



KRAMER ELECTRONICS LTD.

# USER MANUAL

MODEL:

**WP-110xi**

UXGA/Data Line Transmitter

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P/N: 2900-300294 Rev 2

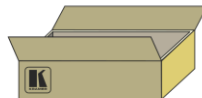


## WP-110xl Quick Start Guide

This guide helps you install and use your product for the first time. For more detailed information, go to [http://www.kramerelectronics.com/support/product\\_downloads.asp](http://www.kramerelectronics.com/support/product_downloads.asp) to download the latest manual or scan the QR code on the left.

### Step 1: Check what's in the box

- WP-110xl** UXGA/Data Line Transmitter
- 1 Quick Start sheet
- 1 Power supply (12V DC)

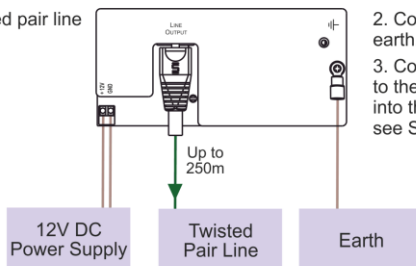


Save the original box and packaging materials in case you need to return your **WP-110xl** for service.

### Step 2: Connect the TP line and the power

Always switch off the power on each device before connecting it to your **WP-110xl**.

1. Connect the twisted pair line to the **WP-110xl**.

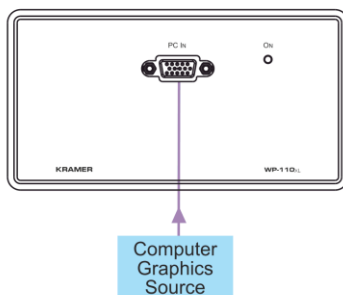


2. Connect the crimp terminal to earth.
3. Connect the 12V DC power supply to the **WP-110xl** and plug the adapter into the mains electricity, (if required, see Section 3.1).

Always use Kramer high-performance cables for connecting AV equipment to the **WP-110xl**.

### Step 3: Install the WP-110xl

Mount the **WP-110xl** in a suitable wall box and connect a computer graphics source.



### Step 4: Capture an EDID

If necessary, remove the front panel, attach a display and capture the display EDID or load the default EDID without an attached display (See Section 5).

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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 11 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 and GROUP 11: Sierra Products.

Congratulations on purchasing your Kramer **WP-110xl UXGA/Data Line Transmitter**, which is ideal for the following typical applications:

- Presentation and multimedia applications
- Long range graphics distribution for schools, hospitals, stores and security applications

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## 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

[http://www.kramerelectronics.com/support/product\\_downloads.asp](http://www.kramerelectronics.com/support/product_downloads.asp)

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 **WP-110xl** 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 Shielded Twisted Pair/Unshielded Twisted Pair

We recommend that you use Shielded Twisted Pair (STP) cable, and stress that the compliance to electromagnetic interference was tested using STP cable. There are different levels of STP cable available, and we advise you to use the best quality STP cable that you can afford. Our non-skew-free cable, Kramer **BC-STP** is intended for analog signals where skewing is not an issue.

In cases where there is skewing, our Unshielded Twisted Pair (UTP) skew-free cable, Kramer **BC-XTP**, may be advantageous, and UTP cable might also be preferable for long range applications. In any event when using UTP cable, it is advisable to ensure that the cable is installed far away from electric cables, motors and so on, which are prone to create electrical interference.

## 2.4 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/>.

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## 3 Overview

The **WP-110xl** is a high-performance, twisted pair (TP) transmitter for computer graphics signals over extended distances using CAT 5/6 cable.

The **WP-110xl** comes in three models: **WP-110xl** 69mm US version, **WP-110xl** 80/86mm European versions.

