KRAMER

USER MANUAL

MODEL:

VP-734

Presentation Switcher/ Scaler

P/N: 2900-300357 Rev 5

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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 15 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 & Repeaters; GROUP 6: Specialty AV Products; GROUP 7: Scalers; GROUP 8: Cables and Connectors; GROUP 9: Room Connectivity; GROUP 10: Mounting and Rack Adapters; GROUP 11: Sierra Video; GROUP 12: Digital Signage; GROUP 13: Audio; GROUP 14: Collaboration; and GROUP 15: KM & KVM Switches.

Congratulations on purchasing your Kramer **VP-734** Presentation Switcher/ Scaler, which is ideal for the following typical applications:

- Presentation applications
- Projection systems in conference rooms, boardrooms, auditoriums, hotels and churches, production studios, rental and staging
- Any application where high quality conversion and switching of multiple and different video signals to graphical data signals is required for display or projection purposes

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/downloads/VP-734 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

- 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 neighbouring electrical appliances that may adversely influence signal quality
- Position your Kramer **VP-734** 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 power cord that is supplied with the unit

Warning: Do not open the unit. High voltages can cause electrical shock! Servicing by qualified personnel only

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 Kramer **VP-734** is a 7-input *Presentation Switcher / Scaler* for a wide variety of presentation and multimedia applications. The **VP-734** has four HDMI, one DisplayPort, and two user definable (universal) analog video inputs (each can be set as computer graphics, composite video, s-Video (Y/C) or component video). It up- or down scales to selectable output resolutions (up to 4K/UHD) and provides glitch-free switching between sources through fast FTB™ (fade-thru-black) switching technology. The scaled signal outputs simultaneously to a 15-pin HD computer graphics and an HDMI connector output. Rich audio support is also included, with digital audio embedding and de-embedding, as well as 7 analog stereo inputs; and analog, S/PDIF, and speaker outputs.

The **VP-734** features:

- PixPerfect™ Scaling Technology – Kramer's precision pixel mapping and high quality scaling technology
- Fast Fade-Thru-Black (FTB™) Switching - Video switching transitions are clean and fast. The video fades to black and the new input fades from black for smooth, glitch-free switching. The output signal provides constant sync so the display never glitches
- 7 input buttons for switching a selected input to the outputs
- Output resolutions – with selectable refresh rates up to 4K/UHD
- Scaled video outputs –HDMI and 15-pin HD computer graphics video
- Computer graphics output resolutions – including a user-defined output resolution with selectable refresh rates
- Multiple aspect ratio selections
- Auto-switching and auto-scanning of inputs
- Efficient power-saving features
- A USB port for downloading splash-screen logo; and for storing / downloading the machine configurations via a flash drive
- Audio breakaway and AFV (audio-follow-video) operation support
- Embedded audio on the HDMI and DisplayPort inputs and outputs

- Built-in noise reduction and picture enhancement features
- Powerful audio features via DSP technology including audio equalization, mixing, delay and so on
- One stereo speaker output, 10W per channel into 8Ω, on a 4-pin terminal block connector
- Built-in Time Base Corrector – stabilizes video sources with unstable sync
- Built-in video Proc-Amp – color, hue, sharpness, contrast, and brightness are set individually for each input
- BLANK and FREEZE buttons, a RESET TO XGA/720P button (to hardware-reset the output resolution); and a PANEL LOCK button
- Firmware Upgrade – Ethernet-based, via a user-friendly software upgrade tool
- User-friendly AP for Text Overlay support
- An OSD (On-Screen Display) – for making adjustments – that can be located anywhere on the screen

In addition, the **VP-734**:

- Includes non-volatile memory that retains the last settings, after switching the power off and then on again
- Is specifically designed to improve video quality by reducing chroma noise
- Includes numerous filters and algorithms for eliminating picture artifacts
- Scales and zooms (to up to 400% of the original size)
- Features advanced EDID management per input

Control your **VP-734** directly via the front panel push buttons (with on-screen menus), or:

- By RS-232 serial commands transmitted by a touch screen system, PC, or other serial controller
- Remotely, from the infrared remote control transmitter
- Via the Ethernet using built-in user-friendly Web pages

The **VP-734** is housed in a 19” 1U rack mountable enclosure, with rack “ears” included, and is fed from a 100-240 VAC universal switching power supply.

3.1 Defining the VP-734 Presentation Switcher/ Scaler

This section defines the **VP-734**.

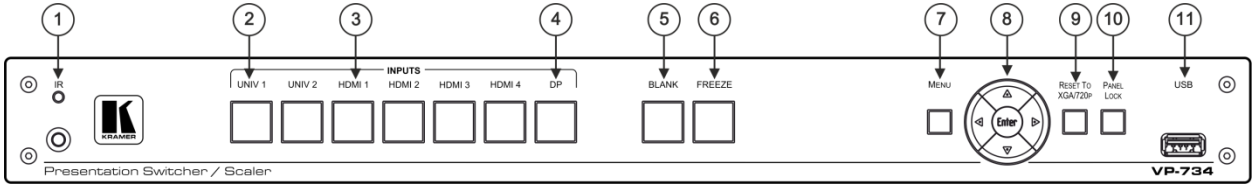


Figure 1: VP-734 Presentation Switcher/ Scaler Front Panel

#	Feature		Function
1	IR Receiver		Receives signals from the remote control transmitter
	LED		Lights red when the unit accepts IR remote commands
2	INPUT Selector Buttons (illuminate green when selected)	UNIV. 1	Press to select the analog video (VGA / component / composite / s-Video) source (configured via the OSD menu, see Section 7.1) and the appropriate audio source (from 1 to 2)
3		HDMI™ 1	Press to select the HDMI source (from 1 to 4)
4		DP	Press to select the DP source
5	Program BLANK Button		Press to toggle between a blank screen (blue or black) and the program display. The BLANK button can be programmed to mute the audio signal at the same time (see Section 6.2)
6	Program FREEZE Button		Press to freeze/unfreeze the program output video image, The FREEZE button can be programmed to mute the audio signal at the same time (see Section 6.2)
7	MENU Button		Press to display the OSD menu screen. Press again to return to normal operation.
8	ENTER Button		Press to move to the next level in the OSD screen or to accept a new parameter
	◄ Button		Decreases the range by one step in the OSD screen or moves to the previous level in the OSD screen. Decreases the volume level, when not in the OSD menu
	▲ Button		Moves up one step (in the same level) in the OSD screen, or moves to the previous slide when running a slideshow
	► Button		Increases the range by one step in the OSD screen Increases the volume level, when not in the OSD menu
	▼ Button		Moves down one step (in the same level) in the OSD screen, or moves to the next slide when running a slideshow
9	RESET TO XGA/720p Button		Press and hold to reset to the default resolution (toggles between RESET TO XGA and 720p)
10	PANEL LOCK Button		Press to lock/unlock the front panel to prevent unintentional operation
11	USB Connector		Connects to a USB drive to download a Logo and save settings (see Section 6.2)

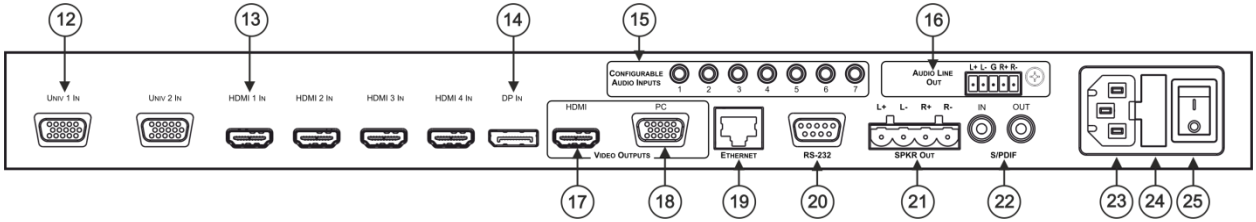


Figure 2: VP-734 Presentation Switcher/ Scaler Rear Panel

#	Feature		Function
12	UNIV 1 IN 15-pin HD Connector		Connect to the universal source (as computer graphics, composite video, s-Video or component video), from 1 to 2
13	HDMI 1 IN Connector		Connect to the HDMI 1 source (from 1 to 4)
14	DP IN DisplayPort Connector		Connect to the DP source
15	CONFIGURABLE AUDIO INPUTS on 3.5 Mini Jack Connectors		Connect to the unbalanced stereo analog audio sources from 1 to 7
16	AUDIO LINE OUT 5-pin Terminal Block		Connect to the balanced stereo analog audio acceptor (see Section 5.3)
17	VIDEO OUTPUTS	HDMI 1 Connector	Connect to an HDMI acceptor
18		PC 15-pin HD Connector	Connect to a computer graphics acceptor
19	ETHERNET Port		Connect to your LAN
20	RS-232 9-pin D-sub Connector		Connect to PC or Serial Controller
21	SPKR OUT 4-pin Terminal Block		Connect to a pair of loudspeakers
22	S/PDIF IN 3.5 Mini Jack Connector		Connect to a digital audio source
	S/PDIF OUT 3.5 Mini Jack Connector		Connect to a digital audio acceptor
23	Mains Power Connector		Connect to the mains power
24	Mains Power Fuse		Fuse for protecting the device
25	Mains Power Switch		Switch for turning the device on or off

4 Installing in a Rack

This section provides instructions for rack mounting the unit.

Before installing in a rack, be sure that the environment is within the recommended range:

OPERATING TEMPERATURE:	0º to +40ºC (32º to 104ºF)
STORAGE TEMPERATURE:	-40º to +70ºC (-40º to 158ºF)
HUMIDITY:	10% to 90%, RHL non-condensing

CAUTION!

When installing on a 19" rack, avoid hazards by taking care that:

1. It is located within the recommended environmental conditions, as the operating ambient temperature of a closed or multi unit rack assembly may exceed the room ambient temperature.

2. Once rack mounted, enough air will still flow around the machine.

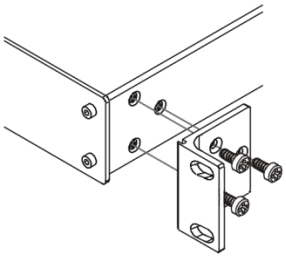
3. The machine is placed straight in the correct horizontal position.

4. You do not overload the circuit(s). When connecting the machine to the supply circuit, overloading the circuits might have a detrimental effect on overcurrent protection and supply wiring. Refer to the appropriate nameplate ratings for information. For example, for fuse replacement, see the value printed on the product label.

5. The machine is earthed (grounded) in a reliable way and is connected only to an electricity socket with grounding. Pay particular attention to situations where electricity is supplied indirectly (when the power cord is not plugged directly into the socket in the wall), for example, when using an extension cable or a power strip, and that you use only the power cord that is supplied with the machine.

To rack-mount a machine:

1. Attach both ear brackets to the machine. To do so, remove the screws from each side of the machine (3 on each side), and replace those screws through the ear brackets.



2. Place the ears of the machine against the rack rails, and insert the proper screws (not provided) through each of the four holes in the rack ears.

Note:

- In some models, the front panel may feature built-in rack ears
- Detachable rack ears can be removed for desktop use
- Always mount the machine in the rack before you attach any cables or connect the machine to the power
- If you are using a Kramer rack adapter kit (for a machine that is not 19"), see the Rack Adapters user manual for installation instructions available from our Web site

5 Connecting the VP-734

Always switch off the power to each device before connecting it to your **VP-734**. After connecting your **VP-734**, connect its power and then switch on the power to each device.

To connect the **VP-734** as illustrated in the example in Figure 3, do the following:

1. Connect the video sources:
   - A computer graphics source to the UNIV IN 1 15-pin HD connector
   - A composite source (for example, a DVD player) to the UNIV IN 2 15-pin HD connector

   Note that the UNIV IN 15-pin HD connector pinout is defined in Section 5.1).
   - An HDMI source (for example, a Blu-ray player) to the HDMI 1 IN connector

     Alternatively, you can connect the DVI connector on the DVD player to the HDMI connector on the **VP-734** via a DVI-HDMI adapter
   - An HDMI source (for example, a DVD player) to the HDMI 3 IN connector

     Alternatively, you can connect the DVI connector on the DVD player to the HDMI connector on the **VP-734** via a DVI-HDMI adapter
   - A DisplayPort video source (for example, a Notebook) to the DP IN connector

   Although this connecting example shows only several inputs that are connected, you can connect all the inputs simultaneously.
2. Connect the analog stereo inputs to the 3.5mm mini jack connectors (from 1 to 7), not shown in Figure 3.
3. Connect the video outputs:
   - The HDMI VIDEO OUTPUT connector (can be configured via the OSD menu, Section 7.3) to an HDMI acceptor (for example, a projector)

   Note that the HDMI output can be set to output HDMI, DVI or can be set to Auto, see Section 7.3.

- The PC 15-pin HD computer graphics video connector to a video acceptor (for example, an analog display)

  In the HDTV mode, the signal is outputted as a component video signal (YPbPr) and goes out via three PINS: PIN 1 is Red or Pr, PIN 2 is Green or Y, PIN 3 is Blue or Pb. In other modes, it is outputted as a VGA signal (RGBHV)

4. Connect the S/PDIF IN RCA connector to a digital audio source (for example, a DVD player), not shown in Figure 3.

5. Connect the AUDIO LINE OUT Terminal Block connector to a balanced audio acceptor and the S/PDIF OUT RCA connector to a digital audio acceptor.

6. Connect the SPKR OUT block connector to a pair of loudspeakers, by connecting the left loudspeaker to the “L+” and the “L-” terminal block connectors, and the right loudspeaker to the “R+” and the “R-” terminal block connectors. **Do not Ground the loudspeakers**.

7. Connect the power cord.
   We recommend that you use only the power cord that is supplied with this machine

8. If required, connect:

   - A PC via RS-232, see Section 5.2
   - The ETHERNET port, see Section 5.4

The USB connector, audio sources and acceptors, and power cord are not shown in Figure 3.

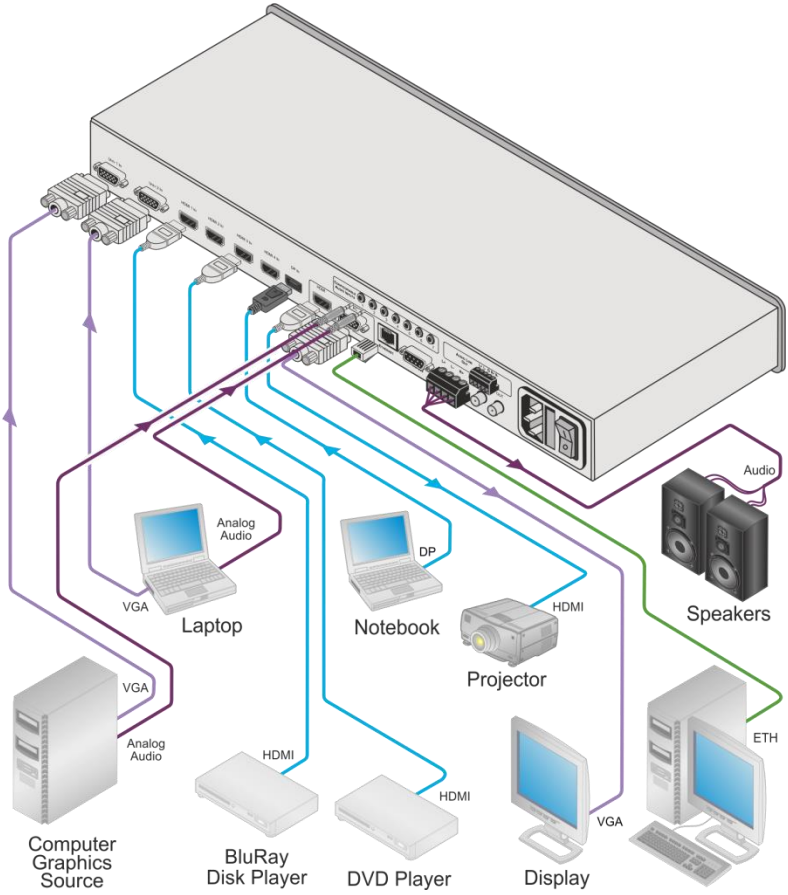


Figure 3: Connecting to the VP-734 Rear Panel

5.1 Universal Connector Pinout

This section describes the UNIV connectors from 1 to 4. Each connector can be set as computer graphics, composite video, s-Video (Y/C) or component video.

