USER MANUAL

MODEL:

VM-2H2
4K HDMI 2.0 1:2 DA
VM-2H2 Quick Start Guide

Step 1: Check what’s in the box
- VM-2H2 4K HDMI 2.0 1:2 DA
- 1 Power cord supply (5V DC)
- 4 Rubber feet
- 1 Quick start guide

Step 2: Install the VM-2H2
Attach the rubber feet and place on a table or mount the VM-2H2 in a rack (using an optional RK-T2B rack mount).

Step 3: Connect inputs and outputs
Always switch OFF the power on each device before connecting it to your VM-2H2.
For best results, we recommend that you always use Kramer high-performance cables to connect AV equipment to the VM-2H2.

Step 4: Connect the power
Connect the 5V DC power adapter to the VM-2H2 and plug the adapter into the mains electricity.

Step 5: Set the DIP-switches
Set the DIP-switches according to your needs using the following table:

<table>
<thead>
<tr>
<th>DIP</th>
<th>Programming mode</th>
<th>HDCP Input (MAC mode)</th>
<th>Force RGB</th>
<th>Lock Default EDID</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFF (up)</td>
<td>Normal mode</td>
<td>HDCP enabled</td>
<td>Force RGB</td>
<td>EDID not locked</td>
</tr>
<tr>
<td>ON (down)</td>
<td>Enable programming</td>
<td>HDCP disabled</td>
<td>Normal mode</td>
<td>EDID locked</td>
</tr>
</tbody>
</table>
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 VM-2H2 4K HDMI 2.0 1:2 DA. This product, which incorporates HDMI™ 2.0 technology, is ideal for:

- Digital signage, entertainment, retail
- Medical and defence applications that require high resolution support
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/VM-2H2 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 neighbouring electrical appliances that may adversely influence signal quality
- Position your VM-2H2 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 power supply 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 **VM-2H2** is a distribution amplifier for 4K UHD HDMI 2.0 signals. The unit takes one HDMI input, equalizes and reclocks the signal and distributes it to two identical outputs. It distributes signals having resolutions up to 4K@60 (4:4:4) with HDMI 2.0 and HDCP 2.2.

The **VM-2H2** features:

- A maximum data rate of 17.82Gbps (5.94Gbps per graphic channel) that supports resolutions up to 4K @60Hz (4:4:4)
- HDMI support for Deep Color, x.v.Color™, Lip Sync, HDMI Uncompressed Audio Channels, Dolby TrueHD, DTS-HD, CEC
- HDCP 2.2, HDMI 2.0 support
- Kramer Equalization & re-Klocking™ Technology that rebuilds the digital signal integrity to travel longer distances
- A default EDID for fast and efficient connection of the unit
  The default EDID feature lets you connect the **VM-2H2** without having to connect a display to the output
- Operating modes selectable by DIP-switch: force RGB, lock EDID, HDCP enable, programming mode
- 3D pass-through
- Plug and Play operation
- Cascade of Kramer devices like distribution amplifiers
- An RS-232 port for upgrading firmware
- A compact MegaTOOLS® enclosure with a 5V DC power source
3.1 Defining the VM-2H2 4K HDMI 2.0 1:2 DA

This section defines the VM-2H2.

Figure 1: VM-2H2 4K HDMI 2.0 1:2 DA

<table>
<thead>
<tr>
<th>#</th>
<th>Feature</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>IN LED</td>
<td>Lights green when an HDMI source is connected</td>
</tr>
<tr>
<td>2</td>
<td>OUT LEDs (1-2)</td>
<td>Light green when an HDMI acceptor is connected</td>
</tr>
<tr>
<td>3</td>
<td>ON LED</td>
<td>Lights green when the unit is powered on</td>
</tr>
<tr>
<td>4</td>
<td>HDMI IN Connector</td>
<td>Connects to an HDMI source</td>
</tr>
<tr>
<td>5</td>
<td>HDMI OUT Connectors (1 to 2)</td>
<td>Connect to up to two HDMI acceptors</td>
</tr>
<tr>
<td>6</td>
<td>RS-232 (PROG) Terminal Block</td>
<td>Connects to a PC for firmware updating</td>
</tr>
<tr>
<td>7</td>
<td>SETUP DIP-Switches (1-4)</td>
<td>Used for setting four different operation modes (see Section 3.2)</td>
</tr>
<tr>
<td>8</td>
<td>5V DC Power Connector</td>
<td>Connects to a 5V DC power supply</td>
</tr>
</tbody>
</table>

3.2 Setting the DIP-Switches

The VM-2H2 uses four DIP-switches to set four different operation modes:

- Programming mode – normal operation mode, programming mode
- MAC mode – enable HDCP, disable input HDCP
- Force RGB - force RGB, normal operation mode
- Lock default EDID – locked, not locked

Note: Any time the DIP-switch settings are changed, the device must be powered off and on for the new settings to take effect.
To select the operation mode, set the DIP-switches as follows:

<table>
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<tr>
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<td>EDID locked</td>
</tr>
</tbody>
</table>

The VM-2H2 toggles between “Normal” and “Force RGB” modes.

