ADJUSTMENT/调整

Required Test Equipment

1. Stabilized Power supply

1. The supply voltage can be changed between 5V and 9V, and the current is 3A or more.
2. The standard voltage is 7.5V.

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. Frequency Counter (f. counter)

1. Frequencies of up to 1GHz or so can be measured.
2. The sensitivity can be changed to 500MHz or below, and measurements are highly stable and accurate (0.2ppm or so).

4. Power Meter

1. Measurable frequency : Up to 500MHz
2. Impedance : 50Ω, unbalanced
3. Measuring range : Full scale of 10W or so
4. A standard cable (5D2W 1m) must be used.

5. RF Voltmeter(RF V.M)

1. Measurable frequency : Up to 500MHz or so.

6. Linear Detector

1. Measurable frequency : Up to 500MHz or so
2. Characteristics are flat, and CN is 60dB or more.

7. Digital Voltmeter

1. Voltage range : FS-18V or so
2. Input resistance : 1MΩ or more

8. Oscilloscope

1. Measuring range : DC to 30MHz
2. Provides highly accurate measurements for 5 to 25MHz.

9. AF Voltmeter (AF V.M)

1. Measurable frequency : 50Hz to 1MHz
2. Maximum sensitivity : 1mV or more

10. Spectrum Analyzer

1. Measuring range : DC to 1GHz or more

11. Standard Signal Generator (SSG)

1. Maximum frequency : 500MHz or more
2. Output : -133dBm/0.05μV to 7dBm/501mV
3. Output impedance : 50

12. Tracking Generator

1. Center frequency : 50kHz to 500MHz
2. Frequency deviation : ±35MHz
3. Output voltage : 100mV or more

13. Dummy Load

1. 8Ω, 3W or more

14. AF Generator(AG)

1. Frequency range : 100Hz to 100kHz
2. Output : 0.5mV to 1V

15. Distortion Meter

1. Measurable frequency : 30Hz to 100kHz
2. Input level : 50mV to 10Vrms

所需的测试设备

1. 稳定电源

1. 输出电源在5V和9V之间可调，并且电流为3A或更大。
2. 标准电压为7.5V。

2. 电流表

1. 高级电流表（17档和其它功能）
2. 满刻度可设定为300mA也可设定为3A。
3. 必须使用低消耗电缆。

3. 频率计数器（f. counter）

1. 可以测量到最大量程大约为1GHz的频率。
2. 灵敏度可调到500MHz或更低，测量为高稳定性和高准确度（大约为0.2ppm）.

4. 功率仪

1. 可测量的频率：最高到500MHz
2. 阻抗：50Ω，不稳定
3. 测量范围：满刻度大约为10W
4. 必须使用标准电缆（5D2W 1m）

5. 射频电压表(RF V.M)

1. 频率范围：最高大约到500MHz

6. 线性检测器

1. 频率范围：最高大约到500MHz
2. 特征函数是平展的，CN为60dB或更大

7. 数字电压表

1. 电压范围：大约FS-18V
2. 输入阻抗值：1MΩ或更大

8. 示波器

1. 测量范围：直流到30MHz
2. 5到25MHz间提供高准确度测量

9. 音频电压表(AF V.M)

