



The Total AirHead
headphone amplifier
owner's manual



Package Contents

- 1 Total AirHead
- 1 mini-to-mini cable
- 3 rubber adhesive feet
- assorted adhesive Velcro feet

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2020 Gilkerson Drive
Bozeman, MT 59715
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Getting to Know Your Total AirHead Amplifier

Hold your AirHead so that controls are facing you and the rubber battery door is up. Across the front of the AirHead are a number of connections and controls.

1. Headphone Jack-On the far left is one of two headphone jacks that fit any 1/8" (mini) headphone plug. (An adapter is needed if your headphones are terminated to a 1/4" plug.)

2. Power Switch-The first switch on the left is the power switch. Turn the power switch to the right, to ON, in order for the amp to function (for both battery pack or AC power). In order to avoid battery drain, the power switch should be set to OFF when not using the amp.

3. Power LED-To the right of the power switch is the green power LED, which indicates whether the unit is ON (lit) or OFF (unlit).

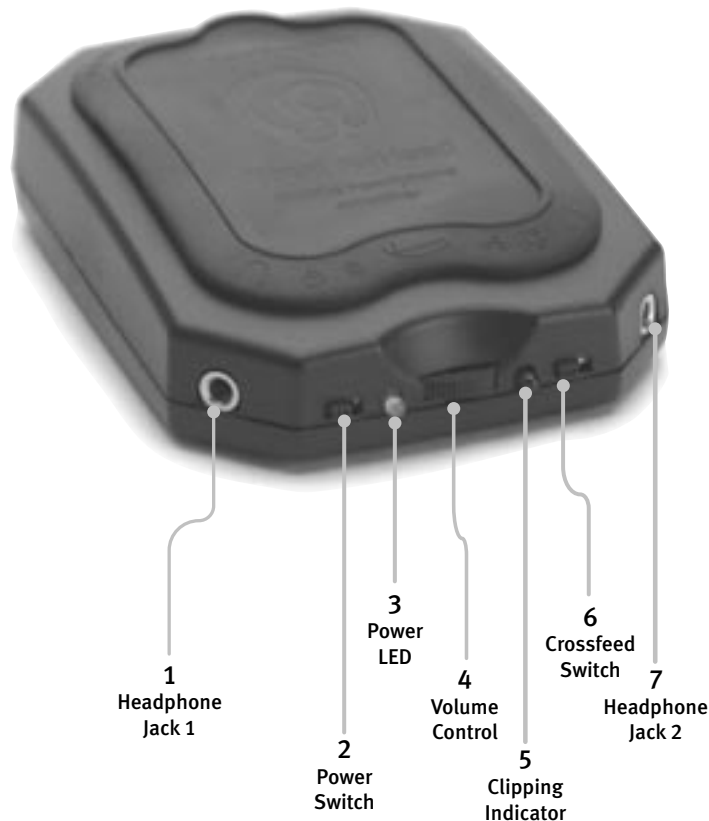
4. Volume Control-Just to the right of the power LED is the volume control. Rotate the volume control to the left to increase volume, and to the right to decrease volume. If using different pairs of headphones with your AirHead, different headphone efficiencies will most likely mean that the volume level will need to be adjusted to achieve adequate sound levels in the headphones.

5. Clipping Indicator-The clipping indicator flashes when the amp doesn't have enough voltage to drive the headphones. This can happen at peak passages when listening at a fairly loud level and/or with high impedance headphones. It will also flash when the batteries get too low in voltage to drive the headphones. Mainly, when the clipping indicator starts to flash at music peaks, it's time to change the batteries. Learn more about the Clipping Indicator on page 9.

6. Crossfeed Switch-To the right of the clipping LED is the crossfeed switch. Turn the switch to the right to the ON position, and the HeadRoom Crossfeed is engaged (for normal stereo headphone listening). In the OFF position, the Crossfeed is bypassed (for listening to mono or binaural recordings). Learn more about HeadRoom Crossfeed on page 8.

7. Headphone Jack 2-On the far right is the second headphone jack. You can connect two headphones to the AirHead at the same time. It's best to use the same type of headphone, as the volumes will be somewhat different unless both headphones are the same efficiency.

