Kramer Electronics, Ltd.

USER MANUAL

Model:

WP-500

Wall Plate Solution for Simple Room
Control and Signal Switching

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1   Introduction

Welcome to Kramer Electronics! Since 1981, Kramer Electronics has been providing a world of unique, creative, and affordable solutions to the vast range of problems that confront the video, audio, presentation, and broadcasting professional on a daily basis. In recent years, we have redesigned and upgraded most of our line, making the best even better! Our 1,000-plus different models now appear in 11 groups[1] that are clearly defined by function.

Congratulations on purchasing your Kramer **WP-500** *Wall Plate Solution for Simple Room Control and Signal Switching* that can be used as a projector switcher and controller in the classroom.

The package includes the following items:

- The **WP-500**
- Power supply
- Screwdriver
- This user manual[2]
- Kramer K-Config Windows®-based configuration software

2   Getting Started

This user manual is written for the end user. Refer to the separate Kramer K-Config Guide (available online) for details of how to install and configure the Room Controller[3]

We recommend that you review the contents of this user manual.

3   Overview

The **WP-500** is an all-in-one AV solution for classrooms, training rooms and similar simple AV installations. It enables remote projector or flat panel control and the routing of one of three A/V sources to the inputs of a display device via the front panel buttons.

1 GROUP 1: Distribution Amplifiers; GROUP 2: Switchers and Matrix Switchers; 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 Products

2 Download up-to-date Kramer user manuals from the Internet at this URL: http://www.kramerelectronics.com
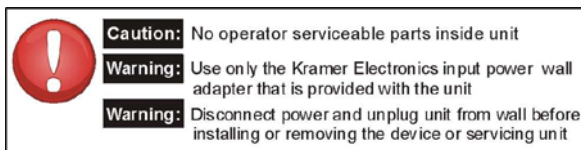
3 That provides information about how to set up the system. This online guide may well be updated on a regular basis. For the latest online guide, go to http://www.kramerelectronics.com

The **WP-500**:

- Consists of two VGA inputs, each with an unbalanced stereo audio signal, one composite video input with an unbalanced stereo audio signal, and a dynamic or condenser microphone input
- Includes an RGBHV output, a composite video output and two identical audio outputs
- Includes bidirectional RS-232 and IR out for controlling the display device
- Has two analog volume control adjustment knobs, one for the PC/Video audio signal and the other for microphone volume adjustment
- Features four dedicated front panel buttons, one for turning the projector ON/OFF and the other three for selecting which input to route to the projector. Each button can be programmed to perform command macros
- Is Kramer Site-CTRL™ compatible[1], for network remote control and management over the Ethernet port
- Includes an Ethernet port for remote control and management from the Kramer Site-CTRL™ software and for accessing the stored Web pages
- Can store EDID information and support EDID communication with the connected PC sources (the default EDID is uploaded upon delivery; a specific EDID can be uploaded by the user via the Kramer **FC-200** *XGA EDID Copier*[2])
- Has a USB port for programming via a computer
- Is available as a 3 Gang wall plate for the USA

To achieve the best performance:

- Use the dedicated Kramer **WP-500** installation cable. If this is not available, connect only good quality connection cables, thus avoiding interference, deterioration in signal quality due to poor matching, and elevated noise-levels (often associated with low quality cables)
- Avoid interference from neighboring electrical appliances and position your Kramer **WP-500** away from moisture, excessive sunlight and dust

Caution:	No operator serviceable parts inside unit
Warning:	Use only the Kramer Electronics input power wall adapter that is provided with the unit
Warning:	Disconnect power and unplug unit from wall before installing or removing the device or servicing unit

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1 Kramer Site-CTRL is a powerful A/V asset management tool. It offers real-time network monitoring and control of Kramer Master controllers installed at an A/V site and all the connected A/V equipment. The Kramer Site-CTRL downloadable version can monitor and control up to 100 Kramer Master controllers. For larger installations, a similar solution is also available

