

**Kramer Electronics, Ltd.**



# **USER MANUAL**

**Model:**

**PT101DVI**

*DVI Repeater*

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This addendum to the **PT101DVI** user manual describes the **PT101DVI-R DVI Repeater**.

The **PT101DVI-R DVI Repeater**:

- Equalizes and reclocks the DVI signal at the end of a long cable(s)
- Effectively reconstructs the DVI signal and retransmits it
- Includes long cable skew alignment that supports the looping of multiple **PT101DVI-R** units in a chain, while preserving the quality of the original signal

**Note that only the digital signal (DVI-D) single link is available on the DVI connector.**

Figure A1 and Table A1 define the **PT101DVI-R DVI Repeater**:

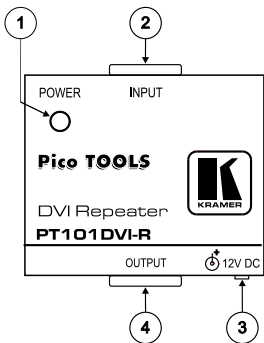


Table A1: PT101DVI-R Features

#	Feature	Function
1	POWER LED	Illuminates when receiving power
2	INPUT DVI Connector	Connect to the DVI source
3	12V DC	+12V DC connector for powering the unit
4	OUTPUT DVI Connector	Connect to the DVI INPUT on the next PT101DVI-R unit or to a DVI acceptor

Figure A1: PT101DVI-R

**Caution** – No operator-serviceable parts inside unit.

**Warning** – Use only the Kramer Electronics input power wall adapter that is provided with this unit<sup>1</sup>.

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

<sup>1</sup> For example: model number SCP1200500P, part number 2535-000251

## 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 Pico TOOLS Digital Visual Interface (DVI)<sup>1</sup> DUAL LINK products like the **PT101DVI DVI Repeater**, we also offer excellent distribution amplifiers, high quality switchers and matrices, remote controllers, presentation processors, interfaces and computer-related products. Congratulations on purchasing your Kramer **PT101DVI DVI Repeater**.

A single DVI LINK passes 165 megapixels per second. If you need higher resolution, use DUAL LINK technology, which is supported by the **PT101DVI DVI Repeater**.

Congratulations on purchasing your Kramer **PT101DVI DVI Repeater**, which is ideal for the following typical applications:

- Presentation graphics distribution and graphics production studios
- Dual monitor systems

The package includes the following items:

- **PT101DVI DVI Repeater**
- Power adapter (12V DC Input)
- This user manual<sup>2</sup> 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<sup>3</sup>

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<sup>1</sup> DVI was designed to provide the industry with a single, universal digital interface (primarily to provide a digital connection between a PC and a display device). It is now considered the industry standard digital graphics interface

<sup>2</sup> Download up-to-date Kramer user manuals from the Internet at this URL: <http://www.kramerelectronics.com/manuals.html>

<sup>3</sup> 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 Overview

The Kramer Pico TOOLS **PT101DVI DVI Repeater**:

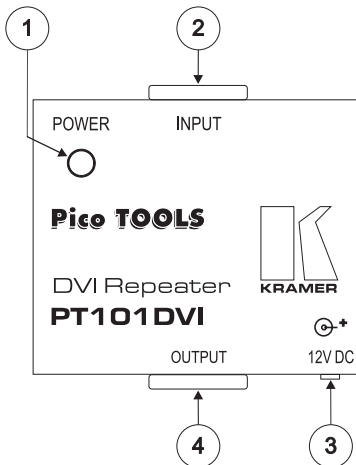
- Is a high quality line driver for DVI-D signals that extends the standard transmission range of standard DVI distances from 5m to up to 15m
- Can be powered by an external power supply, or directly—from DVI connectors on Kramer Scalers, as well as from some desktop DVI cards—without requiring an external power supply
- Utilizes DUAL LINK technology, enabling high frequency signals up to 3Gbps, and therefore the switching of resolutions higher than UXGA

**Note that only the digital signal (DVI-D) is available on the DVI connector.**

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 **PT101DVI** away from moisture, excessive sunlight and dust

Figure 1 and Table 1 define the **PT101DVI DVI Repeater**:



*Table 1: PT101DVI DVI Repeater Features*

#	Feature	Function
1	POWER LED	Illuminates when receiving power
2	INPUT DVI (or DVI DUAL LINK) Connector	Connect to the DVI (or DVI DUAL LINK) source
3	12V DC	+12V DC connector for powering the unit
4	OUTPUT DVI (or DVI DUAL LINK) Connector	Connect to the DVI (or DVI DUAL LINK) acceptor

*Figure 1: PT101DVI DVI Repeater*

## 4 Connecting a PT101DVI DVI Repeater

The example in Figure 2 illustrates how—when connecting a DVI Graphics source to a **VP-724DS Seamless Switcher / Scaler**<sup>1</sup>—you can use the **PT101DVI DVI Repeater** to extend the standard DVI transmission range to 15 meters<sup>2</sup>.

To extend the DVI transmission range using a **PT101DVI DVI Repeater**, as the example in Figure 2 illustrates<sup>3</sup>, do the following:

1. Connect the DVI graphics source (for example, a computer) to the INPUT connector on the **PT101DVI DVI Repeater**.
2. Connect the OUTPUT connector on the **PT101DVI DVI Repeater** to the DVI VIDEO INPUT on the **VP-724DS Seamless Switcher / Scaler**.
3. Connect the VIDEO OUT HD15F connector on the **VP-724DS** to the video acceptor, for example, a Plasma monitor.
4. Connect the power cord to the **VP-724DS**.
5. Connect the 12V DC power adapter to the power socket on the **PT101DVI** and connect the adapter to the mains electricity.

