Adjusting Procedures

1. Setting of Test Frequencies

By using XXXXX Programmer application, test frequencies and other parameters are to be set as below.

CH01	Tx	150.025Mhz	For adjustment	ID000
	Rx	150.025MHz		
CH02	Tx	173.975MHz	For adjustment	ID000
	Rx	173.975MHz		
CH03	Tx	162.000MHz	For adjustment	ID000
	Rx	162.000MHz		
CH04	Tx	161.550MHz	For Tx test	ID123
	Rx	161.550MHz		
Other parameters		SW8 BA172 TB136 LC9 LT10 HP0 RE1	Parameters not being shown on this table are to be set with default value.	

2. VCO Adjustment

2.1. Contact the probe of digital voltmeter at the test point TP(PCV).

2.2. Select CH01 and turn T10 for obtaining 0.3V at TP(PCV).

2.3. Select CH02 and check the voltage below 5V.

2.4. Select CH03 and read the voltage.

2.5. Press PTT and turn T9 for obtaining the same voltage above. (If, by turning the T9, the voltage obtained cannot reach to the one above, take the closest value.)

2.6. Contact the probe of digital voltmeter at the test point TP(AF).

2.7. Turn the T8 for obtaining 1.5V.

2.8. Turn the RV5 counterclockwise until it stops.

3. DSP Adjustment

3.1. Input the AF signal of 1KHz / 10mV (-38dBm) to the MIC IN port.

3.2. Turn the RV1 on the DSP PCB to max.

3.3. Contact the probe of digital voltmeter at TP1, and turn to adjust the RV2 to obtain 0.53V (1.5Vp-p).

3.4. Contact the probe of digital voltmeter at CN2.4TP on DSP PCB, and turn to adjust the RV3 to obtain 0.25V (0.7Vp-p).

3.5. Contact the probe of digital voltmeter at T-AF on CPU PCB, and turn to adjust the RV4 to obtain 0.42V (1.2Vp-p).

4. Tx Adjustment

4.1. Set the TCX1 at 160.000MHz.

4.2. Select CH03, and turn the RF output power to “H” by the H/L Switch.

4.3. Turn the H-PW(RV2) counterclockwise to max. for inactivating the APC.

4.4. Connect a Dummy Load and Watt Meter to the Antenna.

4.5. Press PTT button, and adjust to obtain the peak value at T1 and T2.

4.6. Turn the RV1 to obtain approx. 1.4W, and adjust the TC1 to get the peak value and TC2 to get the lowest current.

<Notes>

✍✍By turning the RV1, the RF output power will be saturated and make the current tend to be increased. Stop turning the RV1 just before the point where the saturation occurs.

✍✍If the RF output power cannot reach to 1.4W, the adjustment can be done with the lower power, i.e. 1.3W.

4.7. Check the RF output power to get approx. 1.4W on CH01 and CH02. If the power is low, readjust the T1 and T2.

4.8. Turn the H-PW to obtain 1W.

4.9. Turn the H/L Switch to “L” and adjust the L-PW(RV3) to obtain 0.1W.

<Notes>

✍✍The current at the High Power should be 0.6 – 0.7V.

4.10. Check the RF output power to be over 1W on both CH01 and CH02.

4.11. Input the AF signal at 10mV from MIC IN.

4.12. Select CH03 and adjust the DEV(RV4) to obtain ±4.5KHz DEV.

4.13. Check the Tx spurious by spectrum analyzer.

5. Rx Adjustment

5.1. Select the CH01.

5.2. Contact the probe of TG at the TR and obtain the peak value at T3 and T7.

<Notes>

✍✍ Set the spectrum analyzer with CENTER 160MHz, SPAN 50MHz, and TG output –30dBm.

✍✍ Peak level should be over –10dBm.

5.3. Select CH02 and CH03, and check the wave shape to show the peak at 172MHz and 160MHz.

5.4. Connect 16 ohm Dummy Load at AF output port, and connect the SINAD Meter.

5.5. Measure the sensitivity on each CH01, CH02, and CH03 to meet the specs.

<Notes>

✍✍ To obtain 12dB SINAD at –120dBm.

5.6. Set the SG at –117dBm, and turn to adjust the SQ(RV5) at the point where the squelch is completely opened.

5.7. Should proper adjustment be done, no less than 140mW is obtained at the maximum position of VR.