



Legacy Wavelet II

Owners Manual



Table of Contents

Owners Record	3
Quick Setup	4
Wireless Setup	5
Connections	6
Specifications	7
Wavelet App Controls	9
Contour Settings Explanation	11
Room Correction Setup	12
<i>Ping channels</i>	<i>13</i>
<i>Manual Channel Level Adjustments</i>	<i>13</i>
<i>Running Room Correction</i>	<i>14</i>
Optimizing Analog Inputs	17
Wavelet Accessories	18
Designer Notes	19
Troubleshooting	22
Warranty	25
Care	26

Owners Record

Thank you for selecting the Legacy Wavelet II. The serial number is located on the rear of the unit. Record this number in the space provided below. Refer to this when calling your dealer regarding this product.

Register your product at www.legacyaudio.com/register

Model: Wavelet II

Serial No: _____

Date of purchase: _____

Thank you for listening with Legacy Audio. These hand-crafted instruments will provide you with many years of listening enjoyment.

Share your Legacy Audio system with the Legacy community. Post your Legacy experience and system photos at www.facebook.com/legacyaudio . Like the page to receive the latest Legacy announcements.

Quick Setup

Wavelet features can be remote controlled via smart device, smart phone or other mobile device. In order to perform room correction, please connect the unit to the internet. We love controlling the system with an iPad Mini sized screen.

What happens if my internet goes out? Don't worry- the Wavelet remote functions continue to work and room correction settings are maintained, even without an internet connection. An internet connection is only necessary for the initial setup and all settings are retained inside of Wavelet- even if the internet is out your system will work as designed.

There are two ways to connect your device and control Wavelet- wirelessly with the included WiPi stick or wired. If you have an ethernet cable available and connected to your router, we recommend a wired connection- it is the quickest way to connect. This Quick Setup walks you through a wired connection. Please visit [Wireless Setup](#) for WiFi instructions.

- a. With your Wavelet powered off, locate the included Ethernet to USB Adaptor.
- b. Connect the Ethernet to USB Adaptor to the top USB Communication at the rear of the Wavelet
- c. Attached one end of the ethernet cable to the Ethernet to USB Adaptor. The other end should run to your router. (If you have an ethernet cable run near your Wavelet but are using the cable for a streamer, you can purchase an inexpensive Ethernet Switch, about \$15 at your local electronics store, to expand the number of ethernet connections)
- d. After connecting your cables, power Wavelet On. Have a piece of paper and a pen nearby- once Wavelet turns on, you will see an IP Address scroll across the screen, please notate it. IP Addresses look like 192.168.1.199 (the screen may display IP Error momentarily, this is normal as Wavelet sets up.)
- e. Once Wavelet displays an IP Address, it has successfully connected to your router. Please open your internet browser on any device (phone, tablet, computer) and enter the IP Address into the address bar, and press Enter or Go
- f. The Wavelet Remote is now displayed

Wireless Setup

*Note- if you've completed the wired ethernet connection in the Quick Setup above, you can disregard this wireless setup section.

First, let's teach your Wavelet what your SSID and Password are, so Wavelet can connect to your internet.

- a. To connect your Wavelet to the internet, please insert the included USB SanDisk memory stick into the USB port of your PC or Mac, open a browser on your PC or Mac, and visit <http://bohmeraudio.com/setup.html>
- b. Enter your SSID- this is your Wifi Network name.
- c. Enter your Wifi Network Password and click "Download wifi-conf.txt file"
- d. Insert the included SanDisk USB memory stick into your computer.
- e. When prompted to "Open" or "Save File" choose "Save
- f. File" click "OK".
- g. Copy the "wifi-conf.txt file to the root directory of the SanDisk USB memory stick. Depending on your browser settings, you might find the file downloaded to your Desktop or Downloads folder. After locating it, right click the file and choose copy. Navigate to the SanDisk USB memory stick and paste the file into the main "root directory" so that when you click on the SanDisk USB drive from your computer, the file is visible and not placed within another folder. Please confirm the file title is wifi-conf.txt and does not have any numbers added. If it does, please remove the numbers from the title. You may now remove the SanDisk USB memory stick from your computer.
- h. Power off your Wavelet. Insert the SanDisk USB memory stick into the port located at the back of Wavelet labeled WLAN USB Stick. Power Wavelet back on and wait 1 minute. The system is saving your wifi network to memory.
- i. After 1 minute, power Wavelet off, remove the SanDisk USB memory stick and insert the WiPi WiFi Stick into the port located at the back of Wavelet labeled WLAN USB Stick.

Now we will open the WiFi remote. Please use the device you wish to control Wavelet with- we recommend an iPad or iPhone. Any smartphone, smart device or computer will work.

- a. First, make sure that your device is connected to the same WiFi network your Wavelet is connected to. (On Apple devices, click Settings, Wi-Fi, and choose the appropriate network)
- b. After connecting your cables, power Wavelet On. If you're Wavelet is already on, please power it off and wait 10 seconds to turn Wavelet on. Have a piece of paper and a pen nearby- once Wavelet turns on, you will see an IP Address scroll across the screen, please notate it. IP Addresses look like 192.168.1.199 (the screen may display IP Error momentarily, this is normal as Wavelet sets up and your router searches for it.)
- c. Once Wavelet displays an IP Address, it has successfully connected to your router. Please open your internet browser on any device (phone, tablet, computer) and enter the IP Address into the address bar, and press Enter or Go

The Wavelet Remote is now displayed

Connections

The Wavelet comes pre-programmed from the Legacy factory with algorithms for your selected speaker. If you are using the Wavelet with a Legacy speaker, please consult the respective manual for specific connection information & diagrams.

A connections assignment printout is also included in the Wavelet box to assist you in getting started.

Wavelet Preamplifier/DAC/Crossover/Room Correction Processor Inputs



Specifications

Inputs

- Analog
 - Two pairs of Stereo balanced inputs on XLR connectors.
Input sensitivity without attenuation $0 \text{ dBFS}^{*1} = 1 \text{ dBV}^{*2}$, input impedance 20 kOhm.
Analog attenuation available in three steps of -3 dB, -6 dB and -12 dB for an input sensitivity of respectively $0 \text{ dBFS} = 4 \text{ dBV}$, 7 dBV or 13 dBV.
 - Two pairs of Stereo unbalanced inputs on RCA connectors.
Input sensitivity without attenuation $0 \text{ dBFS}^{*1} = 1 \text{ dBV}^{*2}$, input impedance 100 kOhm.
Analog attenuation available in three steps of -3 dB, -6 dB and -12 dB for an input sensitivity of respectively $0 \text{ dBFS} = 4 \text{ dBV}$, 7 dBV or 13 dBV.
 - One XLR Measurement microphone input, 48 Vdc Phantom power.
- Digital
 - Asynchronous USB audio, 32 bits, 44.1 – 384 kHz. ASIO driver required for 32 bit operation on PC.
 - AES/EBU, 24 bits, 44.1 – 192 kHz.
 - SPDIF, 24 bits, 44.1 – 192 kHz.
 - TosLink, 24 bits, 44.1 – 96 kHz.

