Kramer Electronics, Ltd.

USER MANUAL

Model:

F-010

XGA Line Amplifier Mounting Box for

Ackermann Floor Boxes

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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 **F-010** *XGA Line Amplifier Mounting Box* for Ackermann floor boxes, which is ideal for board, conference and training rooms, as well as long distance signal distribution.

The **F-010** includes two single Kramer inserts[2] (covered with blank inserts) and is mounted into Ackermann flush floor service units that accept GB2 and GB3 size boxes[3].

The package includes the following items:

- **F-010** *XGA Line Amplifier Mounting Box*
- Power adapter (12V DC Input)
- This user manual[4]

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[5]

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 The complete list of Kramer products can be found on our Web site at http://www.kramerelectronics.com

3 GB2 and GB3 are Ackermann mounting boxes that fit into Ackermann floor boxes

4 Download up-to-date Kramer user manuals from the Internet at http://www.kramerelectronics.com

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

3 Overview

The **F-010** *XGA Line Amplifier Mounting Box* for Ackermann floor boxes is an XGA line amplifier for computer graphics video signals up to UXGA. It includes two adjacent openings that let you fit inside two Kramer single inserts or one dual Kramer insert.

The **F-010** features:

- A resolution of up to UXGA
- An SDA (Serial Data) and SCL (Serial Clock) terminal block connector to pass the EDID information via pins 12 and 15 respectively, on the 15-pin HD connector
- EQ. control for the XGA output
- A 12V DC power supply

3.1 DDC Support

When establishing a VGA connection between a PC or laptop and a display device, a set of parameters known as EDID is exchanged between them, which is carried over the DDC channel. In some PC graphic cards and laptops, this information exchange is essential for proper VGA OUT operation.

3.2 Defining EDID

The Extended Display Identification Data (EDID[1]) is a data-structure provided by a display to describe its capabilities to a graphics card (that is connected to the display's source). The EDID enables the **F-010** to "know" what kind of monitor is connected to the output. The EDID includes the manufacturer's name, product type, timing data supported by the display, display size, luminance data and (for digital displays only) the pixel mapping data.

1 Defined by a standard published by the Video Electronics Standards Association (VESA)

3.3 Achieving the Best Performance

To achieve the best performance:

- Use only good quality connection cables[1] 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 **F-010** 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 the unit

Warning: Disconnect power and unplug unit from wall before installing or removing the device or servicing unit

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

4 Your F-010

Figure 1 and Table 1 define the **F-010**:

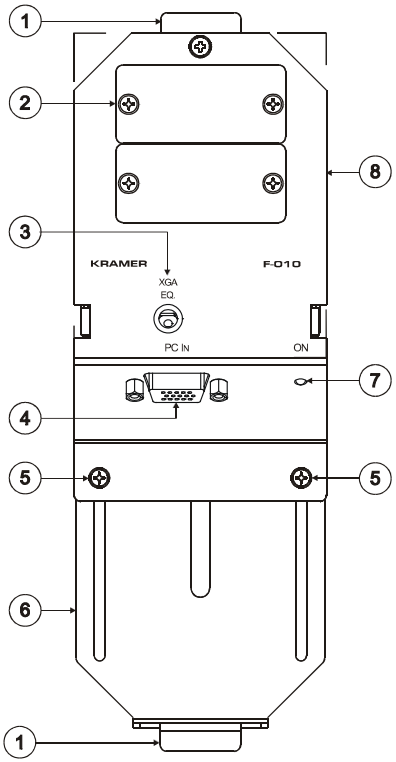


Figure 1: The F-010 XGA Line Amplifier Mounting Box (Diagram)

Table 1: F-010 Features

#	Feature	Function
1	Mounting Tabs	For fitting the **F-010** into an Ackermann floor box
2	Blank Inserts (2)	Cover the openings that can be replaced with Kramer wall plate inserts (see section 5.1)
3	*XGA EQ.* Trimmer	Adjusts[1] the cable compensation equalization level for the output
4	*PC IN* 15-pin HD F Connector	Connect to the XGA source
5	Slide Screws (2)	Release to increase or decrease the length of the unit; tighten to fix size
6	Adjustable Mounting Slide	For adjusting the size of the unit to fit an Ackermann floor box
7	*ON* LED	Lights red when receiving power, lights green when receiving a signal from a video source
8	13-pin Terminal Block Line Output Connector[2]	Connect to the line in connector on the receiver (see section 5.2.1)

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

2 Located inside the mounting box

5 Installing the F-010

To install the **F-010** you have to:

- Install the Kramer inserts (see section 5.1)
- Connect the cables to the rear side (see section 5.2)
- Install the **F-010** inside the Ackermann floor box (see section 5.3)
- Connect the front panel ports (see section 5.4)

5.1 Installing a Kramer Insert

To install a Kramer insert, do the following:

1. Unscrew the two screws holding the blank insert and remove it.
2. Place and align the required wall plate insert item over the opening.
3. Insert the two screws to fix the insert in place, and tighten them.

