

Kramer Electronics, Ltd.



USER MANUAL

Model:

VP-211DS

Automatic VGA / Audio Switcher

Contents

1	Introduction	1
2	Getting Started	1
2.1	Quick Start	1
3	Overview	3
4	Your Automatic VGA / Audio Switcher	4
5	Using the Automatic VGA / Audio Switcher	6
5.1	Connecting the VP-211DS Automatic VGA / Audio Switcher	6
5.2	Selecting the Default VGA Master Source Signal	8
5.3	Connecting the REMOTE Connector	9
6	Technical Specifications	10

Figures

Figure 1:	VP-211DS Automatic VGA / Audio Switcher	4
Figure 2:	VP-211DS Automatic VGA / Audio Switcher Underside	5
Figure 3:	VP-211DS Automatic VGA / Audio Switcher Connections	7
Figure 4:	Remote Terminal Block Connector	9

Tables

Table 1:	VP-211DS Automatic VGA / Audio Switcher Features	4
Table 2:	VP-211DS Automatic VGA / Audio Switcher Underside Features	5
Table 3:	Technical Specifications of the VP-211DS Automatic VGA / Audio Switcher	10

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 Tools **VP-211DS Automatic VGA / Audio Switcher**. This product is ideal for any system requiring automatic computer and presentation VGA / XGA routing, as well as presentation systems with wall plates.

The package includes the following items:

- **VP-211DS Automatic VGA / Audio Switcher**
- Power adapter (12V DC Input)
- Mounting bracket
- 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

2.1 Quick Start

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

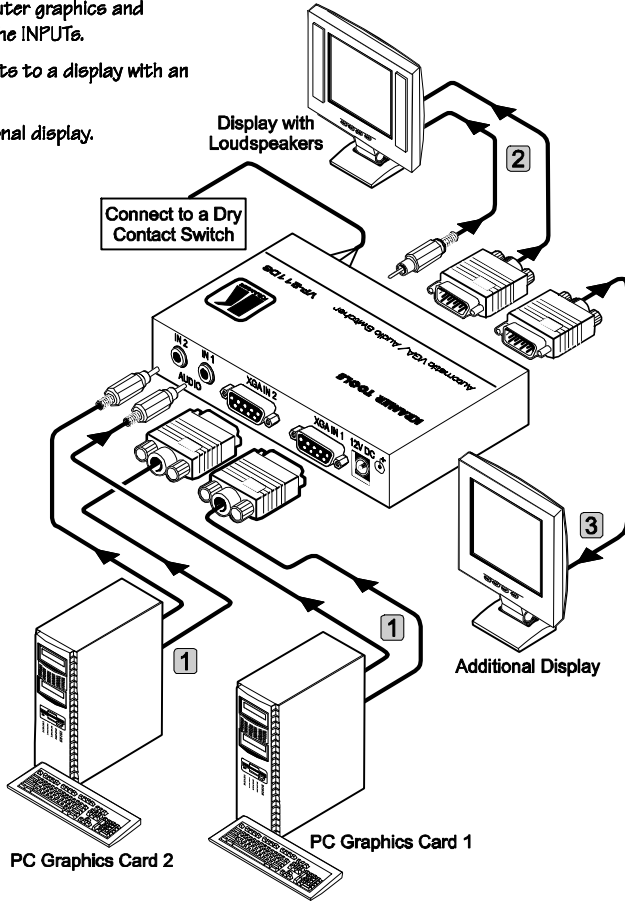
1 GROUP 1: Distribution Amplifiers; GROUP 2: Switchers and Matrix Switchers; GROUP 3: Control Systems; GROUP 4: Format/Standards Converters; GROUP 5: Range Extenders and Repeaters; GROUP 6: Specialty AV Products; GROUP 7: Scan Converters and Scalers; GROUP 8: Cables and Connectors; GROUP 9: Room Connectivity; 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>

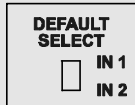
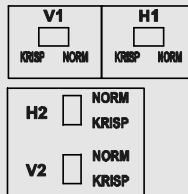
Step 1: Connect the input and the outputs - see section 5

- 1 Connect the computer graphics and audio sources to the INPUTs.
- 2 Connect the outputs to a display with an audio acceptor.
- 3 Connect an additional display.