Outputs

- Analog
 - 8 balanced output channels on 8 XLR connectors. $0 \text{ dBFS}^{*1} = 8 \text{ dBV}^{*2}$, 33 Ohm output impedance.
An analog output level increase of 6 dB is available through internal jumpers offering $0 \text{ dBFS} = 14 \text{ dBV}$.
 - 8 unbalanced output channels on 8 RCA connectors. $0 \text{ dBFS}^{*1} = 8 \text{ dBV}^{*2}$, 33 Ohm output impedance.

Ctrl. Interface

- REST control API over Ethernet.
- Control4 driver available.
- Trigger input and output, 12Vdc on, 0Vdc off.

Processor

- Analog Devices, internal processing sample rate 192 kHz, bit depth 64 bits.
- Bohmer Correction is a Loudspeaker In-room Energy-Time alignment that optimizes the loudspeaker room acoustic transfer function in both frequency and predominantly time domain. Working with revolutionary new algorithms it starts with a psychoacoustically based measurement method.

Alignment errors are then optimized individually, not resorting to common crude bulk correction over the entire frequency spectra. The Algorithms use psycho acoustic reasoning for alignment and correction of the loudspeaker room transfer function. The correction improves sound quality in the whole room, provides improved transient response, clarity & sound staging and gives a relaxed sound without rough edges or any booming.

Dimensions (HxWxD, inches): 4.125 x 17.5 x 12

Weight 13.5 lbs.

*¹dBFS - Decibels Full Scale, referenced to AD converter full scale input or DA converter full scale output. An output level of 0 dBFS is the maximum output voltage available from the DA converters.

*²dBV - Decibels Volt, referenced to 1 Vrms. A 0 dBV input signal has a signal level of 1 Vrms.

Wavelet App Controls

After performing either the Quick Setup or Wireless Setup, above, you can fully control your Wavelet. Please open a browser on your smart device, smart phone, or computer. Here we have opened Safari on an iPad. In the address bar, enter the IP Address that displays on your Wavelet during startup, and click Enter or Go- here the IP Address is 192.168.0.105



Tip: You can bookmark this page for future use. The bookmark button on Apple devices is the square and arrow at the bottom of the screen. Please press this button and choose Add Bookmark. Note- if you change internet service or routers, your IP Address may change- you can confirm your current IP Address by shutting down Wavelet and writing down the current IP Address when powering it back on.

The Wavelet Dashboard features most controls.

Volume can be adjusted by placing your finger on the slider, moving it, and releasing your finger to update the volume. You can use the Fine Volume Control for precise adjustments

Mute Button mutes signal at the outputs

Inputs (RCA 5 & 6 here) can be adjusted by clicking the drop down menu

Bypass enables Home Theater Bypass Mode- this can be loud, so please confirm that your Home Theater Processor Volume is low

Room Correction can be toggled Off/On, once Room Correction Setup has been performed



Apodizing allows you to choose between Apodizing and Linear DAC modes. The Wavelet features an apodizing circuit that corrects for the pre-ringing native to CODECs. Analog lovers can take advantage of balanced XLR or unbalanced RCA inputs without concern of digital artifacts. Turn on the apodization circuit by choosing “Apodizing”. When unchecked, the DAC is in linear mode, and the apodization circuit is bypassed. We recommend the Apodizing mode.

Omnio switches the Omnio technology in and out. Omnio improves channel separation and restores the directional vector relationship to depth and position cues.

M1-M8 are 8 recallable contour presets, which will bring up the saved contour settings underneath. save the contour sections at the bottom of the remote, to up to 8 recallable settings. You can click Info to see what has been saved. Clicking the Save button and choosing a location will save the currently set contour settings.

Contour Settings

The sliders can be adjusted in the same way as the volume control- by placing a finger on the center slider. Moving to the right creates a boost (more volume) and moving to the left creates a cut (less volume) in the given frequency band.

The most recent slider settings are retained permanently in the Wavelet memory- even if you turn the unit off, Wavelet will remember your settings.

Contour Settings Explanation

Before adjusting the contour settings, we recommend performing Room Correction on the Settings Page

Brilliance: controls the "air" and definition of a recording above 10kHz

Low-Treble: adjusts the brightness or forwardness above 3kHz

Upper-Bass: adjusts the fullness or bloom of vocals, cello, etc. below 300 Hz

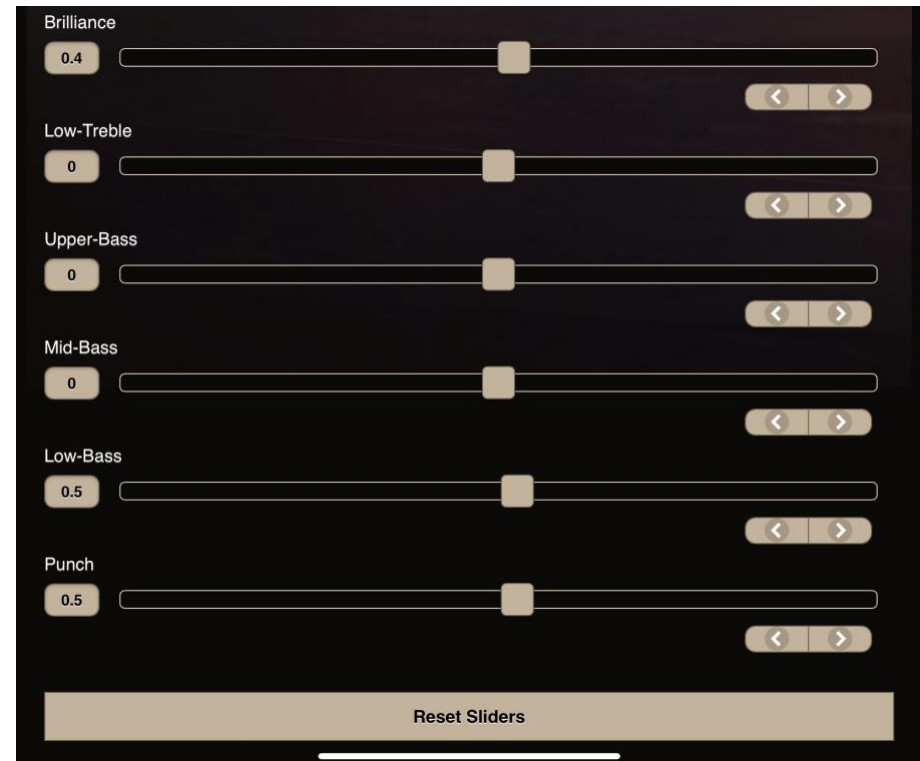
Mid-Bass: determines the apparent speed of decay of bass frequencies. Reducing will tighten, slight boosts will warm below 150 Hz

