MODEL:

VM-50AN
1:5 Audio Distributor

P/N: 2900-000050 Rev 4
VM-50AN 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 to download the latest manual or scan the QR code on the left.

Step 1: Check what’s in the box

- VM-50AN 1:5 Audio Distributor
- Power supply (12V DC)
- 4 Rubber feet
- 1 Quick Start sheet

Save the original box and packaging materials in case you need to return your VM-50AN for service.

Step 2: Install the VM-50AN

Attach the rubber feet and place on a table or mount the VM-50AN in a rack (using an optional RK-1 rack mount).

Step 3: Connect the inputs and outputs

Always switch off the power on each device before connecting it to your VM-50AN.

Always use Kramer high-performance cables for connecting AV equipment to the VM-50AN.

Step 4: Connect the power

Connect the 12V DC power adapter to the VM-50AN and plug the adapter into the mains electricity.

Step 5: Operate the VM-50AN

Set the input mode to balanced or unbalanced stereo. Using a small screwdriver, adjust the output level.
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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 VM-50AN 1:5 Audio Distributor, which is ideal for the following typical applications:

- Video/audio duplication studios and retail outlets
- Any audio system requiring multiple outputs from a single source
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 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 VM-50AN 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 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/.
3 Overview

The **VM-50AN** is a high-performance distribution amplifier for balanced and unbalanced stereo audio signals. It takes one balanced or unbalanced stereo input and distributes the signal simultaneously to ten stereo outputs (five balanced and five unbalanced).

In addition, the **VM-50AN** features:

- A balanced/unbalanced input selection button
- Left and right level (gain) controls
- Operation as a stand-alone distributor, or as a companion to other Kramer “50” series products like the **VM-50V** video DA, or the **VM-50YC** s-Video DA

The **VM-50AN** is housed in a desktop sized enclosure. Two units can be rack mounted side-by-side with the optional RK-1 adapter in a 1U rack space.

3.1 Defining the VM-50AN 1:5 Audio Distributor

This section defines the **VM-50AN**.

![Diagram of VM-50AN 1:5 Audio Distributor](image)

Figure 1: VM-50AN 1:5 Audio Distributor
<table>
<thead>
<tr>
<th>#</th>
<th>Feature</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>POWER Switch</td>
<td>Illuminated switch supplying power to the unit</td>
</tr>
<tr>
<td>2</td>
<td>INPUT MODE BAL/UNBAL Button</td>
<td>When released, selects the balanced stereo audio input when pushed in, selects the unbalanced stereo audio</td>
</tr>
<tr>
<td>3</td>
<td>RIGHT LEVEL Trimmer</td>
<td>Adjusts the right output signal level (use a small screwdriver)</td>
</tr>
<tr>
<td>4</td>
<td>LEFT LEVEL Trimmer</td>
<td>Adjusts the left output signal level (use a small screwdriver)</td>
</tr>
<tr>
<td>5</td>
<td>INPUT 3.5mm Mini Plug Connector</td>
<td>Connects to the unbalanced audio source</td>
</tr>
<tr>
<td>6</td>
<td>INPUT Terminal Block Connector</td>
<td>Connects to the balanced audio source</td>
</tr>
<tr>
<td>7</td>
<td>OUT 3.5mm Mini Plug Connector</td>
<td>Connects to the unbalanced audio acceptor (from 1 to 5)</td>
</tr>
<tr>
<td>8</td>
<td>OUT Terminal Block Connector</td>
<td>Connects to the balanced audio acceptor (from 1 to 5)</td>
</tr>
<tr>
<td>9</td>
<td>12 VDC 200mA</td>
<td>+12V DC connector for powering the unit</td>
</tr>
</tbody>
</table>
Always switch off the power to each device before connecting it to your VM-50AN. After connecting your VM-50AN, connect its power and then switch on the power to each device.

This section describes how to connect the VM-50AN as:

- A balanced stereo 1:5 audio distributor, see Section 4.1
- An unbalanced stereo 1:5 audio distributor, see Section 4.2
- A 1:10 audio distributor, see Section 4.3

4.1 Connecting the VM-50AN as a Balanced Stereo 1:5 Audio Distributor

To connect and operate the VM-50AN as a balanced stereo 1:5 audio distributor, as the example in Figure 2 illustrates, do the following:

1. Connect a balanced stereo audio source (for example, a balanced stereo player) to the INPUT terminal block connector.

2. Connect up to five balanced stereo audio acceptors (for example, balanced stereo recorders) to the OUT terminal block connectors. You do not have to connect all the outputs.

