



KRAMER ELECTRONICS LTD.

USER MANUAL

MODEL:

VP-482
HDMI to 3G HD-SDI Scaler

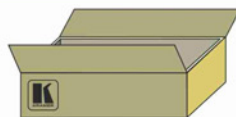
P/N: 2900-000763 Rev 2

VP-482 Quick Start Guide

This page guides you through a basic installation and first-time use of your **VP-482**. For more detailed information see the **VP-482** User Manual, the latest version of which can be downloaded from <http://www.kramerelectronics.com>.

Step 1: Check what's in the box

- VP-482** HDMI to 3G HD-SDI Scaler
- 1 Power supply (5V DC)
- 4 Rubber feet
- 1 Quick Start sheet
- 1 User Manual



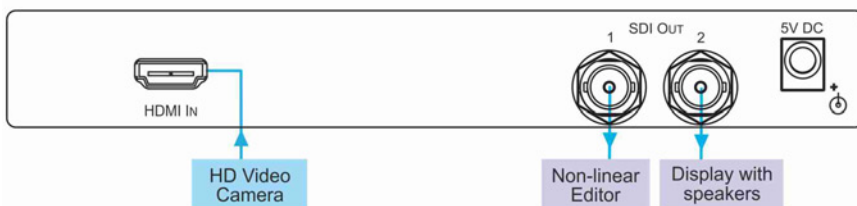
Save the original box and packaging in case your **VP-482** needs to be returned to the factory for service.

Step 2: Install the VP-482

Mount the device in a rack (using the RK-T2B rack adapter) or place the device on a table.

Step 3: Connect the inputs and outputs

Always switch off the power to each device before connecting it to your **VP-482**.



Always use Kramer high-performance cables for connecting AV equipment to the **VP-482**.

Step 4: Connect the power

Connect the 5V DC power adapter to the **VP-482** and plug the adapter into the mains electricity.



Step 5: Operate the VP-482

Set the parameters using the OSD and the front panel buttons.

CONTRAST
BRIGHTNESS
FINETUNE
COLOR
SIZE
OUTPUT
AUDIO
OSD
FACTORY RESET
INFORMATION
AUTO SYNC OFF
EXIT



Contents

1	Introduction	1
2	Getting Started	2
2.1	Achieving the Best Performance	2
3	Overview	3
4	Defining the VP-482 HDMI to 3G HD-SDI Scaler	4
5	Connecting the VP-482	5
6	Operating the VP-482 HDMI to 3G HD-SDI Scaler	7
6.1	Using the Front Panel Buttons	7
6.2	Using the OSD	7
7	Technical Specifications	11

Figures

Figure 1:	VP-482 HDMI to 3G HD-SDI Scaler	4
Figure 2:	Connecting the VP-482 HDMI to 3G HD-SDI Scaler	5

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 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 and GROUP 11: Sierra Products

Congratulations on purchasing your Kramer **VP-482** HDMI to 3G HD-SDI Scaler, which is ideal for the following typical applications:

- Projection systems in conference rooms, boardrooms, hotels and churches
- Home theater up-scaling

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



Go to <http://www.kramerelectronics.com> 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 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
- Position your Kramer **VP-482** away from moisture, excessive sunlight and dust



Caution: 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

3 Overview

The Kramer **VP-482** *HDMI to 3G HD-SDI* Scaler is a high-performance digital scaler for signals up to 3G HD-SDI. It up-scales and down-scales 3G HD-SDI signals to resolutions up to WUXGA and 1080p. The following output resolutions are supported:

- SDTV: 480i and 576i
- HDTV: 720p @60, 1080p SF30/29/25, 1080p 30/29/25/24/23, 1080p @59, 1080i @59, 720p @59, 480i @59, 576i, 1080p @50, 1080i @50, 720p @50, 1080p @60, 1080i @60

The **VP-482** features:

- A data rate of up to 3Gbps
- An HDMI/DVI input (non-HDCP)
- Two SDI outputs (up to 3G HD-SDI)
- Multi-standard operation: SDI (SMPTE 259M), HD-SDI (SMPTE 292M) and 3G HD-SDI (SMPTE 424M)
- An OSD (On Screen Display) accessible via the front panel buttons for easy setup and adjustment
- A built-in ProcAmp for convenient signal adjustment
- A non-volatile memory that retains the last settings used
- A freeze button
- An external 5V DC power supply

4 Defining the VP-482 HDMI to 3G HD-SDI Scaler

This section defines the **VP-482**.

