BJ-UV99 **Tuning Description**

Required Test Instruments

- Radio communication test set HP8921。
- 10V/3A regulated DC power supply
- Multimeter
- Tuner software

After the radio is reassembled, it is required to use the Tuner software to tune it.

The specific operations are described in the table below:

Item	Method
TX Section	
Reference Oscillator Warp	1. The antenna ports of UV99 are connected to the HP8921 through the connecting cables, and set the HP8921 to TX test mode. 2. Then select an appropriate channel, click the "PTT" button. 3. Observe the frequency displayed on HP8921, adjust "VR2" potentiometer on the TX-RX unit board until the frequency offset is less than or equals to 40Hz.

Transmit Power Calibration	1. The antenna ports of UV99 are connected to the HP8921 through the connecting cables, and set the HP8921 to TX test mode.
	2. Open the Tuner software, go to "TUNE_DATA", open the stored date, click the "write" button.
	3. Then select an appropriate channel, click the "PTT" button.
	4.Observe the frequency displayed on HP8921, go to "TUNE_DATA -> HP/ LP" adjust the value of corresponding frequency range, and repeat click" write " button, adjust the power to the required level as described below:：
	    L：1W @(VHF/UHF)
	    H：5W@(VHF) / 4W@(UHF)
	5. Click the "Save" button to save your settings.

Transmit-to-Deviation	1. The antenna ports of UV99 are connected to the HP8921 through the connecting cables, and set the HP8921 to TX test mode.
	2. Connect the Audio In port of UV99 with the Audio Out port of the HP8921.
	3. Set HP8921 as follows:
	    IF Filter: 230kHz
	    Filter1:: <20Hz HPF
	    Filter2: <15kHz LPF
	    De-Emphasis: OFF
	4. Then select an appropriate channel, click the "PTT" button.
	5. Observe the frequency deviation displayed on HP8921,adjust the "VR1" potentiometer on the TX-RX unit board until it is 5k±50Hz.

RX Section	

Receive Sensitivity	1. The antenna ports of UV99 are connected to the HP8921 through the connecting cables, and set the HP8921 to RX test mode.
	2. Connect the Audio Out port of UV99 with the Audio In port of the HP8921.
	3. Open the Tuner software, go to "TUNE_DATA" open the "Transmit Power Calibration steps" stored date, click the "write" button.
	4. Set the HP8921 as follows:
	    Output RF signal: -118dBm/Frequency (current channel frequency)
	    Modulation frequency: 1kHz
	    Modulation deviation: 3kHz
	    De-Emphasis:750 us
	5. Observe the value displayed on the HP8921, go to "TUNE_DATA -> Receive the tuning" adjust the value of corresponding frequency range, and repeat click" write " button, and adjust the vernier until the SINAD value is more than 14dB。