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USER GUIDE



Headphone Gizmo

P/N 991030

Revision 1.1 - 11/2021

Welcome to the world of Angry Audio, home of the audio gadgets and gizmos.

Imagine it's 1980 and you're getting a little dozey in the middle of your overnight air shift, so you queue up "American Pie", "Stairway to Heaven", and "Us and Them" on your triple decker cart machine, crack open the rotary pots on your analog board, and buy yourself 24 minutes or so of snooze time. But you oversleep a little - around 40 years - and wake up in what was yesterday's Studio of Tomorrow, a.k.a. today's Studio of Today.

Everything is different with the exception of the coffee and the fact that you still have to get the basics right to get the most out of the new gear and tech. Good audio is made one step at a time and by sweating the details.

Accordingly, every audio Gizmo and Gadget – including the Headphone Gizmo – is designed to solve common yet critical problems and is meticulously engineered with performance and longevity in mind to deliver pristine audio for years to come.

Our promise and guarantee.

We love the Headphone Gizmo and we think you will too, but maybe you'll be the one customer who doesn't. However, unlike that timeshare you bought that is not only a thorn in your side but will be an albatross to your family for generations to come, we'll buy your Gizmo back within 30 days if you change your mind.

Plus, every Gizmo and Gadget is warrantied to be free from defects in parts and workmanship for two full years after you purchase it. If a Gizmo or Gadget fails within this time period, Angry Audio, at its discretion, will repair or replace it so long as you let us know of the failure within the warranty period and can provide proof of purchase in the form of a dated sales receipt.

You can call us at +1 615-763-3033 or reach out to us online via our website at www.angryaudio.com/contact.

Making a good first impression.

When you unbox your Headphone Gizmo, we really hope it makes a good first impression and you take a moment to appreciate the lengths we've gone to in order to create a "built for broadcast" product. All of our products are over-engineered to provide long-term reliability and guaranteed RFI immunity.

Some of this is apparent – such as the durable powder-coated steel enclosure - but much of this goodness is invisible, like the premium components within. Even if you can't see it, you'll hear it!

A word or two about safety.

Most of this falls under the category of common sense, but our law firm – which will be staffed soon by people who actually passed the bar exam – gets really excited (in a bad way) when we don't caution you against trying to earn a Darwin Award while operating one of our products.

Headphone Gizmos are pretty darned safe, much safer than the 240V electric toothbrush we once tried to market ("Brush your teeth in ten seconds!") but they are intended to be used by qualified personnel only. To avoid electric shock, do not open the unit or attempt to perform any servicing unless you are qualified to do so.



The Headphone Gizmo has an external power supply. Hazardous voltages are present within the supply and at the input of the Headphone Gizmo. Voltage may still be present on certain components even when the unit is unplugged.

The power supply cord is the primary disconnect device and so the outlet providing power to the gadget should be easily accessible. In other words, make sure you can back out of making any bad electrical decisions by yanking the plug. Do not overload outlets.

Do not expose your Gizmo or its power supply to rain or moisture. Any electronic device can fail without warning; do not use this product in applications where a life threatening condition could result due to failure.

Do not feed your Gizmo after midnight. If you don't know why that's important, you'll need to set your time machine to 1984, head to Blockbuster, and rent a VHS copy of "Gremlins." Be kind, rewind.

AN IMPORTANT WORD ABOUT VOLUME: Using headphones at high volume levels can result in hearing damage or permanent hearing loss. Avoid prolonged use at high sound pressure levels. If you experience discomfort or ringing in your ears, immediately reduce the volume or discontinue using the headphones.

Why the Headphone Gizmo?

A place in which to plug studio headphones is hardly a novel idea so you're forgiven for asking why the world needs the Headphone Gizmo (but trust us, it does). For better or worse, radio jocks love loud headphones. Raise your hand if you've ever walked into a studio and thought the monitors were cranked up (though a bit thin-sounding) only to find the ruckus was coming from the talent's headphones, sometimes jumping up and down on the console, sometimes around their necks, and sometimes over their bleeding ears.



The Headphone Gizmo delivers enough volume to satisfy even the most decibel-hungry studio dweller. And if we're honest making things loud isn't all that tough but doing so while maintaining audio that is clean, transparent, and preserves the nuance and detail in the music is – but we've done it thanks to some impressive precision analog circuitry.

