



# KRAMER VM-3AN Mini Balanced Audio Distribution Amplifier User Manual

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**KRAMER VM-3AN Mini Balanced Audio Distribution Amplifier**



## 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! Our 1,000-plus different models now appear in 11 groups<sup>1</sup> that are clearly defined by function.

Thank you for purchasing your Kramer TOOLS™ VM-3AN Audio DA, VM-3SN s-Video DA, and/or VM-3VN Video DA.

### **These products are ideal for the following typical applications:**

- Audio duplication studios, delivering high-quality audio and video duplicates
- Broadcast and production studios for signal distribution
- Presentation and multimedia distribution
- Field distribution

### **The package includes the following items:**

- VM-3AN Audio DA, or VM-3SN s-Video DA, or VM-3VN Video DA
- Power adapter, this user manual<sup>2</sup>

## Getting Started

### **We recommend that you:**

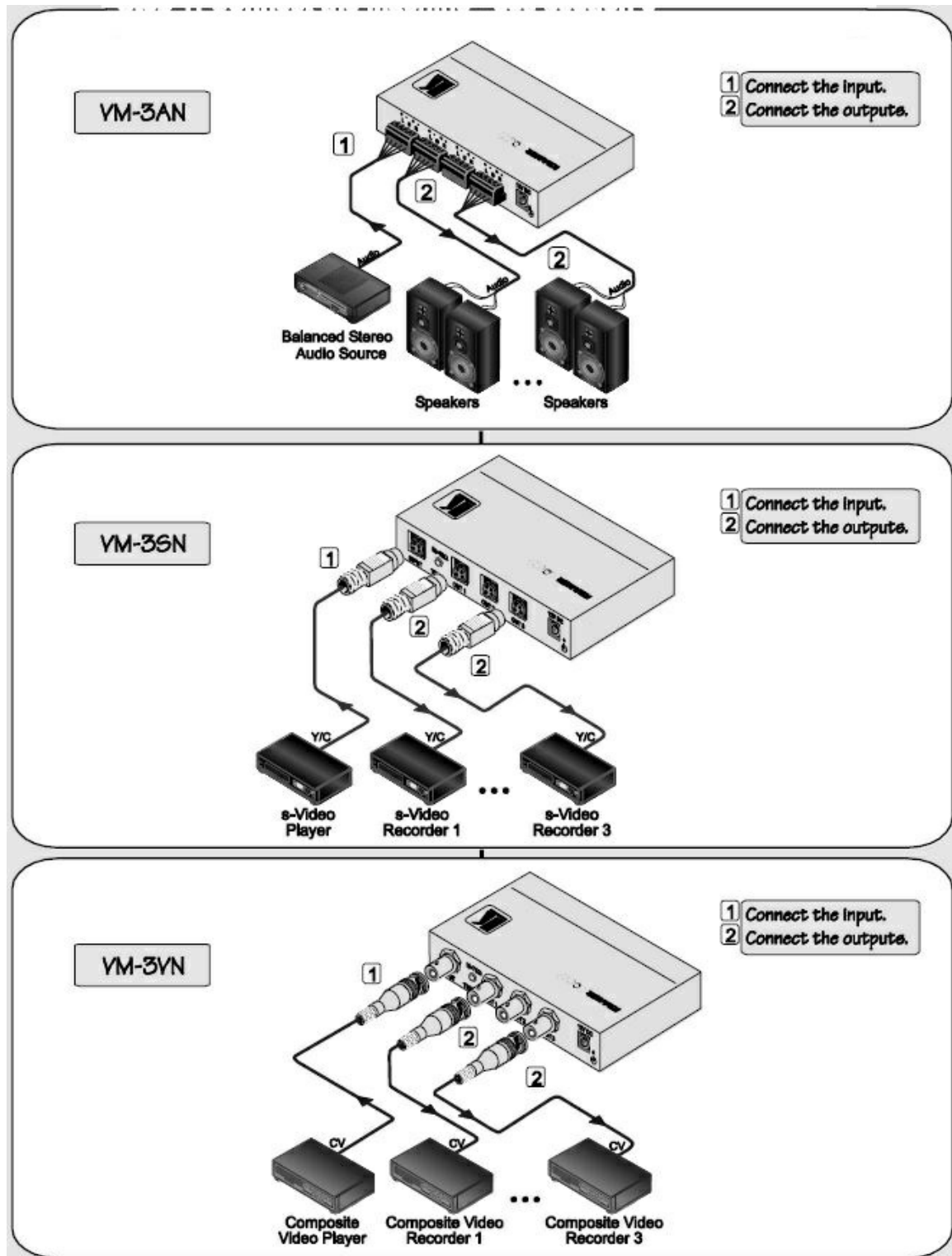
- Unpack the equipment carefully and save the original box and packaging materials for possible future shipment
- Review the contents of this user manual

