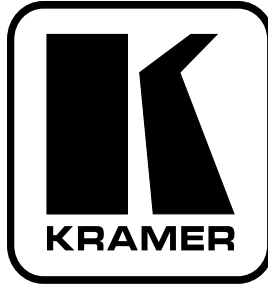


**Kramer Electronics, Ltd.**



# **USER MANUAL**

**Model:**

**VP-111K**

*UXGA Line Driver*

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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 the Kramer TOOLS **VP-111K UXGA Line Driver**, which is ideal for:

- Dual monitor systems (local and remote)
- Presentation systems: for remote transmission and cable equalization

Each package includes the following items:

- The **VP-111K UXGA Line Driver**
- Power adapter (5V DC Input)
- 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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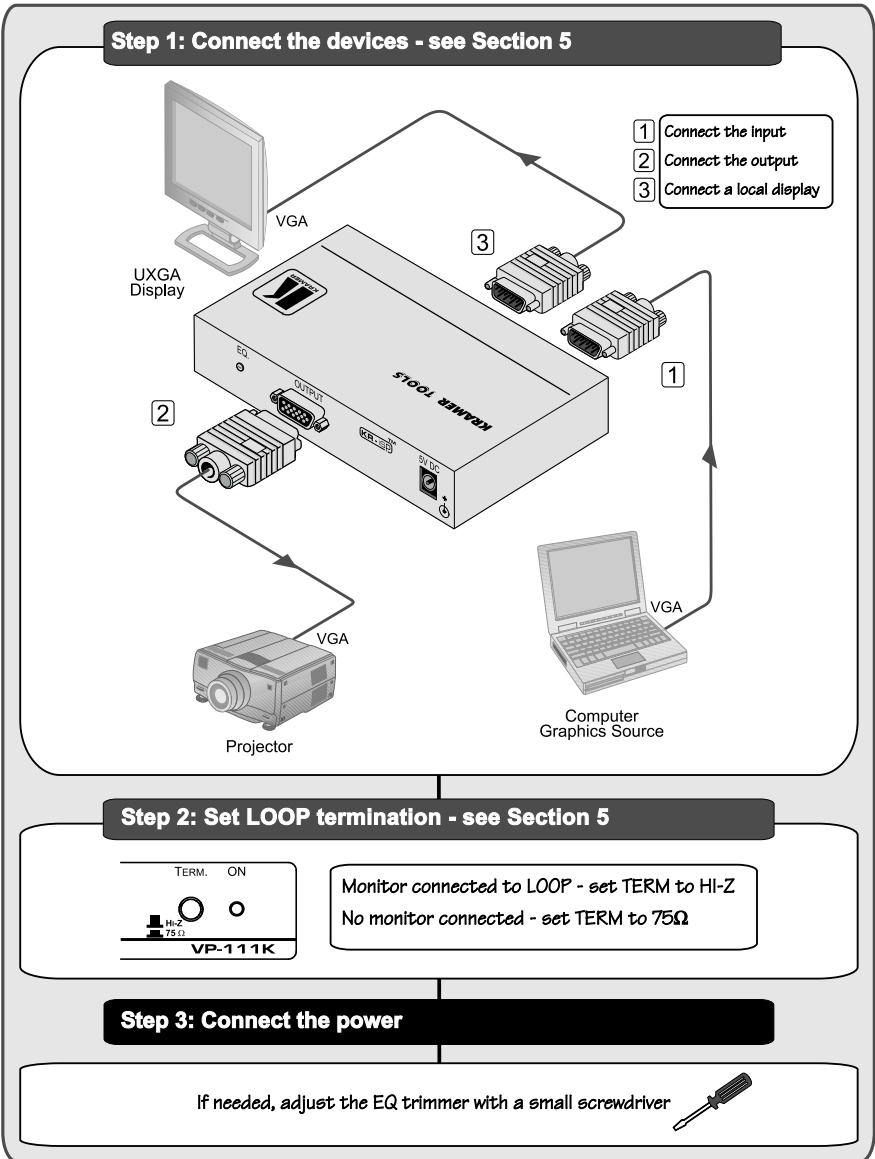
1 GROUP 1: Distribution Amplifiers; GROUP 2: Switchers and Matrix Switchers; GROUP 3: Control Systems; GROUP 4: Format/Standards Converters; GROUP 5: Range Extenders and Repeaters; GROUP 6: Specialty AV Products; GROUP 7: Scan Converters and Scalers; GROUP 8: Cables and Connectors; GROUP 9: Room Connectivity; 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 high-performance Kramer **VP-111K** is a line driver for signals exceeding UXGA. It accepts one input, provides correct buffering and isolation, and outputs the amplified and equalized signal to a remote acceptor. It also loops the input signal to a local monitor (or some other acceptor).

The **VP-111K** features:

- High bandwidth (500MHz) that drives very long high-resolution lines<sup>1</sup> ensuring transparency even at highest resolution
- A TERM switch for input signal termination
- 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 the best performance:

- Use only good quality connection cables<sup>2</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-111K** 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>3</sup>.

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

1 Up to 100 meters (300ft) when using good quality cable

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

3 For example, part number 2535-052002

## 4 Your VP-111K UXGA Line Driver

Figure 1 and Table 1 define the unit.

