

## EL-34 BIAS ADJUSTMENT

*TAGA Harmony recommends that the below actions and modifications are performed by the authorized service only.*

**Each time after any of the output power tubes (EL34) is exchanged for new one – the amplifier is required to be biased manually according to the below procedure (as well as whenever it is required for the currently installed tubes):**

1. Turn off the unit and remove the power cord;
2. If required install new EL34 tubes;
3. Make sure the tube cage is installed;
4. Disconnect all connected devices and speakers;
5. Place the amplifier upside down on the flat surface;
6. Make sure that the power is stable (230V) to ensure the correctness of the measurements;
7. Connect the power cord and turn on the unit and wait around 5-10 minutes to warm up the tubes;
8. Unscrew screws located on the bottom of the amplifier and remove the bottom cover;
9. There are 4 resistors (1 for each output tube) marked R47, R48, R49, R50 located on the main board (check the figure on next page);
10. Above the R resistors there are adjustable resistors marked RV1, RV2, RV3, RV4 corresponding to the R resistors;
11. Connect a voltmeter to the R resistors and measure the DC voltage of each;  
If the DC voltage of a given R resistor is not 0.4V then adjust the corresponding RV resistor to set this voltage – repeat this action for all four R resistors;  
We recommend to repeat measurements one more time and if necessary to adjust the voltage after a period of 5-10 minutes (leave the amplifier turned on for this period of time).
12. Screw in the bottom cover;
13. Your amplifier is ready for operation.



