

## USER MANUAL

### **MODEL:**

**RTBUS-28XL**

**Round Table Connection Bus**



# Contents

<b>Introduction</b>	<b>1</b>
Getting Started	1
Overview	2
<b>Defining RTBUS-28XL Round Table Connection Bus</b>	<b>3</b>
The RTBUS-28XL Connecting Surface	4
Universal Power Socket	4
<b>Installing the RTBUS-28XL</b>	<b>5</b>
Drilling a Hole in the Table	5
Connecting the Cables	5
Mounting the RTBUS-28XL in the Table	7
<b>Using the RTBUS-28XL</b>	<b>8</b>
<b>Technical Specifications</b>	<b>9</b>

# 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!

---

## 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/RTBUS-28xl](http://www.kramerav.com/downloads/RTBUS-28xl) to check for up-to-date user manuals, application programs, and to check if firmware upgrades are available (where appropriate).

## Achieving 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 **RTBUS-28XL** away from moisture, excessive sunlight and dust.

## Safety Instructions



### Caution:

- This equipment is to be used only inside a building. It may only be connected to other equipment that is installed inside a building.
- There are no operator serviceable parts inside the unit.

## 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 [www.kramerav.com/support/recycling](http://www.kramerav.com/support/recycling).

---

## Overview

Congratulations on purchasing your Kramer **RTBUS-28XL Round Table Connection Bus**.

The **RTBUS-28XL** is an elegant furniture-mounted, round connection bus. The **RTBUS-28XL** features a mechanism for pneumatic lifting and smooth closing of its lid. It is easily installed into a table or podium top, and its interface enables you to connect any equipment to systems installed in a room:

- Four pass-through openings for cables, located on the lower surface, enabling closing of the lid while keeping the cables hidden and protected under the surface.
- USB type A and USB type B ports for charging.
- A Universal power socket.

# Defining RTBUS-28XL Round Table Connection Bus

This section defines RTBUS-28XL.