We also recognize that headphones are highly personal things. Everyone has their favorite cans, but almost no one concerns themselves with impedance when making their choice. This can be problematic with most headphone amps since they are typically optimized for either a low or high impedance load. Not so the Headphone Gizmo which provides the high current needed for today's efficient, low impedance earbuds as well as the high voltage swing required by less efficient, high impedance headphones. No matter what you plug in, you'll never run out of power.

As a bonus: Thoughtful design.

The Headphone Gizmo includes 1/4" and 1/8" jacks (no more hunting for those adapters that do the disappearing act) and can be ordered with or without a volume control depending upon your application.

Power is provided by the included wall adapter or from a StudioHub+ power inserter. Audio comes in through a balanced stereo analog input on an RJ45 jack using the popular StudioHub+ pinout. An RJ45 audio output daisy chains the input audio and power to subsequent devices to make feeding multiple guest positions a cinch.

Installing your Headphone Gizmo.

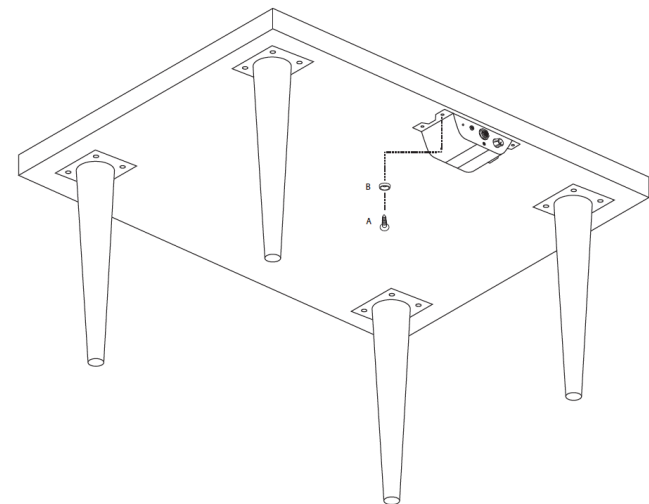
Mounting headphone jacks under the counter makes sense since it's convenient and preserves counter-top space, so that's where the Headphone Gizmo is designed to live.

Most under-counter solutions are bulky and don't feel very good when they forcefully contact your knee though the resulting string of expletives can be pretty entertaining (not to mention a good test of your profanity delay). In contrast, the Headphone Gizmo features a low-profile design with rounded corners and is recommended by orthopedic surgeons*.

The mounting hardware itself is integrated into the Gizmo. Use the four provided No. 6 screws (A) and cup washers (B) as shown in the diagram below to secure the Gizmo to the underside of a plywood counter, desk, or table.

Drilling pilot holes is recommended to reduce the risk of splitting the wood.

Different hardware (not supplied) may be needed if the mounting surface is a different material.

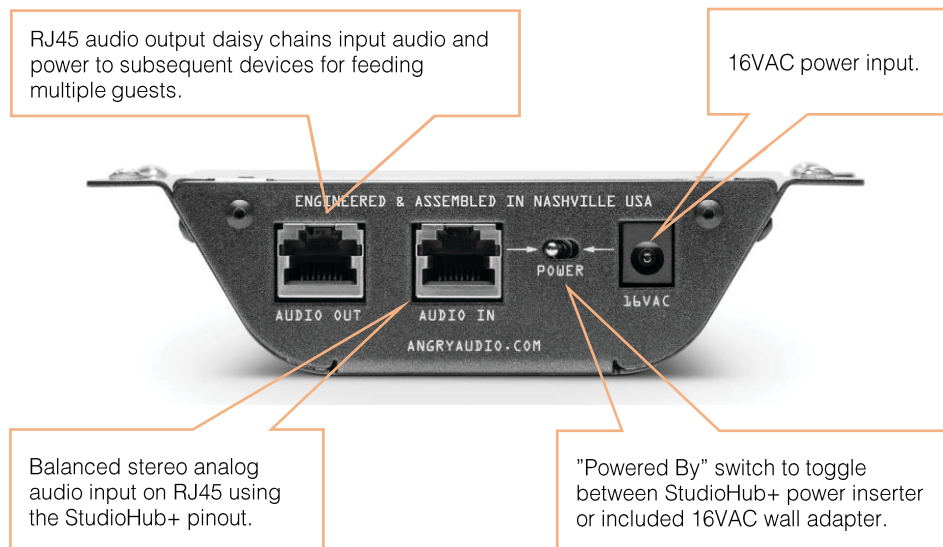


* - That part about the orthopedic surgeons? That's not true.

