USER MANUAL

MODEL:

VS-211HA
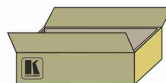Automatic HDMI Standby
Switcher

VS-211HA Quick Start Guide

This guide helps you install and use your product for the first time. For more detailed information, go to http://www.kramerelectronics.com/support/product_downloads.asp to download the latest manual or scan the QR code on the left.

Step 1: Check what's in the box

☑ **VS-211HA** Automatic HDMI Standby Switcher
☑ 1 Power supply (5V DC)

☑ 4 Rubber feet
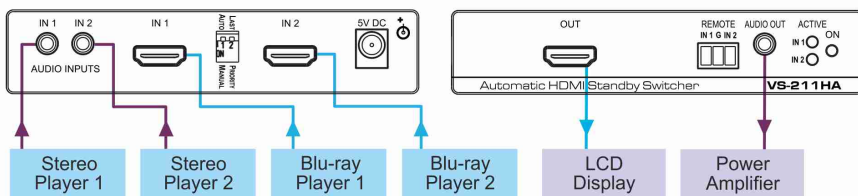☑ 1 Quick Start sheet

Save the original box and packaging materials in case you need to return your **VS-211HA** for service.

Step 2: Install the VS-211HA

Attach the rubber feet and place on a table or mount the **VS-211HA** in a rack (using an optional **RK-3T** rack mount).

Step 3: Connect the inputs and outputs

Always switch off the power on each device before connecting it to your **VS-211HA**.

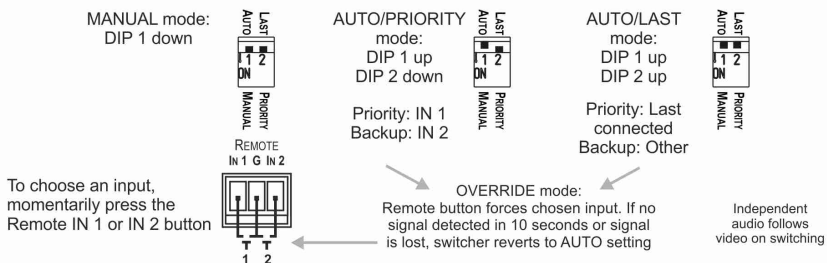| Stereo Player 1 | Stereo Player 2 | Blu-ray Player 1 | Blu-ray Player 2 | LCD Display | Power Amplifier |

Always use Kramer high-performance cables for connecting AV equipment to the **VS-211HA.**

Step 4: Connect the power

Connect the 5V DC power adapter to the **VS-211HA** and plug the adapter into the mains electricity.

Step 5: Set the VS-211HA

MANUAL mode:
DIP 1 down

To choose an input, momentarily press the Remote IN 1 or IN 2 button

AUTO/PRIORITY mode:
DIP 1 up
DIP 2 down

Priority: IN 1
Backup: IN 2

OVERRIDE mode:
Remote button forces chosen input. If no signal detected in 10 seconds or signal is lost, switcher reverts to AUTO setting

AUTO/LAST mode:
DIP 1 up
DIP 2 up

Priority: Last connected
Backup: Other

Independent audio follows video on switching

Contents

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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 video, audio, presentation, and broadcasting professionals 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 14 groups that are clearly defined by function: GROUP 1: Distribution Amplifiers; GROUP 2: Switchers and Routers; 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 Video Products; GROUP 12: Digital Signage; GROUP 13: Audio; and GROUP 14: Collaboration.

Congratulations on purchasing your Kramer **VS-211HA** *Automatic HDMI Standby Switcher*, which is ideal for the following typical applications:

- Providing backup switching
- Boardrooms and meeting rooms
- Restaurant and entertainment venues

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

  Go to www.kramerav.com/support/product_downloads.asp
  to check for up-to-date user manuals, application programs, and to check if firmware upgrades are available (where appropriate).

