

Biasing Tutorial

Please read before proceeding . . .

Everytime you have to change your power tubes, your amp needs to be rebiased (the idle current). The newer Einstein and Herbert models have external bias test points, all you need is a digital multimeter which can read milli amperes. Biasing is done on the amp's plates, pairwise by bridging a fuse.

VH4 amplifiers also can be biased on their plates - the whole quartet (VH4) or the two duets (VH4S).

Our suggestion for all users who are not familiar to handle a digital multimeter or should be scared by the 500 Volts inside an amp, should use a tool like Ted Webers "Bias Rite" adaptor.

www.tedweber.com

Feel free to ask any questions.

Diezel's suggestions for pairwise plate biasing are (Einstein, Herbert):

5881: 50 mA

6L6: 60 to 70 mA

EL34 60 to 70 mA

6550, KT66, KT88: 80 mA

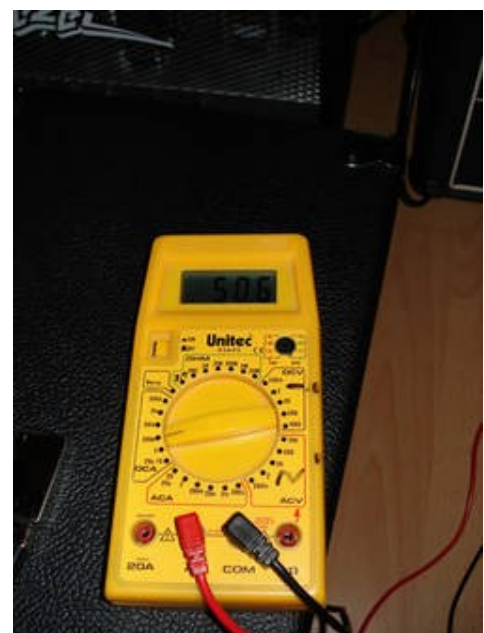
VH4 Biasing

Here we go (keep in mind that there are 500 Volts on the OT, be careful, make sure the crocos are tight on the OT, use an insulated screwdriver for the trimmer . . .):

- 1) take the chassis out of the headshell (and have a look if the bias selector-switch fits your tubes - it is labelled "EL34 and 6L6") and place the amp - pots facing you - onto two books, watch out for powertubes !
- 2) on the right you can see the output-transformer (OT). Its right side (red wires) is the secondary - you need to hook the crocos to the primary, so the left side
- 3) Set DMM to 200mA DC current (many DMMs need another slot for the red for current for voltage !)
- 4) Hook crocos to DMM leads and the black to the middle of the three primary OT wires, red to either left or right of it

Switch amp on, standby run-position, hooked to load - be careful !

- 5) read current and adjust desired value with the bias-trimmer on the left side of the mainboard, close to the midi board
- 6) this way you are reading the current for one side of the quartet (so 2 tubes), which means that should read 60mA for EL34.



Cont...

- 7) Switch amp off, you may want to repeat the whole procedure for the other side - in the case of this amp using the blue wire . . .
- 8) Put amp back into headshell after you've unhooked from mains
- 9) Enjoy your fresh biased VH4 !

Recommended current settings for pairs in a VH4:

5881: 50 mA

6L6: 60 to 70 mA

EL34 60 to 70 mA

6550, KT66, KT88: 80 mA

