



KRAMER ELECTRONICS LTD.

USER MANUAL

MODEL:

VP-2K

1:2 UXGA/Audio Distributor

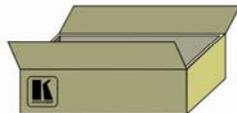
P/N: 2900-000490 Rev 3

VP-2K Quick Start Guide

This page guides you through a basic installation and first-time use of your **VP-2K**. For more detailed information, see the **VP-2K** User Manual. You can download the latest manual at <http://www.kramerelectronics.com>.

Step 1: Check what's in the box

- VP-2K** 1:2 UXGA/Audio Distributor
- 1 Power supply (5V DC)
- 4 Rubber feet
- 1 Quick Start sheet
- 1 User Manual



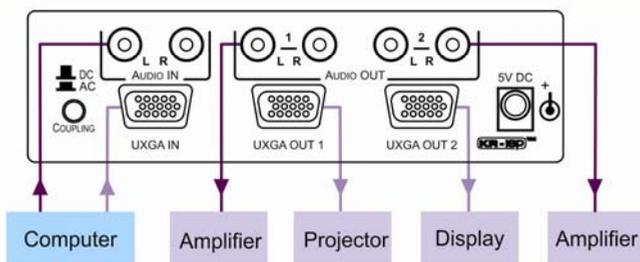
Save the original box and packaging in case your **VP-2K** needs to be returned to the factory for service.

Step 2: Install the VP-2K

Attach the rubber feet and place on a table or mount the machine in a rack (using an optional RK-13 rack mount).

Step 3: Connect the inputs and outputs

Always switch off the power on each device before connecting it to your **VP-2K**.



Always use Kramer high-performance cables for connecting AV equipment to the **VP-2K**.

Step 4: Connect the power

Connect the 5V DC power adapter to the **VP-2K** and plug the adapter into the mains electricity.



Contents

1	Introduction	1
2	Getting Started	2
2.1	Achieving the Best Performance	2
3	Overview	3
3.1	Defining the VP-2K 1:2 UXGA/Audio Distributor	3
4	Installing in a Rack	5
5	Connecting the VP-2K	6
6	Technical Specifications	8

Figures

Figure 1:	VP-2K 1:2 UXGA/Audio Distributor	4
Figure 2:	Connecting the VP-2K 1:2 UXGA/Audio Distributor	7

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 **VP-2K 1:2 UXGA/Audio Distributor**, which is ideal for the following typical applications:

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

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



Go to <http://www.kramerelectronics.com> to check for up-to-date user manuals, application programs, and to check if firmware upgrades are available (where appropriate).

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)
- Avoid interference from neighboring electrical appliances that may adversely influence signal quality
- Position your Kramer **VP-2K** away from moisture, excessive sunlight and dust



Caution: No operator serviceable parts inside the unit

Warning: Use only the Kramer Electronics input power wall adapter that is provided with the unit

Warning: Disconnect the power and unplug the unit from the wall before installing

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
- A 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

3.1 Defining the VP-2K 1:2 UXGA/Audio Distributor

This section defines the **VP-2K**.