Figure 4 and the table below define the connector pinout:

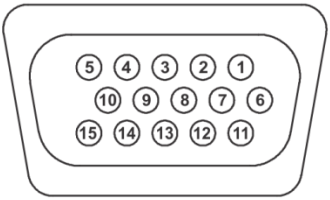


Figure 4: UNIV 15-pin HD Connector Pinout

PIN #	VGA	COMP	s-Video	CV
1	R	Pr		
2	G	Y	Y	Composite video
3	B	Pb	C	
9	+5VD			
12	EDID_SDA			
13	H_Sync			
14	V_Sync			
15	EDID_SCL			
Note that PINs 5, 6, 7, 8 and 10 are GND				

5.2 Connecting to the VP-734 via RS-232

You can connect to the **VP-734** via an RS-232 connection using, for example, a PC. Note that a null-modem adapter/connection is not required.

To connect to the **VP-734** via RS-232:

- Connect the RS-232 9-pin D-sub rear panel port on the **VP-734** unit via a 9-wire straight cable (only pin 2 to pin 2, pin 3 to pin 3, and pin 5 to pin 5 need to be connected) to the RS-232 9-pin D-sub port on your PC

5.3 Connecting the Balanced/Unbalanced Stereo Audio Output

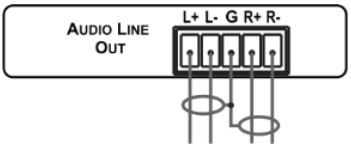


Figure 5: Connecting the Balanced Stereo Audio Output

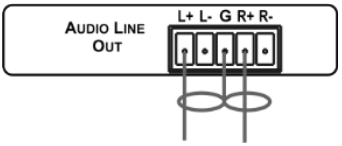


Figure 6: Connecting an Unbalanced Stereo Audio Acceptor to the Balanced Output

5.4 Connecting the VP-734 via the ETHERNET Port

You can connect to the **VP-734** via Ethernet using either of the following methods:

- Directly to the PC using a crossover cable (see Section 5.4.1)
- Via a network hub, switch, or router, using a straight-through cable (see Section 5.4.2)

Note: If you want to connect via a router and your IT system is based on IPv6, speak to your IT department for specific installation instructions.

5.4.1 Connecting the Ethernet Port Directly to a PC

You can connect the Ethernet port of the **VP-734** directly to the Ethernet port on your PC using a crossover cable with RJ-45 connectors.

This type of connection is recommended for identifying the **VP-734** with the factory configured default IP address.

After connecting the **VP-734** to the Ethernet port, configure your PC as follows:

1. Click **Start** > **Control Panel** > **Network and Sharing Center**.
2. Click **Change Adapter Settings**.
3. Highlight the network adapter you want to use to connect to the device and click **Change settings of this connection**.
   The Local Area Connection Properties window for the selected network adapter appears as shown in Figure 7.

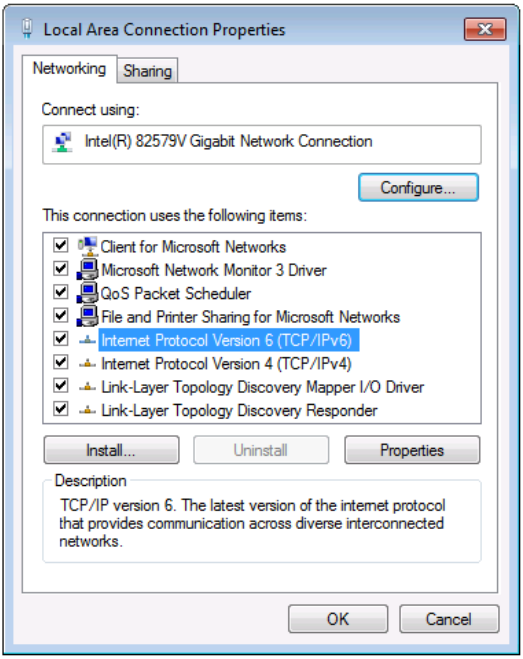


Figure 7: Local Area Connection Properties Window

4. Highlight either **Internet Protocol Version 6 (TCP/IPv6)** or **Internet Protocol Version 4 (TCP/IPv4)** depending on the requirements of your IT system.

5. Click **Properties**.
   The Internet Protocol Properties window relevant to your IT system appears as shown in Figure 8 or Figure 9.

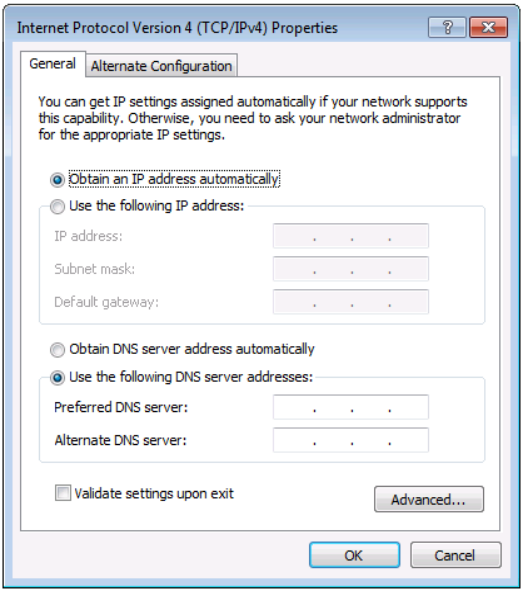


Figure 8: Internet Protocol Version 4 Properties Window

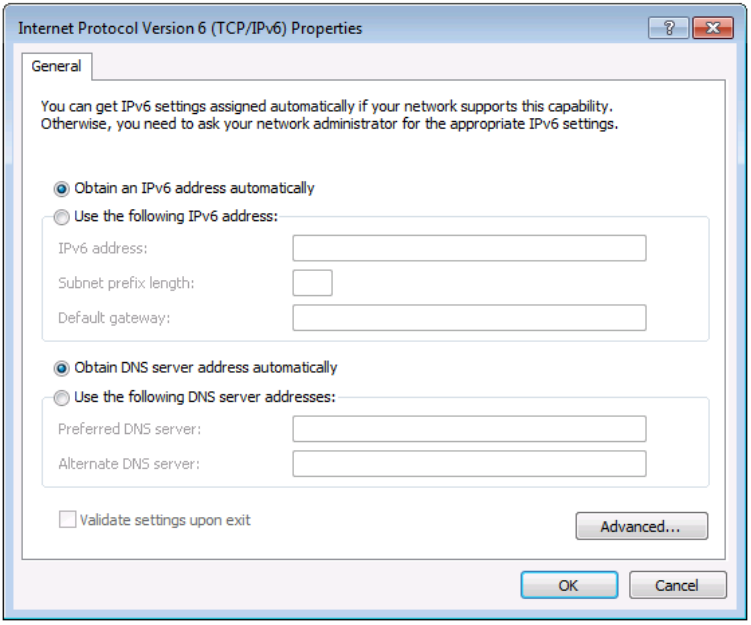


Figure 9: Internet Protocol Version 6 Properties Window

6. Select **Use the following IP Address** for static IP addressing and fill in the details as shown in Figure 10.
   For TCP/IPv4 you can use any IP address in the range 192.168.1.1 to 192.168.1.255 (excluding 192.168.1.39) that is provided by your IT department.

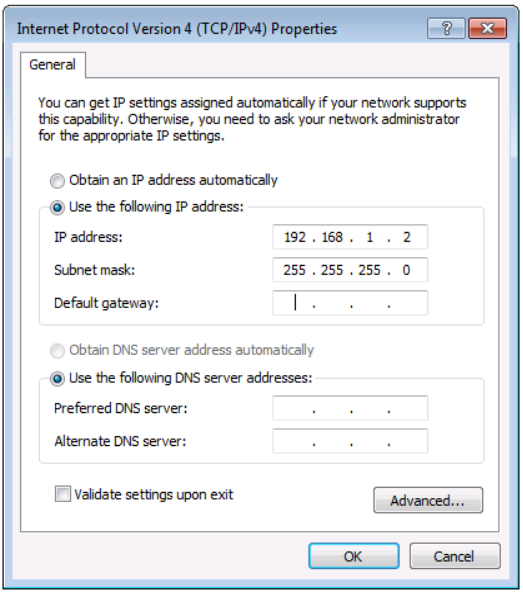


Figure 10: Internet Protocol Properties Window

7. Click **OK**.

8. Click **Close**.

5.4.2 Connecting the Ethernet Port via a Network Hub or Switch

You can connect the Ethernet port of the **VP-734** to the Ethernet port on a network hub or using a straight-through cable with RJ-45 connectors.

5.4.3 Control Configuration via the Ethernet Port

To control several units via Ethernet, connect the Master unit (Device 1) via the Ethernet port to the Ethernet port of your PC. Use your PC provide initial configuration of the settings (see Section 5.4).

6 Presentation Switcher / Scaler Buttons

The **VP-734** includes the following front panel buttons:

- Seven INPUT selector buttons
- BLANK and FREEZE buttons
- Menu navigation buttons (see Section 7)
- A RESET TO XGA/720p button
- A PANEL LOCK button

6.1 Switching the Inputs

You can switch an input to the outputs by pressing the relevant INPUT front panel button.

6.2 Using the BLANK and FREEZE Buttons

Use the OSD menu (see Section 7.5.3) or the Web pages (see Section 9.9) to determine the behavior of the BLANK and FREEZE buttons.

6.3 Locking and Unlocking the Front Panel

To prevent changing the settings accidentally or tampering with the unit via the front panel buttons or the remote control transmitter, lock your **VP-734**. Unlocking releases the protection mechanism. When the front panel is locked, control is still available via RS-232 and/or the Ethernet.

To lock the **VP-734**, Press and hold the PANEL LOCK button on the front panel. The front panel is locked and the PANEL LOCK button is illuminated. Pressing any button other than the PANEL LOCK button has no effect

To unlock the **VP-734**, Press and hold the illuminated PANEL LOCK button on the front panel.
The front panel unlocks and the PANEL LOCK button is no longer illuminated

The Save Lock and Input Lock functions are defined in the OSD table in Section 7.5.3 and on the Web pages in Section 9.9.

6.4 The Infrared Remote Control Transmitter

You can control the **VP-734** remotely from the infrared remote control transmitter which is powered by two AAA size 1.5V DC batteries. The IR remote control transmitter has a range of up to 15 meters and delivers instantaneous results

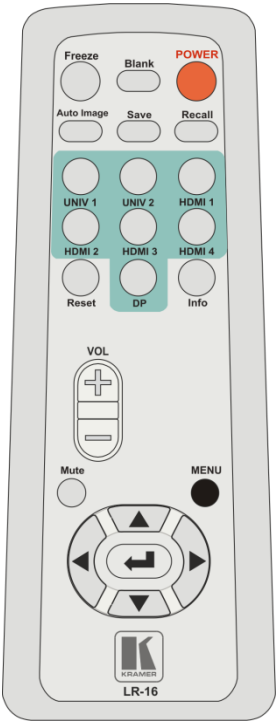


Figure 11: IR Remote Control Transmitter

Key	Function
Freeze	Pauses the output video and can be programmed to mute the audio signal at the same time (see Section 6.2)
Blank	Toggles between a blank screen (blue or black) and the display
POWER	Toggles the **VP-734** ON or OFF (standby)
Auto Image	Press to assess the image and improve the quality accordingly, by automatically adjusting the phase, frequency and position
Save	Press to save a profile
Recall	Press to recall a profile
Source	7 keys for selecting one of the following sources: UNIV 1, UNIV 2, HDMI 1, HDMI 2, HDMI 3, HDMI 4 and DP
Reset	Press and hold to reset to the default resolution (toggles between RESET TO XGA and 720p)
Info	Press to toggle the Info OSD menu
Vol +/-	Press to increase/decrease the output volume
Mute	Toggles to mute/unmute the output audio signal
MENU	Shows the main OSD Menu
Navigation arrows	Allows maneuvering within an OSD screen (left, right, up and down, as well as the ENTER arrow at the center)

7 Configuring the VP-734 via the OSD MENU Screens

The **VP-734** uses an on-screen display (OSD) menu for system configuration. The menu appears as an overlay over any images that are output from the **VP-734**.

There are seven sub-menus that are used to configure the **VP-734**. You can activate and navigate these menus from the front panel buttons, or from the IR remote control.

Figure 12: MENU Items

To access and use the OSD menus, push the button for the desired input signal, then press the MENU front panel OSD button or the MENU key on the infrared remote control transmitter to display the main MENU screen which shows the eight interactive icons.

- Press the ◀ or ▶ buttons to select the desired sub-menu, and then press ENTER
- Press the ▲ or ▼ buttons to select the menu item to be adjusted, and then press ENTER
- Press the ▲ or ▼ buttons to make the adjustment and then press ENTER, or
- Press the ◀ or ▶ buttons to increase or decrease the (numerical) value as needed

To return to the previous menu level, press the front panel MENU button or the MENU key on the remote control. All settings and adjustments are automatically saved in non-volatile memory for each of the inputs (except USB).

The values defined in the different menus may change according to the firmware version (you can download the up-to-date firmware version from our Web site at www.krameav.com/support/product_downloads.asp).

7.1 The Input Screen

Figure 13: Input Screen

Setting	Function	Default
Input	Select the input to switch to the output: UNIV 1, UNIV 2, HDMI 1, HDMI 2, HDMI 3, HDMI 4, DP 1	UNIV 1
Auto switching	Set auto switching to Off or On Set to On to have the system scan for a valid input in accordance with the Auto-switch priority setup (see Section 7.5)	Off
Source type	Set the source type for each universal input: VGA, Component, YC or Video	VGA
Standard	Select the **Color Format** to Auto/RGB/YUV (for HDMI and DP inputs) Select **Video Standard** to Auto/NTSC/PAL/PAL-M/PAL-N/NTSC 4.43/SECAM/PAL-60 (for YC and composite video inputs)	Auto
Fine-tune	Set the H-Position, V-Position, Frequency and Phase for VGA inputs only We recommend that you update the Hpos, Vpos, Frequency and Phase values (in the Fine-tune OSD menu) only after Auto Image is complete (if necessary)	
Auto Image	Click Execute to activate auto image setup Assesses the image and improves the quality accordingly, by automatically adjusting the phase, frequency and position We recommend that you update the Hpos, Vpos, Frequency and Phase values (in the Fine-tune OSD menu) only after Auto Image is complete (if necessary). Enabled for VGA	

7.2 The Picture Screen

The Brightness, Contrast, Color and Hue picture settings are saved individually for each input (except USB).

