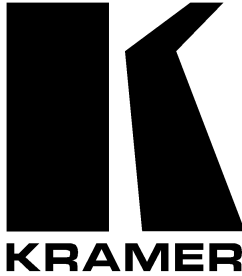


Kramer Electronics, Ltd.



USER MANUAL

Model:

VM-25

1:25 Video Distribution Amplifier

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1 Introduction

Welcome to Kramer Electronics (since 1981): a world of unique, creative and affordable solutions to the infinite range of problems that confront the video, audio and presentation professional on a daily basis. In recent years, we have redesigned and upgraded most of our line, making the best even better! Our 350-plus different models now appear in 8 Groups¹, which are clearly defined by function.

Congratulations on purchasing your Kramer **VM-25 1:25 Video Distribution Amplifier**. The **VM-25** is ideal for:

- Composite video signal distribution
- Video duplication studios, delivering undiminished quality duplicates

Each package includes the following items:

- **VM-25 1:25 Video Distribution Amplifier**
- Power cord
- This user manual²

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
- Use Kramer high performance high resolution cables³

3 Overview

The **VM-25** is a high quality 1:25 distribution amplifier for composite video. The **VM-25** accepts a composite video input and distributes the signal to 25 identical outputs, using RCA connectors.

1 GROUP 1: Distribution Amplifiers; GROUP 2: Video and Audio Switchers, Matrix Switchers and Controllers; GROUP 3: Video, Audio, VGA/XGA Processors; GROUP 4: Interfaces and Sync Processors; GROUP 5: Twisted Pair Interfaces; GROUP 6: Accessories and Rack Adapters; GROUP 7: Scan Converters and Sealers; and GROUP 8: Cables and Connectors

2 Download up-to-date Kramer user manuals from our Web site at <http://www.kramerelectronics.com>

3 The complete list of Kramer cables is on our Web site at <http://www.kramerelectronics.com>

In particular, the **VM-25**:

- Includes a looping connector for connecting to a local monitor, other acceptor, or for forming larger systems¹
- Has a video bandwidth of more than 430MHZ, ensuring transparent performance with typical video sources
- Has front panel video trimmer controls² for output level (LEVEL) and cable equalization (EQ.)

Achieving the best performance means:

- Connecting only good quality connection cables, thus avoiding interference, deterioration in signal quality due to poor matching, and elevated noise levels (often associated with low quality cables)
- Avoiding interference from neighboring electrical appliances and positioning your **VM-25** away from moisture, excessive sunlight and dust

Figure 1 and Table 1 define the **VM-25 1:25 Video Distribution Amplifier**:

¹ For example, you can connect 3 VM-25 units to make a 1:75 video distribution amplifier. See section 4.2 for details

² The video outputs are arranged in two blocks of 5 outputs (outputs 1 to 5, and outputs 6 to 10). Each block can be separately trimmed for output level and cable equalization (EQ.) thus achieving different compensations for different cable lengths