Low-Bass: adjusts the overall weight or heaviness below 75 Hz

Punch: controls the drive or impact felt from the rhythm at 55 Hz

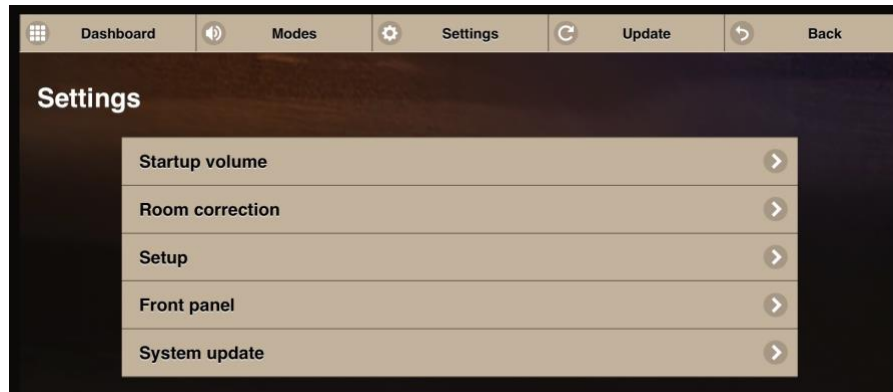
Most speakers benefit from a boost of about +2.5 dB in the brilliance, a low-bass setting of +2 dB with the punch slider set at +2.5 dB.

Pressing Reset Sliders will return all contour sliders to 0.

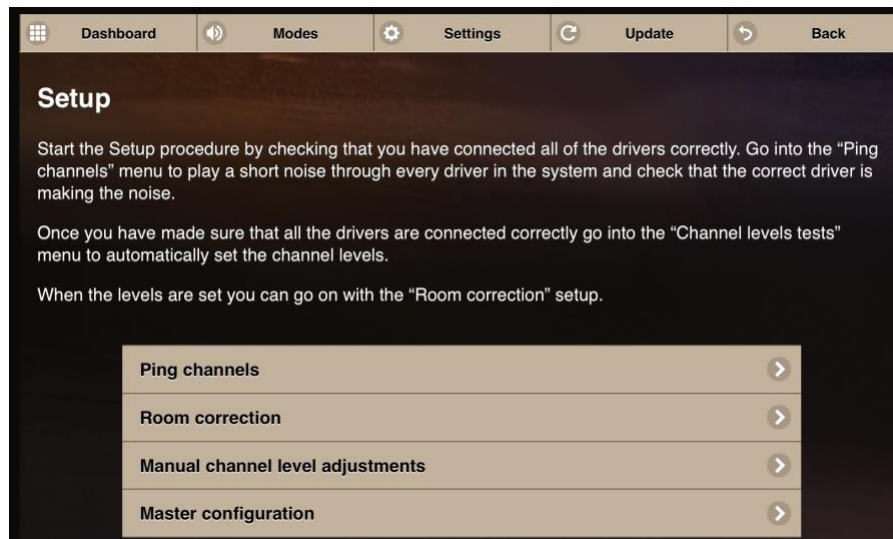


Room Correction Setup

Click the Settings button at the top. In settings, you can adjust the default startup volume level, front panel brightness, and select system update, to check and download the latest Wavelet software version.

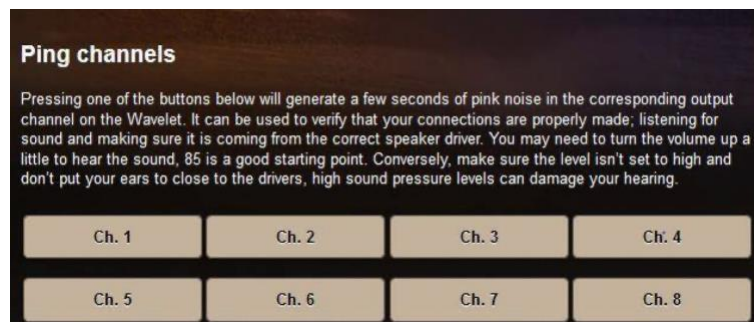


Begin by choosing Setup.



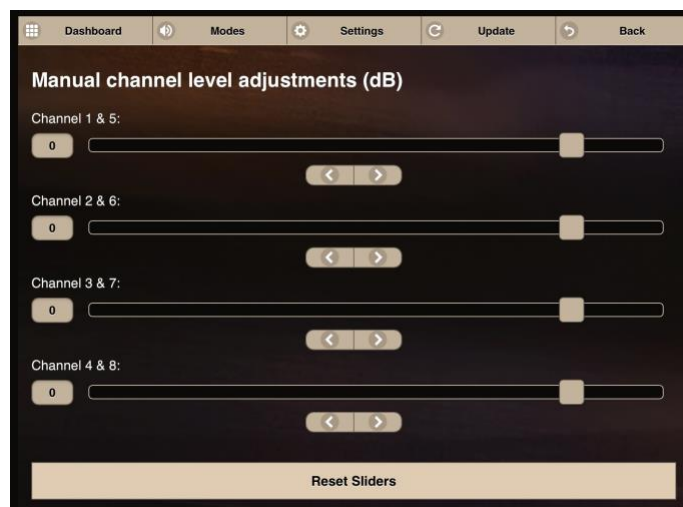
Ping channels

Please verify that your cables are correctly connected. Set the volume to at least 85, and slowly ping channel 1- you should hear output at the correct section of your speaker. Follow the included connection diagram, and ping channels to confirm bass, treble, and any sub connections are correctly connected.