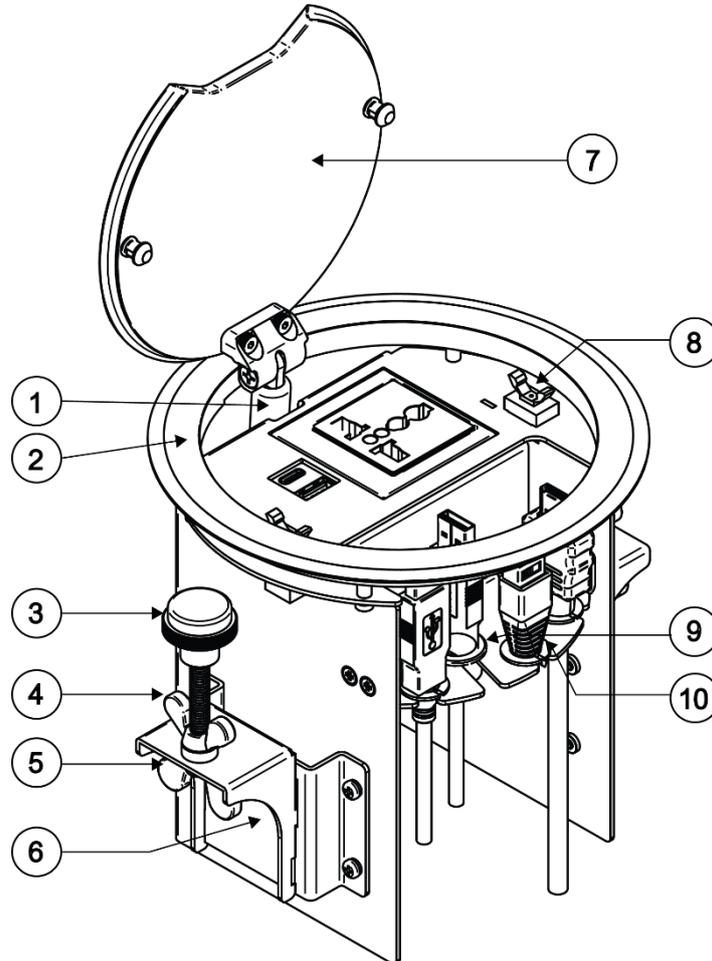


Figure 1: RTBUS-28XL Round Table Connection Bus Front Panel

#	Feature	Function
①	Pneumatic Mechanism	Enables automatic lifting and smooth closing of the lid.
②	Outer Rim	Fits over the table surface.
③	Mounting Screws (x2)	For securing RTBUS-28XL to the table.
④	Locking Butterfly Nuts (x2)	Tighten to lock the mounting butterfly screw.
⑤	Mounting Butterfly Nuts (x2)	Tighten to secure the unit to the table surface.
⑥	Mounting Brackets (x2)	For securing the unit to the table surface.
⑦	Black Anodized or Brushed Aluminum Semi-Automatic Lid (with Opening for Cable Pass-Through)	Covers the connecting surface, leaving the table surface neat and tidy.
⑧	Lid Latch (x2)	For safely closing the lid.
⑨	Inner Pass-Through Opening and Bushing (x1)	Insert a cable through the opening and the bushing – for larger or multiple cables (inner diameter approx. 12.5mm Ø).
⑩	Pass-Through Opening and Bushing (x3)	Insert a cable through the opening and the bushing (inner diameter approx. 10 mm Ø).

## The RTBUS-28XL Connecting Surface

[Figure 2](#) defines the connecting surface.

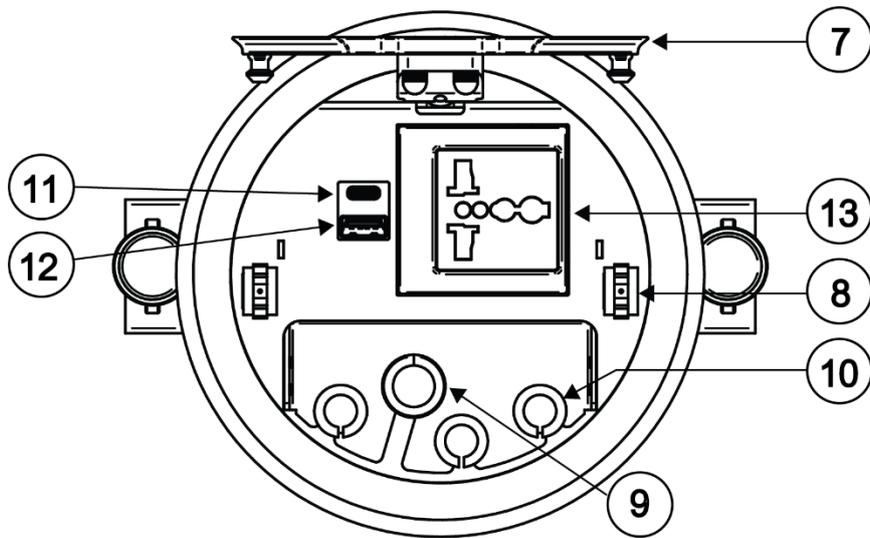


Figure 2: RTBUS-28XL Connecting Surface

#	Feature	Function
⑪	USB-C Charging Port	Use to charge a device.
⑫	5V-2.4A/1A USB Charging Port	Use to charge a device.
⑬	5A MAX. Universal Power Socket	Connect to a 90-240V AC power consuming device.

## Universal Power Socket

A Universal Power Socket is available for general use and is fully compatible with power plugs in the UK, India, Italy and Denmark, as well as with the 2-prong Europlug. The Universal Power Socket is partially compatible (if the polarity is reversed) with plugs in China, Switzerland, Israel and the USA but does not supply grounding to plugs in Central Europe and France and is not compatible with South African plugs.

# Installing the RTBUS-28XL

To install the RTBUS-28XL perform the following steps:

1. Drill a hole in the table (see [Drilling a Hole in the Table](#) on page 5).
2. Connect the cables (see [Connecting the Cables](#) on page 5).
3. Secure the unit to the table (see [Mounting the RTBUS-28XL in the Table](#) on page 7).

---

## Drilling a Hole in the Table

To drill an opening in the table:

1. Using any standard cup bit drill with a diameter ranging from 138mm to 140mm (5.4" to 5.5"), drill a hole in the table in the desired location.



