



KRAMER ELECTRONICS LTD.

# USER MANUAL

MODEL:

**Yarden IH-1**  
Hidden In-wall Speaker

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P/N: 2900-300472 Rev 2



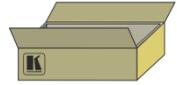
## Yarden IH-1 Quick Start Guide

This guide helps you install and use your product for the first time. For more detailed information, go to <http://bit.ly/k-prod-downloads> to download the latest manual or scan the QR code on the left.

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

✓ Yarden IH-1 On-wall Speaker

✓ 1 Quick start guide



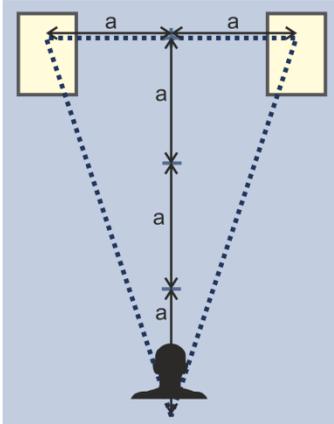
### Step 2: Choose the best location

Before installing the speakers:

- Check that the mounting location is free of obstructions, such as electrical piping, AC ducts or water lines, and so on
- Make sure that there are no objects that may block the area between the listener and the speakers
- Fill the wall cavity behind the speakers with fiberglass insulation or mineral-wool. Keep the same amount of insulation for each of the speakers to achieve a truly consistent bass response

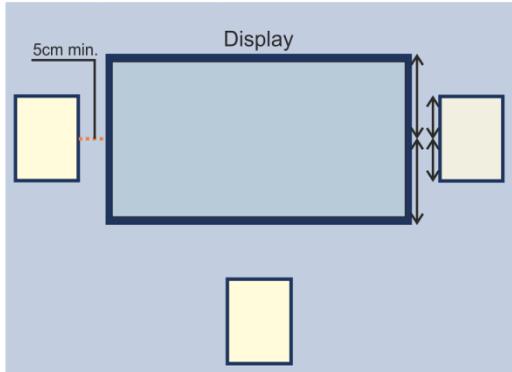
### Step 3: Set up the speakers

#### Stereo set up

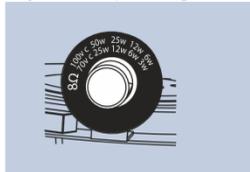


For best results, we recommend that you always use Kramer high-performance cables to connect AV equipment to your speakers

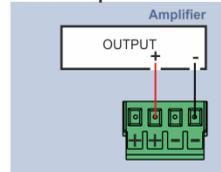
#### Theater application set up



#### Adjust the tap setting



#### Wire the speaker

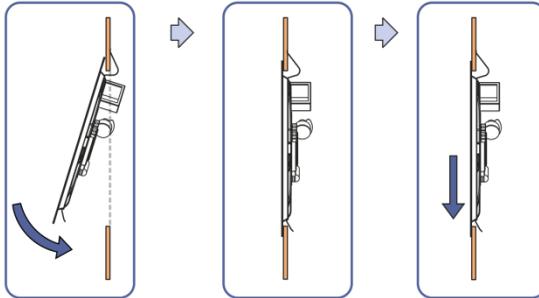


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## Step 4: Mount the Speaker

To mount the speaker:

- Insert the top clamps through the opening. Letting the clamps grip the wall from the inside of the wall and slide the speakers upwards
- Insert the lower clamps through the opening and gently slide the speaker downwards until the lower clamps are locked in place

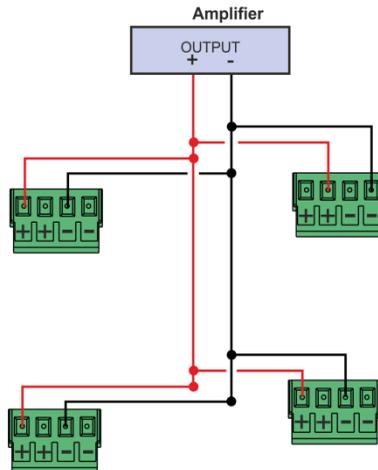


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## Array Installation

In an array installation layout, you need to define the distance between speakers according to the uniformity of the coverage desired and the budget.

You can set the power on each speaker to get the desired power level in different installation areas.



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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 **Yarden IH-1** *Hidden In-wall Speaker*, which is ideal for the following typical applications:

- Home theater
- Luxurious boardrooms
- Boutique shops
- Architectural applications
- Stereo applications
- Lecture venues
- Cafes and Restaurants

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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 (such as the Kramer BC-2S) 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 **Yarden IH-1** 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.



