KRAMER ELECTRONICS LTD.

USER MANUAL

MODEL:

VM-8HN
1:8+2 HDMI Looping DA

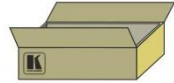# VM-8HN Quick Start Guide

This guide helps you install and use your product for the first time. For more detailed information, go to http://www.kramerav.com/manual/VM-8HN to download the latest manual or scan the QR code on the left.

Step 1: Check what's in the box

☑ **VM-8HN** 1:8+2 HDMI Looping DA   ☑ 1 Quick Start sheet
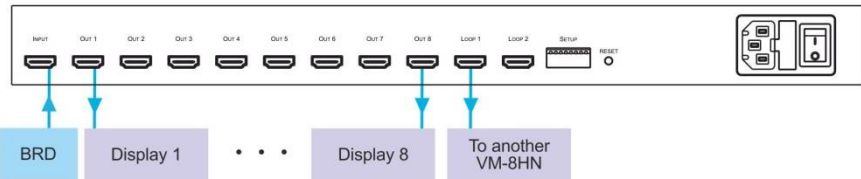☑ 1 Power cord   ☑ 4 Rubber feet

Step 2: Install the VM-8HN

Mount the **VM-8HN** in a rack (using the included rack "ears") or attach the rubber feet and place on a table.

Step 3: Connect the inputs and outputs

Always switch off the power on each device before connecting it to your **VM-8HN**.

INPUT   Out 1   Out 2   Out 3   Out 4   Out 5   Out 6   Out 7   Out 8   Loop 1   Loop 2   SETUP   RESET

BRD   Display 1   • • •   Display 8   To another VM-8HN

Always use Kramer high-performance cables for connecting AV equipment to the **VM-8HN.**

Step 4: Connect the power

Connect the power cord to the **VM-8HN** and plug it into the mains electricity.

Step 5: Operate the VM-8HN

1. Press the EDID SELECT button to cycle through the EDID sources in the following order:
   Out 1 (Output 1 LED lights)
   Out 2 (Output 2 LED lights)

   ...
   Out 8 (Output 8 LED lights)
   Loop 1 (Loop 1 LED lights)
   Loop 2 (Loop 2 LED lights)
   Default EDID (all LEDs flash)

2. To store the EDID, press EDID READ and the EDID is acquired.

3. Set the DIP-switches as follows:

DIP 1	DIP 2	Video Wall Delay
up	up	Video wall off- 0 delay
down	up	On – 10 sec delay
up	down	On – 15 sec delay
down	down	On – 17 sec delay

DIP 3	DIP 4	Output 5V Off Delay
up	up	15 mins
up	down	1 min
down	up	15 sec
down	down	5 sec

DIP 5	MAC Mode
up	MAC on
down	MAC off

Note: MAC mode does not support HDCP

DIP 6	Force RGB
up	Use monitor EDID
down	Use monitor EDID & force RGB support

Note: After setting Force RGB, reset the device

DIP 8	FW Update
up	Normal Operation
down	Update FW

SETUP

1 2 3 4 5 6 7 8

Note: DIP 7 reserved for future use

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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 **VM-8HN** *1:8+2 HDMI Looping DA*, which is ideal for the following typical applications:

- Digital signage
- Entertainment
- 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/VM-8HN 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 **VM-8HN** 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 power cord that is supplied with the unit

Warning: Do not open the unit. High voltages can cause electrical shock! Servicing by qualified personnel only

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-8HN** is a high-quality 1:8 HDMI distributor with 2 looping HDMI outputs that takes one HDMI input, equalizes and reclocks the signal and distributes it to eight identical outputs and two loops. The **VM-8HN** distributes signals having resolutions up to 4Kx2K 30Hz and including WUXGA and 1080p.

In particular, the **VM-8HN** features:

- A maximum data rate of 10.2Gbps (3.4Gbps per graphic channel)

- HDMI support for Deep Color, x.v.Color™, Lip Sync, HDMI Uncompressed Audio Channels, Dolby TrueHD, DTS-HD, CEC (CEC pass through from input to output 1 only)

- HDCP compliance

- Video wall support that mutes the video on all displays and simultaneously unmutes them when all inputs are ready; with selectable output delay.

- Automatic 5V turn off - When no active input signal is detected, the unit turns off 5V on the output allowing attached devices to power off.

