

**Kramer Electronics, Ltd.**



# **USER MANUAL**

**Model:**

**VS-6EIII**

*4x4 Video Audio Matrix Switcher*

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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 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 **VS-6EIII 4x4 Video Audio Matrix Switcher**. This product is ideal for:

- Video production studios, delivering undiminished quality video and audio outputs
- CCTV and other monitoring applications
- Video showrooms, stores and points of sale for system demonstration and comparison

The package includes the following items:

- **VS-6EIII 4x4 Video Audio Matrix Switcher**
- Power supply (12V DC)
- This user manual<sup>2</sup>

## 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 cables<sup>3</sup>

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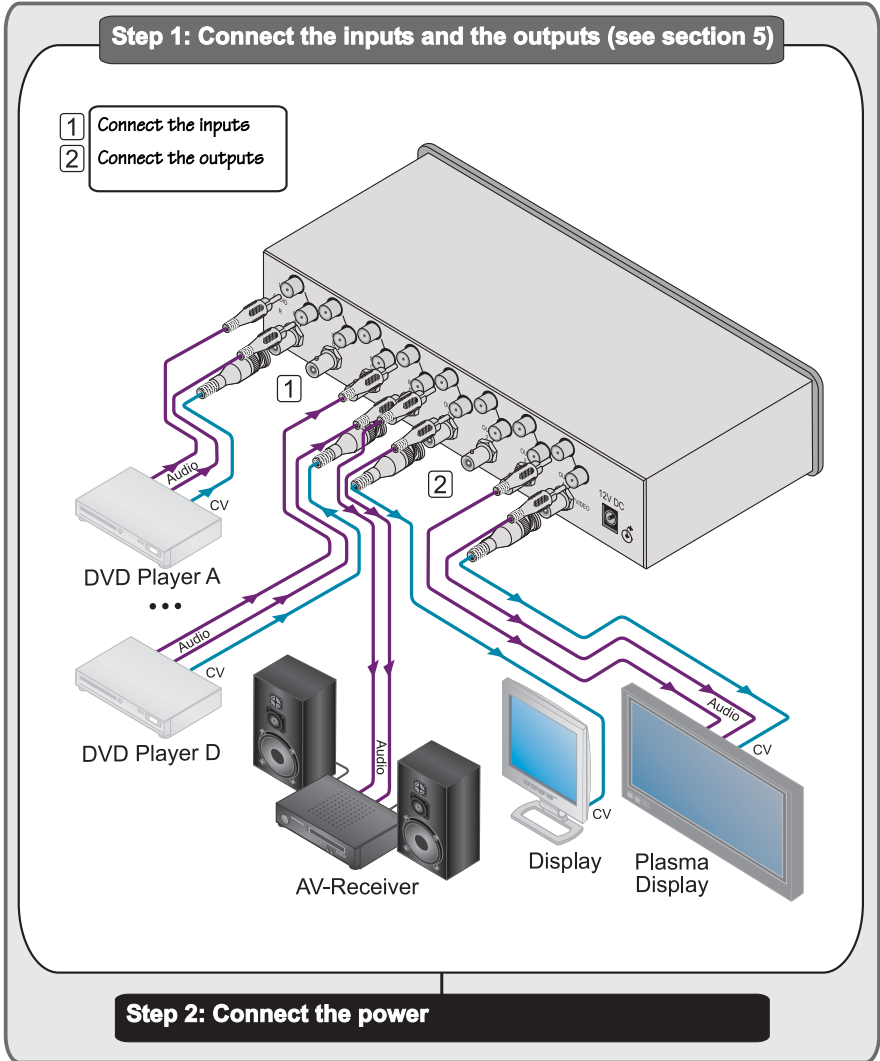
1 GROUP 1: Distribution Amplifiers; GROUP 2: Switchers and Matrix Switchers; GROUP 3: Control Systems; GROUP 4: Format/Standards Converters; GROUP 5: Range Extenders and Repeaters; GROUP 6: Specialty AV Products; GROUP 7: Scan Converters and Scalers; GROUP 8: Cables and Connectors; GROUP 9: Room Connectivity; GROUP 10: Accessories and Rack Adapters; GROUP 11: Sierra Products

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>

## 2.1 Quick Start

This quick start chart summarizes the basic setup and operation steps.