Manual Channel Level Adjustments

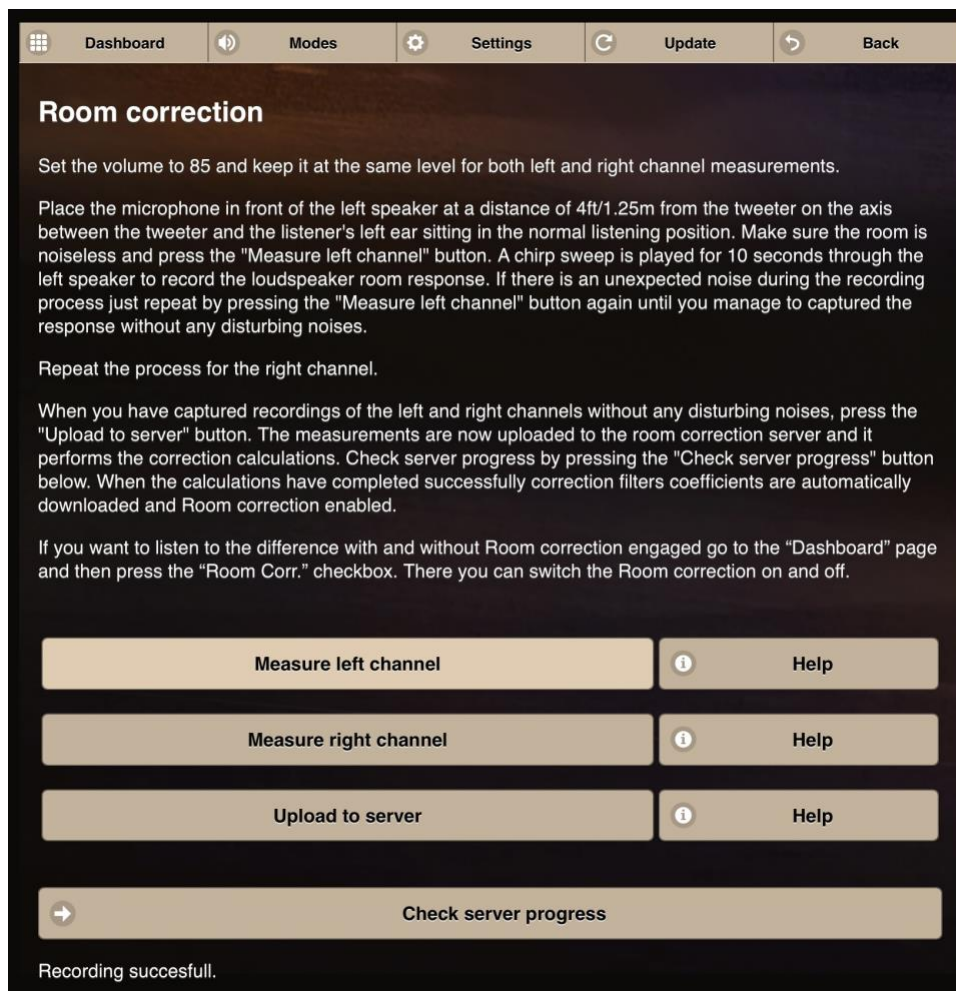
Click manual channel level adjustments. This allows you to adjust the volume for each pair of Wavelet's outputs. This is handy if you have an external amplifier with low gain- you can increase the volume to match the gain of the other amplifiers in your system.



Running Room Correction

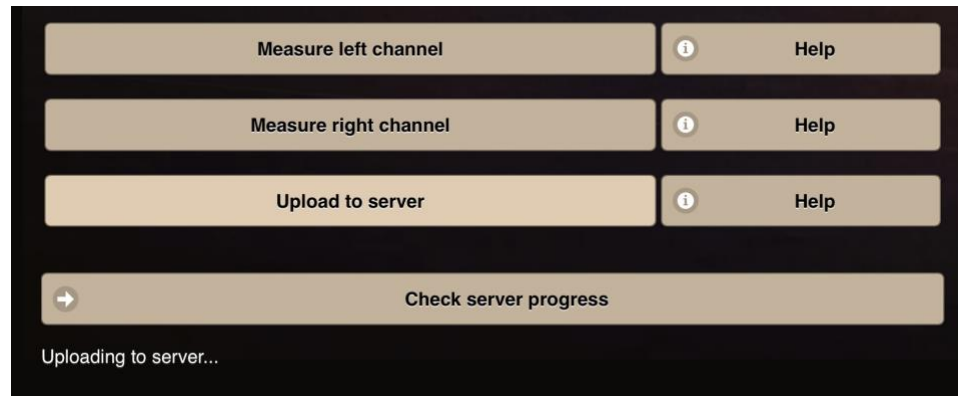
After you have pinged channels to confirm correction connections, you are ready to setup room correction. Click Settings, Setup, Room correction. Your new Wavelet comes with the microphone file preloaded, so you can click Continue with setup.

The on screen instructions will guide you through the process of using the included microphone to capture measurements.



After measuring the left channel, Recording successful will display at the bottom of the screen. If you see an error such as “Volume too low,” please check the connections and/or increase the level and measure the left channel again. A successful left channel measurement will display “Recording successful.” at the bottom of the screen, as shown above.

Repeat the process for your right speaker. Finally, click Upload to server- this sends the measurements to the room correction server which calculates the ideal settings for your speakers and automatically sends them back to your Wavelet.



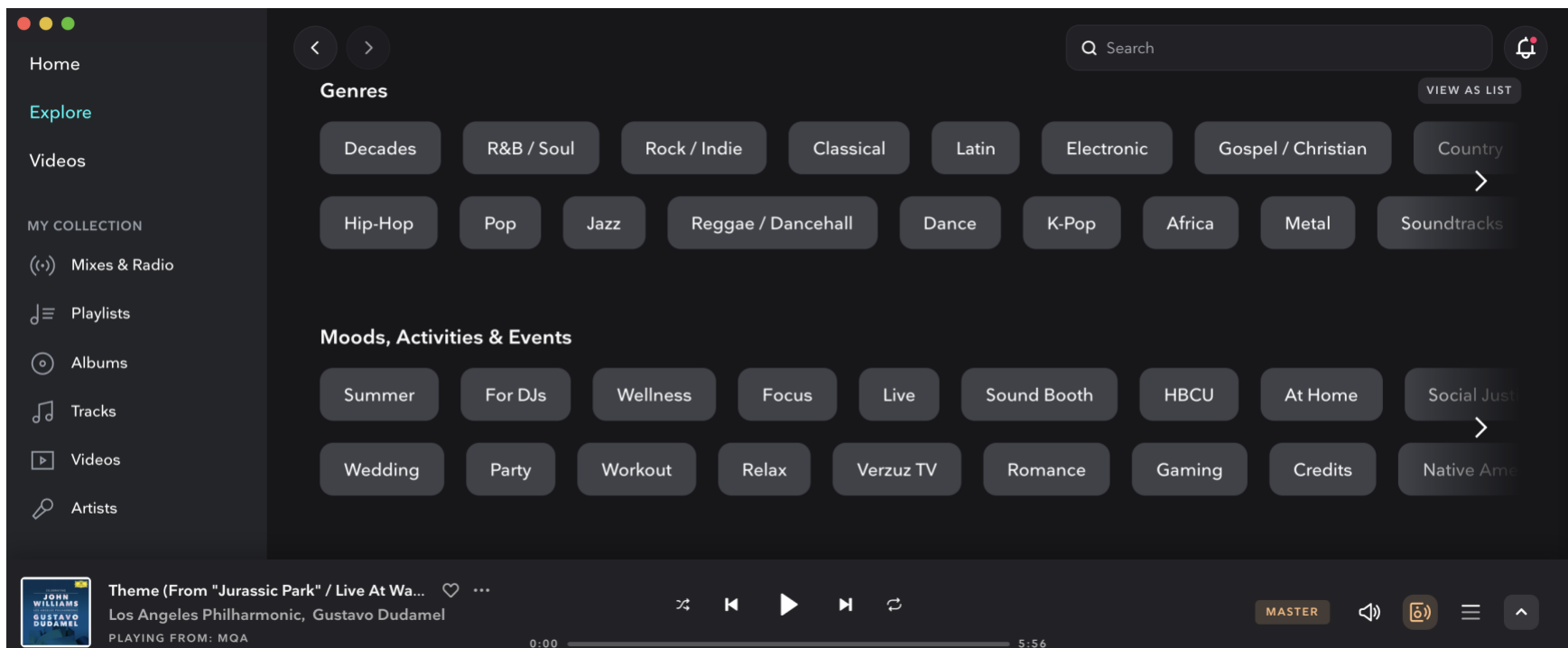
After a few minutes, you can observe progress by clicking Check server progress at the bottom of the screen. This process may take 5 - 10 minutes. You will be prompted when the process is complete.