The Total AirHead



Back of the Total AirHead

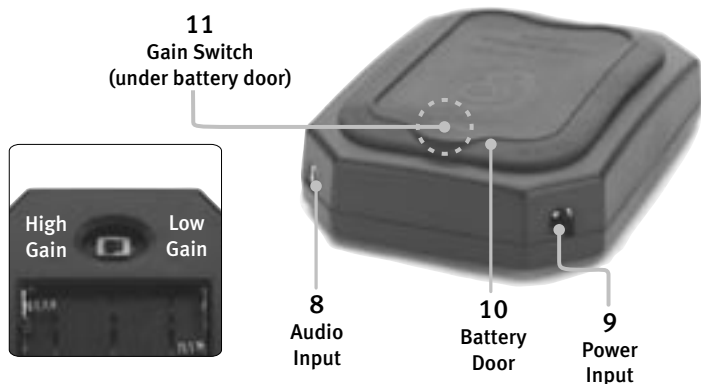
If you rotate the AirHead 1/2 turn, you'll see the back of the AirHead, with two additional jacks, one on each corner.

8. Audio Input-The jack on the left is the audio input. The included mini-to-mini cable connects the AirHead to your portable player via this input.

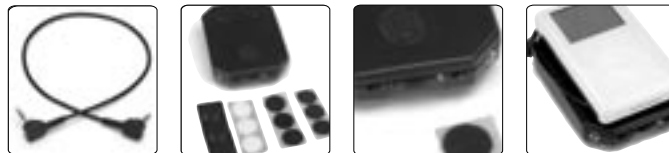
9. Power Input-The jack on the right is the power input, which allows you to use an AC adaptor to power your AirHead at home or at the office. Visit www.headphone.com to purchase an AirHead power supply.

10. Battery Door-On the top of the AirHead is a battery door. To replace your batteries (the AirHead requires 4 AAA cells), simply pull up on the small tab sticking out of the back of the battery door. This will lift the entire rubber door. This exposes the battery compartment; remove the old batteries and insert four new ones. (Note: always replace all four batteries at once.)

11. Gain Switch-The Total AirHead is now equipped with a high-low gain switch that allows you to select a gain range appropriate for your headphones. You'll find the switch by opening the rubber door and looking into the oval hole used by the door latching nub. Generally, you should use the low gain setting unless you can't get the amplifier loud enough with a particular combination of headphone and source, in which case simply switch to the high gain position.



How to Hook Up the Total AirHead



Your AirHead has been supplied with a number of different feet. The rubber feet can be stuck to the bottom of the amp if you are simply going to place it on a tabletop. But we like to attach the amp to the various source devices with the enclosed Velcros. First, remove the hook coins (the scratchy ones with all the miniature hooks) from their adhesive strip and stick them into the three circular foot wells on the bottom of the amp.

Then, clean the surface where you want to mount your AirHead. On portable players we recommend mounting the amp to the bottom side of your portable player with the amp controls facing towards you. In this configuration the rubber door will act as a non-slip foot and the players' controls will tilt slightly towards you for easy access.

Then, remove the loop coins from the strip, and stick them to the hook coin in the feet of the AirHead, adhesive side out. Carefully position the AirHead just above the desired spot, then slowly and firmly push the AirHead against the surface. This should stick the loop Velcros into proper position. Carefully remove the AirHead leaving the loop coins, and then press each more firmly into place by hand.

To hook up your AirHead to a source, plug one end of the included mini-to-mini cable into the AirHead's audio input jack. Then, plug the other end of the mini-to-mini cable into your audio source's audio output jack. Most portable audio devices (CD, Mini-Disc, and MP3 players; radios; etc.) provide one or more 1/8" audio output mini-jacks. If your player has a line-out jack, use that. If not, use the headphone jack and turn the volume on the player to the maximum. Then use the AirHead's volume control to change the volume.

If your audio source has dual (left/right) RCA jacks, you'll need to purchase an RCA-to-stereo miniplug cable (often called a portable cable) that connects to your source's RCA jacks and then connects to the AirHead via the miniplug.

Plug your headphones into either of the two headphone jacks on the AirHead. If your headphones are terminated to a 1/4" headphone plug, it may detach to reveal an 1/8" plug, or you may need to purchase a 1/4"-to-1/8" adaptor available at www.headphone.com.

Connecting your headphones to the AirHead

It's always a good safety measure to turn the amp OFF (or turning the volume all the way down) before connecting or disconnecting your headphones.