Step 2: Set the underside switches - see section 5

Set the H and V polarity switches for input 1 (V1, H1) and input 2 (V2, H2)



Select the default input

Step 3: Connect the power

3 Overview

Your Kramer **VP-211DS** is a high performance 2x1 automatic switcher for VGA/SVGA/XGA/UXGA and stereo audio signals. The **VP-211DS** detects the presence of the active VGA-type input signal from either IN 1 (the default¹) or IN 2—depending on how the DEFAULT SELECT switch is set, as section 5.2 describes—and automatically routes it to the acceptor connected to the XGA OUT and the AUDIO OUT connectors.

In addition, the **VP-211DS**:

- With its video bandwidth exceeding 300 MHz, ensures transparent operation at the highest resolutions
- Automatically switches the stereo audio signal with the video signal (audio-follow-video) when switching the active input to the output
- Includes a DEFAULT SELECT switch on the underside for selecting the default XGA master source signal
- Includes a loop XGA output for connecting an additional display
- Comes with contact closure remote control for forced operation
- Uses active switching and has flexible sync detection and reconstruction circuitry
- Includes the Kramer innovative integrated sync processing; KR-ISPT[™] technology, which lets you achieve a sharp, stable image when the sync level is too low, by restoring the sync signal waveform

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 **VP-211DS** 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 unit².

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

¹ That is, the DEFAULT SELECT switch on the underside is factory preset to IN 1

² For example: model number AD2512C, part number 2535-000251

4 Your Automatic VGA / Audio Switcher

Figure 1 and Table 1 define the **VP-211DS**:

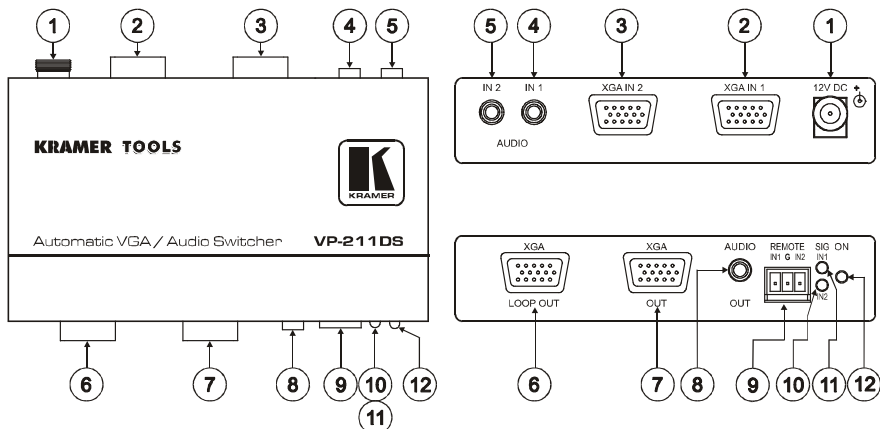


Figure 1: VP-211DS Automatic VGA / Audio Switcher

Table 1: VP-211DS Automatic VGA / Audio Switcher Features

#	Feature	Function	
1	12V DC	+12V DC connector for powering the unit	
2	XGA IN 1 15-pin HD Connector	Connect to the video source 1	
3	XGA IN 2 15-pin HD Connector	Connect to the video source 2	
4	AUDIO Mini Plug	IN 1	Connect to audio source 1
5	Connector	IN 2	Connect to audio source 2
6	XGA LOOP OUT HD15F Connector	Connect to an additional monitor ¹	
7	XGA OUT 15-pin HD Connector	Connect to the video acceptor	
8	AUDIO OUT Mini Plug Connector	Connect to the audio acceptor	
9	REMOTE IN 1 and IN 2 Terminal Block Connectors	Connect to a dry contact switch	
10	SIG LEDs	IN1	Illuminates when input 1 is selected
11		IN2	Illuminates when input 2 is selected
12	ON LED		Illuminates when receiving power

¹ The loop output is for XGA IN 1

Figure 2 and Table 2 define the underside of the **VP-211DS**:

