1x4 MULTI-FORMAT VIDEO WALL PROCESSOR

with HDMI® Loop-out

Vanco Part Number:
EVSP14VW

1X4 Multi-format Video Wall Processor with HDMI® Loop-out

EVOLUTION BY VANCO
ADVANCING DIGITAL CONNECTIVITY

www.vanco1.com • 800.626.6445

DEAR CUSTOMER

Thank you for purchasing this product.
For optimum performance and safety, please
read these instructions carefully before connecting, operating or
adjusting this product. Please keep this manual for future reference.

This product is 100% inspected and tested in the United States to verify HDMI performance parameters.

WARNING

1. Do not expose this unit to water, moisture, or excessive humidity.
2. Do not install or place this unit in a built-in cabinet, or other confined space without adequate ventilation.
3. To prevent risk of electrical shock or fire hazard, due to overheating do not obstruct unit's ventilation openings.
4. Do not install near any source of heat, including other units that may produce heat.
5. Do not place unit near flames.
6. Only clean unit with a dry cloth.
7. Unplug unit during lightening storms or when not used for an extended period of time. A surge protector is strongly recommended.
8. Protect the power cord from being walked on or pinched, particularly at the plugs.
9. Use unit only with accessories specified by the manufacturer.
10. Refer all servicing to qualified personnel.

CAUTION

HDMI is a very complex technology requiring continuous authentication of the signal and the same video resolution and audio settings on all electronic equipment in the system. When there are multiple sources and displays, the video resolution and audio setting on all connected units must be adjusted to correspond with that of the display having the lowest video and audio capability.

INTRODUCTION

The Evolution by Vanco EVSP14VW Multi-Format Video Wall Processor with digital and analog audio-video inputs, integrated USB media player, analog and digital audio breakouts, and IR, TCP/IP and RS-232 control, allows one video signal across multiple displays to create a video wall! Out of the box, the EVSP14VW can handle up to four displays, in any configuration, or with the built in loop-out can be expanded by daisy chaining multiple units together to create an even larger video wall system. Have four displays in a 2x2 configuration, or line them up vertically or horizontally. The EVSP14VW can even be adjusted for different size display bezels, and is able to change the orientation of the image on the displays to be viewed horizontal, vertical, or even upside down for displays with a thinner bezel up top. The EVSP14VW supports Composite, VGA, USB, and HDMI video inputs. Plug in a USB flash drive or hard drive, and the EVSP14VW will continuously play the content via the built in media player. There is no need for a computer or source to display digital signage. Control of the unit can be done via IR (remote included), TCP/IP, and RS-232. For any video wall application, small or large, with customization and control, the EVSP14VW is a great solution!

1x4 Multi-format Video Wall Processor with HDMI Loop-out

Part # EVSP14VW

- HDMI 1x4 Video Wall Processor with Additional HDMI Loop-out for creating larger video wall solutions
- Multi-format functionality supports CVBS/VGA/HDMI inputs and USB for video, picture and music playback
- A single unit is capable of creating vertical and horizontal video walls in a number of different configurations and is able to be cascaded into additional units for even larger video wall systems
- Horizontal and vertical bezel correction
- Supports output resolutions up to 1080p@60Hz
- Supports IR, TCP/IP, and RS232 controls
- Compliant with HDMI1.3a, DVI1.0
- HDCP 1.4
- VGA/USB/CVBS support PCM audio; HDMI supports LPCM, Dolby, and DTS audio formats
- Automatic EDID with outputs able to be scaled to: 1024x768, 1360x768, 1080p, and 720p
- De-interlaced video for improved standard definition content
- Dimensions: 9.8" W x 1.25" H x 4.6" D