Front controls and connections.



Rear connections.



Power

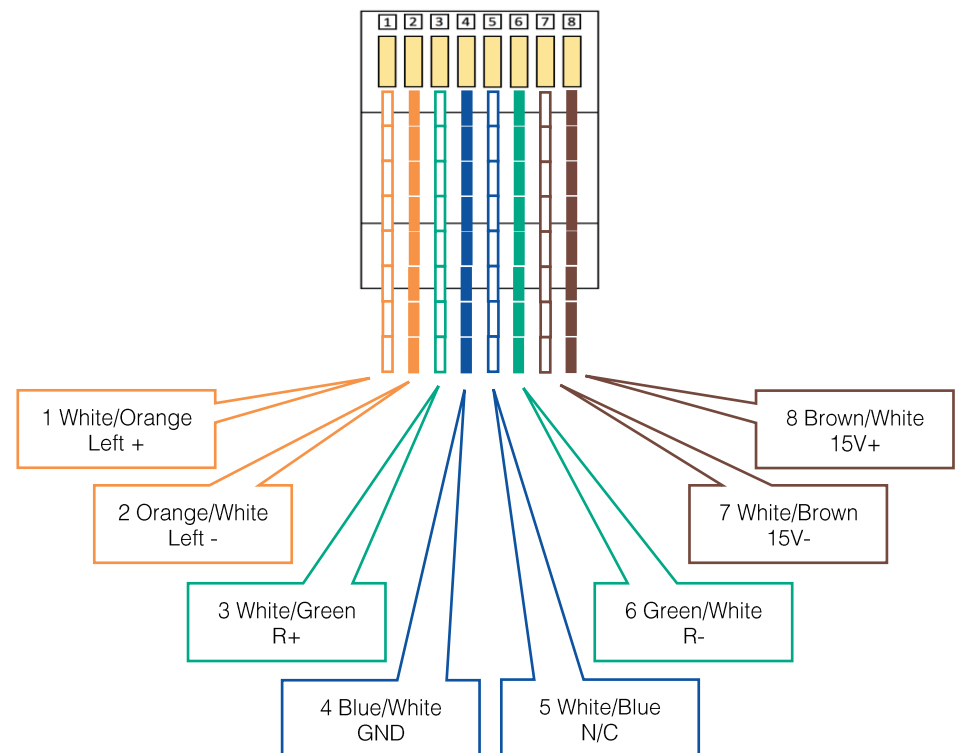
Power is provided either by the included 16VAC power adapter or through the use of a StudioHub PS-CUBE power inserter.

When multiple Headphone Gizmos are daisy-chained together, power is conveyed through from the Audio Output of the first Gizmo to the Audio Input of the second Gizmo, from the Audio Output of the second Gizmo to the Audio Input of the third Gizmo, etc. This is true regardless of how the first Gizmo receives its power, a handy feature if some Gizmos are not located near power outlets.