- Use Kramer high-performance high-resolution cables<sup>3</sup>

## Quick Start

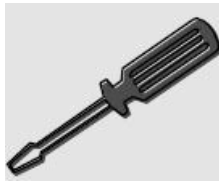
This quick start chart summarizes the basic setup and operation:

**Step 1:** Connect the machine – see section 5



**Step 2:** Connect the power

If required, adjust the following:



- VM-SAN – LEFT and RIGHT audio signal levels
- VM-3SN – Y and C signal levels
- VM-3VN – EQ and LEVEL

## Overview

**This section gives a summary of:**

- The VM-3AN Audio DA, see section 3.1
- The VM-3SN s-Video DA, see section 3.2
- The VM-3VN Video DA, see section 3.3
- Recommendations for achieving the best performance, see section 3.4

### VM-3AN Audio DA

The VM-3AN is a high-quality 1:3 balanced stereo audio distribution amplifier. It accepts one balanced stereo input on a removable terminal block and distributes the signal to three identical outputs on removable terminal blocks. Specifically, the VM-3AN features:

- Left and right signal level trimmers on the front panel
- 12V DC power

### VM-3SN s-Video DA

The VM-3SN is a high-quality 1:3 distribution amplifier for s-Video signals. It accepts one s-Video input on a 4-pin connector and distributes the signal to three identical outputs on 4-pin connectors. Specifically, the VM-3SN features:

- C and Y level trimmers on the front panel
- 12V DC power

### VM-3VN Video DA

The VM-3VN is a high-quality 1:3 distribution amplifier for composite video signals. It accepts one composite video input on a BNC connector and distributes the signal to three identical composite video outputs on BNC connectors. Specifically, the VM-3VN features:

- EQ and LEVEL trimmers on the front panel
- 12V DC power

## Achieving the Best Performance

To achieve the best performance:

- Use only good quality connection cables<sup>1</sup> to avoid interference, deterioration in signal quality due to poor matching, and elevated noise levels (often associated with low quality cables).
- Avoid interference from neighboring electrical appliances that may adversely influence signal quality and position your Kramer products 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<sup>2</sup>.

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

**Your Distribution Amplifier**

This section defines your:

- VM-3AN Audio DA, see section 4.1
- VM-3SN s-Video DA, see section 4.2
- VM-3VN Video DA, see section 4.3

**Your VM-3AN Audio DA**

Figure 1 and Table 1 define the VM-3AN:

