

**Kramer Electronics, Ltd.**



# **USER MANUAL**

**Model:**

**VP-2K**

*1:2 UXGA / Audio Distributor*

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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 **VP-2K 1:2 UXGA / Audio Distributor**.

This **VP-2K** is ideal for:

- Presentation systems requiring a local monitor and projector operating simultaneously
- Schools, churches, rental/staging

The package includes the following items:

- **VP-2K 1:2 UXGA / Audio Distributor**
- 5V DC power supply
- 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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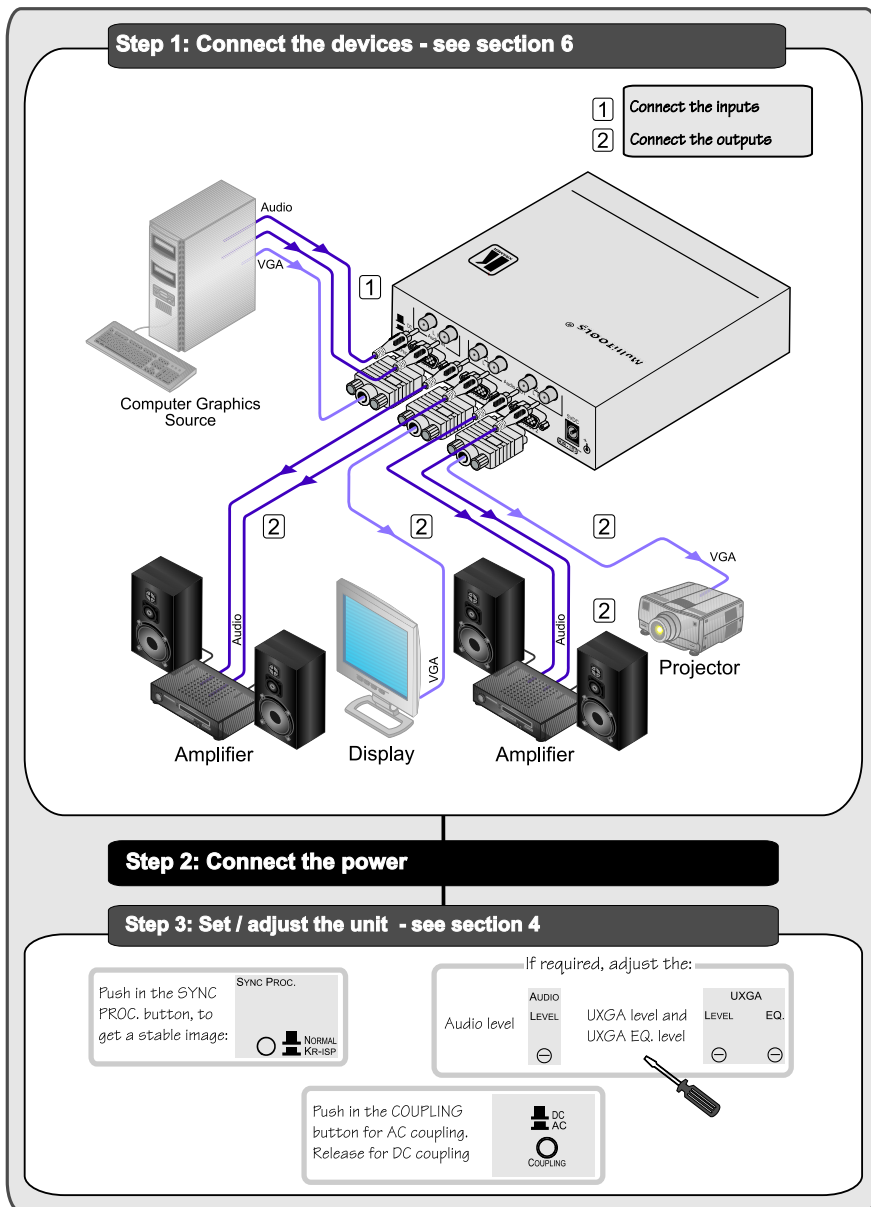
1 GROUP 1: Distribution Amplifiers; GROUP 2: Switchers and Matrix Switchers; GROUP 3: Control Systems; GROUP 4: Format/Standards Converters; GROUP 5: Range Extenders and Repeaters; GROUP 6: Specialty AV Products; GROUP 7: Scan Converters and Scalers; GROUP 8: Cables and Connectors; GROUP 9: Room Connectivity; 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 Kramer MultiTOOLS™ **VP-2K** is a high-performance distribution amplifier for computer graphics signals, with resolutions exceeding UXGA, and unbalanced stereo audio signals. It accepts one computer graphics input, and an unbalanced stereo audio input, and outputs two computer graphics and two unbalanced stereo audio signals.

