

*** Tune-Up Procedure for HL-350VDX ***

Adjustment Memo for HL-350VDX

Adjustments of Output Power (PCB PC1273)

First of all, always use a dummy load during the following adjustments.

- 1) Ground Pin 8 of ACC Socket, so that transmission state will be created. {This time do not drive from the transceiver (0W from transceiver.)}
- 2) Set the base voltage of the final transistors Q2, Q3, Q4 and Q5 to 0.7V by adjusting the potentiometer VR6.
- 3) Confirm that the collector current of the driver transistor Q1 is within the range of 50 - 500mA at the time of transmission without any driving power.
- 4) The adjustments to obtain the proper output power should be done in order of the 50W and then 10W input position.
 - a) At the time of the 50W input position, minimize the reflected power of the input circuit by adjusting TC4 and TC9 alternately. Maximize the output power by adjusting TC8 and TC10 alternately. Confirm that the current consumption of the HL-350VDX should be around 36A at the output power of 250W.
 - b) At the time of the 10W input position, minimize the reflected power of the input circuit by adjusting TC1 and TC11 alternately. Maximize the output power by adjusting TC12. Confirm that the current consumption should be around 42A at the output power of 250W.

Meter/RX AMP/Protection Circuit Adjustments

- 1) Adjustments of Meters:
 - a) VCC: Set to 13.8V by adjusting VR201 (on front panel PCB PC1275B).
 - b) VSWR: Set Input Select Switch to the 50W position. Remove the load (antenna or dummy load) from the antenna terminal of the HL-350VDX. With a 5W drive, transmit and then, set VSWR Meter to the infinite (∞) by adjusting VR203 (on front panel PCB PC1275B).
 - c) RF Out: Using an accurate power indicating a 250W input, set RF OUT Meter to 250W by adjusting VR205 (on front panel PCB PC1275B).
- 2) Adjustments of Overdrive Protection Circuit:

With Input Select Switch set to the 10W position, the protection circuit must be activated with a 20W input drive. Adjust VR1 (on ATT PCB PC1274A) so that the protection circuit starts to work with the above setting. Then, set Input Select Switch to the 50W position, and confirm the protection circuit starts to work with a 100W drive.
- 3) Adjustments of High VSWR Protection Circuit:

With Input Select Switch set to the 50W position, the protection circuit must be activated with a 7W input drive when the load (antenna or dummy load) is removed from the antenna terminal of the HL-350VDX. Adjust VR204 (on front panel PCB PC1275B).
- 4) Adjustments of RX Preamp:
 - a) +15dB: Adjust TC5, TC6 and TC7 (on ATT PCB PC1274A) alternately to obtain the maximum gain.
 - b) +6dB : Adjust VR220 (on front panel PCB PC1275B) to obtain a gain of +6dB.
 - c) -20dB: Adjust VR219 (on front panel PCB PC1275B) to obtain a gain of -20dB.