- MAC Setting enables and disables HDCP support on the input allowing the source to transmit a non−HDCP signal if required.

- Force RGB modifies the EDID saved on the input to support RGB format (that is, not YUV format).

- Kramer Equalization & re-Klocking™ Technology that rebuilds the digital signal integrity to travel longer distances

- I-EDIDPro™ Kramer Intelligent EDID Processing™, an intelligent EDID handling and processing algorithm that ensures Plug and Play operation for HDMI systems

- A default EDID for fast and efficient connection of the unit
  The default EDID feature lets you connect the VM-8HN without having to connect a display to the output

- Support for EDID Designer

- 3D pass-through

3.1 Defining the VM-8HN 1:8+2 HDMI Looping DA

This section defines the **VM-8HN**.
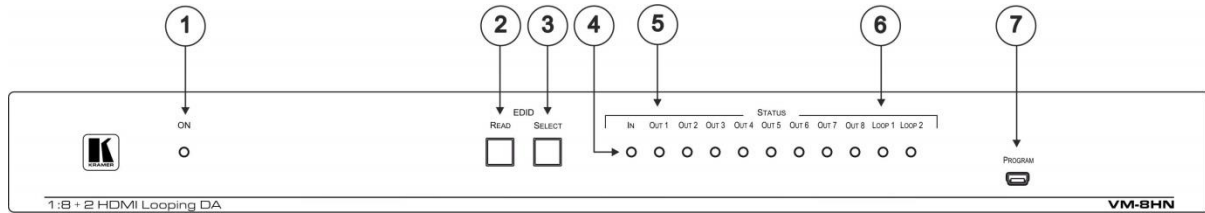
Figure 1: VM-8HN 1:8+2 HDMI Looping DA Front Panel

#	Feature	Function
1	*ON* LED	Lights when the device is powered on
2	*EDID READ* Button	Press to select the chosen output
3	*EDID SELECT* Button	Press to sequentially cycle through the outputs
4	*IN* LED	Lights when an active input signal is detected
5	*OUT* LED (1-8)	Lights when an active output acceptor is detected, flashes when HDCP is not supported by the monitor
6	*LOOP* LED (1-2)	Lights when an active output loop acceptor is detected
7	*PROGRAM* mini USB Connector	Use to upgrade the device firmware, also works with the EDID Designer
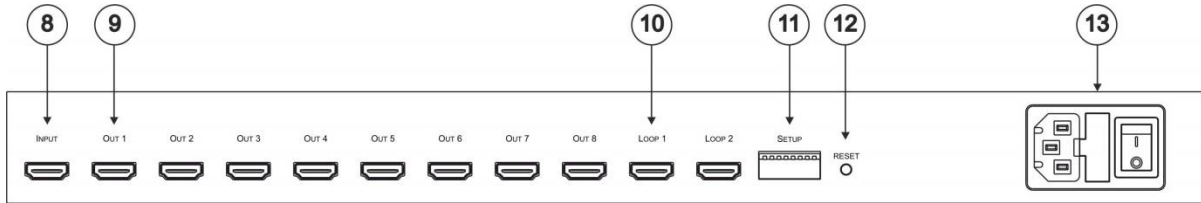
Figure 2: VM-8HN 1:8+2 HDMI Looping DA Rear Panel

#	Feature	Function
8	*INPUT* Connector	Connects to the HDMI source
9	*OUT* Connector (1-8)	Connect to up to 8 HDMI acceptors
10	*LOOP* Connector (1-2)	Connect to up to 2 HDMI loop acceptors
11	*SETUP* DIP-Switches	Adjust to set output delay, automatic power off for the 5V output, MAC mode, programming, force RGB MAC settings enable the system to force the source to input non-HDCP content. Force RGB forces the source to send video with an RGB color space.
12	*RESET* Button	Press to return to default EDID
13	Power Socket, Fuse and Switch	Connects power to and switches the unit on and off

4   Installing in a Rack

This section provides instructions for rack mounting the unit.

Before installing in a rack, be sure that the environment is within the recommended range:

| 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

! CAUTION!

