



Scan for full manual

## VP-4x4K Quick Start Guide

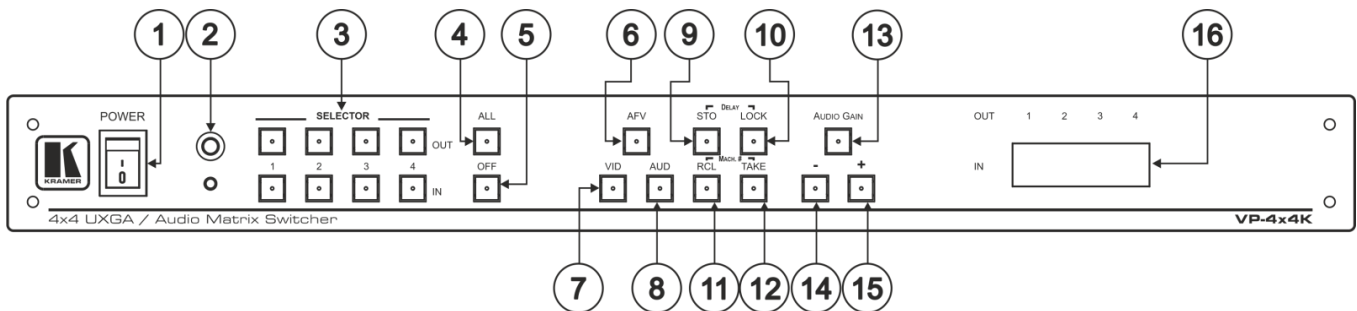
This guide helps you install and use your VP-4x4K for the first time.

Go to [www.kramerav.com/downloads/VP-4x4K](http://www.kramerav.com/downloads/VP-4x4K) to download the latest user manual and check if firmware upgrades are available.

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

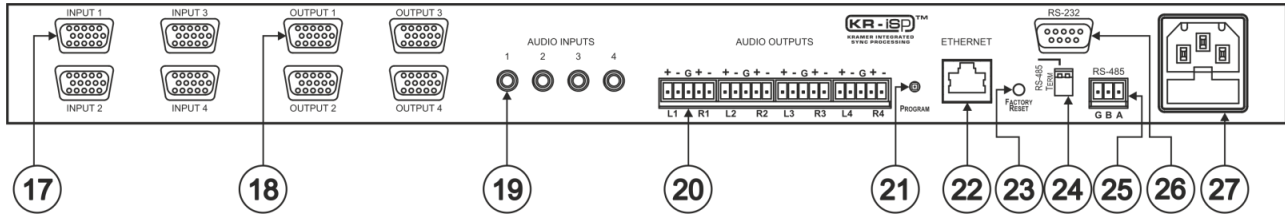
- ✓ VP-4x4K 4x4 UXGA/Audio Matrix Switcher
- ✓ Kramer RC-IR3 IR Remote Control Transmitter
- ✓ 1 Set of rack ears
- ✓ 1 Power cord
- ✓ 4 Rubber feet
- ✓ 1 Quick start guide

### Step 2: Get to know your VP-4x4K



#	Feature	Function	
1	POWER Switch	Illuminated switch for turning the unit ON or OFF	
2	IR Receiver	Signals from the remote control transmitter illuminate the LED	
3	SELECTOR Buttons	OUT	Select the output to which the input is switched
		IN	Select the input to switch to the output When a signal is detected, the input button illuminates in green The SELECTOR IN and OUT buttons also store/recall the input/output configurations
4	ALL Button	Pressing ALL before pressing an input button connects that input to all outputs For example, press ALL and then Input button # 2 to connect input # 2 to all the outputs	
5	OFF Button	Pressing OFF after pressing an output button disconnects that output from the inputs. To disconnect all the outputs, press the ALL button and then the OFF button	
6	AFV Button	When illuminated, the audio channels follow the video channels. The button is illuminated when the AFV mode is selected. If the AUDIO differs from the VIDEO, the TAKE button will flash, and you have to press the TAKE button to confirm the modification	
7	VID Button	When illuminated, actions relate to video The VID button is illuminated when in breakaway mode and actions relate to video	
8	AUD Button	When illuminated, actions relate to audio The AUD button is illuminated when in breakaway mode and actions relate to audio	
9	STO Button	Pressing STO (STORE) followed by an output or an input button stores the current setting Press the STO and LOCK buttons simultaneously to set the delay time. For example, press STO and then the Output button # 3 to store in Setup # 3	
10	LOCK Button	Disengages the front panel switches	
11	RCL Button	Pressing RCL (RECALL) followed by an output or an input button displays a stored setup	
12	TAKE Button	Pressing TAKE toggles the mode between the CONFIRM mode and the AT ONCE mode (user confirmation per action is unnecessary). When in CONFIRM mode, actions are confirmed by pressing the TAKE key. For example, press STO and then the Output button # 3 to store in Setup # 3 When in the CONFIRM mode, the TAKE button illuminates	
13	AUDIO GAIN Button	Press to adjust the audio input or output gain	