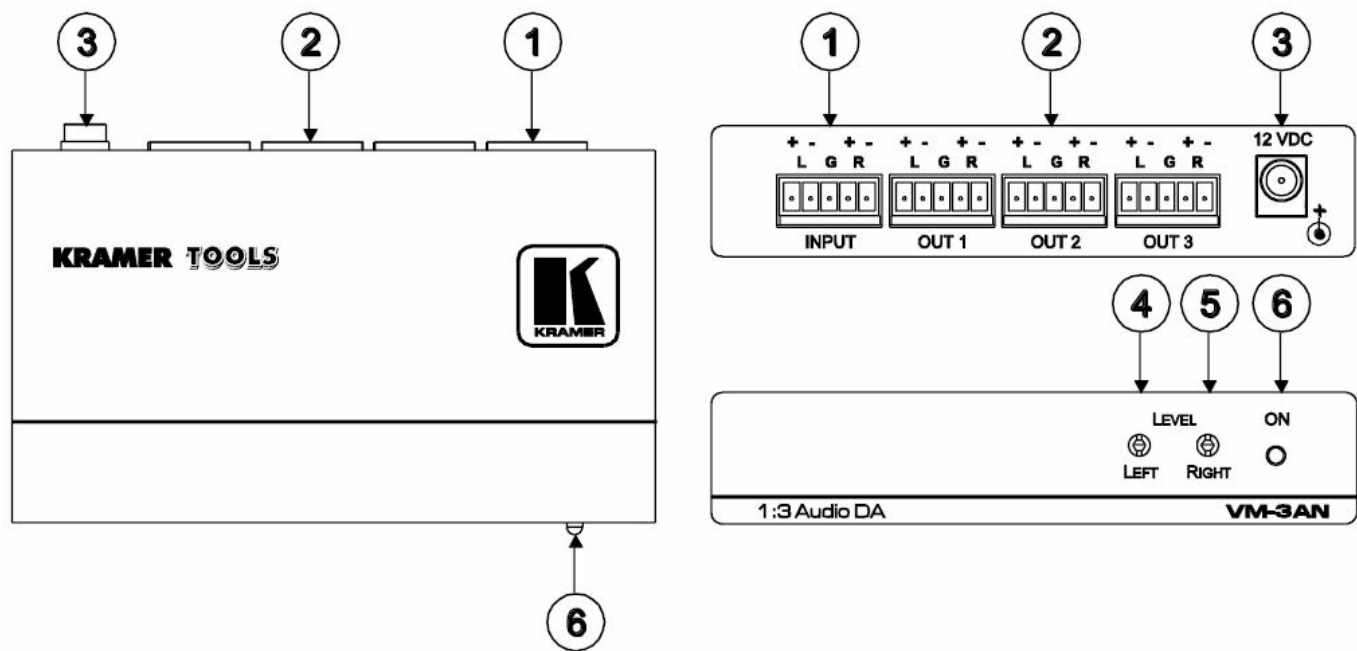


Figure 1: VM-3AN Audio DA

Table 1: VM-3AN Audio DA Features

#	Feature	Function
1	INPUT Detachable Terminal Block Connector	Connects to the balanced audio source
2	OUT Detachable Terminal Block Connector	Connects to the balanced audio acceptor (from 1 to 3)
3	12V DC	+12V DC connector for powering the unit
4	LEFT LEVEL Trimmer	Adjusts <sup>1</sup> the left output signal level
5	RIGHT LEVEL Trimmer	Adjusts <sup>1</sup> the right output signal level
6	ON LED	Illuminates when receiving power

**Your VM-3SN s-Video DA**

Figure 2 and Table 2 define the VM-3SN:

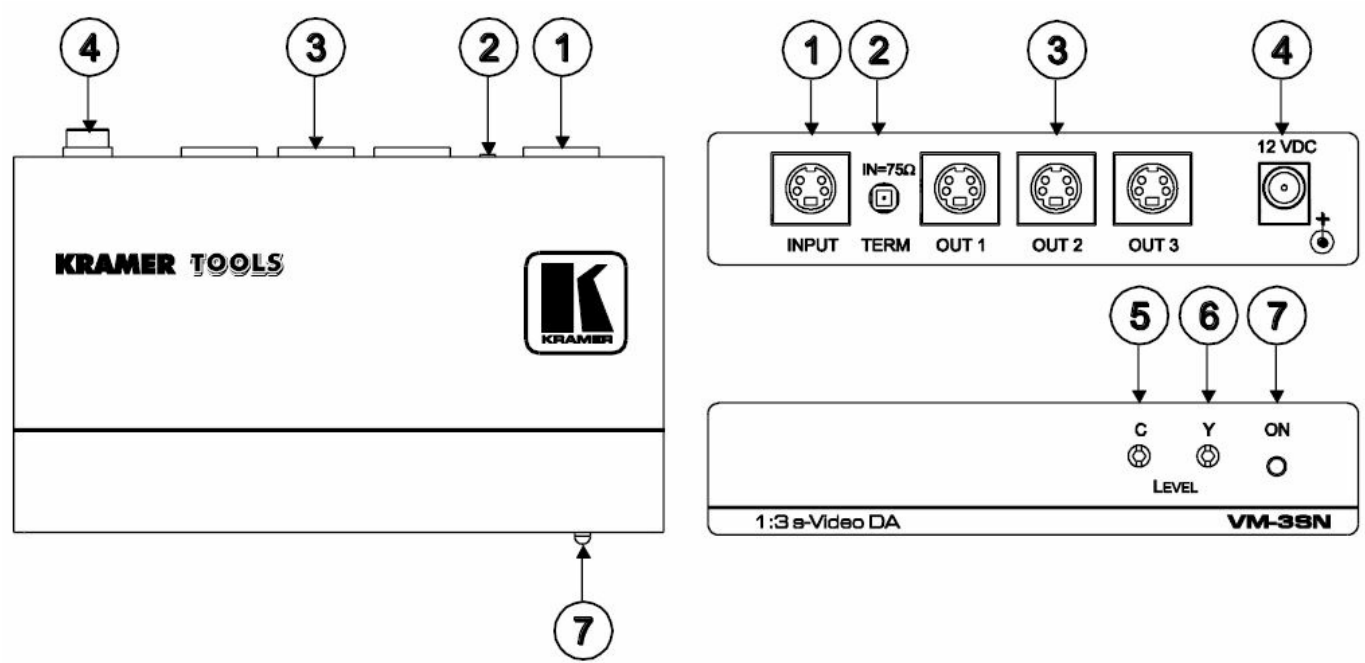


Figure 2: VM-3SN s-Video DA

**Table 2:** VM-3SN s-Video DA Features

#	Feature	Function
1	INPUT 4-pin Connector	Connects to the s-Video source
2	IN=75Ω TERM Pushbutton	Terminates the input with 75Ω
3	OUT 4-pin Connector	Connects to the audio acceptor (from 1 to 3)
4	12V DC	+12V DC connector for powering the unit
5	C LEVEL Trimmer	Adjusts <sup>1</sup> the chrominance output signal level for the s-Video output
6	Y LEVEL Trimmer	Adjusts <sup>1</sup> the luminance output signal level for the s-Video output
7	ON LED	Illuminates when receiving power

### Your VM-3VN Video DA

Figure 3 and Table 3 define the VM-3VN:

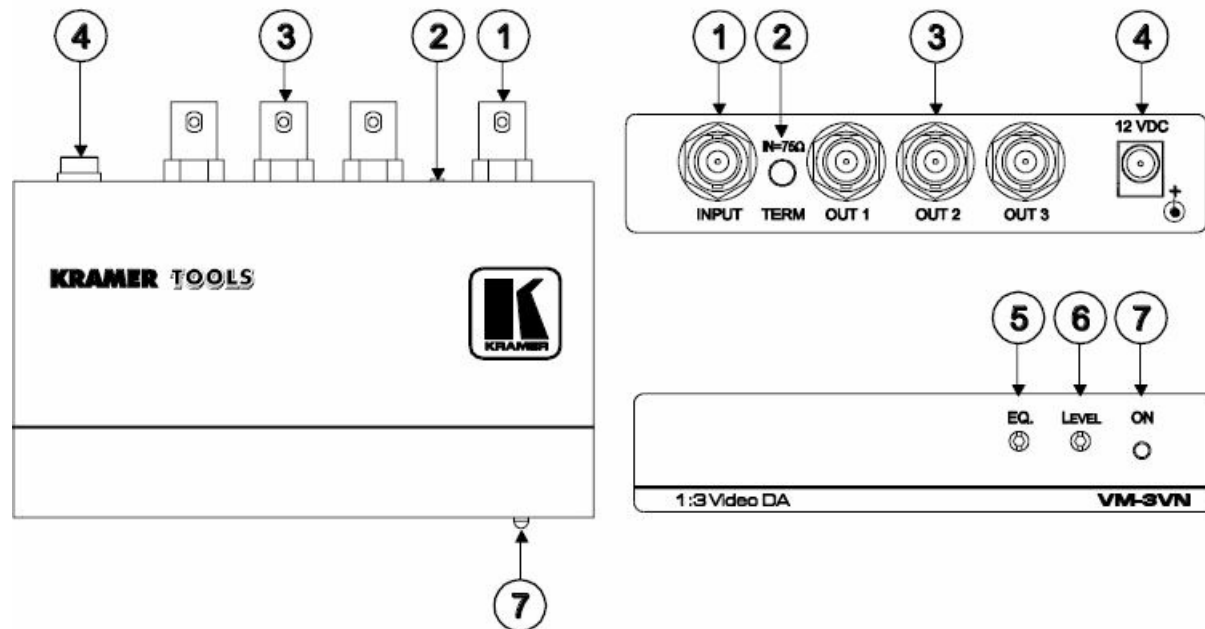


Figure 3: VM-3VN Video DA

Table 3: VM-3VN Video DA Features

#	Feature	Function
1	INPUT BNC Connector	Connects to the composite video source
2	IN=75Ω TERM Pushbutton	Terminates the input with 75Ω
3	OUT BNC Connector	Connects to the composite video acceptor (from 1 to 3)
4	12V DC	+12V DC connector for powering the unit
5	EQ Trimmer	Adjusts <sup>1</sup> the EQ. (equalization) compensation level for the composite video outputs
6	LEVEL Trimmer	Adjusts <sup>1</sup> signal level for the composite video outputs
7	ON LED	Illuminates when receiving power