In “Force RGB” mode, the read EDID is rewritten to identify only RGB support.

- To force RGB, set DIP 3 OFF (up)
- After setting Force RGB mode you must re-acquire the EDID to update the Force RGB change

Powering on the device identifies the mode as follows:

- In “Normal mode” (meaning no forcing RGB), the LEDs flash once
- In “Force RGB mode”, the LEDs flash four times.

Note: Force RGB modifies the EDID saved on the input to not support YUV format. In case of a pink display, use the Force RGB mode.

### 3.3 LED Indications

The input and output LEDs turn on only when there is an input signal and an active output device connected.

<table>
<thead>
<tr>
<th>LED (per input)</th>
<th>Indication</th>
<th>State</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input LED</td>
<td>Flashes four times then stays on</td>
<td>HDCP lost on input while running</td>
</tr>
<tr>
<td>Output LED</td>
<td>Flashes twice quickly, repeatedly</td>
<td>HDCP signal on input. Output device does not support HDCP</td>
</tr>
<tr>
<td></td>
<td>Flashes slowly, repeatedly</td>
<td>Input signal detected. Output device has invalid EDID</td>
</tr>
<tr>
<td></td>
<td>Flashes twice quickly then twice slowly, repeatedly</td>
<td>HDCP signal on input. Output device does not support HDCP and has invalid EDID</td>
</tr>
</tbody>
</table>
4 Connecting the VM-2H2

Always switch off the power to each device before connecting it to your VM-2H2. After connecting your VM-2H2, connect its power and then switch on the power to each device.

You do not have to connect all the inputs and outputs, connect only those that are required.

To connect the VM-2H2, as illustrated in the example in Figure 2, do the following:

1. Connect an HDMI input source (for example, a 4K Blu-ray player) to the HDMI IN connector.

2. Connect the two OUTPUT connectors to up to two HDMI acceptors, as follows:
   Not all outputs need to be connected.
   - HDMI OUT 1 connector to HDMI acceptor 1 (for example, a 4K display with speakers)
   - HDMI OUT 2 connector to HDMI acceptor 2 (for example, a 4K display)

3. Connect the 5V DC power adapter to the power socket unit and then connect the adapter to the mains electricity (not shown in Figure 2). See Section 3.3 for the state of the LED indicators during and after powering on.
Figure 2: Connecting the VM-2H2 4K HDMI 2.0 1:2 DA
5 EDID Acquisition Policy

This section describes the EDID policy as a function of the state of DIP-switch 4 (Lock Default EDID).

When set to ON (down), the input EDID is locked to the default EDID value.

When set to OFF (up):

- If no outputs are connected when powering on the VM-2H2, the default EDID is set on the input. The EDID of the first output that is connected after powering the device is set to the input. This EDID is replaced by the default EDID only when all outputs are disconnected.

- If one or more outputs are already connected when powering on the VM-2H2, the valid EDID of the display that is connected to the output with the highest number is set to the input (for example, if OUT 1 and OUT 2 are connected and both have valid EDIDs, when powering the device, the EDID of the display connected to OUT 2 is written to the input).

Note that DIP-switch changes take effect only after powering on the device.
To upgrade the **VM-2H2** firmware:

1. Turn off the **VM-2H2**. Set DIP-switch 1 On (down). Turn on the **VP-2H2**.

2. Download and install the EPConsole application from the Koryo (Taiwan) Web site.

3. Download and extract the latest version of the firmware from the Kramer Web site to a disk location on your PC. The firmware includes three files with names ending in .h00, .h01, .h02. Make sure they all exist in the same folder.

4. Run EPConsole.

5. Select the COM port that attaches to the **VM-2H2**.

6. Specify the downloaded firmware file ending with .h00 as the BANK0 file. The program automatically loads the other two files in banks 1 and 2.