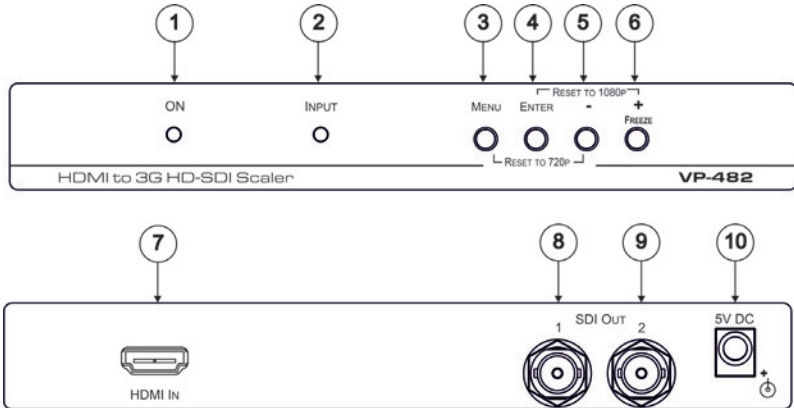


Figure 1: VP-482 HDMI to 3G HD-SDI Scaler

#	Feature	Function
1	ON LED	Lights green when the unit is powered on
2	INPUT LED	Lights green when an HDMI signal is detected on the input
3	MENU Button	Press to display the OSD (On-screen Display) Main menu. When the OSD is not displayed, press together with the - button to set the output resolution to 720p (1280x720)
4	ENTER Button	In the OSD, press to select the highlighted menu item. When the OSD is not displayed, press together with the + button to set the output resolution to 1080p (1920x1080)
5	- Button	In the OSD, press to step up through the options or to decrement the parameter value
6	+ / FREEZE Button	In the OSD, press to step down through the options or to increment the parameter value. When the OSD is not displayed, press to freeze the display
7	HDMI IN Connector	Connect to the non-HDCP HDMI source
8	SDI OUT 1 BNC Connector	Connect to the SDI acceptor 1. The signal is reclocked and equalized
9	SDI OUT 2 BNC Connector	Connect to the SDI acceptor 2. The signal is reclocked and equalized
10	5V DC	Connect to the +5V DC power adapter, center pin positive

5 Connecting the VP-482



Always switch off the power to each device before connecting it to your **VP-482**. After connecting your **VP-482**, connect its power and then switch on the power to each device.