## Connecting Your Distribution Amplifier

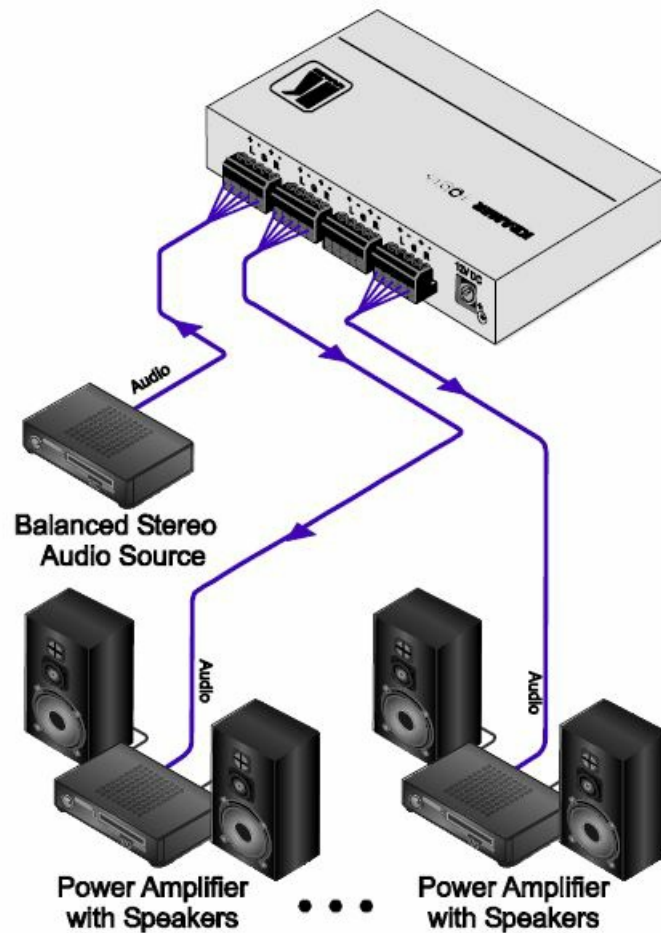
This section explains how to connect your:

- VM-3AN Audio DA, see section 5.1
- VM-3SN s-Video DA, see section 5.2
- VM-3VN Video DA, see section 5.3

### Connecting Your VM-3AN Audio DA

To connect 1 the VM-3AN, as illustrated in the example in Figure 4, do the following:





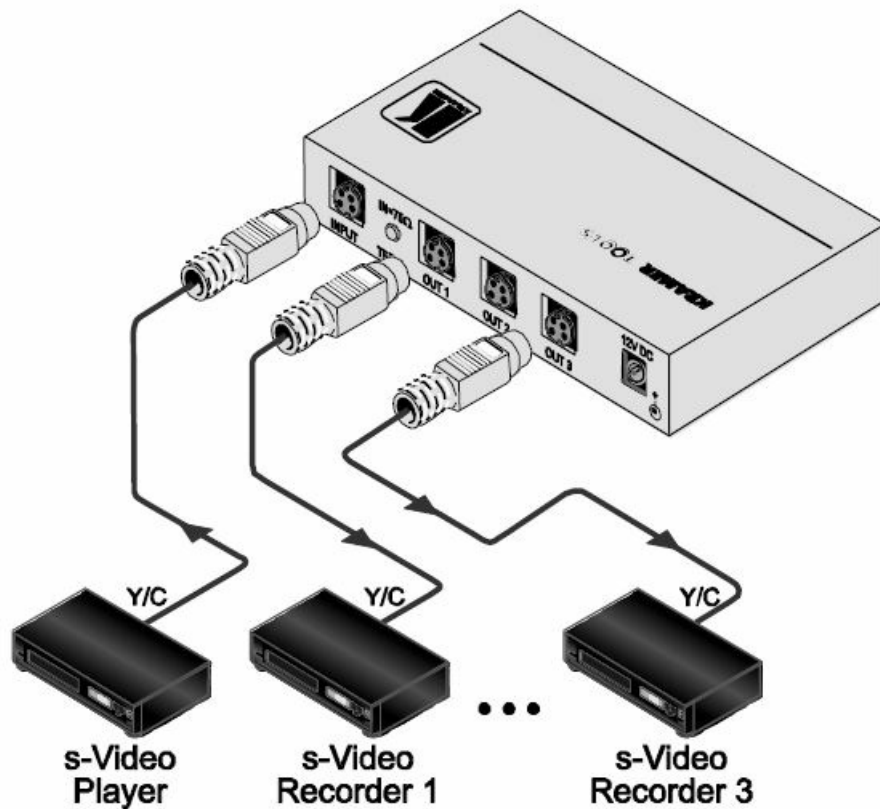
*Figure 4: Connecting the VM-3AN Audio Distributor*