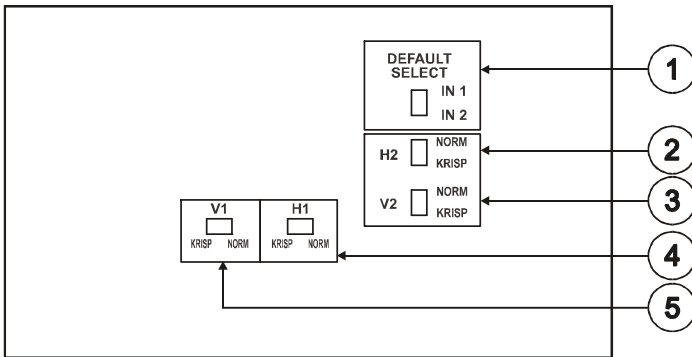


Figure 2: VP-211DS Automatic VGA / Audio Switcher Underside

Table 2: VP-211DS Automatic VGA / Audio Switcher Underside Features

#	Feature	Function
1	<i>DEFAULT SELECT Switch</i>	Set the switch to IN 1 to select input signal 1, as default; or to IN 2, to select input signal 2 as default (see section 5.2)
2	<i>H2 Switch</i>	For input 2, slide the switch up (NORM ¹) to retain the polarity; slide the switch down to change the Hs polarity to KR-ISP
3	<i>V2 Switch</i>	For input 2, slide the switch up (NORM ¹) to retain the polarity; slide the switch down to change the Vs polarity to KR-ISP
4	<i>H1 Switch</i>	For input 1, slide the switch to the right (NORM ¹) to retain the polarity; slide the switch to the left to change the Hs polarity to KR-ISP
5	<i>V1 Switch</i>	For input 1, slide the switch to the right (NORM ¹) to retain the polarity; slide the switch to the left to change the Vs polarity to KR-ISP

¹ By default, both switches are set to NORMAL

5 Using the Automatic VGA / Audio Switcher

This section describes:

- Connecting the **VP-211DS** (see section 5.1)
- Selecting the default master source signal (see section 5.2)
- Connecting the REMOTE connector (see section 5.3)

5.1 Connecting the VP-211DS Automatic VGA / Audio Switcher

To connect the **VP-211DS**, as illustrated in the example in Figure 3, do the following¹:

1. Connect a VGA/Audio source (for example, a PC) to the XGA IN 1 15-pin HD connector and to the AUDIO IN 1 mini plug connector. Set the underside DEFAULT SELECT switch to IN 1 (the factory preset default), as section 5.2 describes.
2. Connect a VGA/Audio source (for example, a PC) to the XGA IN 2 15-pin HD connector and to the AUDIO IN 2 mini plug connector.
3. Connect the XGA OUT 15-pin HD connector and the AUDIO OUT mini plug connector to the acceptor (for example, a video monitor with speakers).
4. If required, connect an additional monitor to the XGA LOOP OUT 15-pin HD connector.
5. Connect the 12V DC power adapter to the power socket and connect the adapter to the mains electricity.
6. If required, set the Hs and Vs switches for input 1 (H1 and V1) and input 2 (H2 and V2).

¹ Switch OFF the power on each device before connecting it to your VP-211DS. After powering up your VP-211DS, switch on the power on each device

