

# Beale Street Audio

## BAV4250, BAV2500 Amplifiers

# Installation Guide



Get Reale. Get Beale.™

# Introduction

Congratulations and thank you for purchasing the BAV2500 or BAV4250 Beale Street Amplifier!

The BAV2500 and BAV4250 amplifiers can be configured for 4/8 ohm zones, it can also be configured 70/100V or can be configured for any combination of 4/8 ohm and 70/100V zones all at the same time! Have one zone delivering 8 ohm, while a separate zone delivering 70V, simultaneously. That's some stuff, right? But there's more...each zone can be controlled by the sleek front panel or over TCP/IP for ON/OFF, Input, Volume/Mute, Treble/Bass and Left/Right Balance. Once connected to a network, the browser-based GUI allows for full control, monitoring, and DSP to adjust nearly any aspect of the audio being output.

The BAV2500 amplifier is a two-channel digital professional audio amplifier which can be set to 4/8 ohm, 70V or 100V outputs and provides up to 500W per channel. There are 2 inputs which are balanced (3-conductor connector) or unbalanced (RCA) which can be matrixed and sent to the 2 outputs.

The BAV4250 amplifier is a four-channel digital professional audio amplifier which can be set to 4/8 ohm, 70V or 100V outputs and provides up to 250W per channel. There are 4 inputs which are balanced (3-conductor connector) or unbalanced (RCA) which can be matrixed and sent to the 4 outputs.

Finally, the BAV2500 and BAV4250 has a 100~240 VAC allowing it to be used just about anywhere there is AC Voltage.

And of course, it's rack mountable and comes with removable rack ears. The Beale Street BAV2500 and BAV4250 is ready for anything...anywhere.

Please read and follow the instructions in this guide to assure proper installation and maximum performance of your new Beale Street BAV2500 and BAV4250 amplifier.

# Specifications

## **1000W, 2 Channel Amplifier BAV2500**

- 500W per channel output
- 2 balanced and unbalanced analog audio inputs
- 2 output channels
- Compatible with 4/8 ohm and 70/100V speakers and systems
- Controllable via front panel and IP
- Browser based GUI for easy setup and control
- Matrix mode allowing any source to be routed to any output channel
- Any source(s) can be mixed or individually selected to any output channel
- Digital Signal Processing (DSP) to completely customize audio performance and experience
- Parametric Equalizer to adjust bass, treble, notch, LPF and HPF
- Rack Mountable with accessories included
- CE, FCC, ICES-3 Ratings
- High efficiency, low noise universal power supply (100~240VAC, 50/60Hz)

## **1000W, 4 Channel Amplifier BAV4250**

- 250W per channel output
- 4 balanced and unbalanced analog audio inputs
- 4 output channels
- Compatible with 4/8 ohm and 70/100V speakers and systems
- Controllable via front panel and IP
- Browser based GUI for easy setup and control
- Matrix mode allowing any source to be routed to any output channel
- Any source(s) can be mixed or individually selected to any output channel
- Digital Signal Processing (DSP) to completely customize audio performance and experience
- Parametric Equalizer to adjust bass, treble, notch, LPF and HPF
- Rack Mountable with accessories included
- CE, FCC, ICES-3 Rated
- High efficiency, low noise universal power supply (100~240VAC, 50/60Hz)

# What's Inside?

## **BAV2500**

- 2 Channel Amplifier
- 3-Pin Terminal x 2
- 2-Pin Terminal x 2
- Rack mounting brackets x 2
- Mounting bracket screws x 4
- Power Cord
- Product Manual

## **BAV4250**

- 4 Channel Amplifier
- 3-Pin Terminal x4
- 2-Pin Terminal x 4
- Rack mounting brackets x 2
- Mounting bracket screws x 4
- Power Cord
- Product Manual

