

Kramer Electronics, Ltd.



USER MANUAL

Model:

VS-6EII

4x4 Video Audio Matrix Switcher

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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 **VS-6EII** *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-6EII** *4x4 Video Audio Matrix Switcher*
- Power cord
- This user manual² and the Kramer concise product catalog/CD

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 **VS-6EII** is a high quality *4x4 Video Audio Matrix Switcher* for composite video and audio stereo signals. It is a true matrix switcher, letting

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 Scalers; and GROUP 8: Cables and Connectors

2 Download up-to-date Kramer user manuals from the Internet at this URL: <http://www.kramerelectronics.com/manuals.html>

3 The complete list of Kramer cables is on our Web site at <http://www.kramerelectronics.com> (click "Cables and Connectors" in the Products section)

you simultaneously route any input to any or all outputs. In particular, the **VS-6EII 4x4 Video Audio Matrix Switcher**:

- Automatically switches the stereo audio signals with the video signals (audio-follow-video), when switching an input to the output
- Includes 4 rotary input selector knobs
- Has a compact design intended to fit on a desktop, but is rack-mountable using the **RK-10** kit, which holds one unit in 2 vertical rack spaces

To achieve the best performance:

- Connect 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)
- Avoid interference from neighboring electrical appliances that may adversely influence signal quality and position your **Kramer VS-6EII** away from moisture, excessive sunlight and dust

4 Your VS-6EII 4x4 Video Audio Matrix Switcher

Figure 1, Table 1, and Table 2 define the **VS-6EII 4x4 Video Audio Matrix Switcher**:

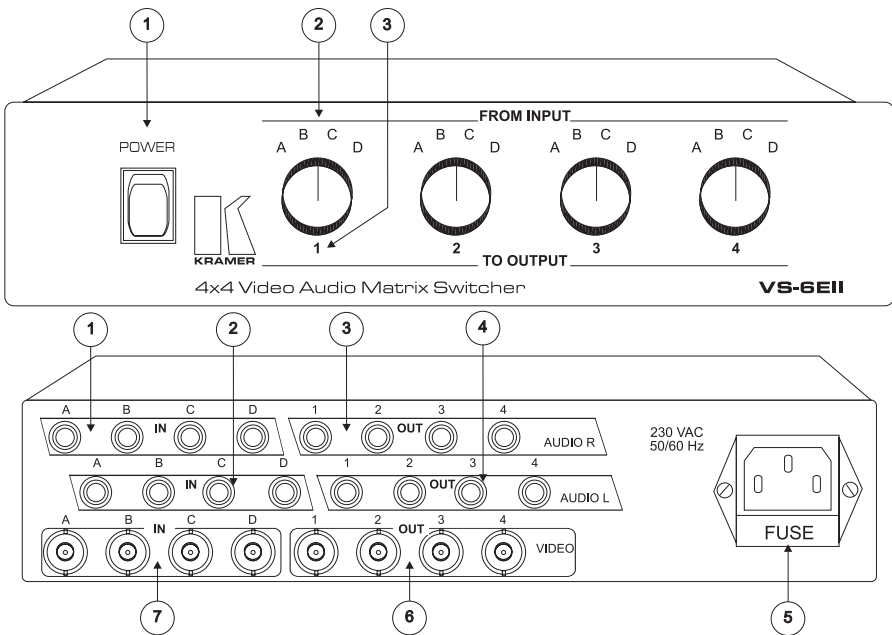


Figure 1: VS-6EII 4x4 Video Audio Matrix Switcher

Table 1: Front Panel VS-6EII Features

#	Feature	Function
1	POWER Switch	Illuminated switch for turning the unit ON or OFF
2	INPUTS	Select the video source (from A to D)
3	OUTPUTS	Select the video acceptor (from 1 to 4)

