

Demeter amplification

6900 Kingsbury Road | Templeton, CA 93465 | 805-461-4100 | <http://www.demeteramps.com/>

VTHF-300M Power Amplifier User's Guide

Congratulations on your purchase of the VTHF-300M, one of the finest sounding all tube amplifiers in the world today. To insure that your unit provides you many years of listening pleasure please follow the directions included in this guide.

USER ADJUSTMENTS

Bias Controls: each output tube has it's own bias adjustment. Properly adjusted bias insures lower distortion and noise and insures a longer tube life. Although the bias is adjusted at the factory, tubes will age differently over time and will need adjustment to insure optimum performance. The bias should be adjusted when you first use your amplifier, a week later, and monthly after that. This will insure long tube life (allow 15 minute warm up time before adjusting).

Procedure

1. Connect your amplifier to the proper speaker load.
2. Turn on the amplifier and let it warm up for 15 minutes.
3. Remove amplifier controls cover plate on front panel by turning the thumb screws at the ends of the plate counter-clockwise.
4. Connect voltage meter to the amplifier by connecting the black lead to the black ground input on the right side of the panel. Then connect the red lead to tube 1 red input connector on the left side of the panel.
5. Set your voltage meter to millivolt scale (MV) and adjust the trim pot with a small flat head screw driver until you read 300 millivolts plus or minus 5 millivolts. In some meters this will read .300 volts.
6. Repeat steps 4 and 5 for tubes 2 through 8.
7. Replace cover plate.

Feedback Control: turning up and down the feedback on the amplifier affects the sound in a number of ways. With the feedback on high the sound is tighter and the distortion and gain are lower. The feedback set lower will increase the gain and make the sound smooth and loose. Set the feedback control to suit your own listening preferences.

Output Mode: this switches the amplifier's output to either pentode (full power ultralinear operation) or triode (half power triode operation). Each mode has different sonic attributes: the pentode mode has more power and dynamic bass, the triode mode has a warmer and more silky midrange. **WARNING:** adjust this switch only with the amplifier turned off, the switch noise could damage your speakers.

Fan: this switch controls the speed of the cooling fan. The fan is optional and only included in amplifiers specially ordered with this option, as fan noise can disrupt the listening environment.

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GENERAL INSTRUCTIONS

1. Make sure your speakers are connected to the proper impedance speaker terminal 8 or 4 ohms. If your speaker is a different impedance, connect to the one closest to your speaker's impedance.
2. Make sure your volumes are adjusted for the proper stereo perspective.
3. If you hear hum coming from your speakers you may have a ground loop and have to lift grounds to eliminate the problems. Consult your dealer for the solution if this occurs.
4. If the amplifier is used in a bi amp situation and is used to operate high frequencies the feed back should be set on low and 40 ohm 20 watt resistor needs to be attached to ground and the 8 ohm tap.
5. **WARNING:** Tube amplifiers need to see a load to operate. Please make sure speakers are connected before turning amplifier on. Failure to do so will result in damage to the output transformer and void your warranty.

OUTPUT TUBE SELECTION AND INTERNAL ADJUSTMENT

The output tubes on your amplifier have been carefully selected and matched for your amplifier. When replacing tubes or if you have a tube that fails or goes out of the adjustment range you can order either a replacement set of tubes or a single tube by calling your distributor or Demeter Amplification for an exact replacement.

If you cannot do this and the tubes you buy fall out of the adjustment range of the front panel controls there is an internal master bias adjustment. **WARNING: THIS SHOULD BE PERFORMED ONLY BY QUALIFIED SERVICE PERSONAL. THERE ARE 600 VOLTS DC PRESENT AND INJURY OR DEATH COULD OCCUR!**

Procedure: unplug amplifier from mains. Hook up meter to bias adjustment terminals (ground and tube one). Set bias controls to mid position. Carefully turn the amplifier over and remove the bottom cover. Plug the amplifier in. Turn the amplifier on with the proper speaker load attached. Let it warm up for two minutes. Very carefully adjust the trim pot found on the power supply board until the meter reads approximately 300 millivolts (.300V). Unplug the amplifier and wait 5 minutes. Replace the bottom cover and turn the amplifier back over. Adjust the bias for each tube as previously shown.