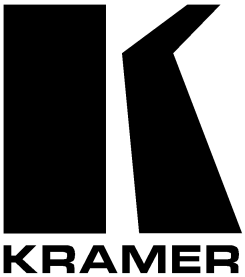
Kramer Electronics, Ltd.



USER MANUAL

Model:

VP-103

XGA Line Amp/Converter

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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 **VP-103** *XGA Line Amp/Converter*. This product is ideal for:

- Any professional display system requiring XGA signal splitting and conversion to BNC connectors
- Long distance graphics signal distribution
- Rental and staging applications

The package includes the following items:

- **VP-103** *XGA Line Amp/Converter*
- 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]

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

3 Overview

The Kramer **VP-103** *XGA Line Amp/Converter* is a high performance line amplifier and format converter for computer graphics video signals (up to at least UXGA). It accepts a computer graphics video input on a 15-pin HD connector, and converts it to two identical outputs of either RGBS, RGsB, or RGBHV.

In addition, the **VP-103**:

- Provides the local monitor loop-through, and necessary buffering, amplification, and sync processing for remote acceptor applications
- Is HDTV compatible
- Has a video bandwidth of 315MHz to ensure transparent operation at multiple resolutions including XGA
- Includes selectable output sync pushbuttons
- Includes a front-panel termination pushbutton[1]
- Includes front panel Level and Cable EQ. controls

The **VP-103** is rugged, dependable, and runs on a standard 12VDC source.

To achieve the best performance:

- Connect 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)
- Avoid interference from neighboring electrical appliances and position your Kramer **VP-103** away from moisture, excessive sunlight and dust

1 For applications not requiring a local monitor, thus eliminating the need for external termination plugs

4 Your VP-103 XGA Line Amp/Converter

Figure 1and Table 1 define the **VP-103** *XGA Line Amp/Converter*:

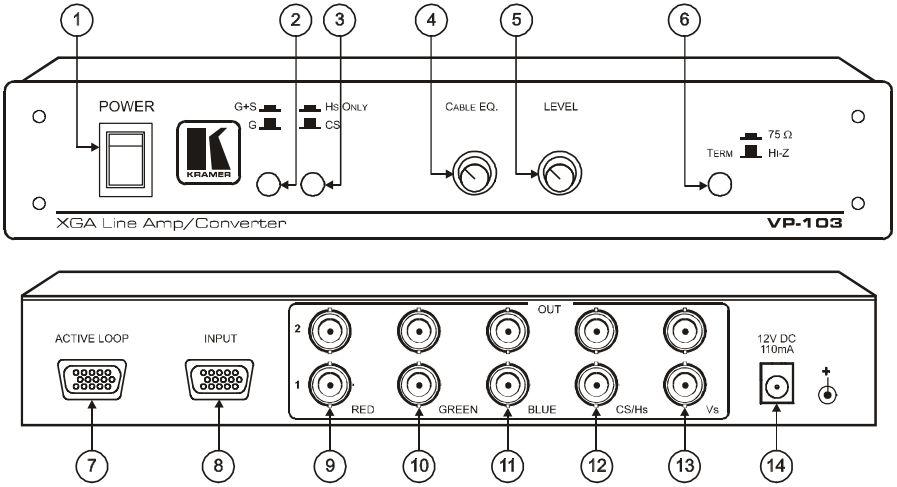

Figure 1: VP-103 XGA Line Amp/Converter – Front and Rear View

Table 1: Features and Functions of the VP-103 XGA Line Amp/Converter

#	Feature		Function
1	*POWER* Switch		Illuminated switch for turning the unit ON or OFF
2	*G+S/G* Pushbutton		Press to select green + sync; release to select green at the GREEN OUT BNC connectors
3	*Hs ONLY/CS* Pushbutton		Press to select horizontal sync; release to select composite sync at the CS/Hs OUT BNC connectors
4	*CABLE EQ.* knob		Adjust the cable equalization level
5	*LEVEL* knob		Adjust the video picture intensity level to correct the input signal
6	*TERM* Pushbutton		Press when looping is not used; release to allow looping
7	*ACTIVE LOOP* HD15F connector		Connects to a local display
8	*INPUT* HD15F connector		Connects to a computers graphics source
9	OUT [1]	*RED* BNC Connector	Connect to the RGB video acceptors
10		*GREEN* BNC Connector	
11		*BLUE* BNC Connector	
12		*CS/Hs* BNC Connector	Amplified and buffered horizontal sync (when the Hs/Cs pushbutton is pressed) or composite sync (when the Hs/Cs pushbutton is released)
13		Vs BNC Connector	Amplified and buffered vertical sync output
14	*12V DC*		+12V DC connector for powering the unit

1 For OUT 1 and OUT 2

5 Connecting your VP-103 XGA Line Amp/Converter

Connect[1] your **VP-103** *XGA Line Amp/Converter*, as the example in Figure 2 illustrates:

1. Connect a computer graphics source to the INPUT HD15F connector.
2. Connect a local display to the ACTIVE LOOP HD15F connector.
3. Connect the RGBHV OUT 1 BNC connectors to an RGBHV display.
4. Connect the 12V DC power adapter to the power socket and connect the adapter to the mains electricity (not shown in this illustration).

