

91B BIAS LEVEL ADJUSTMENTS

Equipment required: Digital Multimeter, 14 pin IC clip, clip-lead to short IC clip pins.

Remove amplifier cover and defeat both safety interlocks (microswitch at rear and HV crowbar at center of amp). Connect the transceiver T/R relay control to the 91B RELAY jack. Make no connection to the 91B RF input at this time (connect radio RF output to dummy-load or antenna, but NOT to amplifier input).

The following steps will allow adjustment of the tube operating bias switching circuitry:

1. Remove knobs and front panel screws to provide access to Control Board adjustments. Insure that cables between front panel and Control Board are properly seated.
2. Set DVM to measure DC voltage. Connect DVM positive lead to chassis. Connect negative lead to B- (anode of D16 or D17 on HV Diode Board).
3. Connect the 14 pin IC clip to U4.
4. Turn on amplifier.
5. Place 91B in OPERATE. Short IC clip pins 4 and 5 (this step actually keys the amp simulating RF applied). Verify 3.8 vdc on DMM, adjust R62 BIAS pot as necessary (this gives 380 ma plate current, the fully turned-on tube operating bias). Remove short on IC pins.
6. Key the transceiver and adjust RF output for zero watts, verify 0.5-0.7 vdc on DMM (50-70 ma plate current); adjust R61 EBS ADJ pot as necessary. Unkey transceiver.

7. Check the adjustments in steps 5 and 6 several times, there is some interaction between them.
8. With amplifier unkeyed, verify that voltage on U4 pin 6 is 0.50 vdc; adjust R41 EBS LVL pot as necessary. Remove IC clip.
9. When reassembling the amplifier, set both TUNE and LOAD capacitors to have FULLY meshed plates and install knobs so that TUNE = 100, LOAD = 0.