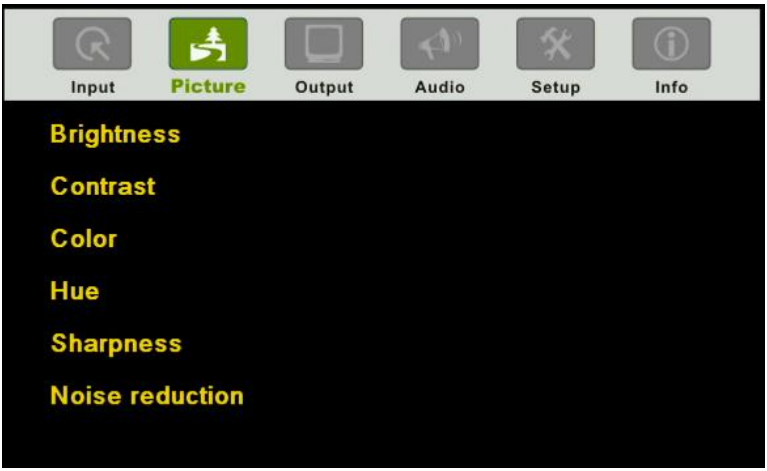


Figure 14: Picture Screen

Setting	Function	Default
Brightness	Adjust the brightness: 0 to 100	50
Contrast	Adjust the contrast: 0 to 100	50
Color	Adjust the color: 0 to 100	50
Hue	Adjust the hue: 0 to 360 (for CV and YC) or 0 to 240 for (HDMI, VGA, component)	180
Sharpness	Adjust the sharpness: 0 to 100	50
Noise reduction	**Temporal NR** – Set the temporal noise reduction level: Off, Low, Medium, High Enabled for analog inputs only	High
	Mosquito NR – Set the Mosquito noise reduction level: Off, Low, Medium, High Enabled for analog inputs only	Low
	Set the **Block NR** level: Off, On Enabled for analog inputs only	Off

7.3 The Output Screen

Figure 15: Output Screen

Setting	Function	Default
Resolution	Native HDMI, Native VGA, 640x480x60Hz, 640x480x75Hz, 800x600x50Hz, 800x600x60Hz, 800x600x75Hz, 1024x768x50Hz, 1024x768x60Hz, 1024x768x75Hz, 1280x768x50Hz, 1280x768x60Hz, 1280x720x60Hz, 1280x800x60Hz, 1280x1024x50Hz, 1280x1024x60Hz, 1280x1024x75Hz, 1366x768x50Hz, 1366x768x60Hz, 1400x1050x50Hz, 1400x1050x60Hz, 1600x900x60Hz (R), 1600x1200x50Hz, 1600x1200x60Hz, 1680x1050x60Hz, 1920x1080x60Hz, 1920x1200x60Hz (R), 2048x1080x50Hz, 2048x1080x60Hz, 3840x2160@24Hz, 3840x2160@25Hz, 3840x2160@29.97Hz, 3840x2160@30Hz, 4096x2160@24Hz, 480px60Hz, 576px50Hz, 720px50Hz, 720px60Hz, 1080ix50Hz (1080i/1080px50Hz), 1080ix60Hz (1080i/1080px60Hz), 1080px50Hz, 1080px60Hz, 1080px24Hz, 480px59.94Hz, 720px59.94Hz, 1080ix59.94Hz (1080i/1080px59.94Hz), 1080px23.98, 1080px29.97, 1080px59.94, Custom 1 to Custom 4 Note that you can set the custom resolution to a value of up to 2046x1200	1024x768x60Hz
HDMI Type	Select the HDMI type to Auto, HDMI or DVI	Auto
Aspect Ratio	Set the aspect ratio (also see Section 7.3.1): Best Fit Letterbox **Follow Output** – If input resolution ≤ output resolution it scales up picture and fills the display (with warp); if input resolution ≥ than output resolution, scales down the picture and fills the display (with warp) Virtual Wide **Follow Input** – If input resolution ≤ output resolution, displays with a blank border. If the input resolution ≥ output resolution, crops the image **Custom** – Click to enable custom aspect ratio **Custom Aspect Ratio** – Set H-Pan, V-Pan, H-Zoom and V-Zoom	Follow Output
Zoom	Set zoom to 100% 150%, 200%, 225%, 250%, 275%, 300%, 325%, 350%, 375%, 400% or click custom to set the custom zoom and enable Zoom H-Pan and Zoom V-Pan	100%
Positioning	Set H_Start, H_End, H_Position, H_Size, V_Start, V_End, V_Position, V_Size	

Setting	Function	Default
Test Pattern	Off, Colorbar, SMPTE, Greyscale, Picture Border, Multiburst, Ramps, H-pattern, Setup	Off

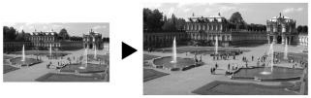
7.3.1 Selecting the Correct Aspect Ratio

You can configure the aspect ratio of any output image to fit your application. The **VP-734** offers six different aspect ratio settings: Best Fit, Letterbox, Follow Output, Virtual Wide, Follow Input, and Custom. Here is how each of these settings works.

BEST FIT – This setting re-sizes the video or graphics input signal to "best fit" the output resolution while maintaining the aspect ratio of the input signal. For example, a composite video signal (4:3 aspect ratio) will "best fit" to the top and bottom of a widescreen output image, resulting in black pillars on either side.

LETTERBOX – This setting compresses the top and bottom edges of the input signal, but fills the width of the screen. For example, to preserve a widescreen film image on a 4:3 display. When not using a 4:3 monitor, this mode is identical to Best Fit

FOLLOW OUTPUT – The aspect ratio and resolution of the input signal is re-sized to precisely match the aspect ratio and resolution of the **VP-734** output signal. This may result in some distortion to the input signal image



VIRTUAL WIDE – The input signal is stretched horizontally to fit the width of a widescreen output image from the **VP-734**. This setting is used to expand anamorphic (horizontally compressed) video images from DVDs

FOLLOW INPUT – The aspect ratio and resolution of the input video or graphics signal are both preserved. For example, a composite video image with a 4:3 aspect ratio will appear with the same aspect ratio on a 1080p (16:9) output image, surrounded by black bars

CUSTOM – Use this menu to define a custom aspect ratio by adjusting the output image horizontal size (width) and vertical size (height)

7.4 The Audio Screen

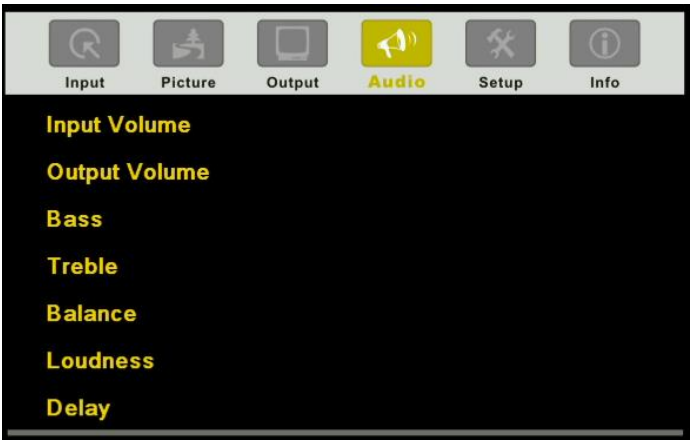


Figure 16: Audio Screen

Setting	Function	Default
Input Volume	Adjust the input volume: -22 to 22	0
Output Volume	Adjust the output volume: -100 to 24	0
Bass	Adjust the bass: -24 to 24	0
Treble	Adjust the treble: -24 to 24	0
Balance	Adjust the balance: -10 to 10	0
Loudness	Set loudness Off or On	Off
Delay	Select to dynamic (the audio delay equals the pipeline video delay), User Define or Off	Dynamic
Input Source	Select the audio input: Analog 1 to Analog 7, S/PDIF or Embedded (for HDMI and DP inputs). For each video input you can assign an analog audio source, the digital audio source or embedded this input will be switched along with the video input. For example, if Analog 1 is assigned to UNIV 2, then whenever UNIV 2 is selected, Analog 1 will be selected too	Analog 1
Audio-Follow-Video	Set to Off or On. When on, the audio will follow the video, as set in the Input Source menu. When Off selecting a different video signal will not change the audio setting and it can be selected via the Input Source menu separately	On

7.5 The Setup Screen

Figure 17: Setup Screen

Setting	Function	Default
Save	Save setup to Profile 1 to Profile 8 or via USB to a memory stick	
Recall	Recall setup from Profile 1 to Profile 8 or from a memory stick via USB port	
Erase	Erase a setup from Profile 1 to Profile 8	
Frame Lock	Set to On or Off. Frame Lock locks the vertical refresh rate of the output to that of the input. Frame Lock only locks 50Hz or 60Hz/59.94Hz In cases where the output resolution can support the vertical refresh rate of the input, the output refresh rate will change according to the input refresh rate Note that: • Seamless switching is not possible when working in the Frame Lock mode unless all sources are frame synchronized • If **VP-734** can lock the input then the output will follow • If **VP-734** cannot lock the input, then the output will not change. The info menu will display one of the following: Sync Mode: Free Run (Frame Lock Off) or Sync Mode: Frame Lock (Frame Lock On) • When resetting the resolution to XGA or 720p, Frame Lock will be turned off automatically and if required you will need to turn Frame Lock on	Off

Setting	Function	Default
	When changing the output resolution (not including Native HDMI and Custom 1 to 4), if the new output resolution can be locked, **VP-734** locks it. If not, it will be unlocked When changing the output resolution to Native, HDMI or Custom1 to 4, Frame Lock turns off and is disabled (grayed out)	
Auto Image	Set to Manual or Auto Set to **Manual** to adjust and align the picture. Set to **Auto** to automatically adjust and align the picture each time one of the UXGA inputs is selected or if the UXGA input resolution has changed	Manual
Switching Mode	Selects **Seamless** switching (fade-through-Black) or **Fast** switching which is faster but may cause glitches on the output	Seamless
Frame Latency	Select: **Best Quality** – Does not consider the latency; all the options (and filters) are allowed in order to achieve the highest quality picture. **Fast** – disables most of the filters, but allows some of the more important processing, such as frame rate conversion and cropping	Best Quality
Auto-switch priority	Auto-Switch Priority lets you set the order of inputs to be scanned when searching for a new active source, 5 seconds after losing the input signal. Set the scanning order of the following inputs from Priority 1 to Priority 10: UNIV 1, UNIV 2, HDMI 1, HDMI 2, HDMI 3, HDMI 4, DP1 and Off. Set the priority list from First priority to the 7th priority. For example, select First Priority and then select the input that will be first in priority from the list of inputs. Set the second input you want scanned into the Second Priority, and so on. By default, the priority order is as follows: UNIV 1 (First Priority) UNIV 2 (Second Priority), HDMI 1 (Third Priority), HDMI 2 (4th Priority), HDMI 3 (5th Priority) HDMI 4 (6th Priority), DP 1 (7th Priority).	
Hot Plug	Set Hot Plug On or Off for the following inputs: HDMI1, HDMI 2, HDMI 3, HDMI 4 and DP 1 **On** – Sends a hot plug handshake to the source when switching to an HDMI or DP input. **Off** – No hot plug handshake is sent when switching to an input	Off
Input HDCP	Set to On or Off for each of the HDMI inputs as well as DP1. HDCP support can be enabled (On) or disabled (Off) for each of the HDMI/DP inputs, allowing the source to transmit a non-HDCP signal if required (for example, when working with a Mac computer)	On
Ethernet Setting	Set the following Ethernet settings: DHCP (DHCP will automatically assign an IP address) On or Off, IP Address, Subnet Mask and Gateway	
Factory Reset	Select Yes to reset your **VP-734** to its preset default settings.	
Advanced Setup	Opens the advanced setup menu screen, which includes the: Mode Set (Section 7.5.1), OSD (Section 7.5.2), Misc (Section 7.5.3), Input (Section 7.5.4)and Output (Section 7.5.5) functions, Input EDID Setup (Section 7.5.6) and the Max Volume Limit (Section 7.5.7)	

7.5.1 The Mode Set Screen

The Mode Set functions define the desired working resolution and refresh rate when the system cannot distinguish between similar resolutions (for example, resolutions that have the same number of lines can be defined to identify refresh rate values).

Setting	Function	Selection/Range	Default
Mode 1	Set mode 1	1400x1050x60Hz 1680x1050x60Hz	1680x1050x60Hz
Mode 2	Set mode 2	1280x1024x75Hz 1280x1024x76Hz	1280x1024x75Hz
Mode 3	Set mode 3	1280x768x60Hz 1366x768x60Hz	1280x768x60Hz
Mode 4	Set mode 4	1024x768x75Hz 1024x768x75Hz-Mac	1024x768x75Hz
Mode 5	Set mode 5	1280x960x60Hz 1600x900x60Hz(R)	1280x960x60Hz

For example, if two resolutions have the same number of lines (for example, 1050), we can define them so that the unit identifies the resolution as 1400x1050 or as 1680x1050.

7.5.2 The OSD Screen Functions

Setting	Function	Selection/Range	Default
Menu Position	Set the location of the OSD menu	Center, Top Left, Top Right, Bottom Left, Bottom Right	Center
Time Out (sec)	Set the OSD menu timeout	5, 10, 20, 30, 60, 90 or Off	30

7.5.3 The Misc Screen Functions

Setting	Function	Default
Logo	Select On, Off or Custom Choose **ON** for the start-up logo to appear on the screen Choose **OFF** for it not to appear **Custom** – to select a custom logo (a BMP file with a resolution of up to 640x400) downloaded via the item below	Kramer Logo
Logo Download	Shows NA unless a memory stick is connected to the USB port. To download a logo: 1. Load the BMP image (or images) to the root folder of the USB (note that the file should not exceed a resolution of 640x400) 2. Connect the Memory stick to the USB connector on the front panel. 3. Click Logo Download item. The BMP image appears 4. Select the BMP file and press the Enter button When Custom is selected in the Logo item menu this logo will appear after powering up the device	

Setting	Function	Default
Blank Color	Select Black or Blue Set the blank color (the color that appears on the screen when the blank button is pressed)	Blue
Background	Select a Blue or Black background if no signal is detected or a file cannot be displayed Note that all the transitions will go through black, even if a blue background color is selected	Black
Low Power Saving	Select Off, Sleep or Power-down; will be activated after an input signal is not detected for 5 minutes When set to **Sleep**, press any key to reactivate the machine. When set to **Powerdown**, press any key to reboot the machine	On
Save Lock	Select On or Off Set to **On** to save the lock status when the machine is powered down	
Input Lock	Select On or Off Set to **Off** so you can still use the SOURCE buttons on the front panel even when the lock button is on	
Blank	Select Blank & Mute, Blank or Mute to determine the behavior of the BLANK front panel button Set to **Blank & Mute** to blank the output image and mute the audio Set to **Blank** to blank the output Set to **Mute** to mute the audio	Blank & Mute
Freeze	Select Freeze & Mute, Freeze or Mute to determine the behavior of the FREEZE front panel button Set to **Freeze & Mute** to Freeze the output image and mute the audio Set to **Freeze** to freeze the output Set to **Mute** to mute the audio	Freeze & Mute
HDCP Setting	Select Follow Input or Follow Output to define whether the HDCP will follow the input or the output When **Follow Input** is selected, the scaler changes its HDCP output setting (for the HDMI output) according to the HDCP of the input. This option is recommended when the HDMI scaler output is connected to a splitter/switcher (in this mode, switching may not be glitch-free) When **Follow Output** is selected, the scaler matches its HDCP output to the HDCP setting of the HDMI acceptor to which it is connected. This ensures smooth switching, regardless of the input	Follow Output
Over Scan	Select On or Off Set to On to Allow stretching of the outputted picture	Off
Overlay	Select Off, Text or Logo When selecting Text you need to download TextOvl.ini to a USB memory stick and then connect it to the **VP-734** When selecting Logo you need to download the Txtlogo.BMP file to the USB and connect it to the **VP-734**	Off
Firmware Download Path	For factory use	Default

7.5.3.1 Using Text Overlay

The text overlay feature is accessed via the Application Program (AP).

