

ADJUSTMENT

Required Test Equipment

1. Stabilized Power supply
 - 1) The supply voltage can be changed between 5V and 20V, and the current is 3A or more.
 - 2) The standard voltage is 7.2V.
2. DC ammeter
 - 1) Class 1 ammeter (17 ranges and other features).
 - 2) The full scale can be set to either 300mA or 3A
 - 3) A cable of less internal loss must be used.
3. Radio Communication test set

Frequencies of up to 1GHz or so can be measured, and measurements are highly stable and accurate (0.2ppm or so).

4. Digital Voltmeter

- 1) Voltage range: FS=18V or so.
- 1) Input resistance: 1M or more.

ADJUSTMENT FREQUENCY LIST

CH	TX Frequency (MHz)	RX Frequency(MHz)
Center	450.185	450.185
Low	430.185	430.185
High	469.985	469.985

Remarks

- Center frequency range from 450.185-450.560MHz (25kHz channel spacing)
- Low frequency range from 430.185-430.560MHz (25kHz channel spacing)
- High frequency range from 469.610-469.985MHz (25kHz channel spacing)

VCO

Item	Condition	Measurement		Adjustment		Specifications / Remarks
		Test equipment	Terminal	parts	method	
1.Setting	1.Power supply voltage Battery terminal: 7.2V					
2.VCO lock voltage	1.CH: TX high	Digital voltmeter	CV	C304	3.2V	$\pm 0.1V$
	2.CH: TX high			C305	3.2V	$\pm 0.1V$
	3.CH: TX high				Check	More than 1.2V
	4.CH: TX high					

Receiver Section

Item	Condition	Measurement		Adjustment		Specifications /
		Test equipment	Terminal	parts	method	Remarks
1.AF level	CH: RX center TEST output:-47dB m AFGen1 Frea: 1kHz AFGen1 To: ± 3 kHz	Radio Communication Test Set	ANT		Check MAX AF level	More than 0.5W
2.Sensitiviity	CH: RX center CH: RX low CH: RX high TEST output:-119dB m AFGen1 Frea: 1kHz AFGen1 To: ± 3 kHz Filter1: 300Hz HPF Filter2: 3kHz LPF				Check	SINAD: more than 12dB
3. Squelch Level	CH: RX center Level 9 TEST output: -116dBm Level 3 TEST output: -121dBm				Adjust to close the squelch.	The squelch must be closed.

Transmitter section

Item	Condition	Measurement		Adjustment		Specifications /
		Test equipment	Terminal	parts	method	Remarks
1. Transmit frequency	CH: TX center PTT: ON	Radio Communication Test Set	ANT	VR1	Adjust to center frequency	Within $\pm 100\text{Hz}$
2. Power	CH: TX center Battery terminal: 7.2V PTT: ON				Check	$3.8\text{W} \pm 0.2\text{W}$
3. MAX DEV	CH: TX center AFGen1 Freq: 1kHz AFGen1 Lv1:100mV PTT: ON			VR2	Adjust it to $\pm 4.2\text{kHz}$	$\pm 2.2\text{kHz} \sim 3.6\text{kHz}$
4. MIC SENX	CH: TX center AFGen1 Freq: 1kHz AFGen1 Lv1:10mv PTT: ON	Radio Communication Test Set	ANT		Check MAX AF level	More than 0.5W
5. CTCSS/DCS DEV	CH: TX center CTCSS: 67Hz DCS: 023			VR3	Adjust it to $\pm 0.75\text{kHz}$	$\pm 50\text{Hz}$