Kramer Electronics, Ltd.

USER MANUAL

Model:

VP-111

XGA Line Driver

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1   Introduction

Dedication by Kramer Electronics since 1981, to the development and manufacture of high quality video/audio equipment, makes the Kramer line an integral part of the finest production and presentation facilities in the world. In recent years, Kramer has redesigned and upgraded most of the line, making the best even better! The Kramer line of professional video/audio electronics is one of the most versatile and complete available, and is a true leader in terms of quality, workmanship, price/performance ratio and innovation. In addition to the **VP-111** *XGA Line Driver*, we also offer excellent switchers and matrices, presentation processors, interfaces, remote controllers and computer-related products.

Congratulations on purchasing your Kramer Tools **VP-111** *XGA Line Driver.* This product is ideal for using with:

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

The package includes the following items:

- **VP-111** *XGA Line Driver*
- Power adapter (12V DC Input)
- This user manual[1] and the Kramer concise product catalog/CD

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[2]

3   Overview

The high performance Kramer **VP-111** is a line driver for VGA/XGA signals that:

- Accepts one input, provides correct buffering and isolation, and then

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1 Download up-to-date Kramer user manuals from the Internet at this URL: http://www.kramerelectronics.com/manuals.html

2 The complete list of Kramer cables is on our Web site at http://www.kramerelectronics.com (click "Cables and Connectors" in the Products section)

loops it out to a local monitor (or some other acceptor), as well as outputting an amplified and equalized signal to a remote acceptor

- Can drive very long high resolution lines[1] due to its large bandwidth that exceeds 480MHz. This ensures that it remains transparent even at highest resolution QXGA modes

In particular, the **VP-111** *XGA Line Driver* includes:

- A TERM switch for input signal termination
- Cable equalization control
- ID Bit control (via a switch on its underside)

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 that may adversely influence signal quality and positioning your **VP-111** unit in a location free from moisture and away from excessive sunlight and dust

4   Your VP-111 XGA Line Driver

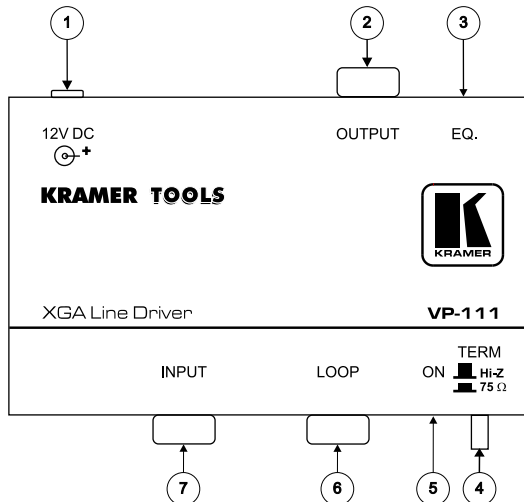Figure 1, Table 1 and Table 2, define the **VP-111** *XGA Line Driver*:

Figure 1: VP-111 XGA Line Driver (Topside)

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

Table 1: Features and Functions of the VP-111 XGA Line Driver (Topside)

#	Feature	Function
1	*12V DC*	+12V DC connector for powering the unit
2	*OUTPUT* HD15F Connector	Connect to the VGA/XGA acceptor
3	*EQ.* Trimmer	Adjusts[1] the cable compensation equalization level for the output
4	*TERM* Button	Pushing in selects *75Ω*; releasing selects *Hi-Z*[2]
5	*ON* LED	Illuminates when receiving power
6	*LOOP* HD15F Connector	Connect to an additional monitor
7	*INPUT* HD15F Connector	Connect to the VGA/XGA source

Table 2: Features and Functions of the VP-111 XGA Line Driver (Underside)

Feature	Function
ID Bit Switch[3]	Sliding to the right selects the ID BIT, sliding to the left deactivates the ID BIT (when outputting the input signal from a laptop connected to an external VGA monitor[4])

5   Connecting the VP-111 XGA Line Driver

To connect the **VP-111**, as the example in Figure 2 illustrates, do the following:

1. Connect an XGA source (for example, a laptop's graphics card) to the INPUT HD15F connector.

2. On the underside, slide the ID Bit switch to the right to set to ON.

3. Connect the OUTPUT HD15F connector to the acceptor (for example, a projector).

4. Connect the LOOP HD15F connector to a local PC monitor and release the TERM button to Hi-Z.
   Note: if only a single output is required, leave the loop unconnected and push in the TERM button to 75Ω.

