

CRE 8900 ADJUSTMENT

Common Section

Item	Condition	Measurement		Adjustment		Specifications /Remarks
		Test equipment	Terminal	Parts	Method	
1. Setting	Power supply voltage DC Power supply terminal : 13.8V					
2. VCO lock voltage RX	1) CH: high	Power meter		TP300	less than 4.0V	
	2) CH: Low	DVM			0.8V or more	
3. VCO lock voltage TX	3) CH: high PTT:ON				less than 4.0V	
	4) CH: Low PTT:ON				0.8V or more	

Transmitter section

Item	Condition	Measurement		Adjustment		Specifications /Remarks
		Test equipment	Terminal	Parts	Method	
1. Transmit frequency	TEST CH: center Mode: AM or FM PTT: ON	Frequency counter	ANT		Adjust to the frequency	Within ± 50 Hz
2. DC Power supply Adjust	TEST CH: low, center, high DC Power supply terminal : 13.8V Mode: FM	Voltmeter DC amperemeter		W11 W、W9	adjust DC voltage to $6.3V \pm 0.1V$ adjust DC voltage to $3.6V \pm 0.1V$	
3. High power Adjust	TEST CH: low, center, high DC Power supply terminal : 13.8V Mode: FM PTT: ON	Power meter Ammeter		T13、T14 W11		11W $\pm 1W$ 5.5A or less
Low power Adjust	TEST CH: low, center, high DC Power supply terminal : 13.8V Mode: FM PTT: ON					1W $\pm 0.3W$ 3.0A or less
4. power & frequency residual	TEST CH: low, center, high AG: 1kHz/30mV Mode: USB PTT: ON	Power meter Deviation meter Oscilloscope AG	ANT	W6	Modulate signal: 1K ± 50 Hz 28dB SINAD or more	25W $\pm 0.2W$ 6.0A or less
	TEST CH: low, center, high AG: 1kHz/30mV Mode: LSB PTT: ON	AF VTVM			Modulate signal: -1K ± 50 Hz 28dB SINAD or more	20W $\pm 0.2W$ 6.0A or less
5. degree of wave balance	TEST CH: center REF Level: 35dB Bandwidth: 10KHz AVG: 5 Mod: OFF Mode: USB and LSB PTT: ON			W502	Adjust IF frequency to be lowest.	-10dBm or less

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6. FM deviation Adjust	TEST CH: low, center, high AG: 1kHz/30mV LPF: 15kHz Mode: FM PTT: ON	Power meter Deviation meter Oscilloscope AG AF VTVM	ANT SP/MIC connector	W500	±2.3~3.0kHz	±50Hz	
7. AM deviation Adjust (High power)	TEST CH: low, center, high AG: 1kHz/30mV LPF: 15kHz Mode: AM PTT: ON			W501	85%~95%	>38W ±3W 5.0A or less	
				(Low power)	W10	85%~95%	>6W ±0.5W 3.0A or less
8. MIC Sensitivity	TEST CH: center AG: 1kHz/0.8mV LPF: 15kHz PTT: ON			Check		30dB SINAD or more	FM: 1.5~2.0kHz AM: 50%~70%
	TEST CH: center AG: 1kHz/0.4mV LPF: 15kHz PTT: ON					USB: 8W~12W LSB: 5W~10W	
9. TONE deviation Adjust	TEST CH: center LPF: 15kHz PTT: ON	85%~95%	1.05kHz±50Hz				

Receiver Section

Item	Condition	Measurement			Adjustment		Specifications /Remarks					
		Test equipment	Terminal	Parts	Method							
1. Sensitivity check	TEST CH: low, center, high Frequency and MODE : Indicated below However, USB: +1kHz LSB: -1kHz RF GAIN: Maximum NB/ANL: ON	SSG DM SP Oscilloscope AG AF V.M	ANT EXT.SP	AM: T8、T9、 T12 USB: T5、T6、 T7、T10								
							Frequency	MODE	SSG ATT	SSG MOD	SSG DEV	
							low, center, high	FM	-107dBm(1.0μV)	1kHz	±1.2kHz	SINAD: 20dB or more
							low, center, high	AM	-107dBm(1.0μV)	1kHz	30%	SINAD: 10dB or more
							low, center, high	USB	-121dBm(0.2μV)	OFF		SINAD: 10dB or more
low, center, high	LSB	-121dBm(0.2μV)	OFF		SINAD: 10dB or more							

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2. Squelch (Threshold) Adjust	TEST CH: center SSG output: -110dBm(0.707 μ V) Mod: 1KHz/1.2KHz, SQL VR: SQ ON Mode: FM	SSG DVM Oscilloscope AG AF VTVM	ANT			Squelch open
	TEST CH: low, center, high SSG output: -50dBm(707 μ V) Mod: 30%/1KHz, Mode: AM			W2	Adjust to open the squelch.	
	TEST CH: low, center, high SSG output: -50dBm(707 μ V) Mod: OFF Add to main frequency base: 1K Mode: USB			W3	Adjust to open the squelch.	
	TEST CH: low, center, high SSG output: -50dBm(707 μ V) Mod: OFF Minus from main frequency base: 1K Mode: LSB			W3	Adjust to open the squelch.	
ASQ Adjust	TEST CH: low, center, high SSG output: -113dBm(0.5 μ V) Mod: 30%/1KHz, Mode: AM				Adjust to open the squelch.	
3. Squelch (Tight) Adjust	TEST CH: center SSG output: -125dBm(0.126 μ V) Mod: 1KHz/1.2KHz, Mode: FM					Squelch open
	TEST CH: low, center, high SSG output: -60dBm(224 μ V) Mod: 30%/1KHz, Mode: AM			W2	Adjust to Tight the squelch.	
	TEST CH: low, center, high SSG output: -60dBm(224 μ V) Mod: OFF Add to main frequency base: 1K Mode: USB			W3	Adjust to Tight the squelch.	
	TEST CH: low, center, high SSG output: -60dBm(224 μ V) Mod: OFF Minus from main frequency base: 1K Mode: LSB			W3	Adjust to Tight the squelch.	

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ASQ Adjust	TEST CH: low, center, high SSG output: -120dBm(0.224 μ V) Mod: 30%/1KHz, Mode: AM	SSG DVM Oscilloscope AG	ANT	W1	Adjust to Tight the squelch.	
4. Sensitivity Adjust	TEST CH: center SSG output: -65dBm(126 μ V) Mod: 1KHz/1.2KHz, Mode: FM	AF VTVM		W4	调整RSSI指示显示满 格	
	TEST CH: center SSG output: -63dBm(158 μ V) Mod: 1KHz/1.2KHz, Mode: USB			W5	调整RSSI指示显示满 格	