2.1 Achieving the Best Performance

To achieve the best performance:

- Use only good quality connection cables (we recommend Kramer high-performance, high-resolution cables) to avoid interference, deterioration in signal quality due to poor matching, and elevated noise levels (often associated with low quality cables)

- Do not secure the cables in tight bundles or roll the slack into tight coils

- Avoid interference from neighboring electrical appliances that may adversely influence signal quality

- Position your Kramer **VS-211HA** away from moisture, excessive sunlight and dust

  This equipment is to be used only inside a building. It may only be connected to other equipment that is installed inside a building.

2.2 Safety Instructions

Caution: There are no operator serviceable parts inside the unit

Warning: Use only the Kramer Electronics input power wall adapter that is provided with the unit

Warning: Disconnect the power and unplug the unit from the wall before installing

2.3   Recycling Kramer Products

The Waste Electrical and Electronic Equipment (WEEE) Directive 2002/96/EC aims to reduce the amount of WEEE sent for disposal to landfill or incineration by requiring it to be collected and recycled. To comply with the WEEE Directive, Kramer Electronics has made arrangements with the European Advanced Recycling Network (EARN) and will cover any costs of treatment, recycling and recovery of waste Kramer Electronics branded equipment on arrival at the EARN facility. For details of Kramer's recycling arrangements in your particular country go to our recycling pages at *www.kramerav.com/support/recycling/*.

3 Overview

The **VS-211HA** is a high-performance automatic standby switcher for HDMI video and unbalanced stereo audio signals. The **VS-211HA** can be used as a manual 2x1 switcher or as an automatic switcher. The switcher either uses a priority input or last connected input.

In priority switching, the signal automatically switches to the secondary input if the primary signal is lost. If the primary signal reappears, the unit automatically switches back to the primary input.

In last connected switching, the switcher automatically switches to the newly introduced input.

In addition, the **VS-211HA** features:

- A maximum data rate of up to 6.75Gbps (2.25Gbps per graphic channel)
- HDTV compatibility
- HDCP and HDMI compliance
- 3D pass through
- EDID PassThru that passes EDID signals from display to source
- DIP-switches for setting the switching mode (manual, auto priority, auto last connected)
- Contact closure remote control for manual operation
- Signal auto detect
- Parallel unbalanced stereo audio switching
- Audio Return Channel (ARC)
- No signal on both HDMI inputs triggers the output auto off, to allow displays to enter sleep mode
- Compact DigiTOOLS® size, three units can be rack mounted side-by-side in a 1U rack space with the optional RK-3T rack adapter

3.1 Defining the VS-211HA Automatic HDMI Standby Switcher
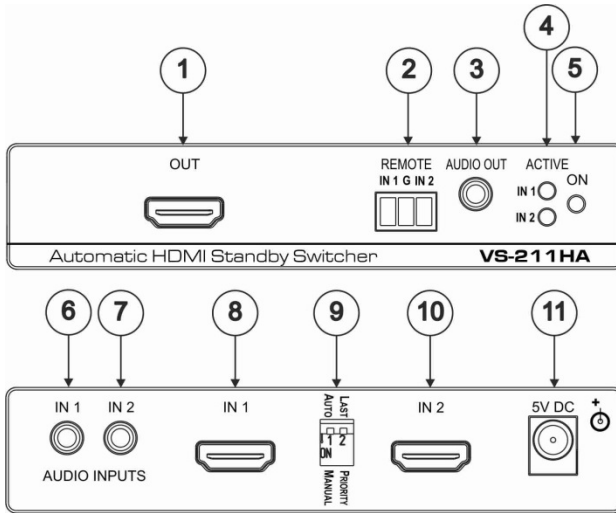
This section defines the **VS-211HA**.