Running this AP with the PC connected to the **VP-734** lets you display text over the screen, with features including text color and speed, transparency, text position and repetition. Current text overlay settings can be saved and loaded to the AP.

Note that currently you can connect to the machine via RS-232 only.

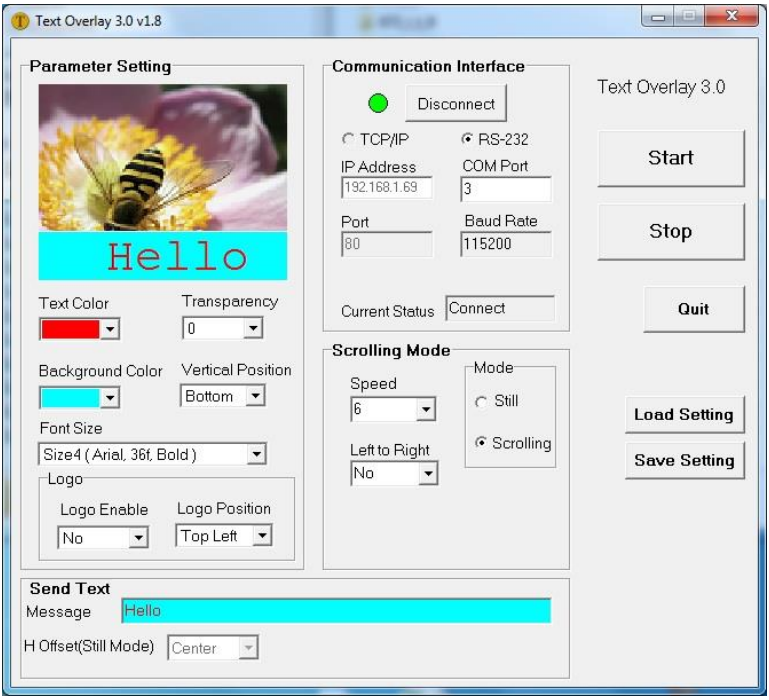


Figure 18: Text Overlay Application Screen

Feature		Function
Parameter Setting Area		
Text Color Dropdown Box		Select the Text color
Transparency Dropdown Box		Select the transparency level (0 to 7)
Background Color Dropdown Box		Set the text background color
Vertical Position		Set the vertical position of the text background on the display screen (Top, Center or Bottom)
Font Size		Select the text overlay font size
Logo	Logo Enable	Enable the logo to appear on screen
	Logo Position	Set the position of the logo
Communication Interface Area		
Connect/Disconnect		Connect the machine or disconnect
TCP/IP Check box		Not available
RS-232 Check box		When selected, set the *COM port* and *Baud Rate* (9600) to connect via the RS-232 connector
IP Address		When selected Set the IP address of the device and the port
Current Status		Indicates whether there is a valid connection to the **VP-734**
Scrolling Mode Area		
Speed Dropdown Box		Set the speed at which the text moves on the display
Mode		Set to Still (fixed text) or Scrolling (text moves across the display)
Left to Right		Set direction of the scrolling text
Send Text Area		
Message		Type the desired text in the *Message* box
H-Offset (Still Mode) Dropdown Box		After selecting the Still mode, use the *H-Offset* box to select the horizontal position of the text (Left Center or Right)
Operation Buttons		
Start Button		Click to display the text on screen
Stop Button		Click to stop scrolling on screen
Quit Button		Click to quit the program
Load Setting Button		Click to load a previously saved setting
Save Setting Button		Click to save the current setting

7.5.4 The Input Functions Screen

The following table defines the input settings:

Setting	Function	Default
Custom	Custom Input from Custom 1 to custom 4 Note that you can set the custom resolution to a value of up to 2046x1200	Custom 1
HT	Horizontal Total	
HW	Horizontal sync pulse width	
HS	Horizontal active start point	
HA	Horizontal active region	
HP	Horizontal polarity	
VT	Vertical Total	
VW	Vertical sync pulse width	
VS	Vertical active start point	
VA	Vertical active region	
VP	Vertical polarity	
OCLK	Output clock	
Enable	Set to On to enable parameter change	Off
Save	Apply settings	N/A

7.5.5 The Output Functions Screen

The following table defines the output settings:

Setting	Function	Default
Custom Output	Custom output from Custom 1 to Custom 4 Note that you can set the custom resolution to a value of up to 2046x1200	Custom 1
HT	Horizontal total	1344
HW	Horizontal sync pulse width	136
HS	Horizontal active start point	296
HA	Horizontal active region	1024
HP	Horizontal polarity	
VT	Vertical total	806
VW	Vertical sync pulse width	6
VS	Vertical active start point	35
VA	Vertical active region	768
VP	Vertical polarity	
OCLK	Output clock	65
Save	Save setup	
Get Current	Import the values of the currently selected output resolution into the User Mode Setting	

Setting	Function	Default
Read HDMI EDID	Reads the EDID file from the acceptor that is connected to the HDMI 1 output. The EDID is stored as a custom output resolution. This allows, for example, automatic handling of LED screens that support very low non-standard resolutions	N/A
Read VGA EDID	Reads the EDID file from the acceptor that is connected to the VGA output. The EDID is stored as a custom output resolution. This allows, for example, automatic handling of LED screens that support very low non-standard resolutions	N/A

Figure 19 illustrates horizontal and vertical sync pulse width, timing and active video area for a typical frame of video.

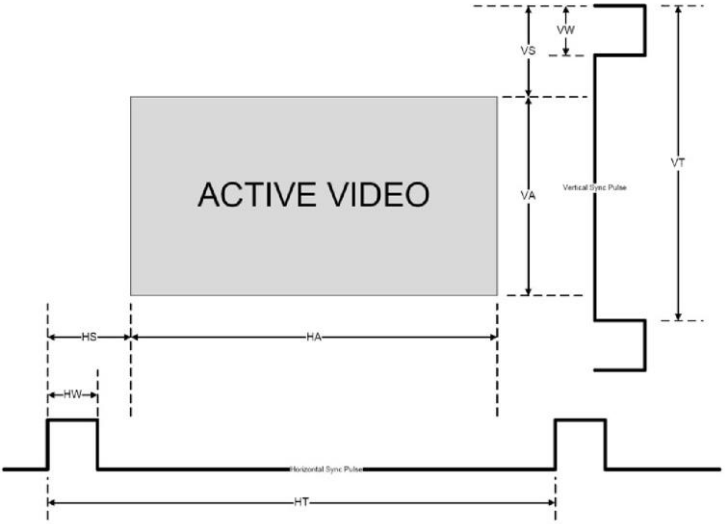


Figure 19: Active Video Functions

7.5.6 The Input EDID Setup Screen

The following table defines the input EDID settings:

Setting	Function	Default
For HDMI 1, HDMI 2, HDMI 3, HDMI 4, DP 1		
Default	Set the default EDID on the input	Default
Copy HDMI Out	Copy the EDID from the sink on the HDMI output to the input	
User Define	Select a previously stored EDID (see **Read HDMI EDID** in Section 7.5.5 above)	
Select Modeline	This feature is available only if Default is selected. Otherwise it is disabled. Select the native resolution: Default 1024x768@60, 1280x800@60, 1280x1024@60, 1366x768@60, 1440x900@60, 1400x1050@60, 1600x900@60 (R), 1600x1200@60, 1680x1050@60, 1920x1080@60, 1920x1200@60Hz (R), 720p50, 720p60, 1080p50, 1080p60, 2048x1080@50, 2048x1080@60, 3840x2160@30	3840x2160@30
For UNIV 1, UNIV 2, UNIV 3, UNIV 4		
Default	Set the default EDIDs on the inputs	Default
Copy VGA Out	Copy the EDID from the sink on the PC output to the input	
User Define	Select a previously stored EDID (see **Read HDMI EDID** in Section 7.5.5 above)	
Select Modeline	Select the native resolution: Default (1920x1080@60), 1024x768@60, 1280x800@60, 1280x1024@60, 1366x768@60, 1440x900@60, 1400x1050@60, 1600x900@60 (R), 1600x1200@60, 1680x1050@60, 1920x1080@60, 1920x1200@60Hz (R)	Default

7.5.7 The Maximum Volume Limit Screen

Set the maximum output volume from -100 to 24 (default = 24). Doing this allows you to limit the maximum volume level that the user can set.

7.6 The Info Screen

From the Information screen (see Figure 20), you can verify the Source, Output, Sync Mode, firmware version, Dynamic or static IP.

Figure 20: Information Screen

8 Firmware Upgrade

The latest firmware version as well as the VP-Download Tool, can be downloaded from the Kramer Web site at www.kramerav.com/support/downloads.asp

You can upgrade the **VP-734** via the VP Download tool, which can be downloaded from our Web site. After downloading this upgrade tool:

1. Connect the **VP-734** to your PC via the Ethernet.

2. Open VP Download Tool. The Download screen appears:

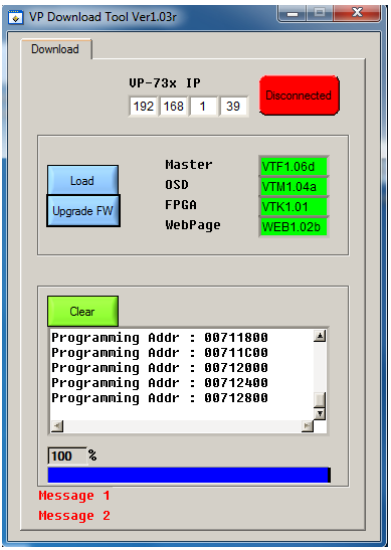


Figure 21: Firmware Upgrade – the VP Download Tool

3. Type in the IP number of the machine.

4. Click the Disconnected button.

5. Click the Load button and select the latest firmware file.

6. Click the Upgrade FW button and wait for the completion of the procedure.

7. Turn off the power on the **VP-734** and then turn it on again.

9 Using the Embedded Web Pages

The Web pages let you control the **VP-734** via the Ethernet. The Web pages include all the OSD items and more, and are accessed using a Web browser and an Ethernet connection.

Note that the Web page features are described in more detail in the OSD Menu, Section 7.

Before attempting to connect:

- Perform the procedures in Section 5.4.
- Ensure that your browser is supported

The following operating systems and Web browsers are supported:

OS	Version	Browser	Version
Windows	7	IE	11
		FireFox	40.0.3
		Chrome	45.0.2454.93
	8	IE	11
		FireFox	40.0.3
		Chrome	45.0.2454.93
Mac	10.10.3	Safari	8.0.5
iOS	7.1.2	Safari	N/A
Android	5.1.1	Chrome	45.0.2454.93

9.1 Browsing the VP-734 Web Pages

To browse the **VP-734** Web pages:

1. Open your Internet browser.
2. Type the IP number of the device in the Address bar of your browser. For example, the default IP number:

The Authentication window appears:

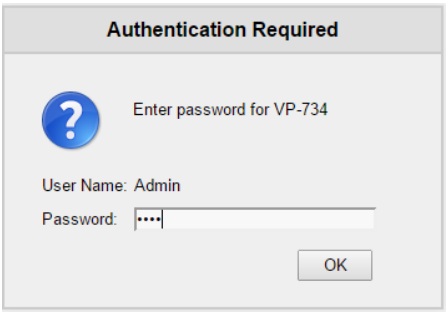


Figure 22: Using the Embedded Web pages – the Authentication Window

3. Enter the password and click OK.
   The Routing & Scaling (first) page loads.

There are 11 Web pages:

- The Routing & Scaling page (see Section 9.2)
- The Device settings page (See Section 9.3)
- The Input Settings page (see Section 9.4)
- The Output settings page (see Section 9.5)
- The Audio Settings page (see Section 9.6)
- The Miscellaneous Video Settings page (see Section 9.7)
- The EDID management page (see Section 9.8)
- The Advanced Settings page (see Section 9.9)
- The Custom Resolutions page (see Section 9.10)
- The Security page (see Section 9.11)
- The About page (see Section 9.12)

9.2 The Routing & Scaling Page

Figure 23 shows the Program Routing & Scaling page that is also the first page that appears following the loading page. The column on the left shows the Routing & Scaling page selected and below a list of all the other available Web pages.

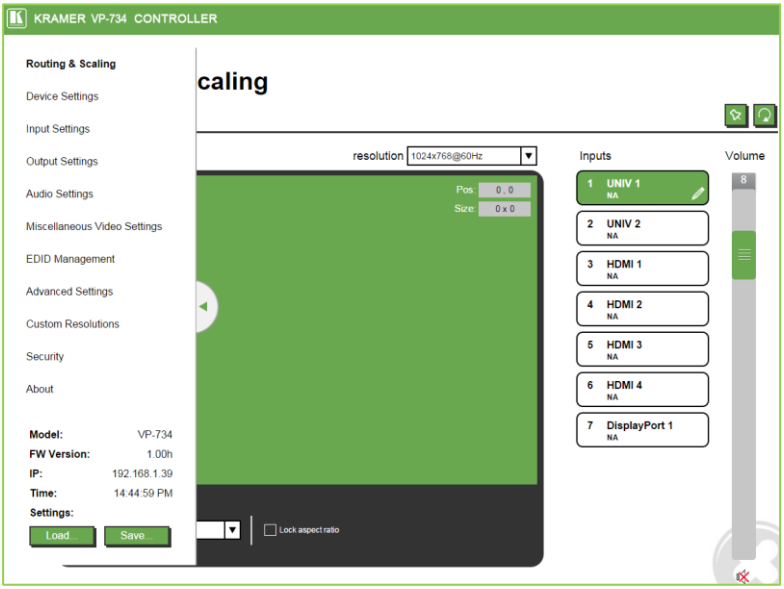


Figure 23: The Routing & Scaling Page with Web page list on the left

Click the arrow to hide the Web pages list on the left:

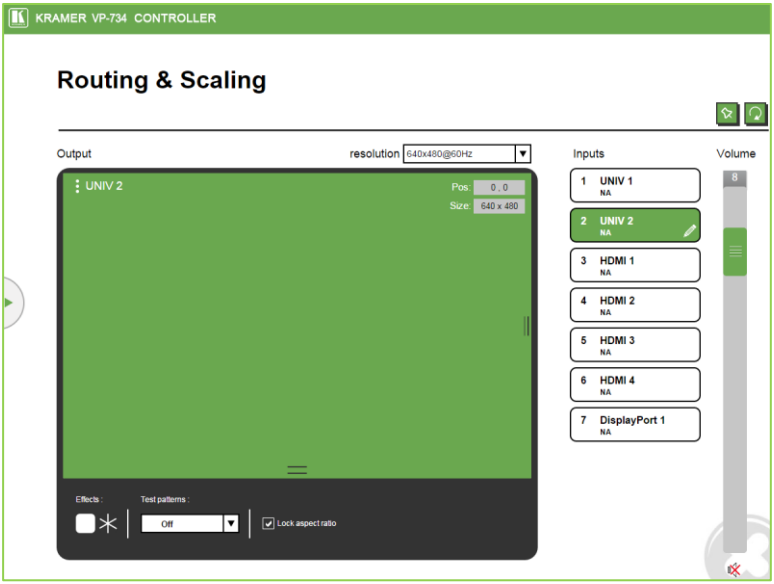


Figure 24: The Routing & Scaling Page

You can set the size of the window by clicking and moving the right and bottom edges of the image. You can also move the image by clicking, holding and moving the image about. The image size and position are indicated in the top right-hand side, and the top left-hand side shows the selected input.

