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Royce 1-653B Alignment Instruction

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I -653B Alignment Instruction

RECEIVER

- A. Inject at the ant. jack a 27.115MHz signal ($\pm .002\%$; 30% modulation at 1KHz).
 B. Connect an audio voltmeter and oscilloscope across on 8 ohm load and plug into external speaker jack.

Test Equipment	Test Point	Adjust	Remarks
1. RF signal generator (low range to avoid audio saturation)	Inject at ant. jack	Channel sel to 13	_____
		T-101, T-102, T-201,	Max. output with vol. control at max, squelch control at min. output should be more than 500mw (2.0v/8 ohm) with gen. voltage at $1\mu\text{V}$; S & N/N= more than 10dB on all channels

AGC RESPONSE

Set the output voltage of a signal generator at $50000\mu\text{V}$ and adjust the volume control so that the voltmeter output is 500mW (2.0v/8 ohm). Then, lower the output voltage of the generator so that the voltmeter output is 10dB down. The output voltage of the signal generator should be under $5\mu\text{V}$ at this time.

AUDIO POWER CHECK

With a generator output of 1mV and squelch control at minimum, audio output should be more than 4w (5.7v/8 ohm) at maximum position of volume control.

TRANSMITTER

- A. Power Supply – 13.8VDC.
 B. Use a suitable power meter, non-inductive dummy load and oscilloscope connected to antenna jack.

Test Equipment	Test Point	Adjust	Remarks
1. Power Meter	antenna jack	T-401, T-402, L-403, L-404,	Adjust for maximum output power
2. Freq. Counter	across dummy load	_____	Check all channels $\pm 800\text{Hz}$
3. A.F. Oscillator with AF voltmeter in shunt (1KHz 10mV)	Inject at mic input	_____	– 90% modulation on oscilloscope
		_____	Reduce AF oscillator output to 5mV; modulation $\geq 50\%$