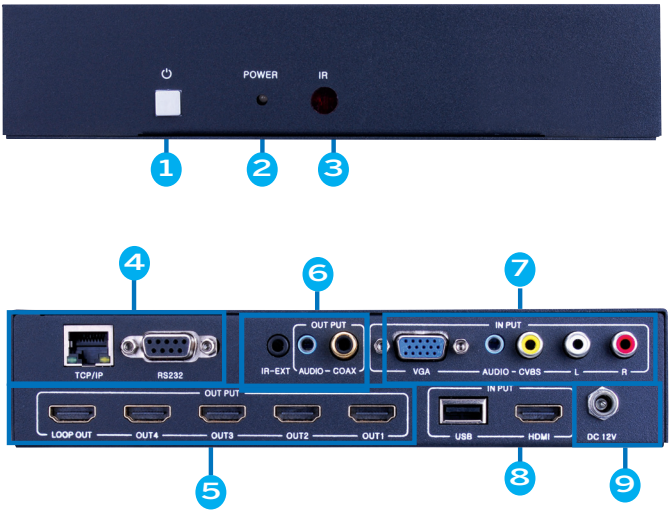
SPECIFICATIONS

Video Bandwidth	225MHz/6.75Gbps
Input ports	(1) HDMI (Female type), (1) USB, (1) VGA,(1) CVBS+L/R
Video Resolutions	up to 1080p@60Hz
Output ports	(5) HDMI (Female type),(1) Coaxial, (2) L/R
HDMI cable distance	26ft/8-bit 1080p
USB formats	MPEG, H.264, RM/RMVB movie decode, JPEG, BMP, PNG Picture decode and MPEG1/2, MP3 audio decode
Audio Formats	supports PCM audio; HDMI supports LPCM, Dolby, and DTS audio formats
ESD Protection	Human body model: ± 8kV (air-gap discharge); ± 4kV (contact discharge)v
Power supply	12V/2.5A DC (US/EU standards, CE/FCC/UL certification)
Dimensions (mm)	9.8" W x 1.25" H x 4.6" D
Weight	2.3 lbs
Operating Temperature	32 °F ~ 104 °F / 0°C ~ 40°C
Storage Temperature	-4 °F ~ 140 °F / -20°C ~ 60°C
Relative Humidity	20~90% RH (non-condensing)
Power Consumption	7.5 W

PACKAGE CONTENTS

- 1x4 Video Wall Processor
- IR Receiver (RX)
- RS-232 Cable
- IR Remote
- DC 12V/2.5A Power Supply
- Product Manual

PANEL DESCRIPTIONS

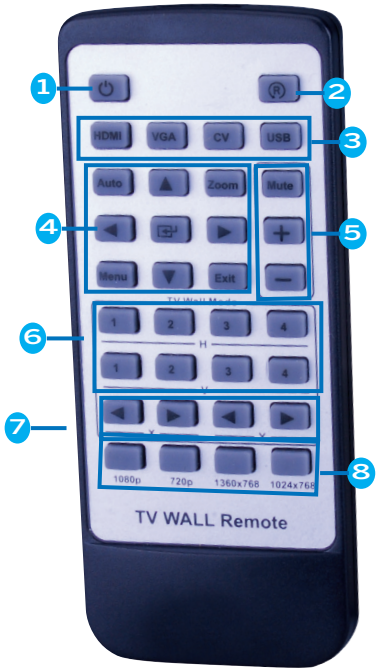


1. POWER SWITCH: Push button switch that turns the unit ON or OFF
2. POWER LED: Illuminates when the unit is connected to power
3. IR: IR sensor
4. CONTROL:
    - TCP/IP: Connect a single Cat5e/6 to a network router or switch
    - RS232: Connect the included RS-232 cable to a PC
    - IR-EXT: Connect the included IR Receiver (RX) for IR control
5. HDMI OUTPUT PORTS 1-4 W/ LOOP OUT: Connect a HDMI displays such as an HDTV or Projector; LOOP OUT port can also be used to cascade or daisy-chain to another processor, to create a larger video wall
6. AUDIO OUTPUT: Extracts audio via digital Coaxial or analog 3.5mm output
7. ANALOG SOURCE INPUT: Connect a source such as a Set Top Box, Game Console, or PC; inputs are VGA w/ audio or composite video
8. DIGITAL SOURCE INPUT: Connect a source such as a Set Top Box, Game Console, PC, or USB for file playback via media player; inputs are USB or HDMI
9. DC 12V IN: Connect the included power supply to power the unit

