Kramer Electronics, Ltd.

USER MANUAL

Model:

VA-1VGAN

EDID Capture

Contents

Figures

Tables

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 groups[1] that are clearly defined by function.

Thank you for purchasing the Kramer PicoTOOLS™ **VA-1VGAN** *EDID Capture,* which is ideal for:

- Distributing presentation graphics
- Using a display at a distance from the computer
- Using in graphics production studios

Each package includes the following items:

- The **VA-1VGAN** *EDID Capture*
- 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]. Be sure that the VGA cable passes the signals on pins 12 and 15
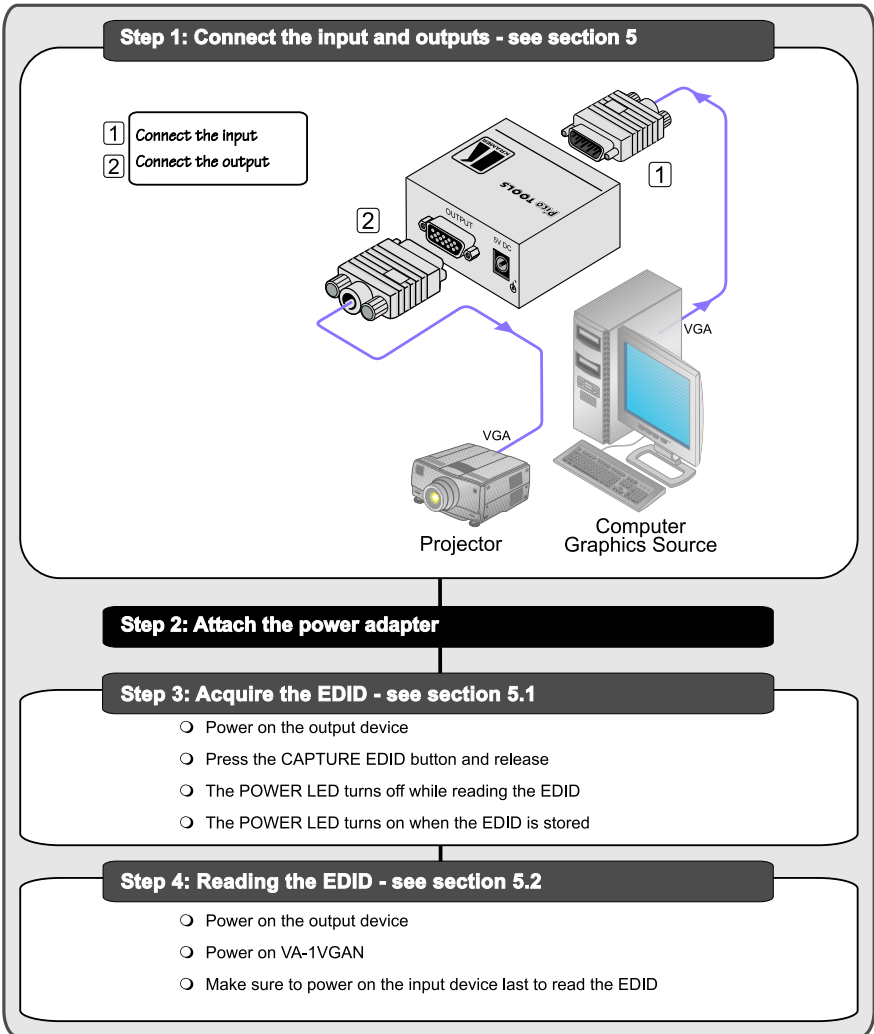
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1 GROUP 1: Distribution Amplifiers; GROUP 2: Switchers and Matrix Switchers; GROUP 3: Control Systems; GROUP 4: Format/Standards Converters; GROUP 5: Range Extenders and Repeaters; GROUP 6: Specialty AV Products; GROUP 7: Scan Converters and Scalers; 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 from our Web site at http://www.kramerelectronics.com

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

2.1 Quick Start

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

Step 1: Connect the input and outputs - see section 5

1 Connect the input
2 Connect the output

VGA

VGA

Projector

Computer
Graphics Source

Step 2: Attach the power adapter

Step 3: Acquire the EDID - see section 5.1

❍ Power on the output device

❍ Press the CAPTURE EDID button and release

❍ The POWER LED turns off while reading the EDID

❍ The POWER LED turns on when the EDID is stored

Step 4: Reading the EDID - see section 5.2

❍ Power on the output device

❍ Power on VA-1VGAN

❍ Make sure to power on the input device last to read the EDID

3 Overview

The Kramer **VA-1VGAN** is a VGA EDID Capture, with VGA input and output on 15-pin HD computer graphics video connectors. When the **VA-1VGAN** is connected to a display device and the CAPTURE EDID button is pressed, the **VA-1VGAN** reads and stores the EDID (Extended Display Identification Data) from the display device[1]. The display can be disconnected and later reconnected without rebooting the operating system.