The thickness of the table should be 3"w (76mm) or less.

2. Clean the table surface.



Take care not to damage the table. Kramer AV is not responsible for any damage caused to the table.

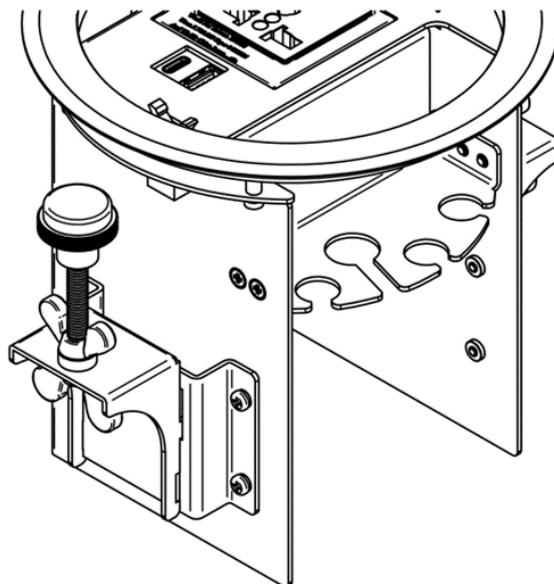
---

## Connecting the Cables

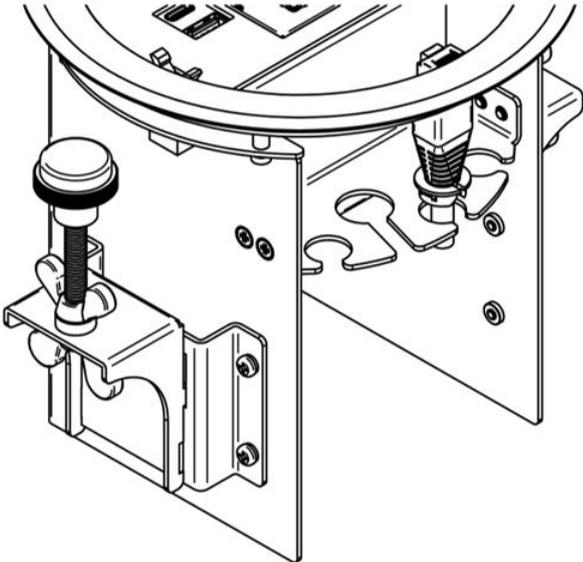
You can install the cables either before mounting the RTBUS-28XL on a table, or after it is mounted (usually if the RTBUS-28XL is mounted and you need to replace the cables).

To connect the cables:

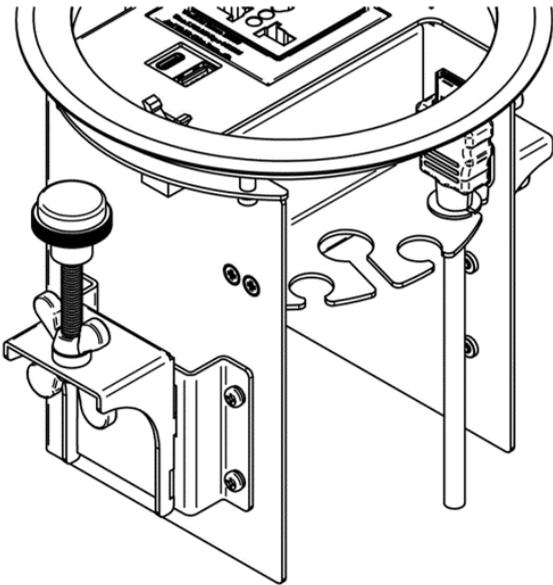
1. Insert the cables through the pass-through openings.



- 2. Insert a cable into an opening and place the bushing around the cable.



- 3. Push the bushing into the pass-through opening to secure.