Room Correction can now be toggled off and on, during playback, from the Wavelet Dashboard.

USB Playback

Wavelet can be used as a USB DAC, with any Mac/PC or other device that interfaces with the USB 2.0 Audio specification. Connect one end of the included USB cable to the back of Wavelet, and the other end to your playback device. Please make sure Wavelet is turned on, before starting playback program or sending digital audio to it. Digital source components (USB, SPDIF, TosLink, AES/EBU) should be powered on after Wavelet.

Select USB from the Wavelet Dashboard or the front panel input selector. Wavelet will automatically be recognized. Depending on your playback device, you may need to select Wavelet from the sound output settings on your computer.



In Tidal, for example, you simply click the speaker logo at the bottom right corner, and select Wavelet for playback.

Optimizing Analog Inputs

When using the analog inputs it is useful to optimize the input levels according to how they are being used. This will maximize the signal to noise ratio and provide optimal gain while preventing distortion from input overload.

Outboard DAC to Wavelet Analog Inputs Using Wavelet as your Preamplifier

The Wavelet has adequate internal gain for virtually any outboard DAC output. In some cases you may wish to decrease the input sensitivity of the Wavelet to accommodate an external DAC with high output level, especially if you are using one with a volume control. Each stereo pair of analog inputs of the Wavelet can be adjusted downward in -3, -6, or -12dB steps as shown below. The goal is to set the analog channel's input sensitivity so that adequate volume level is achieved from your system without any audible clipping of the inputs. When adjusted properly, the Wavelet's blue front panel display will usually be in the range of 85dB for average listening levels. When using the Wavelet's digital inputs such as the SPDIF from a CD transport, adjustments are not required - thus there are no provisions for such. Some computer hosted media software may introduce an extra level control stage to the USB output. In this case it is best to configure the software settings so a typical listening level is accomplished with Wavelet displaying 85dB.

Outboard Preamp Driving Analog Inputs Using Wavelet for Crossover/Room Correction

If you are relying on an external preamplifier to provide the both the master gain and level control into the Wavelet, you will need to optimize the inputs sensitivity of the Wavelet's analog inputs. The key is be certain that the highest volume from the preamp does not overload the analog inputs. We recommend beginning

12

with the -12dB setting initially as shown below. Further attenuation of -3, -6dB is available if needed. While you can also further reduce the volume setting from your preamp, the goal is totally avoid clipping at all levels. Again try to establish a Wavelet level setting of about 85dB for typical listening. With a little care you will have minimized your noise floor and prevented input saturation.

Rarely does the Wavelet need to be set above 90dB when optimizing to the volume settings familiar from your preamplifier.

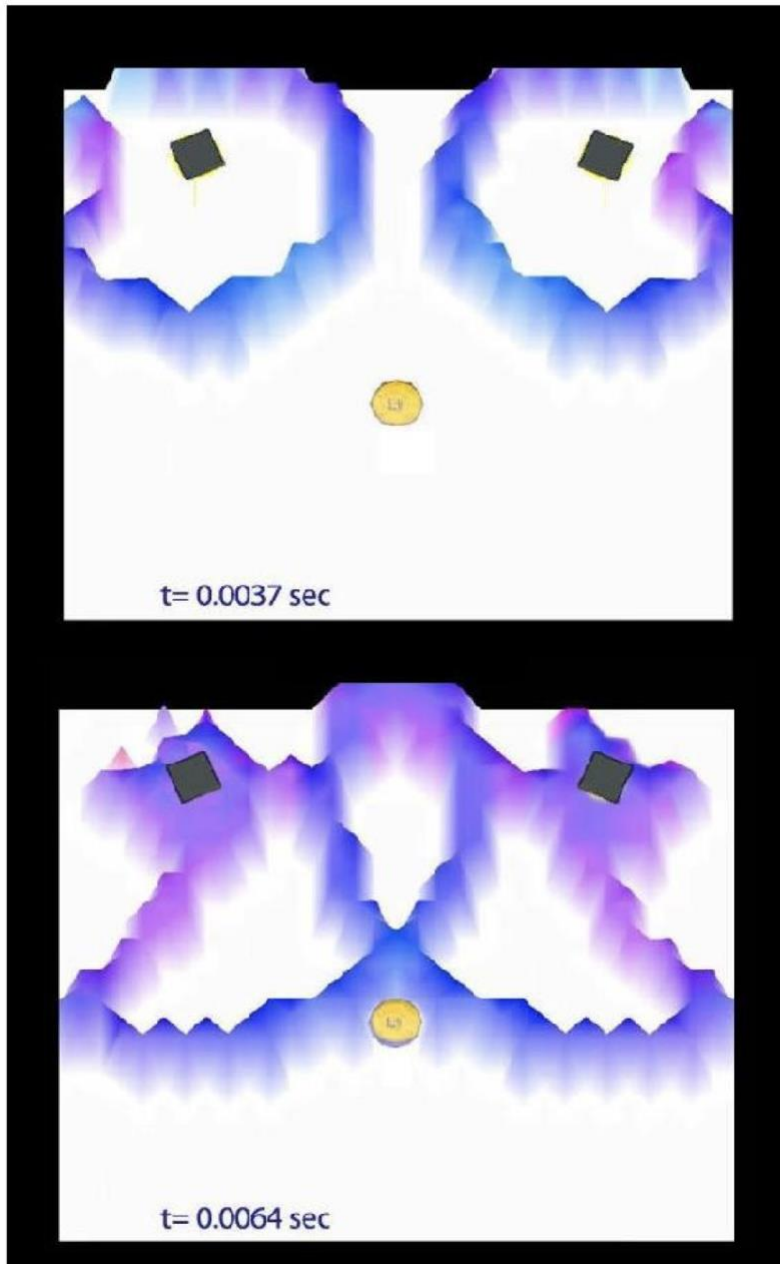
Rear Panel View of Resistive Switches

Wavelet Accessories

Inside the Wavelet processor carton packaging you'll find the included measurement microphone, and a 25 ft. XLR mic cable. At the opposite end of the carton you will find a power supply with a five pin locking connector and its 115 V AC cable, a compact remote volume control, a Wi-Pi WiFi wireless network connector or WiFi antennae and a SanDisk USB memory stick. A robust USB A/B cable is also included, to connect to a computer.



