



KRAMER ELECTRONICS LTD.

USER MANUAL

MODELS:

4x1V and **4x1VB**
4:1 Video Switchers

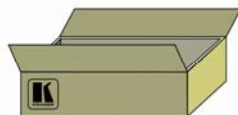
P/N: 2900-300162 Rev 1

4x1V or 4x1VB Quick Start Guide

This page guides you through a basic installation and first-time use of your **4x1V** or **4x1VB**. For more detailed information, see the **4x1V** or **4x1VB** User Manual. You can download the latest manual at <http://www.kramerelectronics.com>.

Step 1: Check what's in the box

- 4x1V** or **4x1VB** 4:1 Video Switcher
- 4 Rubber feet
- 1 Quick Start sheet
- 1 User Manual

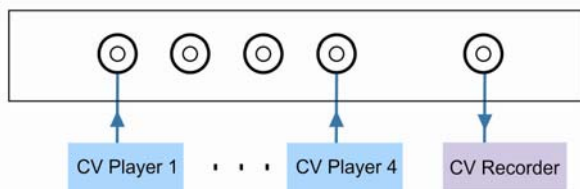


Save the original box and packaging in case your device needs to be returned to the factory for service.

Step 2: Install the 4x1V or 4x1VB

Attach the rubber feet and place on a table or mount the machine in a rack (using an optional RK-3T rack mount).

Step 3: Connect the inputs and outputs



The rear panel of the 4x1V has RCA connectors (shown here). The 4x1VB has BNC connectors.

Always use Kramer high-performance cables for connecting AV equipment to the **4x1V** or **4x1VB**.

Step 4: Operate the 4x1V or 4x1VB

Press one of the switcher input selector buttons to select the input that switches to the output.

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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 that are clearly defined by function: 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 and GROUP 11: Sierra Products.

Congratulations on purchasing your Kramer **4x1V** or **4x1VB** *4:1 Video Switchers*, which are ideal for the following typical applications:

- Presentation and display systems
- CCTV and home theater applications
- Rental and staging applications
- Also compatible with any other high frequency signal

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

2.1 Achieving the Best Performance

To achieve the best performance:

- Use only good quality connection cables to avoid interference, deterioration in signal quality due to poor matching, and elevated noise levels (often associated with low quality cables)
- Position your Kramer **4x1V** and **4x1VB** away from moisture, excessive sunlight and dust

3 Overview

The KramerTOOLS **4x1V** and **4x1VB** are high-quality 4x1 mechanical switchers designed for composite video signals using RCA or BNC connectors. They accept up to four inputs and let you select any input to be routed to one output using buttons located on the front panel. High-quality switching components ensure minimal crosstalk and a high bandwidth of 400MHz (-3dB).

The entirely passive design of the **4x1V** and **4x1VB** eliminates the need for a power supply. Unselected inputs are automatically terminated into a 75Ω resistor.

3.1 Defining the 4x1V and 4x1VB 4:1 Video Switchers

This section defines the **4x1V** and **4x1VB**.

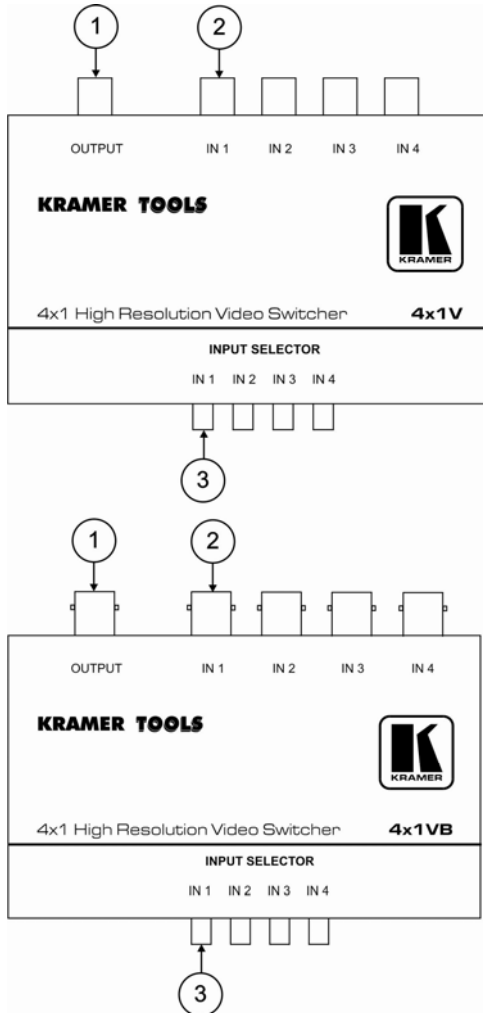


Figure 1: 4x1V and 4x1VB 4:1 Video Switchers

#	Feature	Function
1	<i>OUTPUT</i> Connector	Connect to the composite video acceptor RCA connector (4x1V), BNC connector (4x1VB)
2	<i>IN 1 to IN 4</i> Connectors	Connect to the composite video sources (1 to 4) RCA connectors (4x1V), BNC connectors (4x1VB)
3	<i>INPUT SELECTOR</i> Buttons	Buttons for choosing the input CV source

4 Connecting and Operating the 4x1V and 4x1VB

To connect the 4x1V and 4x1VB as illustrated in the example in [Figure 2](#):

1. Connect up to four composite video sources to the IN 1 to IN 4 connectors (for example, composite video players).
You do not have to connect all inputs.
2. Connect the OUTPUT connector to a composite video acceptor (for example, a composite video recorder).