1. Connect the balanced stereo audio source to the INPUT terminal block connector.
2. Connect the OUT terminal block connectors (from 1 to 3) to up to three balanced stereo audio acceptors<sup>2</sup> (for example, power amplifiers).
3. Connect the 12V DC power adapter to the power socket and connect the adapter to the mains electricity (not illustrated in Figure 4).
4. If required, adjust the audio signal levels by turning the LEFT and RIGHT level trimmers with a small screwdriver.

Switch OFF the power on each device before connecting it to your VM-3AN. After connecting your VM-3AN, switch on its power and then switch on the power on each device  
 You do not have to connect all the outputs

### **Connecting Your VM-3SN s-Video DA**

To connect<sup>1</sup> the VM-3SN, as illustrated in the example in Figure 5, do the following:



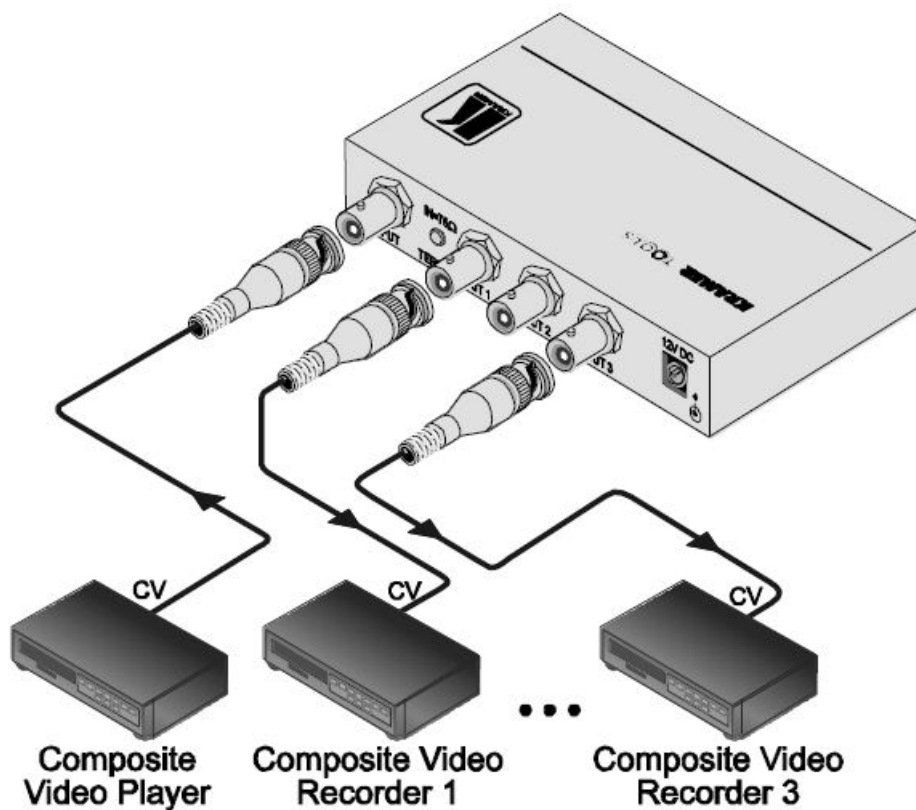
*Figure 5: Connecting the VM-3SN s-Video Distributor*

1. Connect the s-Video source (for example, an s-Video player) to the INPUT 4-pin connector.
2. Terminate the input by ensuring that the TERM switch is pressed to the IN position.
3. Connect the OUT 4-pin connectors (from 1 to 3) to up to three s-Videoacceptors<sup>2</sup> (for example, s-Video recorders).
4. Connect the 12V DC power adapter to the power socket and connect the adapter to the mains electricity (not illustrated in Figure 5).
5. If required, adjust output chrominance (C) and luminance (Y) signal levels by turning the appropriate trimmer with a small screwdriver.