Figure 1: VS-211HA Automatic HDMI Standby Switcher

#	Feature	Function
1	*OUT* HDMI Connector	Connects to the HDMI acceptor
2	*REMOTE IN 1* and *IN 2* Terminal Block Connector	Connects to momentary contact closure switches
3	*AUDIO OUT* 3.5mm Mini Jack Connector	Connects to an unbalanced stereo audio acceptor
4	*ACTIVE IN 1,2* LEDs	Illuminate when an input is active
5	*ON* LED	Illuminates when receiving power
6	IN 1 AUDIO INPUT 3.5mm Mini Jack Connector	Connects to unbalanced stereo audio source 1 Audio is independent of video and switching is audio-follows-video
7	IN 2 AUDIO INPUT 3.5mm Mini Jack Connector	Connects to unbalanced stereo audio source 2 Audio is independent of video and switching is audio-follows-video
8	*IN 1* HDMI Connector	Connects to the HDMI input source 1
9	*AUTO/MANUAL* DIP-switch *1* *LAST/ PRIORITY* DIP-switch *2*	Turn ON (down) for manual switching, OFF (up) for automatic switching Turn ON (down) for setting IN 1 as PRIORITY, OFF (up) for setting LAST connected as priority
10	*IN 2* HDMI Connector	Connects to the HDMI input source 2
11	*5V DC*	+5V DC connector for powering the unit

4 Connecting the VS-211HA

Always switch off the power to each device before connecting it to your **VS-211HA**. After connecting your **VS-211HA**, connect its power and then switch on the power to each device.

To connect the **VS-211HA**, as illustrated in the example in Figure 2, do the following:

1. Connect the HDMI input source 1 (for example, Blu-ray player 1) to the IN 1 HDMI connector.

2. Connect the HDMI input source 2 (for example, Blu-ray player 2) to the IN 2 HDMI connector.

3. Connect an unbalanced stereo audio source (for example, stereo player 1) to the 3.5mm mini jack connector AUDIO IN 1.

4. Connect an unbalanced stereo audio source (for example, stereo player 2) to the 3.5mm mini jack connector AUDIO IN 2.
    Note: Audio and video are completely independent circuits that switch as audio-follows-video (AFV). There is no embedding or de-embedding of HDMI audio.

5. Connect the OUT HDMI connector to an HDMI acceptor (for example, an LCD display).

6. Connect the AUDIO OUT 3.5mm mini jack connector to a stereo audio acceptor (for example, a power amplifier).

7. Set the switching mode switches, as described in Section 5.

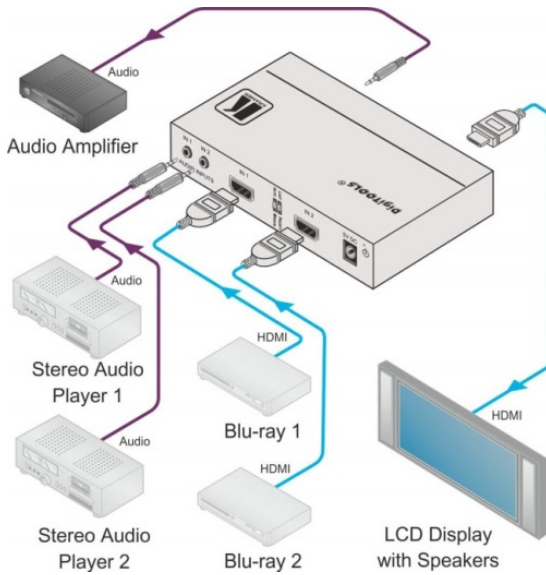8. Connect the 5V DC power adapter to the power socket and connect the adapter to the mains electricity.

Figure 2: VS-211HA Connections

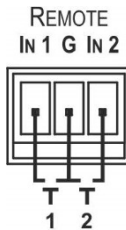## 4.1 Connecting the REMOTE Terminal Block Connector

If DIP 1 is set ON to manual you can switch the active input by using contact closure switches. To do this, connect the appropriate REMOTE input terminal block connector pins to a contact closure switch (see Figure 3).

