when working with a Mac computer)
	Freeze	Freeze+Mute Mute Only Freeze Only Exit	Select to freeze/mute the display
Factory Default		No Yes	Reset the unit to its Factory Default settings
Info Menu	Source Info		Displays the source, input and output resolutions and the software version (read only)
	Sync Info		
	Firmware Version		
Exit			Select to exit OSD

6 Technical Specifications

INPUTS:	1 HDBaseT twisted pair on an RJ-45 connector, 1 IR on a 3.5mm mini jack
OUTPUTS:	1 HDMI connector, 1 IR on a 3.5mm mini jack
PORTS:	1 bidirectional RS-232 port on a 9-pin D-sub connector
OUTPUT RESOLUTIONS:	Native 480p 570p 720p 1080i 1080p 640x480 800x600 1024x768 1280x800 1280x1084 1360x768 1400x1050 1440x900 1600x1050 1680x1050 1920x1200
OUTPUT REFRESH RATE:	60Hz for computer graphics resolutions, 50/60Hz for HDTV resolutions
LATENCY:	30ms (approx.)
VIDEO COLOR DEPTH:	Input: 8/10/12-bit, output: 8-bit
EMBEDDED AUDIO:	Supports LPCM 2CH
RS-232 BAUDRATE:	115200bps max.
CONTROLS:	Front panel buttons, 1 USB for programming
INDICATORS:	ON LED
POWER CONSUMPTION:	5V DC, 1.5A
OPERATING TEMPERATURE:	0° to +40°C (32° to 104°F)
STORAGE TEMPERATURE:	-40° to +70°C (-40° to 158°F)
HUMIDITY:	10% to 90%, RHL non-condensing
DIMENSIONS:	18.8cm x 11.4cm x 2.5cm (7.4" x 4.5" x 1.0") W, D, H
WEIGHT:	0.45kg (1.0lb)
INCLUDED ACCESSORIES:	Power supply
OPTIONS:	RK-T2B 19" rack adapter

Specifications are subject to change without notice at http://www.kramerelectronics.com

6.1 Input Resolutions Support

Resolution/Refresh Rate	Resolution/Refresh Rate
480I/576I(NTSC/PAL)	SXGA@(60)
480P/576P	UXGA@60
720P@(60/50)	WXGA@60(1280x800)
1080I@(60/50)	WXGA@60(1366x768)
1080P@(60/50)	WSXGA@60(1680x1050)
1080P@(24/25/30)	WUXGA@60(1920x1200 RB)
VGA@(60/72/75)	WXGA+@60(1440x900)
SVGA@(56/60/72/75)	SXGA+@60(1400x1050)
XGA@(60/70/75)	

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.

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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.
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