The Routing & Scaling main area shows a depiction of the display. Click and move the mouse to move the image and size by moving the right and bottom edges of the image

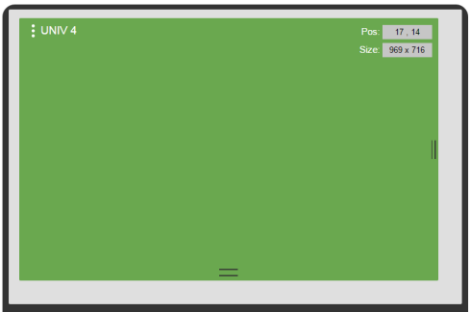


Figure 25: The Routing & Scaling Page

The output resolution can be selected from the Resolution drop-down box:

Figure 26: The Routing & Scaling Page – Selecting the output Resolution

The list of available inputs appears on the right side of the main area. The selected input appears green when its image is selected. For example, in Figure 27 the HDMI 2 input is selected and appears green on the list.

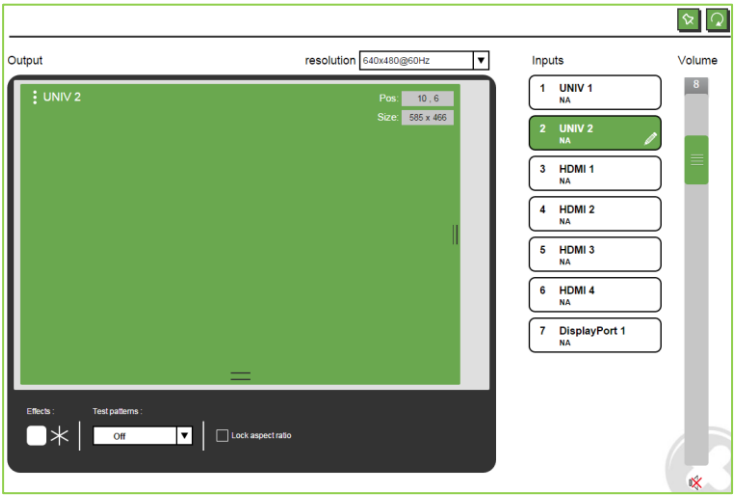
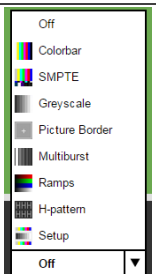
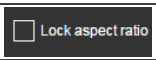


Figure 27: The Routing & Scaling Page – Input Selection

9.2.1 The Lower Buttons Bar

The lower buttons bar lets you perform quick and easy setups:

Figure 28: The Routing & Scaling Page – Program Lower Buttons Bar

Button	Function
	Select freeze and/or blank effects
	Select a pattern
	Lock aspect ratio

9.2.2 Store and Recall a Setup

You can store or recall a setup via the store and recall buttons:

Store button Recall button

To save a preset:.

Click the preset button. the save preset window appears:

Click a preset button (1 to 8), for example, click 1.

Click the Recall button to recall a preset. Only the buttons with stored presets appear.
Click the button to recall the settings.

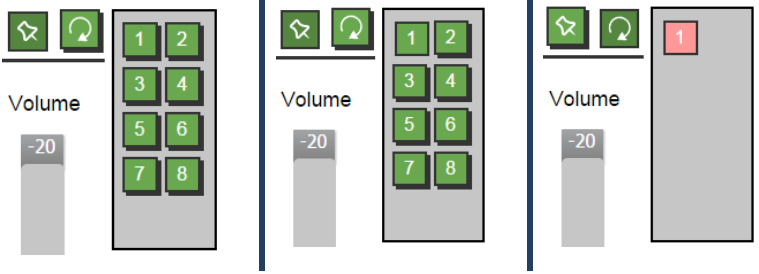


Figure 29: The Routing & Scaling Page – Storing and Recalling a Preset

9.2.3 Audio Level Slider

The volume audio slider appears on the right side of the page and can be toggled to mute and unmute, if required (see Section 9.6).

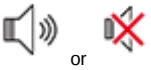


Figure 30: The Routing & Scaling Page – Muting the Audio Level

9.2.4 Editing an Input

Click the pen icon on the input label to edit the input. The Web page moves to the Input Settings page (see Section 9.4).

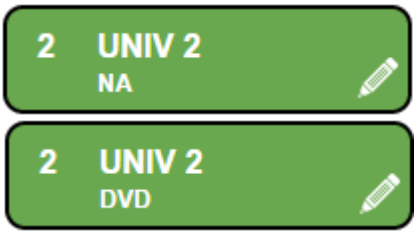


Figure 31: The Routing & Scaling Page – Editing an Input

9.3 The Device Settings Page

The Device Settings window (in Figure 32) lets you set the device name, change the Ethernet parameters, perform factory reset and view the information data.

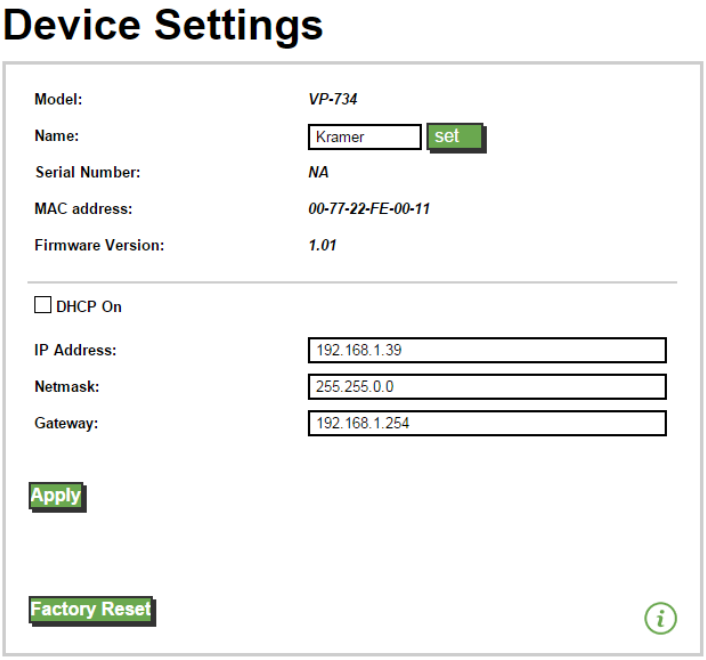


Figure 32: The Device Settings Page

9.3.1 Changing the Ethernet Settings

You can change the Ethernet parameters (DHCP box needs to be clear) by typing the changing and clicking the Apply button. Note that:

- After changing the IP number, you need to reload the Web page with the new IP number
- After changing the Subnet mask you need to turn the **VP-734** power off and then on again

9.3.2 The Information Window

To access the information window, click the ⓘ icon on the lower right side of the page. Click it once more to close the INFO window.

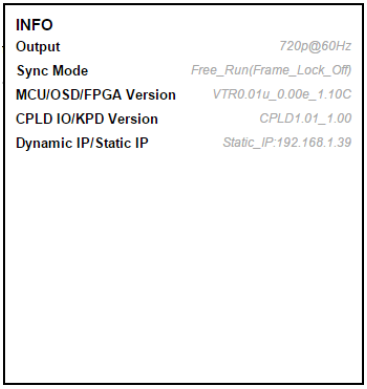


Figure 33: The Device Settings Page – the Information Window

9.3.3 Factory Reset

Click the Factory reset button to reset the device. The following window appears:

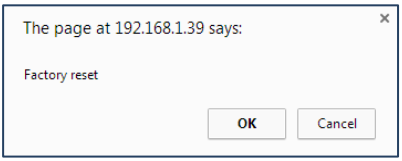


Figure 34: The Device Settings Page – Factory Reset

Click OK to start factory reset.

9.4 The Input Settings Page

The Input Settings page lets you setup the inputs and can also be accessed via the edit icon in the Scaling & Routing page, see Section 9.2.4.

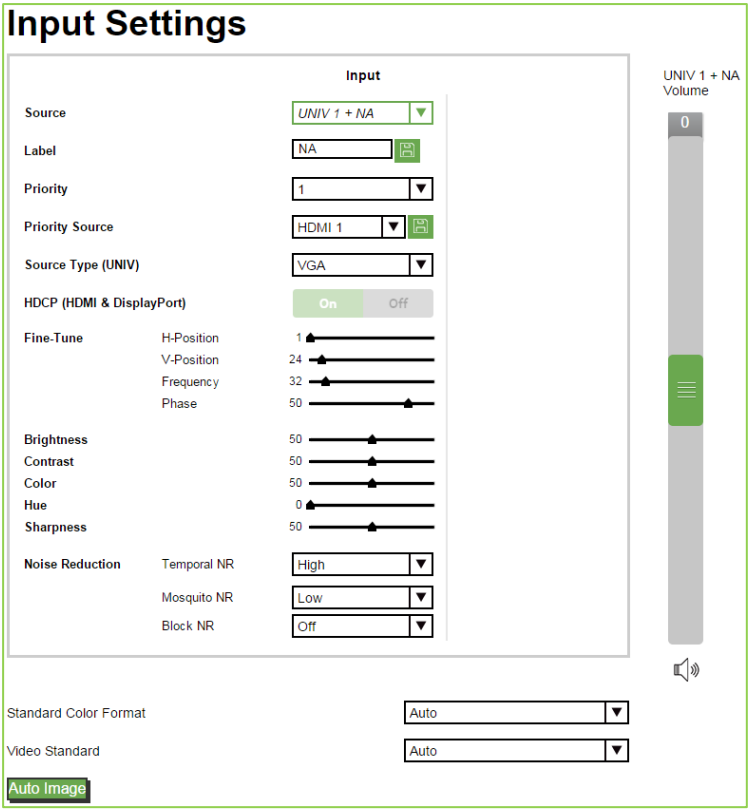


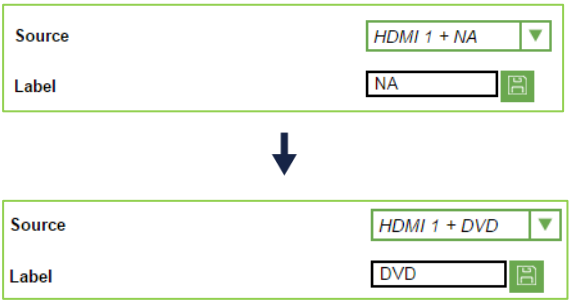
Figure 35: The Input Settings Page

The following table defines the Input Settings page items:

Button	Function
Source	Select the input source, see Section 7.1
Label	Label the input
Priority	Set the priority for auto-switching of the selected input
Source type (UNIV)	Set the type of the analog video source (VGA/Component/YC/Video), disabled if the selected input is not UNIV, see Section 7.1
HDCP (HDMI & DisplayPort)	Set to ON or OFF

Button	Function
Fine-Tune	Adjust the image parameters Horizontal and Vertical Position, Frequency and Phase, for VGA images, see Section 7.1
Brightness	See Section 7.2
Contrast	
Color	
Hue	
Sharpness	
Noise Reduction	
Standard Color Format	Select the color format to Auto/RGB/YUV (for HDMI and DP inputs), see Section 7.1
Video Standard	Select the video standard to Auto/NTSC/PAL/PAL-M/PAL-N/NTSC 4.43/SECAM/PAL-60 (for YC and video inputs), see Section 7.1
Auto Image	See Section 7.1
Input Volume	Set the selected input volume

You can set the source label by typing the label name and saving it:



9.5 The Output Settings Page

Figure 36 shows the Output Settings page.

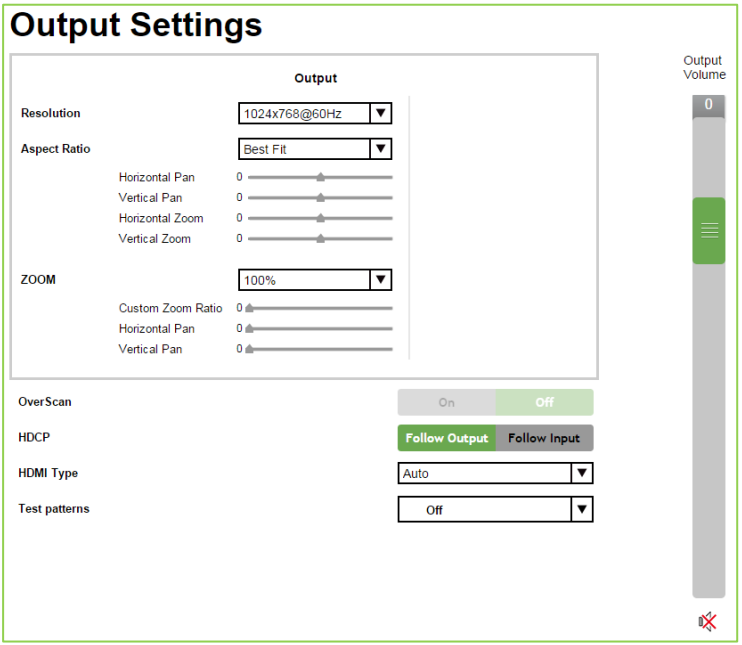


Figure 36: The Output Settings Page

Button	Function
Resolution	Define the output resolution
Aspect ratio	Set the aspect ratio (see Section 7.3.1)
Zoom	Set the zoom from 100% to 400% or click custom to set the custom zoom and enable Zoom Horizontal Pan and Zoom Vertical Pan
Horizontal Pan	Enabled when selecting custom aspect ratio
Vertical Pan	
Horizontal Zoom	
Vertical Zoom	
Overscan	Select On or Off; set to On to stretch the outputted picture
HDCP	Select Follow Input or Follow Output to define whether the HDCP will follow the input or the output
HDMI Type	Set the HDMI1 output type to Auto, HDMI or DVI
Test Patterns	Set the test pattern to Colorbar, SMPTE, Greyscale, Picture Border, Multiburst, Ramps, H-pattern, Setup, or set to Off
Output Volume	Set the output audio level

9.6 The Audio Settings Page

Figure 37 shows the Audio Settings page.

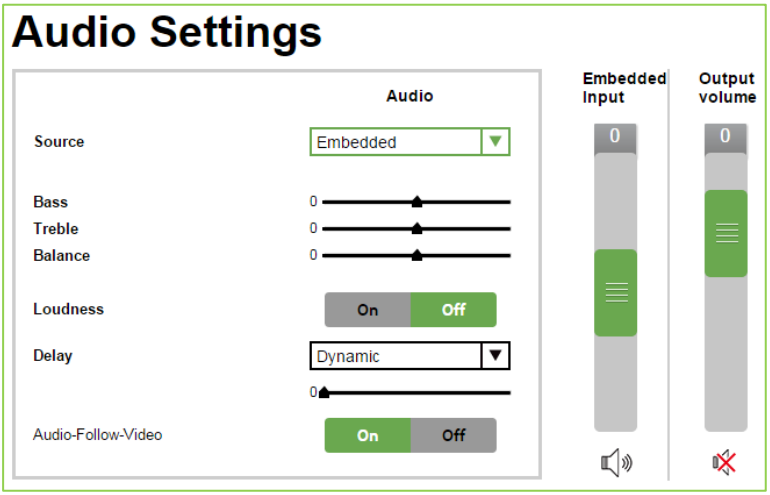


Figure 37: The Audio Settings Page

Button	Function
Source	Set the audio sources (Analog 1 to Analog 7, S/PDIF or Embedded – for HDMI and DP inputs)
Bass	Adjust the bass
Treble	Adjust the treble
Balance	Adjust the balance
Loudness	Set loudness OFF or ON
Delay	Select the delay to dynamic, User Define or Off. Set the delay time (in milliseconds)
Audio-Follow-Video	Set to Off or On
Input Volume	Set the selected input audio level
Output Volume	Set the output volume

9.7 The Miscellaneous Video Settings Page

Figure 38 shows the Miscellaneous Video Settings page.

