

Kramer Electronics, Ltd.



USER MANUAL

Model:

PT-102VN

1:2 Video DA

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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 groups¹ that are clearly defined by function.

Congratulations on purchasing your Kramer Pico TOOLS™ **PT-102VN 1:2 Video DA** (distribution amplifier), which is ideal for:

- Video duplication studios
- CCTV and home theater use
- Rental and staging applications
- Any professional display system requiring an identical picture on several monitors

The package includes the following items:

- The **PT-102VN Video 1:2 DA**
- Power adapter (12V DC Input), mounting bracket and this user manual²

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 cables³



Caution – No operator-serviceable parts inside unit.

Warning – Use only the Kramer Electronics input power wall adapter that is provided with this unit⁴.

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

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

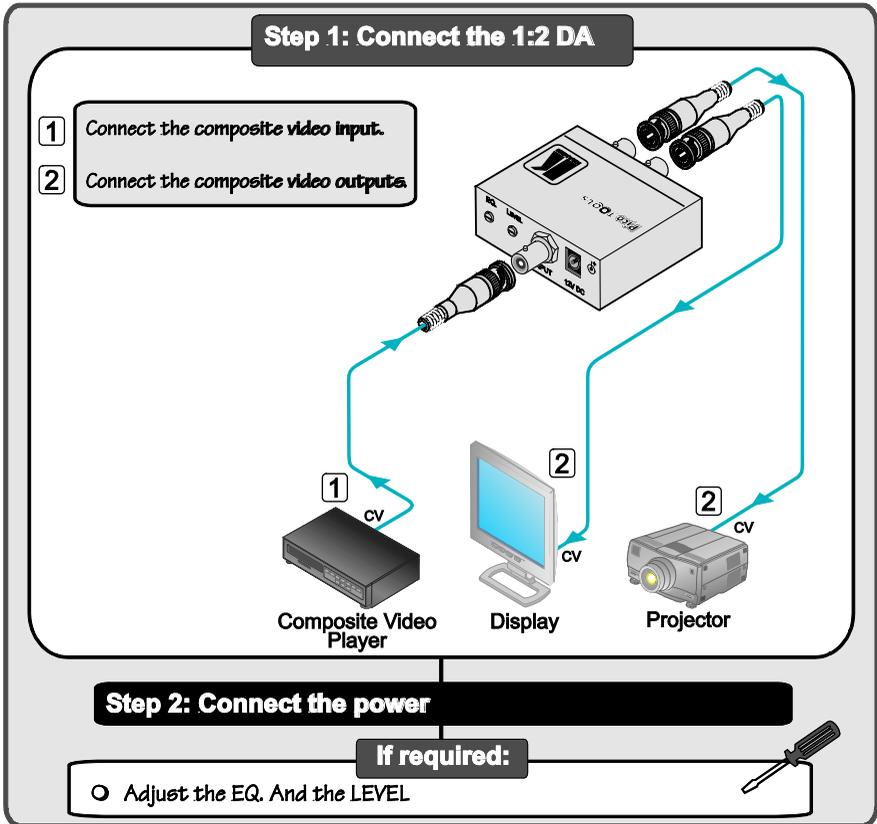
2 Download up-to-date Kramer user manuals at <http://www.kramerelectronics.com>

3 The complete list of Kramer cables is on our Web site at <http://www.kramerelectronics.com>

4 For example: model number AD2512C, part number 2535-000251

2.1 Quick Start

This quick start chart summarizes the basic setup and operation steps.



3 Overview

The Kramer **PT-102VN** is a distribution amplifier for composite video or SDI signals. It takes one input, provides correct buffering and isolation and distributes the signal to two identical outputs.

- Accepts a single input and distributes it to 2 identical outputs using BNC connectors
- Has a bandwidth of 430MHz, ensuring that it remains transparent even in the most critical applications
- Has gain and equalization (EQ.) controls to compensate for cable losses
- Is ideally suited to work with the Pico TOOLS™ **PT-102AN 1:2 Audio DA**

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 **PT-102VN** in a location free from moisture and away from excessive sunlight and dust

4 Your PT-102VN 1:2 Video DA

[Figure 1](#) and [Table 1](#) define the **PT-102VN 1:2 Video DA**:

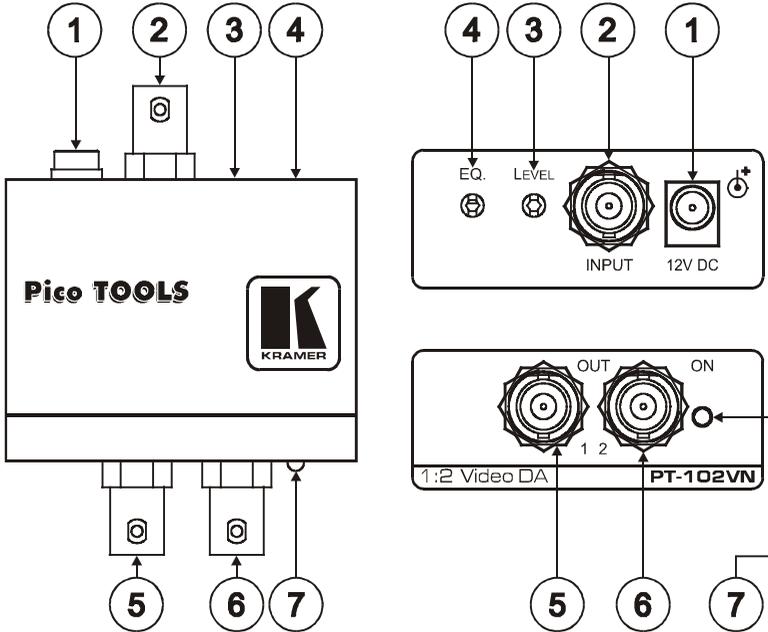


Figure 1: PT-102VN 1:2 Video DA

Table 1: Features and Functions of the PT-102VN 1:2 Video DA

#	Feature	Function
1	12V DC	+12V DC connector for powering the unit
2	INPUT BNC Connector	Connects to the composite video source
3	LEVEL Trimmer	Adjusts ¹ the video signal level for outputs 1 and 2
4	EQ. Trimmer	Adjusts ¹ the cable compensation equalization level
5	OUT 1 BNC Connector	Connects to composite video acceptor 1
6	OUT 2 BNC Connector	Connects to the composite video acceptor 2
7	ON LED	Illuminates when receiving power

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

5 Using the PT-102VN 1:2 Video DA

You can connect your **PT-102VN**:

- As a 1:2 video DA (see section [5.1](#))
- To a **4x1VB 4x1 High Resolution Video Switcher** to increase the number of inputs (see section [5.2](#))
- To two **105VB 1:5 High Resolution Video DA** units to increase the number of outputs (see section [5.3](#))

5.1 Connecting the PT-102VN 1:2 Video DA

To connect the **PT-102VN 1:2 Video DA**, as the example in [Figure 2](#) illustrates, connect the following¹:

1. Connect a composite video source (for example, a composite video player) to the INPUT BNC connector.
2. Connect the two OUT BNC connectors to up to two composite video acceptors, as follows:
 - Connect the OUT 1 connector to video acceptor 1 (for example, a projector)
 - Connect the OUT 2 connector to video acceptor 2 (for example, a display)
3. Connect the 12V DC power adapter to the power socket and connect the adapter to the mains electricity.
4. If required, adjust the output signal level and/or cable compensation equalization level.

¹ Switch OFF the power on each device before connecting it to your PT-102VN. After connecting your PT-102VN, switch on its power and then switch on the power on each device

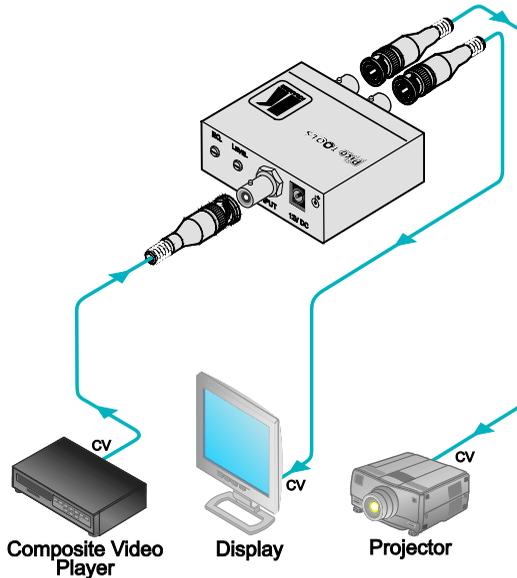


Figure 2: Connecting the PT-102VN 1:2 Video DA

5.2 Increasing the Inputs

When it is necessary to handle more than one input, you can increase the number of inputs for example, from one to four, by connecting the Kramer **4x1VB** *4x1 High Resolution Video Switcher*¹ in addition to the **PT-102VN 1:2 Video DA**, as the example in [Figure 3](#) illustrates:

1. Connect up to four sources to the four IN connectors of the **4x1VB**.
2. Connect the OUTPUT connector of the **4x1VB** to the INPUT connector of the **PT-102VN**.
3. Connect the OUT connectors of the **PT-102VN** to up to two acceptors.
4. Select the desired input via the INPUT SELECTOR switch of the **4x1VB**.
5. Connect the 12V DC power adapter to the power socket of the **PT-102VN** and connect the adapter to the mains electricity.
6. Adjust the output signal level and/or cable compensation equalization level of the **PT-102VN**, if required.