EDID

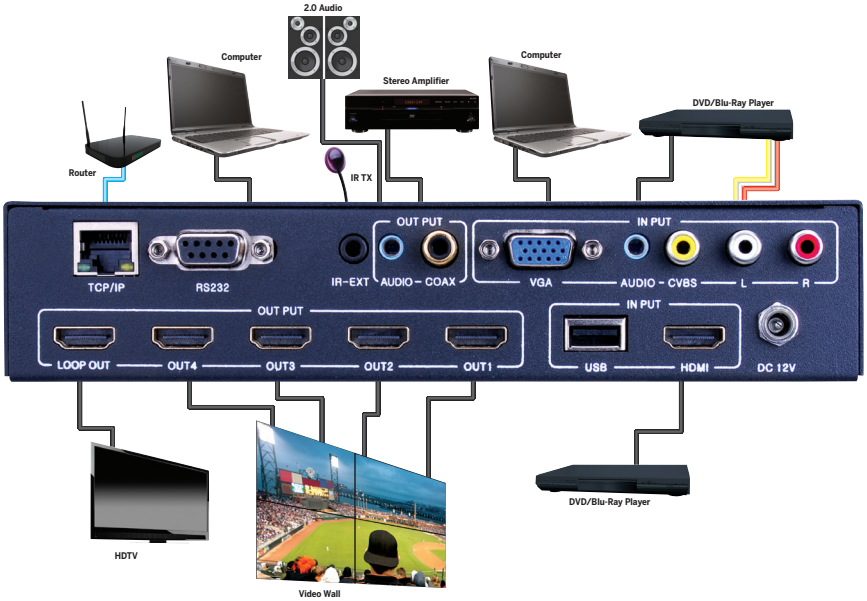
The EVSP14VW is equipped with EDID management, however there is no need to adjust any dip switches or dials, the unit automatically reads the EDID from the display(s) and saves it internally. This feature was created for the installer in mind, for a plug and play installation!

REMOTE CONTROL



1. POWER BUTTON: Push button switch that turns the unit ON or OFF
2. DISPLAY ROTATE ADJUSTMENT: This button rotates the video image 90 degrees each time clockwise; will only adjust in 1x2, 1x3, and 1x4 video wall modes
3. SOURCE SELECTION: Select from HDMI, VGA, CV (Composite), or USB for the input source to be displayed
4. DISPLAY FORMAT ADJUSTMENT:
   - Auto button adjusts VGA input for proper format
   - Zoom button zooms in on video signal for all inputs
   - The arrow, back, and exit buttons are for Media Player control using the USB input
5. AUDIO OUTPUT VOLUME ADJUSTMENT: Adjusts volume for HDMI, Digital Coaxial (COAX), and analog audio output
6. VIDEO WALL FORMAT ADJUSTMENT: Adjusts the type of video wall format desired. For example, if a 2x2 (two displays on top, two displays on the bottom) is desired, simply press the “2” button in the “H” row, and then press the “2” button in the “V” row
7. BEZEL ADJUSTMENT: Adjusts for bezel size, simply click on the arrows to shrink or expand a picture vertically or horizontally to adjust video signal to the displays connected
8. RESOLUTION SELECTION: Select from 1080p, 720p, 1360x768, or 1024x768 video output resolutions; click on the resolution that displays the best

CONNECTION DIAGRAM



CONNECT AND OPERATE

1. Connect a source such as a PC, Blu-Ray Player, game console, A/V Receiver, Cable or Satellite Receiver, etc. to any of the analog or digital inputs on the unit. Inputs include analog VGA or composite, and digital USB or HDMI
2. Connect displays such as an HDTV or HD Projector to the HDMI output(s) of the unit
3. Connect an additional EVSP14VW to the "LOOP OUT" port to add more displays for a larger video wall setup (OPTIONAL)
4. For power, connect the provided power supply

At this point the display connected should display the source signal connected to the unit. If no signal is being displayed, check all HDMI cables connected. If a display is having difficulty receiving a signal, access the display's menu and adjust the resolution (lowest to highest until signal is displayed). A 24 Hz vertical refresh rate may work better than 60 Hz or higher.

