

Kramer Electronics, Ltd.



USER MANUAL

Models:

VP-123, 1:3 RGBHV Distributor

VP-123V, 1:3 RGBHV Distributor

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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 our high quality distribution amplifiers, like the **VP-123 1:3 RGBHV Distributor** and **VP-123V 1:3 RGBHV Distributor**, we also offer excellent switchers and matrices, remote controllers, processors, interfaces and computer-related products. Congratulations on purchasing your Kramer **VP-123** or **VP-123V**, which are ideal for using with presentation systems, and video duplication and production studios. The package includes the following items:

- **VP-123 1:3 RGBHV Distributor** or **VP-123V 1:3 RGBHV Distributor**
- Power adapter (12V DC Input)
- This user manual¹ 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 cables²

3 Overview

The **VP-123** and **VP-123V** are high performance 1:3 distributors for RGBHV signals that provide correct buffering and isolation, accept an RGBHV input, and then distribute the signal to 3 identical outputs on BNC connectors. The **VP-123** RGBHV input consists of 5 BNC connectors. The **VP-123V** RGBHV input consists of a high-density 15 pin D input connector. The **VP-123** and the **VP-123V** are 19-inch rack mountable and require one vertical rack space per product. Both have:

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)

- Excellent video bandwidth, ensuring that each unit remains transparent in almost any application
- Front panel rotary controls for cable equalization (to compensate for high frequency losses on input and output cables) and output level

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 unit in a location free from moisture and excessive sunlight and dust

4 Your 1:3 RGBHV Distributor

Figure 1, Table 1 and Table 2 define the **VP-123 1:3 RGBHV Distributor**:

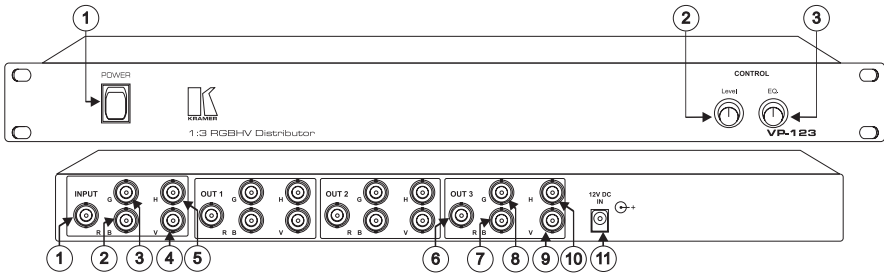


Figure 1: VP-123 1:3 RGBHV Distributor

Table 1: Front Panel VP-123 1:3 RGBHV Distributor Features

#	Feature	Function
1	POWER Switch	Illuminated switch supplying power to the unit
2	Level CONTROL Knob	Potentiometer adjusts the video signal level
3	EQ. CONTROL Knob	Potentiometer adjusts the video equalization (EQ.) compensation

Table 2: Rear Panel VP-123 1:3 RGBHV Distributor Features

#	Feature	Function
1	INPUT R BNC Connector	Connects to the RED signal input
2	INPUT B BNC Connector	Connects to the BLUE signal input
3	INPUT G BNC Connector	Connects to the GREEN signal input
4	INPUT V BNC Connector	Connects to the vertical sync input
5	INPUT H BNC Connector	Connects to the horizontal sync input
6	OUT 3 R BNC Connector	Amplified and buffered RED signal output
7	OUT 3 B BNC Connector	Amplified and buffered BLUE signal output
8	OUT 3 G BNC Connector	Amplified and buffered GREEN signal output
9	OUT 3 V BNC Connector	Amplified and buffered vertical sync output
10	OUT 3 H BNC Connector	Amplified and buffered horizontal sync output
11	12V DC IN	+12V DC connector for powering the unit

Figure 2, Table 3 and Table 4 define the **VP-123V 1:3 RGBHV Distributor**:

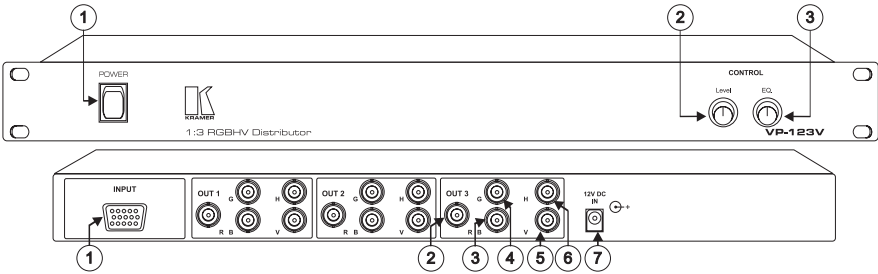


Figure 2: VP-123V 1:3 RGBHV Distributor

Table 3: Front Panel VP-123V 1:3 RGBHV Distributor Features

#	Feature	Function
1	POWER Switch	Illuminated switch supplying power to the unit
2	Level CONTROL Knob	Potentiometer adjusts the video signal level
3	EQ. CONTROL Knob	Potentiometer adjusts the video equalization (EQ.) compensation

