



## THD HOT PLATE OWNER'S MANUAL

To avoid damaging your amp, speaker(s) or the Hot Plate, please read this manual thoroughly before operating the Hot Plate.

### INTRODUCTION:

The Hot Plate is a power attenuator that sits between your amp and speaker(s). It allows you to obtain the full output distortion of a tube amplifier at lower volumes, without sacrificing tone.

The Hot Plate can also function as a high quality direct box, allowing you to send the amp's signal to a mixing board, a separate power amplifier or to rack mount effects without miking the speaker(s).

There are five different Hot Plate models in five colors: The 2Ω (gold), the 2.7Ω (green), the 4Ω (red), the 8Ω (purple), and the 16Ω (blue). To optimize the tone and function of the Hot Plate the impedance should be the same on your amplifier, Hot Plate and speaker cabinet.

### OPERATING THE HOT PLATE:

#### I. AS A POWER ATTENUATOR TO ONE SPEAKER CABINET:

1. Turn the amplifier off or to standby. (If your amp is switched on and is not connected to speakers or to a load, this will strain your amp and can result in blown output tubes and output transformer.)

#### IMPORTANT: WHEN AMP IS ON IT MUST BE CONNECTED TO A SPEAKER.

The only exception to this is if the amp is connected to the Hot Plate and the Hot Plate is set at load.

2. Connect the Speaker Output on the amplifier to the Input on the Hot Plate using speaker cable.

#### IMPORTANT: DO NOT USE INSTRUMENT CABLE - IT IS NOT DESIGNED TO HANDLE THE POWER THAT SPEAKER CABLE CAN.

3. Connect Speaker Output 1 or 2 of the Hot Plate to the speaker cabinet. If you are placing the Hot Plate between the amplifier section and the speaker(s) of a "combo," you may

need an extender cable that has a "male" end (to go into the Hot Plate) and a "female" end (that connects with the cable running from the speaker(s)). If your amp does not have a "speaker out" jack (the speaker(s) are wired directly to the amp), have a qualified technician install one.

#### IMPORTANT: WHEN USING JUST ONE OF THE SPEAKER OUTPUTS FROM THE HOT PLATE, THE SPEAKER CABINET SHOULD HAVE THE SAME IMPEDANCE AS THE HOT PLATE.

4. Adjust the rotary switch on the Hot Plate to attain the volume you desire. At -0 dB the loudness is the same as it would be if the amp were running directly to your speakers. The effective volume will drop in increments of 4 dB as you turn the switch counter-clockwise.

At the -16 dB setting, the potentiometer on the right is activated (at all other settings this pot has no effect so it does not matter where you set it). When the rotary switch is at -16 dB and the pot is turned fully clockwise, the effective volume will be 16 dB less than your unattenuated volume. As you turn the pot counter-clockwise, the volume drops smoothly down to -∞ dB (no sound).

When the rotary switch is at Load, there will be no sound coming through the speakers, but your amp will still be safely running at full output.

5. At -8 dB and below the deep and bright switches will have a noticeable effect. You may want to activate both or either of them (by switching them up) to compensate for any loss of high and/or low frequencies.

#### II. AS A POWER ATTENUATOR TO TWO SPEAKER CABINETS:

Same as above, except connect cables from both speaker outputs on the Hot Plate to your two speaker cabinets. These output jacks are wired in parallel, so if both speaker outputs are being used, the 2Ω Hot Plate would be needed for two 4Ω speaker cabinets, the 4Ω Hot plate for two 8Ω cabinets and the 8Ω Hot Plate for two 16Ω cabinets.

#### IMPORTANT: WHEN USING BOTH SPEAKER OUTPUTS FROM THE HOT PLATE, THE TWO SPEAKER CABINETS SHOULD HAVE THE SAME IMPEDANCE AS EACH OTHER, AND THAT IMPEDANCE SHOULD BE DOUBLE THE IMPEDANCE OF THE HOT PLATE.

#### III. AS A DIRECT OUT:

1. Connect amp to Hot Plate.
2. Connect the Hot Plate to one or two speaker cabinets as outlined above.
3. Connect guitar cable from line out on Hot Plate to line in of mixing board, rack mount effects or a separate power amp.
4. Adjust the line out level as necessary.
5. If you do not want to hear any sound coming from the speaker(s), set the Hot Plate rotary switch to LOAD. At this setting alone it is safe to disconnect your speakers from the Hot Plate and still operate your amp.

#### IMPORTANT: ONLY WHEN THE HOT PLATE IS SET AT LOAD IS IT SAFE TO OPERATE YOUR AMP WITHOUT SPEAKERS CONNECTED.

## SPECIFICATIONS:

### I. Main Output:

Attenuation: 0 dB to -16 dB in four dB increments; -16 dB to  $-\infty$  dB (zero output) continuously variable.

Impedance: Depends on the model.

