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USER GUIDE



Guest Gizmo

P/N 991021

Revision 1.3 - 08/2020



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

The audio world is filled with complex, high-tech gear. Much of it bristles with seductive shapes and eye-catching lights and displays, and all of it promises to make things sound better and open up new creative possibilities.

But in order for those products to shine, you still have to get the basics right and sweat the details. Good audio isn't made by one component. It's made by getting things right every step of the way, especially the little things.

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

Our promise and guarantee.

We know you'll love your Guest Gizmo, but sometimes things happen that defy logic and reasoning and you just might be one of the 0.00001% who don't. That's why we give you 30 days to spend some time together, you and your Gizmo, and if you find you have irreconcilable differences during that time, we'll buy it back.

Plus, every gadget is warrantied to be free from defects in parts and workmanship for two full years after you purchase it. If a gadget fails within this time period, Angry Audio will, at its discretion, 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 us online at www.angryaudio.com/contact.

Making a good first impression.

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

Some of this is apparent - such as the rugged powder-coated steel chassis - but much of this goodness is invisible, like the premium components used in the audio path. 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 the one person who endeavors to install their gadget during a thunderstorm waving a five iron in the air and riding a unicycle (you know who you are) ruins it for everybody, so bear with us while we appease our legal counsel.

Guest Gizmos aren't table saws or 1950's space heaters with frayed cloth cords and no tip-over switch, but still, 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 Guest Gizmo has an external power supply. Hazardous voltages are present within the supply and at the input of the Guest 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.

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.

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 take financial advice from that friend who constantly hits you up for money. Do not believe everything you read in user manuals – we make a lot of this stuff up to fill space.



Why the Guest Gizmo?

Studio guests – being human (for the most part) – will inevitably feel the need to make some sort of undesirable noise while on the air. They cough and sniff and clear their throats, which is almost as annoying to listeners as the over-processed car dealer and cheap mattress commercials clogging up your stop sets.

Enter the Guest Gizmo, whose bright red “cough” button empowers your guests to hack up as many hairballs as they like without telegraphing their disgusting functions to your audience.

How does it work?

Normally, the cough button on the Guest Gizmo is illuminated a bright, easy-to-find red. When your retching guest feels the urge, they simply depress the button which extinguishes the light and mutes their mic via your mixer’s microphone insert jack. When they’re once again ready to make words instead of phlegm, they release the button and their mic unmutes.

Alternately, the Guest Gizmo can be employed as an On/Off/Cough button by using the logic port. In this mode, when the Gizmo is OFF, both the mic and the light are off. Pushing the button turns the Gizmo and the light back ON; however, audio remains muted until the button is released. If the Gizmo is ON, pushing the button immediately mutes the audio. If the button is released within 500ms of being pressed, the Gizmo turns OFF. If the button press lasts longer than 500ms, it will act as a momentary cough/mute button and audio will be restored when the button is released.

If you have one of those trendy, highly-desirable mic arms with the built-in LED, the Guest Gizmo can be wired up to illuminate the tally light. If you have a broadcast console with built-in muting logic, the Guest Gizmo can drive it with its dry relay contacts.

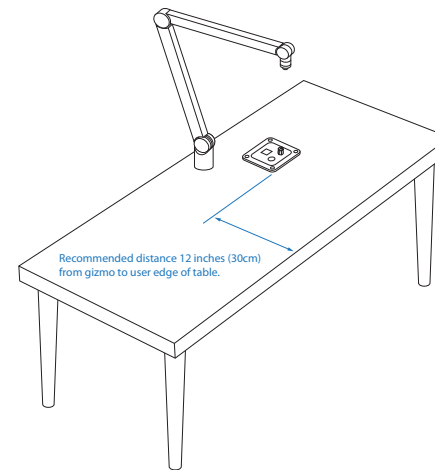
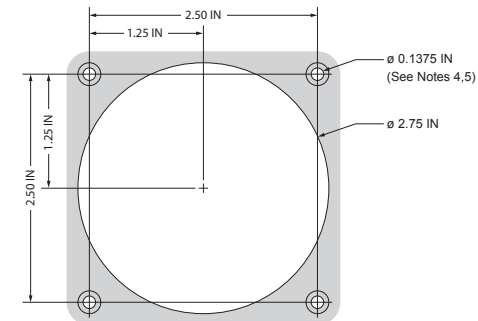
But wait - there’s more!