<b>Description</b>	<b>BAV2500</b>	<b>BAV4250</b>
Amplifier Channel	2 Channel	4 Channel
Power Output	500W rms x2 @4 Ohm/70V/100V	250W rms x 4 @4 Ohm/70V/100V
Signal-to-Noise Ratio	90dB @1KHz/rated power into 70V mode	
THD+N	<1% @1KHz/rated power	
Frequency Response	20Hz to 20KHz +/-0.3dB @8 Ohms	
Crosstalk	>70dB @1KHz	
Amplifier gain	Selectable	
Analog Input - Sensitivity	Selectable, 0dB or +6dB	
Analog Input - Impedance	22K ohms	
Analog Input - Type	Balanced terminal block/Unbalanced RCA x 2	Balanced terminal block/Unbalanced RCA x 4
	Balanced terminal block/Unbalanced RCA x 2	Balanced terminal block/Unbalanced RCA x 4
Output	2-Pin Terminal Green x 2	2-Pin Terminal Green x 4
Indicators (LEDs)	Signal, Limit, Protection	
Power AMP	High Efficiency Digital Amplifier	
DSP	28-/56-bit, 50 MIPS	
	HPF	
	3 PEQs per channel	
	2x2 input matrix mixer	4x4 input matrix mixer
	Limiter	
Control Interface	10/100M Ethernet	
AC Input	Universal, 100~240V AC, 50/60Hz	
Power Supply Topology	SMPS W/PFC	
Protections	Over-power, Over-current, Over-temperature, Soft-start protections	
Display	LCD	
Fuse Rating on Back Panel	T10AH/250V	
Dimensions	16.93" W x 2.17" H x 12.6" D	16.93" W x 2.17" H x 12.6" D
Weight	12.57 lbs	13.67 lbs

# Front Panels

## BAV2500



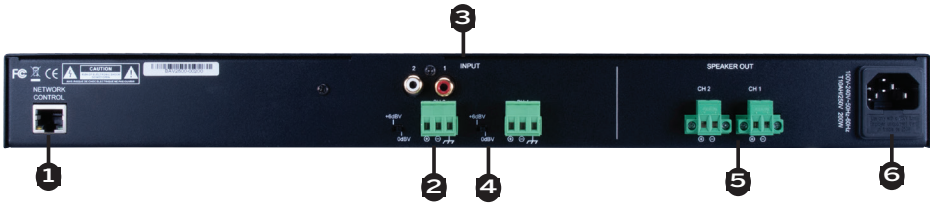
## BAV4250



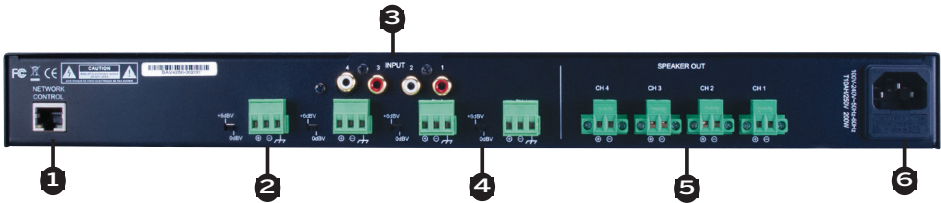
1. **POWER:** Turn on/off the amplifier
2. **CHANNEL SELECTION:** Use to select single or multiple channels to control from the front panel
  - To increase or decrease volume, select the channel by pressing the appropriate button and then turn the rotary dial (5).
  - Protection LED: Each channel has a protection LED. If the orange indicator lights up, this implies that the internal protections have been triggered to protect the device against damage
  - Limit LED: Each channel has a clip limiter LED. The limiter only responds to actual clipping and automatically compensates for load and voltage variations. It illuminates blue whenever the amplifier reaches the selected voltage limit.
  - Signal LED: Each channel has a signal LED. It illuminates green when a signal is present and beyond a default input threshold level.
3. **LCD DISPLAY:** Displays the status and amplifier settings
4. **BACK:** Moves backward through menu layers in MENU mode
5. **ADJUST/SET Rotary Dial:** Rotation moves through the menu and adjusts the currently selected parameter in setup mode. Pressing down on the dial selects a given parameter or advances further into the menu. In operating mode, rotation of the ADJUST/SET Dial adjusts output gain.