7. Press Program MCU icon (downward pointing green arrow) to install the new firmware:
8. After the firmware successfully downloads:
   (In case of failure, rerun the previous process.):
   - Power off the unit.
   - Disconnect the RS-232 cable.
   - Set DIP-switch 1 Off (up).
   - Power on the VM-2H2 to load the new firmware and resume operation.
## Supported Input Resolutions

<table>
<thead>
<tr>
<th>Resolution</th>
<th>Refresh Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>640x480p 60Hz</td>
<td></td>
</tr>
<tr>
<td>640x480p 72Hz</td>
<td></td>
</tr>
<tr>
<td>640x480p 75Hz</td>
<td></td>
</tr>
<tr>
<td>640x480p 85Hz</td>
<td></td>
</tr>
<tr>
<td>720x480i 30Hz</td>
<td></td>
</tr>
<tr>
<td>720x480p 60Hz</td>
<td></td>
</tr>
<tr>
<td>720x576p 50Hz</td>
<td></td>
</tr>
<tr>
<td>800x600p 60Hz</td>
<td></td>
</tr>
<tr>
<td>800x600p 72Hz</td>
<td></td>
</tr>
<tr>
<td>800x600p 75Hz</td>
<td></td>
</tr>
<tr>
<td>800x600p 85Hz</td>
<td></td>
</tr>
<tr>
<td>848x480p 60Hz</td>
<td></td>
</tr>
<tr>
<td>852x480p 60Hz</td>
<td></td>
</tr>
<tr>
<td>1024x768p 60Hz</td>
<td></td>
</tr>
<tr>
<td>1024x768p 70Hz</td>
<td></td>
</tr>
<tr>
<td>1024x768p 75Hz</td>
<td></td>
</tr>
<tr>
<td>1024x768p 85Hz</td>
<td></td>
</tr>
<tr>
<td>1152x864p 75Hz</td>
<td></td>
</tr>
<tr>
<td>1280x768p 60Hz</td>
<td></td>
</tr>
<tr>
<td>1280x800p 60Hz</td>
<td></td>
</tr>
<tr>
<td>1280x960 60Hz</td>
<td></td>
</tr>
<tr>
<td>1280x1024p 60Hz</td>
<td></td>
</tr>
<tr>
<td>1360x768p 60Hz</td>
<td></td>
</tr>
<tr>
<td>1366x768p 50Hz</td>
<td></td>
</tr>
<tr>
<td>1366x768p 60Hz</td>
<td></td>
</tr>
<tr>
<td>1400x1050p 60Hz</td>
<td></td>
</tr>
<tr>
<td>1440x900p 60Hz</td>
<td></td>
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<tr>
<td>1600x900p 60Hz</td>
<td></td>
</tr>
<tr>
<td>1600x1200p 60Hz</td>
<td></td>
</tr>
<tr>
<td>1680x1050p 60Hz</td>
<td></td>
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<tr>
<td>1920x1080i 50Hz</td>
<td></td>
</tr>
<tr>
<td>1920x1080i 60Hz</td>
<td></td>
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<tr>
<td>1920x1080p 24Hz</td>
<td></td>
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<tr>
<td>1920x1080p 30Hz</td>
<td></td>
</tr>
<tr>
<td>1920x1080p 50Hz</td>
<td></td>
</tr>
<tr>
<td>1920x1080p 60Hz</td>
<td></td>
</tr>
<tr>
<td>3840x2160p 24Hz</td>
<td>16:9</td>
</tr>
<tr>
<td>3840x2160p 30Hz</td>
<td>16:9</td>
</tr>
<tr>
<td>3840x2160p 60Hz</td>
<td>16:9</td>
</tr>
<tr>
<td>4096x2160p 24Hz</td>
<td>256:135</td>
</tr>
<tr>
<td>4096x2160p 30Hz</td>
<td>256:135</td>
</tr>
<tr>
<td>4096x2160p 60Hz</td>
<td>256:135 (Default)</td>
</tr>
<tr>
<td>3840x2160p 24Hz</td>
<td>64:27</td>
</tr>
<tr>
<td>3840x2160p 30Hz</td>
<td>64:27</td>
</tr>
<tr>
<td>3840x2160p 60Hz</td>
<td>64:27</td>
</tr>
</tbody>
</table>
8 **Default EDID**

Monitor

- **Model name:** VM-2H2
- **Manufacturer:** KMR
- **Plug and Play ID:** KMR1200
- **Serial number:** n/a
- **Manufacture date:** 2016, ISO week 14
- **Filter driver:** None

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- **EDID revision:** 1.3
- **Input signal type:** Digital
- **Color bit depth:** Undefined
- **Display type:** RGB color
- **Screen size:** 520 x 320 mm (24.0 in)
- **Power management:** Standby, Suspend, Active off/sleep
- **Extension blocs:** 1 (CEA-EXT)