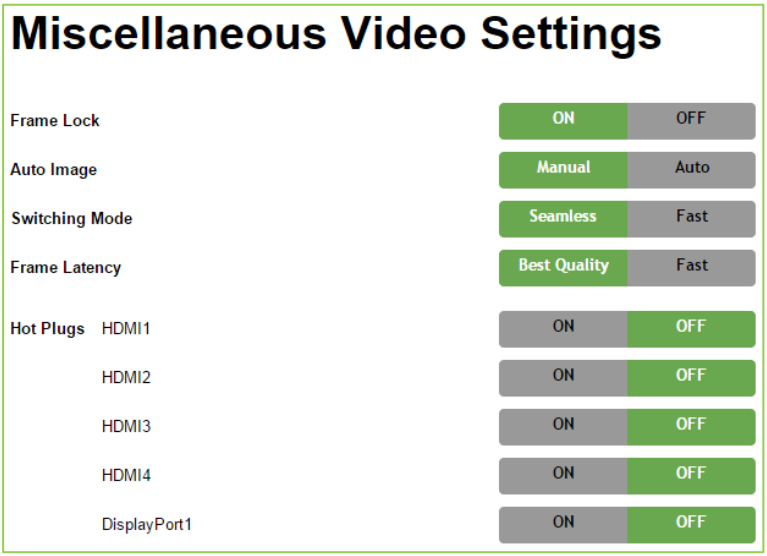


Figure 38: The Miscellaneous Video Settings Page

Button	Function
Frame Lock	Set to On or Off to lock the vertical refresh rate of the output to that of the input (locks only 50Hz or 60Hz/59.94Hz), see Section 7.5
Auto Image	Set to Manual or Auto, see Section 7.5
Switching Mode	Select Seamless switching or Fast switching, see Section 7.5
Frame Latency	Set to Best Quality or Fast, see Section 7.5
Hot Plugs	Set Hot Plug On or Off for HDMI1 to HDMI 4 and DisplayPort, see Section 7.5

9.8 The EDID Management Page

The EDID page lets you read the EDID from any of the outputs (HDMI 1 and VGA), from a list of default resolutions or from a file in your PC (Browse). The selected EDID can be copied to a selected input.

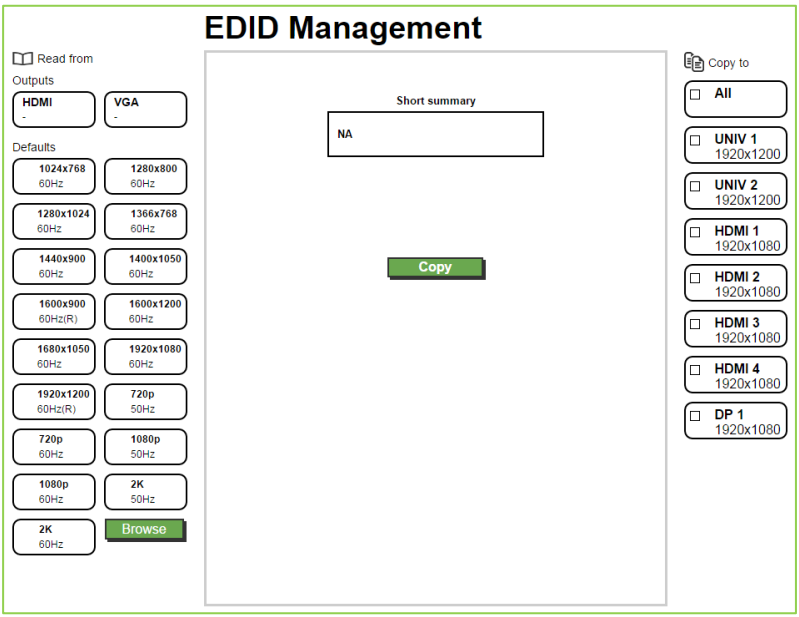


Figure 39: The EDID Page

Figure 41 shows how to select a resolution from the list to be copied to the input. To copy, click the **Copy** button:

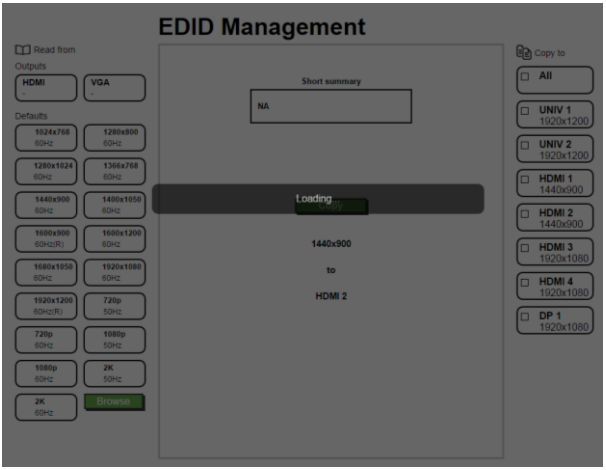


Figure 40: The EDID Page – Copying the EDID from

The 1024x768@60Hz resolution is copied to the HDMI 2 input.

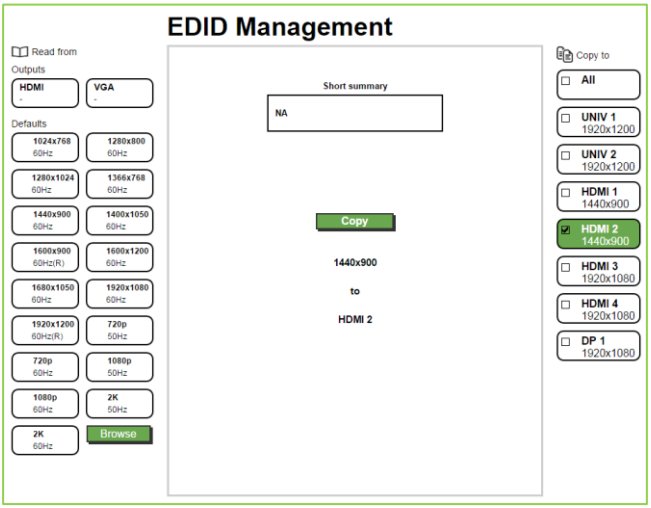


Figure 41: The EDID Page – Selecting a Resolution to copy to an Input

To copy the EDID from the output select the output and the input to which you want to copy the EDID and click the Copy button. The EDID is copied:

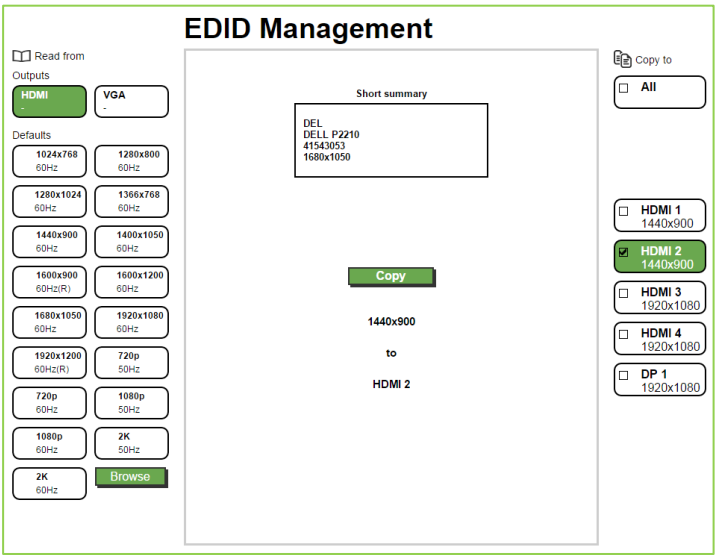


Figure 42: The EDID Page – Copying from an Output

9.9 The Advanced Settings Page

The Advanced Settings page summarizes additional machine settings and lets you change them.

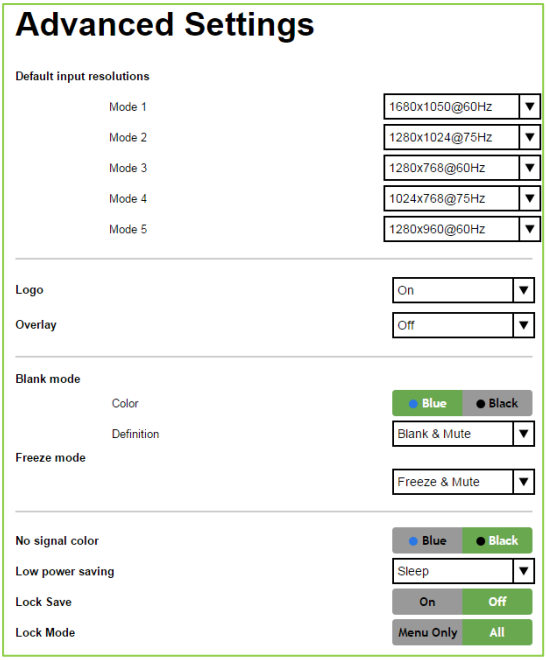


Figure 43: The Advanced Settings Page

Button	Function
Default Input Resolution	Define the desired input resolution modes and refresh rates when the system cannot distinguish between similar resolutions, see Section 7.5.1
Logo	Select On, Off or Custom, see Section 7.5.3
Overlay	Select to Off, Text or Logo, see Section 7.5.3
Blank mode	Select the color of the blank screen to Blue or Black. Define the function of the BLANK front panel button: Blank & Mute, Blank or Mute
Freeze mode	Define the function of the FREEZE front panel button: Freeze & Mute, Freeze or Mute
No signal color	Select a Blue or Black background
Low power saving	Set to Off, Sleep or Power-down, see Section 7.5.3
Lock panel status saved on power down	Select ON (to save the lock status when the machine is powered down) or Off
Lock panel status disables input selection	Select ON or OFF (to use the SOURCE buttons on the front panel even when the lock button is on)

9.10 The Custom Resolutions Page

The Custom Resolutions page lets you set the resolution from different sources, or save a custom input or output (see Sections 7.5.3 and 7.5.5).

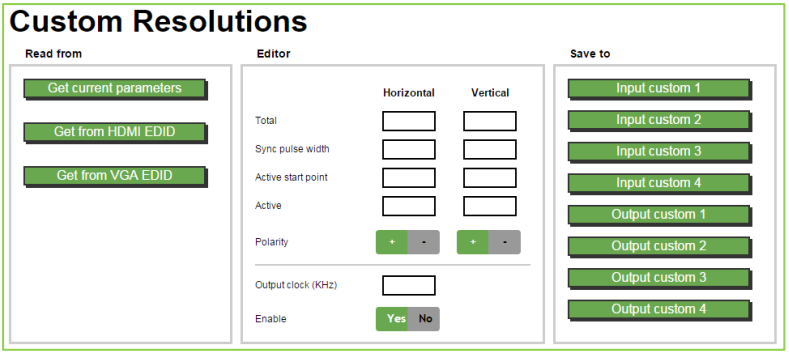


Figure 44: The Custom Resolutions Page

Note that you can set the input and the output custom resolutions to a value of up to 2046x1200

9.11 The Security Page

Set Activate to ON to enter the Web page with a password and change the password, if required. Click Change to save the changes

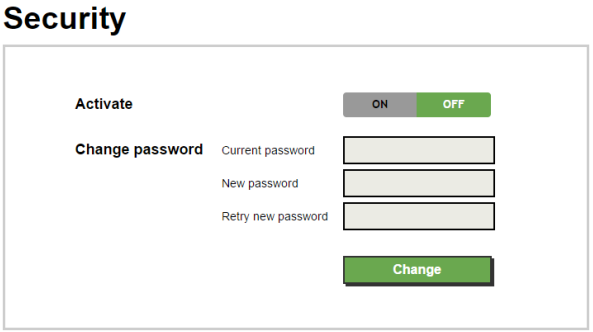


Figure 45: The Security Page

9.12 The About Page

The **VP-734** About page lets you view the Web page version and Kramer Electronics Ltd details.

Figure 46: The About Page

10 Technical Specifications

Inputs	2 Universal (VGA, Composite, s-Video, and Component)	On 15-pin HD connectors
	4 HDMI	On female HDMI connectors
	1 DP	On a female DisplayPort connector
	1 S/PDIF	On an RCA connector
	7 Unbalanced Stereo Audio	On 3.5mm mini jack connectors
Outputs	1 HDMI	On a female HDMI connector
	1 PC	On a 15-pin HD connector
	1 Balanced Stereo Audio	On a 5-pin terminal block connector (+4dBu nominal)
	1 stereo speaker	On a 4-pin large terminal block (10W per channel into 8Ω)
	1 digital S/PDIF output	on an RCA connector
Ports	Ethernet	On an RJ-45 female connector
	RS-232	On a 9-pin D-sub connector
	USB	On a USB connector
Video	Compliance	HDMI and HDCP
	Output Resolutions	Native HDMI, Native VGA, 640x480x60Hz, 640x480x75Hz, 800x600x50Hz, 800x600x60Hz, 800x600x75Hz, 1024x768x50Hz, 1024x768x60Hz, 1024x768x75Hz, 1280x768x50Hz, 1280x768x60Hz, 1280x720x60Hz, 1280x800x60Hz, 1280x1024x50Hz, 1280x1024x60Hz, 1280x1024x75Hz, 1366x768x50Hz, 1366x768x60Hz, 1400x1050x50Hz, 1400x1050x60Hz, 1600x900x60Hz (R), 1600x1200x50Hz, 1600x1200x60Hz, 1680x1050x60Hz, 1920x1080x60Hz, 1920x1200x60Hz (R), 2048x1080x50Hz, 2048x1080x60Hz, 3840x2160@24Hz, 3840x2160@25Hz, 3840x2160@29.97Hz, 3840x2160@30Hz, 4096x2160@24Hz, 480px60Hz, 576px50Hz, 720px50Hz, 720px60Hz, 1080ix50Hz (1080i/1080px50Hz), 1080ix60Hz (1080i/1080px60Hz), 1080px50Hz, 1080px60Hz, 1080px24Hz, 480px59.94Hz, 720px59.94Hz, 1080ix59.94Hz (1080i/1080px59.94Hz), 1080px23.98, 1080px29.97, 1080px59.94, Custom 1 to Custom 4
Controls	Front Panel	Input selection buttons, blank, freeze, lock and reset resolution buttons Menu buttons to access OSD menu
	Remote	RS-232
		Ethernet
		Web pages
		IR remote control transmitter
Power	Consumption	100-240V AC, 38VA max.
Environmental Conditions	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
Regulatory Compliance	Safety	CE, FCC, UL
	Environmental	RoHs, WEEE
Enclosure	Size	19”, 1U
	Type	Aluminum
	Cooling	Fan ventilation
General	Net Dimensions (W, D, H)	43.6cm x 23.7cm x 4.4cm (17.18" x 9.3" x 1.72")

	Shipping Dimensions (W, D, H)	52.5cm x 33cm x 10.7cm (20.7" x 13" x 4.21")
	Net Weight	2.5kg (5.5lbs) approx.
	Shipping Weight	3.4 kg (7.5lbs) approx.
Accessories	Included	rack ears, IR remote control, power cord, 2 C-GM/3RVF-1
Specifications are subject to change without notice. Go to our Web site at www.kramerav.com to access the list of resolutions.		