Note: The **4x1V** uses RCA connectors. The **4x1VB** uses BNC connectors.

To operate the 4x1V and 4x1VB:

Press an INPUT SELECTOR button to switch the desired source to the output.

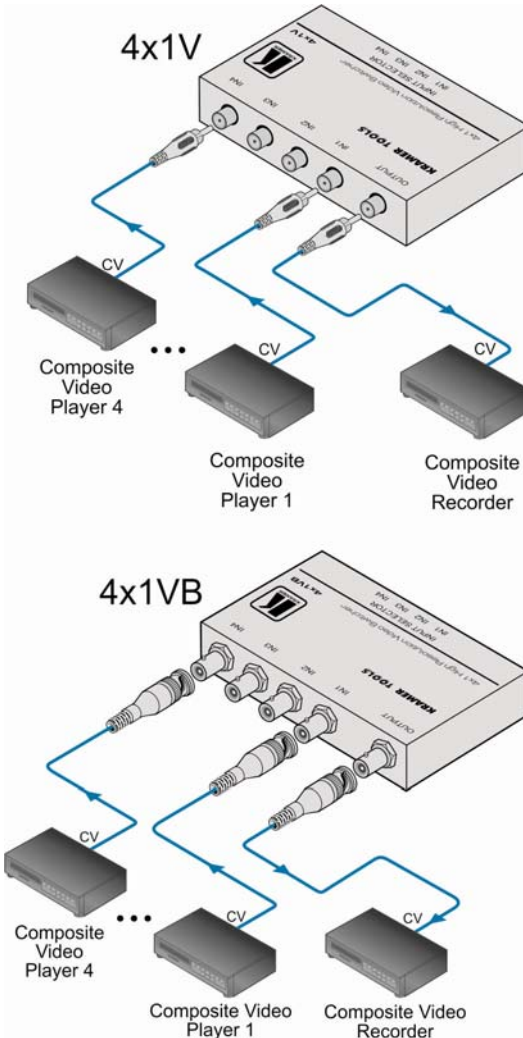


Figure 2: Connecting the 4x1V and 4x1VB 4:1 Video Switchers

5 Technical Specifications

INPUTS:	4 video, 1Vpp/75Ω on RCA connectors (4x1V) or BNC connectors (4x1VB)
OUTPUT:	1 composite or single component video, 1Vpp/75Ω on an RCA connector (4x1V) or BNC connector (4x1VB)
BANDWIDTH (-3dB):	400MHz
SWITCHING SYSTEM:	Mechanical, break-before-make
OPERATING TEMPERATURE:	0° to +55°C (32° to 131°F)
STORAGE TEMPERATURE:	-45° to +72°C (-49° to 162°F)
HUMIDITY:	10% to 90%, RHL non-condensing
DIMENSIONS:	12cm x 7.5cm x 2.5cm (4.7" x 2.9" x 1")
WEIGHT:	0.28kg (0.62lbs) approx. (4x1V) 0.30kg (0.67lbs) approx. (4x1VB)
OPTIONS:	RK-3T 19" rack adapter
Specifications are subject to change without notice at http://www.kramerelectronics.com	

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The warranty obligations of Kramer Electronics for this product are limited to the terms set forth below:

What is Covered

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

What is Not Covered

This limited warranty does not cover any damage, deterioration or malfunction resulting from any alteration, modification, improper or unreasonable use or maintenance, misuse, abuse, accident, neglect, exposure to excess moisture, fire, improper packing and shipping (such claims must be presented to the carrier), lightning, power surges, or other acts of nature. This limited warranty does not cover any damage, deterioration or malfunction resulting from the installation or removal of this product from any installation, any unauthorized tampering with this product, any repairs attempted by anyone unauthorized by Kramer Electronics to make such repairs, or any other cause which does not relate directly to a defect in materials and/or workmanship of this product. This limited warranty does not cover cartons, equipment enclosures, cables or accessories used in conjunction with this product.

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What Kramer Electronics will do

Kramer Electronics will, at its sole option, provide one of the following three remedies to whatever extent it shall deem necessary to satisfy a proper claim under this limited warranty:

1. Elect to repair or facilitate the repair of any defective parts within a reasonable period of time, free of any charge for the necessary parts and labor to complete the repair and restore this product to its proper operating condition. Kramer Electronics will also pay the shipping costs necessary to return this product once the repair is complete.
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.

What Kramer Electronics will not do Under This Limited Warranty

If this product is returned to Kramer Electronics or the authorized dealer from which it was purchased or any other party authorized to repair Kramer Electronics products, this product must be insured during shipment, with the insurance and shipping charges prepaid by you. If this product is returned uninsured, you assume all risks of loss or damage during shipment. Kramer Electronics will not be responsible for any costs related to the removal or re-installation of this product from or into any installation. Kramer Electronics will not be responsible for any costs related to any setting up this product, any adjustment of user controls or any programming required for a specific installation of this product.

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For the latest information on our products and a list of Kramer distributors, visit our Web site where updates to this user manual may be found.

We welcome your questions, comments, and feedback.

Web site: www.kramerelectronics.com

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SAFETY WARNING

Disconnect the unit from the power supply before opening and servicing



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Rev: 1