Do not open the housing of the speaker; doing so may reduce the quality of the sound.

## 2.2 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 **Yarden IH-1** is an open-back speaker designed for mounting invisibly in the wall. It is designed for infinite baffle environments, high-power handling and excellent acoustic performance. The **Yarden IH-1** can be hidden in the wall and covered with regular **water-based** wall paint.



To avoid distortion of the **Yarden IH-1** surface, do not use solvent based materials such as thinner when painting it.

The **Yarden IH-1** features:

- Polypropylene flat membrane, 2" voice coil and double magnet drive units
- A neodymium motor
- A 120Hz to 20kHz @±3dB frequency response
- 8 Ω/70V/100V transformer taps
- A sensitivity of 83dB, 1W @1m
- 40W RMS, 90W continuous program power handling
- 2nd level @120Hz, high pass crossover
- Mounting Brackets equipped with special "insert and drop"
- Brackets for quick, easy and intuitive installation

## 4 Defining the Yarden IH-1

This section defines the powered **Yarden IH-1**:

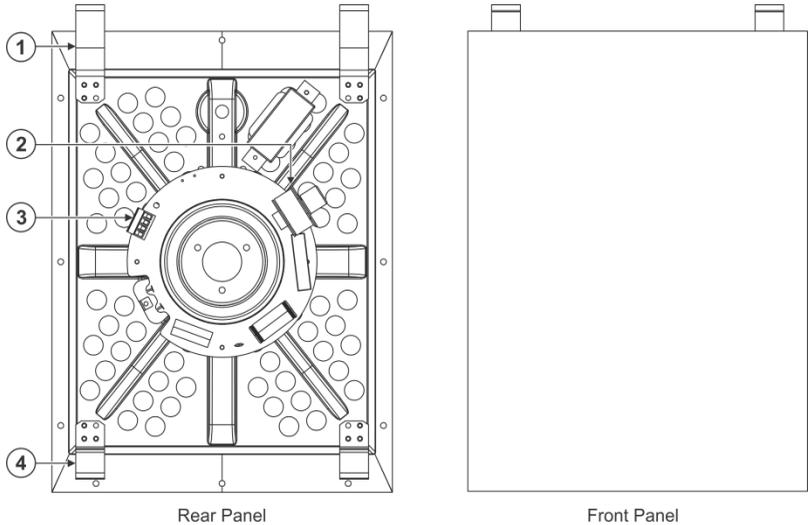


Figure 1: Yarden IH-1 Hidden In-wall Speaker

#	Feature	Function
1	Top Mounting Clamps	Are inserted first to grip the wall
2	Tap Selector	Adjust each speaker to the appropriate tap setting: For 70V: 3W, 6W, 12W or 25W For 100V: 6W, 12W, 25W or 50W Or select 8Ω (to bypass the transformer when connecting directly to an amplifier without using the 70/100V array option)
3	Speaker Inputs	Connect the black (-) speaker input to the receiver (-) Connect the red (+) speaker input to the receiver (+)
4	Lower Mounting Clamps	For gripping onto the wall

The front panel can be leveled with the wall surface and then painted.

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## 5 Installing the Speaker

This section describes:

- The optimal installation recommendations (see [Section 5.1](#))
- How to install and mount the speaker (see [Section 5.2](#))
- How to set up an array installation (see [Section 5.3](#))

### 5.1 Installation Recommendations

For optimum installation:

- Make sure that there are no objects that may block the area between the listener and the speakers
- Fill the wall cavity behind the speakers with fiberglass insulation or mineral-wool. Keep the same amount of insulation for each of the speakers to achieve a true consistent bass response

### 5.1.1 Setting up a Stereo System

When setting the system in a stereo setup (as shown in [Figure 2](#)):

- Install the **Yarden IH-1** so that the top half of the speaker is at ear level
- Keep the distance between the speakers at  $2/3^{rd}s$  of the distance from the listener

