

MPS 2500

PHOENIX GOLD MPS 2500

by Chris Lewis

I believe I have calmed down now. If the big gray MS-2125 is too big for a 2x125-watt amplifier, imagine the same thing in white, rated at just 50 watts per channel. What is too big anyway? Try 2.5 inches tall and

11.5 inches wide by 17.25 inches long. Weighing in at 17.75 pounds in the white trunks is the Phoenix Gold MPS-2500. Rated at 50 watts per channel into four ohms, this amplifier is optimized to drive 1-ohm loads.

Most of the amps I see in my shop would burn up if you tried that. Come to think about it, 1-ohm loads are why some amps in my shop are dead as doornails. There is one misunderstanding that I encounter constantly. When

you bridge an amp onto one speaker we all know it plays louder than if you hooked the one speaker to just the left channel (or right channel). Why? You didn't change the gains did you? Actually you did, let's see if I can explain how. In a flashlight there are two batteries stacked head-to-tail; to make the lamp brighter than just one battery. This is because the battery voltages add up when hooked head-to-tail (+ to -). Two batteries head-to-tail is double the voltage, but four times the light, check it out. Two amplifier channels can hook up just like two batteries, if the manufacturer put them in the case head-to-tail for you.

Now do you get it? Bridging the amp is like putting two batteries onto one lamp. Four times the power and twice the normal drain on both channels. So class, your 4-ohm rated amp that is 2-ohm stable when bridged onto a 2-ohm load will... YES! It will burn up, and be loud about it. But the MPS-2500 is 1-ohm stable so it can be played 1-ohm stereo or 2-ohm mono bridged, no problemo. The dual power supplies in the 2500 are very much like the 2250, except the MOSFETs are IRFP044 instead of IRFP054. The IRFP044 MOSFET is rated to switch 57 amps each, and there are two per phase (two phases) or four per power

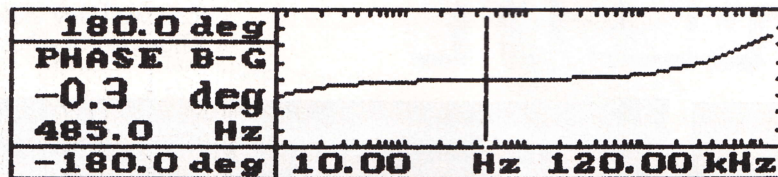
supply. This is a plenty overkill design. Twelve low ESR filter capacitors and a toroidal noise choke (inductor) keep the power clean, and these parts are not cheap. Some brands leave these parts out entirely and they just don't work quite the same. The other parts used in the MPS-2500 are almost the same as in the MS-2125 and MS-2250.

The rail capacitors were increased to 15,000u/35v and the transformers were rewound and the internal speaker wiring is upgraded to Zero Point MK2. There are still the three pair of Toshiba bad-ass power transistors on the huge heatsink. Well, what does it do? Ah, glad you axed. Rated at 2x50 it actually heaves out 2x80 watts per channel 4-ohm stereo. The 4-ohm mono could be four times louder (brighter) in theory, and it comes very close at 303 watts. Two-ohm stereo throws out 2x147, and 1-ohm stereo is 308 per channel. Two-ohm mono delivers 505 watts at 0.06 percent distortion, which is real good for an amp IASCA rated at only 100 watts. Guys, you really do get what you pay for. This power flows from the power supply through the amplifier section, which is one of the cleanest you can get. The noise floor is 88dB below one watt and the 1-watt performance is superb. Try 0.0081 percent distortion

at 1-watt 1kHz, and 0.0079 at 5kHz, this is 10 times lower than your average amp.

OOPS, my eyes are starting to glow again. Phoenix is in the habit of biasing their amps for lower distortion at the expense of higher idling current, and this audibly improves the sound. SO WHAT? So nobody installs an amplifier to idle. At any power level above, say, 0.5 watts, the power consumption of all class A/AB amps fall within 10 percent of each other. So idle current is a non-issue in my book, but low-power distortion is important. The connections are machined brass that accept 2-gauge power and 7-gauge speaker wires, just like the MS-2250, and unlike almost everyone else.

Phoenix connects to your mind through the owner's manual that I personally have not seen, but Ben in engineering described it over the phone. It has your usual explanations of controls and sample wiring diagrams. It also explains how long you can stay connected to Phoenix Gold's warranty department; it is up to five years if you have an authorized dealer sell and install the amp AND you send in your warranty card. This is worth doing, because if you don't the warranty can be as short as 30 days. Get connected.



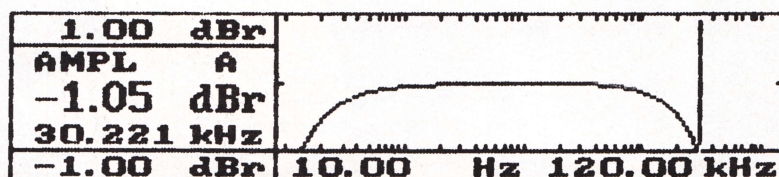
Ap

-180/+180

AVERAGE

GEN:SINE 281.9 mV

Ap



Ap

0 dBr = 2.063 V

UN-WTD <10 Hz - >300 kHz

GEN:SINE 281.9 mV

Ap