Kramer Electronics, Ltd.

USER MANUAL

Model:

WP-209

Wall Plate

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1 Introduction

Welcome to Kramer Electronics (since 1981): a world of unique, creative and affordable solutions to the infinite range of problems that confront the video, audio and presentation professional on a daily basis. In recent years, we have redesigned and upgraded most of our line, making the best even better! Our 500-plus different models now appear in 8 Groups[1], which are clearly defined by function.

Congratulations on purchasing your **WP-209** active wall plate, which is ideal for graphics and audio installations in board, conference and training rooms, as well as long distance signal distribution.

The package includes the following items:

- **WP-209**
- Power supply
- This user manual[2]

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
- Use Kramer high performance high resolution cables[3]

2.1 Quick Start

This quick start chart summarizes the basic setup and operation steps.

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1 GROUP 1: Distribution Amplifiers; GROUP 2: Video and Audio Switchers, Matrix Switchers and Controllers; GROUP 3: Video, Audio, VGA/XGA Processors; GROUP 4: Interfaces and Sync Processors; GROUP 5: Twisted Pair Interfaces; GROUP 6: Accessories and Rack Adapters; GROUP 7: Scan Converters and Scalers; and GROUP 8: Cables and Connectors

2 Download up-to-date Kramer user manuals from the Internet at this URL: http://www.kramerelectronics.com

3 The complete list of Kramer cables is on our Web site at http://www.kramerelectronics.com

Step 1: Connect and operate the unit - see section 5

Computer
Graphics Source

1 Connect the inputs

2 Connect the outputs

HDI5M
connector

Projector

Additional
Display

To
Power

Power Amplifier
with Speakers

Composite Video
Player
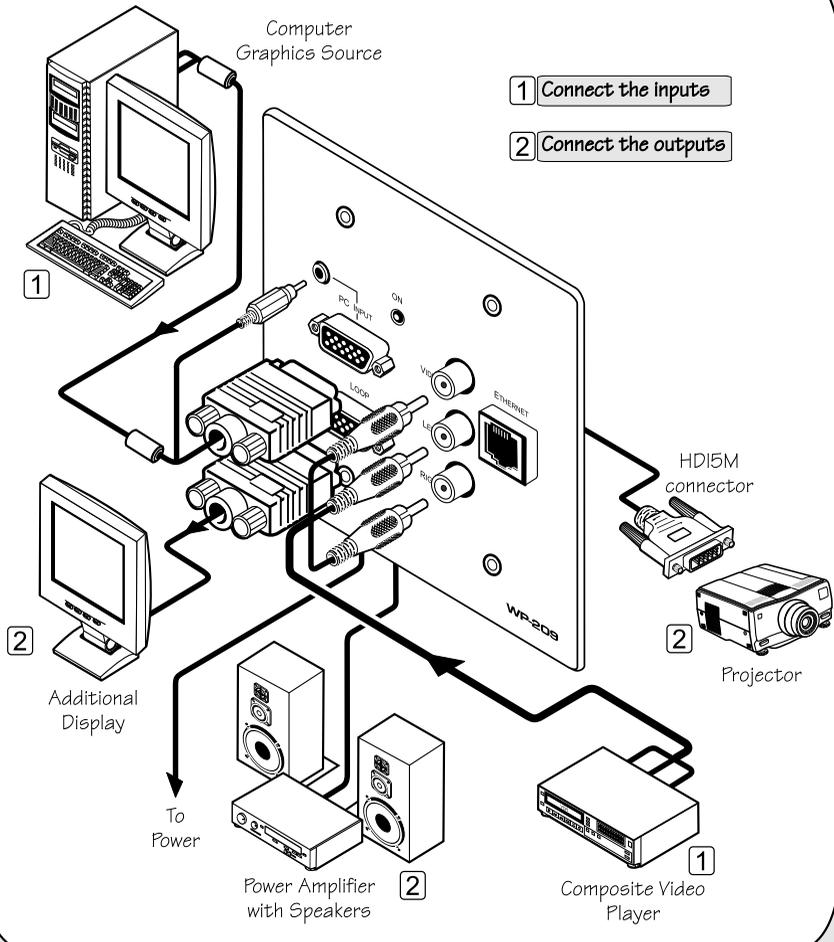
Step 2: Connect the power