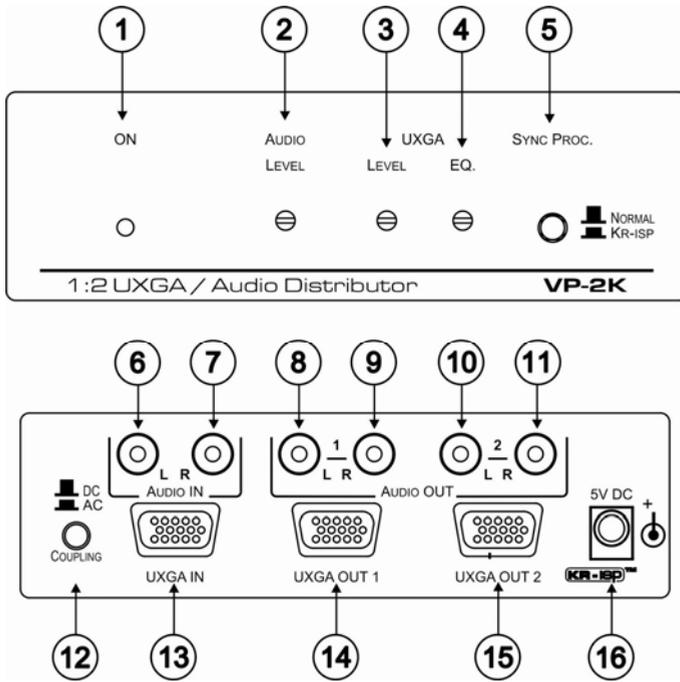


Figure 1: VP-2K 1:2 UXGA/Audio Distributor

#	Feature	Function
1	ON LED	Illuminates when the unit is powered ON
2	AUDIO LEVEL Control	Adjust the output audio level, if required Rotate all level and EQ controls with a small screwdriver
3	UXGA LEVEL Control	Adjust the UXGA output level, if required
4	UXGA EQ. Control	Adjust the EQ. (equalization) compensation level, if required
5	SYNC PROC. Button	Push in to KR-ISP (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
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

4 Installing in a Rack

This section provides instructions for rack mounting the unit.

Before installing in a rack, be sure that the environment is within the recommended range:

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



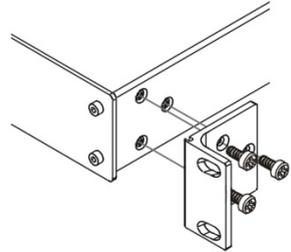
CAUTION!

When installing on a 19" rack, avoid hazards by taking care that:

1. It is located within the recommended environmental conditions, as the operating ambient temperature of a closed or multi unit rack assembly may exceed the room ambient temperature.
2. Once rack mounted, enough air will still flow around the machine.
3. The machine is placed straight in the correct horizontal position.
4. You do not overload the circuit(s). When connecting the machine to the supply circuit, overloading the circuits might have a detrimental effect on overcurrent protection and supply wiring. Refer to the appropriate nameplate ratings for information. For example, for fuse replacement, see the value printed on the product label.
5. The machine is earthed (grounded) in a reliable way and is connected only to an electricity socket with grounding. Pay particular attention to situations where electricity is supplied indirectly (when the power cord is not plugged directly into the socket in the wall), for example, when using an extension cable or a power strip, and that you use only the power cord that is supplied with the machine.

To rack-mount a machine:

1. Attach both ear brackets to the machine. To do so, remove the screws from each side of the machine (3 on each side), and replace those screws through the ear brackets.



2. Place the ears of the machine against the rack rails, and insert the proper screws (not provided) through each of the four holes in the rack ears.

Note:

- In some models, the front panel may feature built-in rack ears
- Detachable rack ears can be removed for desktop use
- Always mount the machine in the rack before you attach any cables or connect the machine to the power
- If you are using a Kramer rack adapter kit (for a machine that is not 19"), see the Rack Adapters user manual for installation instructions available from our Web site

5 Connecting the VP-2K



Always switch off the power to each device before connecting it to your **VP-2K**. After connecting your **VP-2K**, connect its power and then switch on the power to each device.

To connect the **VP-2K** as illustrated in the example in [Figure 2](#):

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).

When both outputs are not required, connect only the required output and leave the other output unconnected.

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, using a breakout cable with the following pinout:

For example, Kramer's optional VGA to 3RCA breakout cable: C-GM/3RVF (not supplied).