- To select IN 1: Momentarily connect REMOTE IN1 to PIN G (ground)

- To select IN 2: Momentarily connect REMOTE IN2 to PIN G (ground)

 Do not connect both the REMOTE IN1 and the REMOTE IN2 to PIN G simultaneously

Momentarily connect pin IN1 to pin G to activate INPUT 1

Momentarily connect pin IN2 to pin G to activate INPUT 2

Figure 3: REMOTE Terminal Block Connector

5 Operating the VS-211HA

The **VS-211HA** works in three modes:

- Manual mode (see Section 5.1)

- Automatic mode (see Section 5.2)

- Override mode (see Section 5.3)

5.1 Using the Manual Mode

In manual mode the **VS-211HA** only switches when the remote contact closure switches are momentarily pressed. If you switch to an inactive input source, the output is blank.

Note: A source is considered active only when there is an active clock signal coming from the source.

To set manual mode:

- Slide the AUTO/MANUAL DIP 1 down to MANUAL (see Figure 1)

- Select the required port manually by pressing the switches connected to the terminal block

5.2 Using the Automatic Mode

Automatic mode uses automatic signal detection to determine the device's behavior during switching. Automatic mode has two further modes: Priority mode and Last connected mode.

In Automatic/Priority mode, Input 1 has the higher priority

- If two sources are connected and active, Input 1 is sent to the output

- If Input 1 becomes inactive, Input 2 is sent to the output

- If Input 1 returns to activity, Input 1 is sent to the output

  For example, a sports bar has an AV system that displays live sports action on Input 1 while commercials loop on Input 2. If the game is interrupted, commercials automatically display until the live action returns.

To set Automatic/Priority mode:

- Slide AUTO/MANUAL DIP 1 up to AUTO and LAST/PRIORITY DIP 2 down to PRIORITY

In Automatic/Last mode, the last connected input is sent to the output

- If Inputs 1 and 2 are active when the **VS-211HA** is powered on, Input 1 is sent to the output (as the priority input)

- If Input 2 is disconnected, Input 1 is still sent to the output

- If Input 2 is reconnected, Input 2 is sent to the output

  For example, a salesman connected to Input 1 displays a presentation on the AV system of a boardroom. A second salesman arrives, connects to Input 2 and continues with his/her presentation.

To set Automatic/Last Connected mode:

- Slide AUTO/MANUAL DIP 1 up to AUTO and LAST/PRIORITY DIP 2 up to LAST

5.3 Using the Override Mode

Override mode is used while the **VS-211HA** is in either Priority or Last connected automatic mode. Pressing either of the contact closure switches:

- Forces the chosen input, if it is active, to be sent to the output

- If the forced signal is inactive for 10 seconds, the **VS-211HA** returns to auto mode

- If the forced signal is lost, the **VS-211HA** reverts to its selected mode

  For example, a sales manager, connected to Input 1, displays a presentation on the AV system of a boardroom. A salesman arrives and wants to connect to Input 2 without interrupting the manager. They press the Input 1 contact closure switch to allow Input 2 to connect without interrupting Input 1.

6   Toggling HDCP Modes

VS-211HA enables toggling between HDCP on (Regular mode) and HDCP off (Mac mode). To do this, connect the appropriate REMOTE input terminal block connector pins to a contact closure switch and power cycle the device.

The current HDCP mode is indicated by the ACTIVE LEDs each time you power on the device, as follows:

- IN 1 and/or IN 2 LEDs flash 3 times – HDMI IN 1 and/or HDMI IN 2 are in Mac mode (HDCP off).

- IN 1 and/or IN 2 LEDs illuminate or remain unlit – HDMI IN 1 and/or HDMI IN 2 are in Regular mode (HDCP on).

To disable HDCP (Mac mode) on HDMI IN 1, HDMI IN 2, or both:

- Connect pins IN 1 and/or IN 2 to G and power on the device.
  The ACTIVE IN 1 and/or IN 2 LEDs flash 5 times and the device resumes normal operation.