# Rear Panels

## BAV2500



## BAV4250



1. RJ45: Connect to network for TCP/IP control and to use the browser-based GUI
2. Balanced Analog Input (3-Pin): Screw down terminals to connect to the source/input
3. Unbalanced Analog Input (RCA-mono): RCA port to connect to the source/input
4. 0dB/+6dB Switch: Adjusts the gain of the input
5. Speaker Outputs: Connect to speaker(s)
6. Power: Connect the included power cord

# Wiring Infrastructure

## **SPEAKER WIRE**

The BAV2500 and BAV4250 are flexible multi-channel amplifiers capable of many different applications. The application for a given system, or even different amp configurations for different zones in a single system can create different requirements for speaker wire runs. Please review the information below and apply these guidelines to your specific application(s).

## **MULTI-ZONE AUDIO (4/8 OHM)**

If the amp(s) are being used to distribute audio to different rooms with 4/8 ohm speakers, individual room volume controls may be needed (Please visit [www.getbeale.com](http://www.getbeale.com) for additional information). In this application, pull speaker wire from each speaker to the volume control location in each room, and then home-runs from each volume control to the amplifier location. Use quality stranded speaker wire based upon the 4/8 ohm Speaker Wire Gauge Table provided below:

<b>Wire Gauge</b>	<b>4 Ohm (feet)</b>	<b>8 Ohm (feet)</b>
10	120	240
12	75	150
14	50	100
16	30	60
18	20	40
20	12.5	25
22	8	16

## **MULTI-ZONE AUDIO (70V/100V)**

If the amp is being used to distribute 70/100V audio, pull distribution lines (each distribution line is a wire pair) in a daisy-chain pattern, (amp to first speaker, first speaker to second speaker, second speaker to third speaker, etc.)

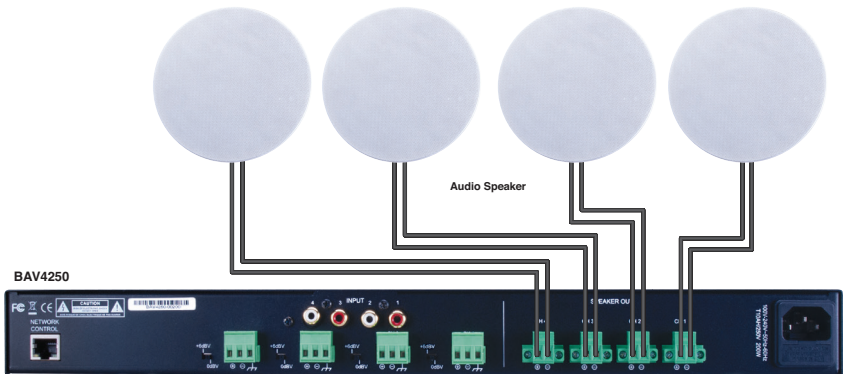
Use quality stranded speaker wire based upon the 70V Speaker Wire Gauge below based on 30W per channel:

<b>70V (feet)</b>							
<b>Wire Gauge</b>	<b>15W</b>	<b>30W</b>	<b>60W</b>	<b>100W</b>	<b>125W</b>	<b>250W</b>	<b>500W</b>
10	10000	5000	2500	1500	1100	550	275
12	6200	3100	1550	940	750	375	185
14	3800	1900	950	600	450	225	110
16	2400	1200	600	370	290	145	
18	1500	750	375	230	180	90	
20	960	480	240	150	110		
22	600	300	150	95			

<b>100V (feet)</b>							
<b>Wire Gauge</b>	<b>15W</b>	<b>30W</b>	<b>60W</b>	<b>100W</b>	<b>125W</b>	<b>250W</b>	<b>500W</b>
10	20000	1000	5000	3000	2200	730	550
12	12400	6200	1550	1880	1500	460	370
14	7600	3800	950	1200	900	280	220
16	4800	2400	600	740	580	180	
18	3000	1500	375	460	360		
20	1920	960	240	300	220		
22	1200	600	150	190			