More specifically, the **WP-110xl** features:

- Resolution up to WUXGA, 1080p
- HDTV compatibility up to 1080p
- Extended transmission range of up to 250m (820ft)
- EDID Capture copies and stores the EDID from a display device
- Increased level of protection against noise, spikes and interference in adverse environments

### 3.1 About the Power Connect™ Feature

The Power Connect™ feature here means that only one unit in a system, the transmitter or receiver, needs to be connected to a power source when the devices are within 60m (197ft) of each other. The Power Connect™ feature applies as long as the cable can carry power and the distance does not exceed 60m on standard TP cable. (Heavier gauge cable may be used to extend the Power Connect™ range).

## 4 Defining the WP-110xl UXGA/Data Line Transmitter

This section defines the **WP-110xl**.

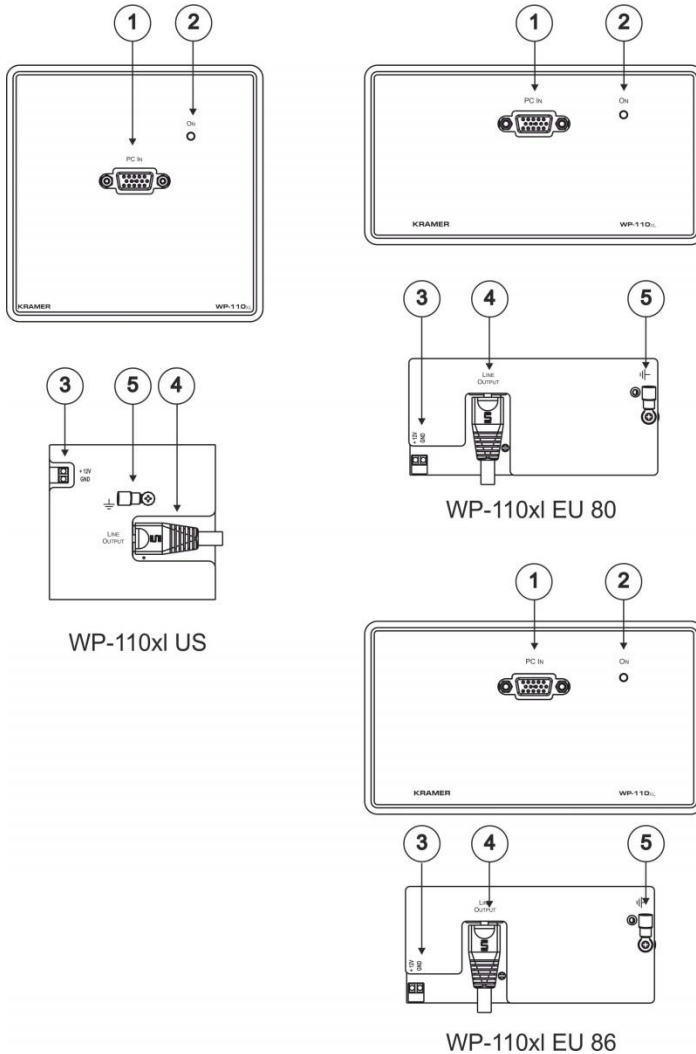


Figure 1: WP-110xl UXGA/Data Line Transmitter



#	Feature	Function
1	<i>PC IN</i> 15-pin HD connector	Connects to the computer graphics source
2	<i>ON</i> LED	Lights when powered on
3	+12V/ <i>GND</i> Terminal Block	Connects to the 12V DC power supply, (see <a href="#">Section 3.1</a> )
4	<i>LINE OUTPUT</i> RJ-45 Connector	Connects to the twisted pair line
5	Ground Terminal	Crimp terminal connects to earth

## 5 Connecting and Installing the WP-110xl



Always switch off the power to each device before connecting it to your **WP-110xl**. After connecting your **WP-110xl**, connect its power and then switch on the power to each device.

To connect the **WP-110xl** as illustrated in the example in [Figure 2](#):

1. Connect a twisted pair line to the LINE OUTPUT RJ-45 connector.
2. Ground the wall plate (see [Section 5.1](#)).
3. Connect the 12V DC power supply to the 12V and GND terminals taking care to keep the correct polarity, (if required, see [Section 3.1](#)).
4. Install the **WP-110xl** into a suitable wall box or rack mount.
5. Connect a computer graphics source (for example, a PC) to the PC IN 15-pin HD connector.

