Kramer Electronics, Ltd.

USER MANUAL

Model:

VP-200AK

1:2 UXGA / Audio DA

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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[1] that are clearly defined by function.

Thank you for purchasing your Kramer TOOLS **VP-200AK** *1:2 UXGA / Audio DA*, which is ideal for:

- Rental and staging systems
- Schools, religious institutions, corporate applications

The package includes the following items:

- **VP-200AK** *1:2 UXGA / Audio DA*
- Power adapter (5V DC Input) and this user manual[2]

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[3]

2.1 Quick Start

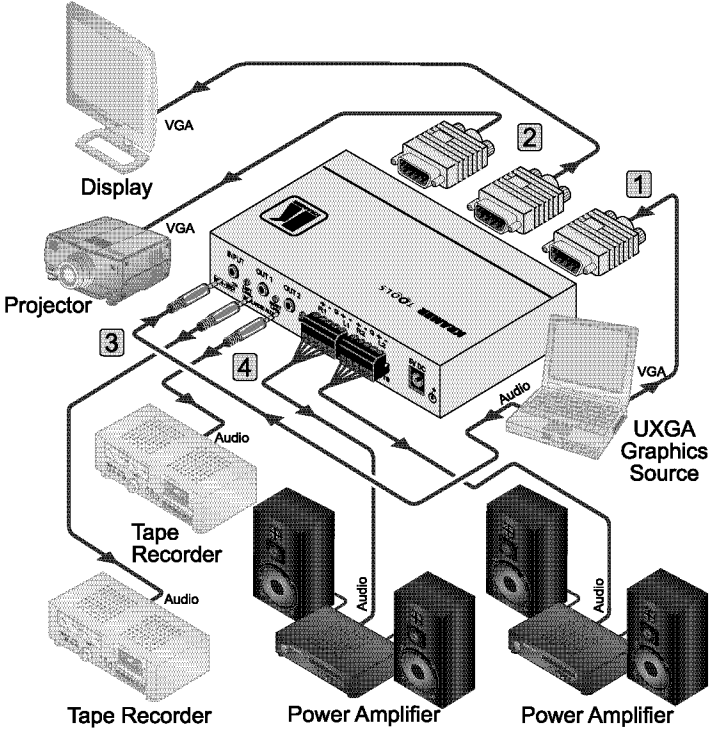This quick start chart summarizes the basic setup and operation steps.

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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 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

Getting Started

Step 1: Connect the input and the outputs - see section 5

[1] Connect a computer graphics source to the INPUT
[2] Connect the video outputs to the acceptors

Display

VGA

VGA

Projector

[2]

[1]

VGA

UXGA
Graphics
Source

Audio

Tape
Recorder

Audio

Tape Recorder   Power Amplifier   Power Amplifier

[3] Connect an unbalanced audio source to the audio INPUT
[4] Connect the audio outputs to the unbalanced and balanced audio acceptors

Step 2: Connect the power

Step 3: If needed, make adjustments - see section 4

INPUT   OUT 1   OUT 2

LEFT   RIGHT   UXGA
LEVEL   LEVEL   EQ.
UNBALANCED AUDIO
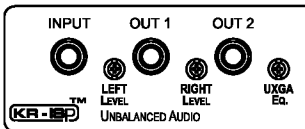
Adjust the audio
gain and UXGA
equalization

2

3   Overview

The Kramer TOOLS **VP-200AK** is a 1:2 distribution amplifier for UXGA (and higher) resolution signals, as well as unbalanced stereo audio signals and/or balanced stereo audio signals.

In particular, the **VP-200AK** *1:2 UXGA / Audio DA*:

- Accepts one computer graphics input[1], provides correct buffering and isolation, and then distributes the signal to two identical outputs on high-density 15-pin HD connectors
- Accepts an unbalanced stereo audio input, and simultaneously outputs two unbalanced stereo audio outputs on mini-plug connectors, and two balanced stereo audio outputs on terminal block connectors
- With its video bandwidth exceeding 500MHz, ensures transparent operation at high-resolution graphics modes such as UUXGA (1600x1200)
- Accepts TTL syncs[2] and provides ID bit control internally, as well as separate controls for audio output level and UXGA equalization
- Features KR-ISP™ advanced sync processing that ensures compatibility with a wide range of computers (even if the sync level is too low) by restoring the sync signal waveform to achieve a sharp, stable image
- Is 5V DC fed

To achieve the best performance:

- Use only good quality connection cables[3] 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-200AK** away from moisture, excessive sunlight and dust

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1 At any resolution (for example, UXGA)

2 Allowing selection of KR-ISP/Normal technology by internal jumpers. Note that both the Hs (horizontal sync) jumper and the Vs (vertical sync) jumper MUST be set identically

3 Available from Kramer Electronics on our Web site at http://www.kramerelectronics.com

> **Caution** – No operator-serviceable parts inside unit.
>
> **Warning** – Use only the Kramer Electronics input power wall adapter that is provided with this unit[1].
>
> **Warning** – Disconnect power and unplug unit from wall before installing or removing device or servicing unit.

