MODEL:

VP-427A
HDBaseT to HDMI+Audio Receiver/Scaler

P/N: 2900-300425 Rev 3
VP-427A Quick Start Guide

This guide helps you install and use your product for the first time. For more detailed information, go to http://www.kramerav.com/manual/VP-427A to download the latest manual or scan the QR code on the left.

Step 1: Check what’s in the box

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

Step 2: Install the VP-427A

Attach the rubber feet and place on a table or mount the VP-427A 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-427A.

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

Step 4: Connect the power

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

Step 5: Operate the VP-427A

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

Reset the resolution or freeze the frame.
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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-427A HDBaseT to HDMI+Audio 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 www.kramerav.com/downloads/VP-427A 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-427A 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 www.kramerav.com/support/recycling.
Overview

The Kramer VP-427A 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-427A 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
- A simultaneous analog audio output of the embedded HDMI audio
- 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.
### Defining the VP-427A HDBaseT to HDMI+Audio Receiver/Scaler

This section defines the **VP-427A**.

![VP-427A Diagram](image)

#### Figure 1: VP-427A HDBaseT to HDMI+Audio Receiver/Scaler

<table>
<thead>
<tr>
<th>#</th>
<th>Feature</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ON LED</td>
<td>Lights green when the unit is powered on</td>
</tr>
<tr>
<td>2</td>
<td>MENU Button</td>
<td>Press to enter/escape the on-screen display (OSD) menu. Press together with the – button to reset to 720p</td>
</tr>
<tr>
<td>3</td>
<td>ENTER Button</td>
<td>In OSD, press to choose the highlighted menu item. Press together with the + button to reset to XGA</td>
</tr>
<tr>
<td>4</td>
<td>–</td>
<td>In OSD, press to move backward through the list or to decrement the parameter value</td>
</tr>
<tr>
<td>5</td>
<td>+/-FREEZE Button</td>
<td>In OSD, press to move forward through the list or to increment the parameter value. When not in OSD, press to freeze the display</td>
</tr>
<tr>
<td>6</td>
<td>PROG USB Connector</td>
<td>Connects to a PC for programming upgrade</td>
</tr>
<tr>
<td>7</td>
<td>HDBT IN RJ-45 Connector</td>
<td>Connects to an HDBaseT transmitter</td>
</tr>
<tr>
<td>8</td>
<td>AUDIO OUT 3.5mm Mini Jack</td>
<td>Connects to an unbalanced stereo acceptor</td>
</tr>
<tr>
<td>9</td>
<td>HDMI OUT Connector</td>
<td>Connects to an HDMI acceptor</td>
</tr>
<tr>
<td>10</td>
<td>IR IN 3.5mm Mini Jack</td>
<td>Connects to an IR receiver</td>
</tr>
<tr>
<td>11</td>
<td>IR OUT 3.5mm Mini Jack</td>
<td>Connects to an IR emitter</td>
</tr>
<tr>
<td>12</td>
<td>RS-232 9-pin D-sub Connector</td>
<td>Connects to a controller</td>
</tr>
<tr>
<td>13</td>
<td>5V DC</td>
<td>+5V DC connector for powering the unit</td>
</tr>
</tbody>
</table>
4 Connecting the VP-427A

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

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

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

2. Connect the AUDIO OUT 3.5mm mini jack connector to an unbalanced stereo audio acceptor (for example, an amplifier).

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

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

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

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

7. 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-427A HDBaseT to HDMI+Audio Receiver/Scaler

4.1 **RS-232 Control over HDBaseT**

You can connect to the transmitter/receiver system via an RS-232 connection using, for example, a PC. Note that a null-modem adapter/connection is not required.

To connect a PC via RS-232, connect the RS-232 9-pin D-sub rear panel port on the transmitter/receiver system unit via a 9-wire straight cable (only pin 2 to pin 2, pin 3 to pin 3, and pin 5 to pin 5 need to be connected) to the RS-232 9-pin D-sub port on your PC.
**Figure 2** shows RS-232 bidirectional control of the DVD that is connected to a TP-582T.