15-pin HD Connector Pinout for HDTV	
PIN#	YPbPr SIGNAL
1	Pr
2	Y
3	Pb

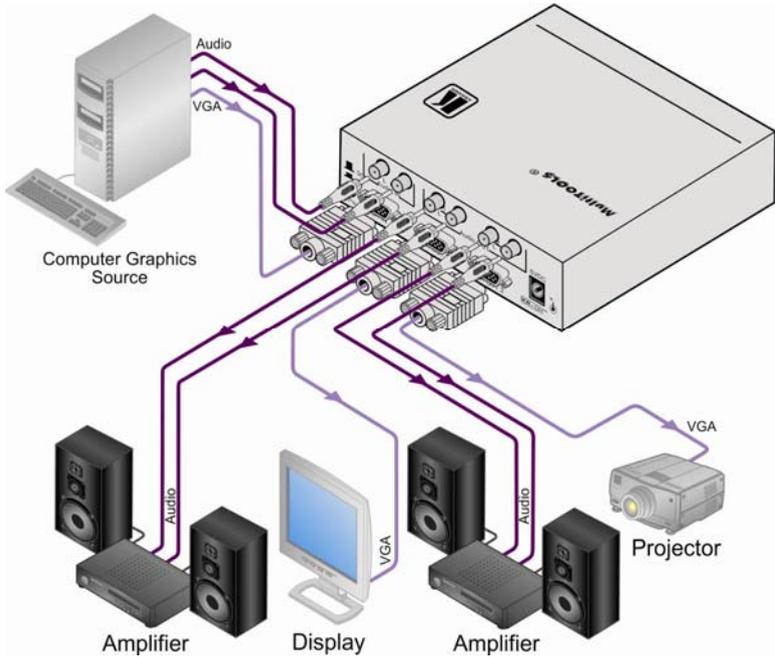


Figure 2: Connecting the VP-2K 1:2 UXGA/Audio Distributor

6 Technical Specifications

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; ID BIT switch; coupling switches; sync processing (normal or Kr-isp®)
COUPLING:	Video: DC/AC selectable; Audio: input AC; output DC
AUDIO THD + NOISE:	0.064%
AUDIO 2nd HARMONIC:	0.002%
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
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:	0.7kg (1.5lbs) approx.
ACCESSORIES:	Power supply
OPTIONS:	RK-13 19" rack mount
Specifications are subject to change without notice at http://www.kramerelectronics.com	

LIMITED WARRANTY

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.

Without limiting any other exclusion herein, Kramer Electronics does not warrant that the product covered hereby, including, without limitation, the technology and/or integrated circuit(s) included in the product, will not become obsolete or that such items are or will remain compatible with any other product or technology with which the product may be used.

How Long Does this Coverage Last

Seven years as of this printing; please check our Web site for the most current and accurate warranty information.

Who is Covered

Only the original purchaser of this product is covered under this limited warranty. This limited warranty is not transferable to subsequent purchasers or owners of this product.

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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To obtain a remedy under this limited warranty, you must contact either the authorized Kramer Electronics reseller from whom you purchased this product or the Kramer Electronics office nearest you. For a list of authorized Kramer Electronics resellers and/or Kramer Electronics authorized service providers, please visit our web site at www.kramerelectronics.com or contact the Kramer Electronics office nearest you.

In order to pursue any remedy under this limited warranty, you must possess an original, dated receipt as proof of purchase from an authorized Kramer Electronics reseller. If this product is returned under this limited warranty, a return authorization number, obtained from Kramer Electronics, will be required. You may also be directed to an authorized reseller or a person authorized by Kramer Electronics to repair the product.

If it is decided that this product should be returned directly to Kramer Electronics, this product should be properly packed, preferably in the original carton, for shipping. Cartons not bearing a return authorization number will be refused.

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Other Conditions

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This limited warranty is void if (i) the label bearing the serial number of this product has been removed or defaced, (ii) the product is not distributed by Kramer Electronics or (iii) this product is not purchased from an authorized Kramer Electronics reseller. If you are unsure whether a reseller is an authorized Kramer Electronics reseller, please visit our Web site at www.kramerelectronics.com or contact a Kramer Electronics office from the list at the end of this document.

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We welcome your questions, comments, and feedback.

Web site: www.kramerelectronics.com

E-mail: info@kramerel.com

CE



SAFETY WARNING

Disconnect the unit from the power supply before opening and servicing



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Rev: 3