### 3 Overview

The **VS-6EIII** is a high quality *4x4 Video Audio Matrix Switcher* for composite video and audio stereo signals. It is a true matrix switcher, letting you simultaneously route any input to any or all outputs. In particular, the **VS-6EIII 4x4 Video Audio Matrix Switcher** features:

- 4 rotary input selector knobs
- Automatic switching of the stereo audio signals with the video signals (audio-follow-video), when switching an input to an output

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 **VS-6EIII** away from moisture, excessive sunlight and dust

	<b>Caution:</b> No operator serviceable parts inside unit
	<b>Warning:</b> Use only the Kramer Electronics input power wall adapter that is provided with the unit
	<b>Warning:</b> Disconnect power and unplug unit from wall before installing or removing the device or servicing unit

<sup>1</sup> Available from Kramer Electronics on our Web site at <http://www.kramerelectronics.com>

## 4 Your VS-6EIII 4x4 Video Audio Matrix Switcher

[Figure 1](#) and [Table 1](#) define the **VS-6EIII 4x4 Video Audio Matrix Switcher**:

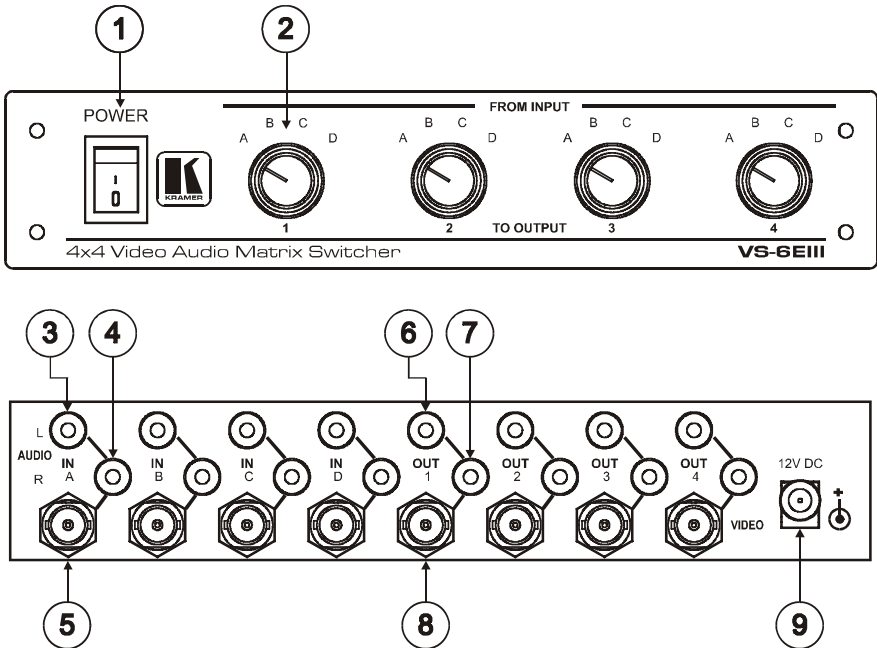


Figure 1: VS-6EIII 4x4 Video Audio Matrix Switcher

Table 1: VS-6EIII 4x4 Video Audio Matrix Switcher Features

#	Feature	Function	
1	POWER Switch	Illuminated switch supplying power to the unit	
2	FROM INPUT TO OUTPUT Selector Knobs	Select the video source (from A to D) for each video acceptor (from 1 to 4)	
3	AUDIO RCA Connectors	L IN	Connect to the left audio source (A, B, C, D)
4		R IN	Connect to the right audio source (A, B, C, D)
5	VIDEO IN BNC Connectors	Connect to the video source (A, B, C, D)	
6	AUDIO RCA Connectors	L OUT	Connect to the left audio acceptor (1, 2, 3, 4)
7		R OUT	Connect to the right audio acceptor (1, 2, 3, 4)
8	VIDEO OUT BNC Connectors	Connect to the video acceptor (1, 2, 3, 4)	
9	12V DC	+12V DC connector for powering the unit	

## 5 Connecting the VS-6EIII 4x4 Video Audio Matrix Switcher

To connect<sup>1</sup> the **VS-6EIII 4x4 Video Audio Matrix Switcher**, as illustrated in the example in [Figure 2](#), do the following<sup>2</sup>:

1. Connect up to four composite video sources (for example, DVD players) to the A, B, C, and D VIDEO BNC IN connectors, and the appropriate AUDIO L and R RCA IN connectors.
2. Connect the VIDEO BNC OUT connectors and the appropriate AUDIO L and R RCA OUT connectors to up to four composite video acceptors, for example:
  - The VIDEO OUT 1 to a display and the AUDIO OUT 1 to an AV receiver with speakers
  - The VIDEO OUT 4 and the AUDIO OUT 4 to a plasma display
3. Connect the 12V DC power adapter to the power socket and connect the adapter to the mains electricity (not shown in [Figure 2](#)).