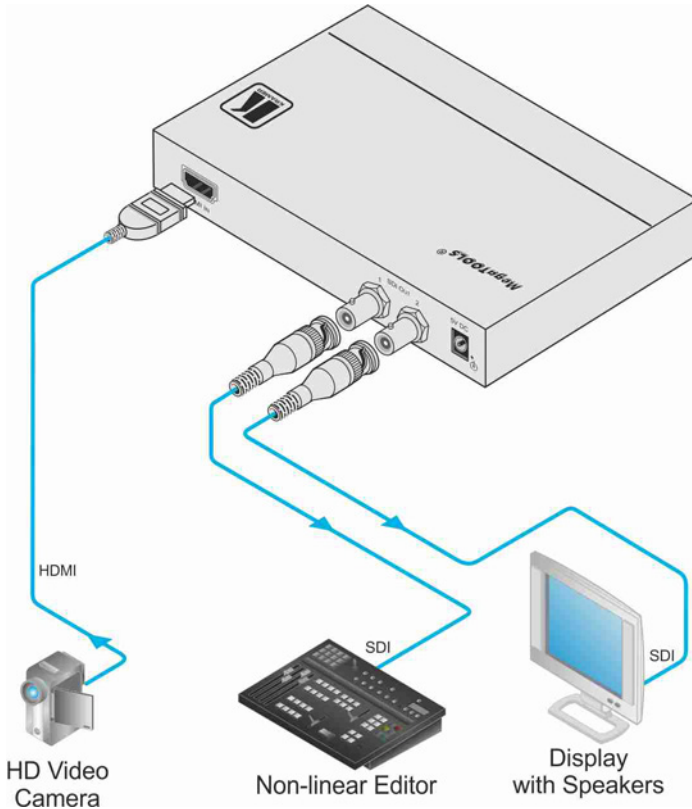


Figure 2: Connecting the VP-482 HDMI to 3G HD-SDI Scaler

To connect the VP-482 as illustrated in the example in [Figure 2](#):

1. Connect an HDMI source (for example, an HD video camera) to the HDMI connector.

Note: If the HDMI signal is HDCP protected, it cannot be displayed on a non-HDCP compliant display and therefore the **VP-482** will not output the picture.

2. Connect the SDI OUT 1 BNC connector to an SDI acceptor (for example, a non-linear editor).
3. Connect the SDI OUT 2 BNC connector to an SDI acceptor (for example, a display with speakers).
4. Connect the 5V DC power adapter to the 5V DC power socket and to the mains electricity (not shown in the illustration).

6 Operating the VP-482 HDMI to 3G HD-SDI Scaler

The **VP-482** is operated directly via the front panel buttons and via the OSD menu.

6.1 Using the Front Panel Buttons

During normal operation (without the OSD), the front panel buttons operate in the following manner:

- **MENU**: Press once to display the OSD Main Menu (see [Section 6.2](#)). Press again to close the OSD
- **FREEZE**: Press once to freeze the display. Press again to unfreeze the display
- **MENU** and **-**: Press together to set the output to 720p
- **ENTER** and **FREEZE**: Press together to set the output to 1080p

6.2 Using the OSD

The OSD is used to set a variety of parameters (see [Section 6.2.1](#)). When using the OSD, the front panel buttons operate in the following manner:

- **MENU**: Press once to open the OSD main menu. Press again to close the OSD
- **ENTER**: Press to select the highlighted menu item or parameter
- **-**: Press to step down through the menu list or decrement the parameter value
- **+**: Press to step up through the menu list or increment the parameter value

Note: After a period of 10 sec with no button activity, the OSD menu automatically turns off. This can be changed using the **OSD > Timer setting** parameter.

To change settings:

1. From normal operation, press MENU.
The OSD main menu appears on the screen.
2. Press the + or – button to move up or down the list or highlight the main menu item in green.
3. Press Enter.
If the menu item has a parameter after it, the parameter changes to red and the + and – buttons are used to cycle through the available parameters.
If there is no parameter after the menu item, a submenu appears.
4. Press ENTER to set the value.
5. Press the + or – button to move up or down the list and highlight the submenu item in green.
6. Press ENTER.
The submenu parameter changes to red.
7. Press the + or – button to increase or decrease the value of the parameter.
8. Press ENTER to set the value.
9. To return to the main menu, select EXIT and press ENTER.
10. To return to normal operation, select EXIT from the main menu and press ENTER.

To exit from the OSD at any point, press the MENU button. Any unsaved parameters return to their previous values.