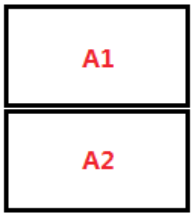
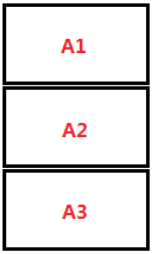
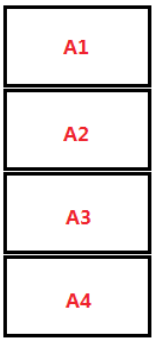
IR EXTENSION

The EVSP14VW can be controlled via IR with the included IR remote control. The front panel of the processor has an IR sensor that can be pointed to, or as an option, can be hidden and be controlled by the included IR Receiver (RX).

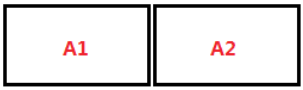
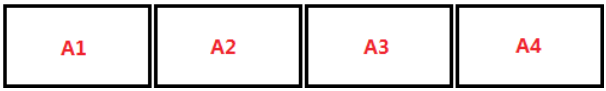
Simply connect the IR Receiver (RX) into the "IR-EXT" port on the back of the unit. The IR Receiver (RX) pigtail can be led out to an area where the IR remote control can still reach it line of sight while the main unit is hidden.

ADDITIONAL VIDEO WALL CONFIGURATIONS

The EVSP14VW out of the box can handle up to 4 displays in multiple video wall configurations, including the following:

2x1	
3x1	
4x1	
2x2	

ADDITIONAL VIDEO WALL CONFIGURATIONS

1x2 (H)	
1x3 (H)	
1x4 (H)	
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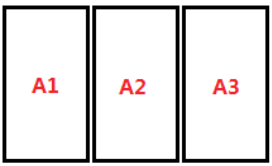
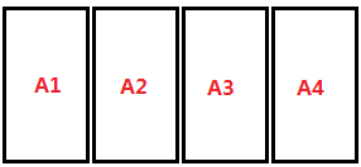
1x3 (V)	
1x4 (V)	

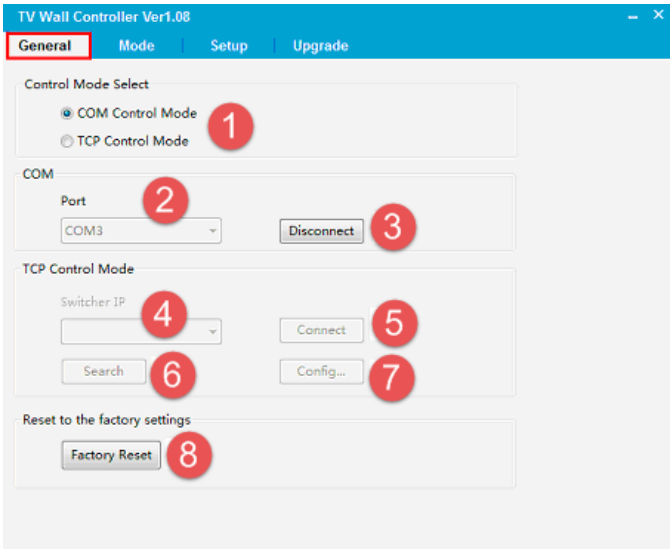
SOFTWARE AND USER INTERFACE CONTROL VIA RS-232

The EVSP14VW can be controlled via RS-232, and includes a user interface to do so, simply connect the included RS-232 cable to a PC running Windows operating system. Windows XP or Windows 7 is recommended. The software is available to be downloaded from www.vanco1.com, under the "downloads" tab of the EVSP14VW's product page:

http://vanco1.com/catalog/HDMI_253/Evolution-1x4-Multi-Format-Video-Wall-Processor-with-HDMI-Loop-out_1558

General Page

Setting the unit up with an IP Address for conrol.