Overview

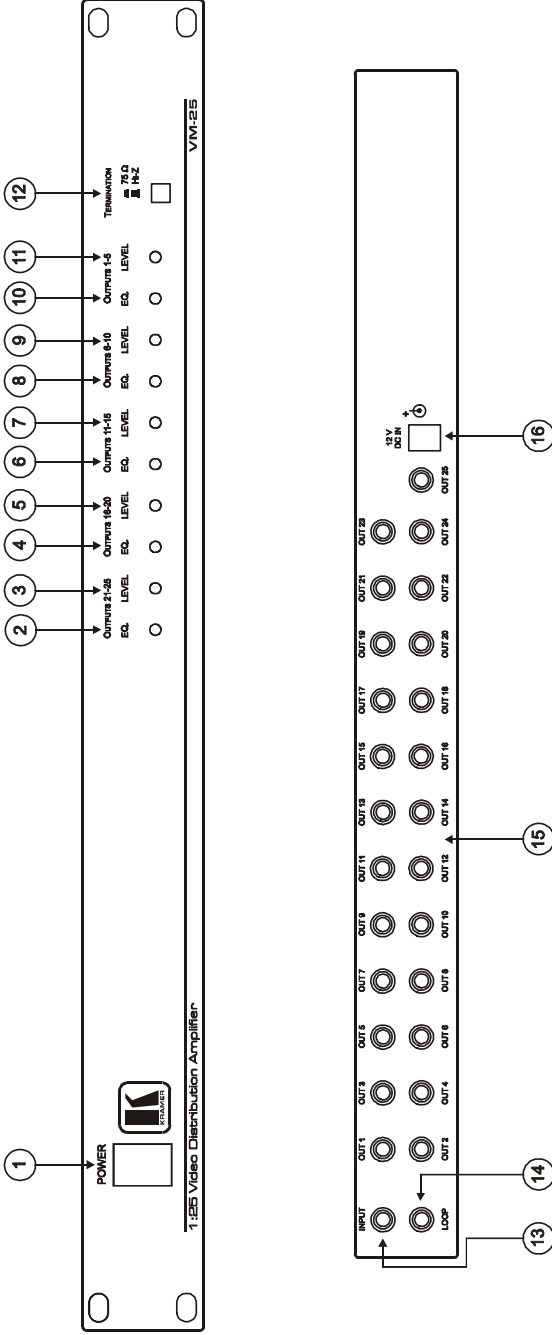


Figure 1: VM-25 1:25 Video Distribution Amplifier

Table 1: Front Panel VM-25 Video Distribution Amplifier Features

#	Feature	Function
1	POWER Switch	Illuminated switch supplying power to the unit
2	EQ. Trimmer	Adjusts ¹ the video EQ. (equalization) compensation of outputs 21 to 25
3	LEVEL Trimmer	Adjusts ¹ the video signal level of outputs 21 to 25
4	EQ. Trimmer	Adjusts ¹ the video EQ. (equalization) compensation of outputs 16 to 20
5	LEVEL Trimmer	Adjusts ¹ the video signal level of outputs 16 to 20
6	EQ. Trimmer	Adjusts ¹ the video EQ. (equalization) compensation of outputs 11 to 15
7	LEVEL Trimmer	Adjusts ¹ the video signal level of outputs 11 to 15
8	EQ. Trimmer	Adjusts ¹ the video EQ. (equalization) compensation of outputs 6 to 10
9	LEVEL Trimmer	Adjusts ¹ the video signal level of outputs 6 to 10
10	EQ. Trimmer	Adjusts ¹ the video EQ. (equalization) compensation of outputs 1 to 5
11	LEVEL Trimmer	Adjusts ¹ the video signal level of outputs 1 to 5
12	TERMINATION Button	Pushing in selects 75Ω, releasing selects Hi-Z ²

Table 2: Rear Panel VM-25 Video Distribution Amplifier Features

#	Feature	Function
13	INPUT RCA Connector	Connects to the video source
14	LOOP RCA Connector	For looping (if required)
15	OUTRCA Connectors	Connect to the composite video acceptors (from 1 to 25)
16	12 V DC IN	+12V DC connector for powering the unit

4 Using the VM-25 Video Distribution Amplifier

You can connect:

- A single **VM-25** unit (see section 4.1)
- Several **VM-25** units to increase the number of outputs (see section 4.2)

4.1 Connecting a VM-25 Video Distribution Amplifier

To connect the **VM-25** as a 1:25 video DA³ (see Figure 2), do the following⁴:

1. Connect a composite video source (for example, a composite video player) to the INPUT RCA connector.
2. Connect up to 25 OUT RCA connectors⁵ to the video acceptors (for example, composite video displays).

1 Insert a screwdriver into the hole and carefully rotate it, to trim the level

2 For looping, select Hi-Z

3 DA is Distribution Amplifier

4 Switch OFF the power on each device before connecting it to your VM-25. After connecting your VM-25, switch on its power and then switch on the power on each device

5 As required. Up to 25 outputs can be connected on the VM-25. Not all outputs need to be connected

3. Connect the 12V DC power adapter to the power socket on the **VM-25**, and plug the adapter into the mains electricity socket.
4. Push in the **TERMINATION** button¹ to terminate the line to 75Ω.
5. If required, adjust² the video trimmer controls³ for output signal level and/or cable compensation equalization level.