## 5 Technical Specifications

Table 2 includes the technical specifications:

*Table 2: Technical Specifications<sup>4</sup> of the PT101DVI*

INPUT:	1 DVI <sup>5</sup> , 1.2Vpp on a DVI Molex 24pin female connector; DDC signal 5Vpp (TTL)
OUTPUT:	1 DVI <sup>5</sup> , 1.2Vpp on DVI Molex 24pin female connector; DDC signal 5Vpp (TTL)
BANDWIDTH (-3dB):	>3.3GHz
DIMENSIONS:	6 cm x 6.5 cm x 2.5 cm (2.36" x 2.56" x 1") W, D, H
WEIGHT:	0.14 kg. (0.31 lbs.) approx.

1 The VP-724DS lets you select any one of 8 inputs and scale that input to the output at the set resolution. For full details, download the latest VP-724DS user manual from the Internet at: <http://www.kramerelectronics.com/manuals.html>

2 The maximum cable length if connecting the DVI Graphics source directly to the VP-724DS is 5 meters

3 The audio connections are not shown in Figure 2

4 Specifications are subject to change without notice

5 On a DVI-I connector. Note that only the digital signal (DVI-D) is available on the DVI connector

## Technical Specifications

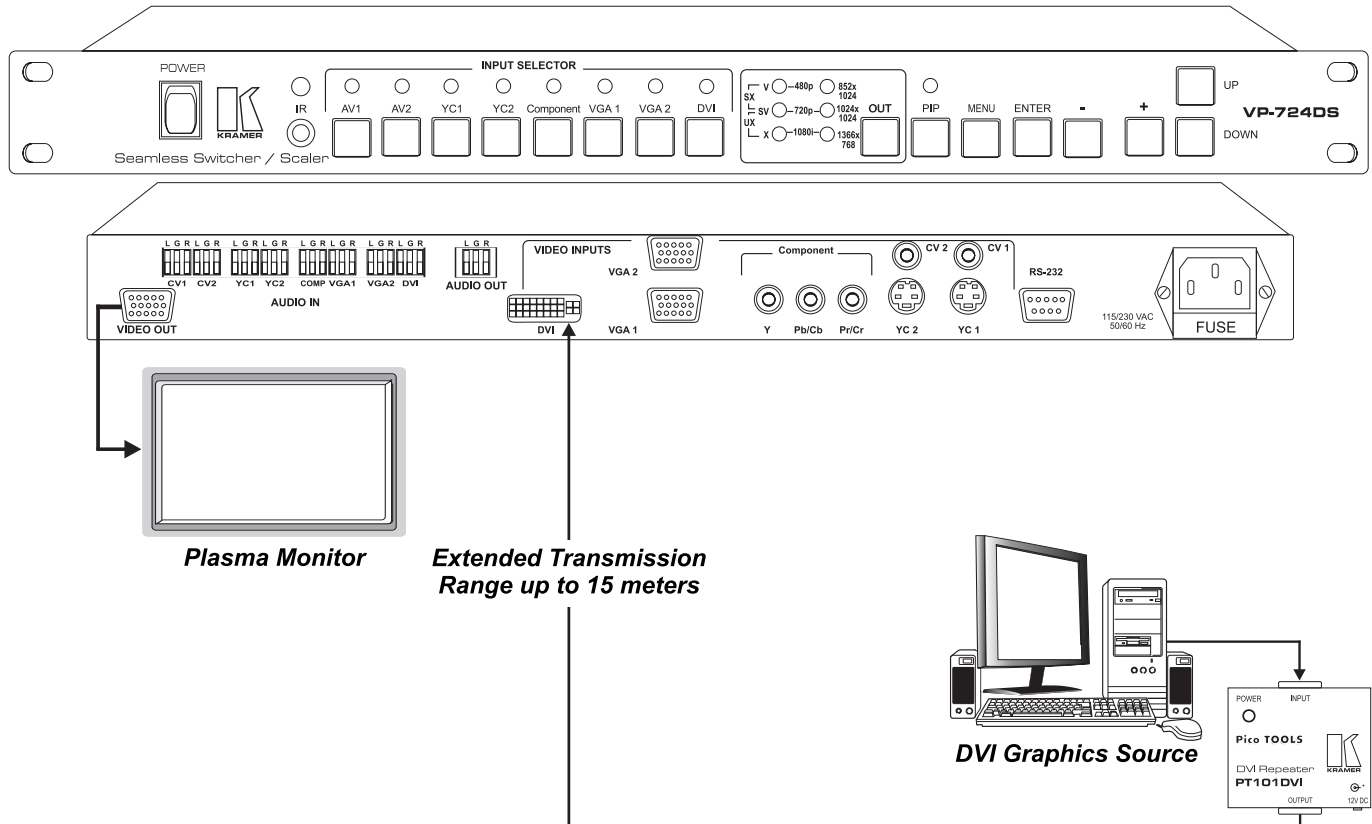


Figure 2: Extending the DVI Transmission Range using a PT101DVI DVI Repeater

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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 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](http://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](http://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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