

**Kramer Electronics, Ltd.**



# **USER MANUAL**

**Model:**

**VP-32XLN**

*3x1 XGA/Audio Switcher*

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This addendum adds the following information to the user manual:

	<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 this unit <sup>1</sup> .
	<b>Warning</b> – Disconnect power and unplug unit from wall before installing or removing device or servicing unit.

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<sup>1</sup> For example: model number AD2512C, part number 2535-000251

## 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 Groups<sup>1</sup>, which are clearly defined by function.

Congratulations on purchasing your Kramer **VP-32XLN 3x1 XGA/Audio Switcher**. This product is ideal for:

- Display and presentation systems that require three way switching to two displays
- Many multimedia applications
- Computer graphics and balanced stereo audio distribution

The package includes the following items:

- **VP-32XLN 3x1 XGA/Audio Switcher**
- Power adapter (12V DC Input)<sup>2</sup>
- This user manual<sup>3</sup> 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 cables<sup>4</sup>

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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 As an option, you can purchase the Kramer VA-50P 6 Port Universal 12-Volt Power Supply, enabling you to supply power to up to 6 Kramer devices that require 12VDC

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

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

### 3 Overview

The **VP-32XLN** is a 3x1:2 switcher for VGA/SVGA/XGA/UXGA and balanced stereo audio signals. It routes one of three sets of VGA/SVGA/XGA/UXGA and balanced stereo audio sources, outputting two identical signals to two acceptors (functioning as a distribution amplifier) with no discernible signal degradation. In particular, the high performance **VP-32XLN**:

- Is effectively a switcher and DA in a convenient desktop-sized unit
- Switches the balanced stereo audio signal with the video signal (audio-follow-video)
- With its video bandwidth of 450MHz, ensures transparent operation at the highest resolutions
- Comes with contact closure remote control for forced operation

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 **VP-32XLN** away from moisture, excessive sunlight and dust

### 4 Your VP-32XLN 3x1 XGA/Audio Switcher

Figure 1, Table 1 and Table 2 define the **VP-32XLN**:

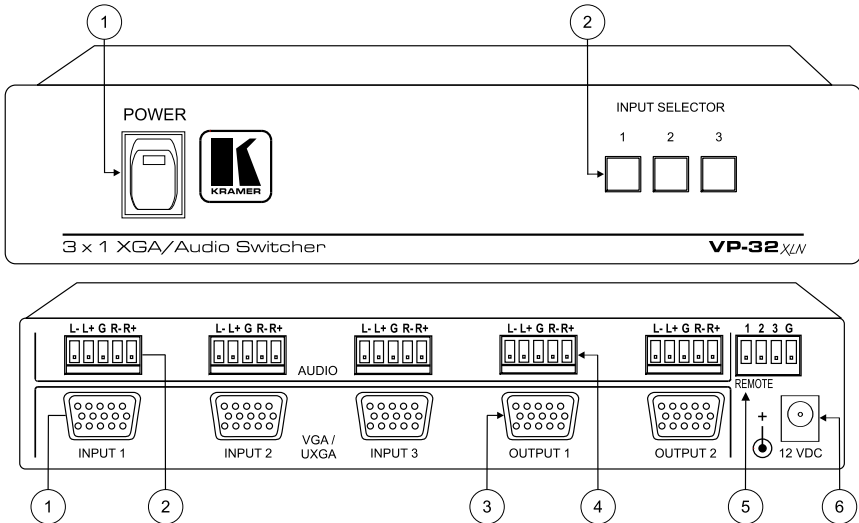


Figure 1: VP-32XLN 3x1 XGA/Audio Switcher

*Table 1: Front Panel VP-32XLN 3x1 XGA/Audio Switcher Features*

#	Feature	Function
1	POWER Switch	Illuminated switch for turning the unit ON or OFF
2	INPUT SELECTOR Buttons	Press to select the source

*Table 2: Rear Panel VP-32XLN 3x1 XGA/Audio Switcher Features*

#	Feature	Function
1	VGA / UXGA INPUT HD15F Connector	Connects to the VGA / UXGA source (from 1 to 3)
2	AUDIO Input Terminal Block Connector	Connects to the balanced stereo audio source (from 1 to 3)
3	VGA / UXGA OUTPUT HD15F Connector	Connects to the VGA / UXGA acceptor (from 1 to 2)
4	AUDIO Output Terminal Block Connector	Connects to the balanced stereo audio acceptor (from 1 to 2)
5	REMOTE Terminal Block Connector	Connects to dry contact switches
6	12V DC	+12V DC connector for powering the unit

## 5 Using the VP-32XLN 3x1 XGA/Audio Switcher

This section describes how to connect the:

- Rear panel of the **VP-32XLN** (see section 5.1)
- REMOTE connector (see section 5.2)
- Balanced/Unbalanced Stereo Audio Input/Output (see section 5.3)

## 5.1 Connecting the VP-32XLN 3x1 XGA/Audio Switcher

To connect your **VP-32XLN 3x1 XGA/Audio Switcher**, as the example in Figure 2 illustrates, do the following<sup>1</sup>:

1. Connect up to 3 VGA/UXGA sources to the 3 HD15F input connectors, and connect up to 3 balanced<sup>2</sup> stereo audio sources to the 3 AUDIO input terminal block connectors, as follows:
  - Connect the source 1 (for example, a PC with a balanced stereo audio card) to the INPUT 1 HD15F connector, and to the INPUT 1 terminal block connector
  - Connect the source 2 (for example, a PC) to the INPUT 2 HD15F connector, and connect a balanced stereo audio source to the INPUT 2 terminal block connector
  - Connect the source 3 (for example, a PC) to the INPUT 3 HD15F connector and connect a balanced stereo audio source to the INPUT 3 terminal block connector
2. Connect the 2 HD15F output connectors to up to<sup>3</sup> 2 VGA/UXGA acceptors and connect the corresponding AUDIO output terminal block connectors to the balanced<sup>2</sup> stereo audio acceptors, as follows:
  - Connect the OUTPUT 1 HD15F connector to the VGA/UXGA acceptor 1 (for example, a monitor), and connect the OUTPUT 1 terminal block connector to the balanced stereo audio acceptor 1 (for example, a power amplifier and speakers)
  - Connect the OUTPUT 2 HD15F connector to the VGA/UXGA acceptor 2 (for example, a projector), and connect the OUTPUT 2 terminal block connector to the balanced stereo audio acceptor 2 (for example, a power amplifier and speakers)
3. Connect<sup>4</sup> the REMOTE Connector (optional), see section 5.2.
4. Connect<sup>4</sup> the 12V DC power adapter (wall transformer) to the 12V DC socket and connect the transformer to the mains electricity.

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1 Switch OFF the power on each device before connecting it to your VP-32XLN. After powering up your VP-32XLN, switch on the power on each device