2 You can download the up-to-date user manual from the Internet at this URL: http://www.kramerelectronics.com

4 Defining the WP-500

Figure 1 and Table 1 define the **WP-500** front panel:
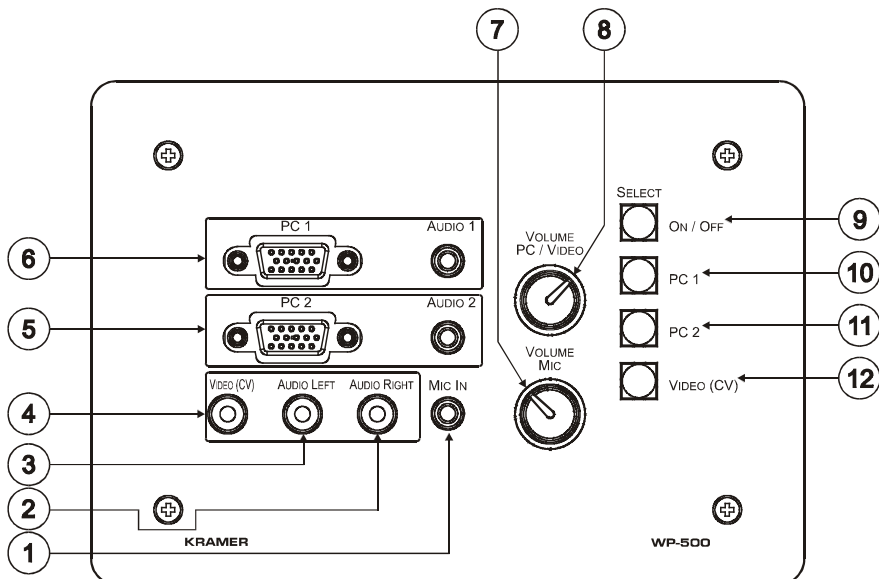
Figure 1: WP-500 Front Panel

Table 1: WP-500 Front Panel Features

#	Feature		Function
1	*MIC IN* 3.5mm mini jack		Connect to microphone
2	Video and Audio Input RCA Connectors	*AUDIO RIGHT*	Connect to the left and right unbalanced audio source
3		*AUDIO LEFT*	
4		*VIDEO (CV)*	Connect to the composite video source
5	*PC 2* Inputs	15-Pin HD Connector	Connect to the PC 2 source
		AUDIO 2 3.5mm mini jack	Connect to the unbalanced stereo audio signal of the PC2 source
6	*PC 1* Inputs	15-Pin HD Connector	Connect to the PC 1 source
		AUDIO 1 3.5mm mini jack	Connect to the unbalanced stereo audio signal of the PC1 source
7	*VOLUME MIC* Adjustment Knob		Rotate clockwise to increase the microphone level
8	*VOLUME PC/VIDEO* Adjustment Knob		Rotate clockwise to increase the PC or video audio level
9	SELECT Buttons[1]	ON/OFF	Toggle to turn the projector on/off
10		PC 1	Select PC 1 as the source
11		PC 2	Select PC 2 as the source
12		VIDEO (CV)	Select composite video as the source