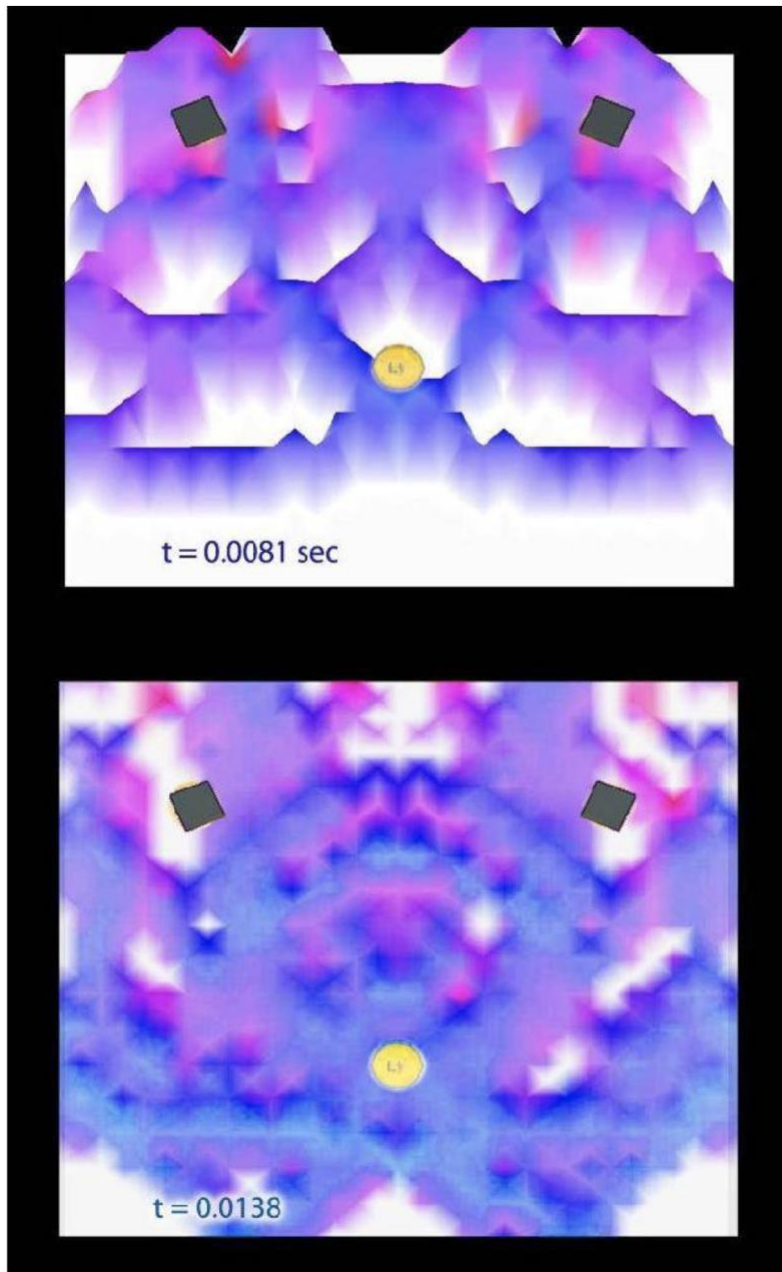
Designer Notes



Why is Room Correction Necessary?

To the left is a 2 dimensional simulation of a 1ms wave pulse from a pair of conventional speakers into a room similar to the above. Because the dispersion exceeds 60 degrees, undesirable energy from each speaker is reflected back into the room within a few thousandths of a second. This reflected energy is out of sync with the original signal.

A few milliseconds later, the first wave-front is about to reach the listener, while the reflected energy is close behind. These early reflections alter the original tonal balance. As they occur within the fusion time window, the brain cannot separate the sounds.



After less than 1/100th of a second, the room has developed a complex wave pattern with energy varying with room position. The listener is now awash in a series of wave-fronts which will soon reflect off the wall behind.