### II. Line output:

Type: Mid-impedance (approx. 35K $\Omega$ ), unbalanced, negative ground.

Connector: 1/4" phone jack.

Level: Continuously variable line out level (+10dB(V) to -40dB(V)).

### III. Input:

Impedance: Depends on model.

Continuous power dissipation: 150W RMS

Max. recommended amplifier power: 185W RMS.

### IV. General:

Size: 2 7/8" high x 8 1/4" wide x 7 1/4" deep (7.3 cm x 20.9 cm x 18.4 cm).

Weight: 4.2 lbs (1.9 kg).

**WARRANTY:** The Hot Plate has a two year limited warranty.

Q. What is the function of the light on the front panel of the Hot Plate?

A. This is part of a noise reduction system that noticeably cuts down the amount of hiss and hum that reaches the speakers. The light will glow more brightly when you are playing through an amp set at full output.

Q. Do the settings on the front panel of the Hot Plate affect the line out signal?

A. Only the bright and deep switches. These have a very slight effect on the line out tone, and actually CUT the treble and bass respectively in the line out signal when they are switched on (up), because they are directing more of the highs or lows to the speakers.

Q. Where should I place the Hot Plate?

A. The Hot Plate can get warm, so do not place objects on top of it. It has a built-in fan that draws in air through holes in the bottom of the unit, and blows hot air out the fins on the top of the unit, so do not obstruct the air below the Hot Plate by placing it on a shag rug, for instance. You can safely place the Hot Plate on top of your amp or on a hard floor surface. When picking it up after extended use please check that it is cool enough to carry.

Q. Can I use the Hot Plate with a solid state amp?

A. NO! The Hot Plate and the power section of the amp will be damaged if the amp does not use output tubes. Thus, even if an amp has preamp tubes, it CANNOT be used with the Hot Plate if it has a solid state output section. However, an amp that has a solid-state pre-amp section but a tube output section CAN be used with the Hot Plate.

Q. Can I use the Hot Plate with a master-volume amp?

A. Yes. Simply set the master-volume at full output, add whatever amount of pre-amp gain you desire, and drop the decibels with the Hot Plate. You will get the same effect of distortion at lower volumes, but the tone will be much warmer and fuller because your amp's output tubes and transformer will be overdriven (not just its preamp tubes).

Q. Can I run a 200-Watt amp through the Hot Plate?

A. NO! The most powerful amp you should use with the Hot Plate is 185 Watts RMS.

Q. Can I still use the Hot Plate if it has a different impedance than my amp?

A. ONLY if the impedance of the Hot Plate is EQUAL TO OR GREATER THAN that of the amp. However, this will lessen the effectiveness of the Hot Plate's tone controls.

Q. If I am using just one speaker cabinet, can I still use the Hot Plate if it has a different impedance than my speaker cabinet?

A. ONLY if the impedance of the speakers is equal to or greater than the amplifier, AND the impedance of the Hot Plate is equal to or greater than the amp. Again, this will lessen the effectiveness of the Hot Plate's tone controls.

Q. How do the fan and light bulb work without being plugged into the wall? Are there batteries in the Hot Plate?

A. The fan and light bulb are powered by the signal coming from your amp (originally generated by you playing your guitar). Thus when you stop playing, the fan stops moving. So, no, there are no batteries in the Hot Plate.

Q. What should I do if the lamps do not glow even when I am playing through the amp at full output?

A. The bulbs may need to be replaced. The Hot Plate will still function, but the noise reduction system cannot work if the light bulbs are blown. Use a Phillips-head screwdriver to remove the screws from the sides of the Hot Plate, then slide the chassis out. Simply remove the light bulbs and replace them with ones of the same value (24V for the 4 $\Omega$ , 8 $\Omega$  and 16 $\Omega$  models; 12V for the 2 $\Omega$  and 2.7 $\Omega$  models). The easiest way to remove the bulbs is by prying up one end of the bulb with a pen or small screwdriver. These bulbs are available through any THD dealer or directly from THD.

Q. Why doesn't my 2 $\Omega$  Hot Plate have a fan in it like the others do?

A. It is unnecessary. The 2 $\Omega$  Hot Plate will be unlikely to ever see an amplifier powerful enough to justify the fan. We are not aware of any guitar amplifier on the market over 50 Watts which is capable of driving a 2 $\Omega$  load.

Q. Sometimes when I run a slave amp out of the line-out there is substantial signal to the slave amp even when the line-out level control is turned all the way down. Why is this?

A. This signal is generated in the cable due to the very high currents involved. To eliminate it, use a cable from the Hot Plate to the slave amp that has its shield connected on only one end.

## **THD Electronics, Ltd.**

3510 6th Avenue W

Seattle, WA 98119-1513 USA

T: 206.781.5500 • F: 206.781.5508

[www.thdelectronics.com](http://www.thdelectronics.com)

[info@thdelectronics.com](mailto:info@thdelectronics.com)