# Connect and Operate



1. Ensure power is off or power supply disconnected from the BAV2500 or BAV4250
2. Connect your input(s) using either the unbalanced RCA ports or the balanced 3-pin screw-down connector
3. Connect the speakers to the numbered outputs on using the 2-pin screw-down connector

NOTE: Default setup has the speakers set to 70v. If you are using 4/8 ohm speakers OR 100v speakers, you need to change the output to the correct setting using the front panel menu or the browser-based GUI BEFORE you connect speakers and power on the amplifier

4. OPTIONAL: If using TCP/IP control or the browser-based GUI, connect a known working Cat5e/6 cable to the RJ45 port from the network router or switch.
5. Connect the power supply into the power input port 6. Power on attached audio devices and test

# Accessing and Using the Browser Based GUI

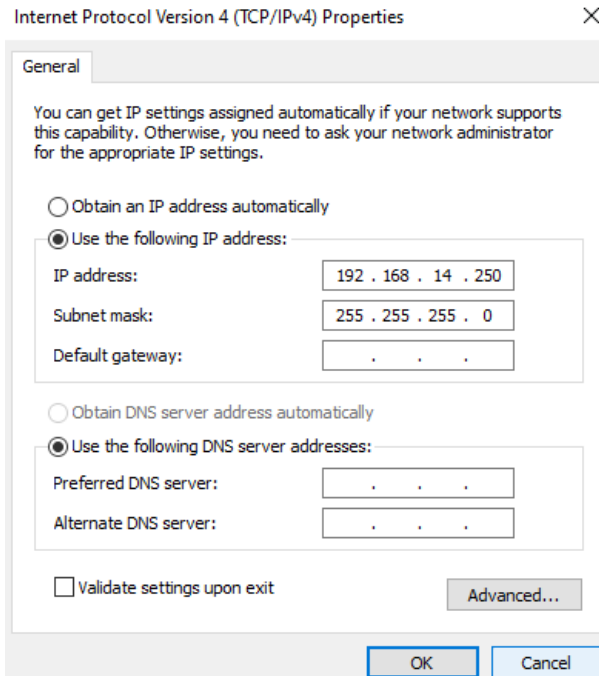
In order to make setup and use all the fun settings found within these amplifiers, you need to be on the same network. The amp has a default IP address of 192.168.14.1. To make sure your computer, phone, or tablet can communicate with the amp, you need to make sure your computer is speaking the same language.

Connect the ethernet port of the amp to your network switch or router via well terminated Cat5e/6 and set the same network segment for the 2 devices.

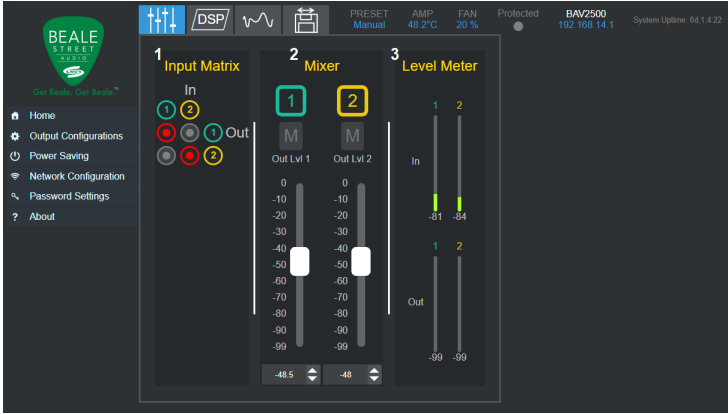
Once completed, enter the IP address of the unit into your computer's web browser to enter the GUI.