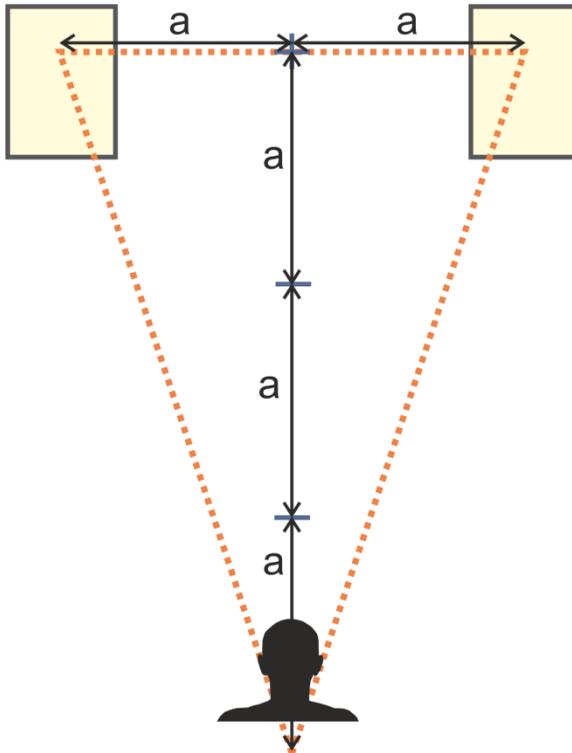


Figure 2: Yarden IH-1 in a Stereo Setup



Note that even though the illustration in [Figure 2](#) shows two speakers, each **Yarden IH-1** package includes one speaker.

## 5.1.2 Setting up a Theater Application

When setting the system in a theater setup (as shown in [Figure 3](#)):

- Place the main front speakers on each side of the display at a minimal distance of 5cm from the edge of the display
- Center the speakers to the display screen
- Locate the center speaker under the display screen
- If you want to add additional speakers on the side walls, we recommend that you place them at the same height of the main front speakers

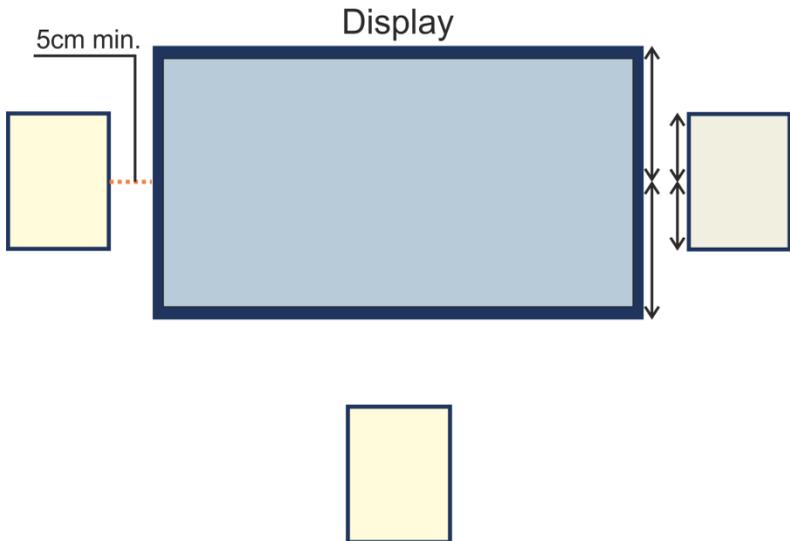


Figure 3: Yarden IH-1 in a Theater Setup



Note that even though the illustration in [Figure 3](#) shows three speakers, each **Yarden IH-1** package includes one speaker.

## 5.2 Installing the Speaker

To install the hidden speaker inside the wall:

1. Check that there is no infrastructure or studs behind the wall where you want to locate your speaker.
2. Place the cut out template on the wall in the correct location.
3. Mark the opening in the correct location by tracing the template.
4. Cut out a hole or small area within the marked template.  
Initially, you can cut a smaller area inside the marked hole just to be sure that the area behind the wall is clear. To do so insert a piece of "L-shaped" wire into the smaller opening and rotate it. If the wire hits any obstacle which prevents you from installing the speakers, you will need to move the template and test the area behind the wall again.
5. Cut out the full-sized opening according to the template.
6. Route the wiring from the amplifier to the speakers' cut out holes, taking care not to place them next to electrical wires or at least at a distance of about two feet from an AC line.
7. Adjust each speaker to the appropriate tap setting (see [Figure 4](#)).

Set the tap according to the power requirements of the speaker based on its location in the room (for example, a speaker located in a remote corner may require additional power)

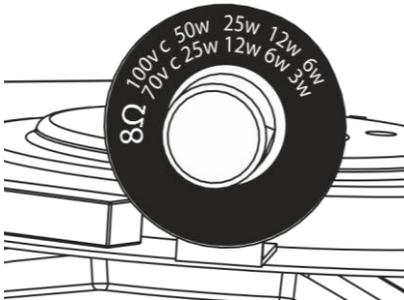


Figure 4: Adjust Tap Selector

8. Connect the + (red) and – (black) wires to the + and – terminal block connectors of the speaker.



Do not nail or staple the speaker wires.

9. Insert the top clamps through the opening, letting the clamps grip the wall from the inside of the wall and slide the speakers upwards.
10. Insert the lower clamps through the opening and gently slide the speaker downwards until the lower clamps are locked in place.