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<sup>1</sup> You do not have to connect all the inputs and the outputs

<sup>2</sup> Switch OFF the power on each device before connecting it to your VS-6EIII. After connecting your VS-6EIII, switch on its power and then switch on the power on each device

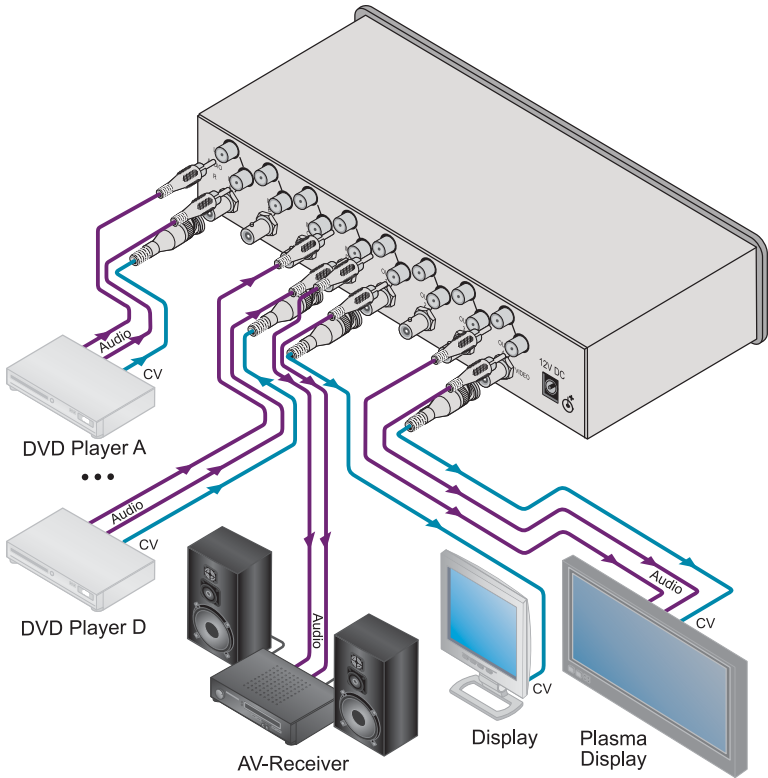


Figure 2: VS-6EIII 4x4 Video Audio Matrix Switcher Connections



## 6 Technical Specifications

[Table 2](#) includes the technical specifications:

*Table 2: Technical specifications<sup>1</sup> of the VS-6EIII 4x4 Video Audio Matrix Switcher*

INPUT:	4 video, 1Vpp/75Ω composite on BNC connectors; 4 audio stereo 1Vpp/100kΩ on RCA connectors
OUTPUTS:	4 video, 1 Vpp/75Ω on BNC connectors; 4 audio stereo 1Vpp/100Ω on RCA connectors
MAX. VIDEO OUTPUT LEVEL:	2.4Vpp/75Ω
VIDEO BANDWIDTH (-3dB):	256MHz, fully loaded
AUDIO BANDWIDTH (-3dB):	>40kHz
DIFF. GAIN:	0.05%
DIFF. PHASE:	0.05Deg
S/N RATIO:	Video: 74dB; Audio: 66dB
VIDEO CROSSTALK:	-44dB
AUDIO THD + NOISE:	0.085%
POWER SOURCE:	12V DC, 105mA
DIMENSIONS:	21.44cm x 16.25cm x 4.36cm (8.44" x 6.4" x 1.72") W, D, H
WEIGHT:	1.7kg (3.8lbs) approx
ACCESSORIES:	Power supply
OPTIONS:	RK-1 19" rack adapter

<sup>1</sup> Specifications are subject to change without notice

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## 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 seven 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](http://www.kramerelectronics.com).
2. Any product, on which the serial number has been defaced, modified or removed, or on which the WARRANTY VOID IF TAMPERED sticker has been torn, reattached, removed or otherwise interfered with.
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 your 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.  
\* FCC and CE approved using STP cable (for twisted pair products)



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



**Caution**

**Safety Warning:**

Disconnect the unit from the power supply before opening/servicing.



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**Kramer Electronics, Ltd.**

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