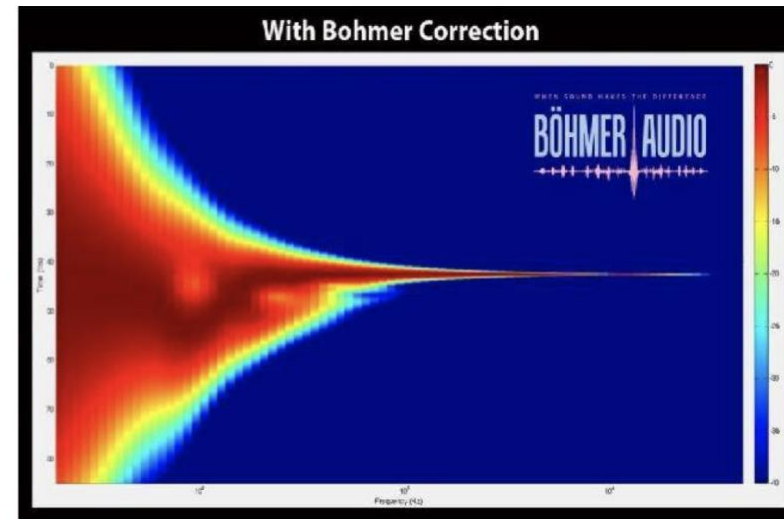
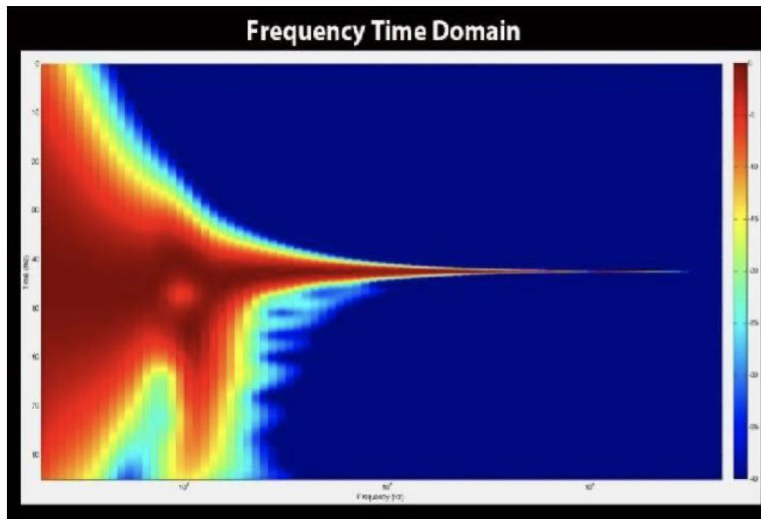
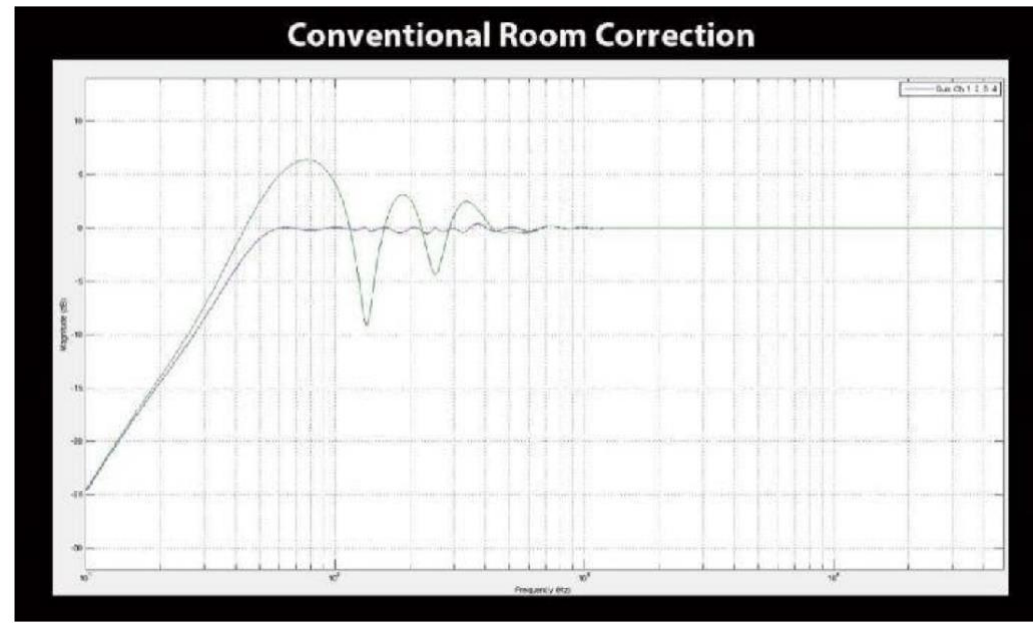
A mere 5 milliseconds later, the initial direct wave-front has now reflected off the rear wall and has made its way back to the listener.

The listener will perceive this reflection as additional bass energy, though a standing wave has not had time to develop.

It is a common misconception that such low frequency excess energy is merely the result of inevitable resonances within the room, when a large portion can be attributed to initial reflections.

To the right is the irregular frequency response of a speaker on axis in the presence of room boundaries. The smoothed curve is the result of applying conventional room correction methods.

Below left is the impact of the correction on the Frequency-Time domain. Below right is the same wavelet plot with the Bohmer correction method.



Troubleshooting

Wavelet Wireless Remote Appears to Not Connect or Displays a White Screen

- a. If you are using a wired ethernet cable from your modem/router to Wavelet
 - a. Please confirm you are using the included ethernet to USB adaptor, and are connected to the USB port in the upper right rear of Wavelet.
 - b. Check that ethernet cable is still plugged into your router.
 - c. Turn Wavelet off, wait 5 seconds, and then turn it back on. Have a piece of paper and a pen nearby- once Wavelet turns on, you will see an IP Address scroll across the screen, please notate it. IP Addresses look like 192.168.1.199 (the screen may display IP Error momentarily, this is normal as Wavelet sets up.)
 - d. Once Wavelet displays an IP Address, it has successfully connected to your router. Please open your internet browser on any device (phone, tablet, computer) and enter the IP Address into the address bar, and press Enter or Go
 - e. The Wavelet Remote is now displayed

- b. If you are using a wireless connection
 - a. Please look at the WiPi WiFi stick at the back of your Wavelet- if it is blue or blinking blue, Wavelet has successfully connected to your router, and you should check your phone/tablet/computer to confirm it is connected to the same WiFi network.
 - b. If it is not blue or blinking blue, your router has not connected to Wavelet. Please repeat the wireless setup, and make sure the SSID and Password are correct in the wifi-conf.txt on the USB memory stick.
 - c. Confirm that wifi-conf.txt does not have a number in the file name, such as wifi-conf(1).txt. If so, please delete the (1) and repeat.
 - d. If you are using a Dual Band Network, please enter the network information for the single band 2.4GHz network, not the 5GHz network. Confirm that your remote device is also on the 2.4GHz single band.
 - e. Confirm that your remote device is connected to the same network as your Wavelet (not another network in the house)

Inconsistent WiFi Connection

- a. Hardwire your router directly to the Wavelet via Ethernet to USB adapter into the USB port on the Wavelet. Reboot Wavelet, take note of IP address displayed, and continue instructions
- b. Reset your wireless router to establish a new connection and use the 2ft USB cable extension to orient the WiPi device for better reception

No Sound From Wavelet II

- a. If any digital source components (USB, SPDIF, TosLink, AES/EBU) are connected, please make sure Wavelet is turned on, before starting playback program or sending digital audio to it. USB devices speak with one another, and it is possible for their initial “handshake” to be interrupted if the source and destination are not turned on in the proper order. Digital source components should be powered on after Wavelet, then the input can be selected, and playback can begin.

Sending digital audio to Wavelet, as with many digital audio devices, can cause the sound to stop playing. If this occurs, power off your Wavelet and digital source device, then power Wavelet on, after 5 seconds you can power on digital source components, input can be selected, and playback can begin.

- b. If there aren't any digital source components, confirm volume is at sufficient level (85-90 on front panel), mute is off, and selected input source matches the audio connection at the Wavelet rear panel. Confirm cables are at correct outputs and amplifiers or active speakers are turned on.

Left Channel Pings appear on Right Channel or vice versa

- a) Incorrect speaker connection- review your hardware connection diagram to insure your current connections are correct.

Message: “Error. Volume too Low” during Room Correction

- a) Signal volume is too low- increase volume and repeat.
- b) Verify that the microphone cable is securely connected to both the microphone and back of Wavelet II.

