Adjustment Description

The radio can be adjusted with PC programming software or by manual adjustment. Manual adjustment procedure of TC-600 is shown as follows. (Refer to “Model Set Mode” and “Manual Adjust Mode” in *Software Specification section*.)

Instrument:

Radio Communication Test Set	1 set
Scanner	1 set
3A/10V Power Supply	1 set
Digital Voltmeter	1 set
3A Ammeter	1 set

Adjustment:

1. Initialization

It’s necessary to set the model and initialize the radio before adjustment because there is no needed information in EEPROM when the radio is manufactured. Please refer to the “Model Set Mode” in *Software Specification* section for details.

2. Adjustment

Some items can be adjusted in Conventional Mode and the others in Manual Adjust Mode. Turn on the power, the radio enters the Conventional Mode. If Manual Adjust Mode is enabled, turn on the power while holding down PTT and MONI key simultaneously, the radio enters Manual Adjust Mode in 2 seconds. (Refer to “Manual Adjust Mode” in *Software Specification* section.)

VCO

Item	Condition	Measurement		Adjustment		Specification /Remarks
		Test Instrument	Terminal	Part	Method	
1. Power Supply	1.power supply voltage 7.2V DC					
2.Transmit VCO Lock Voltage	1.TX High. Turn to CH14 in manual adjust mode and press PTT.	Digital Voltmeter	CV	TC1	3.0V±0.1V	
	2.TX Low. Turn to CH13 in manual adjust mode and press PTT.				>0.7V	
3. Receive VCO Lock Voltage	1.RX High. Turn to CH14 in manual adjust mode.			TC2	2.6V±0.1V	
	2.RX Low. Turn to CH13 in manual adjust mode.				>0.7V	

Note: The radio transmits no matter whether VCO is locked or unlocked. Enter the Manual

Adjust Mode for check in case of unlocked TX VCO.

RECEIVER: (Enter the Manual Adjust Mode)

Item	Condition	Measurement		Adjustment		Specification /Remarks
		Test Instrument	Terminal	Part	Method	
1. Band Pass Filter	1.RX Center. Turn to CH12 in manual adjust mode.	Scanner	ANT . TP2	TC3 TC4 TC5	Adjust the waveform to the top, and the top is flat, the bandwidth is about 20MHz, the sign of RX central frequency is at the center of the waveform.	
2.Sensitivity	1.RX Center. Turn to CH12 in manual adjust mode.	Radio Communic a-tion Test Set SSG output: -118dBm MOD: 1KHz DEV: ±3KHz FILTER: 0.3-3.4kHz	ANT Speaker Jack		Check	SINAD: 12dB or higher
	2. RX Low. Turn to CH13 in manual adjust mode.					
	3.RX High. Turn to CH14 in manual adjust mode.					
3.Squelch	1.RX Center. Turn to CH2 in manual adjust mode. Adjust by PTT or Function key.	Radio Communic-ation Test Set SSG output: -117dBm	ANT Speaker Jack		Level 9 Adjust to just close the squelch.	Adjust to squelch level 9
	2.RX Center. Turn to CH3 in manual adjust mode. Adjust by PTT or Function key.	Radio Communic-ation Test Set SSG output: -125dBm			Level 3 Adjust to just close the squelch.	Adjust to squelch level 3

Transmitter

Item	Condition	Measurement		Adjustment		Specification /Remarks
		Test Instrument	Terminal	Parts	Method	
1.Transmit frequency	1.TX Center. Turn to CH12 in manual adjust mode and press PTT.	Radio Communica-tion Test Set	ANT	TC6	Adjust it to center frequency	Error≤±250Hz
2.Max. Deviation	1.TX Center. Turn to CH12 in manual adjust mode and press PTT.	Radio Communica-tion Test Set LPF: 15KHz AF:1KHz 120mV	ANT MIC Jack	VR2	Adjust deviation to: 4.2kHz±100Hz(W) 2.2kHz±100Hz(N)	
3. Modulation Sensitivity	1.TX Center. Turn to CH12 in manual adjust mode and press PTT.	Radio Communica-tion Test Set FILTER: 0.3-3.4KHz AF: 1KHz 13±3mV	ANT MIC Jack		Check deviation: 2.2KHz-3.6KHz	
4. CTCSS Balance	1. TX Center. CTCSS: 67.0Hz. Turn to CH4 in manual adjust mode.	Radio Communica-tion Test Set LPF:300Hz	ANT	VR3	Adjust VR3, deviation tested on condition 1 and condition 2 are consistent, the difference≤200Hz	67.0Hz CTCSS
	2. TX Center. CTCSS: 250.3Hz. Turn to CH4 in manual adjust mode and press PTT.					250.3Hz CTCSS
5. CTCSS Deviation	1. TX Center. CTCSS: 67.0Hz. Turn to CH4 in manual adjust mode. Adjust by PTT or Function key.	Radio Communica-tion Test Set LPF: 300Hz	ANT		Adjust deviation to: 0.65kHz±100Hz(W) 0.35kHz±100Hz(N)	
6. CDCSS Deviation	1. TX Center. CDCSS: 023. Turn to CH5 in manual adjust mode. Adjust by PTT or Function key.				Adjust deviation to: 0.65kHz±100Hz(W) 0.35kHz±100Hz(N)	

7. DTMF Deviation	TX center, turn to CH15 in manual adjust mode	Radio Communica-tion Test Set LPF: 15KHz	ANT	Observe	Deviation: ≤3.5KHz(W) ≤2.5KHz(N)	
8. Low Battery Alert Level	1. Turn to CH1 in manual adjust mode. Adjust the power supply voltage to 5.5V. Adjust by PTT or Function key.	Digital Voltmeter			Adjust the level to make LED just flash.	

Note: In Manual Adjust Mode, when channel selector knob is rotated to CH1-CH16, MIC jack can't connect with external cables. After adjustment is completed, short out the two SELF points and then turn the power on, the radio enters Model Set Mode. Then press PTT to disable the manual adjust mode.