6.2.1 OSD Main Menu

Main Menu	Submenu	Function	Value Range	Factory Default
CONTRAST		Sets the output contrast	0-100	50
BRIGHTNESS		Sets the output brightness	0-100	45
SIZE		Sets the output size/aspect ratio	FULL, BEST FIT, PANSCAN, LETTERSCAN, UNDERSCAN, OVERSCAN	FULL
OUTPUT		Sets the output resolution	720p @60, 1080p SF30/29/25, 1080p@30/29/25/24/23/59, 1080i @59, 720p @59, 480i @59, 576i, 1080p @50, 1080i @50, 720p @50, 1080p @60, 1080i @60	1080p60
FACTORY RESET		Resets all parameters to factory defaults	YES	
INFORMATION		Displays current input resolution, output resolution and firmware revision	SOURCE, INPUT, OUTPUT, VERSION	
AUTO SYNC OFF		When on, de-activates the output after a few minutes if no input is present. For example, when the output is connected to a projector, the projector shuts down automatically when there is no input	ON/OFF	OFF
EXIT		Exits the OSD and returns to normal operation		

6.2.2 Color Sub-menu

Main Menu	Submenu	Function	Value Range	Factory Default
COLOR	RED	Sets the output red value	0-100	47
	GREEN	Sets the output green value	0-100	47
	BLUE	Sets the output blue value	0-100	47
	EXIT	Returns to the main menu		

6.2.1 Finetune Sub-menu

Main Menu	Submenu	Function	Value Range	Factory Default
FINETUNE	COLOR FILTER	Sets the color filter on or off	ON/OFF	OFF
	EXIT	Returns to the main menu		

6.2.1 Audio Sub-menu

Main Menu	Submenu	Function	Value Range	Factory Default
AUDIO	DELAY	Sets the audio delay	OFF, 40ms, 110ms, 150ms	OFF
	SOUND	Turns the sound on or off	ON, MUTE	ON
	EXIT	Returns to the main menu		

6.2.1 OSD Sub-menu

Main Menu	Submenu	Function	Value Range	Factory Default
OSD	H-POSITION	Sets the right/left position of the OSD on the screen	0-100	10
	V-POSITION	Sets the up/down position of the OSD on the screen	0-100	90
	TIMER	Sets the length of time (in seconds) that the OSD remains visible on the screen	0-100	10
	BACKGROUND	Sets the darkness of the OSD background	0-100	63
	EXIT	Returns to the main menu		

7 Technical Specifications

INPUT:	1 HDMI on an HDMI connector (non-HDCP)
OUTPUTS:	2 3G HD-SDI on BNC connectors
INPUT RESOLUTIONS:	See the document "Kramer Scalers Input Output Resolutions" available for download from http://www.kramerelectronics.com
AUDIO INPUT SAMPLE RATE:	48kHz
OUTPUT RESOLUTIONS:	720p, 1080p SF30/29/25, 1080p @30/29/25/24/23/59, 1080i @59, 720p @59, 480i @59, 576i, 1080p @50, 1080i @50, 720p @50, 1080p, 1080i, 720p @60, 1080p @60, 1080i @60
OUTPUT SIZE:	Full, best fit, panscan, letterbox, underscan, overscan
PROCESSING DELAY:	30ms
CONTROLS:	Menu, Enter, "-" and +/Freeze front panel buttons
POWER SOURCE:	5V DC, 1.53A
OPERATING TEMPERATURE:	0° to +55°C (32° to 131°F)
STORAGE TEMPERATURE:	-45° to +72°C (-49° to 162°F)
HUMIDITY:	10% to 90%, RHL non-condensing
DIMENSIONS:	18.8cm x 11.4cm x 2.5cm (7.4" x 4.5" x 1") W, D, H
WEIGHT:	0.47kg (1.04lbs) approx.
ACCESSORIES:	Power supply
OPTIONS:	RK-T2B 19" rack adapter
Specifications are subject to change without notice at http://www.kramerelectronics.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.

Without limiting any other exclusion herein, Kramer Electronics does not warrant that the product covered hereby, including, without limitation, the technology and/or integrated circuit(s) included in the product, will not become obsolete or that such items are or will remain compatible with any other product or technology with which the product may be used.

How Long Does this Coverage Last

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

Who is Covered

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.

