



KRAMER ELECTRONICS LTD.

# USER MANUAL

MODEL:

**VP-425**

PC / Component to HDMI Scaler

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P/N: 2900-3001 1 1 Rev 2

# VP-425 Quick Start Guide

This guide takes you through a basic installation and first-time use of your **VP-425**. For more detailed information, see the **VP-425** user manual. You can download the latest manual at <http://www.kramerelectronics.com>.

## Step 1: Check what's in the box

- The **VP-425** PC / Component to HDMI Scaler
- 4 Rubber feet
- 1 Power Adapter
- 1 Quick start guide
- Mounting brackets
- 1 User Manual



Save the original box and packaging materials in case your Kramer product needs to be returned to the factory for service.

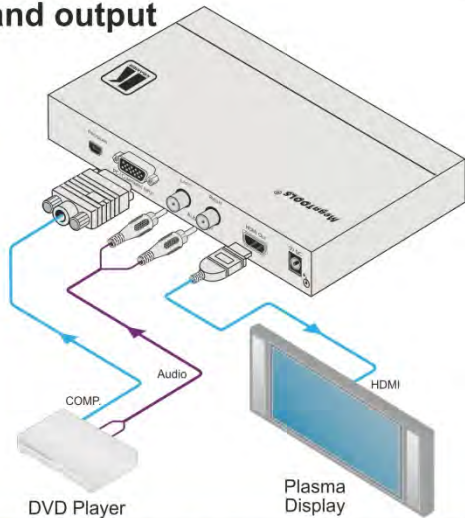
## Step 2: Install the VP-425

Mount the machine in a rack or place on a table.

## Step 3: Connect inputs and output

Always switch OFF the power on each device before connecting it to your **VP-425**.

For best results, we recommend that you always use Kramer high-performance cables to connect AV equipment to the **VP-425**.



## Step 4: Configure the VP-425 via the OSD menu

Press the MENU button to open the OSD menu:



- PICTURE
- ASPECT RATIO
- OVER SCANNING
- NOISE REDUCTION
- OUTPUT
- REFRESH RATE
- HD OUTPUT COLOR
- OSD SETTINGS
- ADVANCED
- FACTORY DEFAULT
- INFORMATION
- EXIT

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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 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 Video Products.

Congratulations on purchasing your Kramer **VP-425** PC / Component to HDMI Scaler, which is designed to let you control an A/V system with ease, in a multimedia classroom or conference room.

This product is ideal for:

- Projection systems in conference rooms, boardrooms, hotels and houses of worship
- Home theater up-scaling
- Rental and staging

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## 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-425** 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

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## 3 Overview

The Kramer **VP-425** PC / Component to HDMI Scaler is a high-performance digital scaler for computer graphics and HDTV signals. It up- or down-scales the PC or component video input and embeds the stereo audio into the HDMI output.

The **VP-425** PC / Component to HDMI Scaler also features:

- A non-HDCP encrypted HDMI or DVI output signal on an HDMI connector
- HDTV Compatibility
- A maximum resolution of up to WUXGA and 1080p
- A built-in ProcAmp for convenient signal adjustment
- On-Screen Display (OSD) for easy setup and adjustment, accessible via the front-panel buttons
- A USB port for firmware upgrade
- A non-volatile memory that retains the last settings used
- A freeze button
- An external 5V DC power source, making it suitable for field operation

You can control your **VP-425** directly via the front panel push buttons and the on-screen display (OSD).

The **VP-425** is housed in a compact MegaTOOLS™ enclosure, letting 2 units to be rack mounted side-by-side in a 1U rack space with the optional **RK-T2B** universal rack adapter.

## 3.1 About HDMI

High-Definition Multimedia Interface (HDMI) is an uncompressed all-digital audio/video interface, widely supported in the entertainment and home cinema industry. HDMI ensures an all-digital rendering of video without the losses associated with analog interfaces and their unnecessary digital-to-analog conversions. It delivers the maximum high-definition image and sound quality in use today. Note that Kramer Electronics Limited is an HDMI Adopter and an HDCP Licensee.

HDMI, the HDMI logo and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI licensing LLC.