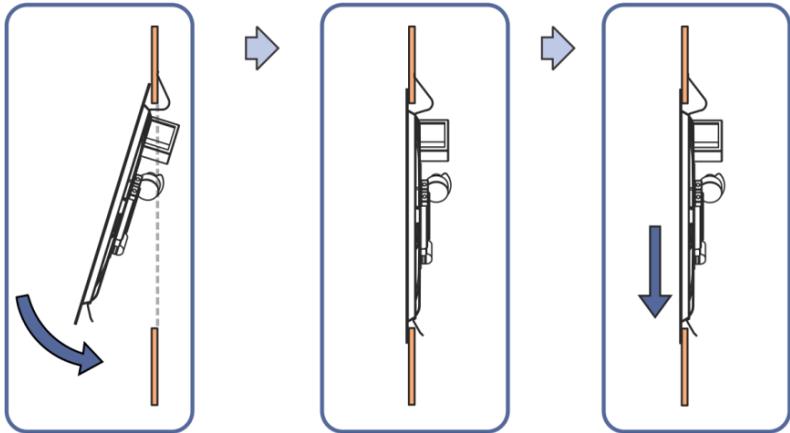


Figure 5: Yarden IH-1 In-wall Installation

### 5.3 Setting up an Array Installation

When installing the **Yarden IH-1** in an array installation layout, you need to define the distance between speakers according to the uniformity of the coverage desired and the budget. You can set the power on each speaker to get the desired power level in different installation areas.

[Figure 6](#) shows an example of parallel wiring in a square array installation:

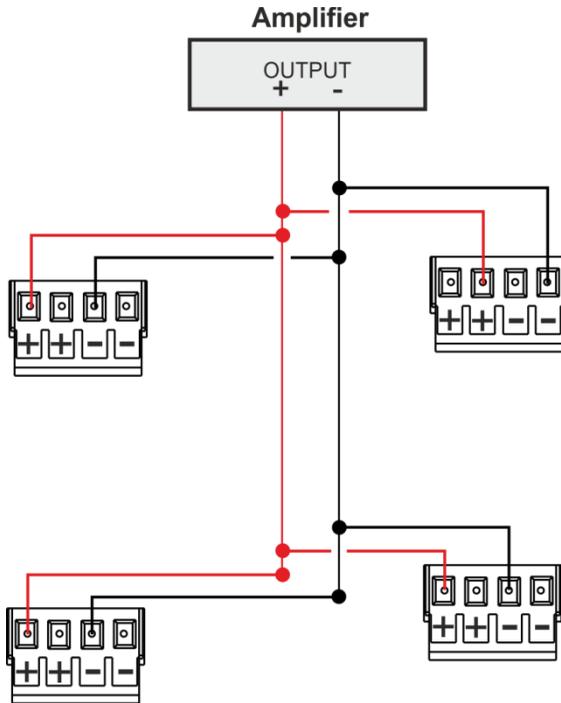


Figure 6: Array Layout Parallel Wiring

## 6 Technical Specifications

<b>Yarden IH-1</b>	
<b>Audio and Power</b>	
DESCRIPTION:	Hidden In-wall speaker
FREQUENCY RESPONSE:	120Hz to 20kHz @ ±3dB
DRIVE UNITS:	Polypropylene 1.34mm flat membrane 2" voice coil Double Magnet Neodymium motor
VOICE COIL DIAMETER:	50mm
VOICE COIL WIRE:	Hexatech™ aluminum
IMPEDANCE:	8Ω (transformer tap in off position)
TRANSFORMER TAPS:	70V – 25W / 12W / 6W / 3W / Off (Lo-Z) 100V – 50W / 25W / 12W / 6W / Off (Lo-Z)
SENSITIVITY:	83dB SPL, 1W@1m
MAX SPL:	Continuous: 97dB Peak: 100dB
POWER HANDLING:	90W (40W RMS)
CROSSOVER FREQUENCY:	6dB – 120Hz high pass
RESONANCE FREQUENCY:	95Hz
INPUT CONNECTOR:	Terminal block
<b>Shipping and Installation</b>	
MATERIALS:	Steel body
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
WEIGHT:	1.62kg (3.57lb) approx.
SHIPPING WEIGHT:	2.16kg (4.76lbs) approx.
DIMENSIONS:	External: 35cm x 26cm (13.7" x 10.2") Cutout: 31.8cm x 23.8cm (12.52"x9.37")
INSTALLATION CLEARANCE:	Mounting depth: 5.7cm (2.2")
OPTIONS:	Kramer BC-2S speaker cable
COLORS:	White
Specifications are within a 10% tolerance and 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

One year 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: 2900-300472



Rev: 2