Username: admin

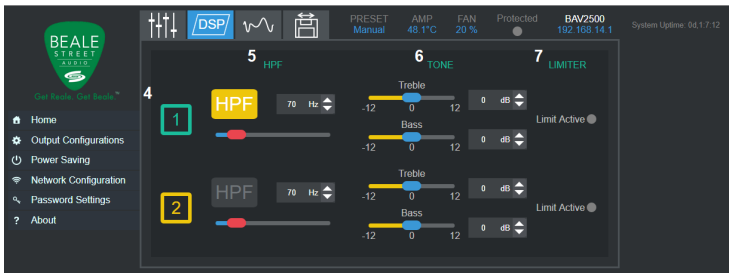
Password: admin



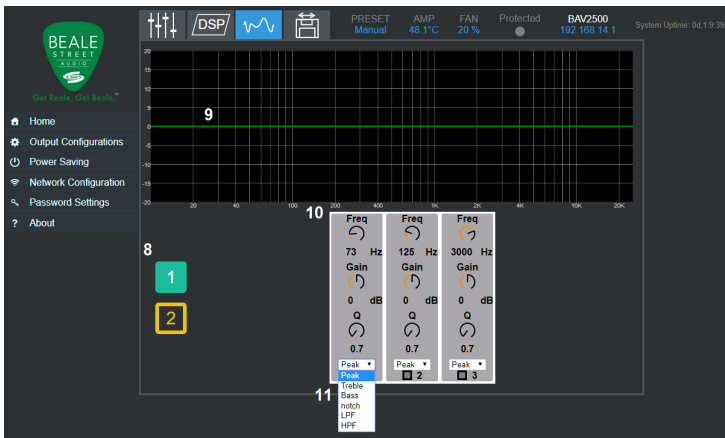
# GUI LAYOUT, SETUP AND MENU OPTIONS



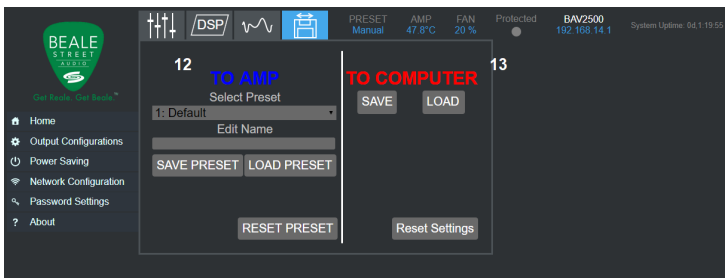
1. Input/Output Matrix: Select the source you want to listen to on each output/channel. Multiple inputs can also be selected and mixed
2. Mixer: Increase, decrease, or mute the volume of each output/channel
3. Level Meter: provides Input (source) and Output (channel) levels



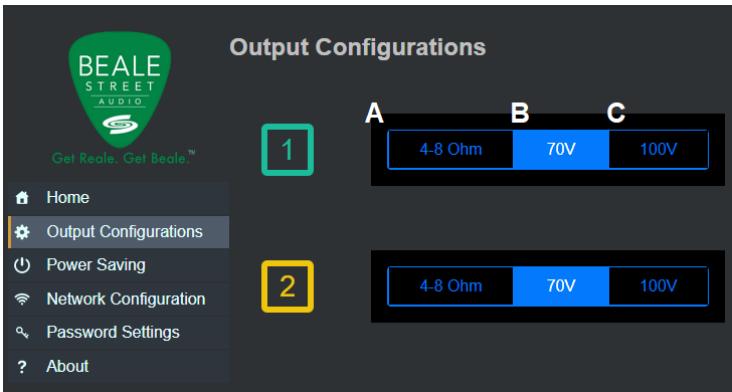
4. Numbered output channels
5. HPF (High Pass Filter): Allows you to adjust the frequency and enable or disable HPF
6. Tone: Adjusts the treble and bass
7. Limiter: Shows if a limit is active



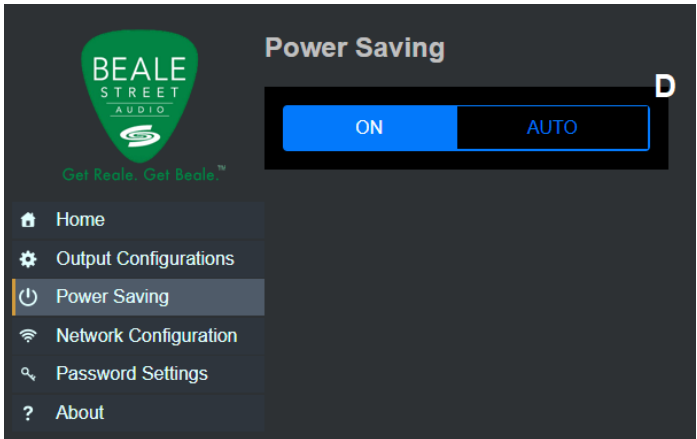
8. Select an output channel to use the parametric EQ interface
9. Changes various aspects of the audio. This can be done by clicking/touching the green bar and moving and arranging it into different positions
10. Different frequency layouts
11. Dropdown menu to select and manipulate peak, treble, bass, notch, LPF (low pass filter), HPF (high pass filter)