Every guest needs headphones, so we’ve incorporated a high-quality stereo headphone amp and individual volume control into each Guest Gizmo. It has enough oomph to drive just about any cans, including the high-impedance models often found in radio stations. Warning: 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.



Installing your Guest Gizmo.

The Guest Gizmo is designed to be installed directly into your studio furniture in a location that is easily accessible to your guests. The only tools required are a power drill and a 2 3/4" hole saw to create the grommet hole; a router is not required. The Gizmo is then secured with four screws. Spacing and dimensions are shown below. A handy to-scale template is included for printing on Page 9.



The Guest Gizmo should be placed far enough away from the guest to prevent accidental button presses on the top side (and painful accidental interaction with the guest’s knees underneath) but close enough to allow quick access when the urge to make unsavory noises arises. Ideally, that’s about 12” - 15” (30 - 38 cm) from the front edge of mounting surface.

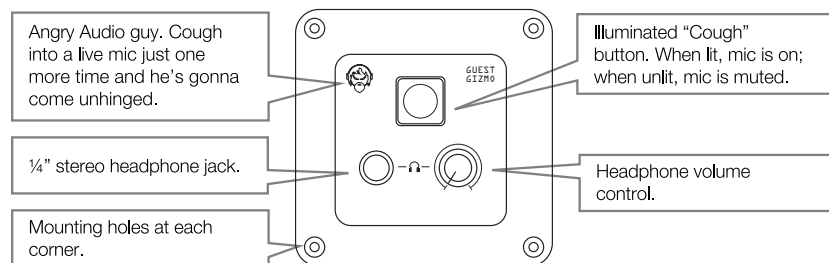
Two anchor holes are provided on the back of the gizmo to secure the supplied tie wraps. We recommend bundling the audio cables to one side and the power and logic cables to the other.

Using right angled TRS plugs can provide a bit of additional room. The button on the Guest Gizmo is a 1cm square (0.40”) film cap type, so you can insert a custom label indicating “COUGH”, “MUTE”, “ON/OFF” (or even “LAUNCH” if you’re feeling sporty) using any clear printer label media. Removing the cap takes little force but a good grip. Wide jaw long-nose pliers work well; use caution.

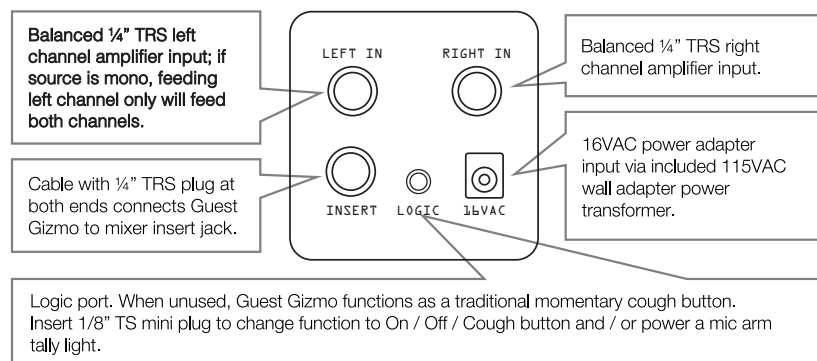
For a different look, try reverse printing so that the word is clear on a black background, causing the text to glow red when the LED illuminates. Note: If glowing red words suddenly render sinister messages, disconnect your Gizmo immediately and contact a priest.



Front controls and connections.



Rear connections.



Headphone input and output.

The audio inputs for the Guest Gizmo's headphone amplifier are located on the back side and are labeled "Left In" and "Right In". They provide a balanced, nominal +4dBu level on 1/4" TRS (tip-ring-sleeve) jacks. If a stereo feed is available, use both the Left and Right inputs. If the source is mono, feeding the left input only will automatically send the audio to both the left and right channels of the headphones.

