

Kramer Electronics, Ltd.



USER MANUAL

Model:

VS-33Vxl

3x1 Video 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 groups¹ that are clearly defined by function.

Congratulations on purchasing your Kramer TOOLS **VS-33Vx1 3x1 Video Switcher** which is ideal for:

- Any professional system requiring high quality video switching
- Video production and broadcast facilities
- Retail stores and other point-of-sale systems
- Security and CCTV applications

The package includes the following:

- **VS-33Vx1 3x1 Video Switcher**
- Power adapter (5V DC Input)
- 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

2.1 Quick Start

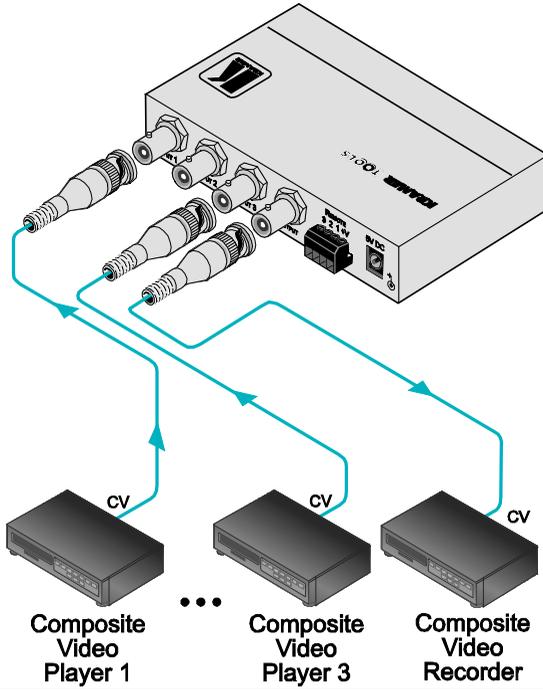
This quick start chart summarizes the basic setup and operation steps.

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 the Internet at this URL: <http://www.kramerelectronics.com>

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

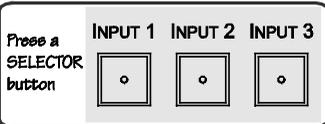
Step 1: Connect the Inputs and output - see section 5



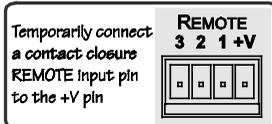
Step 2: Connect the power

Step 3: Operate the machine - see section 5

To switch an input to the output:



OR



3 Overview

The **VS-33Vxl** is a 3x1 video switcher for composite video signals. It features:

- BNC connectors
- Switching during the vertical interval, thus ensuring glitch-free switching with genlocked sources¹
- A bandwidth of 46MHz (-3dB)
- A 5VDC power supply and is housed in a Kramer TOOLS enclosure

3.1 Recommendations for Achieving the Best Performance

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 and position your **VS-33Vxl** 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 unit².

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

¹ This means that if all the sources are Genlocked to each other, uninterrupted switching will occur between them. The VS-33Vxl uses input # 1 as the vertical interval trigger source. If the sources are not Genlocked or if input # 1 is missing the VS-33Vxl will function as a regular switcher

² For example, part number 2535-052002

4 Your VS 33Vxl 3x1 Video Switcher

Figure 1 and Table 1 define the **VS-33Vxl 3x1 Video Switcher**:

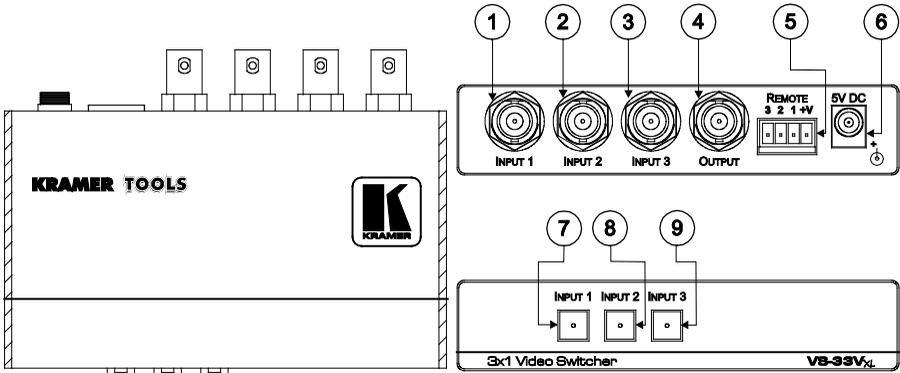


Figure 1: VS-33Vxl 3x1 Video Switcher

Table 1: VS-33Vxl 3x1 Video Switcher Features

#	Feature	Function
1	INPUT 1 BNC Connector	Connect to the composite video source 1
2	INPUT 2 BNC Connector	Connect to the composite video source 2
3	INPUT 3 BNC Connector	Connect to the composite video source 3
4	OUTPUT BNC Connector	Connect to the composite video acceptor
5	REMOTE Terminal Block	Connect to dry contact switches
6	5V DC	+5V DC connector for powering the unit
7	INPUT 1 Button	Press to select composite video source 1
8	INPUT 2 Button	Press to select composite video source 2
9	INPUT 3 Button	Press to select composite video source 3