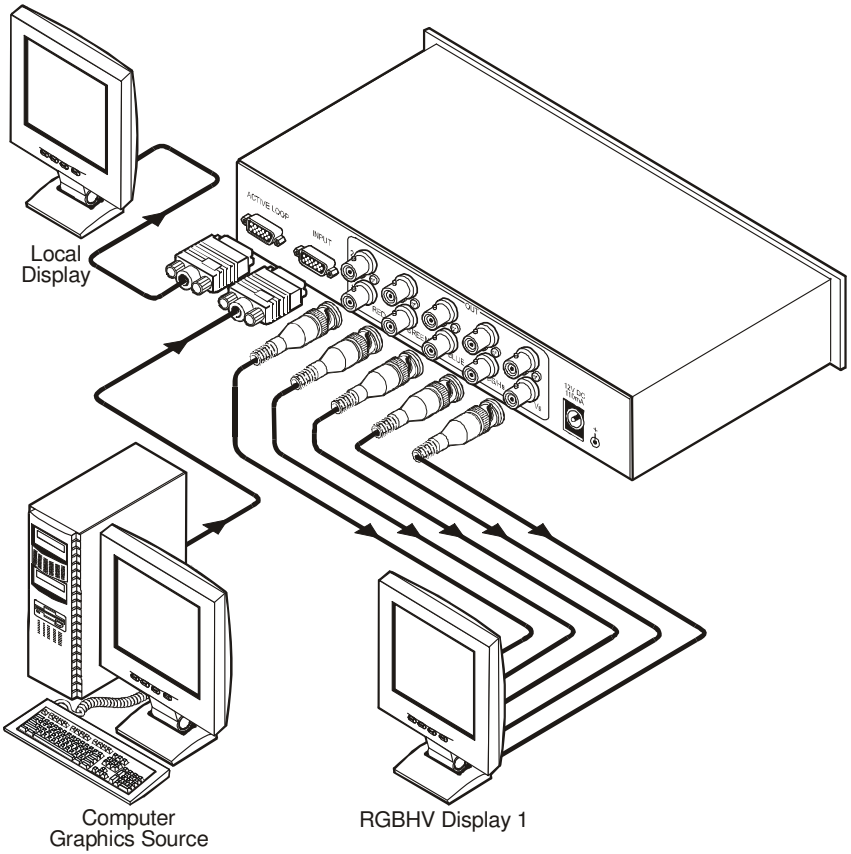

Figure 2: Connecting the VP-103 XGA Line Amp/Converter

1 Switch OFF the power on each device before connecting it to your VP-103. After connecting your VP-103, switch on its power and then switch on the power on each device

6 Technical Specifications

Table 2: Technical Specifications[1] of the VP-103 XGA Line Amp/Converter

INPUTS:	Looping analog red, green, blue signals - 0.7 Vpp/75Ω, H & V sync, TTL level, on an HD15F connector
OUTPUTS:	2 x analog red, green (with or without composite sync), blue signals – 0.7 Vpp/75Ω, H & V syncs -TTL level (Hi-Z load) or analog level (75Ω load) on BNC connectors. Composite sync - TTL levels (Hi-Z load) or analog level (75Ω load)
BANDWIDTH (-3dB):	315MHz
DIFF. GAIN:	0.47%
DIFF. PHASE:	0.15Deg.
VIDEO S/N RATIO:	75dB
CONTROL:	Composite sync or horizontal sync output, green or green + sync selected via front panel switches,level control: - 1 to + 4.1dB, EQ. control: 0 to + 8.6dB @ 5.8MHz
COUPLING:	AC, inputs and outputs, with input protection circuitry
POWER SOURCE:	12VDC, 110mA 1.5W max.
DIMENSIONS:	24.5cm x 18 cm x 4.5 cm (9.6" x 7" x 1.8", W, D, H.).
WEIGHT:	1.1kg. (2.4lbs.) approx.
ACCESSORIES:	12Volts DC power supply
OPTIONS:	RK-MEDN 19" Rack adapter

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: 2900-004024 REV 2