When installing on a 19" rack, avoid hazards by taking care that:

1. It is located within the recommended environmental conditions, as the operating ambient temperature of a closed or multi unit rack assembly may exceed the room ambient temperature.
2. Once rack mounted, enough air will still flow around the machine.
3. The machine is placed straight in the correct horizontal position.
4. You do not overload the circuit(s). When connecting the machine to the supply circuit, overloading the circuits might have a detrimental effect on overcurrent protection and supply wiring. Refer to the appropriate nameplate ratings for information. For example, for fuse replacement, see the value printed on the product label.
5. The machine is earthed (grounded) in a reliable way and is connected only to an electricity socket with grounding. Pay particular attention to situations where electricity is supplied indirectly (when the power cord is not plugged directly into the socket in the wall), for example, when using an extension cable or a power strip, and that you use only the power cord that is supplied with the machine.

To rack-mount a machine:
1. Attach both ear brackets to the machine. To do so, remove the screws from each side of the machine (3 on each side), and replace those screws through the ear brackets.
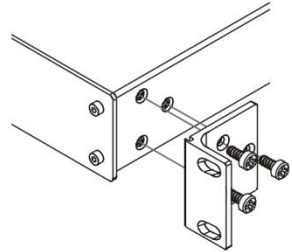
2. Place the ears of the machine against the rack rails, and insert the proper screws (not provided) through each of the four holes in the rack ears.
Note:
• In some models, the front panel may feature built-in rack ears
• Detachable rack ears can be removed for desktop use
• Always mount the machine in the rack before you attach any cables or connect the machine to the power
• If you are using a Kramer rack adapter kit (for a machine that is not 19"), see the Rack Adapters user manual for installation instructions available from our Web site

5 Connecting the VM-8HN

Always switch off the power to each device before connecting it to your **VM-8HN**. After connecting your **VM-8HN**, connect its power and then switch on the power to each device.

To connect the **VM-8HN**, do the following:

1. Set the DIP-switches as needed (see Section 5.2).

2. Connect an HDMI source (for example, a DVD player) to the INPUT connector.

3. Connect the eight OUT connectors to up to eight HDMI acceptors (for example, plasma displays).
   Not all outputs need to be connected.

4. Connect the two LOOP connectors to up to two HDMI loop acceptors (for example, plasma displays).
   Note: The loop connectors do not provide the video wall delay or automatic 5V turn-off features.

5. Connect the power cord to the mains electricity.

6. Turn ON the POWER.

7. Acquire the EDID (see Section 5.1).
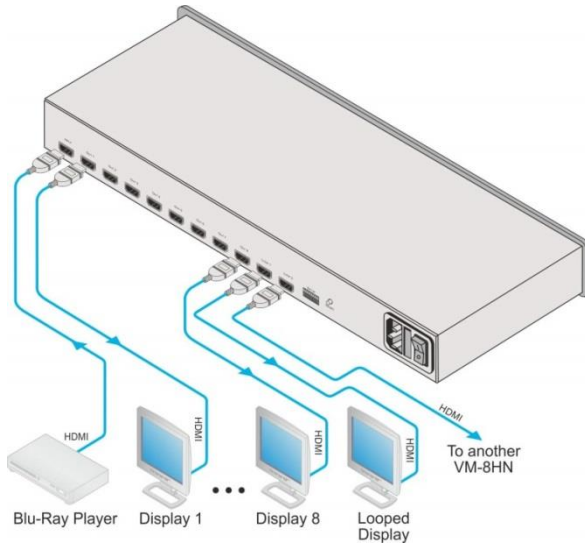
Figure 3: Connecting the VM-8HN 1:8+2 HDMI Looping DA

5.1 Acquiring an EDID

To acquire an EDID, press the EDID SELECT button as follows:

1. The first press of the EDID SELECT button displays the present EDID status similar to that shown in the next step.

2. The second press of EDID SELECT enters the read mode and each additional press cycles through the source options:
   OUT 1 -> OUT 2 -> OUT 3 -> OUT 4 -> OUT 5 -> OUT 6 -> OUT 7 -> OUT 8 -> LOOP 1 -> LOOP 2, all LEDS flash slowly for a default EDID.

