

INITIAL ADJUSTMENT

After you have completed the wiring inspect to make certain that all connections are properly soldered and that wire ends are trimmed and not shorting to adjacent terminals. If an ohmmeter is handy make a resistance check from PC1-13 to ground. The resistance should measure about 80,000 ohms.

Adjust the Balance control P3 on PC1 to approximately mid-position. Turn Bias control P2 to full left rotation then turn right approximately one quarter of full rotation with this adjustment made from the underside of the printed circuit board. Set control P4 in mid-position.

Plug in all tubes with the exception of the GZ34. Ease tubes into their sockets, do not push in abruptly. Make certain that tubes are in correct location as given by Fig. 5. Place 5 amp fuse in fuseholder. Plug line cord into 117V outlet (60CPS AC only) and turn on switch.

To adjust bias proceed as follows. Connect a vacuum tube voltmeter or a multitester between either point A or B on the printed circuit board and ground. Adjust the Bias control P2 to obtain 36 volts. Plug in the GZ34 rectifier tube, and allow it to warm up.

Balance the output tubes by connecting a voltmeter on its lowest range to pin jacks J2 and J3. If the meter deflects to the left of zero, reverse the leads. Rotate the Balance control P3 until the meter reads zero. Disconnect one meter lead, and connect it to ground. Re-adjust the Bias control P2 to obtain a meter reading of 0.34 volts. If the lead now connected to one pin jack is shifted to the other pin jack, the same voltage reading should be obtained. If this is not the case, change the setting of the Balance control to obtain this. When these adjustments have been made, the plates of the output tubes will normally show a dull red glow.

If it is desired to use KT-88 or 6550 output tubes, proceed as above. Initially set Bias control P2 to full right hand rotation as viewed from the underside of the printed board, and with the GZ34 removed. Plug in line cord, turn on switch, and adjust Bias control P2 to obtain 54 volts at point A or B. Plug in the GZ34, and balance the output tubes as above. Reset the Bias control to obtain 0.4 volts between pin jacks and ground.

It will be noted that there is another control on the printed circuit board, potentiometer P4. This control provides a means of reducing residual traces of distortion to a minimum by dynamically balancing driver and output tubes. If test equipment is not available to make this adjustment, set the control in the mid-position of its rotation. Intermodulation distortion will then be approximately 1% at 60 watts output using an average set of output tubes.

If an intermodulation test set or a harmonic distortion instrument is available, adjust P4 as follows. With the damping control switch in the "off" position, and with a 16 ohm load resistor connected across the 16 ohm output terminals, feed in the input test signal and adjust to obtain output voltage slightly below maximum output power. For a 4:1 intermodulation test signal this will be about 24 volts, for sine wave input, 29 volts. Adjust P4 to obtain minimum distortion. This will result in intermodulation distortion of the order of 0.4% for 60 watts output.

The amplifier is now ready to put into operation. Plug the rubber feet into the bottom cover and attach to the bottom of the amplifier using eight sheet metal screws. Attach the dust cover using four sheet metal screws. Attach knob to damping control P1. Align index with ends of scale.

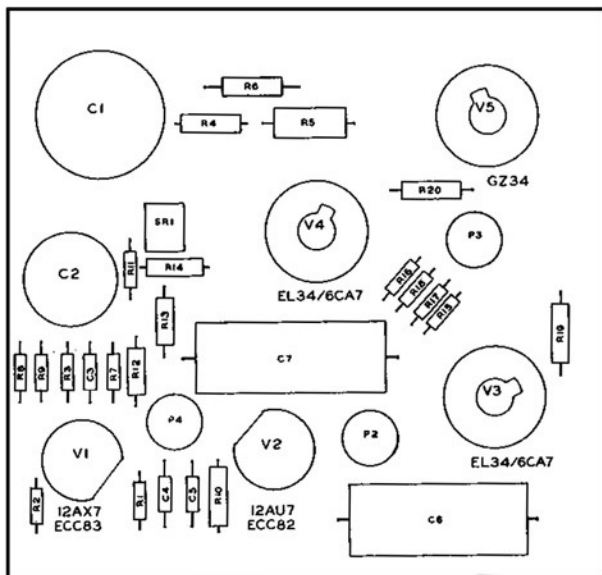


FIG. 5