My unit will not fully power on/clicks for a few seconds then shuts off

- a) Wavelet II was not allowed to fully boot due to receiving a premature digital signal. Please turn off all sources and streams, unplug them from the back of Wavelet II, power Wavelet II off, wait 20 seconds and power back on.
- b) Please always power Wavelet II on before digital sources.
- c) If problem persists, please press and hold down Standby button to hard reboot Wavelet II.

No audio output from speakers

- a) Please make sure the intended input source is selected.
- b) Please disable the mute function. Mute light is illuminated when mute is enabled and will not be lit when mute is disabled.
- c) Please raise the volume to 90

- d) Refer to the connection guide and confirm all inputs and outputs to the amps are correct

Distorted Sound

- a) Signal input level is too high, causing clipping. Trim the input signal by toggling down the attenuator switches on the back panel. Trims can be set at -3dB, -6db, or -12dB these values are additive and can sum up to -21dB per channel.

Loud pop on start-up

- a) Please turn off all streamers, preamps, sources and amplifiers before turning on Wavelet II.

Output level on a channel is too low or high

- a) Increase or decrease the channel level in the manual channel level adjustments.

Stereo Sound in Monophonic

- a) Unit is in Mono mode, please choose Stereo Mode.

LED Display is too Dim or Bright

- a) Click Settings, and choose Front Panel to adjust the brightness.

Wavelet II displays IP address but can't connect

- a) Wireless isolation is turned on within your router, please disengage in your router settings- this setting blocks communication from devices within the network. If Wavelet II displays an IP Address, it has connected to your router.

Warranty

Legacy Audio supports its customers and products with pride. We cheerfully warrant our amplifiers from defects in materials and workmanship for a period of three (3) years. Please register your product with Legacy Audio. Should you require service Legacy will require a proof of purchase in order to honor the warranty - so please keep your receipt.

The warranty applies to the original owner and is not transferable.

The warranty applies to products purchased from an “Authorized Legacy Dealer”.

The warranty on active components such as digital processors or internal amplifiers is limited to three (3) years of coverage.

The warranty on dealer stock will extend for a maximum of two years from invoice.

The warranty does not cover transportation costs of product to or from the customer, distributor or dealer, or related shipping damage.

The following situations or conditions are not covered by the Legacy Audio warranty:

Accidental damage, electrical abuse or associated equipment failure

Use inconsistent with recommended operating instructions and specifications

Damage caused by modification or unauthorized service

Costs associated with the removal and reinstallation of defective products. Consequential damage to other products.

Normal wear such as fading of finishes due to sunlight.

Care

If you wish to clean your Wavelet II, use a diluted ammonia based window cleaner. Do not use any abrasive cleaners or chemical solvents. Take care not to damage the aluminum body, since aluminum is a medium hardness metal and can be scratched by the careless use of tools during installation. We recommend saving your box and packing material for moving the unit.

Safety

Safety and EMC Standards

Legacy Audio's ICEpower1200AS family products have been verified to conform to the following standards.

Safety Following standards incl. compliance with the National requirements of AR, AT, AU, BE, CA, CN, CH, CZ, DE, DK, ES, FI, FR, GB, HU, IE, IL, IT, JP, KR, MY, NL, NO, PL, SE, SG, SK, SI and US.

IEC 60065:2014(8thedition)

IEC 60065 7th edition Amd1 + Amd2

EN60065:2014

EN 60065: 2002/A1:2006; EN 60065:2002/A11:2008;

EN 60065:2002/A2:2010; EN 60065:2002/A12:2011

EMC

EN 55032: 2015 (CISPR 32: 2015) Electromagnetic compatibility of multimedia equipment – Emission requirements – Class B

EN 61000-3-2: 2014 (IEC 61000-3-2: 2014) Harmonic current emission

EN 61000-3-3: 2013 (IEC 61000-3-3: 2013) Voltage changes, voltage fluctuations and flicker

CFR 47 Part 15 Subpart B (FCC): 2016 Telecommunication – Radio Frequency Devices – Unintentional Radiation – Class B

EN55020: 2007 + A11: 2011 (CISPR 20: 2006) Sound and television broadcast receivers and associated equipment – Immunity characteristics – Limits and methods of measurement

EN 61000-4-2: 2009 (IEC 61000-4-2:2008) Electrostatic discharge immunity test

EN 61000-4-3: 2006 + A1: 2008 + A2: 2010 (IEC 61000-4-3: 2006 + A1: 2007 + A2: 2010) Radiated, radio frequency, electromagnetic field immunity test

EN 61000-4-4: 2004 + A1: 2010 (IEC 61000-4-4: 2004 + C1: 2006 + C2: 2007 + A1: 2010) Electrical fast transient / burst immunity test

ESD Warning

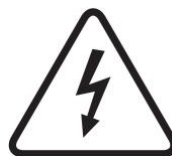
ICEpower products are manufactured according to the following ESD precautions:

ANSI/ESD-S20.20-2014: Protection of Electrical and Electronic Parts, Assemblies and Equipment.

Mechanical and Environmental Tests

ICEpower1200AS has undergone extensive environmental testing including Highly Accelerated Life Test (HALT).

Test	Acceleration	Amount
Random vibration	2.1 g _{rms} , random profile composed of 5 frequencies in the range 5 Hz to 275 Hz	3 perpendicular directions 3 x 20 min. + 3 x 10 min. + 3 x 10 min.
Shock	40 g / 26 ms to 70 g / 12 ms in steps of 10 g	6 directions, 3 shocks per direction



WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT USE THE AMPLIFIER NEAR WATER OR IN WET LOCATIONS, DO NOT EXPOSE IT TO RAIN OR MOISTURE, DO NOT EXPOSE IT TO DRIPPING OR SPLASHING FROM OTHER SOURCES, AND ENSURE THAT NO OBJECTS FILLED WITH LIQUIDS (SUCH AS VASES) ARE PLACED ON IT. DOING SO MAY RESULT IN DAMAGE TO THE UNIT AND THE RISK OF ELECTRIC SHOCK, WHICH MAY RESULT IN BODILY INJURY OR DEATH. WARNING: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE THE COVER. NO USER-SERVICEABLE PARTS INSIDE.

Do not block any ventilation openings. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus that produce heat. The power cable should be unplugged from the outlet during severe electrical storms, or when unused for a long period of time. Grounding: Adequate precautions should be taken so that the grounding provisions built into an electrical product are never defeated.

All information contained in this manual is accurate to the best of our knowledge at the time of publication. In keeping with our policy of ongoing product improvement, we reserve the right to make changes to the design and features of our products without prior notice.

A listing of Legacy Audio Dealers and Distributors can be found on the Legacy Audio website www.legacyaudio.com or by contacting Legacy Audio at: 3023 E. Sangamon Ave., Springfield, IL 62702, USA—Phone: +1 217-544-3178.





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