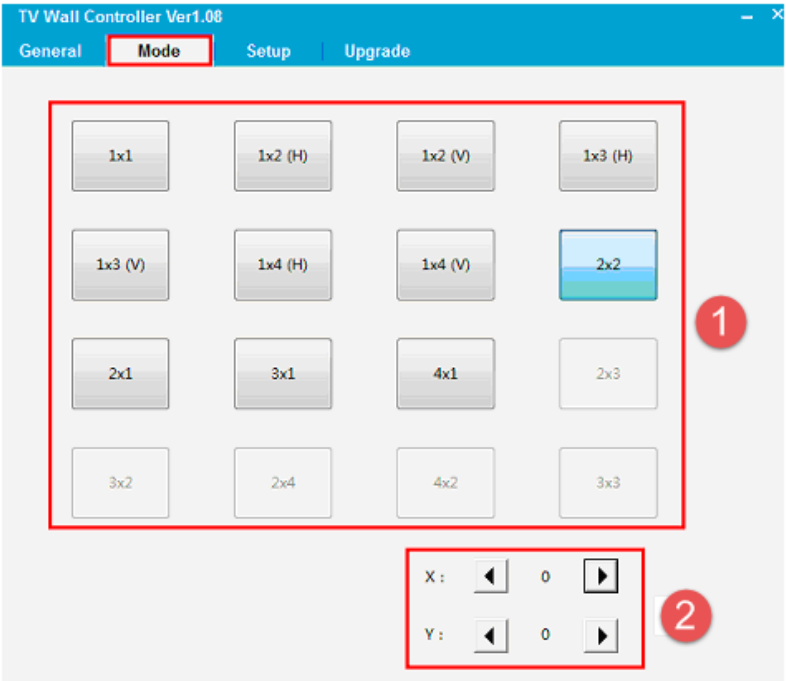


1. Select RS232 COM or TCP mode
2. Select the proper COM of the PC or computer being used to connect to the EVSP14VW
3. Connect/Disconnect the EVSP14VW from the PC or computer
4. Select the proper IP address
5. Connect using the IP address selected
6. Search for an IP address of the EVSP14VW
7. Configure unit IP and MAC address
8. Click to reset to the factory default settings:
    - Input source: HDMI
    - Output Resolution: 1080p60Hz
    - Output mode: HDMI
    - Audio Volume: 80
    - TV Wall Mode: 1x1
    - Bezel correction: X=0,Y=0

SOFTWARE AND USER INTERFACE CONTROL VIA RS-232

Mode Page

Setting the Video Wall configuration.



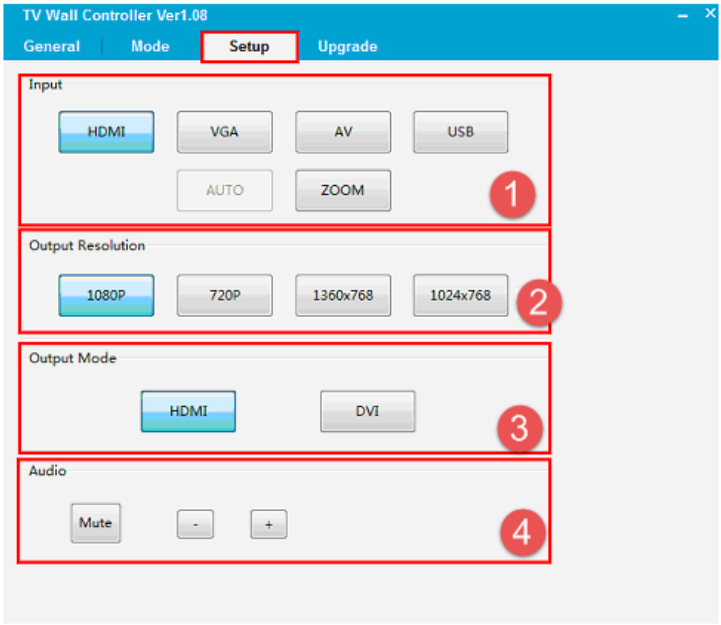
Simply click on the video wall configuration desired, bezel adjustment can also be changed.

