

# TC2108U Adjustment Description

The radio can be programmed with PC program software or by manual programming. Manual programming procedure of TC2108 is as follow. (Please refer to the test and alignment mode in the section *Radio Mode*.)

## I. Instruments:

|                                 |       |
|---------------------------------|-------|
| 1. Communication analyzer 2955B | 1 set |
| 2. Scanner                      | 1 set |
| 3. 3A/10V Power Supply          | 1 set |
| 4. Digital Voltmeter            | 1 set |
| 5. 3A Ammeter                   | 1 set |
| 6. RF Cable                     |       |

## II. Alignment:

### 1. Initializing:

It's necessary to set the model and initialize the radio before alignment because there is no needed information in EEPROM when the radio is manufactured. Short out two SELF points on PCB (i.e, pin 26 and grounding pin), and turn on the power, after a “beep” sounds, LCD displays “BAND 1-22”. The radio enters model set and reset mode. Press [UP]/[DOWN] to select model number 1-22. [For example, the model number of radio 450MHz-470MHz is “7”]. Press [PTT] to save the model and to initialize the radio. Refer to the table in page 11 for data of initialization.

### 2. Alignment:

Some items can be aligned in conventional communication mode and the others in manual alignment mode. Turn on the power, the radio enters conventional communication mode. While pressing [PTT] and [MONI] simultaneously, turn on the power, and in 3 seconds the radio enters model select menu. Select “ tune”, and press PTT to enter manual alignment mode.

Only the model number is set, the alignment can be done.

## VCO:

| Item                         | Condition             | Measurement       |          | Alignment |           | Specifications |
|------------------------------|-----------------------|-------------------|----------|-----------|-----------|----------------|
|                              |                       | Test Instrument   | Terminal | Part      | Method    | /Remarks       |
| 1. Power supply              | power voltage DC 7.5V |                   |          |           |           |                |
| 2. Transmit VCO Lock voltage | 1.CH: TX HIGH         | Digital Voltmeter | CV       | TC1       | 3.0V±0.1V |                |
|                              | 2.CH: TX LOW          |                   |          |           | Check     | >1V            |
| 3. Receive VCO Lock voltage  | 1.CH: RX HIGH         |                   |          | TC2       | 3.0V±0.1V |                |
|                              | 2.CH: RX LOW          |                   |          |           | Check     | >1V            |