

**Twenty-five and One Thousand , AND 700
Bias and offset adjustment**

- Ensure that the amplifier is assembled & functioning properly.
- Disconnect all input and output connections.
- Power up the amplifier.
- Adjust the A.C. line voltage to 120V.

For each channel:

Bias adjustment:

- Connect the common lead of your digital multimeter to the pad labelled P17.
- Measure the voltages on the NPN emitter pads labelled P4, P5, P6, P7, P15, P16.
- Measure the voltages on the PNP emitter pads, see diagrams.
- These 12 pads must be constantly monitored during the first 1/2 hour after the amplifier has been turned on.
- The transistors are matched for gain and therefore should have similar emitter voltages. The difference between the absolute values of the voltages on each emitter pad should never be allowed to exceed 6mV.
- When the amplifier is cold, the measurements should be approximately $14\text{mV} \pm 5\text{mV}$.
- Use trimpot R13 to adjust the bias.

Output offset adjustment:

- With the common lead of your digital multimeter still connected to P17, measure the voltage on pad P11.
- When the amplifier is cold, the measurement should be approximately $\pm 100\text{mV}$.
- Use trimpot R4 to adjust the offset.
- Let the amp idle for 6 to 8 hours at a room temperature of 22 degrees celsius. The line voltage should be steady at 120V.
- The heatsinks will reach a final temperature of approximately 47 degrees celsius.

Final adjustments for each channel

- Adjust the offset so that it is between 0mV and + 10mV.
- Adjust the bias so that the average of the six NPN emitter readings equals 22mV.
- NOTE: There is some overshoot when making bias and offset adjustments. Turn the trimpots 1/2 to 1 revolution at a time and let the amp settle for 15 to 20 minutes after each adjustment.