Kramer Electronics, Ltd.

USER MANUAL

Model:

FC-200

XGA EDID Copier

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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 groups[1] that are clearly defined by function.

Thank you for purchasing the Kramer Pico TOOL™ **FC-200** *XGA EDID Copier* (and uploader) which is ideal for:

- Ensuring trouble free VGA transmission by copying an EDID block from a display device to a Kramer compatible wall plate or twisted pair product

Each package includes the following items:

- The **FC-200** *XGA EDID Copier*
- This user manual[2]
- VGA cable[3]
- PP3 9V battery

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[4]

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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
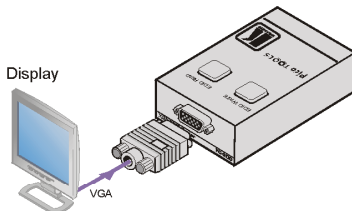
3 Kramer model number C-MGM/MGM-1

4 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: Install the battery - see section 5

**Step 2: Connect the display - see section 6**

Display

VGA

Step 3: Turn on the FC-200

Step 4: Read the EDID

❍ Press and release the EDID READ button. The EDID READ button flashes slowly approximately once per second for 3 seconds while reading the EDID. When the button stops flashing, the EDID has been read

❍ Disconnect the display device from the FC-200

Step 5: Connect the receiver

SV-301XL

VGA
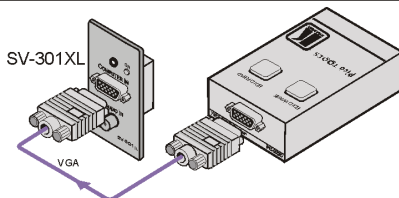
❍ Connect the EDID receiver to the FC-200 and turn on the EDID receiver (the SV-301xl Wall Plate is shown merely for purposes of illustration)

Step 6: Upload the EDID

❍ Press and release the EDID WRITE button. The EDID WRITE button flashes slowly approximately once per second for 3 seconds. When the button stops flashing, the EDID has been written

❍ Disconnect the EDID receiver

Step 7: Turn off the FC-200

3 Overview

The Kramer Pico TOOLS™ **FC-200** is an XGA[1] EDID (Extended Display Identification Data, see Section 3.1) copier and uploader used to read and write EDID to and from various devices. The **FC-200** has a combined VGA input and output on a single 15-pin HD computer graphics video connector.

The **FC-200** is connected to a display device to capture (read and store) the EDID from the display device[2]. The **FC-200** can then be connected to an interfacing device (for example, the Kramer **SV-301xl** *Wall Plate*) to which it can write (upload) the stored EDID information. This prevents the problem whereby a source (for example, a PC) fails to output video because it was not connected to the display device when attempting to read its EDID.

The **FC-200** features:

- A 15-pin HD connector for input and output signals
- EDID READ and WRITE pushbuttons
- Power by a 9V internal battery
- An ON/OFF power switch and ON LED
- Visual indication of successful/unsuccessful read/write

To achieve the best performance:

- Use only good quality connection cables[3] 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 **FC-200** away from moisture, excessive sunlight and dust

Caution: No operator serviceable parts inside unit
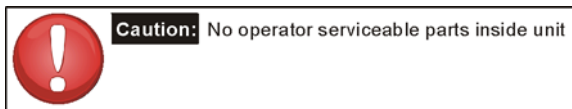
3.1 Defining EDID

EDID[4] is a data-structure that the display provides to describe its capabilities to a graphics card connected to the display. The EDID enables the graphics card or

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1 The actual resolution can be up to XGA

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

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

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

other source, such as a PC, to identify the characteristics of the monitor that is connected to the output.

The EDID includes information, such as, 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 Defining the FC-200 XGA EDID Copier
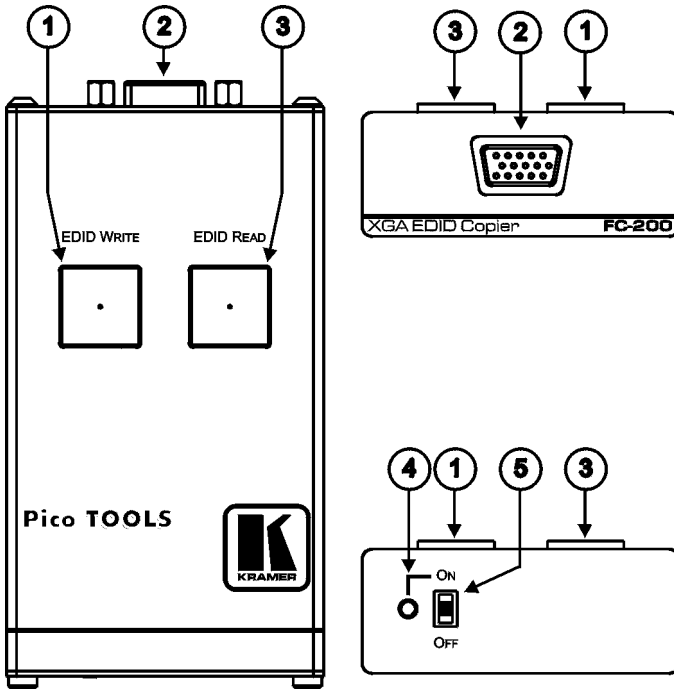
Figure 1 and Table 1 define the **FC-200**.