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1 These four configurable backlit buttons can set up any supported command, as configured by the system integrator
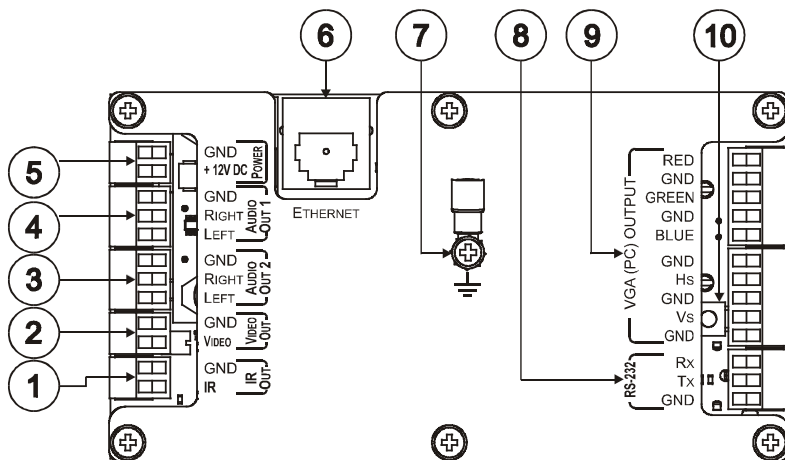
Figure 2 and Table 2 define the **WP-500** rear panel:

Figure 2: WP-500 Rear Panel

Table 2: WP-500 Rear Panel Features

#	Feature	Function	
1	IR OUT	Controls the display device via an IR emitter (for example, in cases where RS-232 control is not available)	
2	VIDEO OUT	Connect to the video IN of the display device	
3	AUDIO OUT 2[1]	Connect to the audio input associated with the Video Input channel of the display device	
4	AUDIO OUT 1[1]	Connect to the audio input associated with the PC graphics Input channel of the display device	
5	+ 12V DC	Connect to power the unit	
6	ETHERNET Port	Connect to the local computer network for accessing the stored Web pages, for remote control and management from the Kramer Site-CTRL software and for remote configuration file and firmware updates upload	
7	Grounding Screw	Connect to grounding wire	
8	RS-232 Port	Connect to the RS-232 connector on the display device	
9	VGA (PC) OUTPUT	Connect to the PC graphics IN of the display device	
10	Factory Reset Button[2]	Push[3] to erase the configuration and reset to the factory default definitions[4]:	
		IP Address:	192.168.1.39
		Mask:	255.255.0.0
		Gateway:	0.0.0.0

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1 Both output ports are identical

2 This operation should be carried out by authorized Kramer technical personnel or by an external system integrator, and requires removal of the device from the wall by unscrewing the four wall mount screws

3 Using a small screwdriver

4 Disconnect the power and then connect it while pressing the Factory Reset button. The unit will power up and load its memory with the factory default definitions

4.1 The USB Port

Use the USB port to configure[1] the unit. You can access the USB port by removing the two adjustment knobs and unscrewing the four front panel screws.

5 Using Your WP-500

This user manual is applicable once the unit is installed and configured[2]. The installation process is not detailed in this user manual, and includes configuration via the Kramer K-Config Windows®-based configuration software.

This section describes how to:

- Connect the **WP-500** (see section 5.1)
- Control the **WP-500** (see section 5.2)

5.1 Connecting the WP-500

To connect the **WP-500**, as illustrated in the example in Figure 3 (front panel) and Figure 4 (rear panel), do the following:

1. On the front panel (see Figure 3), connect:
   - A computer graphics source and the audio source of the computer to the PC 1 15-pin HD and 3.5mm mini jack, respectively
   - A computer graphics source and the audio source of the computer to the PC 2 15-pin HD and 3.5mm mini jack, respectively
   - A composite video source (for example, a DVD player) and the audio source of that composite video source to the VIDEO (PC) RCA and AUDIO LEFT and RIGHT RCA connectors, respectively
   - A microphone to the MIC IN 3.5mm mini jack (see section 5.1.1)

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1 By the system integrator only