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- **DDC/CI:** n/a

Color characteristics

- **Default color space:** Non-sRGB
- **Display gamma:** 2.20
- **Red chromaticity:** Rx 0.674 - Ry 0.319
- **Green chromaticity:** Gx 0.188 - Gy 0.706
- **Blue chromaticity:** Bx 0.148 - By 0.064
- **White point (default):** Wx 0.313 - Wy 0.329
- **Additional descriptors:** None

Timing characteristics

- **Horizontal scan range:** 30-83kHz
- **Vertical scan range:** 56-76Hz
- **Video bandwidth:** 170MHz
- **CVT standard:** Not supported
- **GTF standard:** Not supported
- **Additional descriptors:** Established timings
- **Preferred timing:** Yes
- **Native/preferred timing:** 1920x1080p at 60Hz

Modeline

```
"1920x1080" 148.500 1920 2008 2052 2200 1080 1084 1089 1125 +hsync +vsync
```

Standard timings supported

- 640 x 480p at 60Hz - IBM VGA
- 640 x 480p at 72Hz - VESA
- 640 x 480p at 75Hz - VESA
- 800 x 600p at 60Hz - VESA
- 800 x 600p at 72Hz - VESA
- 800 x 600p at 75Hz - VESA
- 1024 x 768p at 60Hz - VESA
- 1024 x 768p at 70Hz - VESA
- 1024 x 768p at 75Hz - VESA
- 1280 x 1024p at 75Hz - VESA
- 1600 x 900p at 60Hz - VESA STD
- 1280 x 800p at 60Hz - VESA STD
- 1600 x 1200p at 60Hz - VESA STD
1024 x 768p at 85Hz - VESA STD
800 x 600p at 85Hz - VESA STD
640 x 480p at 85Hz - VESA STD
1152 x 864p at 75Hz - VESA STD
1280 x 960p at 60Hz - VESA STD
848 x 480p at 60Hz - VESA
1280 x 768p at 60Hz - VESA
1280 x 1024p at 60Hz - VESA
1360 x 768p at 60Hz - VESA
1440 x 900p at 60Hz - VESA
1400 x 1050p at 60Hz - VESA
1680 x 1050p at 60Hz - VESA

EIA/CEA-861 Information
Revision number............ 3
IT underscan.............. Supported
Basic audio.............. Supported
YCbCr 4:4:4.............. Supported
YCbCr 4:2:2.............. Supported
Native formats........... 0
Detailed timing #1....... 720x480i at 30Hz
  Modeline.................. "720x480" 8.490 720 808 852 1000 480 488 498 570 interface +hsync +vsync
Detailed timing #2....... 852x480p at 60Hz (16:9)
  Modeline.................. "852x480" 49.450 852 1380 1424 1572 480 484 489 525 +hsync +vsync
Detailed timing #3....... 1366x768p at 50Hz (16:9)
  Modeline.................. "1366x768" 84.650 1366 1894 1938 2086 768 772 777 813 +hsync +vsync
Detailed timing #4....... 1366x768p at 60Hz (16:9)
  Modeline.................. "1366x768" 101.610 1366 1894 1938 2086 768 772 777 813 +hsync +vsync
Detailed timing #5....... 720x576p at 50Hz (4:3)
  Modeline.................. "720x576" 27.370 720 728 824 880 576 578 596 621 -hsync -vsync

CE video identifiers (VICs) - timing/formats supported
1920 x 1080p at 60Hz - HDTV (16:9, 1:1) [Native]
1920 x 1080i at 60Hz - HDTV (16:9, 1:1)
720 x 480p at 60Hz - EDTV (4:3, 8:9)
1920 x 1080i at 50Hz - HDTV (16:9, 1:1)
1920 x 1080p at 50Hz - HDTV (16:9, 1:1)
1920 x 1080p at 24Hz - HDTV (16:9, 1:1)
1920 x 1080p at 30Hz - HDTV (16:9, 1:1)
3840 x 2160p at 24Hz - HDTV (16:9, 1:1)
3840 x 2160p at 30Hz - HDTV (16:9, 1:1)
3840 x 2160p at 60Hz - HDTV (16:9, 1:1)
4096 x 2160p at 24Hz - HDTV (256:135, 1:1)
4096 x 2160p at 30Hz - HDTV (256:135, 1:1)
4096 x 2160p at 60Hz - HDTV (256:135, 1:1)
3840 x 2160p at 24Hz - HDTV (4:3, 1:1)
3840 x 2160p at 30Hz - HDTV (4:3, 1:1)
3840 x 2160p at 60Hz - HDTV (4:3, 1:1)
NB: NTSC refresh rate = (Hz*1000)/1001