Table 2: Rear Panel VS-6EII Features

#	Feature	Function
1	AUDIO R IN RCA Connectors	Connects to the right audio source (A, B, C, D)
2	AUDIO L IN RCA Connectors	Connects to the left audio source (A, B, C, D)
3	AUDIO R OUT RCA Connectors	Connects to the right audio acceptor (1, 2, 3, 4)
4	AUDIO L OUT RCA Connectors	Connects to the left audio acceptor (1, 2, 3, 4)
5	Power Connector with Fuse	230 VAC 50/60 Hz (115 VAC, U.S.A.) power inlet
6	VIDEO OUT BNC Connectors	Connects to the video acceptor (1, 2, 3, 4)
7	VIDEO IN BNC Connectors	Connects to the video source (A, B, C, D)

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

To connect the **VS-6EII 4x4 Video Audio Matrix Switcher**, as Figure 2 illustrates, do the following¹:

1. Connect up to 4 composite video sources² (A, B, C, and D) to the appropriate VIDEO BNC IN connectors and AUDIO L and R RCA IN connectors.
2. Connect the appropriate VIDEO BNC OUT connectors and AUDIO L and R RCA OUT connectors to up to 4 composite video acceptors² (1, 2, 3, and 4).
3. Connect the power cord to the mains electricity (not illustrated Figure 2).

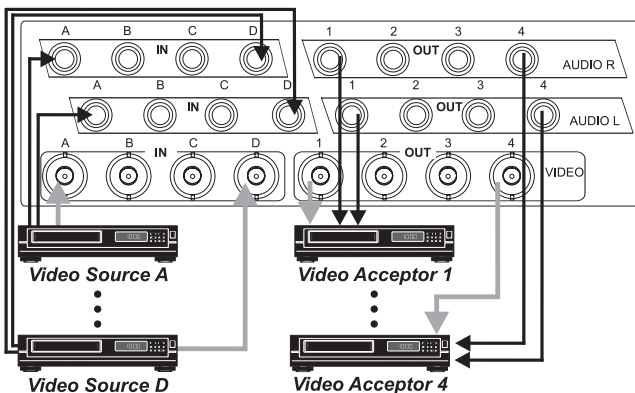


Figure 2: VS-6EII 4x4 Video Audio Matrix Switcher Connections

¹ Switch OFF the power on each device before connecting it to your VS-6EII. After connecting your VS-6EII, switch on its power and then switch on the power on each device

² For example, VCR units

6 Technical Specifications

Table 3 includes the technical specifications:

Table 3: Technical specifications¹ of the VS-6EII 4x4 Video Audio Matrix Switcher

INPUTS:	4 composite video, 1Vpp / 75Ω on BNC type connectors 4 audio stereo 1Vpp / 100kΩ on RCA type connectors	
OUTPUTS:	4 composite video, 1Vpp / 75Ω on BNC type connectors 4 audio stereo 1Vpp / 100Ω on RCA type connectors	
MAX. VIDEO OUTPUT LEVEL:	2Vpp/75Ω	
BANDWIDTH (-3dB):	VIDEO: 100MHz, Fully Loaded	AUDIO: 24kHz
DIFF. GAIN:	1.3%	
DIFF. PHASE:	0.9 Deg	
S/N RATIO:	VIDEO: 74dB	AUDIO: 80dB
VIDEO CROSSTALK:	-65dB (SYNC), -48dB (C)	
AUDIO THD + NOISE:	0.02%	
POWER SOURCE:	230 VAC, 50/60 Hz (115VAC, U.S.A.) 10.6 VA	
DIMENSIONS:	24.5 cm x 16 cm x 5 cm (9.6" x 6.3" x 1.9"), W, D, H	
WEIGHT:	1.7 kg. (3.8 lbs.) approx.	
ACCESSORIES:	Power cord	
OPTIONS:	RK-10 kit, 19" rack adapter	

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 you 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.

**Updates to this user manual may be found at
<http://www.kramerelectronics.com/manuals.html>.**

We welcome your questions, comments and feedback.



Kramer Electronics, Ltd.

Web site: www.kramerelectronics.com

E-mail: info@kramerel.com

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