2 By authorized Kramer technical personnel or by an external system integrator
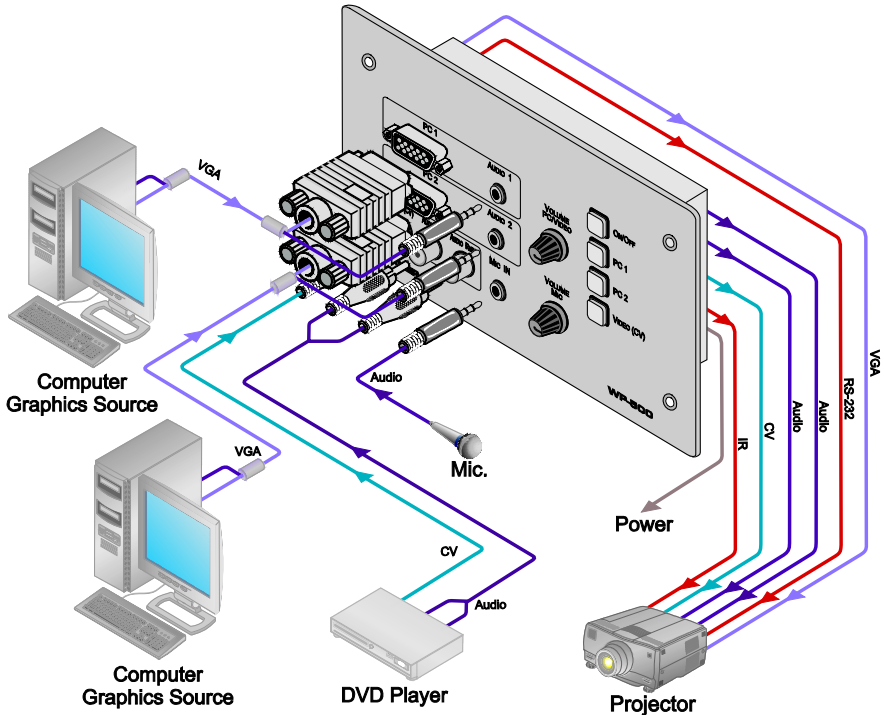
Figure 3: Connecting the WP-500 Front Panel

2. On the rear panel, connect the display device (for example, a projector) as follows. Connect the:

   ▪ VGA (PC) OUTPUT to the PC Graphics (15-pin HD connector or RGBHV connector) input on the projector

   ▪ VIDEO OUT output (VIDEO OUT, GND) to the video input on the projector

   ▪ AUDIO OUT 1 and AUDIO OUT 2 outputs to the audio input of the video and PC inputs on the projector[1]

   ▪ RS-232 port to the PC control port of the projector and/or the IR OUT to the IR receiver of the projector

3. Connect the ETHERNET port to a PC for configuration and control (not shown in Figure 4), see section 5.2.

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1 You can connect either AUDIO OUT 1 or AUDIO OUT 2 to either the PC or the CV input of the projector since both audio outputs are identical
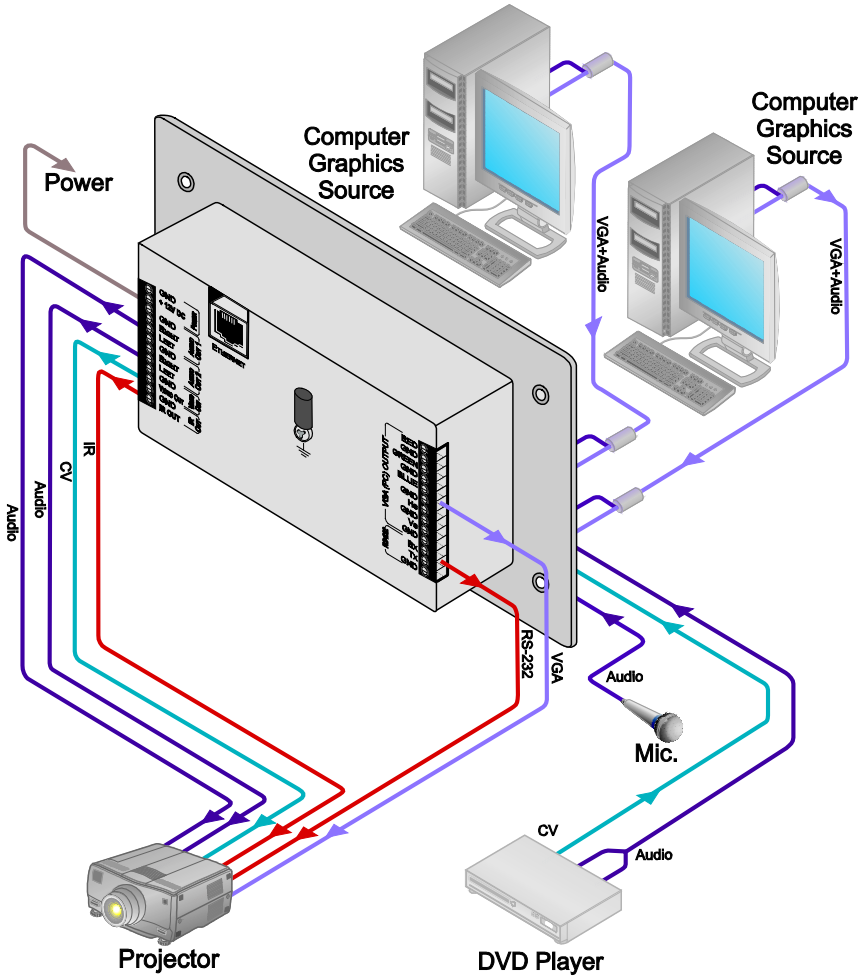
Figure 4: Connecting the WP-500 Rear Panel

