



The Cosmic & Supreme Manual

Welcome to the world of fantastic portable audio! You have purchased the finest portable headphone amplifier/processor available. You will hear a clear improvement in a high-quality headphone's ability to resolve musical detail, express deep, tight bass and present a more natural audio image. All of our amps are hand-built in Bozeman, Montana of high-quality components and with plenty of TLC.

Front Panel



On the far left of the faceplate is a hole—a headphone jack to be more specific. It accepts a standard $\frac{1}{4}$ " stereo plug. **We recommend turning the amp OFF or ALL THE WAY DOWN before plugging in and unplugging your headphones to avoid causing a short circuit in the amp.**

On the far right you'll find the volume control knob. We should point out that, if you're switching between two or three pairs of headphones with different input impedance ratings, different volume settings will most likely be necessary to achieve similar sound levels.

The first switch on the left is the POWER switch and is used when operating in the amp from either the battery pack or the AC adapter. **This switch must be turned OFF when not using the amp to avoid battery drain.** It should also always be turned OFF whenever using the BaseStation One.

Next is the PROCESS switch. In the ON position, the Audio Image Processor is engaged for normal stereo headphone listening. In the OFF position, the Processor is bypassed for listening to mono or binaural recordings. This switch should be in the OFF position when using the headphone amp as a pre-amp.

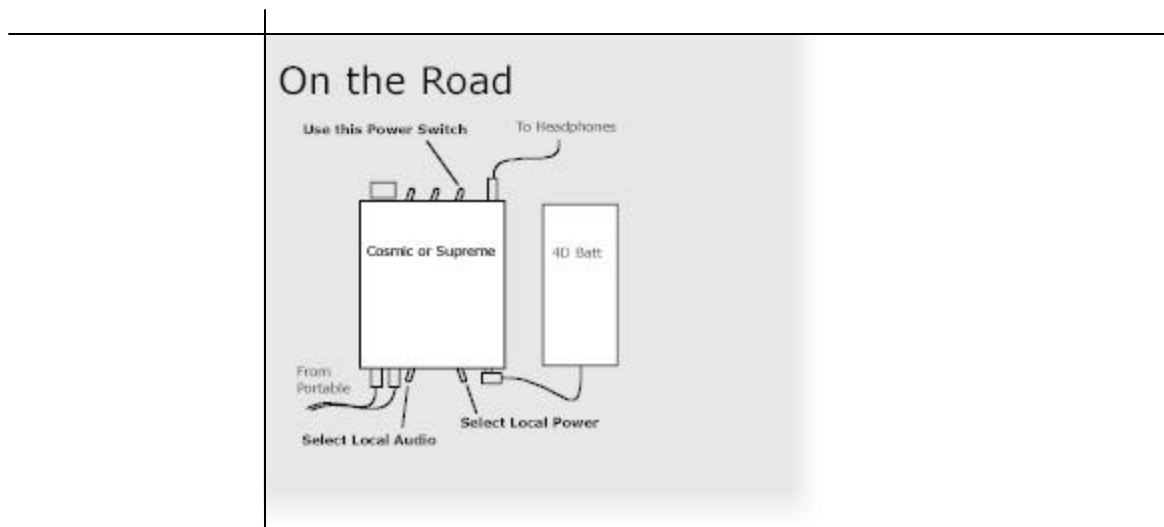
To the far right is the FILTER switch. When in the ON position, a high-pass filter is engaged. This filter is used to slightly brighten the sound on stereo recordings with a strong mono component that may be overly warmed through the Processor. For most other recordings, or to soften a particularly harsh or bright recording, turn the filter OFF. (For more details on the function of the Processor and Filter, see the related sections later in this manual.)



Rear Panel



Both the Cosmic and Supreme can be operated on four D-cell batteries using the 4-D battery pack supplied with the amp. An AC adapter also comes with the amp and uses the same 6-volt input connector as the battery pack. These two power sources are considered "local power", and when using either source, the POWER switch on the rear of the amp should be set to LOCAL..