1. Select the video wall configuration desired
2. Adjust height and width of the video signal across the video wall configuration, this will adjust for bezel size of the displays

SOFTWARE AND USER INTERFACE CONTROL VIA RS-232

Setup Page

Selecting the input source, adjusting the output resolution and mode, and audio output



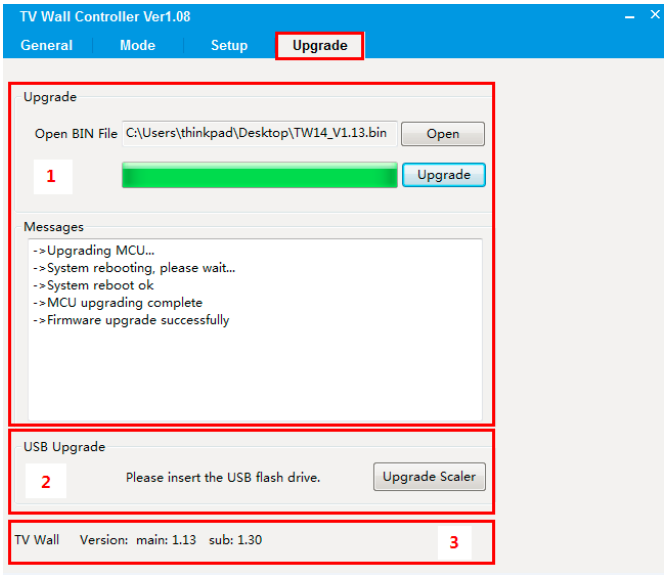
1. Select the source input
2. Select the output resolution desired
3. Select the output mode (HDMI or DVI)
4. Adjust volume or mute

SOFTWARE AND USER INTERFACE CONTROL VIA RS-232

Upgrade Page

Upgrading the firmware if needed, available firmware will be posted on the “downloads” tab of the EVSP14VW’s product page:

http://vanco1.com/catalog/HDMI_253/Evolution-1x4-Multi-Format-Video-Wall-Processor-with-HDMI-Loop-out_1558



1. Download the available firmware on www.vanco1.com
    - Click “Open” and select the firmware file; file path will display where the file is located
    - Click “Upgrade” to begin firmware upgrade process
    - Any updates, errors, or unsuccessful notifications will display under the “Messages” section
2. The built in Scaler can also be upgraded with available firmware
    - Download the available Scaler firmware on www.vanco1.com
    - Save the file onto a USB flash or hard drive
    - Insert the USB flash or hard drive to the USB port on the EVSP14VW
    - Click on “Upgrade Scaler” to begin firmware upgrade process
3. Software Version
    - This lets you know which software version(s) your EVSP14VW currently has

WARNING: Any interruption or power interruption during the firmware update process may brick the unit, ensure consistent power is being used when updating.