5.1.1 Connecting the Microphone

You can connect either a dynamic or a condenser microphone to the MIC IN 3.5mm mini jack.

Before connecting the microphone, set the microphone mode switch to dynamic or condenser (by default, this switch is set to dynamic).

The Dyn/Cond mode switch is located behind the front panel on the lower left side of the MIC IN 3.5mm jack, as illustrated in Figure 5.

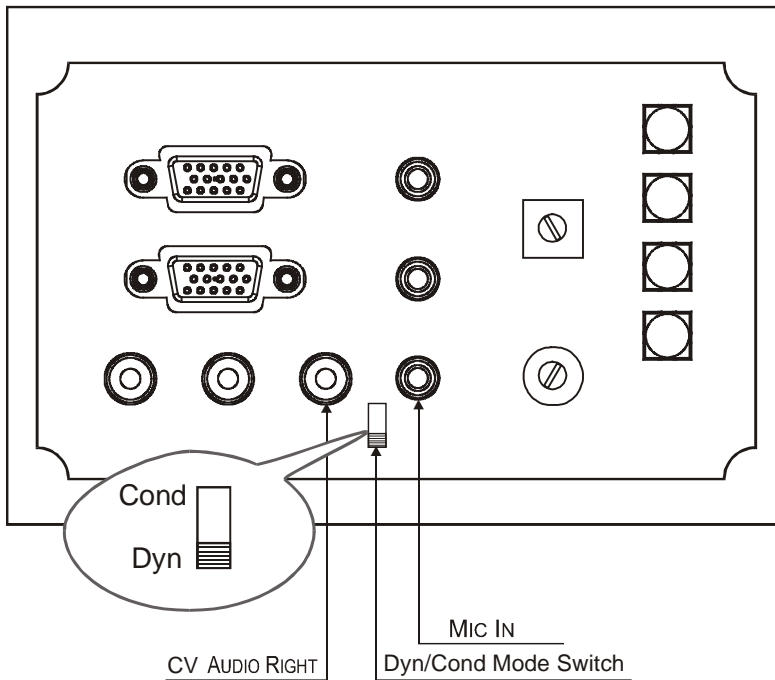It is recommended to set the mic mode switch before mounting the **WP-500** front panel.

Figure 5: Setting the Microphone Mode Switch

When disconnecting the microphone or switching it OFF, turn the microphone volume adjustment knob to the left (MIC mute).

