



KRAMER ELECTRONICS LTD.

# USER MANUAL

MODEL:

**Tavor 5-0 (SPK-WA511)**  
On-Wall Active Speakers

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P/N: 2900-300366 Rev 4

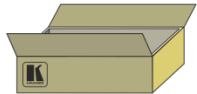


## Tavor 5-O Quick Start Guide

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

- ✓ **Tavor 5-O** Active Speakers
- ✓ 1 RCA cable (2 meters)
- ✓ 1 speaker cable for connecting the active speaker to the passive speaker (4 meters)
- ✓ 1 AC power cord (4 meters)
- ✓ A pair of U-shaped rotating mounting brackets with 4 mounting knobs



Save the original box and packaging materials in case you need to return your product for service.

### Step 2: Choose the best location

Before installing the speakers:

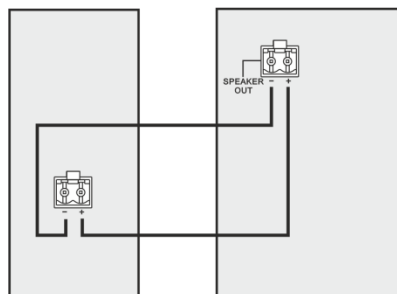
- Experiment by placing the speakers in different locations before finally deciding on the most suitable location
- Be sure that the wall type is appropriate for the mounting brackets, that is, either solid wood, bricks, concrete, hollow building blocks, or wood studs. You cannot mount the brackets on gypsum walls
- Check that the mounting location is free of obstructions, such as electrical piping, AC ducts or water lines, and so on

### Step 3: Install the speakers

To install the speakers:

- Connect the + and - stereo sockets of the active speaker to the + and - stereo sockets of the passive speaker
- Connect the audio source
- Connect the power
- Adjust the volume, bass and treble
- If required, loop additional speakers
- If required, mount the speakers on the wall

Always switch OFF the power on each device before connecting it to your Speakers.



Passive Speaker (R)

Active Speaker (L)

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

Contents

<b>1</b>	<b>Introduction</b>	<b>1</b>
<b>2</b>	<b>Getting Started</b>	<b>2</b>
2.1	Achieving the Best Performance	2
2.2	Recycling Kramer Products	3
<b>3</b>	<b>Overview</b>	<b>4</b>
<b>4</b>	<b>Defining the Tavor 5-O</b>	<b>6</b>
<b>5</b>	<b>Installing the Speakers</b>	<b>8</b>
5.1	Choosing the Best Location	8
5.2	Installing the Speaker Wires	8
<b>6</b>	<b>Technical Specifications</b>	<b>10</b>

Figures

Figure 1:	Active On-Wall Speakers in a Home Theater Setup	5
Figure 2:	Active On-Wall Speakers in a Conference Room Setup	5
Figure 3:	Tavor 5-O Active Speaker	6
Figure 4:	Connecting the Active Speaker to the Passive Speaker	8

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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 13 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; and GROUP 13: Audio.

Congratulations on purchasing your Kramer **Tavor 5-O** *On-Wall Active Speakers*, which are ideal for the following typical applications:

- Boardrooms
- Conference rooms
- Educational classrooms
- Presentation venues
- Home theater

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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 **Tavor 5-O** 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 **Tavor 5-O** is a powered two-way speaker system designed for indoor wall mounting. The system accepts a line level stereo input and amplifies it using a built-in amplifier and outputs a speaker signal to the passive speaker.

The **Tavor 5-O** speaker system features:

- Three available inputs (that can either be connected separately or connected simultaneously to form a mix of the inputs) that consist of:
  - A Line level unbalanced stereo audio input on a 3.5mm mini jack connector
  - A balanced stereo audio input on a 5-pin terminal block connector
  - An unbalanced stereo audio input on two RCA connectors
- An output to external amplified or non-amplified speakers
- An output to an external sub-woofer
- A unique looping output, letting you chain additional pairs of active and passive speakers
- TREBLE, BASS and VOLUME control knobs
- A control panel on the back of the active speaker that controls all the functions of both speakers
- A magnetic shield
- Enhanced bass reflex design
- An integrated 2x30W stereo amplifier (no external amplifier required)
- A self-adjusting power range of 90 to 240V AC
- Auto-power shutoff

The **Tavor 5-O** is enclosed in an ABS cabinet and can be mounted indoors on the wall, vertically or horizontally. The mounting brackets are made of hardened steel that attach to each speaker, letting you rotate each speaker to the left or right.