5. Connect the 12V DC power adapter to the power socket and connect the adapter to the mains electricity.

6. Adjust[5] the video EQ. (equalization) compensation, if required.

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1 Insert a screwdriver into the hole and carefully rotate it, to trim the level

2 For looping select Hi-Z

3 Illustrated in Figure 2

4 Sometimes laptop computers refuse to output a VGA signal to an external VGA monitor if they do not detect the ID Bit as

ON. Set the ID Bit to ON using this switch so that the laptop will output to an external VGA monitor

5 Insert a screwdriver into the small hole and carefully rotate it, trimming the OUTPUT equalization level
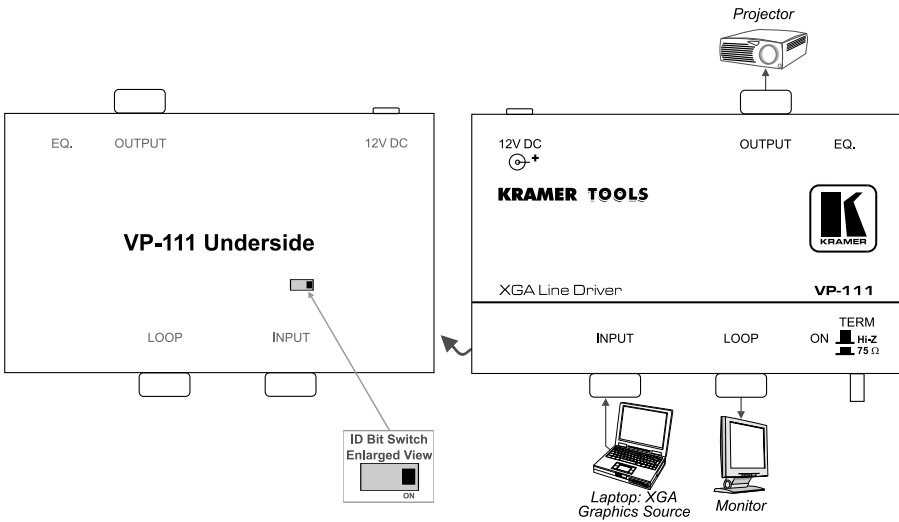
Figure 2: Connecting the VP-111 XGA Line Driver

6   Technical Specifications

Table 3 includes the technical specifications:

Table 3: Technical Specifications[1] of the VP-111 XGA Line Driver

INPUT:	Looping analog red, green, blue signals - 0.7Vpp / 75Ω, H & V sync, TTL level, on HD15F connectors
OUTPUT:	Analog red, green, blue signals - 0.7Vpp / 75Ω, H & V sync, TTL level, on an HD15F connector
MAX. OUTPUT LEVEL:	1.9Vpp
BANDWIDTH (-3dB):	480MHz
DIFF. GAIN:	0.8%
DIFF. PHASE:	0.2 Deg.
K-FACTOR:	<0.05%
S/N RATIO:	73.5dB
CONTROLS:	EQ.: 0dB to +11.3dB @ 50MHz
COUPLING:	DC
POWER SOURCE:	12 VDC, 101mA
DIMENSIONS:	12cm x 7.5cm x 2.5cm (4.7" x 2.95" x 0.98"), W, D, H
WEIGHT:	0.3 kg. (0.66 lbs.) approx.
ACCESSORIES:	Power supply, mounting bracket

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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 three 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.