

AudioStorm



Sean Mandrake

AudioStorm HotBox

The HotBox is a power attenuator, also sometimes called a power-soak or power-brake, which absorbs a large proportion of the output power from your amplifier and converts it into heat instead of volume. This allows you to capture the real overloaded vintage tones of your heroes running their amps at eleven, but without deafening yourself.

Power levels

Your HotBox is rated for 60 watts (HB60) or 120 watts (HB120). This rating is the loudest amplifier you should use with your HotBox. As long as your amplifier is well serviced then you can turn it up to 11 and drive it as hard as you like, for as long as you like: The HotBox is built exactly for this purpose. You can also always use a lower powered amplifier without issue.

Decibels, watts and human hearing

Human hearing is non-linear. This means that halving the watts does not half the volume. The following section describes this in more detail.

Reduction ranges

The **HB60 Studio** offers a fixed -10 dB reduction which equates to a factor of 1/10th. So a 50 watt amplifier will output 5 watts. 5 watts can be much louder than expected. In real human hearing terms this will sound only like one quarter volume. This level of reduction is ideal for studio use, rehearsal use in small spaces with moderately loud musicians and intimate venues.

The **HB60 Pro** offers a Studio mode which works similarly to the HB60 Studio but also a 'Practice' mode which equates to a reduction factor of roughly 1/40th. In this case a 60watt amp will become a 1.5 watt amp, or a 20 watt amp will become a 0.5 watt amp. To human hearing this will sound like roughly an eighth of the volume. This level of reduction can still be surprisingly loud but is ideal for solo practice.

The **HB120 Pro** also offers a Studio mode which, again works similarly to the HB60 Studio so that a 10 watt amp becomes a 10 watt amp This is ideal for studio use, collaborative writing sessions and intimate performances. The HB120 Pro also offers a 'Practice' mode which equates to a reduction factor of roughly 1/50th. In this case a 100 watt amp will become a 2 watt amp. To human hearing this will sound like a tenth of the volume. This level of reduction can still be surprisingly loud but is ideal for solo practice or home recording.

What watts for what?

1 - 3 watts is a good range for practicing by yourself.

3 - 8 watts is good for microphone recording and rehearsals in small spaces. This is often still loud enough to annoy housemates or neighbours however.

5+ watts is good for quieter pubs and jam sessions where you are writing. Of course this depends upon the drummer, style of music and other factors.

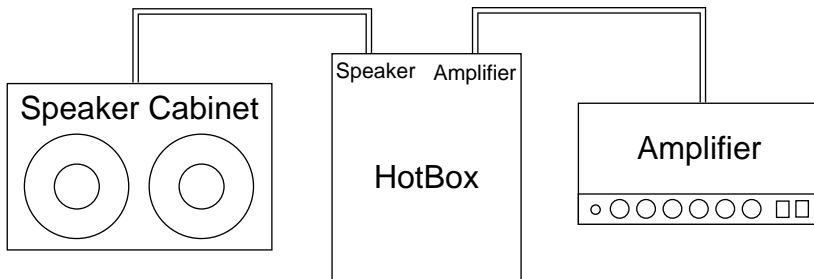
CAUTION: The HotBox WILL GET HOT!

Your HotBox absorbs energy and converts it into heat. After long use at extreme volumes your HotBox might get hot enough to sting your fingers or leave a mark on your amp's precious tolex. Always make sure that your HotBox is not touching delicate surfaces and let it cool before moving it.

If your HotBox is getting *really* hot (burn your fingers hot) then your amp almost certainly has a fault and you *must* get the bias and tubes checked immediately. All tube amps can suffer bias faults and the result is that they will attempt to output almost limitless power and thus burn themselves out.

Connections

To use your HotBox simply connect it in-line with the speaker output of your amplifier. Your amp or head goes to the 'AMP' socket on the box and then take another speaker lead from the 'SPEAKER' socket to your speaker cabinet. In the case of combos this is usually the built in lead.



FAQ & Troubleshooting

I accidentally connected the leads the wrong way around!

The HotBox can handle this and it won't hurt your amplifier. However the HotBox will NOT be working correctly and this is not recommended.

Does the impedance (16 ohm, 8 ohm, 4 ohm) really matter?

It depends on the amp manufacturers quality. Some amps can tolerate mismatch where some it will cause damage. Read their guidelines.

I measured my speaker impedance and it's 7.3 ohm / 13.5 ohm etc.

Speaker impedance is only a very rough measurement. Use common sense so 7.3 is '8' and both 13.5 or 17.1 are '16' (or 15 on vintage amps).

Will it sound 'exactly' like an overloaded amp

No. But it will be very close. You are not driving the speaker as hard so you might prefer to use a lower powered speaker, perhaps 5 to 10w, to improve your tone.

It doesn't sound ten times quieter. It's faulty!

Human hearing is not linear. Ten times in power is only about four times in perceived volume. The aim of this pedal is to reduce a typical amplifier to useful levels but not bedroom levels which are often well under 1 watt.

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Where does it go in my signal chain again?

It is not an effects unit. If you have a head it goes between the speaker cab and the amplifier head. In the case of a combo you will have to disconnect the speakers according to the manufacturers instructions and insert it there. Most simply use a jack plug into the back. A very small number of amplifiers do not, including a few versions of the Vox AC30, and you may have to contact a technician to fit a speaker jack socket instead of a hardwired speaker cable to your amplifier in this case.

Does the HotBox need batteries or a power supply?

No.

Why is the HotBox so much cheaper than the competition?

Using a fixed reduction ratio and impedance saves a lot of money. We also don't add components to 'simulate' or 'compensate' for anything, we believe that straightforward and uncomplicated is best.

Can I use the HotBox as a dummy load?

We do not recommend this. Consider purchasing the BurnBox all analogue, passive DI if you wish to do this. The BurnBox is compatible with all our HotBoxes.

Terms, conditions and warranty

All AudioStorm pedals are designed and hand built by SeanMandrake. As such, every pedal will vary slightly and cosmetic imperfections are to be expected and are considered normal.

Sometimes suppliers or manufacturers of parts change their prices or stock different components. Although AudioStorm will do everything in their power to keep a product the same sometimes we are forced to make changes and thus we reserve the right to substitute different parts or make changes as needed.

Every pedal is built from high quality, carefully selected components. If anything goes wrong or your pedal malfunctions AudioStorm will repair or replace it (at our discretion) for at least twelve months from the purchase date.

This guarantee excludes damage caused from unreasonable abuse. This includes but is not limited to: liquid damage of any sort, high impact physical damage, cosmetic damage, failure to follow instructions in this manual and damage from using an incorrectly specified PSU. This guarantee also assumes that any equipment this unit is connected to is in good condition and thoroughly serviced. We take no responsibility for damage to equipment this unit is connected to, especially when exacerbated by neglect or failure to properly and thoroughly maintain equipment.

<http://www.seanmandrake.com>