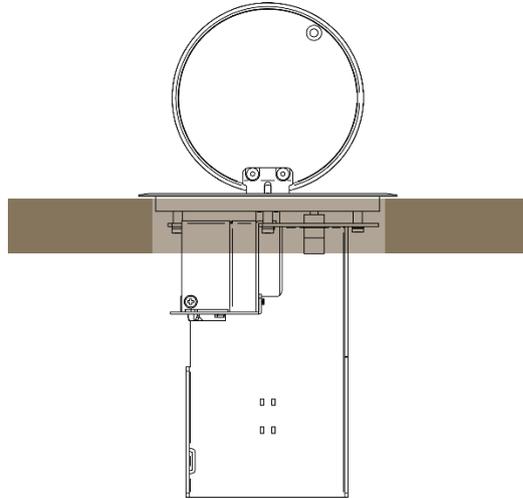


We recommend that you use the Kramer **C-AC** AC Power Cord series to power the unit.

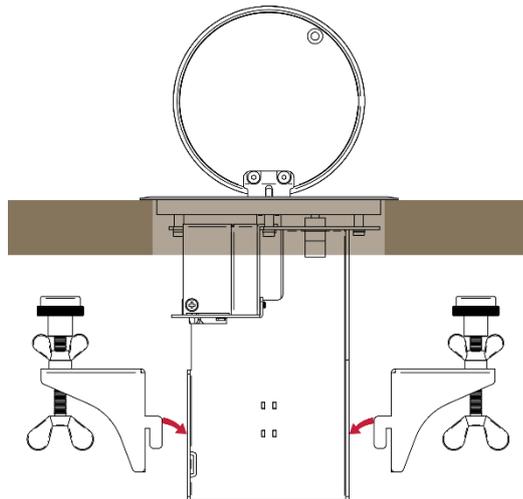
## Mounting the RTBUS-28XL in the Table

To mount the unit:

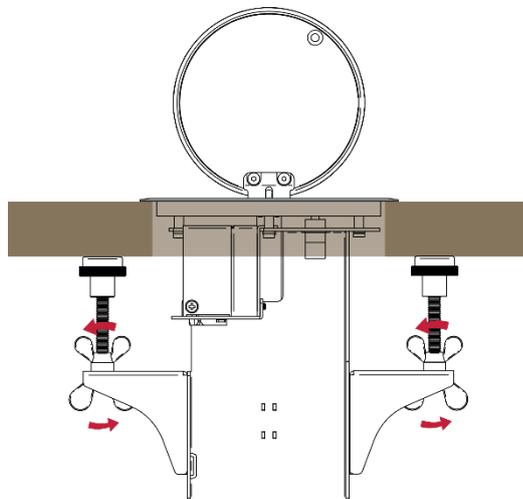
1. Insert the RTBUS-28XL into the hole cut into the table making sure the outer rim is firm against the surface of the table.



2. From underneath the table, slide the mounting brackets into the appropriate slots.



3. **Step 3:** Tighten the butterfly mounting screws securely upward against the table.
4. Lock the mounting screws into position with the locking butterfly screws.



# Using the RTBUS-28XL

Once the RTBUS-28XL is installed, you can easily customize it to your own needs by directly plugging in the required AV equipment, as illustrated in the example in [Figure 3](#).

