Kramer Electronics, Ltd.

USER MANUAL

Model:

VP-200D

XGA Differential Amplifier / DA

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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[1], which are clearly defined by function. Congratulations on purchasing your Kramer TOOLS: **VP-200D** *XGA Differential Amplifier / DA*, which is ideal for:

- Dual monitor remote applications (local or long range)
- Presentation systems (for long distance, interference-free distribution and cable equalization) requiring a local display and a large screen display such as a projector, at close or remote locations

The package includes the following items:

- **VP-200D** *XGA Differential Amplifier / DA*
- Power adapter (12V DC Input)
- 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]

3 Overview

The high performance **VP-200D** *XGA Differential Amplifier / DA* is a 1:2 differential line amplifier / distributor for computer graphics signals that accepts one input, provides correct buffering and isolation, and then distributes the signal to two identical outputs.

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 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

In particular, the **VP-200D** *XGA Differential Amplifier / DA* includes:

- High-density 15 pin D connectors
- Video bandwidth of 420MHz, ensuring that it remains transparent for all resolutions
- Separate controls for output level and a cable equalization
- Special differential amplifying circuitry, which eliminates noise and hum problems commonly found in long XGA lines
- ID Bit control
- Is 12VDC fed

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-200D** away from moisture, excessive sunlight and dust

4 Your VP-200D XGA Differential Amplifier / DA

Figure 1, Figure 2, Figure 3 and Table 1 define the **VP-200D**:

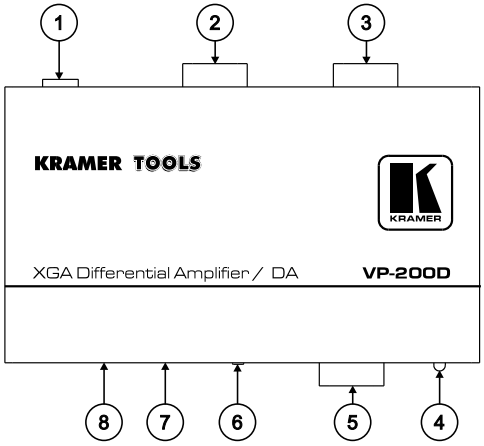

Figure 1: VP-200D XGA Differential Amplifier / DA

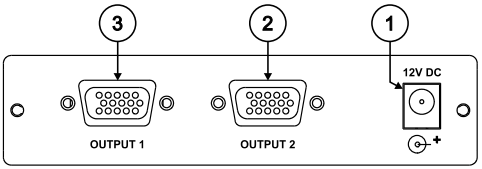

Figure 2: VP-200D (Top Side Panel)

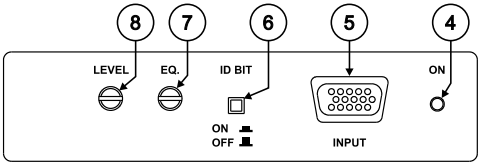

Figure 3: VP-200D (Lower Side Panel)

Table 1: VP-200D XGA Differential Amplifier / DA Features

#	Feature	Function
1	***12V DC***	+12V DC connector for powering the unit
2	***OUTPUT 2*** HD15F Connector	Connect to the computer graphics acceptor 2
3	***OUTPUT 1*** HD15F Connector	Connect to the computer graphics acceptor 1
4	***ON*** LED	Illuminates when receiving power
5	***INPUT*** HD15F Connector	Connect to the computer graphics source
6	***ID BIT*** Button	Pushing in activates the ID BIT[1], releasing deactivates the ID BIT
7	***EQ.*** Control Potentiometer	Adjusts the video EQ. (equalization) compensation
8	***LEVEL*** Control Potentiometer	Adjusts the video signal level

5 Connecting the VP-200D XGA Differential Amplifier / DA

To connect your **VP-200D** *XGA Differential Amplifier / DA*, as the example in Figure 4 illustrates, do the following[2]:

1. Connect a computer graphics source (for example, a computer) to the INPUT HD15F connector.
2. Push in the ID Bit button.
3. Connect the OUTPUT HD15F connectors to up to 2 acceptors, as follows:
   - Connect the OUTPUT 1 to the acceptor 1 (for example, a projector)
   - Connect the OUTPUT 2 to the acceptor 2 (for example, a display)
4. Connect the 12V DC power adapter (wall transformer) to the 12V DC socket and connect the transformer to the mains electricity.
5. If required, adjust the video EQ. and/or the video signal level.

It is recommended that you place the **VP-200D** at the far end, away from the source, where the differential circuitry would be most effective.

1 Enabling the notebook or laptop to output a VGA signal to an external VGA monitor

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

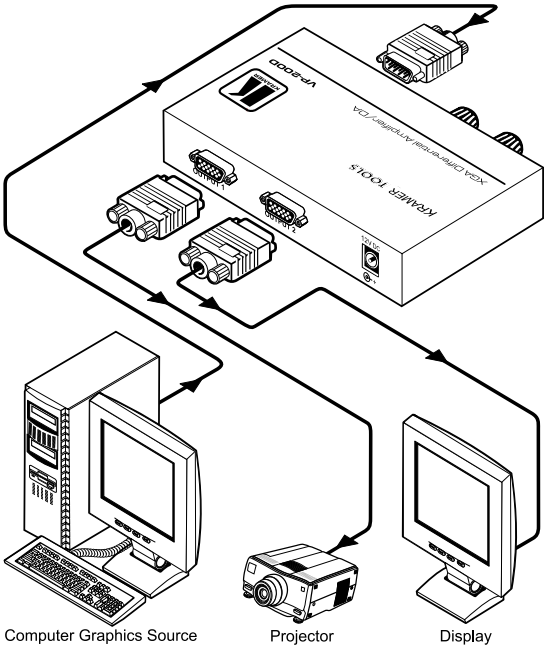

Figure 4: Connecting the VP-200D XGA Differential Amplifier / DA

6 Technical Specifications

Table 2 includes the technical specifications:

Table 2: Technical Specifications[1] of the VP-200D XGA Differential Amplifier / DA

INPUT:	1 XGA on an HD15F connector
OUTPUTS:	2 XGA on HD15F connectors
MAX. OUTPUT LEVEL:	1.8Vpp
BANDWIDTH (-3dB):	420MHz
DIFF. GAIN:	0.01%
DIFF. PHASE:	0.08 Deg.
K-FACTOR:	0.1%
S/N RATIO:	61dB
CONTROLS:	Level: –1dB to +6 9dB, EQ.: 0 to +6.2dB @ 50MHz
COUPLING:	DC
POWER SOURCE:	12 VDC, 190mA
DIMENSIONS:	12cm x 7.15cm x 2.76cm (4.7" x 2.8" x 1.08"), W, D, H
WEIGHT:	0.3 kg. (0.67 lbs.) approx.
ACCESSORIES:	Power supply, mounting bracket
OPTIONS:	19" rack adapters RK-T1, RK-T3

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.
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, 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.

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P/N: 2900-000147 REV 1