3 Overview

The Kramer **WP-209** wall plate features:

- A computer graphics PC INPUT on a standard HD-15 connector
- An amplified and equalized RGBHV/UXGA/YPbPr output on an HD-15 connector
- An unbalanced stereo AUDIO input on a 3.5mm mini jack with a corresponding balanced stereo AUDIO output on a 5-pole terminal block

In addition, the **WP-209** wall plate comes with pass through connectors for:

- Composite video on an RCA connector
- Unbalanced stereo audio on RCA connectors
- Ethernet on an RJ-45 connector

In particular, the **WP-209** has:

- Trimmer controls for UXGA EQ.[1], and UXGA Level
- Separate trimmer controls for right and left line audio level
- Resolution exceeding UXGA, that ensures transparent operation
- A standard 12 Volt DC feed

Achieving the best performance means:

- Connecting 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)
- Avoiding interference from neighboring electrical appliances and positioning your **WP-209** 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 this unit[2].

Warning – Disconnect power and unplug unit from wall before installing or removing device or servicing unit.

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1 Cable equalization

2 For example: model number AD2512C, part number 2535-000251

4   Your WP-209

The Kramer **WP-209E** *XGA/Audio/Video Line Driver* is available in two versions—one for the US and one for Europe.

This section defines the **WP-209** front panel (see section 4.1), the right panel (see section 4.2), and the lower panel (see section 4.3).

4.1 Your WP-209 Front Panel

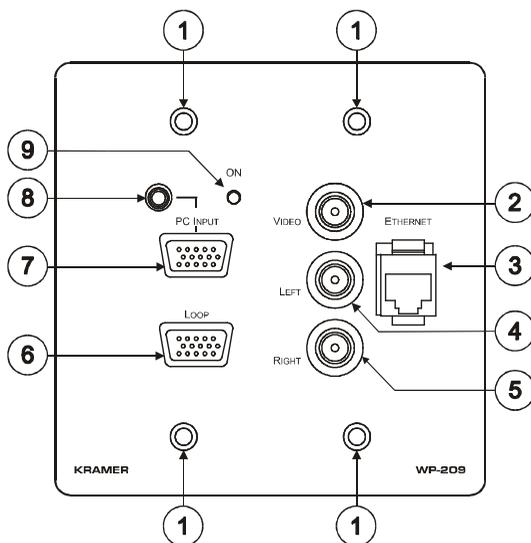Figure 1(the US version), Figure 2 (the European version) and Table 1 define the front panel of the **WP-209**:

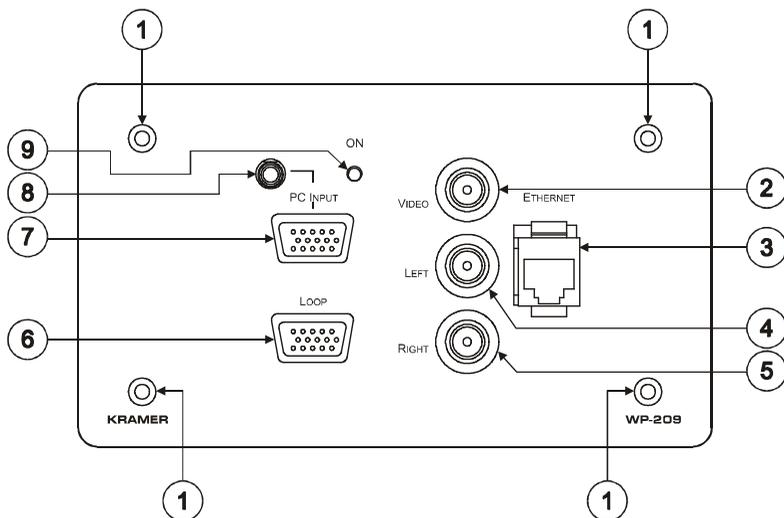*Figure 1: WP-209 Front Panel for the US Version*