3. When the desired EDID source is reached, press the EDID READ button. The **VM-8HN** reads the EDID for a few seconds. When finished, all LEDS return to display the present output connection status.
   If an unconnected output is chosen or the EDID cannot be read, the **VM-8HN** loads the default EDID.
   Note: After reading an EDID, there is an interruption on the video outputs while syncing with the monitors.
   Note: The VM-8HN supports EDID Designer that can be downloaded from the Kramer Web site at:
   http://www.kramerelectronics.com/products/model.asp?pid=2826&pname=edid%20designer

5.2   Setting the DIP-Switches

The eight DIP-switches located on the back panel are used for video wall, 5V DC, MAC settings and force RGB.

The DIP-switch status is sampled when the device is reset. The unit must be powered off and on for the new settings to activate.

DIPs 1 and 2 - Video Wall Delay

DIP 1	DIP 2	Video Wall Delay
up	up	Video wall off – 0 delay
down	up	On – 10 sec delay
up	down	On – 15 sec delay
down	down	On – 17 sec delay

DIPs 3 and 4 - Output 5V Off Delay

DIP 3	DIP 4	Output 5V Off Delay
up	up	15 mins
up	down	1 min
down	up	15 sec
down	down	5 sec

DIP 5 – MAC Mode

DIP 5	MAC Mode
up	MAC on
down	MAC off

Note: MAC mode does not support HDCP.

DIP 6 – Force RGB

DIP 6	Force RGB
up	Use monitor EDID
down	Use monitor EDID and force RGB support

Note: After setting force RGB, you must reset the device.

DIPs 7 – Reserved for future use

DIP 8 – Firmware Update

DIP 8	FW Update
up	Normal operation
down	Update firmware

6 Protocol 3000

6.1 Command Summary

The VM-8HN supports the following Protocol 3000 commands:

Command	Description	Type	Permission
CPEDID	Copy EDID data from the output to the input EEPROM	EDID Handling	End User
DISPLAY?	Get output HPD status	System	End User
FACTORY	Reset device to factory default configuration	System-mandatory	End User
HDCP-STAT?	Get HDCP signal status	System	End User
RESET	Reset device	System-mandatory	End User
SIGNAL?	Get input signal lock status	System	End User
SN?	Get device serial number	System-mandatory	End User

6.2 Command Details

Command - **CPEDID**		Command Type - EDID Handling	
Command Name		**Permission**	**Transparency**
Set:	**CPEDID**	End User	Public
Get:	-	-	-
Description		**Syntax**	
Set:	Copy EDID data from the output to the input EEPROM	#**CPEDID** ꜱᴘ src_type, src_id, dst_type, dest_bitmap ᴄʀ	
Get:	-	-	
Response			
~nn@**CPEDID** ꜱᴘ src_stg, src_id, dst_type, dest_bitmap ᴄʀ ʟꜰ			
Parameters			
src_type - EDID source type (usually output) (see Section 6.3 EDID Source) src_id - number of chosen source stage (1.. max number of inputs/outputs) dst_type - EDID destination type (usually input) (see Section 6.3 EDID Source) dest_bitmap - bitmap representing destination IDs. Format: XXXX…X, where X is hex digit. The binary form of every hex digit represents corresponding destinations. Setting '1' says that EDID data has to be copied to this destination			
Response Triggers			
Response is sent to the com port from which the Set was received (before execution)			
Notes			
Destination bitmap size depends on device properties (for 64 inputs it is a 64-bit word) Example: bitmap 0x0013 means inputs 1,2 and 5 are loaded with the new EDID			

Command - **DISPLAY?**		Command Type - System	
Command Name		**Permission**	**Transparency**
Set:	-	-	-
Get	**DISPLAY?**	End User	Public
Description		**Syntax**	
Set:	-	-	
Get:	Get output HPD status	**#DISPLAY?** SP *out_id* CR	
Response			
~ nn **@DISPLAY** SP *out_id,status* CR LF			
Parameters			
out_id - output number *status* - HPD status according to signal validation (see Section 6.4 Signal Validation)			
Response Triggers			
After execution, response is sent to the com port from which the Get was received Response is sent after every change in output HPD status ON to OFF Response is sent after every change in output HPD status OFF to ON and ALL parameters (new EDID, etc.) are stable and valid			
Notes			

Command - **FACTORY**		Command Type - System-mandatory	
Command Name		**Permission**	**Transparency**
Set:	**FACTORY**	End User	Public
Get:	**-**	-	-
Description		**Syntax**	
Set:	Reset device to factory default configuration	**#FACTORY** CR	
Get:	-	-	
Response			
~ nn **@FACTORY** SP **OK** CR LF			
Parameters			
Response Triggers			
Notes			
This command deletes all user data from the device. The deletion can take some time.			