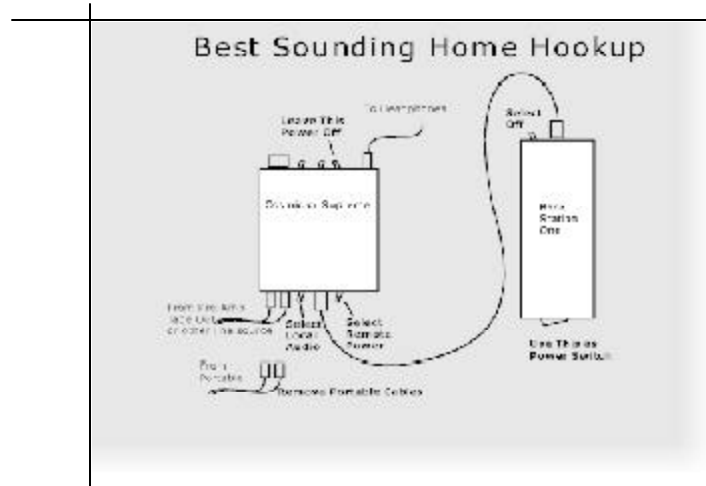


The audio inputs are on the rear of the amp. The RCA jacks are recessed into the back panel to minimize torsional stress on the connectors and cables. Audio cables are usually color coded with the red connector representing the right channel. The left channel connector may be black or white. When plugging your source (usually a portable CD player) into these inputs, the AUDIO switch on the back of the amp should be set to LOCAL..

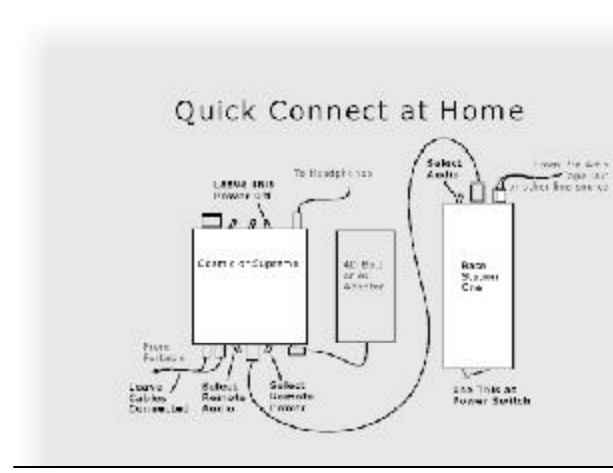
Using the Cosmic or Supreme with the BaseStation One

To get the best sound from your Cosmic or Supreme, use the BaseStation One as the power source. Though the Cosmic and Supreme sound groovy by themselves, the BaseStation One will further smooth the highs and tighten the bass for even greater audio ecstasy. In our humble opinion, the BS1 is a truly worthwhile upgrade. Give us a call to try it out for 30 days.

The BaseStation One is the REMOTE power source and the POWER switch on the rear of the amp should be set accordingly. To connect the BS1 to the amp, use the BS1-Cosmic interconnect (blue cable with din connectors) that comes with the BS1.



For ultimate sound quality, continue to use the LOCAL inputs directly from the audio source to the back of the amp. Use the BaseStation One only as a power source. Using the BS1-Cosmic interconnect to carry both power and audio will cause a very, very slight degradation of the signal quality coming from the source. In this configuration, the switch on the front of the BS1 should be in the OFF position.



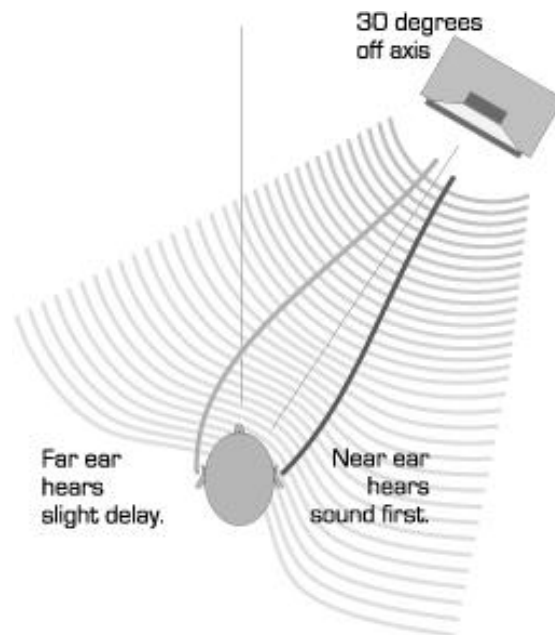
An audio input is also available on the BS1 for a low-hassle method of connecting the headphone amp to a home system. Just leave the inputs from your home equipment plugged into the front of the BS1 and flip the switch on the BS1 to AUDIO. To connect the amp, plug in the blue cable and flip both the AUDIO and POWER switches on the rear of the amp to REMOTE. Both power and audio will come from the BS1 to the amp.

