



## Tuning procedure

### Testing Condition

1. Speaker Load : 8 ohm
2. Modulation signal : 1000 Hz
3. Modulation deviation : 1.5 kHz
4. Antenna Load : 50 ohm
5. Channel : 4
6. Supply Voltage : 6.0VDC

### Channel Frequency Chart (FRS).

Channel	TX and RX Frequency (MHz)
A	467.5625
B	467.6125
C	467.6625
D	467.7125

Test and Alignment procedure of main board

1. Align PLL Voltage
2. Align Tx frequency
3. Align 450KHz Quad Coil
4. Align RSSI
5. Align maximum modulation deviation

#### 1. Align PLL Voltage

- 1.1 Terminate antenna to 50 ohm Loading.
- 1.2 Connect the voltage probe to the TP1 of RF board.
- 1.3 Press “PTT” Button to Tx mode
- 1.4 Align the spring coil (L6) to set a PLL voltage in Tx mode at 3.0V
- 1.5 Program the PLL to Rx mode and check PLL voltage is within 2.8V

#### 2. Align Tx Frequency

- 2.1 Connect the RF probe to Antenna of the RF board
- 2.2 Press “PTT” Button to Tx mode
- 2.3 Align trimmer capacitor C79 so that frequency error is within +/- 400Hz



### **3. Align 450KHz Quad Coil**

- 3.1 Connect the RF probe to Antenna of the RF board
- 3.2 Set RF Signal Gen. : Freq. dev. = 1.5KHz; Mod. Freq. : 1KHz; O/P Power = -50dBm
- 3.3 Set Volume Level 5 of the Dummy main board.
- 3.4 Align L1 for maximum o/p Level at “speaker +”.

### **4. Align RSSI**

- 4.1 Continue the procedure of 3.3
- 4.2 Decrease the RF signal generator output level. Measure 12dB Sinad at speaker output.
- 4.3 Connect the voltage probe to TP10.
- 4.4 Set RSSI threshold by adjusting R129 so that “NO\_RF” output starts to go from low level to high level.

### **5. Align Max. Modulation Deviation.**

- 5.1 Align Sound Source sound pressure level is 110dB SPL
- 5.2 Press “PTT” Button to Tx mode, deviation limiting should be observed.
- 5.3 Align trimmer resistor (R81) to Max. modulation is 2.3-2.4kHz Dev. (15kHz LP Filter)