Figure 2: WP-209 Front Panel for the European Version

Table 1: WP-209 Front Panel

#	Feature	Function
1	Holes (4)	For fastening the wall plate in place
2	*VIDEO* RCA Connector[1]	Connects to the composite/SDI video source
3	*ETHERNET* RJ-45 Connector[1]	Connect to the ETHERNET
4	*LEFT* RCA Connector[1]	Connects to the unbalanced left stereo audio source
5	*RIGHT* RCA Connector[1]	Connects to the unbalanced right stereo audio source
6	*LOOP* HD15F Connector	Connect to a local display
7	*PC INPUT*[2] HD15F Connector	Connect to the computer graphics source
8	*PC INPUT* AUDIO INPUT 3.5mm Mini Jack	Connects to the unbalanced stereo audio PC source
9	*ON* LED	Illuminates when receiving power

1 This connector is a pass through connector

2 Can be used for any RGBHV resolution (for example, VGA, XGA, UXGA and so on). You can connect a component HD source (for example, a set top box with YPbPr outputs), using a breakout VGA-to-RCA/BNC cable (for example, the Kramer C-GM/3RVF cable). If you have a VGA to a 5 BNC cable, use the RGB wires only. For direct wiring, the input connector PINOUT is as follows: PIN 1 for Pr; PIN 2 for Y; and PIN 3 for Pb

4.2 Your WP-209 Right Panel

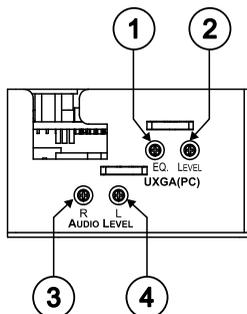Figure 3 and Table 2 define the right panel of the **WP-209**:

Table 2: WP-209 Right Panel

#	Feature	Function
1	*UXGA (PC) EQ.*[1] Trimmer	Adjusts[2] the cable compensation equalization level
2	*UXGA (PC) LEVEL* Trimmer	Adjusts[2] the computer graphics signal level
3	*AUDIO LEVEL*	*R* Trimmer	Adjusts[2] the right audio output signal level
4		*L* Trimmer	Adjusts[2] the left audio output signal level

Figure 3: WP-209 Right Panel

4.3 Your WP-209 Lower Panel

Figure 4 and Table 3 define the lower panel of the **WP-209**:

Table 3: WP-209 Lower Panel

#	Feature	Function
1	AUDIO Terminal Block	Connects to the balanced stereo audio acceptor[3]
2	POWER	+12V PIN	Connect (+) to the connector for powering the unit
		GND PIN	Connect (-) to the Ground
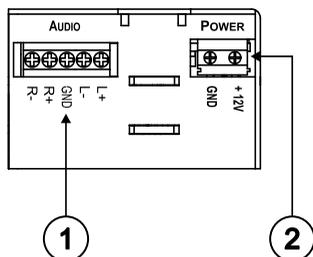
Figure 4: WP-209 Lower Panel

1 Degradation and UXGA signal loss can result from using long cables (due to stray capacitance), sometimes leading to a total loss of sharpness in high-resolution signals

2 Insert a screwdriver into the small hole and carefully rotate it, trimming the appropriate level

3 Can be used for unbalanced audio. To do this, connect using the "+" and "G" terminal only (leave the "–" terminal unconnected – see Figure 6)

5   Using the WP-209

You can use your **WP-209**, for example, in a conference room, as the example in Figure 5 illustrates:
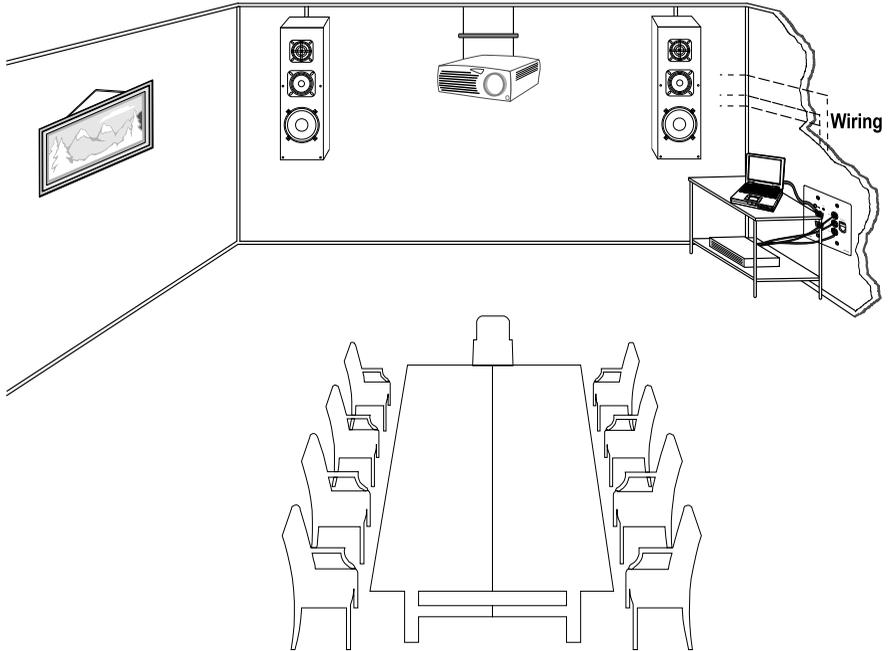
Figure 5: Example of Conference Room WP-209 Installation