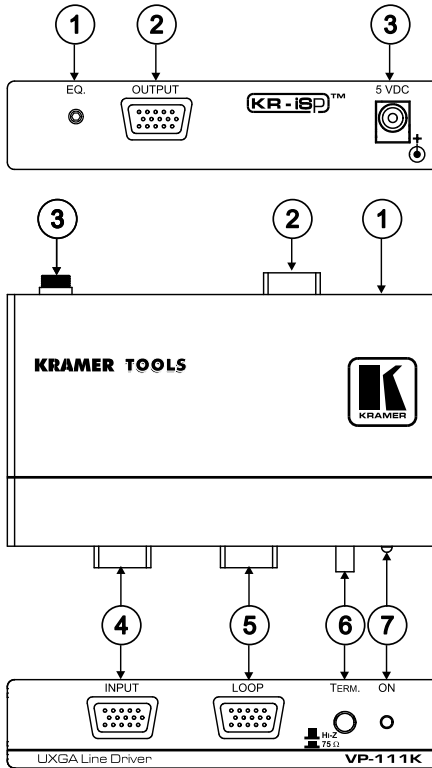


Figure 1: VP-111K UXGA Line Driver Functions

Table 1: VP-111K UXGA Line Driver Functions

#	Feature	Function
1	EQ. Trimmer	Adjusts <sup>1</sup> the cable compensation equalization level for the output
2	OUTPUT 15-pin HD Connector	Connect to the computer graphics acceptor
3	5V DC Connector	+5V DC for powering the unit
4	INPUT 15-pin HD Connector	Connect to the computer graphics source
5	LOOP 15-pin HD Connector	Connect to an additional graphics acceptor
6	TERM Pushbutton Switch	Press IN to 75Ω (when a local monitor is not used); press OUT to Hi-Z (when a local monitor is connected to the LOOP connector)
7	ON LED	Illuminates green when receiving power

<sup>1</sup> Insert a screwdriver into the hole and carefully rotate it, to trim the level

## 5 Connecting the VP-111K UXGA Line Driver

To connect the **VP-111K**, as the example in *Figure 2* illustrates, do the following<sup>1</sup>:

1. Connect a computer graphics source (for example, a laptop) to the INPUT 15-pin HD (F) connector.
2. Connect the OUTPUT 15-pin HD (F) connector to an acceptor (for example, a projector).
3. Connect the LOOP 15-pin HD (F) connector to an acceptor (for example, a local display).
4. Connect the 5V DC power adapter to the 5V DC socket and connect the transformer to the mains electricity (not illustrated in *Figure 2*).
5. Set the termination switch as follows:
  - If no acceptor is attached to the LOOP connector, press the pushbutton in to the 75 $\Omega$  setting
  - If an acceptor is attached to the LOOP connector, set the pushbutton out to HI-Z setting

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<sup>1</sup> Switch OFF the power on each device before connecting it to your **VP-111K**. After connecting your **VP-111K**, switch on its power and then switch on the power on each device

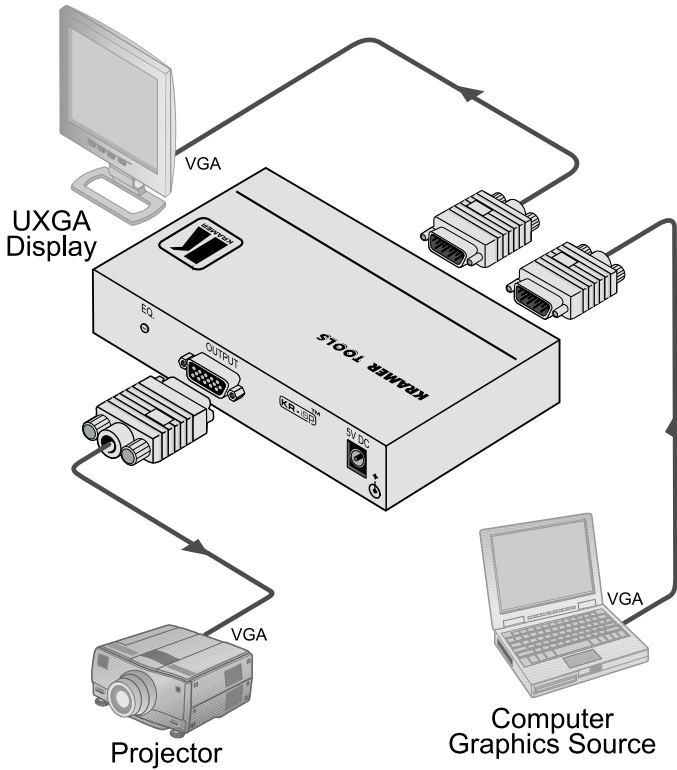


Figure 2: Connecting the VP-111K UXGA Line Driver



## 6 Technical Specifications

The **VP-111K** technical specifications are shown in *Table 2*:

*Table 2: VP-111K Technical Specifications<sup>1</sup>*

INPUT:	1 XGA input on a 15-pin HD connector
OUTPUTS:	1 XGA output and loop on 15-pin HD connectors
MAX OUTPUT LEVEL:	2.2Vpp
BANDWIDTH (-3dB):	500MHz
DIFF. GAIN:	0.05%
DIFF. PHASE:	0.05Deg
K-FACTOR:	<0.05%
S/N RATIO:	75dB
CONTROLS:	0 to 10dB, equalization @50MHz
COUPLING:	DC
POWER SOURCE:	5V DC, 114mA
DIMENSIONS	12cm x 7.2cm x 2.4cm (4.7" x 2.8" x 1.0") W, D, H
WEIGHT:	0.3kg (0.7lbs)
ACCESSORIES:	5V DC 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 your 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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Rev: 1

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**Kramer Electronics, Ltd.**

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**P/N: 2900-000488 REV 1**