Command - **HDCP-STAT**		Command Type - System	
Command Name		**Permission**	**Transparency**
Set:	-	-	-
Get:	**HDCP-STAT?**	End User	Public
Description		**Syntax**	
Set:	-	-	
Get:	Get HDCP signal status	#**HDCP-STAT?** `SP` *stage,stage_io* `CR`	
Response			
Set / Get: ~ `nn` @**HDCP-STAT** `SP` *stage,stage_id,mode* `CR` `LF`			
Parameters			
stage – input/output (see Section 6.5 Stage) *stage_id* - number of chosen stage (1.. max number of inputs/outputs) *actual_status* - signal encryption status - valid values ON/OFF (see Section 6.6 HDCP Types)			
Response Triggers			
Response is sent to the com port from which the Set (before execution) / Get command was received Response is sent to all com ports after execution if HDCP-STAT was set by any other external control device (button press, device menu and similar) or HDCP mode changed			
Notes			
On output – sink status On input – signal status			

Command - **RESET**		Command Type - System-mandatory	
Command Name		**Permission**	**Transparency**
Set:	**RESET**	Administrator	Public
Get:	**-**	-	-
Description		**Syntax**	
Set:	Reset device	#**RESET** `CR`	
Get:	-	-	
Response			
~ `nn` @**RESET** `SP` **OK** `CR` `LF`			
Parameters			
Response Triggers			
Notes			
To avoid locking the port due to a USB bug in Windows, disconnect USB connections immediately after running this command. If the port was locked, disconnect and reconnect the cable to reopen the port.			

VM-8HN - Protocol 3000

Command - **SIGNAL**		Command Type - System	
Command Name		**Permission**	**Transparency**
Set:	-	-	-
Get	**SIGNAL?**	End User	Public
Description		**Syntax**	
Set:	-	-	
Get:	Get input signal lock status	#**SIGNAL?**[SP]*inp_id*[CR]	
Response			
~ [nn]@**SIGNAL**[SP] *inp_id,status* [CR LF]			
Parameters			
inp_id - input number *status* - lock status according to signal validation (see Section 6.4 Signal Validation)			
Response Triggers			
After execution, a response is sent to the com port from which the Get was received Response is sent after every change in input signal status ON to OFF, or OFF to ON			
Notes			

Command - **SN?**		Command Type - System-mandatory	
Command Name		**Permission**	**Transparency**
Set:	**-**	-	-
Get:	**SN?**	End User	Public
Description		**Syntax**	
Set:	-	-	
Get:	Get device serial number	#**SN?**[CR]	
Response			
~[nn]@**SN**[SP]*serial_number*[CR LF]			
Parameters			
serial_number - 11 decimal digits, factory assigned			
Response Triggers			
Notes			
For new products with 14 digit serial numbers, use only the last 11 digits			

6.3   EDID Source

Number	Value
0	Input
1	Output
2	Default EDID

6.4   Signal Validation

Number	Value
0	Signal or sink is not valid
1	Signal or sink is valid
2	Sink and EDID is valid

6.5   Stage

Number	Value
0	Input
1	Output
2	(Reserved)
3	(Reserved)

6.6   HDCP Types

Number	Value
0	HDCP Off
1	HDCP On
2	Follow input
3	Mirror output ("MAC mode")

7   Technical Specifications

INPUT:	1 HDMI connector
OUTPUTS:	10 HDMI connectors (8 output, 2 loop)
MAX. DATA RATE:	10.2Gbps (3.4Gbps per graphic channel)
COMPLIANCE WITH HDMI STANDARD:	Supports HDMI and HDCP
CONTROLS:	EDID SELECT and READ buttons
INDICATOR LEDs:	OUTPUTS 1 to 8, LOOP 1 and 2 and ACTIVE input LED
POWER CONSUMPTION:	100-240V AC, 50/60Hz, 26VA
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:	19" x 7" x 1U
WEIGHT:	1.5kg (3.3lbs)
INCLUDED ACCESSORIES:	Power cord
Specifications are subject to change without notice at http://www.kramerelectronics.com	

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 APPICABLE 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.kramerAV.com
E-mail: info@kramerel.com

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