### 4.2 IR Control Over HDBaseT

Since the IR signal on the **TP-582T** transmitter and **VP-427A** receiver is bidirectional, you can use a remote control transmitter (that is used for controlling a peripheral device, for example, a DVD player) to send commands (to the AV equipment) from either end of the transmitter /receiver system. To do so, you have to use the Kramer external IR sensor on one end (P/N: 95-0104050) and the Kramer IR emitter cable on the other end (P/N: C-A35/IRE-10)

Two IR Emitter Extension Cables are also available: a 15 meter cable and a 20 meter cable.

The example in **Figure 2** illustrates how to control the DVD player that is connected to **TP-582T** using a remote control, via the **VP-427A**. In this example, the External IR Sensor is connected to the IR connector of the **VP-427A** and an IR Emitter is connected between the **TP-582T** and the DVD player. The DVD remote control sends a command while pointing towards the External IR Sensor. The IR signal passes through the TP cable and the IR Emitter to the DVD player, which responds to the command sent.
5  Operating the VP-427A

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

5.1  Operating the VP-427A 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

<table>
<thead>
<tr>
<th>Main Menu</th>
<th>Submenu</th>
<th>Values</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Picture</td>
<td>Contrast</td>
<td>0-100</td>
<td>Adjusts the contrast</td>
</tr>
<tr>
<td></td>
<td>Brightness</td>
<td>0-50</td>
<td>Adjusts the brightness level</td>
</tr>
<tr>
<td></td>
<td>Saturation</td>
<td>0-100</td>
<td>Adjusts the color saturation level</td>
</tr>
<tr>
<td></td>
<td>Hue</td>
<td>0-100</td>
<td>Adjusts the color hue setting</td>
</tr>
<tr>
<td></td>
<td>Sharpness</td>
<td>0-100</td>
<td>Adjusts the sharpness (edge contrast)</td>
</tr>
<tr>
<td></td>
<td>Picture Reset</td>
<td></td>
<td>Resets picture settings to their default values</td>
</tr>
<tr>
<td></td>
<td>Exit</td>
<td></td>
<td>Select to exit to the Main Menu</td>
</tr>
<tr>
<td>Aspect Ratio</td>
<td>Best Fit</td>
<td></td>
<td>Shows the largest sized picture without distorting the aspect ratio</td>
</tr>
<tr>
<td></td>
<td>Full</td>
<td></td>
<td>The output picture fills the screen</td>
</tr>
<tr>
<td></td>
<td>16:9</td>
<td></td>
<td>Forces a 16:9 aspect ratio</td>
</tr>
<tr>
<td></td>
<td>4:3</td>
<td></td>
<td>Forces a 4:3 aspect ratio</td>
</tr>
<tr>
<td>Over Scanning</td>
<td>5%</td>
<td></td>
<td>Allows enabling and sizing selection of overscanned output</td>
</tr>
<tr>
<td></td>
<td>10%</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>15%</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>20%</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>OFF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Noise Reduction</td>
<td>Off</td>
<td></td>
<td>Enable video noise reduction, and selection of strength of noise filter</td>
</tr>
<tr>
<td></td>
<td>Min</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Typ</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Max</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Main Menu</td>
<td>Submenu</td>
<td>Values</td>
<td>Notes</td>
</tr>
<tr>
<td>-----------</td>
<td>---------------</td>
<td>----------------------------------------</td>
<td>----------------------------------------------------------------------</td>
</tr>
<tr>
<td>Output</td>
<td>Native</td>
<td>480p 570p 720p 1080i 1080p 640x480 800x600 1024x768 1280x800 1280x1084 1360x768 1400x1050 1440x900 1600x1200 1680x1050 1920x1200</td>
<td>Select the desired resolution (Native is recommended)</td>
</tr>
<tr>
<td>Refresh Rate</td>
<td>60Hz 50Hz Follow</td>
<td></td>
<td>Select that the output refresh rate follows the input refresh rate (recommended), or force it to 50Hz or 60Hz</td>
</tr>
<tr>
<td>HD Output Color</td>
<td>RGB YPbPr</td>
<td></td>
<td>Select the output colorspace</td>
</tr>
<tr>
<td>OSD Settings</td>
<td>H-Position</td>
<td>0-100</td>
<td>Adjusts the horizontal position of the OSD on the screen</td>
</tr>
<tr>
<td></td>
<td>V-Position</td>
<td>0-100</td>
<td>Adjusts the vertical position of the OSD on the screen</td>
</tr>
<tr>
<td></td>
<td>Transparency</td>
<td>0-100</td>
<td>Adjusts the transparency of the OSD background from black to totally transparent</td>
</tr>
<tr>
<td></td>
<td>Menu Timeout</td>
<td>5-100</td>
<td>Adjusts the length of time in seconds the OSD appears on the screen before timing out</td>
</tr>
<tr>
<td>Info Timeout</td>
<td>Info Display</td>
<td></td>
<td>Select to exit to the Main Menu</td>
</tr>
<tr>
<td>Advanced</td>
<td>Auto Sync Off</td>
<td>Slow Fast Disable</td>
<td>Turns of the output after a period of not detecting a valid video signal on the input(s) until a valid input is again detected or any keypad is pressed. Set to: Slow – to disable outputs after 2 minutes Fast – to disable outputs after 10 seconds Disable – to leave outputs active at all times</td>
</tr>
<tr>
<td></td>
<td>HDCP on Input</td>
<td>On Off</td>
<td>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)</td>
</tr>
</tbody>
</table>
### Main Menu