Switch OFF the power on each device before connecting it to your VM-3SN. After connecting your VM-3SN, switch on its power and then switch on the power on each device  
You do not have to connect all the outputs

### **Connecting Your VM-3VN Video DA**

To connect<sup>1</sup> the VM-3VN, as illustrated in the example in Figure 6, do the following:



*Figure 6: Connecting the VM-3VN Video Distributor*

1. Connect the composite video source to the INPUT BNC connector.
2. Terminate the input by ensuring that the TERM switch is pressed to the IN position.
3. Connect the OUT BNC connectors (from 1 to 3) to up to three composite video acceptors<sup>2</sup>.
4. Connect the 12V DC power adapter to the power socket and connect the adapter to the mains electricity (not illustrated in Figure 6).
5. If required, adjust output equalization (EQ) and signal level (LEVEL) by turning the appropriate trimmer with a small screwdriver.

Switch OFF the power on each device before connecting it to your VM-3VN. After connecting your VM-3VN, switch on its power and then switch on the power on each device  
You do not have to connect all the outputs

## Technical Specifications

**Table 4 includes the technical specifications**

**Table 4:** Technical Specifications

	<b>VM-3AN</b>	<b>VM-3SN</b>	<b>VM-3VN</b>
INPUT:	1 balanced audio stereo on 5-pin terminal blocks	1 YC on a 4-pin connector	1 composite video on a BNC connector
OUTPUTS:	3 balanced audio stereo on 5-pin terminal blocks	3 YC on 4-pin connectors	3 composite video on BNC connectors
MAX. INPUT / OUTPUT LEVEL:	18.5Vpp	2Vpp, Y	1.8Vpp
BANDWIDTH (-3dB):	>100 kHz	135MHz	430MHz
DIFF GAIN:	—	0.03%	0.12%
DIFF PHASE:	—	0.03Deg	0.03Deg
K-FACTOR:	—	<0.05%	<0.05%
S/N RATIO:	90dB @1kHz	78dB @5MHz	74.3dB
CONTROL:	Output level control: -77 to +6dB, R+/-, L+/- channels	Y-level: -1.6 to +6.3dB; C-level: -0.4 to +7.6dB	Level: -1.6 to +6dB; Equalization: 0 to +6dB
COUPLING:	—	AC	AC
AUDIO THD + NOISE:	0.008%	—	—
AUDIO 2d HARMONIC:	0.001%	—	—
POWER SOURCE:	12V DC, 89mA	12V DC, 29mA	12V DC, 27mA
DIMENSIONS:	11.7cm x 6cm x 3.2cm (4.6" x 2.4" x 1.3") W, D, H		
WEIGHT:	0.28 kg (0.62 lbs.) approx.		
ACCESSORIES:	Power supply		
OPTIONS:	Rack adapter		

## 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 circuits) 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 OR 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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### **Other Conditions**

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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.


**Kramer Electronics, Ltd.**

- Web site: [www.kramerelectronics.com](http://www.kramerelectronics.com)
- E-mail: [info@kramerel.com](mailto:info@kramerel.com)

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## Documents / Resources

<p>Kramer Electronics, Ltd.</p>  <p>USER MANUAL</p> <p>Models: VM-3AN, 117-1000-001 VM-3AN, 117-1000-002 VM-3AN, 117-1000-003</p>	<p><a href="#">KRAMER VM-3AN Mini Balanced Audio Distribution Amplifier</a> [pdf] User Manual VM-3AN Mini Balanced Audio Distribution Amplifier, VM-3AN, Mini Balanced Audio Distribution Amplifier, Balanced Audio Distribution Amplifier, Audio Distribution Amplifier, Distribution Amplifier, Amplifier</p>
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## References

- [User Manual](#)