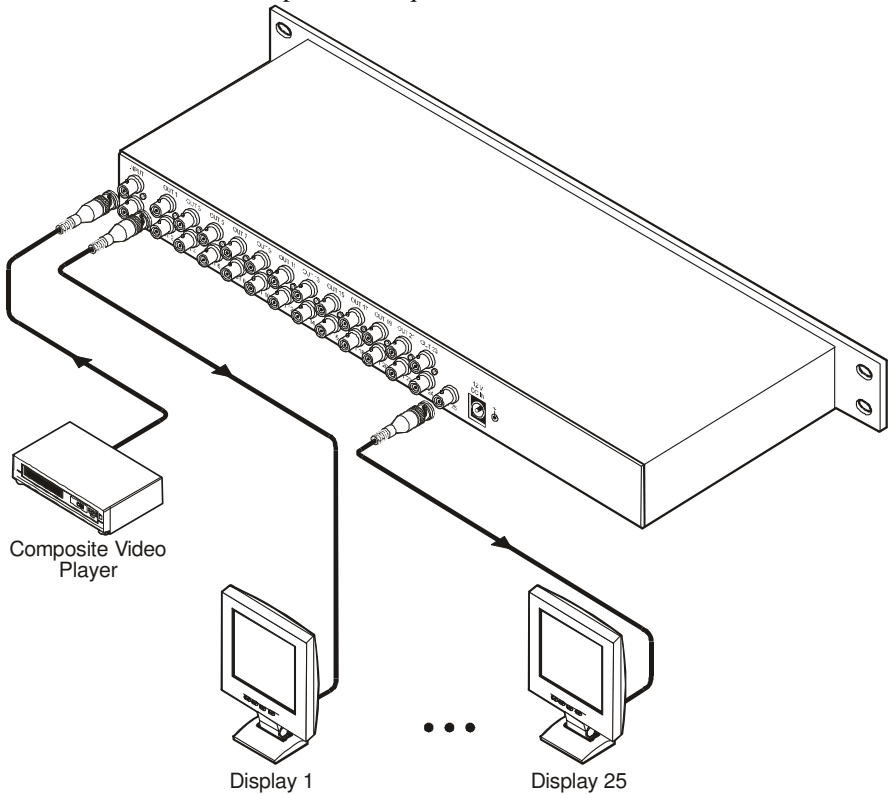


Figure 2: Connecting the VM-25

1 Since the LOOP output is not being used in this example

2 Insert a screwdriver into the hole and carefully rotate it, to trim the level

3 The video outputs are arranged in five blocks of 5 outputs (outputs 1 to 5, outputs 6 to 10, outputs 11 to 15, outputs 16 to 20 and outputs 21 to 25). Each block can be separately trimmed for output level and cable equalization (EQ.) thus achieving different compensations for different cable lengths

4.2 Increasing the Outputs

You can increase the number of outputs by interconnecting **VM-25** units. The example in Figure 3 illustrates how to connect three units to increase the number of outputs from 25 to 75.

To form a 1:75 video DA, do the following¹:

1. Connect a video source (for example, a composite video player) to the INPUT RCA connector of the first **VM-25** unit.
2. Connect the video LOOP RCA connector of the:
 - First **VM-25** unit to the INPUT RCA connector of the second **VM-25** unit
 - Second **VM-25** unit to the INPUT RCA connector of the third **VM-25** unit
3. Connect the 25 OUT RCA connectors of the:
 - First **VM-25** unit to the video acceptors² 1 to 25
 - Second **VM-25** unit to the video acceptors² 26 to 50
 - Third **VM-25** unit to the video acceptors² 51 to 75
4. On the first and second **VM-25** units, release the TERMINATION button. On the third **VM-25** unit, push in the TERMINATION button to terminate the line to 75Ω.
5. On each **VM-25** unit:
 - Connect the 12V DC power adapter to the power socket on the **VM-25**, and plug the adapter into the mains electricity socket (not shown in Figure 3)
 - If required, adjust³ the video trimmer controls⁴ for output signal level and/or cable compensation equalization level