5.2 Connecting the Rear Side of the F-010

To connect the rear side cables, do the following:

1. Run the cables through the Ackermann under floor cable opening.
2. Connect the cables to the rear side of the inserts.
3. Connect the cables[1] to the rear side of the **F-010** (see section 5.2.1), that is, attach the:
   - RGBHV Terminal block output to the RGBHV acceptor (for example, a display)
   - SDA and SCL terminal block connector to pins 12 and 15 on the XGA output connector
4. Connect the 12V DC power supply to the power terminal blocks (connect the wire labeled "+" to the +12V pin, and the wire labeled "–" to the GND pin) taking care that the polarity is correct (see Figure 2).

1 We recommend that you use Kramer C-GM/XL cable, which has a molded male 15-pin HD connector installed at one end, and the corresponding RGBHV coaxes exposed, pre-stripped and tinned at the other end, as well as two additional wires to connect pins 12 and 15 for EDID support. For details, see our Web site at http://www.kramerelectronics.com)

5.2.1 Wiring the 13-pin Terminal Block Connector

The 13-pin terminal block is an easy plug-in connector for attaching the outputs. Follow the colors of the color-coded sticker on these terminals for proper connection of the cable. Figure 2 defines the pinout for the terminal block.

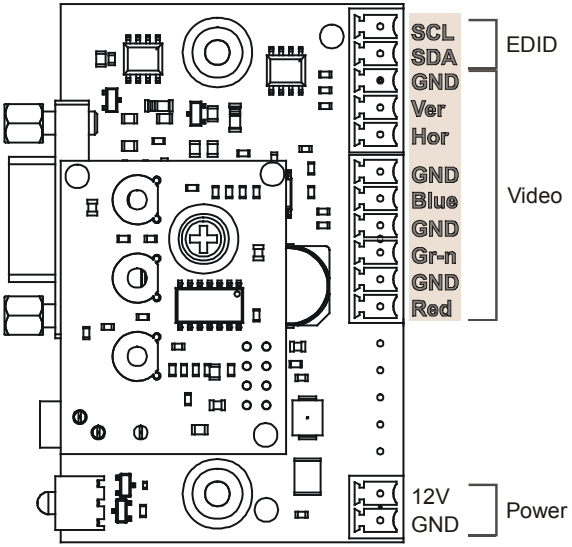


Figure 2: Terminal Block Pinout

Note:

- Use the connector clips only when removing wires, not when inserting them
- Each wire should protrude 9mm (0.35") from the plastic insulation so that it can be easily connected. Be sure to fully insert each wire to prevent them from crossing

Figure 3 defines the corresponding VGA connector pinout:

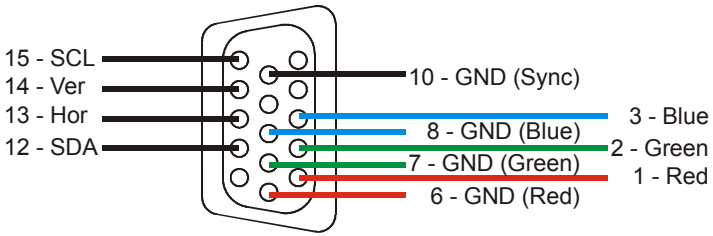


Figure 3: VGA Connector Pinout

5.3 Installing the F-010 inside the Ackermann Floor Box

To install the **F-010** inside the Ackermann floor box, as illustrated in Figure 4, perform the following steps:

Step 1. Loosen the two slide screws (without removing them) so that the adjustable mounting slide will move freely.

Step 2. Fit the **F-010** mounting box into its designated place inside the Ackermann floor box (not shown in Figure 4, see Figure 5).

Step 3. Insert the fixed tab into the slot in the Ackermann box.

Step 4. Adjust the size of the unit to fit the space in the box.

Step 5. Insert the tab on the adjustable mounting box to the appropriate slot in the Ackermann box.

Step 6. Tighten the slide screws to fix the size of the unit.