Specifically, the **VA-1VGAN** features:

- 15-pin HD connectors for input and output signals
- An EDID capture pushbutton
- An ON LED
- 5V DC power

To achieve the best performance:

- Use only good quality connection cables[2] to avoid 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 that may adversely influence signal quality and position your Kramer **VA-1VGAN** away from moisture, excessive sunlight and dust

⚠	**Caution** – No operator-serviceable parts inside unit. **Warning** – Use only the Kramer Electronics input power wall adapter that is provided with this unit[3]. **Warning** – Disconnect power and unplug unit from wall before installing or removing device or servicing unit.

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1 Some computers need to have the EDID information available when they boot up, otherwise the VGA output may be disabled

2 Available from Kramer Electronics on our Web site at http://www.kramerelectronics.com

3 For example, part number 2535-052002

3.1 Defining EDID

EDID (Extended Display Identification Data[1]) is a data-structure that the display provides to describe its capabilities to a graphics card connected to the display's source. The EDID enables the source, such as a PC, to "know" what kind of monitor is connected to the output.

The EDID includes: the name of the manufacturer, product type, timing data supported by the display, display size, luminance data, and (for digital displays only) the pixel mapping data.

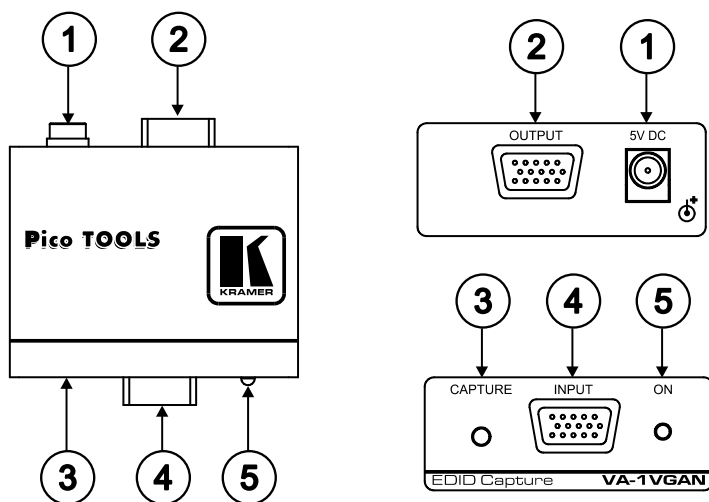# 4 Your VA-1VGAN EDID Capture

Figure 1 and *Table 1* define the unit.

Figure 1: VA-1VGAN EDID Capture

Table 1: VA-1VGAN EDID Capture Functions

#	Feature	Function
1	*5V DC*	+5V DC connector for powering the unit
2	*OUTPUT* 15-pin HD connector	Connects to the VGA acceptor
3	*CAPTURE* Button	Press to acquire the EDID
4	*INPUT* 15-pin HD connector	Connects to the VGA source
5	*ON* LED	Illuminates when the power is connected

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1 EDID is defined by a standard published by the Video Electronics Standards Association (VESA)

5   Connecting the VA-1VGAN EDID Capture

In the example illustrated in *Figure 2*, a projector is disconnected from a PC in order to reinstall it at a distance, after the PC has read the projector's acquired EDID from the **VA-1VGAN**. The projector is then reconnected, without the need to reboot the system.

The configuration illustrated in *Figure 3* requires two separate stages:

- The **VA-1VGAN** needs to acquire the projector's EDID information (see section 5.1)
- The PC is connected to the **VA-1VGAN**, letting it read the projector's EDID information even if it is not connected to the PC (see section 5.2).
  The projector can now be reconnected at a distance to the PC via the **VA-1VGAN**.

5.1   Acquiring the EDID

To use the **VA-1VGAN** to acquire the EDID information, as illustrated in the example in *Figure 2*, do the following:

1. Connect the OUTPUT VGA connector to the input VGA connector of the display (for example, a projector), using a short cable[1].