1 Switch OFF the power on each device before connecting it to your VM-25 units. After connecting the VM-25 units, switch on their power and then switch on the power on each device

2 For example, composite video displays

3 Insert a screwdriver into the hole and carefully rotate it, to trim the level

4 The video outputs are arranged in five blocks of 5 outputs (outputs 1 to 5, outputs 6 to 10, outputs 11 to 15, outputs 16 to 20 and outputs 21 to 25). Each block can be separately trimmed for output level and cable equalization (EQ.) thus achieving different compensations for different cable lengths

Using the VM-25 Video Distribution Amplifier

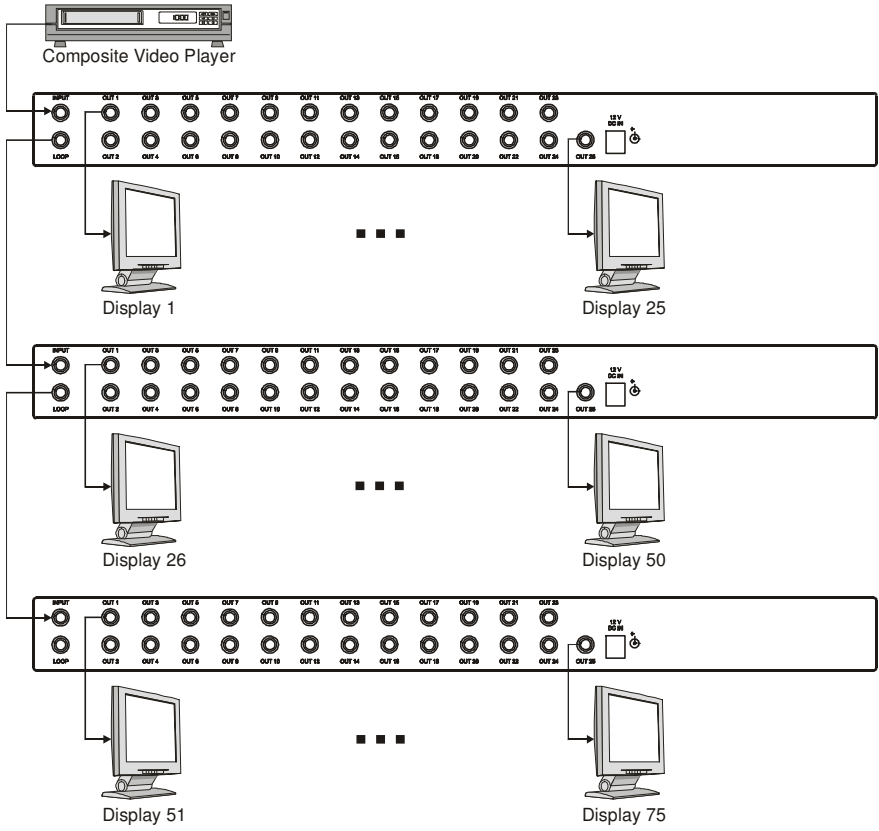


Figure 3: Increasing the Outputs: Arranging a 1:75 Video DA

5 Technical Specifications

Table 3 includes the technical specifications:

Table 3: Technical Specifications¹ of the VM-25 Video Distribution Amplifier

INPUTS:	1 composite video, 1 looping on RCA connectors
OUTPUTS:	25 composite video, on RCA connectors
MAX. OUTPUT LEVEL:	1.7Vpp
BANDWIDTH (-3dB):	433MHz
DIFF. GAIN:	0.08%
DIFF. PHASE:	0.005 Deg.
K-FACTOR:	<0.05%
S/N RATIO:	74dB RMS
CONTROLS:	Front panel accessible trimmers for video level (-1.2dB to +6.2dB) and EQ. (0dB to +8. dB) @ 50 MHz
COUPLING:	AC
POWER SOURCE:	12VDC x 162 mA
DIMENSIONS:	19-inch (W), 7-inch (D), 1U (H)
WEIGHT:	2.1kg (4.7 lbs.) approx.
ACCESSORIES:	Power supply

¹ Specifications are subject to change without notice

LIMITED WARRANTY

Kramer Electronics (hereafter *Kramer*) warrants this product free from defects in material and workmanship under the following terms.