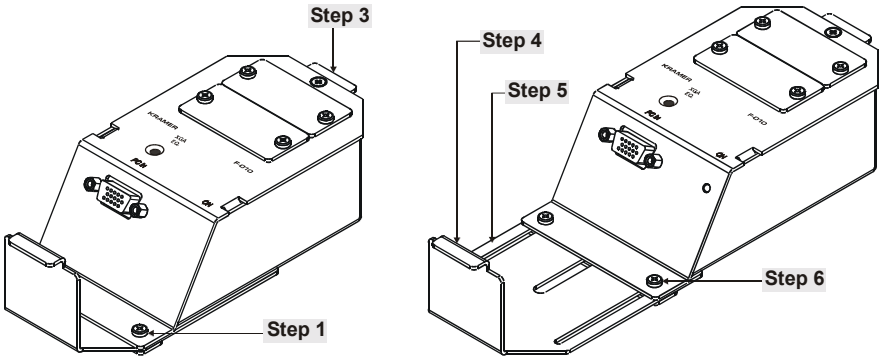


Figure 4: Installing the F-010 XGA Line Amplifier Mounting Box

Figure 5 shows the **F-010** fitted in an Ackermann floor box:



Figure 5: F-010 Fitted in an Ackermann Floor Box

5.4 Connecting the Front Panel Ports

To connect the front panel ports do the following:

1. Connect the XGA source (for example, a laptop) to the PC IN 15-pin HD (F) connector.
2. Connect the appropriate connectors to the inserts (not illustrated in Figure 6).

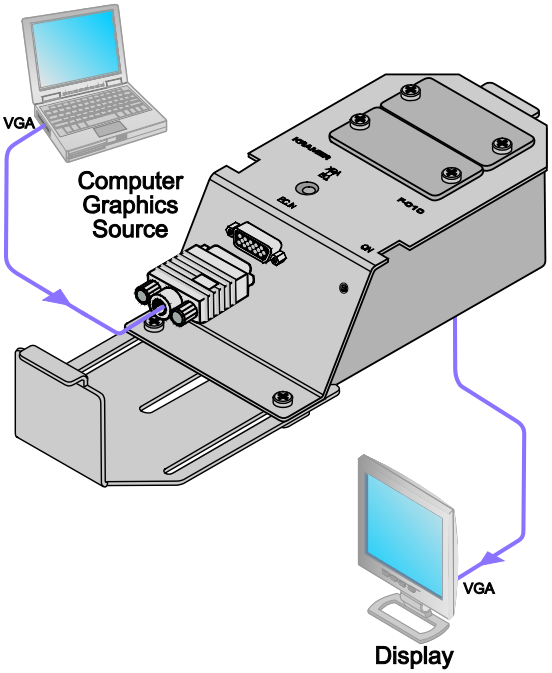


Figure 6: Connecting the F-010 XGA Line Amplifier Mounting Box

6 Technical Specifications

Table 2 lists the technical specifications:

Table 2: Technical Specifications[1] *of the F-010*

INPUTS:	1 UXGA on a 15-pin HD (F) connector 1 Power 12V DC on a 2-pin terminal block connector
OUTPUTS:	1 RGBHV for XGA on an 8-pin terminal block connector SDA and SCL for EDID on a 2-pin terminal block connector
MAX. OUTPUT LEVEL:	1.7Vpp
RESOLUTION:	Up to UXGA
BANDWIDTH (-3dB):	400MHz
DIFF. GAIN:	0.1%
DIFF. PHASE:	0.1 Deg
K-FACTOR:	<0.05%
S/N RATIO:	68.8dB @5MHz
CONTROLS:	XGA EQ.: 0dB to 8.2dB; power LED
COUPLING:	DC
POWER SOURCE:	12V DC 70mA
DIMENSIONS:	Closed: 7.5cm x 15.7cm x 4.4cm (2.95" x 6.18" x 1.73") W, D, H Open: 7.5cm x 20.7cm x 4.4cm (2.95" x 8.15" x 1.73") W, D, H
WEIGHT:	0.19kg (0.42lbs) approx.
ACCESSORIES:	Power supply
OPTIONS:	Kramer C-GM/XL cable[2]

1 Specifications are subject to change without notice

2 The Kramer C-GM/XL cable has a molded male 15-pin HD connector installed on one end, and the corresponding RGBHV coaxes exposed, pre-stripped and tinned at the other end, as well as two additional wires to connect pins 12 and 15 for EDID support. For details, see our Web site at http://www.kramerelectronics.com

LIMITED WARRANTY

We warrant 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 us 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.
- 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.

Kramer Electronics, Ltd.
Web site: www.kramerelectronics.com
E-mail: info@kramerel.com
P/N: 2900-000761 REV 1