The standard 1/4" (6.35mm) TRS headphone output jack is located on the front side with a volume control to allow guests to set their own monitoring level. Most professional headphones that have a 1/8" (3.5mm) "mini" plug come with a screw-on adapter for 1/4" connections, but keeping a stash of 3.5mm female stereo to 6.35mm stereo male adapters will ensure you're prepared if a guest arrives with consumer earbuds to which they are emotionally attached.

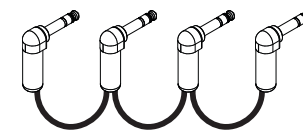
Insert Jack.

Using a cable with a 1/4" TRS connection at both ends, connect one end to the mixer insert jack and the other to the insert jack on the Guest Gizmo.

Connecting multiple Gizmos.

You may want to feed multiple Guest Gizmos from a single audio source. Thankfully, the Guest Gizmo's input circuit is balanced and bridging, allowing the connection of multiple Gizmos in parallel with minimal insertion loss by way of a daisy chain cable as show here.

Using shielded two-conductor audio cable, connect all sleeve connections together, all tip connections together, and all ring connections together. One plug is used to connect the first Gizmo to the audio source.



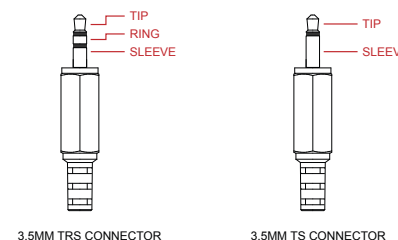
You'll need as many additional plugs as you have Gizmos. Stereo audio requires two cables. Another option is to purchase a ready-made splitter such as the Galaxy Audio Jacks in the Box which takes a balanced input signal and replicates it on four balanced outputs to feed each balanced Gizmo input. Two splitters are required for stereo.

Please note that while your Gizmo's headphone outputs also use a 1/4" TRS connection, it will not work to directly feed another Gizmo's input. If using a headphone output is your only option, you can make it work by using a 1/4" TRS stereo female to 2 x 1/4" TRS mono male splitter.

The logic port.

With nothing plugged into the logic port, the Guest Gizmo acts as a traditional cough button: The mic is muted when the button is pressed and held, then unmuted when the button is released.

The logic port can also function as an On/Off/Cough button (as described on Page 3) by using the logic port and a 3.5mm TS (tip-sleeve) connector. In this configuration, the tip provides +12VDC when the Guest Gizmo is ON and the button is illuminated.



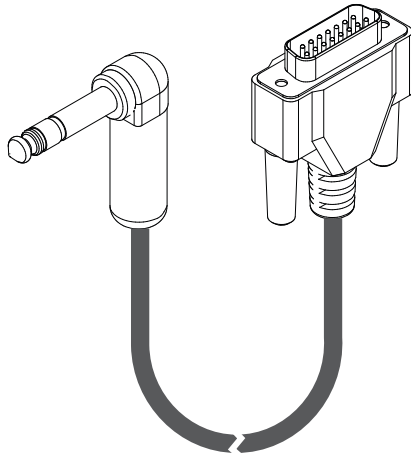
The use of the TS connector also allows the Guest Gizmo to drive a mic arm tally light by connecting the tally light between the tip and sleeve conductors, paying attention to polarity so that the tally is lit when the button is lit. If you want to drive a tally light but prefer the Guest Gizmo to behave as a cough button, use a TRS (tip-ring-sleeve) connector instead, connect the tally between the tip and sleeve conductors, and leave the ring contact open.

Using the Guest Gizmo with broadcast consoles.

The Guest Gizmo presents fully isolated dry contacts to its Insert jack that follow the status of the front panel button. If you are using a broadcast mixing console with built-in muting logic, you will use the Insert jack to activate it.

When the button is illuminated, the tip and ring are shorted together. When not illuminated, the ring and sleeve are shorted together. These contacts will short or open the logic circuits on your console. As different consoles have different logic schemes, please check your console manual before wiring it up.

In general, though, an active low connection will need to be pulled to ground when muted, while an active high connection will be pulled to logic supply when muted. In this example, we show how to connect the Guest Gizmo to an Axia radio console using a DB-15 sub to 1/4" TRS connector.



