SECTION 5 ADJUSTMENT PROCEDURES

5-1 PREPARATION

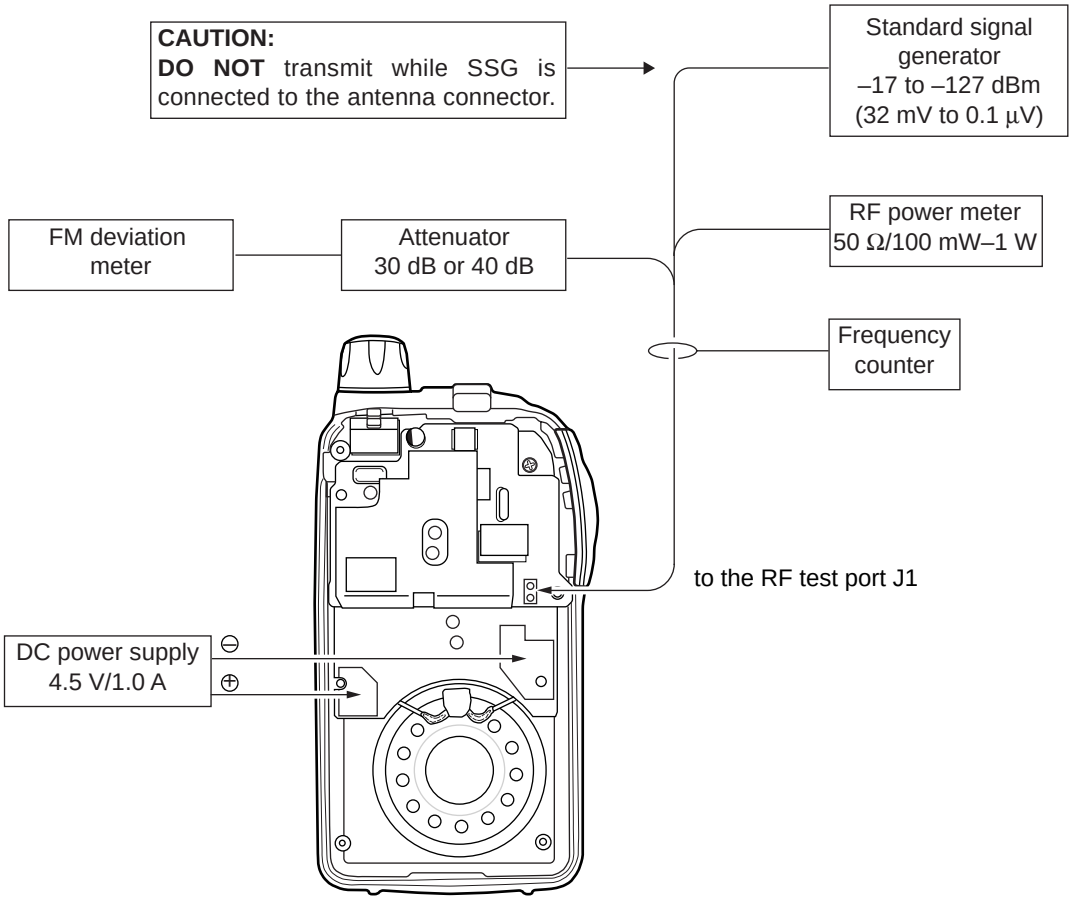
■ REQUIRED TEST EQUIPMENT

EQUIPMENT	GRADE AND RANGE	EQUIPMENT	GRADE AND RANGE
DC power supply	Output voltage : 4.5 V DC Current capacity : 1 A or more	Audio generator	Frequency range : 300–3000 Hz Measuring range : 1–500 mV
Frequency counter	Frequency range : 0.1–600 MHz Frequency accuracy : ±1 ppm or better Sensitivity : 100 mV or better	Standard signal generator (SSG)	Frequency range : 0.1–600 MHz Output level : 0.1 μV–32 mV (–127 to –17 dBm)
FM deviation meter	Frequency range : 30–600 MHz Measuring range : 0 to ±10 kHz	Oscilloscope	Frequency range : DC–20 MHz Measuring range : 0.01–10 V
DC voltmeter	Input impedance : 50 kΩ/V DC or better	AC millivoltmeter	Measuring range : 10 mV–10 V
RF power meter (terminated type)	Measuring range : 100 mW–1 W Frequency range : 300–600 MHz Impedance : 50 Ω SWR : Less than 1.2 : 1	External speaker	Input impedance : 8 Ω Capacity : 300 mW or more
		Attenuator	Power attenuation : 30 or 40 dB Capacity : 1 W or more