TROUBLE-SHOOTING

1. Best results are usually achieved when the source and display resolutions are the same. If resolutions differ, the extenders will try to adjust the signal to match the resolution of the HDTV with the lowest resolution. This will result in a picture with a lower resolution on the other HDTV sets.
2. If you do not get audio and video, access the "setup" menu on the TV to adjust the audio and video settings. If the HDMI control circuit cannot establish a handshake, then there usually will be no audio or video in addition to a blue or black screen with a statement similar to "this protocol not supported" or "weak signal".
3. If the above mentioned messages display, reset the receiver by disconnecting the power supply. You can also disconnect all of the HDMI and power cables, wait 15 minutes for any voltages to decay and then reconnect all of the cables.
4. If you are still encountering issues, attempt the "hot-plug concept. With all of the HDMI cables disconnected, turn on the source and plug in the HDMI cable into it's output, then power up the Vanco unit and plug the HDMI cable into it's input, finally turn on the display and plug the HDMI cable from the receiver into it. This activates all of the devices in corresponding order and results in a signal being plugged into a device that is on and will attempt to connect the signal.
5. Most of the major source and display manufacturers employ a proprietary control channel to communicate between devices from the same manufacturer. Sometimes this can interfere with the HDMI control circuit or the authentication of the signal. Call the manufacturer if you experience this issue. Sometimes a player, an audio/video receiver, or a cable/satellite box may not have the latest software update, usually this can be downloaded from the manufacturer's website.

SAFETY AND NOTICE

The EVSP14VW has been tested for conformance to safety regulations and requirements, and has been certified for international use. However, like all electronic equipment, the EVSP14VW should be used with care. Please read and follow the safety instructions to protect yourself from possible injury and to minimize the risk of damage to the unit.

- Follow all instructions and warnings marked on this unit.
- Do not attempt to service this unit yourself, except where explained in this manual.
- Provide proper ventilation and air circulation and do not use near water.
- Keep objects that might damage the device and assure that the placement of this unit is on a stable surface.
- Use only the power adapter and power cords and connection cables designed for this unit.
- Do not use liquid or aerosol cleaners to clean this unit.
- Always unplug the power to the device before cleaning

LIMITED WARRANTY

With the exceptions noted in the next paragraph, Vanco warrants to the original purchaser that the equipment it manufactures or sells will be free from defects in materials and workmanship for a period of two years from the date of purchase. Should this product, in Vanco's opinion, prove defective within this warranty period, Vanco, at its option, will repair or replace this product without charge. Any defective parts replaced become the property of Vanco. This warranty does not apply to those products which have been damaged due to accident, unauthorized alterations, improper repair, modifications, inadequate maintenance and care, or use in any manner for which the product was not originally intended.

Items integrated into Vanco products that are made by other manufacturers, notably computer hard drives and liquid crystal display panels, are limited to the term of the warranty offered by the respective manufacturers. Such specific warranties are available upon request to Vanco. A surge protector, power conditioner unit, or an uninterruptible power supply must be installed in the electrical circuit to protect against power surges.

If repairs are needed during the warranty period the purchaser will be required to provide a sales receipt/sales invoice or other acceptable proof of purchase to the seller of this equipment. The seller will then contact Vanco regarding warranty repair or replacement.

TECHNICAL SUPPORT

In case of problems, please contact Vanco Technical Support by dialing 1-800-626-6445. You can also email technical support issues to techsupport@vanco1.com.

When calling, please have the Model Number, Serial Number (affixed to the bottom of the unit) and Invoice available for reference during the call.

Please read this Instruction Manual prior to calling or installing this unit, since it will familiarize you with the capabilities of this product and its proper installation.