In particular, the **VP-2K** features:

- High video bandwidth exceeding 380MHz, ensuring that it remains transparent even at high-resolution graphics modes such as UXGA (1600x1200)
- An AUDIO LEVEL trimmer to adjust the audio signal level, as well as UXGA LEVEL and UXGA EQ. controls to adjust the signal level, compensating for cable loss over long distances
- Switch for selecting AC or DC coupling
- HDTV compatibility
- KR - ISP™ technology, which provides a sharp, stable image when the sync level is too low, by restoring the sync signal waveform.

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 **VP-2K** 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 unit<sup>2</sup>.

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

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

<sup>2</sup> For example, part number 2535-052002

## 4 Your VP-2K 1:2 UXGA / Audio Distributor

Figure 1 and Table 1 define the **VP-2K 1:2 UXGA / Audio Distributor**:

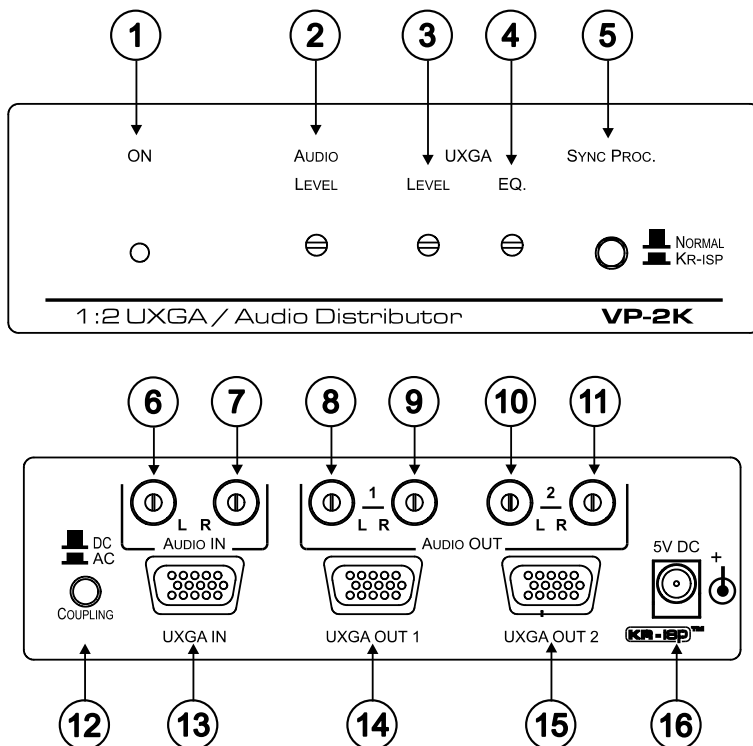


Figure 1: VP-2K 1:2 UXGA / Audio Distributor

Table 1: Features and Functions of the VP-2K 1:2 UXGA / Audio Distributor

#	Feature	Function
1	ON LED	Illuminates when the unit is powered ON
2	AUDIO LEVEL Control	Adjust <sup>1</sup> the output audio level, if required
3	UXGA LEVEL Control	Adjust <sup>1</sup> the UXGA output level, if required
4	UXGA EQ. Control	Adjust <sup>1</sup> the EQ. (equalization) compensation level, if required
5	SYNC PROC. Button	Push in to KR-ISP <sup>2</sup> (to activate the sync processing); or release to NORMAL
6	AUDIO IN (L) RCA Connector	Connect to the left audio source channel
7	AUDIO IN (R) RCA Connector	Connect to the right audio source channel
8	AUDIO OUT 1 (L) RCA Connector	Connect to the left audio acceptor 1 channel
9	AUDIO OUT 1 (R) RCA Connector	Connect to the right audio acceptor 1 channel

1 By rotating the screw using a flat screw driver

2 The default

## Connecting the VP-2K 1:2 UXGA / Audio Distributor

#	Feature	Function
10	AUDIO OUT 2 (L) RCA Connector	Connect to the left audio acceptor 2 channel
11	AUDIO OUT 2 (R) RCA Connector	Connect to the right audio acceptor 2 channel
12	COUPLING Pushbutton	Press in for AC coupling, out for DC coupling
13	UXGA IN 15-pin HD (F) Connector	Connect to the UXGA source
14	UXGA OUT 1 15-pin HD (F) Connector	Connect to the UXGA acceptor 1
15	UXGA OUT 2 15-pin HD (F) Connector	Connect to the UXGA acceptor 2
16	5V DC	+5V DC connector for powering the unit

## 5 Connecting the VP-2K 1:2 UXGA / Audio Distributor

To connect the **VP-2K**, as the example in *Figure 2* illustrates:

1. Connect a computer graphics source to the UXGA IN 15-pin HD (F) connector and to the R and L AUDIO IN RCA connectors.
2. Connect the UXGA OUT 15-pin HD (F) connectors to up to two acceptors (for example, a display and a projector) and connect the respective R and L AUDIO OUT RCA connectors to audio acceptors (for example, two amplifiers with speakers).
3. Connect the 5V DC power adapter to the power socket and connect the adapter to the mains electricity (not illustrated in *Figure 2*).
4. If required:
  - Check that the SYNC PROC. button is pushed in, to activate the sync processing
  - Adjust the AUDIO LEVEL, the UXGA LEVEL, and/or the UXGA EQ. (equalization) compensation level
  - Set the coupling switch to AC or DC

**Note:** The **VP-2K** can also distribute HDTV signals in YPbPr format over a split cable<sup>2</sup> having the following pinout:

*Table 2: 15-pin HD Connector Pinout for HDTV*

PIN#	YPbPr SIGNAL
1	Pr
2	Y
3	Pb

<sup>1</sup> When both outputs are not required, connect only the output that is required and leave the other output unconnected

<sup>2</sup> For example, Kramer's VGA to 3RCA breakout cable: C-GM/3RVF (not supplied)

## Connecting the VP-2K 1:2 UXGA / Audio Distributor

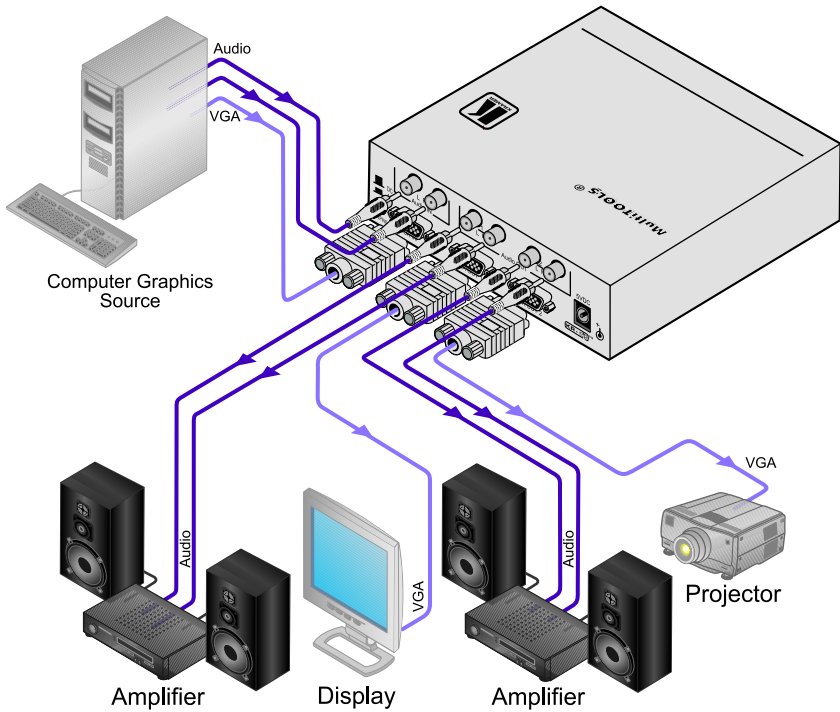


Figure 2: Connecting the VP-2K 1:2 UXGA / Audio Distributor



## 6 Technical Specifications

Table 3: Technical Specifications<sup>1</sup> of the VP-2K 1:2 UXGA / Audio Distributor

INPUTS:	Video: 1 UXGA on a 15-pin HD (F) connector	Audio: 1 audio stereo on RCA connectors
OUTPUTS:	Video: 2 UXGA on 15-pin HD (F) connectors	Audio: 2 audio stereo on RCA connectors
MAX. OUTPUT LEVEL:	Video: 2.2Vpp	Audio: 6.8Vpp
BANDWIDTH (-3dB):	Video: 380MHz	Audio: >100kHz
DIFF. GAIN:	0.03%	
DIFF. PHASE:	0.03Deg	
K-FACTOR:	<0.05%	
S/N RATIO:	Video: 73dB	Audio: 89dB
CONTROLS:	UXGA: Level: -1.1dB to 6.5dB; EQ.: 0dB to 5.3dB@50MHz Audio Level: -50dB to 6.2dB Coupling switch; sync processing switch (normal or KR-ISP)	
COUPLING:	Video: DC/AC selectable	Audio: input AC; output DC
AUDIO THD + NOISE:	0.064%	
AUDIO 2nd HARMONIC:	0.002%	
POWER SOURCE:	5V DC, 150mA	
DIMENSIONS:	16.2cm x 10.7cm x 4.4cm (6.4" x 4.2" x 1.7" ) W, D, H	
WEIGHT:	0.15kg (0.3lbs)	
ACCESSORIES:	Power supply	
OPTIONS:	19" rack mount	

<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 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.

\* 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.**

Web site: [www.kramerelectronics.com](http://www.kramerelectronics.com)

E-mail: [info@kramerel.com](mailto:info@kramerel.com)

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