CE audio data (formats supported)
LPCM 2-channel, 16/20/24 bit depths at 32/44/48 kHz

CE speaker allocation data
Channel configuration.... 2.0
Front left/right........ Yes
Front LFE.............. No
Front center........... No
Rear left/right........ No
Rear center............ No
Front left/right center.. No
Rear left/right center... No
Rear LFE................ No

CE vendor specific data (VSDB)
IEEE registration number. 0x000C03
CEC physical address..... 1.0.0.0
Maximum TMDS clock...... 165MHz

Report information
Date generated........... 4/17/2016
Software revision........ 2.90.0.1002
Data source.............. File
Operating system......... 6.1.7601.2.Service Pack 1

Raw data
00,FF,FF,FF,FF,FF,FF,00,2D,B2,00,12,00,00,00,00,0E,1A,01,03,80,34,20,78,EA,B3,25,AC,51,30,B4,26,
10,50,54,2D,CF,00,A9,C0,81,00,A9,40,61,59,45,59,31,59,71,4F,81,40,02,3A,80,18,71,3B,2D,40,58,2C,
45,00,0F,24,21,00,00,1E,00,00,00,FD,00,00,00,08,42,00,00,00,00,00,00,00,00,00,01,B4,
02,03,23,F0,50,90,05,02,14,1F,20,22,5D,5F,61,62,64,66,67,69,6B,23,09,07,83,01,00,00,65,03,0C,
00,10,00,51,03,D0,18,21,F0,2D,00,58,2C,45,00,0E,1A,21,00,00,9E,51,13,54,D0,32,0E,2D,10,10,2C,45,
80,BA,88,21,00,00,1E,11,21,56,D0,52,00,2D,30,10,2C,45,80,BA,88,21,00,00,1E,B1,0A,D0,A0,20,40,2D,20,08,60,22,01,80,E0,21,00,00,00,00,F1,B5
## Technical Specifications

| INPUT: | 1 HDMI connector |
| OUTPUTS: | 2 HDMI connectors |
| PORT: | 1 RS-232 for firmware upgrade |
| MAX. DATA RATE: | 17.82Gbps (5.94Gbps per graphic channel) supporting resolutions up to 4K @60Hz (4:4:4) |
| RS-232 BAUD RATE: | 57600 |
| COMPLIANCE WITH HDMI STANDARD: | Supports HDMI 2.0 and HDCP 2.2 |
| INDICATOR LEDs: | ON, IN, OUT 1 to 2 |
| 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 |
| POWER CONSUMPTION: | 5V DC, 630mA |
| DIMENSIONS: | 18.75cm x 11.5cm x 2.54cm (7.4" x 4.5" x 1.0") W, D, H, 1/2 19" 1U |
| WEIGHT: | 0.17kg (0.37lb) |
| SHIPPING DIMENSIONS: | 35.1cm x 21.2cm x 7.2cm (13.8" x 8.4" x 2.8") W, D, H |
| SHIPPING WEIGHT: | 0.67kg (0.67lb) |
| INCLUDED ACCESSORIES: | Power supply |
| OPTIONS: | RK-T2B 19" rack adapter |

Specifications are subject to change without notice.
For the most updated resolution list, go to our Web site at [http://www.kramerav.com](http://www.kramerav.com)
LIMITED WARRANTY

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

What's Covered
This limited warranty covers defects in materials and workmanship in this product.

What's 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 excessive 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 repair or repair attempted by any other person or company, or any repairs attempted by Kramer Electronics to make such repairs, or any other cause which does not relate directly to a defect in materials and workmanship of this product. This limited warranty does not cover cartons, equipment enclosures, cables or accessories used in conjunction with this product.

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 part 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 the 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.krameremotely.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 inspect 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 TO KRAMER ELECTRONICS FOR THE PRODUCT. TO THE MAXIMUM EXTENT PERMITTED BY LAW, KRAMER ELECTRONICS SPECIFICALLY DISCLAIMS ANY AND ALL IMPLIED WARRANTIES, 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 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) the 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.krameremotely.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 computerized system to the online product registration form. Kramer Electronics thanks you for purchasing a Kramer Electronics product. We hope it will give you years of satisfaction.
SAFETY WARNING

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

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

We welcome your questions, comments, and feedback.

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info@kramerel.com