2 See section 5.3 for details of how to wire a balanced/unbalanced stereo audio input/output

3 When only one output is required, connect only that output of the VP-32XLN and leave the other output unconnected

4 Not illustrated in Figure 2

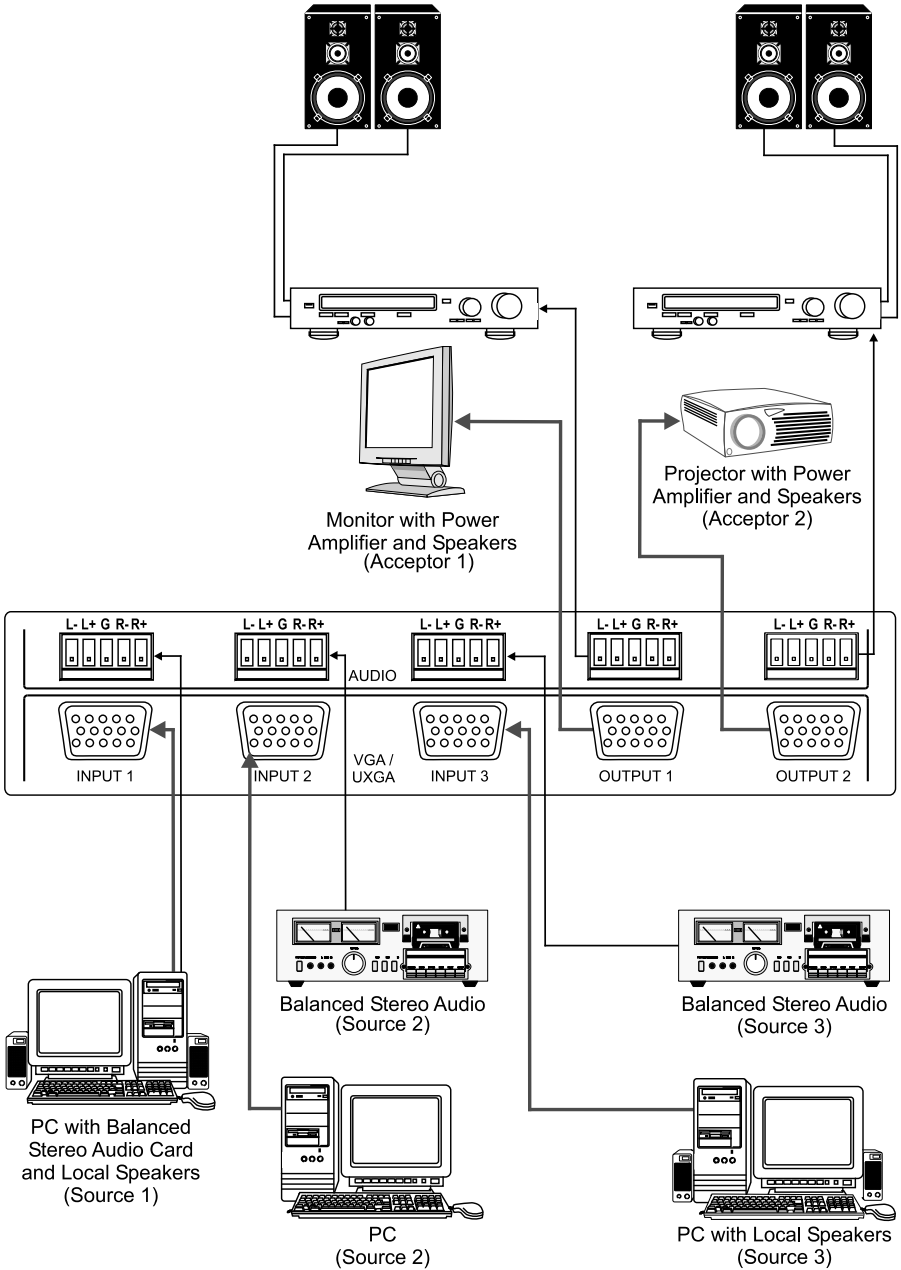


Figure 2: Connecting the VP-32XLN 3x1 XGA/Audio Switcher



## 5.2 Connecting the REMOTE Connector

You can force the routing of one of the 3 inputs to the VGA/UXGA and balanced stereo audio outputs by remote control.

To do so, momentarily connect the appropriate<sup>1</sup> REMOTE terminal block connector PIN to the REMOTE terminal block connector Ground PIN (see the illustration in Figure 3). The appropriate front panel push button illuminates as the selected input routes to both outputs.

### DO NOT:

- Interconnect PIN 1, PIN 2 or PIN 3
- Connect more than one PIN to the Ground PIN at the same time

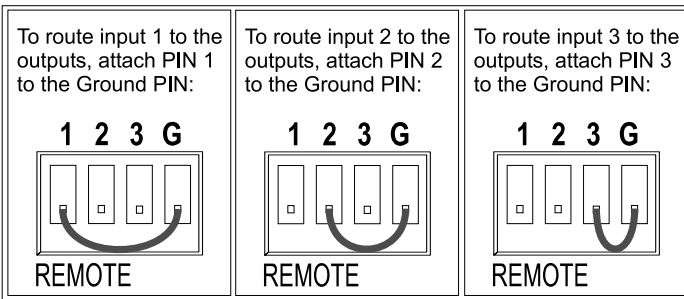


Figure 3: Connecting the REMOTE Connector

## 5.3 Connecting the Balanced/Unbalanced Stereo Audio Input/Output

Figure 4, Figure 5, and Figure 6 illustrate how to wire a balanced/unbalanced input and/or output connection:

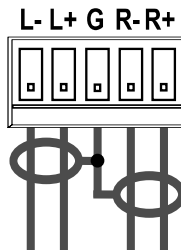
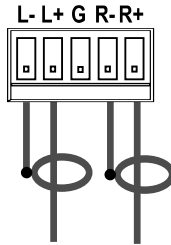
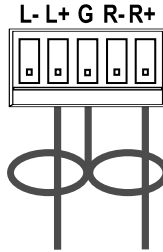


Figure 4: Connecting the Balanced Stereo Audio Input/Output

<sup>1</sup> To route Input 1, connect PIN 1 to the Ground PIN. To route Input 2, connect PIN 2 to the Ground PIN. To route Input 3, connect PIN 3 to the Ground PIN



*Figure 5: Connecting the Unbalanced Stereo Audio Input*



*Figure 6: Connecting the Unbalanced Stereo Audio Output*

## 6 Technical Specifications

Table 3 includes the technical specifications:

*Table 3: Technical Specifications<sup>1</sup> of the VP-32XLN 3x1 XGA/Audio Switcher*

INPUTS:	3 VGA/UXGA on HD15F connectors 3 balanced stereo audio 10kΩ on 5 PIN terminal block connectors 1 detachable 4 PIN terminal block connector for remote control	
OUTPUTS:	2 VGA/UXGA on HD15F connectors 2 balanced stereo audio 50Ω on 5 PIN terminal block connectors	
MAX. OUTPUT LEVEL:	VIDEO: 2Vpp	AUDIO: 7Vpp
BANDWIDTH (-3dB):	VIDEO: 450MHz, Fully Loaded	AUDIO: >100kHz
DIFF. GAIN:	0.03%	
DIFF. PHASE:	0.03 deg	
K-FACTOR:	<0.05%	
S/N RATIO:	VIDEO: 73.5dB	AUDIO: 83 1dB unweighted
CROSSTALK (all hostile):	VIDEO: -56.9dB @ 5 MHz	AUDIO: -87.6dB @ 1kHz
CONTROLS:	Front panel electronic push buttons, contact closure remote control	
COUPLING:	VIDEO: DC	AUDIO: Input: AC; Output: DC
AUDIO THD + NOISE:	0.022%	
AUDIO 2nd HARMONIC:	0.004%	
POWER SOURCE:	12 VDC 146mA	
DIMENSIONS:	22cm x 18cm x 4.5cm (8.7" x 7" x 1.8") W, D, H.	
WEIGHT:	1.1 kg (2.4lbs.) approx.	
ACCESSORIES:	Power supply	
OPTIONS:	VA-50P 6 Port Universal 12-Volt Power Supply 19" rack adapter RK-80	

<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 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](http://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](http://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.**



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