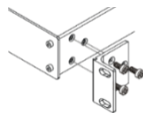
#	Feature	Function
14	- Button	Press to decrease the numerical value By pressing the + or - buttons continuously, you can speed up their response. For step-by-step response, press and release these buttons as many times as needed Gain, switching delay time and machine number
15	+ Button	Press to increase the numerical value
16	STATUS 7-segment Display	Displays the selected input switched to the output (marked above each input) Also displays the number of IN and OUT ports, the firmware version number, the MACHINE # and the audio gain level



#	Feature	Function
17	INPUT 15-pin HD Connectors	Connect to the video sources (from 1 to 4)
18	OUTPUT 15-pin HD Connectors	Connect to the acceptors (from 1 to 4)
19	AUDIO INPUTS 3.5mm Mini Jack	Connect to the unbalanced stereo audio sources (from 1 to 4)
20	AUDIO OUTPUTS Terminal block connectors	Connect to the balanced stereo audio acceptors (from 1 to 4)
21	PROGRAM Button	Not used (for technical staff use only)
22	Ethernet Connector	Connects to the PC or other Serial Controller through computer networking
23	Factory Reset Button	Press to reset to the factory default definitions: IP number – 192.168.1.39 Mask – 255.255.0.0 Gateway – 0.0.0.0 UDP port – 50000 TCP port – 5000 Protocol 3000 commands All 8 Presets deleted All audio channels set to 0dB Machine name – the last four digits of the machine's serial number DHCP disabled Turn the POWER switch OFF and then ON again while pressing the Factory Reset button. The unit will power up and load its memory with the factory default definitions
24	RS-485 TERM DIP-switch	DIP 1 is for RS-485 Termination, DIP 2 is not used
25	RS-485 Terminal Block Port	Pins B (-) and A (+) are for RS-485; Pin G (Ground) may be connected to the shield of the cable if desired
26	RS-232 9-pin D-sub Connector	Connects to the PC or the Remote Controller
27	Power Connector with Fuse	AC connector enabling power supply to the unit

### Step 3: Mount VP-4x4K

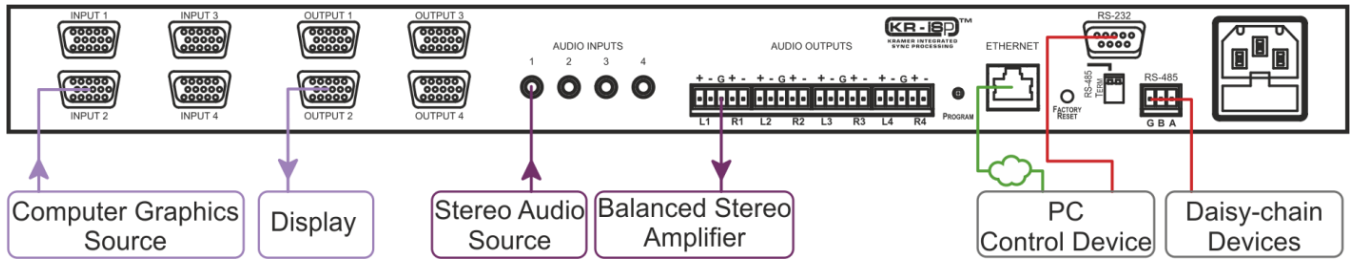
To rack mount the machine, attach both rack ears (by removing the screws from each side of the machine and replacing those screws through the rack ears) or place the machine on a table.



- Ensure that the environment (e.g., maximum ambient temperature & air flow) is compatible for the device.
- Avoid uneven mechanical loading.
- Appropriate consideration of equipment nameplate ratings should be used for avoiding overloading of the circuits.
- Reliable earthing of rack-mounted equipment should be maintained.

## Step 4: Connect inputs and outputs

Always switch OFF the power on each device before connecting it to your VP-4x4K.

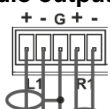


You can connect DVI-U to an analog (VGA, composite or component video) or digital (HDMI™ or DVI) source.

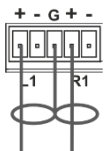
The terms HDMI, HDMI High-Definition Multimedia Interface, and the HDMI Logo are trademarks or registered trademarks of HDMI Licensing Administrator, Inc.