In particular, HDMI:

- Provides a simple interface between any audio/video source, such as a set-top box, DVD player, or A/V receiver and video monitor, such as a digital flat LCD / plasma television (DTV), over a single lengthy cable  
**SIMPLICITY** - With video and mul i-channel audio combined into a single cable, the cost, complexity, and confusion of multiple cables curren ly used in A/V systems is reduced  
**LENGTHY CABLE** - HDMI technology has been designed to use standard copper cable construction at up to 15m
- Supports standard, enhanced, high-definition video, and multi-channel digital audio on a single cable  
**MULTI-CHANNEL DIGITAL AUDIO** - HDMI supports multiple audio formats, from standard stereo to multi-channel surround-sound. HDMI has the capacity to support Dolby 5.1 audio and high-resolution audio formats
- Transmits all ATSC HDTV standards and supports 8-channel digital audio, with bandwidth to spare to accommodate future enhancements and requirements
- Benefits consumers by providing superior, uncompressed digital video quality via a single cable, and user-friendly connector  
HDMI provides the quality and functionality of a digital interface while also supporting uncompressed video formats in a simple, cost-effective manner
- Is backward-compatible with DVI (Digital Visual Interface)
- Supports two-way communication between the video source (such as a DVD player) and the digital television, enabling new functionality such as automatic configuration and one-button play
- Has the capacity to support existing high-definition video formats (720p, 1080i, and 1080p/60), standard definition formats such as NTSC or PAL, as well as 480p and 576p

### 3.2 About HDCP

The High-Bandwidth Digital Content Protection (HDCP) standard developed by Intel, protects digital video and audio signals transmitted over DVI or HDMI connections between two HDCP-enabled devices to eliminate the reproduction of copyrighted material. To protect copyright holders (such as movie studios) from having their programs copied and shared, the HDCP standard provides for the secure and encrypted transmission of digital signals.

### 3.3 Defining the VP-425 PC / Component to HDMI Scaler

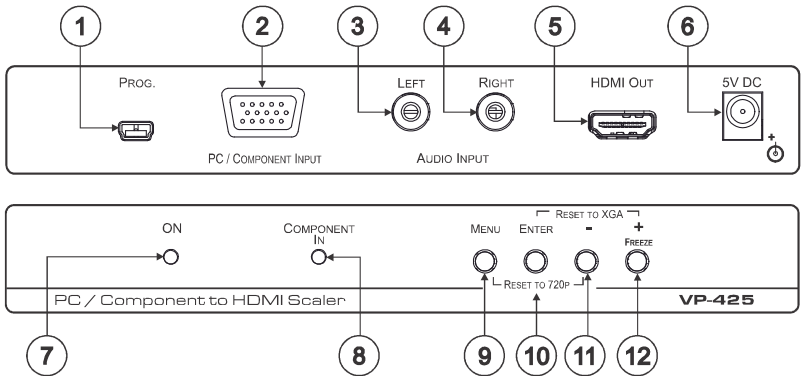


Figure 1: VP-425 PC / Component to HDMI Scaler

#	Feature	Function
1	PROGRAM USB Connector	For firmware upgrade
2	PC / COMPONENT INPUT 15-pin HD Connector	Connects to a PC or component source
3	AUDIO INPUT	Connects to an unbalanced stereo audio source
4		
	RIGHT	
5	HDMI OUT Connector	Connects to an HDMI acceptor
6	5V DC	+5V DC connector for powering the unit
7	ON LED	Lights green when the unit is powered on
8	COMPONENT IN LED	Lights blue when a component (YPbPr) signal is detected on the input
9	MENU Button	Press to enter/escape the on-screen display (OSD) menu. Press together with the - button to reset to 720p
10	ENTER Button	In the OSD, press to choose the highlighted menu item. Press together with the + button to reset to XGA
11	- Button	In the OSD, press to move backward through the list or to decrement the parameter value
12	+ / FREEZE Button	In the OSD, press to move forward through the list or to increment the parameter value. When not in the OSD, press to freeze the display



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## 4 Connecting the VP-425 PC / Component to HDMI Scaler



Always switch off the power to each device before connecting it to your **VP-425**. After connecting your **VP-425**, connect its power and then switch on the power to each device.

To connect the **VP-425**, as illustrated in the example in [Figure 2](#) do the following:

1. Connect a component video source (for example, a DVD player) to the PC/COMPONENT INPUT 15-pin HD connector as shown in the pinout table below:

Signal	PIN #
Pr	1
Y	2
Pb	3
Ground	6, 7, 8

Alternatively, you can connect a PC to the 15-pin HD connector

2. Connect an analog stereo audio source (for example, the DVD player audio signal) to the L and R AUDIO INPUT RCA connectors.
3. Connect the HDMI OUT 15-pin HD connector to an HDMI acceptor (for example, an LCD display).
4. Connect the 5V DC power adapter to the power socket and connect the adapter to the mains electricity (not shown in [Figure 2](#)).