■ ENTERING THE ADJUSTMENT MODE

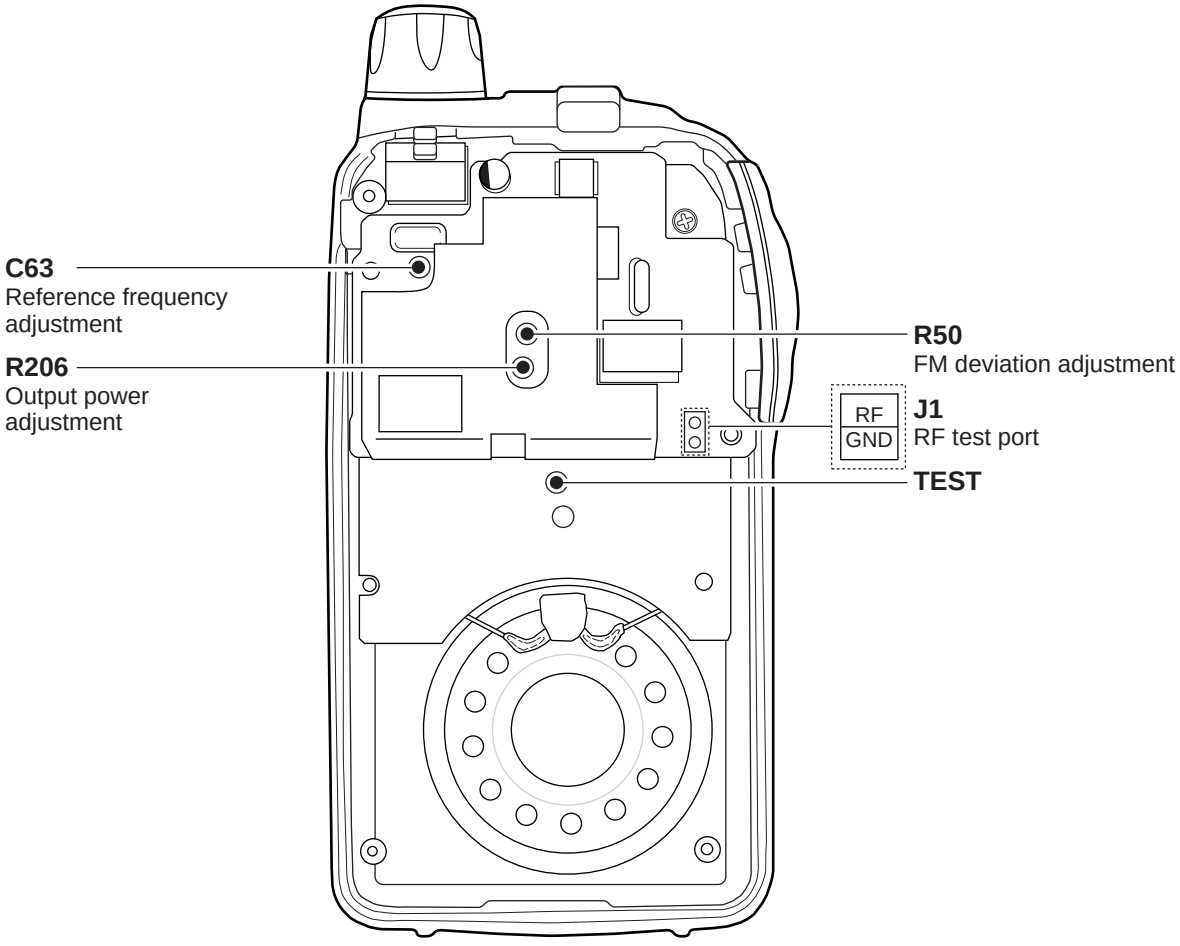
① Turn the transceiver power OFF.
② While connecting the “TEST” and GND on the MAIN unit, then turn power ON.
(See location at page 5-3)

■ CONNECTIONS



5-2 PLL AND TRANSMITTER ADJUSTMENTS

ADJUSTMENT		ADJUSTMENT CONDITION	MEASUREMENT		VALUE	ADJUSTMENT POINT	
			UNIT	LOCATION		UNIT	ADJUST
REFERENCE FREQUENCY	1	• Operating channel : Ch 01 • Transmitting	Top panel	Loosely couple a frequency counter to the antenna.	466.00625 MHz	RF	C63
OUTPUT POWER	1	• Operating channel : Ch 01 • Transmitting	RF	Connect an RF power meter to the RF test port J1.	.145W erp	RF	R206
FM DEVIATION	1	• Operating channel : Ch 01 • Set group No. : 01 • Connect an audio generator to the [MIC] jack and set as: 1 kHz/100 mV rms • Set an FM deviation meter as: HPF : OFF LPF : 20 kHz or 15 kHz De-emphasis : OFF Detector : (P–P)/2 • Transmitting	RF	Connect an FM deviation meter to the RF test port J1.	±2.45 kHz	RF	R50
	2	• Set group No. : OFF (– –) • Set an audio generator output level until the deviation is ±1.75 kHz. • Transmitting			10 mV ±3dB		Verify



5-3 RECEIVER ADJUSTMENT

ADJUSTMENT		ADJUSTMENT CONDITION	MEASUREMENT		VALUE	ADJUSTMENT
			UNIT	LOCATION		
SQUELCH	1	• Operating channel : Ch 04 • Connect an SSG to J1 on the RF unit and set as: Frequency : 446.04375 MHz Level : 0.14 µV* (–124 dBm) Modulation : OFF • Receiving	Front panel			Push and hold [MODE] and [DOWN] keys for 1 sec.
	2	• Set an SSG as : Level : OFF • Receiving		Internal speaker	Audio signal disappears.	Verify