4   Your VP-200AK 1:2 UXGA / Audio DA
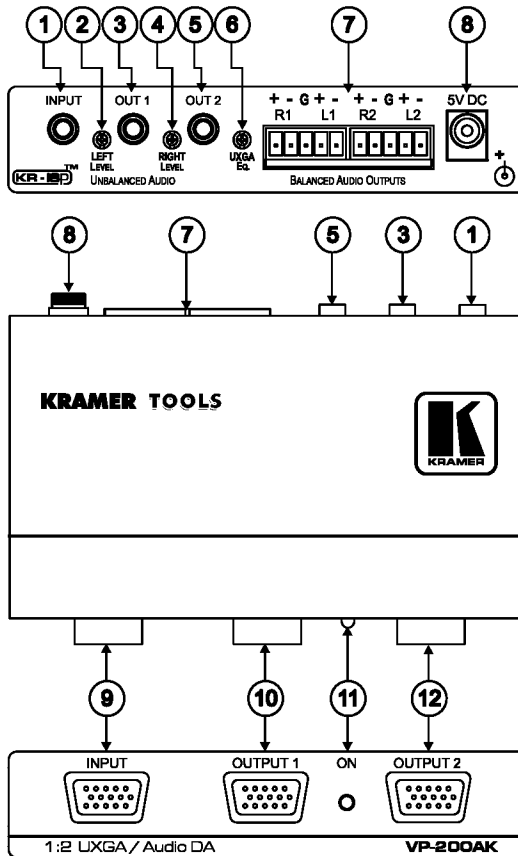
Figure 1 and *Table 1* define the **VP-200AK**:

Figure 1: VP-200AK 1:2 UXGA / Audio DA

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1 For example, part number 2535-052002

Table 1: VP-200AK 1:2 UXGA / Audio DA Features

#	Feature		Function
1	*INPUT* 3.5mm Mini plug Connector		Connects unbalanced audio to the audio source
2	*LEFT LEVEL* Trimmer		Adjusts the left audio signal level
3	*OUT 1* 3.5mm Mini plug Connector		Connects unbalanced stereo audio to the audio acceptor 1
4	*RIGHT LEVEL* Trimmer		Adjusts the right audio signal level
5	*OUT 2* 3.5mm Mini plug Connector		Connects unbalanced stereo audio to the audio acceptor 2
6	*UXGA EQ.* Trimmer		Adjusts the video EQ. (equalization) compensation
7	*BALANCED AUDIO OUTPUT* Terminal Block Connectors	*R2, L2*	Connects balanced stereo audio to the audio acceptor 2
		R1, L1	Connects balanced stereo audio to the audio acceptor 1
8	*5V DC*		+5V DC connector for powering the unit
9	*INPUT* 15-pin HD (F) Connector		Connect to the computer graphics source
10	*OUTPUT 1* 15-pin HD (F) Connector		Connect to the computer graphics acceptor 1
11	*ON* LED		Illuminates when receiving power
12	*OUTPUT 2* 15-pin HD (F) Connector		Connect to the computer graphics acceptor 2

5 Connecting the VP-200AK 1:2 UXGA / Audio DA

To connect your **VP-200AK** *1:2 UXGA / Audio DA*, as the example in *Figure 2* illustrates, do the following[1]:

1. Connect a computer graphics source to the 15-pin HD (F) INPUT connector.

2. Connect[2] the 15-pin HD (F) OUTPUT connectors to up to two acceptors, as follows:

   • Connect the OUTPUT 1 connector to acceptor 1 (for example, a display)

   • Connect the OUTPUT 2 connector to acceptor 2 (for example, a projector)

3. Connect the unbalanced audio source (for example, the computer graphics source audio) to the INPUT 3.5mm mini jack connector.

4. Connect the unbalanced audio OUT 1 and OUT 2, 3.5mm mini jack connectors, to up to two unbalanced audio acceptors (for example, tape recorders).

5. Connect[2] the BALANCED AUDIO OUTPUT (R1, L1 and R2, L2) terminal block connectors to up to two balanced audio acceptors (for example, power amplifiers).