[Figure 1](#) and [Figure 2](#) show examples of how the speakers can be installed in conference room and home theater setups, respectively.

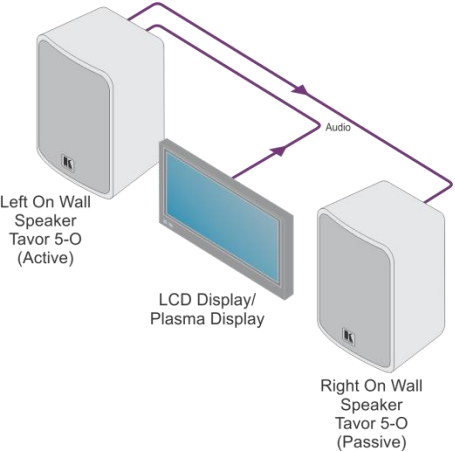


Figure 1: Active On-Wall Speakers in a Home Theater Setup

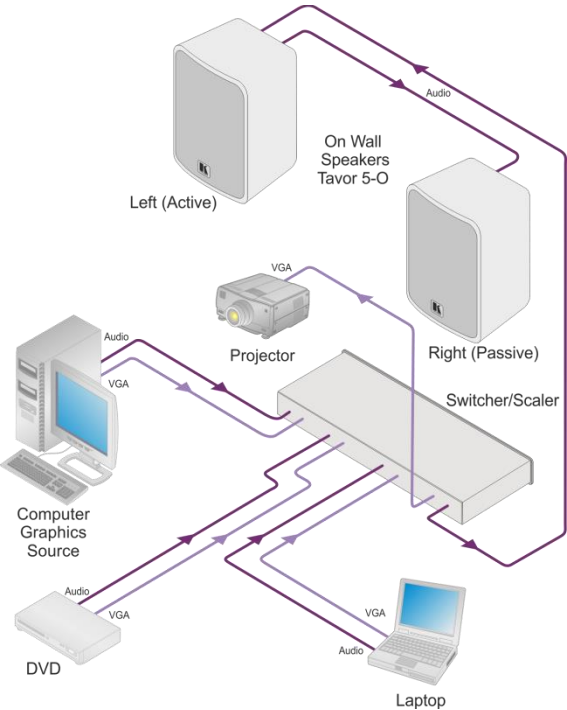


Figure 2: Active On-Wall Speakers in a Conference Room Setup



# 4 Defining the Tavor 5-O

This section defines the active **Tavor 5-O**:

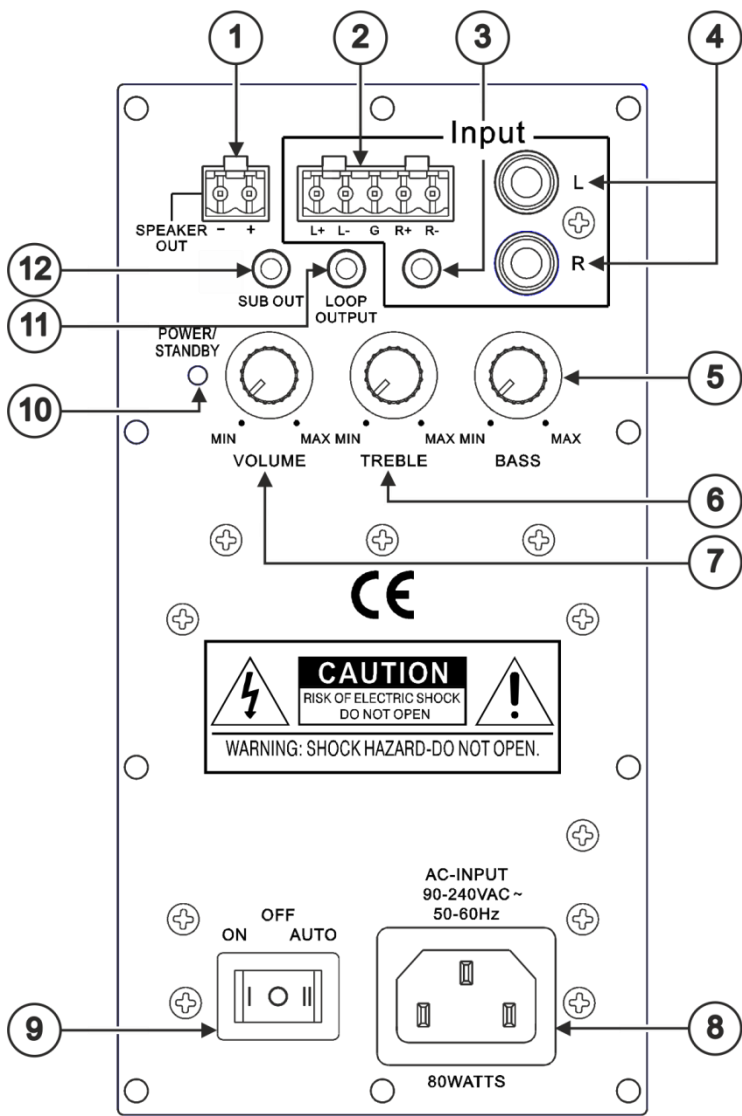


Figure 3: Tavor 5-O Active Speaker

#	Feature		Function
1	SPEAKER OUT Connectors		Connect the active speaker to the (+) and (-) stereo sockets on the passive speaker The L speaker is active and the R speaker is passive
2	INPUT Connectors	5-pin Terminal Block	Connect the audio source to one or more of the input connectors
3		3.5mm Mini Jack	
4		L and R RCA	
5	BASS Control Knob		Rotate the button to control the bass
6	TREBLE Control Knob		Rotate the button to control the treble
7	VOLUME Control knob		Rotate the button to adjust the audio volume
8	AC-Input Power Supply (self adjusting)		Connect to the AC power cord
9	POWER Switch		For turning the unit ON (I), OFF (O) or AUTO shutoff (II) When selecting the AUTO shutoff mode, the speaker enters the standby mode when idle for over 10 minutes
10	POWER/STANDBY LED		Illuminates in green when powered (POWER switch set to ON or AUTO) illuminates in red when in the standby mode (POWER switch is set to AUTO) In the AUTO mode, the LED illuminates green if an input signal is detected and illuminates red if idle for over 10 minutes
11	LOOP OUTPUT 3.5mm Mini Jack Connector		Connect to another pair of active speakers
12	SUB OUT 3.5mm Mini Connector		If required, connect an active sub-woofer to this output for maximum bass reproduction

## 5 Installing the Speakers

This section explains how to:

- Choose the best location for your speakers (see [Section 5.1](#))
- Install the speaker wires (see [Section 5.2](#))

### 5.1 Choosing the Best Location

Before installing the speakers:

- Experiment by placing the speakers in different locations before finally deciding on the most suitable location
- Be sure that the wall type is appropriate for the mounting brackets, that is, either solid wood, bricks, concrete, hollow building blocks, or wood studs. You cannot mount the brackets on gypsum walls
- Check that the mounting location is free of obstructions, such as electrical piping, AC ducts or water lines, and so on

### 5.2 Installing the Speaker Wires

To install the speakers, do the following:

1. Connect the + and - stereo sockets of the active speaker to the + and - stereo sockets of the passive speaker using the cable supplied, as follows:

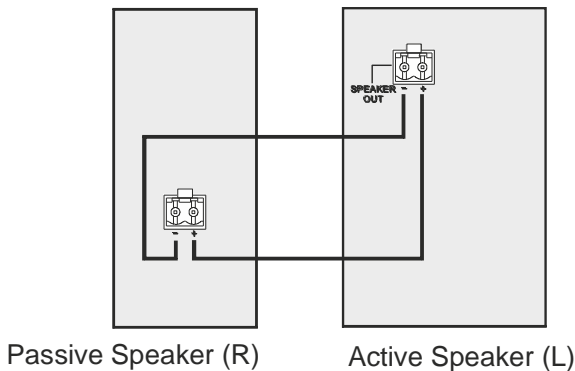


Figure 4: Connecting the Active Speaker to the Passive Speaker

2. Connect the audio source (for example, a CD or a DVD player and so on) to one of the INPUT connectors on the active speaker.
3. Connect the power.
4. Adjust the volume on the input source.
5. Adjust the volume control on the rear side control panel.
6. Adjust the bass and treble control on the rear side control panel.
7. If required, connect an additional set of speakers by connecting the LOOP OUTPUT connector to the input of a second active speaker.
8. If required, mount the speaker on the wall via the removable mounting brackets. To do so:
  - Mark the location of the mounting holes
  - Screw the mounting screws (not included in the package) into the mounting holes
  - Slide the mounting bracket over the mounting screws so that the mounting bracket is secured to the surface

## 6 Technical Specifications

Audio and Power	
DESCRIPTION:	2-way powered speaker
BUILT IN POWER AMPLIFIER:	2 x 30W RMS; 2 x 80W continuous program
FREQUENCY RESPONSE:	45Hz to 20kHz @ -10dB 100Hz to 20kHz @ $\pm 3$ dB
WOOFER:	5 1/4" polypropylene cone with rubber edge woofer
TWEETER	1/2" Mylar dome tweeter
SENSITIVITY:	85dB SPL, 1W @ 1m
MAX SPL:	Continuous: 105dB Peak: 110dB
POWER SOURCE:	90–240V AC 50/60Hz
CROSSOVER FREQUENCY:	8kHz
DIRECTIVITY FACTOR (Q):	5.8 averaged 1kHz to 10kHz
DIRECTIVITY INDEX (DI):	7.6dB averaged 1kHz to 10kHz
INPUT CONNECTORS:	Line level unbalanced stereo audio on a 3.5mm mini jack Line level balanced stereo audio on a terminal block connector Line level unbalanced stereo audio on left and right RCA connectors
OUTPUT CONNECTORS:	Speaker (to connect to the external passive speaker) 3.5mm mini jack lineout for optional sub-woofer 3.5mm mini jack Loop output
DAMPING FACTOR:	>100 @ 8 $\Omega$ /400Hz
S/N RATIO:	> 83dB
THD:	< 0.2%
CONTROLS:	Volume, bass and treble
INPUT POWER:	ON or AUTO
STANDBY MODE POWER CONSUMPTION:	0.7W
INPUTS SIGNAL FOR SYSTEM "WAKE-UP" FROM STANDBY MODE:	+8mV - +11 mV
Shipping and Installation	
MATERIALS:	Aluminum grill, steel brackets, ABS cabinet
WEIGHT PER SINGLE SPEAKER:	Active Speaker: 2.7kg (5.95lbs) approx. Passive Speaker 2.2 kg (4.85lbs) approx.
WEIGHT WITH MOUNTING KIT:	Active Speaker: 3.1kg (6.83lbs) approx. Passive Speaker: 2.6kg (5.73lbs) approx.
SHIPPING WEIGHT (FOR PAIR):	6kg (13.23lbs) approx.
DIMENSIONS:	18.3cm x 17cm x 24.4cm (7.2" x 6.7" x 9.6") W, D, H
DIMENSIONS with mounting brackets:	18.3cm x 17.2cm x 26.5cm (7.2" x 6.8" x 10.4") W, D, H
INSTALLATION CLEARANCE:	Front panel to wall (with mounting bracket): 22cm (8.7in) Back panel to wall (with mounting bracket): 4.5cm (1.8in)
ACCESSORIES:	1 pair of U-shaped rotating mounting brackets with 4 mounting knobs; 4m (13.12ft) power cord; 4m (13.12ft) loudspeaker cable; and a 2m (6.6ft) 3.5mm to 2 RCA cable
COLORS:	Available in white or black
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.

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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.

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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@kramereel.com](mailto:info@kramereel.com)



#### SAFETY WARNING

Disconnect the unit from the power supply before opening and servicing



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Rev:

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