For details of how to:

- Install your **WP-209**, see section 5.1
- Operate your **WP-209**, see section 5.2

5.1 Installing the WP-209

To install your **WP-209**:

1. Connect the HD15M output connector[1] to the pre-installed wiring in the wall box opening that connects to the UXGA acceptor (for example, a projector), as Figure 7 defines.

2. Connect the AUDIO output (for example, to a power amplifier with speakers), as one of the following:
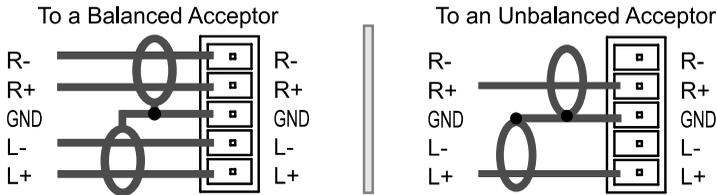
To a Balanced Acceptor   To an Unbalanced Acceptor

R-   R-   R-   R-
R+   R+   R+   R+
GND   GND   GND   GND
L-   L-   L-   L-
L+   L+   L+   L+

Figure 6: Connecting the AUDIO Output

3. Connect your 12V DC power supply to the *POWER* pins[2], taking care that **polarity is correct**.

4. Insert the **WP-209** directly into the wall box opening, and then mount the front panel securely using the screws.

5.2 Operating the WP-209

To operate your **WP-209**:

1. Connect your computer graphic's source (for example, a laptop's digital graphics card) to the PC INPUT HD15F connector and to the PC INPUT audio 3.5mm mini jack, for example, using a Kramer C-GMA/GMA cable (VGA HD15M +Audio jack to VGA HD15M +Audio jack)[3]. (Alternatively, you can connect *separate* audio source to the PC AUDIO INPUT.).

2. Connect the LOOP HD15F connector to an additional display

3. Connect the video source (for example, a composite video player) to the VIDEO RCA connector and to the LEFT and RIGHT audio RCA connectors.

4. If required, connect the ETHERNET RJ-45 connector.

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1 For component HDTV, use a breakout VGA-to-RCA/BNC cable (for example, the Kramer C-GM/3RVF cable). For direct wiring, the output connector PINOUT is as follows: PIN 1 for Pr; PIN 2 for Y; and PIN 3 for Pb