2. Connect the 5V DC power adapter to the power socket and connect the adapter to the mains electricity[2] (not shown in this illustration).
   The ON LED should light.

3. Press the CAPTURE EDID button.
   The ON LED turns off while the EDID information is read and stored in the **VA-1VGAN** non-volatile memory. When the ON LED lights again, the EDID is stored.

4. Disconnect the projector's VGA connector from the OUTPUT VGA on the **VA-1VGAN**.

5. Disconnect the power source.

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1 The EDID is carried over pins 12 and 15 of the VGA connector. It is essential that the cable used for capturing the EDID passes all 15 pins

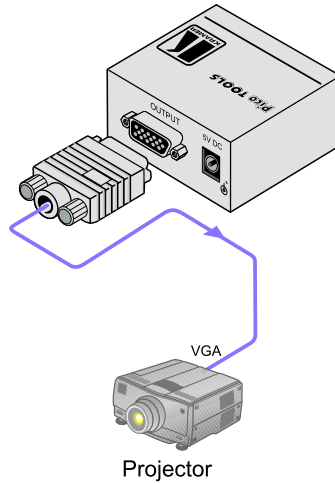2 Also make sure that the projector is connected to the power supply

VGA

Projector

Figure 2: VA-1VGAN – Acquiring the EDID from the Display Device

5.2 Reconnecting the Projector

To reconnect the projector at a distance from the PC, as illustrated in the example in *Figure 3*, do the following[1]:

1. Connect a VGA source (for example, a VGA computer graphics source) to the INPUT VGA connector on the **VA-1VGAN**.

> Turn on the VGA source only after connecting the **VA-1VGAN**,
> so it can acquire the EDID properly

2. Connect the 5V DC power adapter to the power socket and connect the adapter to the mains electricity[2].

3. When installation is complete[3], connect the OUTPUT VGA connector of the **VA-1VGAN** to the projector, using the required cable length.

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1 Switch OFF the power on each device before connecting it to your VA-1VGAN

2 If the PC can supply power to the unit via its VGA connector, the power supply is not needed

3 The EDID is transmitted to the PC via the VA-1VGAN, so the PC gets the EDID information even if the projector is temporarily disconnected. When installing the display again at a distance, there is no need to reboot the PC
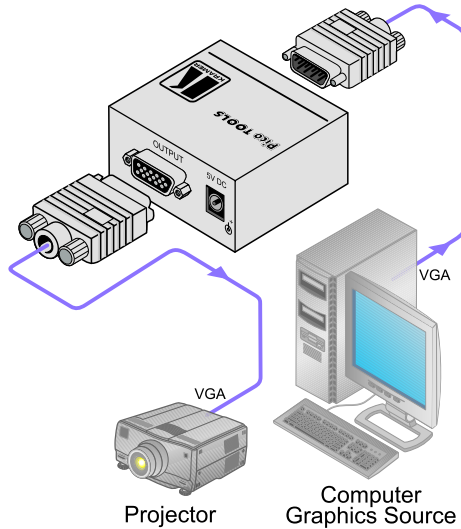

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Figure 3: Connecting the VA-1VGAN EDID Capture

6   Technical Specifications

VA-1VGAN technical specifications are shown in *Table 2*:

Table 2: VA-1VGAN EDID Capture Technical Specifications[1]

INPUT:	1 XGA input on a 15-pin HD connector
OUTPUT:	1 XGA output on a 15-pin HD connector
MAX. OUTPUT LEVEL:	> 2Vpp
BANDWIDTH (-3dB):	1.8GHz
DIFF. GAIN:	0.02%
DIFF. PHASE:	0.02Deg
K-FACTOR:	< 0.05%
S/N RATIO:	74dB @ 5MHz (unweighted: 66dB)
CONTROLS:	Pushbutton for EDID monitor information storage
COUPLING:	DC, direct wiring between input and output
POWER SOURCE:	5V DC, 20mA
DIMENSIONS:	6.2cm x 6.2cm x 2.4cm (2.4" x 2.4" x 0.9") W, D, H
WEIGHT:	0.15kg (0.33lbs) approx.
ACCESSORIES:	Power supply
OPTIONS:	19" rack mount adapter

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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 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.

Safety Warning:
Disconnect the unit from the power supply before
opening/servicing.

Caution