10.1 Default Communication Parameters

RS-232	
Baud Rate:	115,200
Data Bits:	8
Stop Bits:	1
Parity:	None
Command Format:	ASCII
Example (switch input to UNIV2):	Y 0 92 1<CR>
Ethernet	
To reset the IP settings to the factory reset values go to: Menu->Setup -> Factory Reset-> press Enter to confirm	
IP Address:	192.168.1.39
Subnet mask:	255.255.255.0
Default gateway:	192.168.1.254
TCP Port #:	5000
Maximum TCP Ports:	1
Full Factory Reset	
OSD	Go to: Menu-> Setup -> Factory Reset -> press Enter to confirm
Front panel buttons	Press the Reset to XGA/720p Button while plugging the power to reset the machine

10.2 Tables of Supported Input Resolutions

Technical Specifications of the RGBHV / RGBS (PC) / RGsB (PC) Input Signal						
Resolution	Vertical Frequency (Hz)	Notes	Resolution	Vertical Frequency (Hz)	Notes	Notes
640x480	60	VESA	1280x720	60	VESA	
640x480	67	Mac13	1280x800	60	VESA	Reduced Blanking
640x480	72	VESA	1280x800	60	VESA	
640x480	75	VESA	1280x960	60	VESA	
640x480	85	VESA	1280x960	85	VESA	
720x400	70		1280x768	60	VESA	Reduced Blanking
720x400	85	VESA	1280x768	60	VESA	
800x600	56	VESA	1280x1024	60	VESA	
800x600	60	VESA	1280x1024	75	VESA	
800x600	72	VESA	1280x1024	76	Sun	
800x600	75	VESA	1280x1024	85	VESA	

Technical Specifications of the RGBHV / RGBS (PC) / RGsB (PC) Input Signal						
Resolution	Vertical Frequency (Hz)	Notes	Resolution	Vertical Frequency (Hz)	Notes	Notes
800x600	85	VESA	1366x768	60	VESA	Reduced Blanking
832x624	75	Mac16	1366x768	60	VESA	
1024x768	60	VESA	1440x900	60	VESA	Reduced Blanking
1024x768	70	VESA	1440x900	60	VESA	
1024x768	75	VESA	1400x1050	60	VESA	
1024x768	75	Mac19	1400x1050	75	VESA	
1024x768	85	VESA	1600x900	60	VESA	
1024x800	84	Sun	1600x1200	60	VESA	
1152x864	75	VESA	1680x1050	60	VESA	Reduced Blanking
1152x870	75	Mac21	1680x1050	60	VESA	
1152x900	66	Sun	1920x1080	60	VESA	
1152x900	76	Sun	1920x1200	60	VESA	Reduced Blanking

Technical Specifications of the Y/C, Video Signal	
Standard	NTSC, NTSC4.43, PAL, PAL-M, PAL-N, SECAM, PAL-60

Technical Specifications of the Component Input Signal		
Resolution	Vertical Frequency (Hz)	Notes
1080i	60	YPbPr
1080i	50	YPbPr
1080p	60	YPbPr
1080p	50	YPbPr
720p	60	YPbPr
720p	50	YPbPr
480i	60	YPbPr
480p	60	YPbPr
576i	50	YPbPr
576p	50	YPbPr

Technical Specifications of the DVI Input Signal (for RGB Colorspace)						
Resolution	Vertical Frequency (Hz)	Notes	Resolution	Vertical Frequency (Hz)	Notes	Notes
640x480	60	VESA	1280x800	60	VESA	Reduced Blanking
640x480	67	Mac13	1280x800	60	VESA	
640x480	72	VESA	1280x960	60	VESA	
640x480	75	VESA	1280x960	85	VESA	
640x480	85	VESA	1280x768	60	VESA	Reduced Blanking
720x400	70		1280x768	60	VESA	
720x400	85	VESA	1280x1024	60	VESA	

Technical Specifications of the DVI Input Signal (for RGB Colorspace)						
Resolution	Vertical Frequency (Hz)	Notes	Resolution	Vertical Frequency (Hz)	Notes	Notes
800x600	56	VESA	1280x1024	75	VESA	
800x600	60	VESA	1280x1024	76	Sun	
800x600	72	VESA	1280x1024	85	VESA	
800x600	75	VESA	1366x768	60	VESA	Reduced Blanking
800x600	85	VESA	1366x768	60	VESA	
832x624	75	Mac16	1440x900	60	VESA	Reduced Blanking
1024x768	60	VESA	1440x900	60	VESA	
1024x768	70	VESA	1400x1050	60	VESA	
1024x768	75	VESA	1400x1050	75	VESA	
1024x768	75	Mac19	1600x900	60	VESA	
1024x768	85	VESA	1600x1200	60	VESA	
1024x800	84	Sun	1680x1050	60	VESA	Reduced Blanking
1152x864	75	VESA	1680x1050	60	VESA	
1152x870	75	Mac21	1920x1080	60	VESA	
1152x900	66	Sun	1920x1200	60	VESA	Reduced Blanking
1152x900	76	Sun	2048x1080	50		
1280x720	60	VESA	2048x1080	60		

Technical Specifications of the HDMI Input Signal (for RGB or YUV Colorspace)					
Resolution	Vertical Frequency (Hz)	Notes	Resolution	Vertical Frequency (Hz)	Notes
1080i	60	YPbPr	720p	50	YPbPr
1080i	50	YPbPr	480i	60	YPbPr
1080p	60	YPbPr	480p	60	YPbPr
1080p	50	YPbPr	576i	50	YPbPr
1080P	24	YPbPr	576p	50	YPbPr
720p	60	YPbPr			

10.3 Tables of Supported Output Resolutions

Technical Specifications of the RGBHV/Comp/YPbPr Output Signal					
Resolution	Vertical Frequency (Hz)	Notes	Resolution	Vertical Frequency (Hz)	Notes
640x480	60	VESA	1600x1200	50	
640x480	75	VESA	1600x1200	60	VESA
800x600	50		1920x1080	60	VESA
800x600	60	VESA	1920x1200	60	VESA Reduced Blanking
800x600	75	VESA	1680x1050	60	VESA
1024x768	50		1080i	60	
1024x768	60	VESA	1080i	50	
1024x768	75	VESA	720p	60	
1280x720	60	VESA	720p	50	
1280x768	50		480p	60	
1280x768	60	VESA	576p	50	
1280x800	60	VESA	1080p	50	
1280x1024	50		1080p	60	Comp/YPbPr
1280x1024	60	VESA	480p	59.94	
1280x1024	75	VESA	720p	59.94	
1366x768	50		1080i	59.94	
1366x768	60	VESA	1080p	23.98	
1400x1050	50		1080p	24	
1400x1050	60	VESA	1080p	29.97	
1600x900	60	VESA	1080p	59.94	

Technical Specifications of the HDMI/DVI/RGB Output Signal					
Resolution	Vertical Frequency (Hz)	Notes	Resolution	Vertical Frequency (Hz)	Notes
640x480	60	VESA	1680x1050	60	VESA
640x480	75	VESA	2048x1080	50	
800x600	50		2048x1080	60	
800x600	60	VESA	3840x2160	24	
800x600	75	VESA	3840x2160	25	
1024x768	50		3840x2160	29.97	
1024x768	60	VESA	3840x2160	30	
1024x768	75	VESA	4096x2160	24	
1280x720	60	VESA	1080i	60	HDMI
1280x768	50		1080i	50	
1280x768	60	VESA	720p	60	
1280x800	60	VESA	720p	50	
1280x1024	50		480p	60	
1280x1024	60	VESA	576p	50	
1280x1024	75	VESA	1080p	50	
1366x768	50		1080p	60	
1366x768	60	VESA	480p	59.94	
1400x1050	50		720p	59.94	
1400x1050	60	VESA	1080i	59.94	
1600x900	60	VESA	1080p	23.98	
1600x1200	50		1080p	24	
1600x1200	60	VESA	1080p	29.97	
1920x1080	60	VESA	1080p	59.94	
1920x1200	60	VESA Reduced Blanking			

11 VP-734 Communication Protocol

Serial Configuration:

Baud rate: 115200 (Bits per second)

Data bits: 8bits

Parity: None

Stop bits: 1bit

Communication confirmation:

Send: CR

Reply: CRLF>

Set Command:

Send: Y■Control_Type■Function■Param■CR

Reply: Z■Control_Type■Function■Param■CRLF>

Get Command:

Send: Y■Control_Type■Function■CR

Reply: Z■Control_Type■Function■Param■CRLF>

Example: set Input 1 Source Type to Component

Send: Y■0■1■0■2CR

Reply: Z■0■1■0■CRLF>

Example: get current Input 1 Source Type

Send: Y■1■1■3CR

Reply: Z■1■1■0■3CRLF >

Definition:

■: ASCII Code 0x20

CR: Ascii Code 0x0D

CRLF: Ascii Code 0x0D+0x0A

Go to www.kramerav.com/support/product_downloads.asp to check for the latest **VP-734** communication protocol.

11.1 Command list

Control Type		Function	Parameter1	Description
Set	Get			
0	-	0	N/A	Menu
0	-	1	N/A	Top
0	-	2	N/A	Down
0	-	3	N/A	Left
0	-	4	N/A	Right
0	-	5	N/A	Enter
0	-	6	0: Reset 720P	Reset program output resolution to XGA / 720P /Factory reset
			1: Reset XGA	
			2: Factory Reset	
0	1	7	0: Off	Panel lock key function
			1: On	
0	1	8	0: Off	Blank
			1: On	
0	1	9	0: Off	Freeze
			1: On	
0	1	10	0: Off	Power
			1: On	
0	1	11	0: Off	Mute
			1: On	
0	-	12	N/A	Save
0	-	13	N/A	Recall
0	1	14	0: Off	Info
			1: On	
			2: Custom	
0	-	15	N/A	Info
0	-	16	N/A	Auto Image
0	1	30	0: Input 1	Input source
			1: Input 2	
			2: HDMI 1	
			3: HDMI 2	
			4: HDMI 3	
			5: HDMI 4	
			6: DP 1	
0	1	31	0: Off	Auto Switch Input Source
			1: On	
0	1	32	0: VGA	Input 1 Source Type
			1: Component	
			2: YC	
			3: Video	
0	1	33	0: VGA	Input 2 Source Type
			1: Component	
			2: YC	
			3: Video	

Control Type		Function	Parameter1	Description
Set	Get			
0	1	40	0: Auto	Input Color Format
			1: RGB	
			2: YUV	
0	1	41	0: Auto	Input Video Standard
			1: NTSC	
			2: PAL	
			3: PAL_M	
			4: PAL_N	
			5: NTSC_4_43	
			6: SECAM	
			7: PAL-60	
0	1	42	1 ~ N	Input H Position
0	1	43	1 ~ N	Input V Position
0	1	44	0 ~ N	Input Frequency
0	1	45	0 ~ 63	Input Phase
0	-	46	N/A	Auto Image
0	1	60	0 ~ 100	Brightness
0	1	61	0 ~ 100	Contrast
0	1	62	0 ~ 100	Color
0	1	63	0 ~ 360	YC / Video Hue
			0 ~ 240	HDMI / VGA / Component Hue
0	1	64	0 ~ 100	Sharpness
0	1	65	0: Off	Temporal NR
			1: Low	
			2: Medium	
			3: High	
0	1	66	0: Off	Mosquito NR
			1: Low	
			2: Medium	
			3: High	
0	1	67	0: Off	Block NR
			1: On	
0	1	80	0: Native HDMI1 1: Native VGA 2: 640x480x60Hz 3: 640x480x75Hz 4: 800x600x50Hz 5: 800x600x60Hz 6: 800x600x75Hz 7: 1024x768x50Hz 8: 1024x768x60Hz 9: 1024x768x75Hz 10: 1280x768x50Hz 11: 1280x768x60Hz 12: 1280x720x60Hz 13: 1280x800x60Hz 14: 1280x1024x50Hz 15: 1280x1024x60Hz 16: 1280x1024x75Hz 17: 1366x768x50Hz	Output Resolution

Control Type		Function	Parameter1	Description
Set	Get			
			18: 1366x768x60Hz 19: 1400x1050x50Hz 20: 1400x1050x60Hz 21 1600x900x60Hz (RB) 22: 1600x1200x50Hz 23: 1600x1200x60Hz 24: 1680x1050x60Hz 25: 1920x1080x60Hz 26: 1920x1200x60Hz (RB) 27: 2048x1080x50Hz 28: 2048x1080x60Hz 100: 480P60 101: 576P50 102: 720P50 103: 720P60 104: 1080i50 105: 1080i60 106: 1080P50 107: 1080P60 108: 1080P24 109: 480P59.94 110: 720P59.94 111: 1080i59.94 112: 1080P23.98 113: 1080P29.97 114: 1080P59.94 150: Custom1 151: Custom2 152: Custom3 153: Custom4	
0	1	81	0: Auto	Output HDMI Type
			1: HDMI	
			2: DVI	
0	1	82	0: Best Fit	Aspect Ratio
			1: Letterbox	
			2: Follow Output	
			3: Virtual Wide	
			4: Follow Input	
			5: Custom	
0	1	83	-16 ~ 16	Aspect Ratio H Pan
0	1	84	-16 ~ 16	Aspect Ratio V Pan
0	1	85	-8 ~ 8	Aspect Ratio H Zoom
0	1	86	-8 ~ 8	Aspect Ratio V Zoom
0	11	87	0: 100% 1: 150% 2: 200% 3: 225% 4: 250% 5: 275% 6: 300% 7: 325%	Zoom

Control Type		Function	Parameter1	Description
Set	Get			
			8: 350% 9: 375% 10: 400% 11: Custom	
0	1	88	0 ~ 32	Custom Zoom
0	1	89	0 ~ 32	Zoom H Pan
0	1	90	0 ~ 32	Zoom V Pan
0	1	91	0: Off 1: Color bar 2: SMPTE 3: Grey scale 4: Picture Border 5: Multiburst 6: Ramps 7: H-pattern 8: Setup	Test Pattern
0	1	130	-22~0~+22	Audio Input Volume
0	1	131	-100~24	Audio Output Volume
0	1	132	-24~0~+24	Audio Bass
0	1	133	-24~0~+24	Audio Treble
0	1	134	-10~10	Audio Balance
0	1	135	0: Off	Audio Loudness
			1: On	
0	1	136	0: Dynamic	Audio Delay
			1: User Define	
			2: Off	
0	1	137	0~170	Audio User Delay
0	1	138	0: Analog1	Audio Input Source
			1: Analog2	
			2: Analog3	
			3: Analog4	
			4: Analog5	
			5: Analog6	
			6: Analog7	
			7: S/PDIF	
			8: Embedded	
0	1	139	0: Off	Audio Follow Video
			1: On	
0	-	170	0: Profile 1	Save
			1: Profile 2	
			2: Profile 3	
			3: Profile 4	
			4: Profile 5	
			5: Profile 6	
			6: Profile 7	
			7: Profile 8	
			8: USB	

Control Type		Function	Parameter1	Description
Set	Get			
0	-	171	0: Profile 1	Recall
			1: Profile 2	
			2: Profile 3	
			3: Profile 4	
			4: Profile 5	
			5: Profile 6	
			6: Profile 7	
			7: Profile 8	
			8: USB	
0	-	172	0: Profile 1	Erase
			1: Profile 2	
			2: Profile 3	
			3: Profile 4	
			4: Profile 5	
			5: Profile 6	
			6: Profile 7	
			7: Profile 8	
			8: USB	
0	1	173	0: Off	Frame Lock
			1: On	
0	1	174	0: Manual	Auto Image
			1: Auto	
0	1	175	0: Seamless	Switching Mode
			1: Fast	
0	1	176	0: Best Quality	Frame Latency
			1: Fast	

Control Type		Function	Parameter1	Parameter2	Description
Set	Get				
0	1	177	0: First Priority	0: UNIV 1	Auto Switch Input Source Priority
			1: Second Priority	1: UNIV 2	
			2: Third Priority	2: HDMI 1	
			3: 4th Priority	3: HDMI 2	
			4: 5th Priority	4: HDMI 3	
			5: 6th Priority	5: HDMI 4	
			6: 7th Priority	6: DP 1	
				7: Off	
0	1	180	0: Off		Input HDMI1 Hot Plug
			1: On		
0	1	181	0: Off		Input HDMI2 Hot Plug
			1: On		
0	1	182	0: Off		Input HDMI3 Hot Plug
			1: On		
0	1	183	0: Off		Input HDMI4 Hot Plug
			1: On		