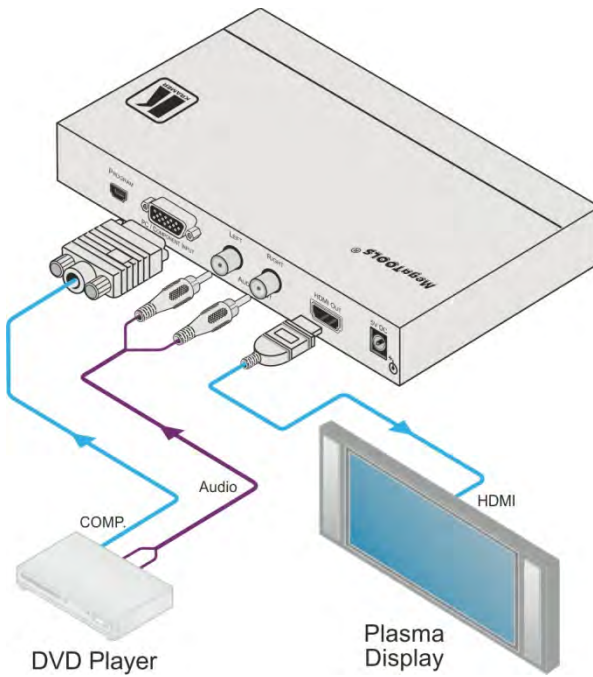


Figure 2: Connecting the VP-425 PC / Component to HDMI Scaler

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## 5 Controlling the VP-425

The **VP-425** can be controlled via:

- The front panel buttons (see [Section 5.1](#))
- The OSD menu (see [Section 5.2](#))

### 5.1 Controlling via the Front Panel Buttons

The **VP-425** includes the following front panel buttons:

- MENU, ENTER, -, and +
- FREEZE
- RESET TO XGA/720p

### 5.2 Using the OSD Menu

Press the menu button to enter or close the OSD menu. While the OSD menu is open, you can use the front panel buttons to perform the following functions. Press the:

- + and – buttons to move up and down through the menu items and increment or decrement the parameter values
- ENTER button to select and activate a menu item or accept the parameter value set
- MENU button to close the OSD menu

As an example of setting parameters, to increase the contrast on the display:

1. From normal operation, press MENU.  
The OSD main menu appears on the screen.
2. Press the + or – button to highlight CONTRAST.  
CONTRAST changes to green when highlighted.
3. Press ENTER.  
The contrast value parameter changes to red.
4. Press the + button to increase the value (increase the contrast) or  
the – button to decrease the value (decrease the contrast).  
The value ranges from 0 to 100.
5. Press ENTER to set the value.  
The contrast value parameter changes back to white.
6. To return to normal operation, highlight EXIT and press ENTER; press  
MENU; or wait until the menu times out.