HOW LONG IS THE WARRANTY

Labor and parts are warranted for three years from the date of the first customer purchase.

WHO IS PROTECTED?

Only the first purchase customer may enforce this warranty.

WHAT IS COVERED AND WHAT IS NOT COVERED

Except as below, this warranty covers all defects in material or workmanship in this product. The following are not covered by the warranty:

1. Any product which is not distributed by Kramer, or which is not purchased from an authorized Kramer dealer. If you are uncertain as to whether a dealer is authorized, please contact Kramer at one of the agents listed in the Web site www.kramerelectronics.com.
2. Any product, on which the serial number has been defaced, modified or removed.
3. Damage, deterioration or malfunction resulting from:
 - i) Accident, misuse, abuse, neglect, fire, water, lightning or other acts of nature
 - ii) Product modification, or failure to follow instructions supplied with the product
 - iii) Repair or attempted repair by anyone not authorized by Kramer
 - iv) Any shipment of the product (claims must be presented to the carrier)
 - v) Removal or installation of the product
 - vi) Any other cause, which does not relate to a product defect
 - vii) Cartons, equipment enclosures, cables or accessories used in conjunction with the product

WHAT WE WILL PAY FOR AND WHAT WE WILL NOT PAY FOR

We will pay labor and material expenses for covered items. We will not pay for the following:

1. Removal or installations charges.
2. Costs of initial technical adjustments (set-up), including adjustment of user controls or programming. These costs are the responsibility of the Kramer dealer from whom the product was purchased.
3. Shipping charges.

HOW YOU CAN GET WARRANTY SERVICE

1. To obtain service on you product, you must take or ship it prepaid to any authorized Kramer service center.
2. Whenever warranty service is required, the original dated invoice (or a copy) must be presented as proof of warranty coverage, and should be included in any shipment of the product. Please also include in any mailing a contact name, company, address, and a description of the problem(s).
3. For the name of the nearest Kramer authorized service center, consult your authorized dealer.

LIMITATION OF IMPLIED WARRANTIES

All implied warranties, including warranties of merchantability and fitness for a particular purpose, are limited in duration to the length of this warranty.

EXCLUSION OF DAMAGES

The liability of Kramer for any effective products is limited to the repair or replacement of the product at our option. Kramer shall not be liable for:

1. Damage to other property caused by defects in this product, damages based upon inconvenience, loss of use of the product, loss of time, commercial loss; or:
2. Any other damages, whether incidental, consequential or otherwise. Some countries may not allow limitations on how long an implied warranty lasts and/or do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations and exclusions may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights, which vary from place to place.

NOTE: All products returned to Kramer for service must have prior approval. This may be obtained from your dealer. This equipment has been tested to determine compliance with the requirements of:

- EN-50081: "Electromagnetic compatibility (EMC);
generic emission standard.
Part 1: Residential, commercial and light industry"
- EN-50082: "Electromagnetic compatibility (EMC) generic immunity standard.
Part 1: Residential, commercial and light industry environment".
- CFR-47: FCC Rules and Regulations:
Part 15: "Radio frequency devices
Subpart B – Unintentional radiators"

CAUTION!

- ☒ Servicing the machines can only be done by an authorized Kramer technician. Any user who makes changes or modifications to the unit without the expressed approval of the manufacturer will void user authority to operate the equipment.
- ☒ Use the supplied DC power supply to feed power to the machine.
- ☒ Please use recommended interconnection cables to connect the machine to other components.





**For the latest information on our products and a list of Kramer distributors, visit our Web site: www.kramerelectronics.com, where updates to this user manual may be found
We welcome your questions, comments and feedback.**



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