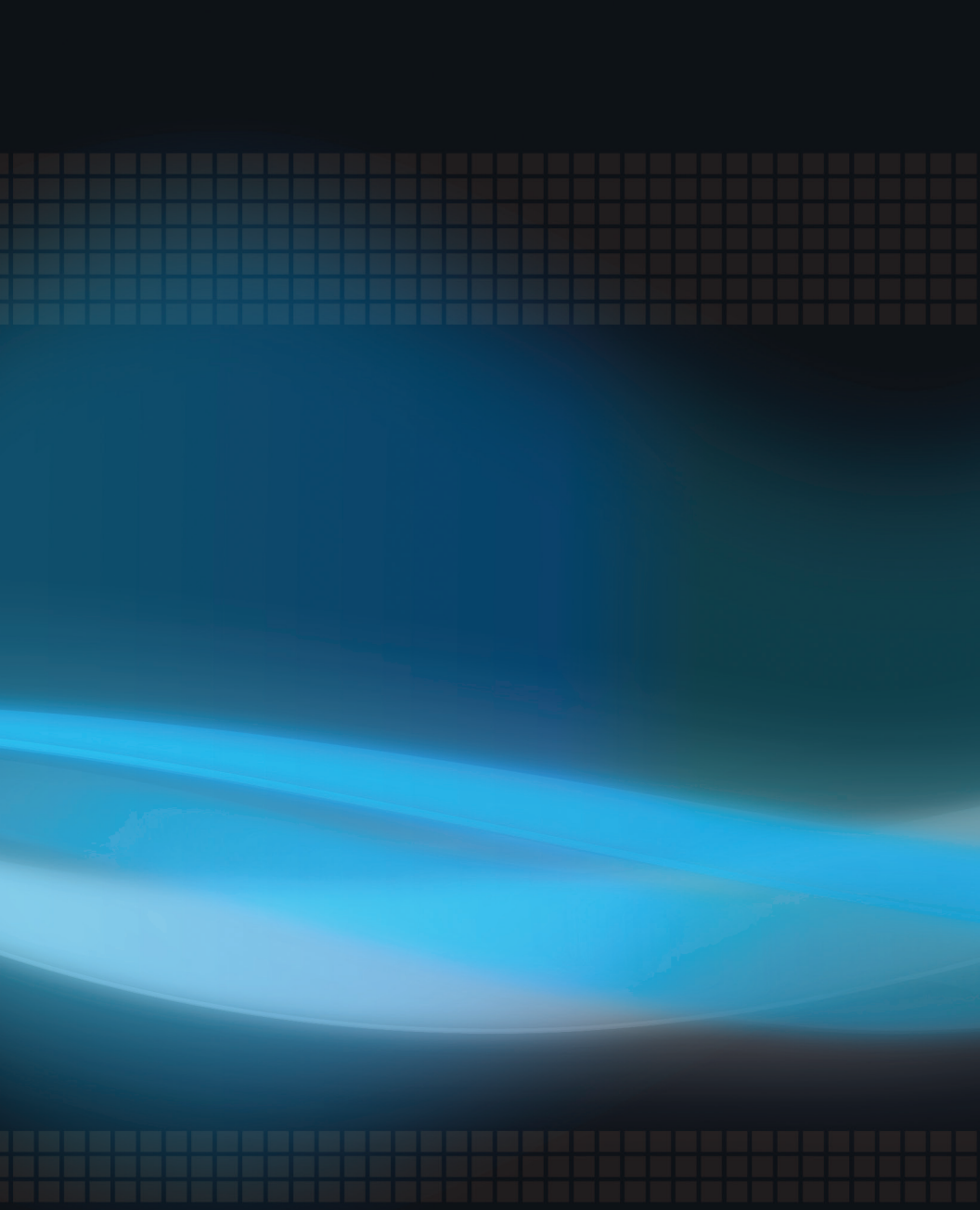
All active electronic products are 100% inspected and tested to insure highest product quality and trouble-free installation and operation. The testing process utilizes the types of high-definition sources and displays typically installed for entertainment and home theater applications.

For additional information, such as helpful installation videos, etc. please visit www.vanco1.com

LIABILITY STATEMENT

Every effort has been made to ensure that this product is free of defects. The manufacturer of this product cannot be held liable for the use of this hardware or any direct or indirect consequential damages arising from its use. It is the responsibility of the user and installer of the hardware to check that it is suitable for their requirements and that it is installed correctly.

Manufacturer reserves the right to revise any of its hardware and software following its policy to modify and/or improve its products where necessary or desirable. This statement does not affect the legal rights of the user in any way.



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