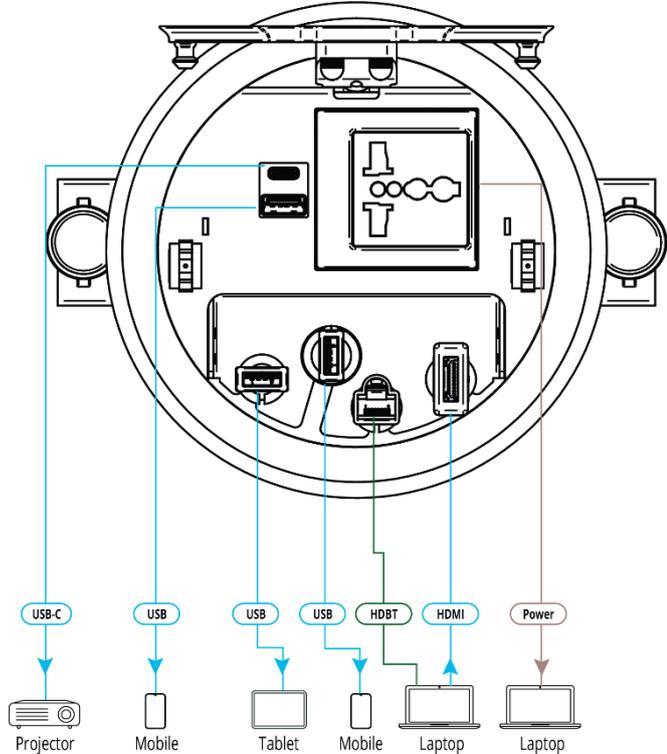


Figure 3: RTBUS-28XL Boardroom Installation

# Technical Specifications

Ports	USB-C	On a USB-C port (fast charge)
	USB Type A	On a USB port (fast charge)
USB Features	Rated USB Output	DC 5 V, 4.2 A
	Protocol	Type-A: QC 3.0 Type-C: PD 5
	Output Current Voltage	Type-A: 5V=3A, 9V=3A, 12V=2.5A, 20V=1.5A Type-C: 5V=3A, 9V=3A, 12V=2.5A, 15V=2A, 20V=1.5A Type-A + Type-C: 5V=2.4A both
	Output Power	30W max.
Power	Power socket	Universal, 100-240V AC, 50/60Hz, 5A; maximum 5A per power outlet Fully compatible with power plugs in the UK, India, Italy and Denmark, as well as with the 2-prong Europlug. Partially compatible (if the polarity is reversed) with plugs in China, Switzerland, Israel and the USA. The universal socket does not supply grounding to plugs in Central Europe and France. Not compatible with South African plugs.
	Fuse Rating	T 6.3A 250V
	Options	TBUS AC Power Cord (C-AC/POWERCORD) power socket kits
Environmental Conditions	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
Regulatory Compliance	Safety	CE
	Environmental	RoHS, WEEE
General	Net Dimensions (Diameter, H)	15.5cm x 14.6cm (6.1" x 5.7")
	Shipping Dimensions (W, D, H)	27.5cm x 22cm x 19.5cm (10.8" x 8.7" x 7.7")
	Net Weight	1.32kg (2.9lbs) approx.
	Shipping Weight	1.9kg (4.2lbs) approx.
Specifications are subject to change without notice at <a href="http://www.kramerav.com">www.kramerav.com</a>		

The warranty obligations of Kramer Electronics Inc. ("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 this Coverage Lasts**

The standard limited warranty for Kramer products is seven (7) years from the date of original purchase, with the following exceptions:

1. All Kramer VIA hardware products are covered by a standard three (3) year warranty for the VIA hardware and a standard three (3) year warranty for firmware and software updates; all Kramer VIA accessories, adapters, tags, and dongles are covered by a standard one (1) year warranty.
2. Kramer fiber optic cables, adapter-size fiber optic extenders, pluggable optical modules, active cables, cable retractors, ring mounted adapters, portable power chargers, Kramer speakers, and Kramer touch panels are all covered by a standard one (1) year warranty.
3. All Kramer Cobra products, all Kramer Calibre products, all Kramer Minicom digital signage products, all HighSecLabs products, all streaming, and all wireless products are covered by a standard three (3) year warranty.
4. All Sierra Video MultiViewers are covered by a standard five (5) year warranty.
5. Sierra switchers & control panels are covered by a standard seven (7) year warranty (excluding power supplies and fans that are covered for three (3) years).
6. K-Touch software is covered by a standard one (1) year warranty for software updates.
7. All Kramer passive cables are covered by a ten (10) year warranty.

#### **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. If a direct or similar replacement product is supplied, the original product's end warranty date remains unchanged and is transferred to the replacement 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, visit our web site at [www.kramerav.com](http://www.kramerav.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 (RMA number). 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 of 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, visit our web site at [www.kramerav.com](http://www.kramerav.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.



## SAFETY WARNING

Disconnect the unit from the power supply before opening and servicing

For the latest information on our products and a list of Kramer distributors, visit our website where updates to this user manual may be found.

We welcome your questions, comments, and feedback.

The terms HDMI, HDMI High-Definition Multimedia Interface, and the HDMI Logo are trademarks or registered trademarks of HDMI Licensing Administrator, Inc. All brand names, product names, and trademarks are the property of their respective owners.