The BS1 has an ON/OFF rocker switch above the power cord socket on the rear of the unit. This becomes the power switch for the amp. When using the BS1, the POWER switch on the front of the Cosmic or Supreme should always be in the OFF position to prevent battery drain. An AC power cord is supplied with the BS1 and is plugged into the 3-prong connector on the back of the unit.



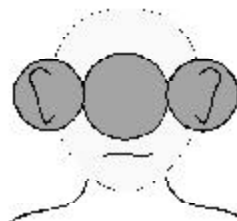
Why does your HeadRoom amp have a processor?

Because it makes headphone listening much more natural. When listening to speakers, you hear both the left and the right signals in both ears. Not so with headphones. When you stick a pair of speakers directly to your ears (i.e., headphones), you lose the spatial/acoustic cues your mind needs to locate sounds in space.



Despite this lack of acoustic data, your mind attempts to laterally locate sounds. The result is a troubling blobs-in-the-head sonic image. Your brain ends up frustrated and fatigued.

Plain Headphones



with HeadRoom



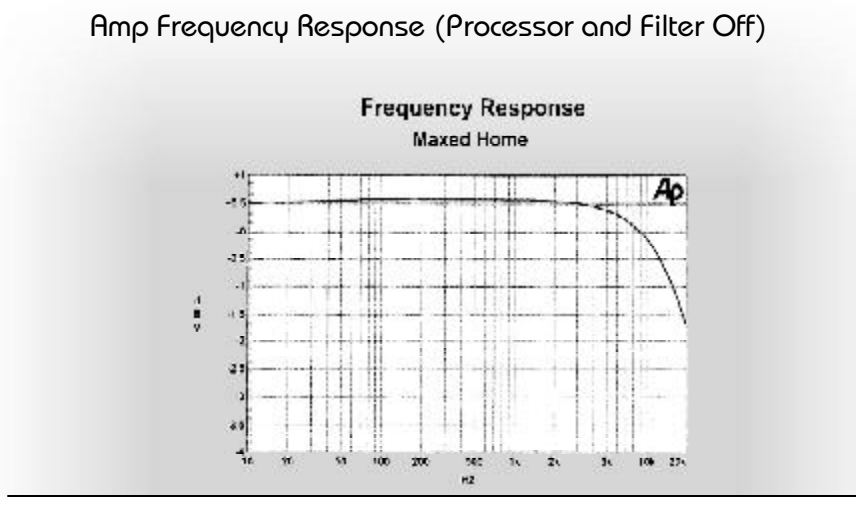
The audio image processor solves this problem. Analog filters are used to take an attenuated signal from each ear, slightly delay it (about 300 ms), and feed it to the opposite ear. This is the acoustic information your mind needs create a believable audio image in your head. This added information eases the burden on your brain by spreading out the clumped image in your head. Ahh, sweet relief.



Why does your HeadRoom amp have a filter?

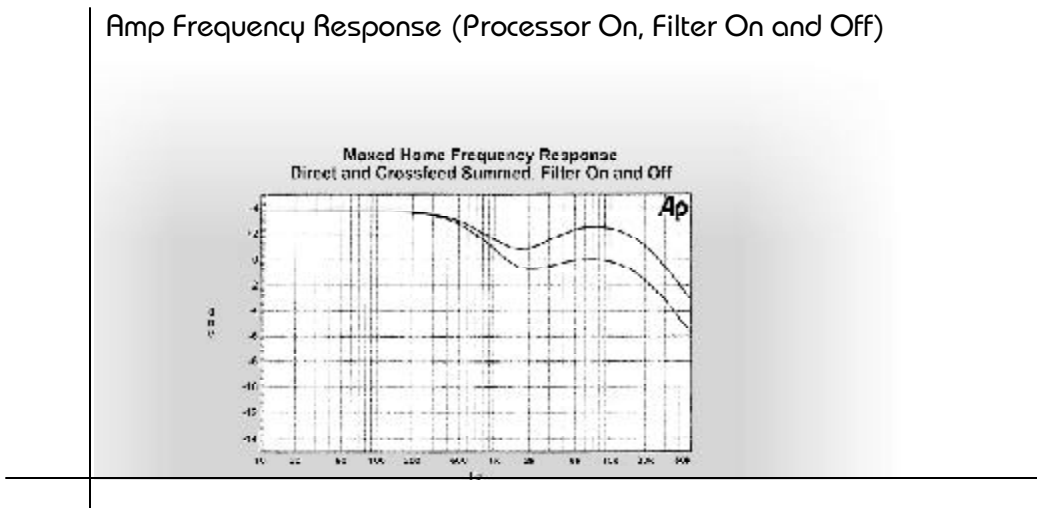
Because the Processor slightly darkens the sound on some recordings. When the attenuated and delayed signal is mixed with the opposite signal, some high frequencies are canceled (i.e., the comb filter effect). On some recordings, the sound may appear to lose a bit of its luster when the Processor is switched on. The FILTER switch engages a high-pass filter that restores much of the lost high frequencies.