## 5.2.1 The MAIN MENU

Mode	Function																																								
PICTURE	See <a href="#">Section 5.2.2</a>																																								
ASPECT RATIO	Full, 16:9, 4:3, BEST FIT																																								
OVER SCANNING	Off, 5%, 10%, 15%, 20%																																								
NOISE REDUCTION	Off, Min, Typ, Max																																								
OUTPUT	Select the output resolution from the menu (default 720p): <table border="1"> <thead> <tr> <th>Output resolution:</th> <th>Appears as:</th> <th>Output resolution:</th> <th>Appears as:</th> </tr> </thead> <tbody> <tr> <td>480p</td> <td>480P</td> <td>SXGA</td> <td>1280x1024</td> </tr> <tr> <td>576p</td> <td>576P</td> <td>WXGA</td> <td>1360x768</td> </tr> <tr> <td>720p</td> <td>720P</td> <td>1400x1050</td> <td>1400x1050</td> </tr> <tr> <td>1080i</td> <td>1080I</td> <td>WSXGA</td> <td>1440x900</td> </tr> <tr> <td>1080p</td> <td>1080P</td> <td>UXGA</td> <td>1600x1200</td> </tr> <tr> <td>VGA</td> <td>640x480</td> <td>1680x1050</td> <td>1680x1050</td> </tr> <tr> <td>SVGA</td> <td>800x600</td> <td>WUXGA</td> <td>1920x1200</td> </tr> <tr> <td>XGA</td> <td>1024x768</td> <td></td> <td>Native</td> </tr> <tr> <td>1280x800</td> <td>1280x800</td> <td></td> <td></td> </tr> </tbody> </table> <p><b>NATIVE</b> - Select NATIVE to select the output resolution from the EDID of the connected HDMI monitor</p>	Output resolution:	Appears as:	Output resolution:	Appears as:	480p	480P	SXGA	1280x1024	576p	576P	WXGA	1360x768	720p	720P	1400x1050	1400x1050	1080i	1080I	WSXGA	1440x900	1080p	1080P	UXGA	1600x1200	VGA	640x480	1680x1050	1680x1050	SVGA	800x600	WUXGA	1920x1200	XGA	1024x768		Native	1280x800	1280x800		
Output resolution:	Appears as:	Output resolution:	Appears as:																																						
480p	480P	SXGA	1280x1024																																						
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SVGA	800x600	WUXGA	1920x1200																																						
XGA	1024x768		Native																																						
1280x800	1280x800																																								
REFRESH RATE	Select the output refresh rate: FOLLOW, 50Hz, 60Hz																																								
HD OUTPUT COLOR	Select the HD output colorspace: RGB, YPbPr																																								
OSD SETTINGS	Set the OSD parameters: H Position, V Position, Transparency, Timeout and Display (see <a href="#">Section 5.2.3</a> )																																								
ADVANCED	<b>AUTO SYNC-OFF</b> - Turn the auto sync ON/OFF. When ON, this deactivates the output after a few minutes if no input is present, until a valid input is again detected or any button is pressed.  This is useful, for example, when the output is connected to a projector, and the projector will automatically shut down when it has no input <b>H OFFSET</b> – adjust the picture H position <b>V OFFSET</b> – adjust the picture V position <b>FREEZE</b> – set the function of the FREEZE button: FREEZE + MUTE, MUTE ONLY, FREEZE ONLY																																								
FACTORY DEFAULT	Resets to the default parameters  If you cannot see the display after factory reset, use the front panel buttons to set the correct resolution: To reset to XGA, press the FREEZE (+) and ENTER buttons simultaneously for about 2 seconds To reset to 720p press the – and MENU buttons simultaneously for about 2 seconds																																								
INFORMATION	Displays the input and output resolution (via the INFO display) the SINK connector type and model, the native resolutions and the software version																																								
EXIT	Select to exit the menu																																								

## 5.2.2 The PICTURE Menu

Parameter	Function
CONTRAST	Set the contrast
BRIGHTNESS	Set the brightness
SATURATION	Set the color saturation
HUE	Set the color hue
SHARPNESS	Set the image sharpness
PHASE	Adjust the clock phase
PICTURE RESET	Reset the PICTURE parameters to their default state

## 5.2.3 The OSD Menu

Parameter	Function
POSITION	LEFT+TOP, RIGHT-TOP, RIGHT-BTM, LEFT-BTM, CENTER
TRANSPARENCY	Set the OSD background between 0 (solid black) and 15 (transparent)
MENU TIMEOUT	Set the OSD timeout period in seconds (from 5 to 50, OFF)
INFO. TIMEOUT	Set the INFO timeout period in seconds (from 5 to 50, OFF)
INFO. DISPLAY	Select the information shown on the screen during operation: <b>ON</b> - the information is shown permanently <b>OFF</b> - the information is not shown <b>INFO</b> - the information is shown for the time period set in INFO. TIMEOUT following any change in the resolution

## 6 Technical Specifications

INPUTS:	1 15-pin HD connector 1 unbalanced stereo audio on RCA connectors
OUTPUT:	1 HDMI connector
PORT:	1 USB port
OUTPUT RESOLUTIONS:	480p, 576p, 720p, 1080i, 1080p, 640x480, 800x600, 1024x768, 1280x800, 1280x1024, 1360x768, 1400x1050, 1440x900, 1600x1200, 1680x1050, 1920x1200 and native
OUTPUT REFRESH RATE:	50/60Hz/follow input
PROCESSING DELAY:	20 ms
CONTROLS:	ON and PC/COMPONENT INPUT LEDs
POWER CONSUMPTION:	5V DC, 400mA
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 2.45cm (7.4" x 4.5" x 0.98") W, D, H
WEIGHT:	0.66kg (1.45lbs) approx.
ACCESSORIES:	Power supply
OPTIONS	RK-T2B 19" rack adapter
Specifications are subject to change without notice Go to our Web site at <a href="http://www.kramerelectronics.com">http://www.kramerelectronics.com</a> to access the list of resolutions	

## 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](http://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.

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### Other Conditions

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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](http://www.kramerelectronics.com)

E-mail: [info@kramerel.com](mailto:info@kramerel.com)



**SAFETY WARNING**

Disconnect the unit from the power supply before opening and servicing

P/N 2900-300111



Rev 2