2 Connect the wire labeled "+" to the +12V pin, and the wire labeled "–" to the GND pin

3 Not supplied. The complete list of Kramer cables is on our Web site at http://www.kramerelectronics.com

5. If required, adjust[1] the left and/or right AUDIO LEVEL, and/or the UXGA EQ. level, and/or the UXGA LEVEL.
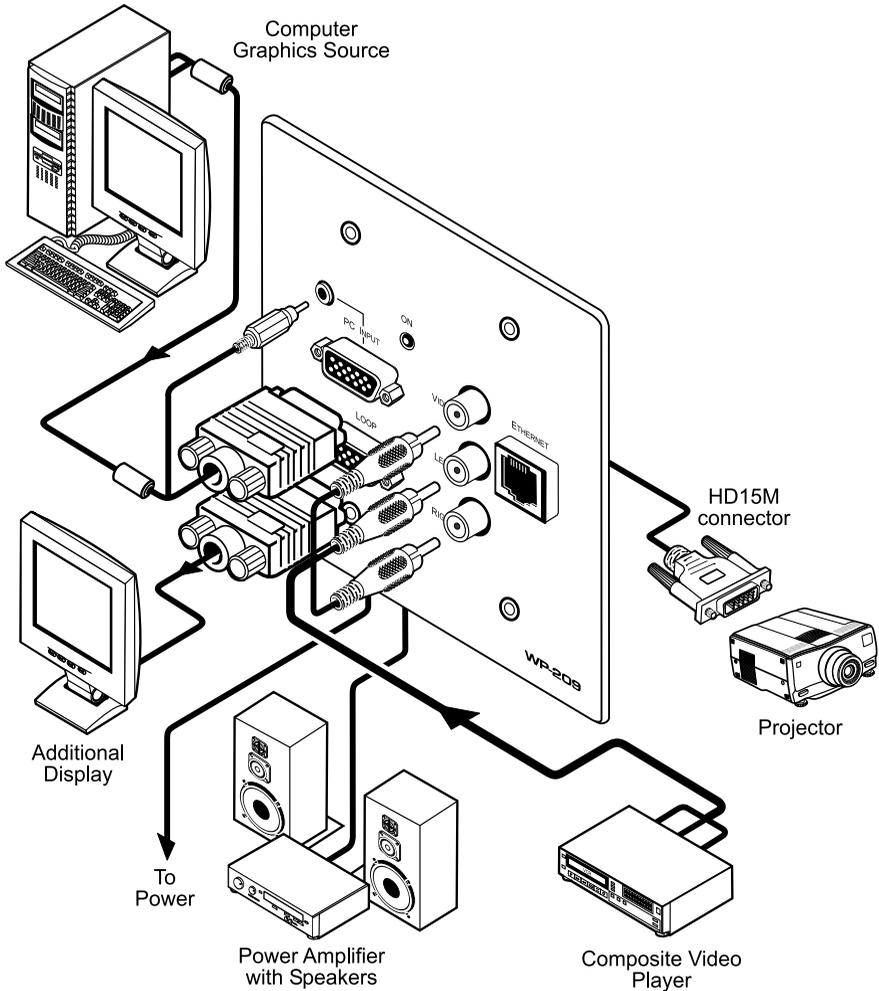

Figure 7: Connecting the WP-209

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1 Use a screwdriver to carefully rotate the trimmer, adjusting the appropriate level

6   Technical Specifications

Table 4 includes the technical specifications:

Table 4: Technical Specifications[1] of the WP-209

INPUTS:	1 looping UXGA INPUT on HD-15 connectors 1 unbalanced stereo audio PC INPUT on a 3.5mm mini jack 1 composite video pass through input on an RCA connector 1 unbalanced stereo pass through input on 2 RCA connectors 1 Ethernet pass through input on an RJ-45 connector
OUTPUTS:	1 UXGA on an HD-15 connector and cable 1 balanced stereo audio on a 5-pole terminal block
MAX. OUTPUT LEVEL:	UXGA: 2.3Vpp · AUDIO: 6.8Vpp
AUDIO BANDWIDTH (-3dB):	>100kHz
RESOLUTION:	Up to UXGA; 1080p
DIFF. GAIN:	2.73%
DIFF. PHASE:	0.09 Deg.
K-FACTOR:	0.1%
S/N RATIO:	VIDEO: 71dB · AUDIO: 85dB
CROSSTALK (all hostile):	AUDIO: <–32dB
CONTROLS:	UXGA level: –7.5dB to +4.5dB UXGA EQ. level: 0dB to +23dB AUDIO level left and right controls: –76dB to +6.2dB
COUPLING:	VIDEO: DC · AUDIO: Input: AC, Output: DC
AUDIO THD + NOISE:	0.018%
AUDIO 2nd HARMONIC:	0.003%
POWER SOURCE:	12 VDC, 171mA
DIMENSIONS:	2 gang (Europe and USA)
WEIGHT:	0.3 kg (0.67 lbs.) approx
ACCESSORIES:	Power supply

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1 Specifications are subject to change without notice

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.

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.

**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.**

Safety Warning:
Disconnect the unit from the power supply before opening/servicing.

Caution

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