When using the microphone, pay attention to the placement of the speakers. By placing the speakers properly, the chance of getting audio feedback is minimized.

5.2 Operating the WP-500

The Ethernet and USB ports are used to configure the **WP-500** front panel SELECT buttons[1] to perform several tasks[2], such as those defined in the example in Table 3. Pressing a button initiates a macro sequence[3], during which the button blinks (as programmed by the system integrator).

Table 3: A Configuration Setup Example

The Label	Macro Sequence Example
ON/OFF	• Power up/Power down the projector[4] • Set required Audio level for the projector • 1 minute delay [for the projector to heat up] • The projector selects the PC input
PC 1	• Select the PC 1 input of the projector • Stop the DVD player • Power down the DVD player
PC 2	• Select the PC 2 input of the projector • Stop the video player
VIDEO (CV)	• Select the VIDEO (CV) input • The projector selects the DVD input • Play the DVD

In addition to operation via the front panel buttons, you can monitor the **WP-500** via the Ethernet, using Site-CTRL™ and the stored Web pages.

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1 By the technical installer

2 A macro sequence, including several commands per button, carried out one after the other

3 The macro sequence can be carried out instantly or can take a while, depending on the delay times included in the sequence

4 This is a two toggle button. a macro can be assigned for each toggle of the button via the Kramer K-Config software

6 Technical Specifications

Table 4 lists the technical specifications:

Table 4: Technical Specifications[1] of the WP-500

INPUTS:	1 composite video (1Vpp/75Ω) on an RCA connector 2 VGA (PC) on 15-pin HD connectors 2 stereo analog audio on 3.5mm mini connectors 1 unbalanced audio on 2 RCA connectors 1 condenser/dynamic microphone on a 3.5mm mini connector
OUTPUTS (on Terminal Block Connectors):	1 VIDEO OUT 2-pin, 2 Audio OUT 3-pin unbalanced stereo audio, 1 VGA (PC) OUTPUT 10-pin
PORTS:	Ethernet, 1 IR out on terminal block connectors, 1 RS-232 on terminal block connectors, 1 USB connector
DEFAULT IP ADDRESS	192.168.1.39
SUPPORTED BAUD RATES FOR RS-232:	1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200
DEFAULT EDID INFORMATION:	Standard timings supported: 640x480px60Hz (IBM VGA), 640x480px67Hz (Apple Mac II), 640x480px72Hz (VESA), 640x480px75Hz (VESA), 800x600px56Hz (VESA), 800x 600px60Hz (VESA), 800x600px72Hz (VESA), 800x600px75Hz (VESA), 1024x768px60Hz[2] (VESA), 1024x768px70Hz (VESA), 1024x768px75Hz (VESA), 1280x1024px75Hz (VESA), 1280x1024px60Hz (VESA STD), 1280x960px60Hz (VESA STD), 1400x1050px60Hz (VESA STD), 1440x900px60Hz (VESA STD), 1600x1200px60Hz (VESA STD)
POWER SOURCE:	12V DC, 180mA
FUSE:	500mA, FSMD 1812
ADAPTER:	12V, 5A
DIMENSIONS:	16.2cm x 3.4cm x 11.4cm (6.37" x 1.34" x 4.49", W, D, H)
WEIGHT:	0.14kg (0.31lbs) approx.
ACCESSORIES:	Power supply, screwdriver, Kramer K-Config Windows®-based configuration software
OPTIONS:	12V DC, 0.5A Power supply[3] , USB cable 3' (0.91m)[4], WP-500 Installation cable, **FC-200** *XGA EDID Copier*, Site-CTRL™ Management Tool Software

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1 Specifications are subject to change without notice

2 Native/preferred timing (4:3)

3 Model number AD2512C, part number 2535-000251

4 Part number C-UA/MUB-3

     KRAMER: SIMPLE CREATIVE TECHNOLOGY

LIMITED WARRANTY

Kramer Electronics (hereafter *Kramer*) warrants this product free from defects in material and workmanship under the following terms.

