



MANLEY LABORATORIES, INC.  
13880 MAGNOLIA AVE.  
CHINO, CA. 91710 USA  
TEL: (909) 627-4256  
FAX: (909) 628-2482  
[SERVICE@MANLEYLABS.COM](mailto:SERVICE@MANLEYLABS.COM)  
[WWW.MANLEYLABS.COM](http://WWW.MANLEYLABS.COM)

Rev. 11-7-07

## REPLACING OUTPUT TUBES IN MANLEY AMPILFIERS

The following procedure should be used when replacing any or all output tubes in current production units. For earlier units, and current NEO-CLASSIC 300B units, please contact our Service Department for specific instructions.

1. Before applying power to the amp, turn the bias control(s) to minimum bias. This will be full CCW (COUNTER CLOCKWISE) on most current units except the Stingray and Mahi which minimum bias setting is full CW (CLOCKWISE). IF YOU'RE NOT SURE, test first with the old tubes to see which way to turn the control for minimum reading.
2. For Neo 250 and 500 units: Turn the amps on in the "Soft Start" position, and after a minute or so, check the bias readings on the replacement tube. This reading should be very low or zero if the bias control was turned to minimum. A reading of >150mv may indicate a problem; contact our Service Department for further instructions. If all readings are acceptable, switch from "Soft Start" to "Operate", and after about another minute, check the bias test point (s) for the new tubes. Insure that the reading is below .275mv. If so, let the unit warm up a few more minutes, and slowly raise the bias on the replacement tubes to .275mv. No bias reading on all of the tubes indicates a blown B+ fuse.
3. For Stingray, Mahi, and Snappers, apply power, and within about a minute, check the bias readings on the replacement tubes. The readings should be below 250mv on the Stingray and Mahi, and below 300mv on the Snappers. If the readings on any of the tubes are above this with the bias set at minimum, turn the units off and contact the Service Department for further instructions. If the readings are below these figures (probably well below in most cases), let the amp continue to warm up for a few more minutes, and slowly increase the bias on each replaced tube to the proper value. No bias reading on all of the tubes indicates a blown B+ fuse.

FOR ALL MODELS: The bias reading on all replacement tubes should be checked and re-set after the first hour of operation, and it is recommended that they be checked periodically in the first 20 hours of operation. Final adjustments should be made after a minimum of ½ hour warm up.

Location of this page online:

<http://www.manleylabs.com/techpage/biasnewtubes.pdf>

For more information or help, please contact the Manley Service Department.