1. 测量范围：50Hz到1MHz
2. 最高灵敏度：1mV或更高

10. 频谱分析仪

1. 测量范围：直流到1GHz

11. 标准信号发射器（SSG）

1. 测量范围：直流到1GHz
2. 输出：-133dBm/0.05μV to 7dBm/501mV
2. 输出阻抗：50Ω

12. 轨迹发生器

1. 中心频率：500MHz或更高
2. 频偏：±35MHz
3. 输出电压：100mV或更高

13. 假负载

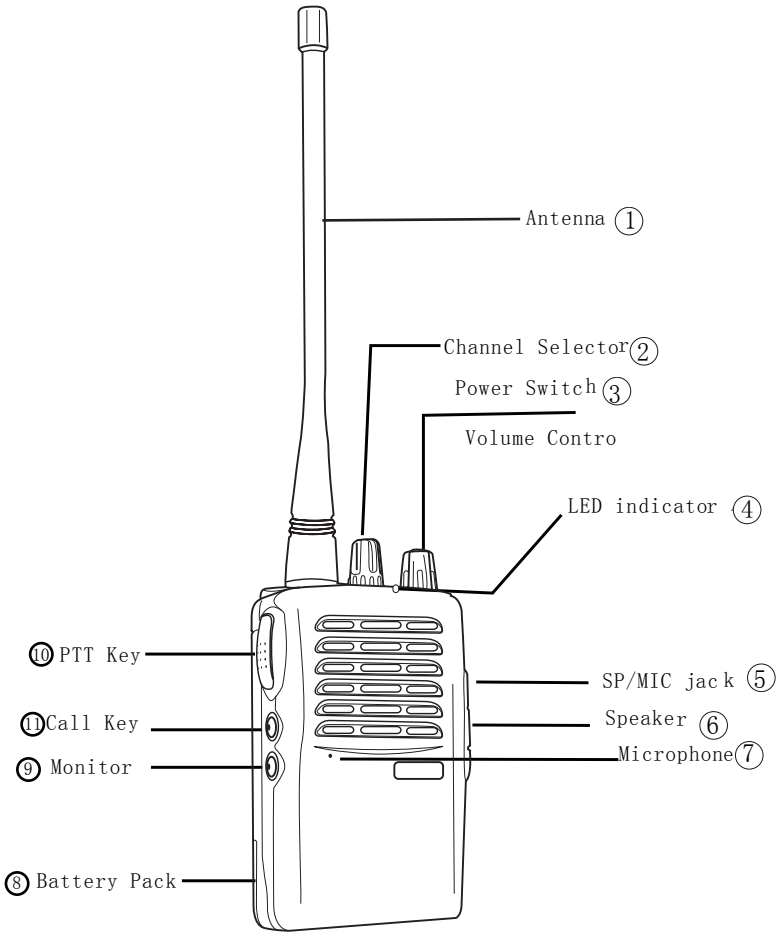
1. 8Ω，3W或更高

14. 音频发生器

1. 测量范围：100Hz到100KHz
2. 输出：0.5mV到1V

15. 失真测试仪

1. 测量范围：30Hz到100KHz
2. 输入电平：50mV到10Vrms



1. Antenna
2. Channel selector
   Rotate to select channels 1-16
3. Power switch/Volume control
   Turn clockwise to switch ON the transceiver. To switch OFF the transceiver, turn counterclockwise until a click sounds. Rotate to adjust the volume level.
4. LED indicator
   Lights red while transmitting. Lights green while receiving a singal. Flashes red when the battery voltage is low while transmitting.
5. SP/MIC jack
6. Speaker
7. Microphone
8. Battery pack
9. Monitor
10. PTT(Push-To-Talk) switch Press and then speak into the microphone to call a station, Release to receive.
11. Call key

.Use a non-conductive rod such as a Ceramic rod for adjustment (especially of trimmers and coils).

.To protect the SSG,do not send out signals while adjusting the receiving unit

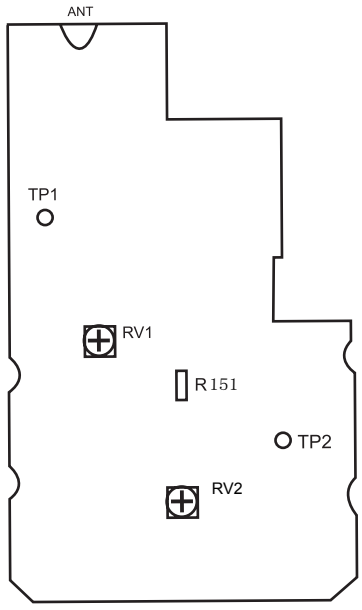
• The indicated SSG output levels are for maximum output.

