

30BT Tuning Procedure 33-529-23 723MHz---735MHz

1) VCO adjustment

- a) Set a frequency at CH001.
- b) Connect DC volt-meter to TP1.
- c) Adjust VC101 until DC volt-meter shows at 0.9V.
- d) Set a frequency at CH240 and then make sure a DC volt-meter shows at less than 2.1V.

2) RF Output power adjustment

- a) Set a frequency at CH121.
Disconnect an antenna. Set SW2 at CN5.
- b) Connect a spectrum analyzer and a power meter to CN5.
- c) Adjust VC2 to minimize a spurious with maintaining carrier.
- d) Make sure the spurious should be less than 40dB less than carrier.
- e) Adjust VC3 until power shows at 15mW.

3) TX Frequency adjustment

- a) Set a frequency at CH 121.
- b) Connect a frequency counter to CN5.
- c) Adjust VC1 until frequency counter shows at $729.000\text{MHz} \pm 2\text{kHz}$.

4) AF Deviation adjustment

- a) Connect an oscillator output to mic terminal (Lch of ST jack).
(Should use $10\mu\text{F}/16\text{V}$ capacitor between them and + side should be connected to mic terminal.)
- b) Set the output of oscillator at -60dBm at 1kHz.
- c) Adjust VR1 until level of TP4 become at -31dBm.
- d) Adjust VR2 until deviation become at $5.0\text{kHz} \pm 0.5\text{kHz}$.
- e) Adjust VR5 until one AF level meter (5pcs small square) is shown.
- f) Connect an oscillator output to mic terminal (Rch of ST jack).
- g) Check the oscillator the input level $19\text{dBm} \pm 3\text{dBm}$ at 5kHz deviation.

5) Tone modulation adjustment

- a) Turn off the Audio.
- b) Connect terminal TP6 to ground.
- c) Adjust VR4 until the deviation become $3.0\text{kHz} \pm 0.2\text{kHz}$.
- d) After adjustment should to set SW2 at antenna.

- 6) Check the display (Allowance of the voltage is $\pm 0.1V$)
- a) Make sure low battery indicator shows the three (3) LCD segments at 9V.
 - b) Make sure low battery indicator shows the one (1) LCD segment at less than 6.2V.
 - c) Press the mode button and change to the time display. Then hold pressing "UP" switch more than two seconds to become "0" indication.
 - d) Make sure the channel display to show the correct frequency.
(Ch 001 to Ch 240, 50kHz step, 723.000 to 734.950 MHz)