3. Connect the 12V DC power adapter to the power socket, connect the adapter to the mains electricity, and then turn on the power switch.

4. Release the BAL/UNBAL INPUT MODE button to select balanced stereo audio operation.

5. Adjust the right and/or left output signal level, if required. Insert a screwdriver into the hole and carefully rotate it, to trim the level.
4.2 Connecting the VM-50AN as an Unbalanced Stereo 1:5 Audio Distributor

To connect the VM-50AN as an unbalanced stereo 1:5 audio distributor, as the example in Figure 3 illustrates, do the following:

1. Connect the unbalanced stereo audio source (for example, a PC sound card) to the INPUT mini 3.5mm socket.

2. Connect up to five unbalanced stereo audio acceptors (for example, balanced stereo recorders) to the OUT mini 3.5mm sockets. You do not have to connect all the outputs.

3. Connect the 12V DC power adapter to the power socket, connect the adapter to the mains electricity, and then turn on the power switch.

4. Push in the BAL/UNBAL INPUT MODE button to select unbalanced stereo audio operation.

5. Adjust the right and/or left output signal level, if required. Insert a screwdriver into the hole and carefully rotate it, to trim the level.
4.3 Connecting the VM-50AN as a 1:10 Audio Distributor

To connect the VM-50AN as a 1:10 audio distributor, as the example in Figure 4 illustrates, do the following:

**Warning:** Both formats cannot be connected to the machine at the same time, as they share some of the input connections

1. Connect either **(but not both simultaneously)** the:
   - Balanced stereo audio source to the INPUT terminal block connector (and release the BAL/UNBAL INPUT MODE button to select balanced stereo audio operation), or
   - Unbalanced stereo audio source to the INPUT mini 3.5mm socket (and push in the BAL/UNBAL INPUT MODE button to select unbalanced stereo audio operation)

2. Connect up to 10 acceptors, as follows:
   - 5 balanced stereo audio acceptors to the OUT terminal block connectors, **and**
   - 5 unbalanced stereo audio acceptors to the OUT mini 3.5mm sockets
3. Connect the 12V DC power adapter to the power socket, connect the adapter to the mains electricity, and then turn on the power switch.

4. Adjust the right and/or left output signal level, if required. Insert a screwdriver into the hole and carefully rotate it, to trim the level.

Figure 4: Connecting the VM-50AN as a 1:10 Audio Distributor
# Technical Specifications

| INPUTS: | 1 balanced stereo audio, +4dBm 50kΩ on detachable terminal block connector  
1 unbalanced stereo audio, 1Vpp/50kΩ on mini 3.5mm socket |
|---------|-------------------------------------------------------------------------------------------------------------------|
| OUTPUTS: | 5 balanced stereo audio, +4dBm 50Ω on detachable terminal block connectors  
5 unbalanced stereo audio, +22dBm 470Ω on mini 3.5mm sockets |
| MAX. OUTPUT LEVEL: | >24dBm |
| MAX. INPUT LEVEL: | 18dB |
| BANDWIDTH: | >40kHz; fully loaded |
| S/N RATIO: | 84dB, unweighted |
| CONTROLS: | Level (for right and left): 0.4dB to 9.5dB |
| COUPLING: | Input: AC; Output: DC |
| AUDIO THD + NOISE: | 0.002% @1kHz, balanced output |
| AUDIO 2nd HARMONIC: | 0.022% @1kHz, balanced output |
| POWER CONSUMPTION: | 12V DC, 200mA |
| OPERATING TEMPERATURE: | 0°C to +40°C (32°F to 104°F) |
| STORAGE TEMPERATURE: | -40°C to +70°C (-40°F to 158°F) |
| HUMIDITY: | 10% to 90%, RHL non-condensing |
| DIMENSIONS: | 16.5cm x 12cm x 4.5cm (6.5” x 4.7” x 1.7”, W, D, H) |
| WEIGHT: | 0.6kg (1.3lbs) approx. |
| ACCESSORIES: | Power supply |
| OPTIONS: | RK-1 19” rack adapter |

Specifications are subject to change without notice at [http://www.kramerelectronics.com](http://www.kramerelectronics.com)
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SAFETY WARNING
Disconnect the unit from the power supply before opening and servicing