. 使用一个专用调整棒进行调整（特别是微调电容器和线圈）

. 为了保护标准信号发生器，在调整接收部分时通信机不要发射。

. 显示的标准信号发生器输出电平为最大输出值。

Adjustment point/调整要点



Componennt Side View

RV2 : Frequency adjustment

R151: QT/DQT waveform adjustment

RV1: Deviation adjustment

TP1：Band-pass filter test point

TP2: Lock voltage adjustment terminal

元件视图

RV2：频率调整

R151：QT/DQT波形调整

RV1：频偏调整

TP1：带通滤波器波形试点

TP2：锁定电压调整终端

Notes:

. Adjust the TX VCO trimmer within a short period of time (Appros. 10 senconds).when the transcerver is in TX mode and the final amplifier transistor is detached from the chassis for a long time, it may cause thermal damage to the transistor(No heatsink).

注意:

在短暂的时间内（大约10秒）调整发射压控振荡器。当对讲机处于发射模式和终端放大器二极管脱离底盘很久，有可能造成晶体管热损伤。

Squelch Level, S meter Level, Lo Power, QT Deviation, DQT Deviation, and battery warning.

Section common to the transmitter and receiver（VCO）

Item	Condition	Measurement		Adjustment		Specifications /Remarks
		Test equipment	Terminal	parts	Method	
Setting	Power supply voltage battery terminal: 7.4V					
VCO lock Voltage	CH: TX low	Digital voltmeter			0.8V	±0.1V
	CH: RX low				0.8V	±0.1V
	CH: TX high				4V	Less than 4.5V
	CH: RX high					

Receiver Section

Item	Condition	Measurement		Adjustment		Specifications /Remarks
		Test equipment	Terminal	parts	Method	
Band-pass filter	CH: RX center	Tra generator Spectrum analyzer			Adjust to the spectrum waveform	3V
AF level	CH: RX center SSG output: -53dBm（50μV） MOD:1KHz DEV :±3.0KHz	SSG Oscilloscope AF.V.M Distortion meter	ANT SP		Adjust to the MAX AF level Vo..knob position at 12 o'clock	
Sensitivity	CH: RX center CH: low CH: high SSG:output: -116dBm（0.35μV） MOD:1KHz DEV :±3.0KHz				check	SINAD: 12dB or higher
Squelch Level	CH: RX center					
	Level 9 SSG output: -116dBm（0.35μV）				Adjust to open the squelch	
	Level 2 SSG output: -123dBm（0.16μV）				Adjust to open the squelch	

Transmitter section

Item	Condition	Measurement		Adjustment		Specifications /Remarks
		Test equipment	Terminal	parts	Method	
Transmit Frequency	CH: TX center PTT: ON	Frequency counter	ANT	RV2	Adjust to center frequency	Within±500Hz
QT/DQT balance	CH: RX center	Modulation analyzer		R151	Recify the waveform to square wave	
Lo Power	CH: TX center CH: TX low CH: TX high	Power meter Current meter			Adjust it to 1W	Within±0.2W
HI Power	CH: RX center CH: TX low CH: TX high	Power meter Current meter			Adjust it to 4W	Within±0.2W
MAX DEV	CH: TX center AG:1KHz/50mV	Modulation Analyzer 15KHz LPF AG AF V.M		RV1	Adjust it to ±2.0KHz	±100Hz
					Check	±1.9KHz~2.2KHz
MIC Sensitivity	CH: TX center AG:1KHz/5mV					
QT Deviation	CH: TX center CH: TX low CH: TX high QT:151.4Hz	Modulation Analyzer 3KHz LPF			Adjust it to 0.35KHz	±0.05Hz
					CH:TX center	
DQT Deviation	CH: TX center CH: TX low CH: TX high DQT:023N	Modulation Analyzer 15KHz LPF			Adjust it to 0.35KHz	±0.05Hz
					CH:TX center	
VOX Level					Adjust it to [4]	
Battery Warning	Battery terminal: 6.0V					