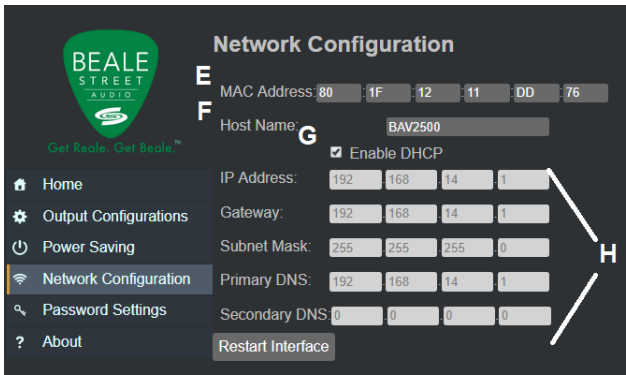
12. Save an amp configuration as a preset or load a configuration or preset to the amp
13. Save an amp configuration or load a configuration to/from a computer



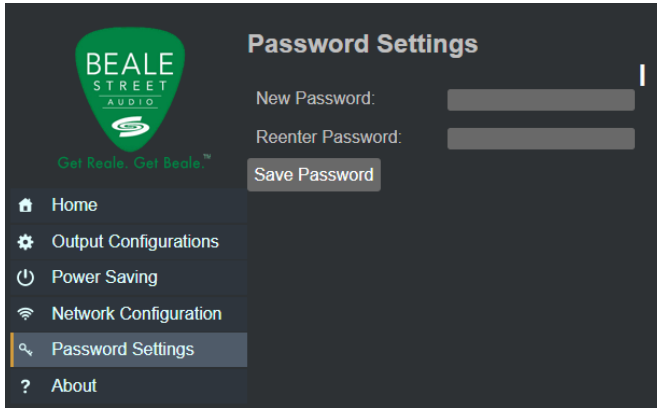
- A. Used for 4/8 ohm Speakers
- B. Used for 70v Speakers
- C. Used for 100v Speakers



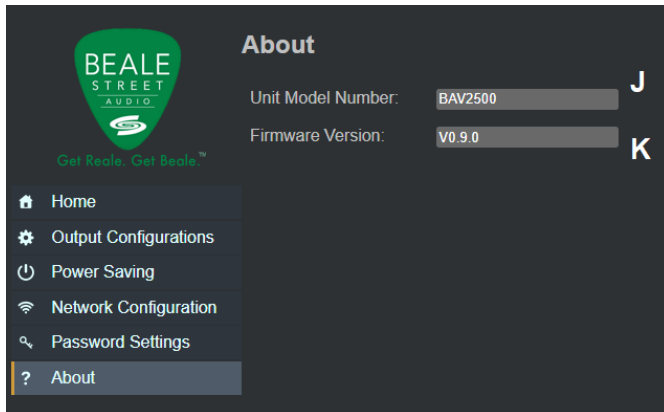
- D. Set power saving to ON or AUTO



- E. MAC Address of the unit
- F. Name of the unit on the network
- G. Enable/disable DHCP
- H. IP address and information for the unit.
  - a. If no address is provided by the network, a default IP address will be 192.168.14.1



- I. Change a password to enter the GUI



- J. Model number of the unit
- K. Current firmware on the unit

# 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](mailto: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 theatre applications. For additional information please visit [www.vanco1.com](http://www.vanco1.com).

## LIABILITY STATEMENT

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