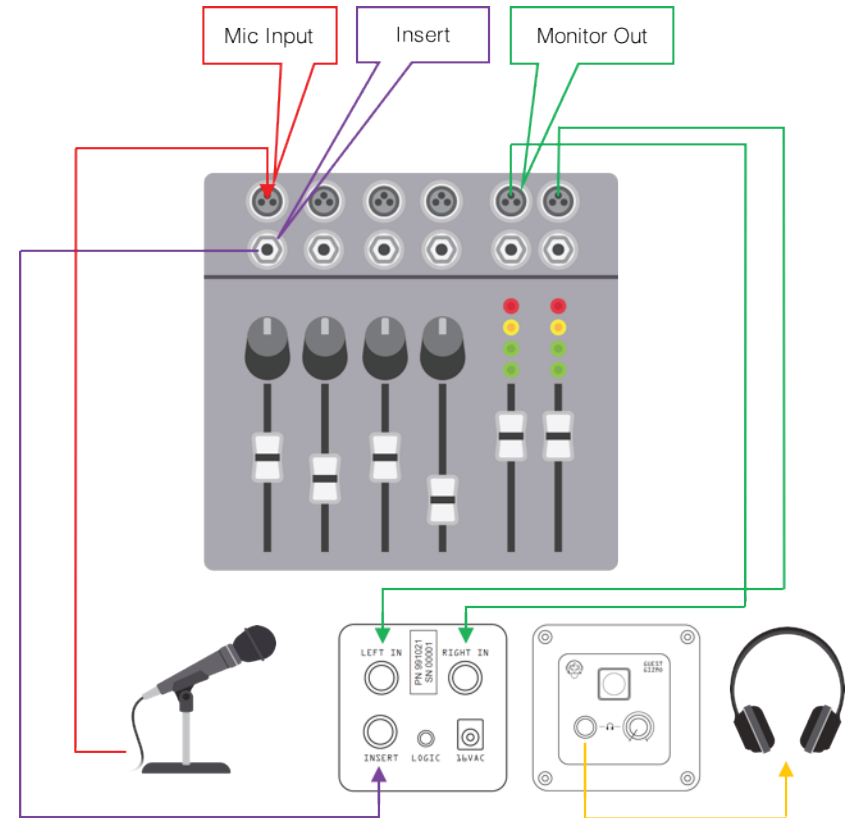
GUEST GIZMO INSERT JACK

TIP	OPEN WHEN MUTED
RING	RELAY COMMON
SLEEVE	CLOSED WHEN MUTED

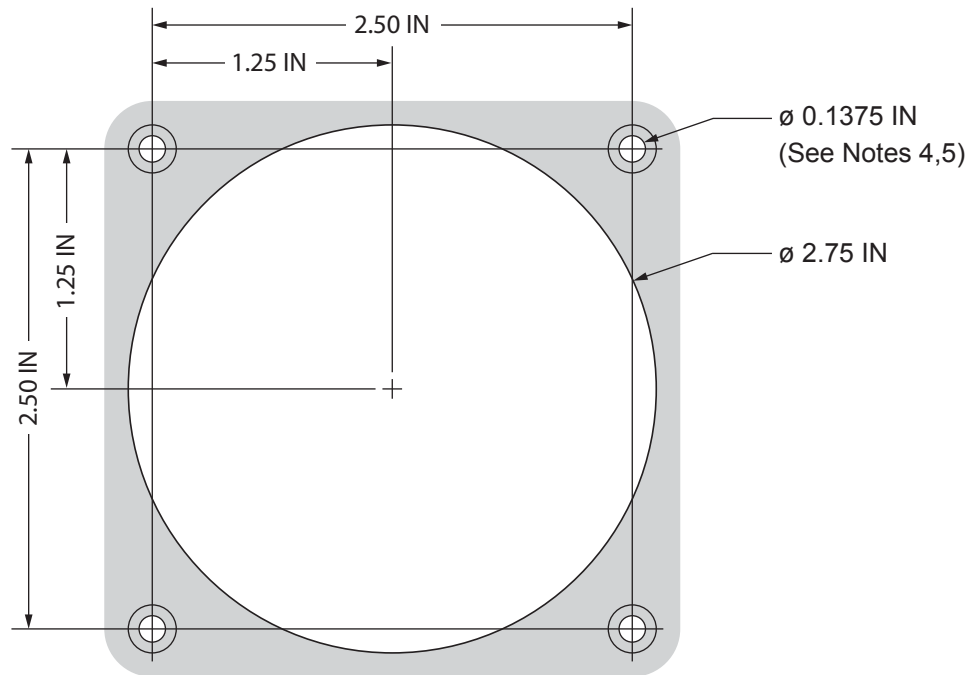
AXIA GPIO LOGIC PORT
CONFIGURED FOR GUEST MICROPHONE