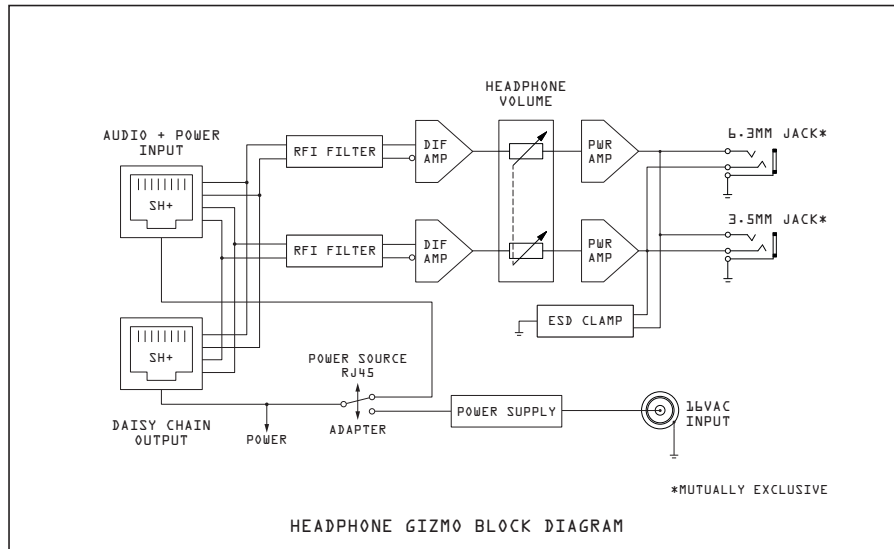
IMPORTANT: Make all audio connections and place the "Powered By" switch in the desired position BEFORE applying power. Hot-plugging or changing the position of the switch when the Gizmo is powered can cause damage.

RJ45 Audio Pinout

The RJ45 jacks use the popular StudioHub+ pinout:



The Ins and Outs of Your Headphone Gizmo



Compliance in the U.S.

In the U.S., this Gizmo complies with the limits for a Class A computer device as specified by FCC Rules, Part 15, Subpart J, which are designed to provide reasonable protection against such interference when this type of equipment is operated in a commercial environment.

...and in Canada.

In Canada, this Gizmo does not exceed the Class A limits for radio noise emissions set out in the Radio Interference Regulations of the Canadian Department of Communications.

...and in Europe.

This Gizmo complies with the requirements of the EEC Council Directives 93/68/EEC (CE Marking), 73/23/EEC (safety – low voltage directive), and 89/336/EEC (electromagnetic compatibility). Conformity is declared to standards EN50081-1 and EN50082-1

Box Includes:

Headphone Gizmo
Wall adapter power transformer

Part Numbers

Headphone Gizmo With Volume Control

North America (115V)	Part No. 991030
Australia (230V)	Part No. 991030A
Europe (230V)	Part No. 991030E
United Kingdom (230V)	Part No. 991030U

Headphone Gizmo Without Volume Control

North America (115V)	Part No. 991030X
Australia (230V)	Part No. 991030XA
Europe (230V)	Part No. 991030XE
United Kingdom (230V)	Part No. 991030XU

Specifications

Connections

Audio Input and Output	RJ45 jack, StudioHub+ format
Headphone Outputs	1/8" (3.5mm) and 1/4" (6.3mm) TRS
Power	16VAC (115V or 230V) via wall adapter or +/-15VDC via RJ45 audio input jack

Headphone Amplifier

Nominal Input Level	+4dBu
Maximum Input Level	+26dBu
Input Impedance	20k Ω Fully Balanced
Headphone Impedance	$\geq 16\Omega$
Output Voltage	+20dBu
Output Power	2.6W per channel at 16 Ω
Output Current	400mA
Frequency Response	20Hz - 20kHz ± 0.1 dB
THD+N	$\leq 0.003\%$ (20Hz - 20kHz)
Noise	≤ -96 dBu (20Hz - 20kHz unweighted)
Dynamic Range	≥ 115 dB
CMRR	≥ 80 dB (1kHz)

Power and Environmental

Power Input (120V Adapter)	120VAC 60Hz
Power Input (230V Adapter)	230VAC 50Hz
Power Output (Adapter)	16VAC, 500mA, 8.0W
Operating Temperature	0 $^{\circ}$ to 40 $^{\circ}$ C (32 $^{\circ}$ to 104 $^{\circ}$ F)
Storage Temperature	-20 $^{\circ}$ to 45 $^{\circ}$ C (-4 $^{\circ}$ to 113 $^{\circ}$ F)
Relative Humidity	0% to 90% non-condensing

Product Weight & Dimensions

Gizmo Dimension	5.6w x 4.0d x 1.4h in. (14.40 x 10.16 x 3.56cm)
Shipping Dimensions	8.0w x 6.0d x 3.0h in. (20.32 x 152.4 x 76.2cm)
Shipping Weight	3.0 pounds (1.36 kg)

So THAT'S how they do it.