¹ A mechanical switcher that lets you select any input to route to one output via its INPUT SELECTOR buttons. Alternatively, you could connect the PT-102VN to a video switcher with more than four inputs

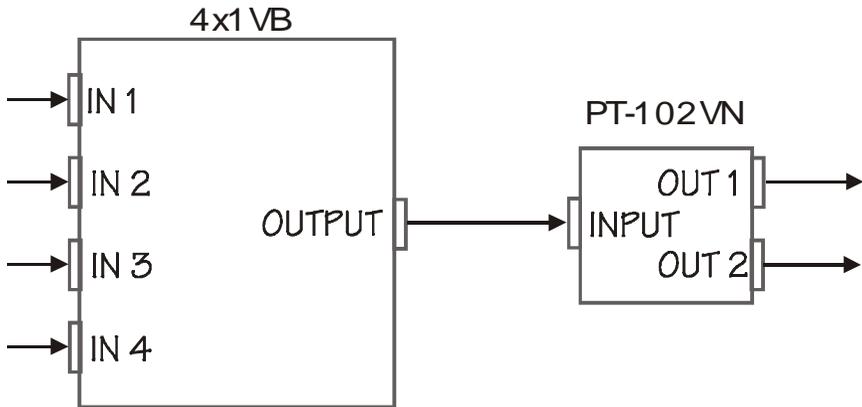


Figure 3: Increasing the Inputs: Arranging a 4:2 DA

5.3 Increasing the Outputs

The **PT-102VN** can be cascaded with other high quality distribution amplifiers to distribute a video source to more than two outputs. For example, you can increase the number of outputs from two to ten, by connecting a **PT-102VN 1:2 Video DA** unit to two Kramer **105VB 1:5 High Resolution Video DA** units, forming a 1:10 DA, as the example in [Figure 4](#) illustrates:

To form a 1:10 DA, do the following:

1. Connect a source to the INPUT BNC connector of the **PT-102VN**.
2. Connect the OUT 1 BNC connector of the **PT-102VN** to the INPUT BNC connector of the first **105VB**.
3. Connect the OUT 2 BNC connector of the **PT-102VN** to the INPUT BNC connector of the second **105VB**.
4. Connect the five OUT BNC connectors of the first **105VB** to the video acceptors 1 to 5, and connect the five OUT BNC connectors of the second **105VB** to five video acceptors as well.
5. Connect the 12V DC power adapter to the power socket and connect the adapter to the mains electricity (for the **PT-102VN** and both **105VB** units).
6. Adjust the output signal level and/or cable compensation equalization level of the **PT-102VN**, if required.

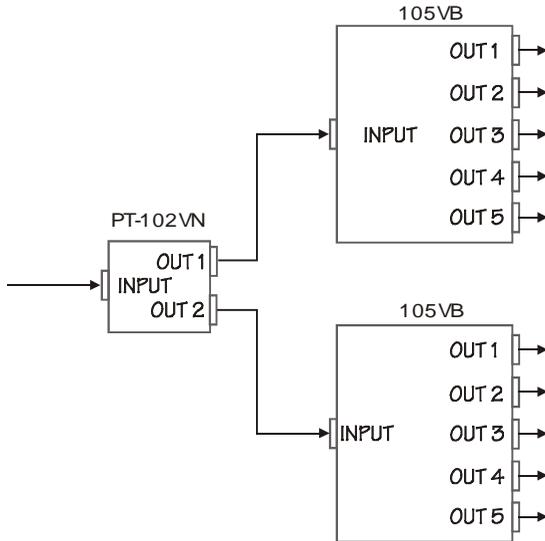


Figure 4: Increasing the Outputs: Arranging a 1:10 DA

6 Technical Specifications

[Table 2](#) includes the technical specifications:

Table 2: Technical Specifications¹ of the PT-102VN

INPUTS:	1 Video, 1Vpp /75Ω on a BNC connector
OUTPUTS:	2 Video, 1Vpp /75Ω on BNC connectors
MAX. OUTPUT LEVEL:	2 Vpp
BANDWIDTH (-3dB):	430MHz
DIFF. GAIN:	0.05%
DIFF. PHASE:	0.05 Deg.
K-FACTOR:	<0.05%
S/N RATIO:	76.1dB
CONTROLS:	Level: -1.2dB to +6dB, EQ.: 0 to + 7.5dB @50MHz via the trimmers
COUPLING:	AC
POWER SOURCE:	12VDC, 30mA
DIMENSIONS:	6cm x 6.5cm x 2.5cm (2.36" x 2.56" x 1") W, D, H
WEIGHT:	0.14kg (0.31lbs) approx.
ACCESSORIES:	Power supply, mounting bracket
OPTIONS:	RK-4PT 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, 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 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.

* FCC and CE approved using STP cable (for twisted pair products)





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.



Caution

Safety Warning:

Disconnect the unit from the power supply before opening/servicing.



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