# TURN UP INFORMATION

INTRUMENT:

| | |
|---|---|
| Standard Signal Generator(SSG) | 1set |
| Digital Voltmeter | 1set |
| Power Meter | 1set |
| Frequency counter | 1set |
| Distortion meter | 1set |
| Spectrum analyzer | 1set |
| Oscilloscope | 1set |
| Audio Generator (AG) | 1set |
| AF Volt Meter | 1set |
| Tracking Generator | 1set |
| 8Ω Dummy Load | 1set |
| Regulated power supply | 1set |
| Ammeter | 1set |
| Deviation Meter | 1set |

Adjustment:

Some items can be adjusted in conventional mode and the others in manual mode

Turn the power on to enter conventional mode.
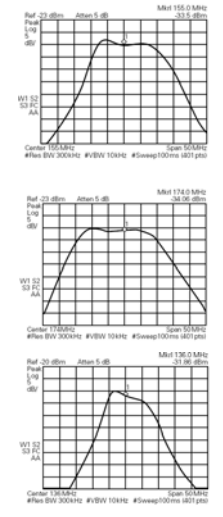
Common Section

| Item | Condition | Measurement | | Adjustment | | Specification/Remarks |
|---|---|---|---|---|---|---|
| | | Test Instrument | Terminal | Part | Method | |
| 1.Setting | 1) BATT Terminal Voltage : 7.2V<br>2) SSG standard Modulation<br>[WIDE]MOD:1kHz,DEV:3kHz<br>[NARROW]MOD:1kHz,DEV:1.5kHz | | | | | |
| 2.VCO Lock voltage RX | 1)CH : HI | Power Meter<br>DVM | ANT CV | TC2 | 3.6 V | ±0.1V |
| | 2)CH : LO | | | | CHECK | ≥0.9V |
| 3.VCO Lock voltage TX | 3)CH : HI<br>PTT : ON | | | TC1 | 3.8 V | ±0.1V |
| | 4)CH : LO<br>PTT : ON | | | | CHECK | ≥0.7V |

## Transmitter Section：

| Item | Condition | Measurement | | Adjustment | | Measurement |
|---|---|---|---|---|---|---|
| | | Test Instrument | Terminal | Test Instrument | Terminal | |
| 1. Frequency Adjustment | 1）CH : HI<br>2）PTT : ON | Frequency counter | ANT | VR1 | 172.875MHz | ±50Hz |

| | | | | | |
|---|---|---|---|---|---|
| 2. High Power Adjust | TEST CH: LO<br>　　　Center<br>　　　HI<br>（3 POINT）<br>BATT Voltage:7.2V<br>PTT : ON | Power Meter<br>Ammeter | | Programming software :<br>U10 | | 4.7W±0.1W<br>≤1.6A |
| 3. Low Power Adjust | TEST CH: LO<br>　　　Center<br>　　　HI<br>（3 points）<br>BATT terminal Voltage :7.2V<br>PTT : ON | | | | | |
| 4. Max deviation adjust<br>［ wide ] | TEST CH: Center<br>AG : 1kHz / 120mV<br>Deviation meter filter LPF :<br>15kHz HPF : OFF<br>PTT : ON | Power meter<br>Deviation meter<br>Oscilloscope<br>AG<br>AF VTVM | ANT<br>SP /<br>MIC connector | | 4.6kHz<br>(According to t lager+,-) | ±50Hz<br>Error：3.8~4.8KHz |
| ［ narrow] | TEST　CH : Center<br>PTT : ON | | | | 2.3kHz<br>(According to t lager+,-) | ±50Hz |
| DQT<br>5. Balance adjust<br>［wide | TEST CH: LO<br>　　　MID<br>　　　HI<br>（3 POINT）<br>LPF : 3kHz<br>HPF : OFF<br>PTT : ON | Power meter<br>Deviation meter<br>Oscilloscope<br>AG<br>AF VTVM | ANT | Programming software :<br>U10 | Make the demodulation wave into square waves | |
| ［ narrow ] | TEST CH : Center<br>PTT : ON | | | | | |
| 6. QT deviation adjust<br>［ wide ] | TEST CH: LO<br>　　　MID<br>　　　HI<br>　　（3 POINT）<br>LPF : 3kHz<br>HPF : OFF<br>PTT : ON | Power meter<br>Deviation meter<br>Oscilloscope<br>AG<br>AF VTVM | ANT | Programming software :<br>U10 | 0. 75kHz | ±100Hz |
| ［ narrow ] | TEST CH : Center<br>PTT : ON | | | | 0. 35kHz | ±100Hz |
| 7. DQT deviation adjust | TEST CH : Center<br>　　　Low<br>　　　High<br>　　（3 points）<br>LPF : 3kHz<br>HPF : OFF<br>PTT : ON | | | | 0. 75kHz | ±100Hz |
| ［ narrow ] | TEST CH : Center<br>PTT : ON | | | | 0. 35kHz | ±100Hz |

Receiver Section

| Item | Condition | Measurement | | Adjustment | | Specification/Remarks |
|------|-----------|-------------|------|------------|--------|----------------------|
| | | Test Instrument | Termi | Part | Method | |
| 1. BPF Wave adjust | (1)Center frequency<br>  Spectrum analyzer setting<br>  Center-f : 155MHz<br>  Span : 50MHz<br>  RBW : 300kHz<br>  VBW : 10kHz ATT<br>    : 5dB<br>(2)High-edge frequency<br>  Spectrum analyzer setting Center-f: 174MHz<br>(3)Low-edge frequency<br>  Spectrum analyzer setting Center-f : 136MHz | Spectrum analyzer | ANT BPF | Programming software : U10 | Adjust the waveform as shown to the right |  |
| 2. Sensitivity [ wide ] | TEST CH : LOW<br>      Center<br>      High<br>SSG output :<br>-119dBm (0.3μV)<br>SSG MOD : 3.0kHz | SSG<br>DVM<br>Oscilloscope<br>AF VTVM | ANT | | check | 12dB SINAD or more |
| [ narrow] | TEST CH : Center<br>SSG output : -117 dBm (0.4μV)<br>SSG MOD : 1.5kHz | | | | | |
| 3. SQL1 (Threshold) writing [ wide ] | TEST CH : Center<br>      LOW<br>      High<br>SSG output : -123 dBm (0.16μV)<br>SSG MOD : 3.0kHz | | | Programming software : U10 | write | Squelch open<br>Error：± 1.5dB |
| [narrow ] | TEST CH : Center<br>SSG OUTPUT : -122 dBm (0.18μV) | | | | | |
| 4. SQL9 (Tight writing [ wide ] | TEST CH : Center<br>      Low<br>      High<br>SSG output : -117 dBm (0.3μV) | | | | | |
| [ narrow ] | TEST CH : Center<br>SSG output : -116 dBm (0.35μV) | | | | | |
| 5. BATT Detection Writing | BATT Terminal voltage : 5.6V | DVM | ANT BATT terminal | | writing | BATT Terminal voltage : 5.6V |