

## ■ ADJUSTMENT

### 1. PLL Section (Lock)

- (1) Connect a tester (10 V range) to C120 (+).
- (2) Set the reception frequency to 144.000 MHz.
- (3) Turn L16 so that the tester should indicate 2.5 V.
- (4) Make sure that the tester indicates between 2.7 and 3.0 V when the reception frequency is set to 146.000 MHz.

### 2. Transmitter section

- (1) Set the frequency to 146.000 MHz.
- (2) Turn VR1 full on the face clockwise. Set the front H/L switch to H side.
- (3) Connect a tester (10 V range) to L9 and put the device on air.
- (4) Turn VC1 so that the tester should indicate the minimum.
- (5) Turn VR1 and adjust so that RF power should be 25 W (45 W on the ALR-22HT/HE). In this case that current consumption would be over 5 A (9.5 A on the ALR-22HT/HE) or the output power would not reach to 25 W (45 W on the ALR-22HT/HE), beat out L11~14.
- (6) Set the front H/L switch to L side so that output power should be between 3 W and 6 W.
- (7) Turn VC2 to set the transmission frequency to 146.000 MHz.
- (8) Send 1 kHz modulation signals into the mic terminal, and set the modulation level to -10 dBm.
- (9) Set the modulation degree to 4.7 kHz (dev) by adjusting VR2.
- (10) Set the modulation level at the mic terminal to 0.
- (11) When using the ALR-22T, set the tone frequency to 88.5 Hz (Tone No. 08) and turn VR1 of the TONE unit so that the deviation is 0.6 kHz.
- (12) When using the ALR-22E, press the Tone (1750 Hz) switch to set the transmission mode and turn the VR3 so that the deviation is 3.5 kHz.
- (13) Verify that the transmission spurious velocity is less than -60 dB (both H and L outputs).
- (14) Adjust the angle of D14 so that 4 (or 8) S meter indicators light up when the power transmission is LOW.

### 3. Receiver section

- (1) Set the reception frequency to 146.000 MHz.
- (2) Connect a tester (2.5 V) range to terminal CN2 ⑥.
- (3) Adjust SG output so that the tester should indicate around 0.5 V.
- (4) Adjust L2~L6 so that the tester should indicate the maximum.
- (5) When the tester comes to indicate over 1 V, turn SG output down and repeat (3) and (4).
- (6) Set AF LEVEL to 0 dB. Sensitivity of SINAD 12 dB is to be less than -8 dB $\mu$ .
- (7) Distortion is to be less than 10% when output power is 1.6 W.
- (8) Set the signal output to 15 dB $\mu$  (release value).
- (9) Adjust VR4 until the upper right indicator of the S meter lights up.