Break-In Time

Both headphones and headphone amplifiers require "break-in" (often called "burn-in") time before they provide optimal performance. Using your new headphone amp and/or headphones for about 40 hours should provide sufficient break-in time. If you'd prefer some unattended burn-in, the easiest way to do this is connect your system (source, AirHead, and headphones) as described on page 5; turn the AirHead on and set it to a normal listening volume; and then place your audio source in "repeat" mode and begin playback.

Adjusting the Volume

When adjusting the volume, turn the volume on your portable source from 3/4 to full volume if it doesn't have a line out. Then use the volume control on the amp to adjust the level. If you do have a line out feature on your source, then you will want to plug your mini-to-mini cable in to that; and adjust the volume on your AirHead. If your AirHead still seems too quiet, adjust the gain switch to 'High gain setting'.

Using two pair of headphones with the AirHead

You can run two pair of headphones off your AirHead provided that they are of similar impedance levels. Consult www.headphone.com or your headphone manufacturer's website to confirm your headphones' impedance level. (The AirHead is able to drive headphones of different impedance levels; however the volume level will not be the same between the two pair of headphones.)

Rubber and Velcro Feet for the AirHead

You will find 3 rubber feet included with your AirHead, which you may stick to the corresponding divets on the bottom of the AirHead. You will also find Velcoins made out of both hook (the scratchy side) and loop (the softer side). Attach the hook Velcoins to the bottom of your AirHead in the corresponding divets. The loop Velcoins are to be used anywhere that you may want to attach the AirHead, such as the back of your portable player, on your computer, or inside a HeadRoom Bag.

Storing the AirHead

As with most electronic devices, we recommend removing the batteries from the AirHead when storing the unit for a long period of time. Even though the AirHead will not drain the batteries when it's turned off, batteries sometimes leak, which can damage the unit.

Q. How long do the batteries last on my AirHead?

A. The AirHead and Total AirHead can be powered for approximately 40 hours on 4 AAA batteries.

Q. What type of power supply do I need to use with the Total AirHead?

A. Power supplies are available for sale on our website, or you can buy them from most electronic stores. The Airheads can take anywhere from 5 to 12 VDC with a current rating greater than or equal to 200mA. The center tip is positive and the tip size is a 5.5mm outer diameter and 2.1mm inner diameter.

Q. Does HeadRoom recommend using rechargeable batteries?

A. For the best sound quality, we do not recommend using rechargeable batteries.

Q. Do you make a bag to carry my Total AirHead?

A. Yes, HeadRoom makes several bags that can accomodate your Mobile Line amp. Visit www.headphone.com/products/system-bags to see the GigaBag, Complete HeadCase, and other carrying cases made especially for your mobile line amp.

Q. Can the unit drain the batteries even when it's turned off?

A. It will not drain your batteries, but if you are storing the unit for a period of time, it is a good idea to remove the batteries to prevent accidental leakage.

Q. What headphones are my AirHead able to drive?

A. With the exception of AKG K-1000's and electrostatic headphones, your AirHead can drive any pair of headphones.



The GigaBag



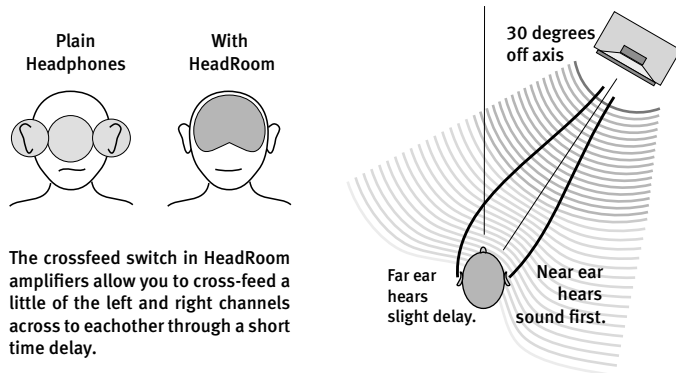
The Complete HeadCase

What does the HeadRoom Crossfeed Do?

Imagine you are listening to a pair of speakers. If you turn off the left speaker, both ears hear the sound from the right speaker. But because the left ear is slight farther away than the right ear, it hears the speaker's sound slightly after the right ear; about 300 milliSeconds. This time difference is called the "inter-aural time difference" and it is the main thing your brain listens for in order to tell where to place sound left-to-right.

