



## **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).**

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

### **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)