PIN 01	ON TALLY LAMP
PIN 02	OFF TALLY LAMP
PIN 03	TALK TALLY LAMP
PIN 04	MUTE TALLY LAMP
PIN 05	NOT CONNECTED
PIN 06	NOT CONNECTED
PIN 07	SOURCE COMMON
PIN 08	LOGIC COMMON
PIN 09	LOGIC +5VDC SUPPLY
PIN 10	SOURCE SUPPLY
PIN 11	ON COMMAND
PIN 12	OFF COMMAND
PIN 13	TALK (TO CR) COMMAND
PIN 14	MUTE COMMAND
PIN 15	NOT CONNECTED

Wiring up the Guest Gizmo to a mixer.



One handy-dandy printable template.



This template can be used as a guide for locating holes. Your printer must be set to print this page at 100% (actual size). If your printer shrinks or enlarges the image to fit the page, the dimensions will be wrong. Always measure the printed image with a ruler to verify that the printed dimensions match the actual size.

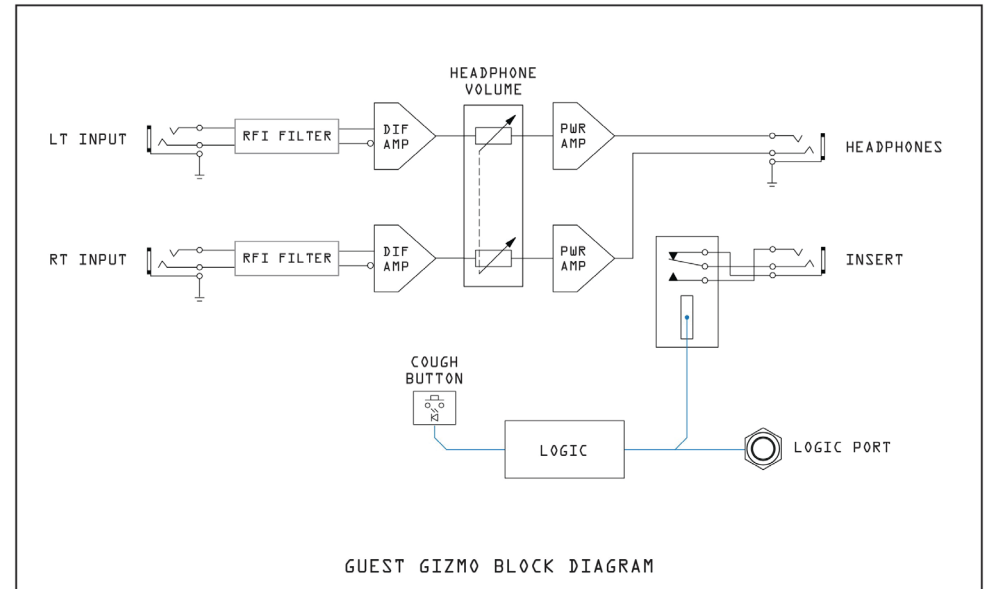
Once you've decided on the location of your Guest Gizmo, tape the template to your desktop. Remember to leave at least 12 inches between the edge of the desk nearest the guest and the Gizmo. Use an awl or center punch to mark center of all 5 holes, then remove the template.

Drill the 2.75" diameter center hole; this hole must go completely through the table or desk.

For hardwood, plywood, or MDF desktops, drill a 1/16" pilot hole for each corner hole, then use the four included flathead wood screws to secure the Gizmo to the surface. Do not over-tighten the screws.

For desktops made of other materials including stone or glass, or made of hollow (honeycomb) construction, the corner holes should be 0.1375" diameter through-holes in order to allow a flathead bolt to pass through the desktop and be secured with a nut beneath. This hardware is not included.