<table>
<thead>
<tr>
<th>Submenu</th>
<th>Values</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>HDCP ON OUTPUT</td>
<td>Follow Input Follow Output</td>
<td>Select FOLLOW INPUT, to change its HDCP output setting according to the HDCP of the input. This option is recommended when the HDMI/HDCP output is connected to a splitter/switcher. Select FOLLOW OUTPUT for the scaler to match its HDCP output to the HDCP setting of the HDMI/HDCP acceptor to which it is connected.</td>
</tr>
<tr>
<td>Freeze</td>
<td>Freeze+Mute Mute Only Freeze Only Exit</td>
<td>Select to freeze/mute the display</td>
</tr>
<tr>
<td>Factory Default</td>
<td>No Yes</td>
<td>Reset the unit to its Factory Default settings</td>
</tr>
</tbody>
</table>

### Info Menu

<table>
<thead>
<tr>
<th>Values</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source Info</td>
<td>Displays the source, input and output resolutions and the software version (read only)</td>
</tr>
<tr>
<td>Sync Info</td>
<td></td>
</tr>
<tr>
<td>Firmware Version</td>
<td></td>
</tr>
</tbody>
</table>

### Exit

<table>
<thead>
<tr>
<th>Values</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Select to exit OSD</td>
</tr>
</tbody>
</table>
## 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, 1 unbalanced stereo audio 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 1600x1200 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 [www.kramerav.com](http://www.kramerav.com)

## 6.1 Input Resolutions Support

<table>
<thead>
<tr>
<th>Resolution/Refresh Rate</th>
<th>Resolution/Refresh Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>480i/576i(NTSC/PAL)</td>
<td>SXGA@60</td>
</tr>
<tr>
<td>480P/576P</td>
<td>UXGA@60</td>
</tr>
<tr>
<td>720P@60/50</td>
<td>WXGA@60(1280x800)</td>
</tr>
<tr>
<td>1080i@60/50</td>
<td>WXGA@60(1366x768)</td>
</tr>
<tr>
<td>1080P@60/50</td>
<td>WSXGA@60(1680x1050)</td>
</tr>
<tr>
<td>1080P@24/25/30</td>
<td>WUXGA@60(1920x1200 RB)</td>
</tr>
<tr>
<td>VGA@60/72/75</td>
<td>WXGA+@60(1440x900)</td>
</tr>
<tr>
<td>SVGA@56/60/72/75</td>
<td>SXGA+@60(1400x1050)</td>
</tr>
<tr>
<td>XGA@60/70/75</td>
<td></td>
</tr>
</tbody>
</table>
The warranty obligations of Kramer Electronics Inc. ("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 software included in the product, will not become obsolete or that such items are or will remain compatible with any other product or technology which the product may be used with.