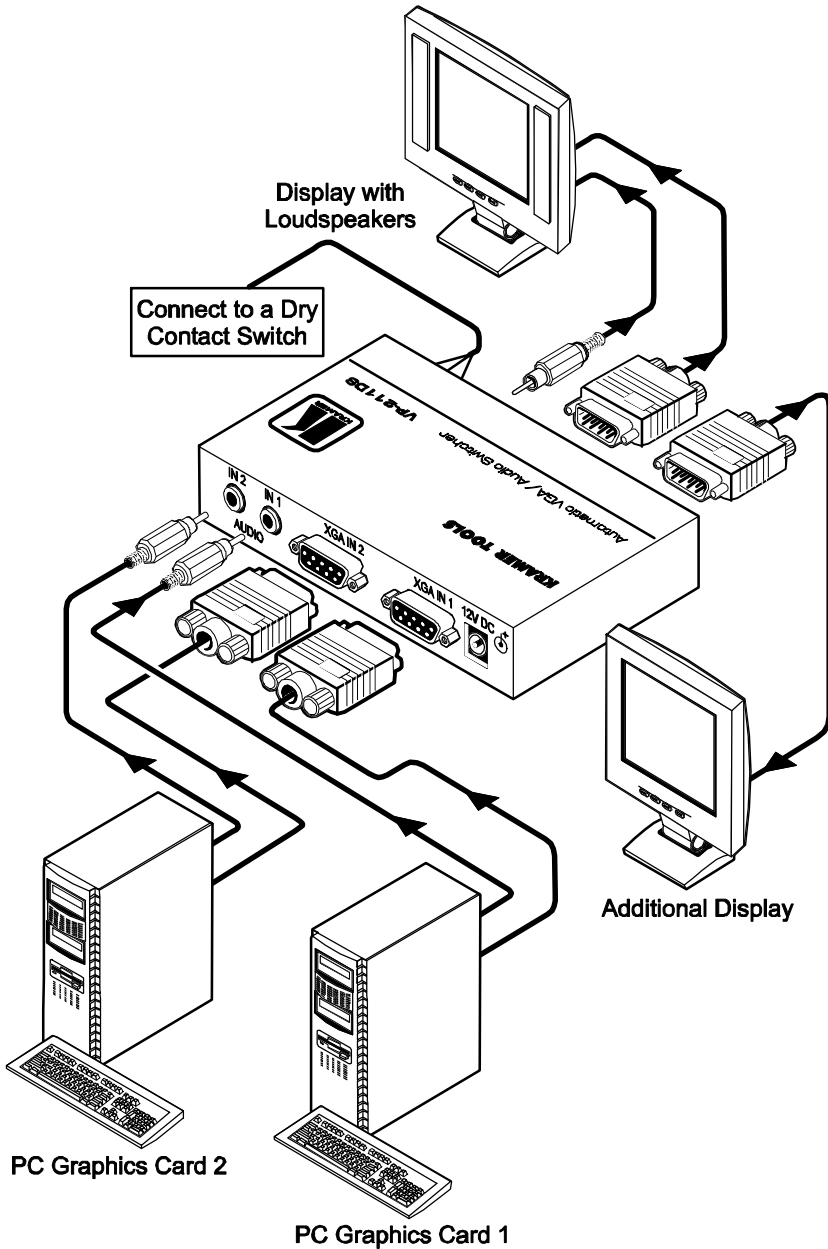


Figure 3: VP-211DS Automatic VGA / Audio Switcher Connections

5.2 Selecting the Default VGA Master Source Signal

The DEFAULT SELECT switch is factory preset to IN 1 and the **VP-211DS** will detect the presence of the master source signal at the XGA IN 1 connector. If you connect active sources to both the XGA IN 1 and the XGA IN 2 connectors, the source at the XGA IN 1 connector takes priority over the source at the XGA IN 2 connector and it is routed to the XGA OUT and the AUDIO OUT connectors (audio follows the video).

You can change the default so that the **VP-211DS** automatically detects an active source signal from XGA IN 2, by setting the DEFAULT SELECT switch to IN 2. When active, the source at the XGA IN 2 connector takes priority over the source at the XGA IN 1 connector and it is routed to the XGA OUT and the AUDIO OUT connectors (audio follows the video).

If the **VP-211DS** detects:

- No signal¹ at the XGA IN 1 input (when IN 1 is selected as the default), the **VP-211DS** routes the signal from the source at XGA IN 2 to the XGA OUT and the AUDIO OUT connectors. Similarly, if the **VP-211DS** detects no signal at the XGA IN 2 input (when IN 2 is selected as the default), the **VP-211DS** routes the signal from the source at XGA IN 1 to the XGA OUT and the AUDIO OUT connectors
- A signal from the VGA source at XGA IN 1 input (when IN 1 is selected as the default), while routing the signal from the VGA source at XGA IN 2, the **VP-211DS** will reroute the signal from the VGA source at XGA IN 1 to the XGA OUT and the AUDIO OUT connectors. Similarly, if the **VP-211DS** detects a signal from the VGA source at XGA IN 2 input (when IN 2 is selected as the default), while routing the signal from the VGA source at XGA IN 1, the **VP-211DS** will reroute the signal from the VGA source at XGA IN 2 to the XGA OUT and the AUDIO OUT connectors
- No signal at all (that is, when there is no active input from a source at XGA IN 1 or at XGA IN 2), the **VP-211DS** will still route XGA IN 2 to the XGA OUT, and continue to examine XGA IN 1 input (when IN 1 is selected as the default), switching back to it when it detects a valid signal. Similarly, if the **VP-211DS** detects no signal at all (when IN 2 is selected as the default), it will still route XGA IN 1 to the XGA OUT, and continue to examine the XGA IN 2 input, switching back to it when it detects a valid signal