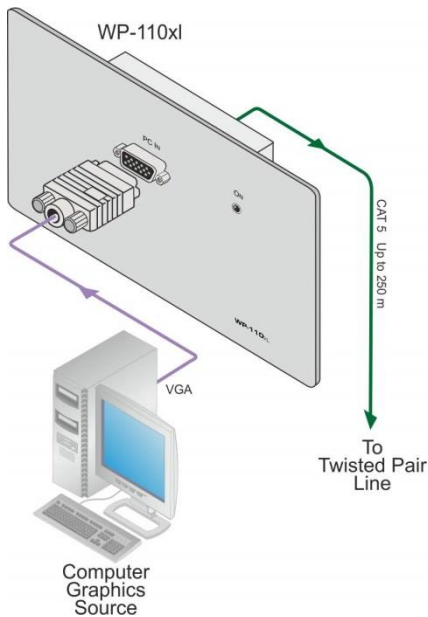


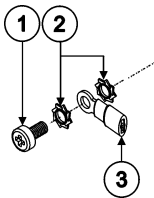
Figure 2: Connecting the WP-110xl UXGA/Data Line Transmitter

## 5.1 Grounding the Wall Plate

Grounding the **WP-110xl** is recommended. The grounding wire is connected to the rear of the chassis of the unit. The grounding screw is used to earth the unit to the ground of the building. This helps prevent static electricity from interfering with product performance.

To connect the grounding to the WP-110xl as shown in [Figure 3](#):

1. Crimp the ring-tongue terminal to the building grounding point wire.  
(We recommend that you use a green-yellow #18 AWG wire (0.82mm<sup>2</sup>) crimped with a proper hand-tool).
2. Insert the M3x6 screw through the toothed lock washers and the ring-tongue terminal in the order shown above.
3. Insert the M3x6 screw (with the two toothed lock washers and ring-tongue terminal in place) into the grounding screw hole on the rear of the **WP-110xl** and tighten the screw.



#	Item
1	M3x6 Screw
2	M3 Toothed lock washers
3	M3 Ring tongue terminal

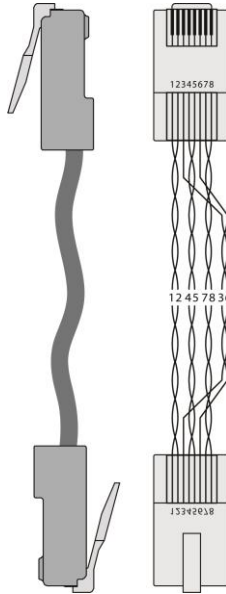
Figure 3: Ground Connection

## 5.2 Wiring the TP LINE OUT RJ-45 Connector

This section defines the TP pinout, using a **straight** pin-to-pin cable with RJ-45 connectors.

EIA /TIA 568B	
PIN	Wire Color
1	Orange / White
2	Orange
3	Green / White
4	Blue
5	Blue / White
6	Green
7	Brown / White
8	Brown

Figure 4: TP PINOUT



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## 6 Capturing the EDID

The **WP-110x** can capture an EDID from a connected display or can load a default EDID when no display is available or the unit cannot capture the EDID from the connected display.

### 6.1 Capturing the EDID from a Display Device

To capture an EDID from a display:

1. Using a Philips screwdriver, remove the four screws holding the faceplate to the PCB assembly.
2. Using a short cable (for example, Kramer model number C-MGM/MGM-1), connect the PC IN input 15-pin HD connector on the **WP-110xl** to the 15-pin HD connector of the display and turn the display on.
3. Connect the 12V DC power adapter to the power terminal block (see [Figure 1](#)) on the **WP-110xl** and connect the adapter to the mains electricity.
4. Press the EDID capture button (item 1 on [Figure 5](#) and [Figure 6](#)).  
The EDID status LED (item 2 on [Figure 5](#) and [Figure 6](#)) flashes slowly several times. The new EDID is captured when the LED stops flashing and lights solid.