HOW LONG IS THE WARRANTY

Labor and parts are warranted for seven years from the date of the first customer purchase.

WHO IS PROTECTED?

Only the first purchase customer may enforce this warranty.

WHAT IS COVERED AND WHAT IS NOT COVERED

Except as below, this warranty covers all defects in material or workmanship in this product. The following are not covered by the warranty:

1. Any product which is not distributed by Kramer, or which is not purchased from an authorized Kramer dealer. If you are uncertain as to whether a dealer is authorized, please contact Kramer at one of the agents listed in the Web site www.kramerelectronics.com.
2. Any product, on which the serial number has been defaced, modified or removed, or on which the WARRANTY VOID IF TAMPERED sticker has been torn, reattached, removed or otherwise interfered with.
3. Damage, deterioration or malfunction resulting from:
   i)   Accident, misuse, abuse, neglect, fire, water, lightning or other acts of nature
   ii) Product modification, or failure to follow instructions supplied with the product
   iii) Repair or attempted repair by anyone not authorized by Kramer
   iv) Any shipment of the product (claims must be presented to the carrier)
   v)   Removal or installation of the product
   vi) Any other cause, which does not relate to a product defect
   vii) Cartons, equipment enclosures, cables or accessories used in conjunction with the product

WHAT WE WILL PAY FOR AND WHAT WE WILL NOT PAY FOR

We will pay labor and material expenses for covered items. We will not pay for the following:

1. Removal or installations charges.
2. Costs of initial technical adjustments (set-up), including adjustment of user controls or programming. These costs are the responsibility of the Kramer dealer from whom the product was purchased.
3. Shipping charges.

HOW YOU CAN GET WARRANTY SERVICE

1. To obtain service on you product, you must take or ship it prepaid to any authorized Kramer service center.
2. Whenever warranty service is required, the original dated invoice (or a copy) must be presented as proof of warranty coverage, and should be included in any shipment of the product. Please also include in any mailing a contact name, company, address, and a description of the problem(s).
3. For the name of the nearest Kramer authorized service center, consult your authorized dealer.

LIMITATION OF IMPLIED WARRANTIES

All implied warranties, including warranties of merchantability and fitness for a particular purpose, are limited in duration to the length of this warranty.

EXCLUSION OF DAMAGES

The liability of Kramer for any effective products is limited to the repair or replacement of the product at our option. Kramer shall not be liable for:

1. Damage to other property caused by defects in this product, damages based upon inconvenience, loss of use of the product, loss of time, commercial loss; or:
2. Any other damages, whether incidental, consequential or otherwise. Some countries may not allow limitations on how long an implied warranty lasts and/or do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations and exclusions may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights, which vary from place to place.

NOTE: All products returned to Kramer for service must have prior approval. This may be obtained from your dealer.

This equipment has been tested to determine compliance with the requirements of:

EN-50081:	"Electromagnetic compatibility (EMC); generic emission standard. Part 1: Residential, commercial and light industry"
EN-50082:	"Electromagnetic compatibility (EMC) generic immunity standard. Part 1: Residential, commercial and light industry environment".
CFR-47:	FCC* Rules and Regulations: Part 15: "Radio frequency devices Subpart B Unintentional radiators"

CAUTION!

⊠ Servicing the machines can only be done by an authorized Kramer technician. Any user who makes changes or modifications to the unit without the expressed approval of the manufacturer will void user authority to operate the equipment.

⊠ Use the supplied DC power supply to feed power to the machine.

⊠ Please use recommended interconnection cables to connect the machine to other components.
  * FCC and CE approved using STP cable (for twisted pair products)

For the latest information on our products and a list of Kramer distributors, visit our Web site: www.kramerelectronics.com, where updates to this user manual may be found. We welcome your questions, comments and feedback.

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