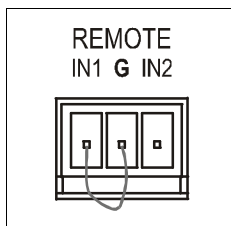
¹ Perhaps no source is connected, or that source is connected but its power is OFF

5.3 Connecting the REMOTE Connector

You can force the routing of one of the two inputs to the XGA output by remote control. To do so, connect the appropriate REMOTE input terminal block connector pins to a dry contact switch¹. For example, as Figure 4 illustrates, to route REMOTE IN 1 to the VGA output, connect PIN IN 1 to PIN G (Ground). To route REMOTE IN 2 to the VGA output, connect PIN IN 2 to PIN G.

Do not connect both the REMOTE IN 1 and the REMOTE IN 2 to PIN G simultaneously

Route input 1 to the output,
by attaching PIN IN 1 to
PIN G:



Route input 2 to the output,
by attaching PIN IN 2 to
PIN G:

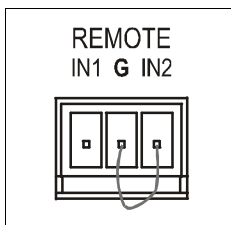


Figure 4: Remote Terminal Block Connector

When both XGA IN 1 and XGA IN 2 are connected, the signal from XGA IN 1 routes to the output. However, you can force the routing of XGA IN 2 to the output by attaching PIN IN 2 to PIN G. If no input is present on XGA IN 1, you can still force the routing of the output from XGA IN 1 (displaying a blank screen) by attaching PIN IN 1 to PIN G.

¹ Note that the connection should be permanent, since the VP-211DS will revert to an automatic switcher when the connection is removed

6 Technical Specifications

Table 3 includes the technical specifications:

Table 3: Technical Specifications¹ of the VP-211DS Automatic VGA / Audio Switcher

INPUTS:	2 VGA/UXGA on 15-pin HD connectors 2 unbalanced stereo audio on 3.5mm mini audio connectors
OUTPUTS:	1 VGA/UXGA on a 15-pin HD connector 1 VGA/UXGA on a 15-pin HD connector (input #1 loop) 1 unbalanced stereo audio on a 3.5mm mini audio connector
MAX. OUTPUT LEVEL:	Video: 1.8Vpp; Audio: >10Vpp
BANDWIDTH (-3dB):	Video: 300MHz; Audio: >100kHz
DIFF. GAIN:	0.02%
DIFF. PHASE:	0.02 Deg.
K-FACTOR:	<0.05%
S/N RATIO:	Video: 67dB; Audio: 71dB unweighted
CROSSTALK:	Video: -55 dB @ 5 MHz; Audio: <-72dB @ 1kHz
CONTROLS:	Contact closure remote control, Input default selection switch accessible from the underside, Hs and Vs switches for setting the sync (NORM or KRISP)
COUPLING:	DC
AUDIO THD + NOISE:	<0.06%
AUDIO 2nd HARMONIC:	<0.002%
POWER SOURCE:	12V DC 105mA
DIMENSIONS:	12.1cm x 7.18cm x 2.42cm (4.76" x 2.83" x 0.95", W, D, H)
WEIGHT:	0.3kg (0.66lbs.) approx.
ACCESSORIES:	Power supply, mounting bracket
OPTIONS:	19" rack adapters

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 I: Residential, commercial and light industry"
- EN-50082: "Electromagnetic compatibility (EMC) generic immunity standard.
Part I: 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.



Kramer Electronics, Ltd.

Web site: www.kramerelectronics.com

E-mail: info@kramerel.com

P/N: 2900-000393 REV 4