**Note:** If the status LED flashes quickly for a few seconds and then stays on solid, the **WP-110xl** could not capture the EDID and loaded the default EDID instead.

5. Unplug the power adapter from the mains and disconnect it from the **WP-110xl**.
6. Replace the faceplate and secure the four screws removed in Step 1.

## 6.2 Loading the Default EDID

To load the default EDID:

1. Using a Philips screwdriver, remove the four screws holding the faceplate to the PCB assembly.
2. Do not connect a display to the PC IN input 15-pin HD connector.
3. Connect the 12V DC power adapter to the power terminal block (see [Figure 1](#)) on the **WP-110xl** and connect the adapter to the mains electricity.
4. Press the EDID capture button (item 1 on [Figure 5](#) and [Figure 6](#)).  
The EDID status LED (item 2 on [Figure 5](#) and [Figure 6](#)) flashes quickly for a few seconds and then stays on solid.
5. Unplug the power adapter from the mains and disconnect it from the **WP-110xl**.
6. Replace the faceplate and secure the four screws removed in Step 1.

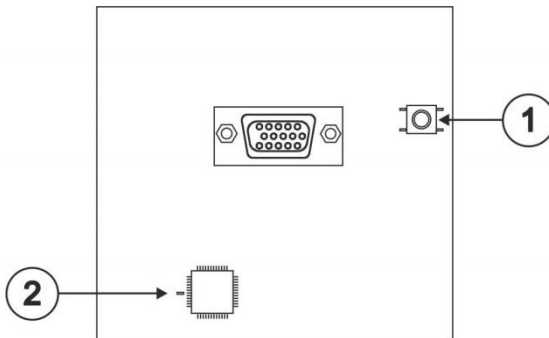


Figure 5: WP-110xl US Wall Plate

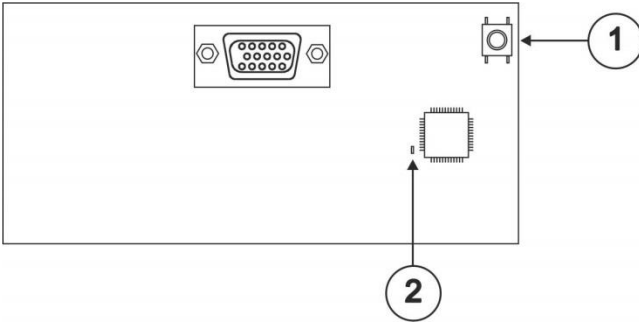


Figure 6: WP-110xl EU Wall Plate

## 7 Technical Specifications

INPUT:	1 VGA / UXGA on a 15-pin HD connector
OUTPUT:	1 RJ-45 LINE OUTPUT connector
VIDEO RESOLUTION:	Up to WUXGA, 1080p
RANGE:	Up to 250m (820ft)
COUPLING:	AC
POWER CONSUMPTION:	12V DC, 70mA
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
WALL PLATE SIZE:	2 gang EU/US
DIMENSIONS:	2 gang USA: 11.4cm x 3.5 cm x 11.4cm (4.49" x 1.4" x 4.49", W, D, H) 2 gang Europe: 15.2cm x 3.5cm x 8.0/8.6cm (5.98" x 1.4" x 3.15/3.39", W, D, H)
WEIGHT:	0.14kg (0.31lbs) approx.
ACCESSORIES:	Power supply
OPTIONS:	19" rack adapters for EU and US wall plates; Kramer on-wall boxes
Specifications are subject to change without notice at <a href="http://www.kramerelectronics.com">http://www.kramerelectronics.com</a>	



## 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](http://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

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 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.

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 APPLICABLE 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](http://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.kramerelectronics.com](http://www.kramerelectronics.com)

E-mail: [info@kramerel.com](mailto:info@kramerel.com)



**SAFETY WARNING**

Disconnect the unit from the power supply before opening and servicing



P/N: 2900-300294



Rev: 2