Amp Frequency Response (Processor and Filter Off)



Your need for the Filter depends on the kind of music and the quality of the recordings you listen to. The left and right signals in audiophile recordings generally differ more than in typical recordings. This minimizes the comb filter effect and makes the effect of the Processor less apparent. Multi-miked pop mixes and mid-side recorded concert music generally contain a greater mono component, resulting in a warmer sound. When it comes right down to it, you are the final judge. If the sound is too warm, turn the Filter on. If it's too bright, turn it off.

Amp Frequency Response (Processor On, Filter On and Off)





And Now 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 must be capable of driving even the most inefficient dynamic headphones to satisfactory listening levels, the amps are able to drive headphones of average and high efficiencies to very high levels. As a result, you may not be listening at a safe level even though the volume control on the amp is less than half way up. Generally speaking, when listening to headphones, you should only turn up the volume to the point at which the sound isn't too quiet.

The most common hearing damage caused by prolonged or excessively loud sound is called tinnitus. It manifests itself as a sustained 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, give them a rest for a couple of days (or until they feel fresh). These symptoms are your body telling you that your ears need a break. If you ignore these symptoms you are risking permanent hearing damage. As a general rule, sound pressure levels under 80 decibels will not damage hearing, even if listened to continually. On the other hand, anything over 100 decibels may cause permanent damage fast. Sound pressure levels anywhere in between can also be damaging. The louder the sound, the shorter the exposure time required to cause permanent damage.

Now, don't fool yourself into thinking that you either have full-blown tinnitus or you don't have it at all—you can have a slight case. For example, you might only notice your ears ringing in bed at night. Once you have a slight case of tinnitus, your ears are much more susceptible to further damage. So, if you get tinnitus, it's important to be much more careful about exposure to loud sounds. 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. Sorry to sound so sobering, but a lifetime of musical enjoyment requires ears in tiptop shape.

30-day Satisfaction Guarantee

We back everything we sell with a 30-day Satisfaction Guarantee. If, at any time during the first 30 days from the time you receive your HeadRoom product, you decide it is not providing enough bang for your hard-earned buck, you may return it (in a "good-as-new" condition) for a refund. Damaged returns will be repaired and the repair costs deducted from your refund. Shipping costs are not covered under this guarantee. If you purchased a package system at a discount and are keeping some of the items in the package, your refund will be adjusted based on the retail price of the equipment you are keeping. In other words, we don't give full-price refunds on products purchased at a discount.

Product Warranty

If you have any problems with your headphone listening system, please **first** call us at 1-800-828-8184. We will try to diagnose the problem over the phone, which can save both of us considerable time, effort and money. If the equipment must be returned for repair, we will authorize a return for you. 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). For units out of warranty, repairs are billed on a time and parts, plus shipping basis. When we receive the equipment, we will initiate repairs quickly (usually within three working days) and return the unit to you, or call you with an assessment of the problem.

One-year warranty— There is a one-year product warranty for the AirHead system. If anytime within the year of your purchase you have a problem with your AirHead, you can return it for repairs under the terms of the above policy.



Contacting HeadRoom

Now that you've read the owner's manual, do you have any questions? If so, give us a call or send us a fax, e-mail, or letter. Here's how to go about it.

Give us a Call!	Fax
toll free in the U.S. 800 828 8184 or 406 587 9466	406 587 9484
	Or send a letter to HeadRoom Corp. P.O. Box 6549 Bozeman, MT 59771
Send us e-mail at info@headphone.com or sales@headphone.com	Happy Listening!