How to Obtain a Remedy under this Limited Warranty

To obtain a remedy under this limited warranty, you must contact either the authorized Kramer Electronics reseller from whom you purchased this product or the Kramer Electronics office nearest you. For a list of authorized Kramer Electronics resellers and/or Kramer Electronics authorized service providers, please visit our web site at www.kramerelectronics.com or contact the Kramer Electronics office nearest you.

In order to pursue any remedy under this limited warranty, you must possess an original, dated receipt as proof of purchase from an authorized Kramer Electronics reseller. If this product is returned under this limited warranty, a return authorization number, obtained from Kramer Electronics, will be required. You may also be directed to an authorized reseller or a person authorized by Kramer Electronics to repair the product.

If it is decided that this product should be returned directly to Kramer Electronics, this product should be properly packed, preferably in the original carton, for shipping. Cartons not bearing a return authorization number will be refused.

Limitation on Liability

THE MAXIMUM LIABILITY OF KRAMER ELECTRONICS UNDER THIS LIMITED WARRANTY SHALL NOT EXCEED THE ACTUAL PURCHASE PRICE PAID FOR THE PRODUCT. TO THE MAXIMUM EXTENT PERMITTED BY LAW, KRAMER ELECTRONICS IS NOT RESPONSIBLE FOR DIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM ANY BREACH OF WARRANTY OR CONDITION, OR UNDER ANY OTHER LEGAL THEORY. Some countries, districts or states do not allow the exclusion or limitation of relief, special, incidental, consequential or indirect damages, or the limitation of liability to specified amounts, so the above limitations or exclusions may not apply to you.

Exclusive Remedy

TO THE MAXIMUM EXTENT PERMITTED BY LAW, THIS LIMITED WARRANTY AND THE REMEDIES SET FORTH ABOVE ARE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, REMEDIES AND CONDITIONS, WHETHER ORAL OR WRITTEN, EXPRESS OR IMPLIED. TO THE MAXIMUM EXTENT PERMITTED BY LAW, KRAMER ELECTRONICS SPECIFICALLY DISCLAIMS ANY AND ALL IMPLIED WARRANTIES, INCLUDING, WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. IF KRAMER ELECTRONICS CANNOT LAWFULLY DISCLAIM OR EXCLUDE IMPLIED WARRANTIES UNDER APPLICABLE LAW, THEN ALL IMPLIED WARRANTIES COVERING THIS PRODUCT, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, SHALL APPLY TO THIS PRODUCT AS PROVIDED UNDER APPLICABLE LAW.

IF ANY PRODUCT TO WHICH THIS LIMITED WARRANTY APPLIES IS A "CONSUMER PRODUCT" UNDER THE MAGNUSON-MOSS WARRANTY ACT (15 U.S.C.A. §2301, ET SEQ.) OR OTHER APPLICABLE LAW, THE FOREGOING DISCLAIMER OF IMPLIED WARRANTIES SHALL NOT APPLY TO YOU, AND ALL IMPLIED WARRANTIES ON THIS PRODUCT, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR THE PARTICULAR PURPOSE, SHALL APPLY AS PROVIDED UNDER APPLICABLE LAW.

Other Conditions

This limited warranty gives you specific legal rights, and you may have other rights which vary from country to country or state to state.

This limited warranty is void if (i) the label bearing the serial number of this product has been removed or defaced, (ii) the product is not distributed by Kramer Electronics or (iii) this product is not purchased from an authorized Kramer Electronics reseller. If you are unsure whether a reseller is an authorized Kramer Electronics reseller, please visit our Web site at www.kramerelectronics.com or contact a Kramer Electronics office from the list at the end of this document.

Your rights under this limited warranty are not diminished if you do not complete and return the product registration form or complete and submit the online product registration form. Kramer Electronics thanks you for purchasing a Kramer Electronics product. We hope it will give you years of satisfaction.



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.

We welcome your questions, comments, and feedback.

Web site: www.kramerelectronics.com

E-mail: info@kramerel.com



SAFETY WARNING

Disconnect the unit from the power supply before opening and servicing



P/N: 2900-000763



Rev: 2