But in headphones if you turn off the left channel, only the right ear hears the sound. In headphones, if there is any sound that is only in the left channel, or only in the right channel, then only that ear hears the sound. This is not natural, and you brain becomes fatigued trying to figure out where sound is coming from when only one ear is hearing it. This tends to create an audio image that is a blob on the left, blob on the right and a blob in the middle.

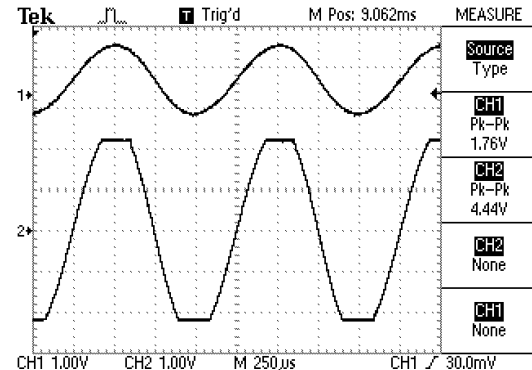
HeadRoom amplifiers cure the problem by allowing you to cross-feed a little of the left and right channels across to each other through a short time delay using the processor switch. The usefulness of the circuit varies depending on what type of recording you are listening to; mono and binaural recordings need no processor at all. Old studio recordings that have instruments panned hard left or right, benefit greatly from the processor. Live and classical recordings miked from a distance benefit somewhat less, and can often be listened to without the processor quite comfortably.



What does the Clipping Indicator Do?

Next is the clipping indicator, a frosted red LED that lights up every time the amp clips. "Clipping" is what happens when the signal tries to get bigger than the power supply voltage, which it can't, and the peaks in the signal get "clipped" off. The result is a miserable crackling sound.

But in the case of the AirHead, the clipping indicator not only tells you when you've got a hot signal, it also tells you when your batteries are low. Because we're using multi-voltage "rail-to-rail" interated circuit chips, the AirHead will run on a wide range of voltages. And because "normal listening level" will vary widely due to the varying impedances of headphones on the market, we can't really estimate how long the AirHead "should" run on a set of batteries. (The battery voltage may lower to clipping after 20 hours of use with a difficult-to-drive pair of AKGs, but you might get 60 or more hours of use at a comfortable listening level when driving a pair of efficient Grados.) We realized that a clipping indicator on the ever-diminishing voltage of a set of batteries would be the best low battery indicator of all. For a given volume level at your headphones, the battery voltage will eventually get lower than the signal, and the clipping indicator will start to blink with the louder bits of the music. If the clipping indicator starts blinking more and more at your normal listening volume, it's a sign that your batteries are on their way out and need to be changed soon.



An example of the input signal, and the output signal clipping.

HeadRoom Product Guaranty & Warranty

HeadRoom 30 Day Guaranty

Unless specifically stated otherwise, all HeadRoom purchases come with a 30-day satisfaction guaranty in order to give you the opportunity to evaluate your purchases. We're happy to provide you with the opportunity to refund or exchange your product, but to keep costs down we do have a few conditions.

Products must be returned to us within 30 days of the date you receive the product. So make sure you try your purchase out right away! Products must be in "as-new" condition. This means that they're in pristine cosmetic condition, functioning perfectly, and include ALL materials (plastic bags, warranty cards, tie wraps, etc). In other words, please send products back exactly as you received them. If a product is returned within the 30-day return period, but is not in "as-new" condition, we will charge you a 15% restocking fee plus any labor and materials required to return the product to "as-new" condition. Sorry, but after your 30 day trial, products are no longer exchangeable or refundable.

If you're having trouble with a headphone amp or system, please contact us first to troubleshoot the problem. You can email Sales, (sales@headphone.com) or call 800.828.8184. If we can fix it while you've still got the product, everyone's happy!

HeadRoom Manufactured Products under Warranty:

The HeadRoom Total AirHead amps are warrantied for two years. If anytime within the first two years of your purchase you have a problem with your Total AirHead, you can return it for repairs under the terms of our 30 Day Guaranty.

HeadRoom is the only authorized service center for HeadRoom products, either in or out of warranty. If a unit is under warranty, there is no cost for the repair labor, parts, or shipping from HeadRoom back to you (i.e., You're responsible for paying the shipping charges to get the product to us).