5 Connecting the VS-33Vxl 3x1 Video Switcher

You can use the **VS-33Vxl** to switch any one of three sources to a single output. To connect the **VS-33Vxl**, as illustrated in the example in Figure 2, do the following:

1. Connect up to three sources to the three composite video input connectors, as follows:
 - Connect a composite video source (for example, a video player) to the INPUT 1 BNC connector
 - Connect a composite video source (for example, a video player) to the INPUT 2 BNC connector
 - Connect a composite video source (for example, a video player) to the INPUT 3 BNC connector
2. Connect the OUTPUT BNC connector to the composite video acceptor (for example, a video player recorder).
3. Connect the 5V DC power adapter to the power socket and connect the adapter to the mains electricity (not shown in Figure 2).

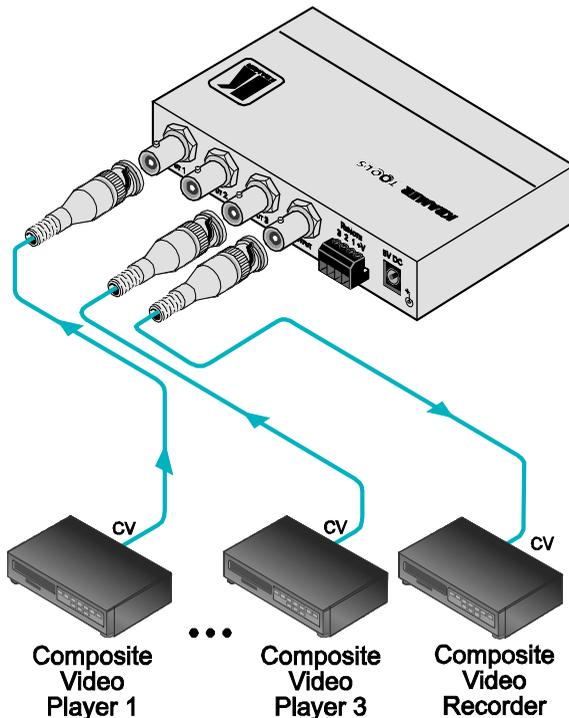


Figure 2: Connecting the VS-33Vxl 3x1 Video Switcher

6 Controlling the VS-33Vx1 3x1 Video Switcher

You can control the **VS-33Vx1** via the:

- Input selector buttons, see section 6.1
- Contact closure REMOTE connector, see section 6.2

6.1 Controlling via the Input Selector Buttons

To switch an input to the output, press the appropriate input selector button (that is, 1, 2 or 3).

6.2 Controlling via the Contact Closure REMOTE Connector

The contact closure REMOTE control pins operate in a similar way to the input selector buttons. Using the contact closure REMOTE control lets you route an input to the output by remote control. To do so, temporarily connect the required input (from 1 to 3) pin on the REMOTE terminal block connector to the +V pin.

DO NOT connect more than one PIN to the +V PIN at the same time

For example, to route input 2 to the output, as the example in Figure 3 illustrates, momentarily touch input # 2 to the +V pin.

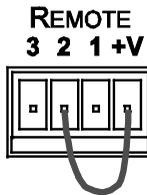


Figure 3: Using the REMOTE Connector

7 Technical Specifications

Table 2 includes the technical specifications¹.

Table 2: Technical Specifications of the VS-33Vxl

INPUTS:	3 composite video, 1Vpp/75Ω on BNC connectors
OUTPUT:	1 composite video, 1Vpp/75Ω on a BNC connector
MAX. VIDEO OUTPUT:	1.8Vpp/75Ω
VIDEO BANDWIDTH (-3dB):	46MHz
DIFF. GAIN:	1.25%
DIFF. PHASE:	0.52°
K-FACTOR:	<0.05%
VIDEO S/N RATIO:	73dB
SWITCHING:	Vertical interval
CROSSTALK:	-44dB@5MHz
POWER SOURCE:	5VDC 22mA
DIMENSIONS:	12cm x 6.95cm x 2.44cm (4.72" x 2.74" x 0.96", W, D, H)
WEIGHT:	0.3kg (0.66lbs.) approx.
ACCESSORIES:	5VDC power supply
OPTIONS:	19" Rack Adapters, VA-100P-5 5V DC Power Supply ²

¹ Specifications are subject to change without notice

² An efficient ten-outlet universal switching power supply that can supply 5V DC at up to 8A

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This limited warranty covers defects in materials and workmanship in this product.

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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.

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Caution

Safety Warning:

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



P/N: 2900-000421



Rev: 1

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