Table 4: Rear Panel VP-123V 1:3 RGBHV Distributor Features

#	Feature	Function
1	INPUT DB15F Connector	Connects to the RGBHV source
2	OUT 3 R BNC Connector	Amplified and buffered RED signal output
3	OUT 3 B BNC Connector	Amplified and buffered BLUE signal output
4	OUT 3 G BNC Connector	Amplified and buffered GREEN signal output
5	OUT 3 V BNC Connector	Amplified and buffered vertical sync output
6	OUT 3 H BNC Connector	Amplified and buffered horizontal sync output
7	12V DC IN	+12V DC connector for powering the unit

4.1 Connecting the 1:3 RGBHV Distributor

To connect the **VP-123 1:3 RGBHV Distributor**, as the example in Figure 3 illustrates, do the following:

1. Connect an RGBHV source (for example, a high resolution graphics source) to the 5 INPUT BNC connectors¹, R, B, G, H, and V, as Table 2 defines, using BNC cables².
2. Connect the 3 sets of BNC output connectors³ R, B, G, H, and V, to up to 3 RGBHV acceptors, as follows:

¹ On the VP-123V 1:3 RGBHV Distributor, you connect an RGBHV source to the INPUT DB15F connector

² We recommend using Kramer high performance high resolution cables. The complete list of Kramer cables is on our Web site at <http://www.kramerelectronics.com> (click "Cables and Connectors" in the Products section)

³ As Table 2 and Table 4 define

- Connect the OUT 1 BNC connectors to a Data Projector
 - Connect the OUT 2 BNC connectors to Monitor 1
 - Connect the OUT 3 BNC connectors to Monitor 2
3. Connect the 12V DC power adapter to the power socket and connect the adapter to the mains electricity.
 4. Adjust the video equalization (EQ.) compensation and/or the video signal level, if required.

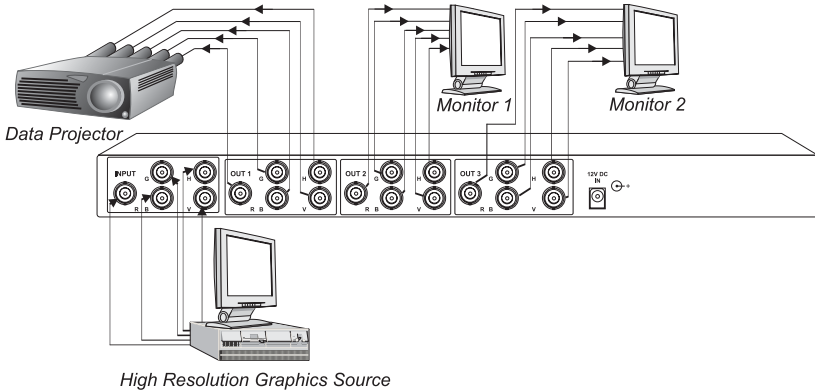


Figure 3: Connecting the VP-123 1:3 RGBHV Distributor

5 Technical Specifications

Table 5 includes the technical specifications:

Table 5: Technical Specifications¹ of the VP-123 and VP-123V 1:3 RGBHV Distributor

INPUT:	R, G, B, H and V on BNC connectors (VP-123) or on DB15F connector (VP-123V)
OUTPUTS:	3 outputs - R, G, B, H and V on BNC connectors
MAX. OUTPUT LEVEL:	1.8 Vpp
BANDWIDTH (-3dB):	430 MHz
DIFF. GAIN:	0.13%
DIFF. PHASE:	0.02 Deg.
K-FACTOR:	<0.05%
S/N RATIO:	82dB
CROSSTALK (all hostile):	-56dB
CONTROLS:	Level and Equalization
COUPLING:	DC
POWER SOURCE:	12V DC 91mA
DIMENSIONS:	19-inch (W), 7-inch (D), 1U (H) rack mountable
WEIGHT:	2.6 kg. (5.7 lbs.) approx.
ACCESSORIES:	Power supply

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 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.



For the latest information on our products and a list of Kramer distributors, visit our Web site: www.kramerelectronics.com.

**Updates to this user manual may be found at
<http://www.kramerelectronics.com/manuals.html>.**

We welcome your questions, comments and feedback.

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