6. Connect the 5V DC power adapter to the power socket and connect the adapter to the mains electricity (not shown in *Figure 2*).

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1 Switch OFF the power on each device before connecting it to your VP-200AK. After powering up your VP-200AK, switch on the power on each device

2 When only one output is required, use either of the outputs, and leave the other output unconnected

7. If required, adjust[1] the right and left audio signal levels and the UXGA EQ. level.
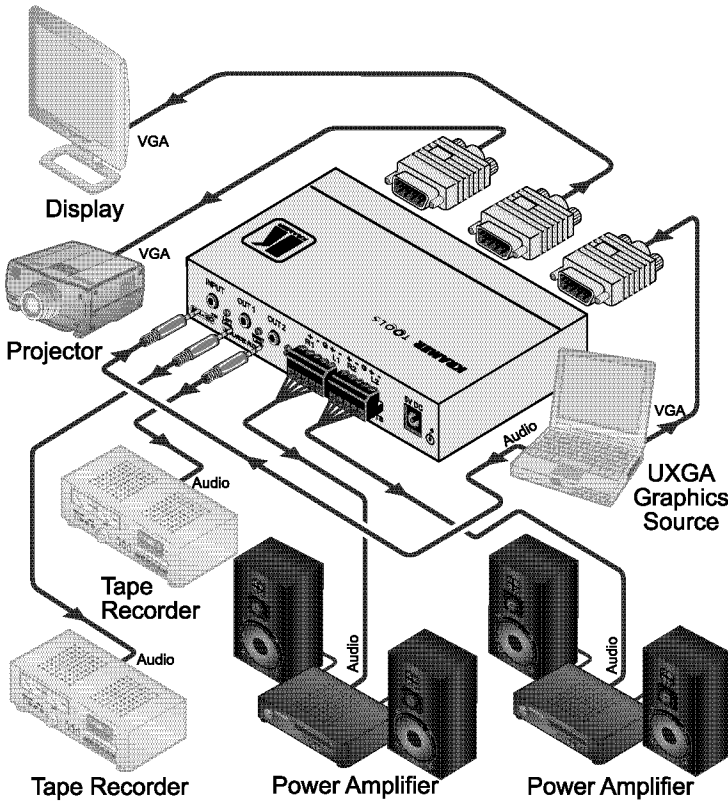

Figure 2: Connecting the VP-200AK 1:2 UXGA / Audio DA

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1 Insert a screwdriver into the small hole and carefully rotate it, trimming the OUTPUT level

6 Technical Specifications

The **VP-200AK** technical specifications are shown in *Table 2*:

Table 2: Technical Specifications[1] of the VP-200AK 1:2 UXGA / Audio DA

INPUT:	1 XGA on a 15-pin HD (F) connector 1 unbalanced audio stereo on a 3.5mm mini jack audio connector	
OUTPUTS:	2 UXGA on 15-pin HD (F) connectors 2 unbalanced audio stereo on 3.5mm mini jack audio connectors 2 balanced audio stereo on detachable 5-pin terminal blocks	
MAX. OUTPUT LEVEL:	Video: 2.0Vpp	Audio: 7.2Vpp
BANDWIDTH (-3dB):	Video: 510MHz	Audio: >100kHz
DIFF. GAIN:	0.55%	
DIFF. PHASE:	0.10Deg.	
K-FACTOR:	<0.05%	
S/N RATIO:	Video: 72.5dB @5MHz	Audio: 82dB (balanced); 88dB (unbalanced)
CONTROLS:	EQ: 0dB to 4.7dB @50MHz	
COUPLING:	Video: DC	Audio: AC at the output; DC at the input
AUDIO THD + NOISE:	0.005% @1kHz (unbalanced and balanced)	
AUDIO 2nd HARMONIC:	0.003% (unbalanced); 0.001% (balanced)	
POWER SOURCE:	5V DC, 120mA	
DIMENSIONS:	12cm x 7.18cm x 2.42cm (4.7" x 2.8" x 0.95") W, D, H	
WEIGHT:	0.3kg (0.67lbs) approx.	
ACCESSORIES:	Power supply, mounting bracket	
OPTIONS:	19" rack adapters	

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1 Specifications are subject to change without notice

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.

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)

For the latest information on our products and a list of Kramer distributors, visit our Web site: www.kramerelectronics.com, where updates to this user manual may be found. We welcome your questions, comments and feedback.

Safety Warning: Disconnect the unit from the power supply before opening/servicing.

Caution