Out of Warranty Repairs

If you have an older HeadRoom amp that is out of warranty, call us at 800.828.8184 ext.104 or email service@headphone.com to troubleshoot the problem with our Service Department. Upgrades fees are calculated by labor and parts costs. HeadRoom's non-warranty repair rate is \$100 per hour (billed in 1/2 hour increments) plus parts. If the cost of the repair is over \$100, we will call you with an estimate. Repairs are conducted only on HeadRoom products. When we receive the equipment, we will initiate repairs and upgrades within 1-2 weeks and return the unit to you. You are responsible for shipping costs to and from HeadRoom for all non-warranty repair items.

Product Exchanges & Shipping

Equipment Exchanges

If you would like to exchange your purchase for another item, you have two options. You can simply purchase the item you want, and send the item you don't want back for refund within 30 days of the original purchase (don't forget to fill out the back of the Return & Exchange card and include it with your return). We will refund your credit card after we receive the item. Or, you can send your product back as an exchange, and indicate the product you would like on the Return card. We will adjust your credit card accordingly and ship you the new item. Replacement products are shipped to you as soon as possible, typically within 3-5 days provided the replacement item is in stock.

Defective Equipment Exchanges

In the uncommon event of receiving a defective product, contact us and we will ship out a replacement product to you at no cost as soon as possible, typically within 3-5 days provided the replacement item is in stock. You will receive the replacement item along with a return shipping label and a card to include with the defective item to return to HeadRoom. **Important: Fill in your name and original invoice number of your order on the card and return the item to HeadRoom within 2 weeks.** If we have not received the product after 2 weeks (allowing shipping time) we will charge your credit card the amount of the defective item. Please understand that we enforce this policy as an incentive for customers to get defective equipment back to us as soon as possible.

Shipping Products back to HeadRoom

Please ship products back in the original shipping box (or another that is comparable); please don't send headphones back in JUST the headphone box, as it's a sure bet that they will no longer be in "as-new" condition when we receive them! We HIGHLY recommend that you ship returns using an insured and "signature required" delivery method—we can't be responsible for lost or damaged packages. Finally, don't forget to include the completed Return & Exchange card and WRITE YOUR NAME on the outside of the box!

Return Products to:

HeadRoom
Attn: Returns
2020 Gilkerson Drive
Bozeman, MT 59715

Contact Us:

www.headphone.com
Toll Free: 800-828-8184
Phone: 406-587-9466
Fax: 406-587-9484



A Word About Your Hearing

People have a natural tendency to listen to music at much louder levels with headphones than they would with speakers. To avoid permanent hearing damage, it's important to be careful not to listen at extremely loud levels (or to listen for too long at moderately loud levels). Because HeadRoom amps need to be able to drive even the most inefficient dynamic headphones to satisfactory listening levels, they are also able to drive headphones of average or higher efficiencies to extremely high levels. As a result, even though the volume control on your HeadRoom amp may appear to be set to a low level, you may not be listening at a safe level. Generally speaking, when listening to headphones you should only turn up the volume to the point at which the sound isn't too quiet.

As a general rule, sound pressure levels under 80 decibels will not damage hearing, even if experienced continually. On the other hand, anything over 100 decibels may cause permanent damage very quickly. Sustained exposure to sound pressure levels anywhere in between can also be damaging—the louder the sound, the shorter the time required to cause permanent damage.

Just to drive this message home, here's a bit of information about hearing damage. The most common type of damage caused by prolonged or excessively loud sound is called tinnitus. It manifests itself as a sustained buzzing and/or ringing in the ears, and can become a permanent condition.

If you find that your ears are ringing or that there is a sensation of pressure or fatigue, your body is trying to tell you that your ears need a break. Give them a rest for a few days (or until they feel fresh). If you ignore these symptoms, you're risking permanent hearing damage. In addition, don't fool yourself into thinking that you either have full-blown tinnitus or you don't have it at all—there are different degrees of hearing damage. For example, you might have a mild case where you only notice ringing in your ears in the quiet of your bedroom at night. However, once you have a slight case of tinnitus, your ears are much more susceptible to further damage. So if you do experience mild symptoms, it's important to be much more careful about your exposure to loud sounds.

Sorry to sound so sobering, but a lifetime of musical enjoyment requires ears in tiptop shape. Now that we've told you to be careful, don't blame us if you blow it. If you have any more questions about hearing damage, call a doctor.

Contacting HeadRoom

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