Figure 1: FC-200 EDID Copier

Table 1: FC-200 EDID Copier Functions

#	Feature	Function
1	*EDID WRITE* pushbutton	Press to write the EDID to an EDID receiver
2	INPUT/OUTPUT 15-pin HD connector	Connects to the VGA display during reading and to the EDID receiver during writing
3	*EDID READ* pushbutton	Press to acquire the EDID from the display source
4	*ON* LED	Lights when the unit is switched on
5	*ON/OFF* power switch	Turns the **FC-200** on or off

5 Installing the Battery

To install the battery:

1. Ensure that the **FC-200** is turned off.

2. Using a Philips screwdriver, remove the two screws that retain the panel bearing the ON/OFF switch and lay it aside.

3. Attach the battery connector to the battery taking care that the polarity is correct. The connector fits the battery in one orientation only.

4. Slide the battery into the housing with the wires that exit the connector facing the ON/OFF switch. Note that the battery can fit fully into the housing only if the wires of the connector exit towards the switch.

5. Replace the panel, insert and tighten the retaining screws.

6 Using the FC-200 XGA EDID Copier to Read and Write the EDID

Copying the EDID is a two step process consisting of:

1. Connecting the display device to the **FC-200**, reading the EDID, and disconnecting the display.

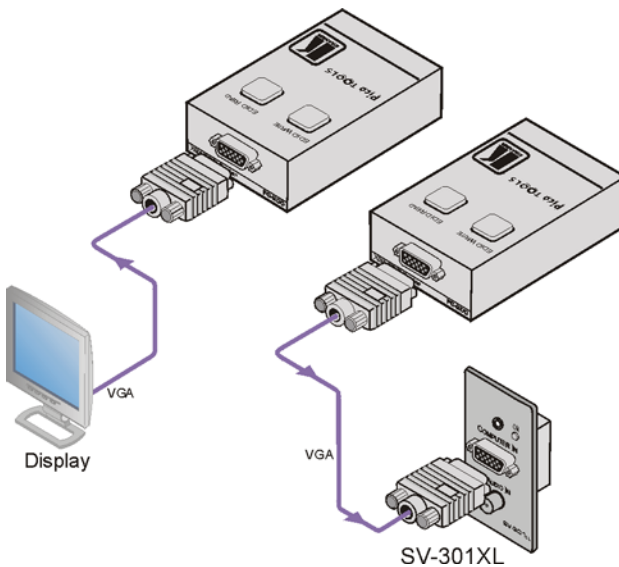2. Connecting the EDID receiver to the **FC-200** and writing the EDID.

Figure 2: Reading and Writing the EDID

To read the EDID information:

1. Connect the **FC-200** to the VGA connector on the display device (for example, a projector), using the VGA cable[1] provided.

2. Turn the **FC-200** on.
   The ON LED lights continually, and the READ and WRITE buttons flash alternately for approximately three seconds as the unit performs a self test. Wait for the buttons to stop flashing.

3. Press the **EDID READ** button.
   The EDID READ button flashes slowly for approximately 3 seconds while the EDID information is read and stored in the non-volatile memory of the **FC-200**. Slow flashing of the EDID READ button indicates a successful read operation. When the button stops flashing, the EDID has been stored.
   If the button flashes quickly, this indicates a failed read operation. Either the connection has failed or the EDID is corrupt. Check the connection and repeat this step.

4. Disconnect the display from the **FC-200**.

To write the EDID to the EDID receiver:

1. Connect the **FC-200** to the VGA connector on the EDID receiver (for example, a wall plate), using the VGA cable[1] provided.
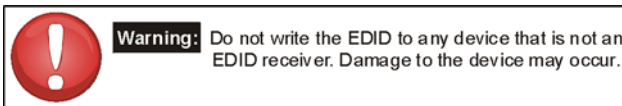
2. Turn the EDID receiver on.

3. Press the **EDID WRITE** button.
   The EDID WRITE button flashes slowly for approximately 3 seconds while the EDID information is written to the EDID receiver. Slow flashing of the EDID WRITE button indicates a successful write operation. When the button stops flashing, the EDID has been written.
   If the button flashes quickly, this indicates a failed write operation. Either the connection has failed or the EDID is corrupt. Check the connection and repeat this step.

4. Turn the **FC-200** off to extend battery life.
   The power LED goes off.
   Note: The **FC-200** stores the EDID value that was last read even when the power is off or the battery is disconnected.

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1 The EDID is carried over pins 12 and 15 of the VGA connector, so the cable used for reading/writing must pass pins 12 and 15

7   Technical Specifications

Technical specifications of the **FC-200** are listed in <u>Table 2</u>.

Table 2: FC-200 XGA EDID Copier Technical Specifications[1]

INPUT/OUTPUT:	1 VGA on a 15-pin HD connector
CONTROLS:	Pushbuttons for EDID reading and writing
POWER SOURCE:	PP3 9V battery
DIMENSIONS:	6.2cm x 11.0cm x 2.4cm (2.4" x 4.3" x 0.9") W, D, H.
WEIGHT:	0.15kg (0.33lbs) approx.
ACCESSORIES:	VGA cable[2], PP3 9V battery
OPTIONS:	19" rack mount adapter

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1 Specifications are subject to change without notice

2 Kramer model number C-MGM/MGM-1

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)

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

Caution