### Connecting the audio output

To a balanced stereo audio acceptor:



To an unbalanced stereo audio acceptor:



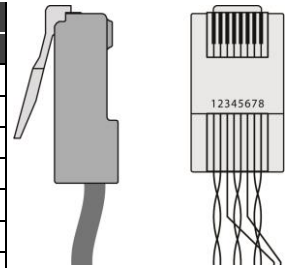
### Wiring the RJ 45 Connectors

This section defines the TP pinout, using a straight pin-to-pin cable with RJ 45 connectors.

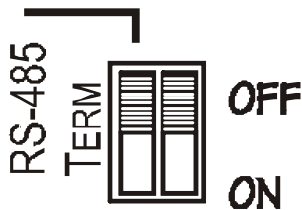


For HDBT cables, it is recommended that the cable ground shielding be connected/soldered to the connector shield.

EIA /TIA 568B	
PIN	Wire Color
1	Orange / White
2	Orange
3	Green / White
4	Blue
5	Blue / White
6	Green
7	Brown / White
8	Brown



### Set the RS-485 TERM DIP-switch



### RS-485 TERM

ON for RS-485 line termination with 120Ω OFF for no RS-485 line termination

When cascading machines, set this DIP-switch to ON for the first and last units only (otherwise, set it to OFF)



To achieve specified extension distances, use the recommended Kramer cables available at [www.kramerav.com/product/VP-4x4K](http://www.kramerav.com/product/VP-4x4K).

Using third-party cables may cause damage!

## Step 5: Connect power

Connect the power cord to VP-4x4K and plug it into the mains electricity.

Safety Instructions (See [www.kramerav.com](http://www.kramerav.com) for updated safety information)

### Caution:

- For products with relay terminals and GPIO ports, please refer to the permitted rating for an external connection, located next to the terminal or in the User Manual.
- There are no operator serviceable parts inside the unit.

### Warning:

- Use only the power cord that is supplied with the unit.
- Disconnect the power and unplug the unit from the wall before installing.
- Do not open the unit. High voltages can cause electrical shock! Servicing by qualified personnel only.
- To ensure continuous risk protection, replace fuses only according to the rating specified on the product label which located on the bottom of the unit.

## Step 6: Operate VP-4x4K

### RS-232 and Ethernet:

EDID			
EDID data is passed between Input 1 and Output 1			
RS-232			
Protocol 2000		Protocol 3000 (Default)	
Baud Rate:	9600	Baud Rate:	115,200
Data Bits:	8	Data Bits:	8
Stop Bits:	1	Stop Bits:	1
Parity:	None	Parity:	None
Command Format:	HEX	Command Format:	ASCII
Example (Output 1 to Input 1):	0x01, 0x81, 0x81, 0x81	Example (Output 1 to Input 1):	#AV 1>1<CR>
Switching Protocol			
P2000 -> P3000		P3000 -> P2000	
Command:	0x38, 0x80, 0x83, 0x81	Command:	#P2000<CR>
Front Panel:	Press and hold Output 1 and Output 3 simultaneously	Front Panel:	Press and hold Output 1 and Output 2 simultaneously
Ethernet			
Default Settings		Reset Settings	
IP Address: 192.168.1.39	Power cycle the unit while holding in the Factory Reset button, located on the rear panel of the unit.		
TCP Port #: 5000			
UDP Port #: 50000			

## Technical Specifications

Inputs:	4 UXGA on 15-pin HD connectors 4 unbalanced audio stereo signals on 3.5mm mini plug connectors	
Outputs:	4 UXGA on 15-pin HD connectors 4 balanced audio stereo signals on 5-pin terminal block connectors	
Max. Output Level:	Video: 2.2Vpp	Audio: >15Vpp
Bandwidth (-3dB):	Video: 400MHz	Audio: 19kHz
Diff. Gain:	0.07%	
Diff. Phase:	0.03 Deg.	
K-Factor:	<0.05%	
S/N Ratio:	Video: 73.5dB @5MHz	Audio: 76dB unweighted
Crosstalk (all hostile):	Video: -48dB @5MHz	Audio: -54dB @1MHz
Controls:	Input-output selector, AFV, VID, AUD, STO, LOCK, RCL, TAKE, DELAY, MACH. #, RS-485, RS-232, REMOTE IR	
Coupling:	Video: DC	Audio: AC
Audio THD + Noise:	0.065% @1kHz	
Audio 2nd Harmonic:	0.002% @1kHz	
Power Source:	100-240V AC, 18VA max.	
Operating Temperature:	0° to +40°C (32° to 104°F)	
Storage Temperature:	-40° to +70°C (-40° to 158°F)	
Humidity:	10% to 90%, RHL non-condensing	
Dimensions:	19" x 7" x 1U (W, D, H) rack mountable	
Weight:	2.7kg (6 lbs) approx	
Accessories:	Power cord, rack "ears", Windows®-based control software	
Specifications are subject to change without notice at <a href="http://www.kramerav.com">www.kramerav.com</a>		