Control Type		Function	Parameter1	Parameter2	Description
Set	Get				
0	1	184	0: Off		Input DP1 Hot Plug
			1: On		
0	1	190	0: Off		Input HDMI1 HDCP
			1: On		
0	1	191	0: Off		Input HDMI2 HDCP
			1: On		
0	1	192	0: Off		Input HDMI3 HDCP
			1: On		
0	1	193	0: Off		Input HDMI4 HDCP
			1: On		
0	1	194	0: Off		Input DP1 HDCP
			1: On		
0	1	200	0: Off		DHCP
			1: On		

Set	Get	Function	IP1	IP2	IP3	IP4	Parameter *7, Reboot after setting IP Address / Subnet /Gateway
0	1	201	0~255	0~255	0~255	0~255	IP
0	1	202	0~255	0~255	0~255	0~255	Sub Mask
0	1	203	0~255	0~255	0~255	0~255	Gateway

Set	Get	Function	Parameter1	Description Control Type
0	-	230	N/A	Factory Reset – ALL
0	-	231	N/A	Factory Reset – Without Ethernet Setting
0	1	240	0: 1400x1050x60 1: 1680x1050x60	Mode Set – Mode1
0	1	241	0: 1280x1024x75 1: 1280x1024x76	Mode Set – Mode2
0	1	242	0: 1280x768x60 1: 1366x768x60 2: 1366x768x60(R)	Mode Set – Mode3
0	1	243	0: 1024x768x75 1: 1024x768x75-Mac	Mode Set – Mode4
0	1	244	0: 1280x960x60 1: 1600x900x60(R)	Mode Set – Mode5
0	1	250	0: Center	Menu Position
			1: Top Left	Advanced OSD – Menu Position
			2: Top Right	Advanced OSD – Time Out(sec.)
			3: Bottom Left	Advanced Misc – Logo
			4: Bottom Right	Advanced Misc –Blank Color
0	1	251	0: 5sec	OSD Timeout
			1: 10sec	
			2: 20sec	
			3: 30sec	
			4: 60sec	
			5: 90c	
			6: Off	

Set	Get	Function	Parameter1	Description Control Type
0	1	260	0: Off	Logo
			1: On	
			2: Custom	
0	1	261	0: Blue	Blank Color
			1: Black	
0	1	262	0: Blue	Background
			1: Black	
0	1	263	0: Off	Low Power Saving
			1: Sleep	
			2: Power down	
0	1	264	0: Off	Lock Save
			1: On	
0	1	265	0: All	Lock Mode
			1: Menu Only	
0	1	266	0: Blank & Mute	Blank Setting
			1: Blank	
			2: Mute	
0	1	267	0: Freeze & Mute	Freeze Setting
			1: Freeze	
			2: Mute	
0	1	268	0: Follow Output	HDCP Setting
			1: Follow Input	
0	1	269	0: Off	Over Scan
			1: On	
0	1	270	0: Off	Text Overlay
			1: Text	Requirements: 1. Text: you need to have TextOvl.ini in USB disc and connect it to VP-734
			2: Logo	2. Logo: you need to have Txtlogo.bmp in USB disc and connect it to VP-734
0	1	300	0: Custom1	Custom Input
			1: Custom2	
			2: Custom3	
			3: Custom4	
0	1	301	4 ~ A	Custom Input HT
0	1	302	1 ~ A	Custom Input HW
0	1	303	2 ~ A	Custom Input HS
0	1	304	1 ~ A	Custom Input HA
0	1	305	0: Negative polarity	Custom Input HP
			1: Positive polarity	
0	1	306	4 ~ A	Custom Input VT
0	1	307	1 ~ A	Custom Input VW
0	1	308	2 ~ A	Custom Input VS
0	1	309	1 ~ A	Custom Input VA
0	1	310	0: Negative polarity	Custom Input VP
			1: Positive polarity	
0	1	311	1 ~ A	Custom Input OCLK (KHz)

Set	Get	Function	Parameter1	Description Control Type
0	1	312	0: Off	Custom Input Enable
			1: On	
0	-	313	N/A	Custom Input Save
0	1	320	0: Custom1	Custom Output
			1: Custom2	
			2: Custom3	
			3: Custom4	
0	1	321	4 ~ A	Custom Output HT
0	1	322	1 ~ A	Custom Output HW
0	1	323	2 ~ A	Custom Output HS
0	1	324	1 ~ A	Custom Output HA
0	1	325	0: Negative polarity	Custom Output HP
			1: Positive polarity	
0	1	326	4 ~ A	Custom Output VT
0	1	327	1 ~ A	Custom Output VW
0	1	328	2 ~ A	Custom Output VS
0	1	329	1 ~ A	Custom Output VA
0	1	330	0: Negative polarity	Custom Output VP
			1: Positive polarity	
0	1	331	1 ~ A	Custom Output OCLK (KHz)
0	-	332	N/A	Custom Output Save
0	-	333	N/A	Custom Output Get Current Output Mode
0	-	334	N/A	Custom Output Read HDMI EDID
0	-	335	N/A	Custom Output Read VGA EDID
0	1	360	0: Default	Input EDID HDMI1
			1: Copy HDMI Out	
			2: User Define	
0	1	361	0: Default (1920x1080x60Hz) 1: 1024x768x60Hz 2: 1280x800x60Hz 3: 1280x1024x60Hz 4: 1366x768x60Hz 5: 1440x900x60Hz 6: 1400x1050x60Hz 7: 1600x900x60Hz 8: 1600x1200x60Hz 9: 1680x1050x60Hz 10: 1920x1080x60Hz 11: 1920x1200x60Hz (RB) 12: 720Px60Hz 13: 720Px60Hz 14: 1080Px60Hz 15: 1080px60Hz 16: 2048x1080x50Hz 17: 2048x1080x60Hz	Input EDID HDMI1 Modeline
0	1	362	0: Default	Input EDID HDMI2
			1: Copy HDMI Out	
			2: User Define	

Set	Get	Function	Parameter1	Description Control Type
0	1	363	0: Default (1920x1080x60Hz) 1: 1024x768x60Hz 2: 1280x800x60Hz 3: 1280x1024x60Hz 4: 1366x768x60Hz 5: 1440x900x60Hz 6: 1400x1050x60Hz 7: 1600x900x60Hz 8: 1600x1200x60Hz 9: 1680x1050x60Hz 10: 1920x1080x60Hz 11: 1920x1200x60Hz (RB) 12: 720Px60Hz 13: 720Px60Hz 14: 1080Px60Hz 15: 1080px60Hz 16: 2048x1080x50Hz 17: 2048x1080x60Hz	Input EDID HDMI2 Modeline
0	1	364	0: Default 1: Copy HDMI Out 2: User Define	Input EDID HDMI3
0	1	365	Default (1920x1080x60Hz) 1: 1024x768x60Hz 2: 1280x800x60Hz 3: 1280x1024x60Hz 4: 1366x768x60Hz 5: 1440x900x60Hz 6: 1400x1050x60Hz 7: 1600x900x60Hz 8: 1600x1200x60Hz 9: 1680x1050x60Hz 10: 1920x1080x60Hz 11: 1920x1200x60Hz (RB) 12: 720Px60Hz 13: 720Px60Hz 14: 1080Px60Hz 15: 1080px60Hz 16: 2048x1080x50Hz 17: 2048x1080x60Hz	Input EDID HDMI3 Modeline
0	1	366	0: Default 1: Copy HDMI Out 2: User Define	Input EDID HDMI4
0	1	367	Default (1920x1080x60Hz) 1: 1024x768x60Hz 2: 1280x800x60Hz 3: 1280x1024x60Hz 4: 1366x768x60Hz 5: 1440x900x60Hz 6: 1400x1050x60Hz 7: 1600x900x60Hz 8: 1600x1200x60Hz 9: 1680x1050x60Hz 10: 1920x1080x60Hz 11: 1920x1200x60Hz (RB)	Input EDID HDMI4 Modeline

Set	Get	Function	Parameter1	Description Control Type
			12: 720Px60Hz 13: 720Px60Hz 14: 1080Px60Hz 15: 1080px60Hz 16: 2048x1080x50Hz 17: 2048x1080x60Hz	
0	1	380	0: Default 1: Copy HDMI Out 2: User Define	Input EDID DP1
0	1	381	Default (1920x1080x60Hz) 1: 1024x768x60Hz 2: 1280x800x60Hz 3: 1280x1024x60Hz 4: 1366x768x60Hz 5: 1440x900x60Hz 6: 1400x1050x60Hz 7: 1600x900x60Hz 8: 1600x1200x60Hz 9: 1680x1050x60Hz 10: 1920x1080x60Hz 11: 1920x1200x60Hz (RB) 12: 720Px60Hz 13: 720Px60Hz 14: 1080Px60Hz 15: 1080px60Hz 16: 2048x1080x50Hz 17: 2048x1080x60Hz	Input EDID DP1 Modeline
0	1	400	0: Default 1: Copy PC Out 2: User Define	Input EDID UNIV1
0	1	401	1: 1024x768x60Hz 2: 1280x800x60Hz 3: 1280x1024x60Hz 4: 1366x768x60Hz 5: 1440x900x60Hz 6: 1400x1050x60Hz 7: 1600x900x60Hz 8: 1600x1200x60Hz 9: 1680x1050x60Hz 10: 1920x1080x60Hz 11: 1920x1200x60Hz (RB)	Input EDID UNIV1 Modeline
0	1	402	0: Default 1: Copy PC Out 2: User Define	Input EDID UNIV2
0	1	403	0: Default (1920x1200x60Hz) 1: 1024x768x60Hz 2: 1280x800x60Hz 3: 1280x1024x60Hz 4: 1366x4768x60Hz 5: 1440x900x60Hz 6: 1400x1050x60Hz 7: 1600x900x60Hz 8: 1600x1200x60Hz 9: 1680x1050x60Hz	Input EDID UNIV2 Modeline

Set	Get	Function	Parameter1	Description Control Type
			10: 1920x1080x60Hz 11: 1920x1200x60Hz (RB)	
0	1	420	-100 ~ 24	Max Volume Limit
-	1	450	0: 640x480x60Hz 1: 640x480x67Hz (Mac13) 2: 640x480x72Hz 3: 640x480x75Hz 4: 640x480x85Hz 5: 720x400x70Hz 6: 720x400x85Hz 7: 800x600x56Hz 8: 800x600x60Hz 9: 800x600x72Hz 10: 800x600x75Hz 11: 800x600x85Hz 12: 832x624x75Hz (Mac16) 13: 1024x768x60Hz 14: 1024x768x70Hz 15: 1024x768x75Hz 16: 1024x768x75Hz (Mac19) 17: 1024x768x85Hz 18: 1024x800x84Hz (Sun) 19: 1152x864x75Hz 20: 1152x870x75Hz (Mac21) 21: 1152x900x66Hz (Sun) 22: 1152x900x76Hz (Sun) 23: 1280x720x60Hz 24: 1280x800x60Hz (RB) 25: 1280x800x60Hz 26: 1280x960x60Hz 27: 1280x960x85Hz 28: 1280x768x60Hz (RB) 29: 1280x768x60Hz 30: 1280x1024x60Hz 31: 1280x1024x75Hz 32: 1280x1024x76Hz (Sun) 33: 1280x1024x85Hz 34: 1366x768x60Hz (RB) 35: 1366x768x60Hz 36: 1440x900x60Hz (RB) 37: 1440x900x60Hz 38: 1400x1050x60Hz 39: 1400x1050x75Hz 40: 1600x900x60Hz (RB) 41: 1600x1200x60Hz 42: 1680x1050x60Hz (RB) 43: 1680x1050x60Hz 44: 1920x1080x60Hz 45: 1920x1200x60Hz (RB) 46: 2048x1080x50Hz 47: 2048x1080x60Hz 100: Custom1 101: Custom2 102: Custom3 103: Custom4	Input Signal

Set	Get	Function	Parameter1	Description Control Type
			150: 480i60Hz 151: 480p60Hz 152: 576i50Hz 153: 576p50Hz 154: 720p50Hz 155: 720p60Hz 156: 1080i50Hz 157: 1080i60Hz 158: 1080p24Hz 159: 1080p50Hz 160: 1080p60Hz 200: NTSC 201: PAL 202: PAL-M 203: PAL-N 204: NTSC4.43 205: SECAM 206: PAL-60 250: No Input detected 251: Not supported	
-	1	451	0: Native HDMI1 1: Native VGA 2: 640x480x60Hz 3: 640x480x75Hz 4: 800x600x50Hz 5: 800x600x60Hz 6: 800x600x75Hz 7: 1024x768x50Hz 8: 1024x768x60Hz 9: 1024x768x75Hz 10: 1280x768x50Hz 11 1280x768x60Hz 12: 1280x720x60Hz 13: 1280x800x60Hz 14: 1280x1024x50Hz 15: 1280x1024x60Hz 16: 1280x1024x75Hz 17: 1366x768x50Hz 18: 1366x768x60Hz 19: 1400x1050x50Hz 20: 1400x1050x60Hz 21: 1600x900x60Hz (RB) 22: 1600x1200x50Hz 23: 1600x1200x60Hz 24: 1680x1050x60Hz 25: 1920x1080x60Hz 26: 1920x1200x60Hz (RB) 27: 2048x1080x50Hz 28: 2048x1080x60Hz 100: 480P60 101: 576P50 102: 720P50 103: 720P60	Output Resolution

Set	Get	Function	Parameter1	Description Control Type
			104: 1080i50 105: 1080i60 106: 1080P50 107: 1080P60 108: 1080P24 109: 480P59.94 110: 720P59.94 111: 1080i59.94 112: 1080P23.98 113: 1080P29.97 114: 1080P59.94 150: Custom1 151: Custom2 152: Custom3 153: Custom4	
-	1	452	0: Free Run	Sync Mode
			1: Frame Lock	
-	1	453		FW Version
-	1	504	0~65535	Keypad LED Status
			1->ON, 0->OFF	
			bit 0: Input 1	
			bit 1: Input 2	
			bit 2: HDMI 1	
			bit 3: HDMI 2	
			bit 4: HDMI 3	
			bit 5: HDMI 4	
			bit 6: DP 1	
			bit 8: Blank	
			bit 9: Freeze	
			bit 12: Panel Lock	

Limited Warranty

The warranty obligations of Kramer Electronics Inc. ("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 this Coverage Lasts

The standard limited warranty for Kramer products is seven (7) years from the date of original purchase, with the following exceptions:

1. All Kramer VIA hardware products are covered by a standard three (3) year warranty for the VIA hardware and a standard three (3) year warranty for firmware and software updates.
2. All Kramer fiber optic cables, adapter-size fiber optic extenders, active cables, cable retractors, all Kramer speakers and Kramer touch panels are covered by a standard one (1) year warranty.
3. All Kramer Cobra products, all Kramer Calibre products, all Kramer Minicom digital signage products, all HighSecLabs products, all streaming, and all wireless products are covered by a standard three (3) year warranty.
4. All Sierra Video MultiViewers are covered by a standard five (5) year warranty.
5. Sierra switchers & control panels are covered by a standard seven (7) year warranty (excluding power supplies and fans that are covered for three (3) years).
6. K-Touch software is covered by a standard one (1) year warranty for software updates.
7. All Kramer passive cables are covered by a ten (10) year warranty.

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, visit our web site at www.kramerav.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 (RMA number). 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.

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SAFETY WARNING

Disconnect the unit from the power supply before opening and servicing

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