To enable HDCP (Regular mode) on HDMI IN 1, HDMI IN 2, or both:

- Connect pins IN 1 and/or IN 2 to G and power on the device.
  The ACTIVE IN 1 and/or IN 2 LEDs flash 3 times and the device resumes normal operation.

> After selecting the required HDCP mode, remove the contact closure switch or the device will continue to toggle between the modes upon each power cycle.

7   Technical Specifications

INPUTS:	2 HDMI connectors, 2 unbalanced stereo audio on 3.5mm mini jacks
OUTPUTS:	1 HDMI connector, 1 unbalanced stereo audio on a 3.5mm mini jack
MAX. DATA RATE:	6.75Gbps (2.25Gbps per graphic channel)
COMPLIANCE WITH HDMI STANDARD:	Supports HDMI and HDCP
CONTROLS:	Contact closure on a 3-pin terminal block, 2 priority DIP-switches
INDICATORS:	ON and active input LEDs
POWER CONSUMPTION:	5V DC, 120mA (without load), 350mA (fully loaded)
OPERATING TEMPERATURE:	0° to +40°C (32° to 104°F)
STORAGE TEMPERATURE:	-40° to +70°C (-40° to 158°F)
HUMIDITY:	10% to 90%, RHL non-condensing
DIMENSIONS:	12cm x 7.2cm x 2.4cm (4.7" x 2.8" x 0.9") W. D. H
WEIGHT:	0.3kg (0.66lbs)
ACCESSORIES:	Power supply
OPTIONS:	RK-3T 19" rack adapter
Specifications are subject to change without notice at www.KramerAV.com	

LIMITED WARRANTY

The warranty obligations of Kramer Electronics for this product are limited to the terms set forth below:

What is Covered

This limited warranty covers defects in materials and workmanship in this product.

What is Not Covered

This limited warranty does not cover any damage, deterioration or malfunction resulting from any alteration, modification, improper or unreasonable use or maintenance, misuse, abuse, accident, neglect, exposure to excess moisture, fire, improper packing and shipping (such claims must be presented to the carrier), lightning, power surges, or other acts of nature. This limited warranty does not cover any damage, deterioration or malfunction resulting from the installation or removal of this product from any installation, any unauthorized tampering with this product, any repairs attempted by anyone unauthorized by Kramer Electronics to make such repairs, or any other cause which does not relate directly to a defect in materials and/or workmanship of this product. This limited warranty does not cover cartons, equipment enclosures, cables or accessories used in conjunction with this product.

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Seven years as of this printing; please check our Web site for the most current and accurate warranty information.

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Only the original purchaser of this product is covered under this limited warranty. This limited warranty is not transferable to subsequent purchasers or owners of this product.

What Kramer Electronics will do

Kramer Electronics will, at its sole option, provide one of the following three remedies to whatever extent it shall deem necessary to satisfy a proper claim under this limited warranty:

1. Elect to repair or facilitate the repair of any defective parts within a reasonable period of time, free of any charge for the necessary parts and labor to complete the repair and restore this product to its proper operating condition. Kramer Electronics will also pay the shipping costs necessary to return this product once the repair is complete.

2. Replace this product with a direct replacement or with a similar product deemed by Kramer Electronics to perform substantially the same function as the original product.

3. Issue a refund of the original purchase price less depreciation to be determined based on the age of the product at the time remedy is sought under this limited warranty.

What Kramer Electronics will not do Under This Limited Warranty

If this product is returned to Kramer Electronics or the authorized dealer from which it was purchased or any other party authorized to repair Kramer Electronics products, this product must be insured during shipment, with the insurance and shipping charges prepaid by you. If this product is returned uninsured, you assume all risks of loss or damage during shipment. Kramer Electronics will not be responsible for any costs related to the removal or re-installation of this product from or into any installation. Kramer Electronics will not be responsible for any costs related to any setting up this product, any adjustment of user controls or any programming required for a specific installation of this product.

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VS-211HA - Technical Specifications

For the latest information on our products and a list of Kramer distributors, visit our Web site where updates to this user manual may be found.

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