How Long this Coverage Lasts
The standard limited warranty for Kramer products is seven (7) years from the date of original purchase, with the following exceptions:

1. All Kramer VIA products are covered by a standard three (3) year warranty for VIA hardware and a standard one (1) year warranty for firmware and software updates. (An extended software warranty plan for an additional 2 years can be purchased separately.)
2. All Kramer fiber optic cables and adapters, active cables, all Kramer speakers and Kramer touch panels are covered by a standard one (1) year warranty.
3. All Kramer Connect products, all Kramer TVs, all Kramer Monitors digital signage products, all HighDefZone products, all streaming, and all wireless products are covered by a standard three (3) year warranty.
4. All Sierra Video MultiViewers are covered by a standard five (5) year warranty.
5. Sierra switchers & control panels are covered by a standard seven (7) year warranty (excluding power supplies and fans that are covered for three (3) years).
6. K-Touch software is covered by a standard one (1) year warranty for software updates.
7. All Kramer passive cables are covered by a ten (10) year warranty.

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 remedies with respect to whatever extent it shall deem necessary to satisfy a proper claim under this limited warranty:

1. To replace, repair, or refund the purchase price for any defective parts within a reasonable period of time. Any repair is made by the manufacturer of the defective part, and the manufacturer shall be liable for the repair of the defective part.

2. To replace the product with a new replacement product of equivalent or superior performance and functionality, provided that the original product is returned to Kramer Electronics at the customer's expense.

3. To issue a refund of the original purchase price less the depreciation to be determined based on the age of the product at the time of the request and the condition of the product.

What Kramer Electronics Will Not Do Under This Limited Warranty
If this product is returned to Kramer Electronics or the authorized dealer from whom it was purchased or any other authorized dealer to repair or replace the product, the customer will be responsible for any costs related to the removal or reinstallation of this product from or into any installation. Kramer Electronics will not be responsible for any costs related to any setup 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 the authorized Kramer Electronics dealer from whom you purchased the product or the Kramer Electronics office nearest you. For a list of authorized Kramer Electronics dealer and/or the Kramer Electronics office nearest you, visit our website at www.kramer.com or contact the Kramer Electronics office nearest you.

In order to receive a repair or replacement under this limited warranty, you must provide an original or replacement receipt as proof of purchase from an authorized Kramer Electronics dealer. This product is returned under this limited warranty, a return authorization number, obtained from Kramer Electronics, will be included with the repair. You are responsible for any costs related to any setup up this product, any adjustment of user controls or any programming required for a specific installation of this product.

If it is determined 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 of Liability
The maximum liability of Kramer Electronics under this limited warranty shall not exceed the actual purchase price paid for this product. To the maximum extent permitted by law, Kramer Electronics is not responsible for direct, indirect, incidental, or consequential damages resulting from any breach of warranty or condition, or under any other legal theory. Some states, provinces, or countries may not allow the exclusion or limitation of liability, so the above limitations or exclusions may not apply to you.

Exclusive Remedy
To the maximum extent permitted by law, this limited warranty and the remedies set forth above are exclusive and in lieu of all other warranties, remedies, and conditions, whether oral or written, express or implied, to the maximum extent permitted by law. Kramer Electronics shall not be liable for any damages, including, without limitation, warranties of merchantability and fitness for a particular purpose. If Kramer Electronics cannot lawfully disclaim or exclude implied warranties under applicable law, then all implied warranties covering this product, including warranties of merchantability and fitness for a particular purpose, shall apply to this product as provided under applicable law.

Other Conditions
This limited warranty is void if (a) the label bearing the serial number of this product has been removed or defaced, (b) the product is not distributed by Kramer Electronics or (iii) this product is not purchased from an authorized Kramer Electronics dealer. If you are unsure whether a dealer is an authorized Kramer Electronics dealer, visit our website at www.kramer.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 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.KramerAV.com E-mail: info@KramerAV.com

SAFETY WARNING
Disconnect the unit from the power supply before opening and servicing.