The flow of electrons within the Guest 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.



Riveting data about your Gizmo.

Part Numbers

Guest Gizmo	
North American Version	991021 115VAC USA Power Plug
Export Versions	991021E 230VAC Europe Power Plug
	991021A 230VAC Australia Power Plug
	991021U 230VAC UK Power Plug

Pushbutton Switch

Momentary film insert type, LED illuminated

Connections

Left/Right Inputs	Balanced female +4dBu nominal 1/4" TRS jacks
Insert	Balanced female 1/4" TRS jack
Headphone Output	Balanced female 1/4" TRS jack
Logic Port	3.5mm TRS jack
Power	16VAC (115V)

Headphone Amplifier

Nominal Input Level	+4dBu
Input Impedance	20kΩ Fully Balanced
Min. Headphone Impedance	16Ω
Maximum Output	+18dBu
Output Impedance	10Ω
Frequency Response	20Hz – 20kHz, +/- 0.2dB
THD + N	≤0.008% (20Hz – 20kHz)
Noise	≤-90dBu (20Hz – 20kHz unweighted)
Maximum Power	550mW per channel at 75Ω

Power and Environmental

Power Input (Adapter)	120VAC 60Hz
Power Output (Adapter)	16VAC, 500mA, 8.0W
Operating Temperature	0° to 40° C (32° to 104° F)
Storage Temperature	-20° to 45° C (-4° to 113° F)
Relative Humidity	0% to 90% non-condensing

Product Weight & Dimensions

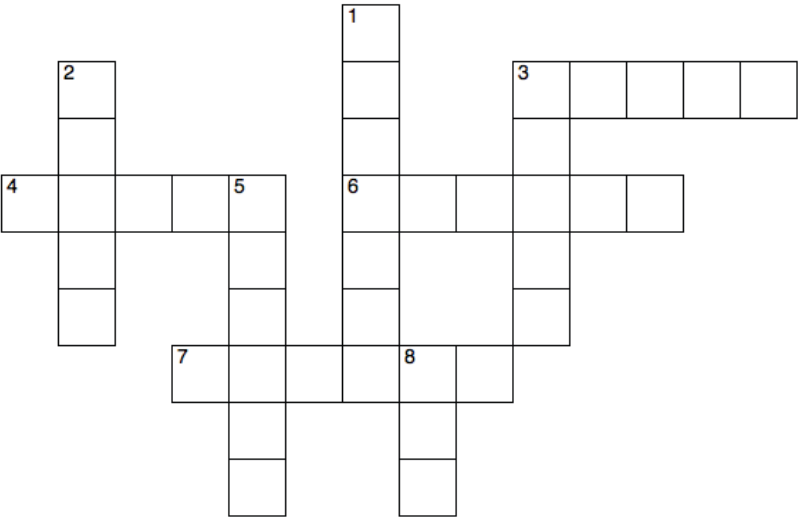
Shipping box	9in x 5in x 5in, 4 pounds
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Box Includes:

- Guest Gizmo
- StudioHub Dual TRSM to RJ45 adapter
- 3.5mm to screw terminal adapter
- Wall adapter power transformer

Well, this is awkward.

It seems we have an even number of pages to work with here, but have only enough compelling information to fill an odd number. Let's use this opportunity to work a fun crossword puzzle and keep our gray matter from going mushy! The answers are at the bottom of the page. Don't cheat. We can see you and won't think twice about ratting you out.



ACROSS

- 3. Coughing guests make us _____.
- 4. The person in the studio most likely to cough.
- 6. Anyone caught bringing drinks here may get beaten with a rubber hose.
- 7. It's first.

DOWN

- 1. A mixing desk, or something you might do to someone in distress.
- 2. The wretched noise we're trying to eliminate with this device.
- 3. It's what we're passionate about.
- 5. The veggie that's really a fruit.
- 8. The very end of a 1/4" connector, or something a pro might give you

ANSWERS
ACROSS DOWN
1. Angry 1. Console
2. Cough
3. Audio
4. Studio
5. Safety
6. Tomato
7. Tip
8. Tip



A peek behind the curtain at the cough-fighting magic.

