ACOM International, Inc.

Exhibit 12: Measurements Demonstrating Conformance to 97.307 and 97.317

External Radio Frequency Power Amplifier ACOM 2000A Model 2000A

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97.317(a)(1)&(3) & 97.317(b): Spurious Emissions per 97.307(d) and Gain versus Frequency

Amplifier under test operated at frequencies f1 with CW (A1A) excitation. Spectrum analyzer used to observe all frequencies from f1 through at least 10 x f1 for harmonic and spurious emissions.

Results reflect amplifier as shipped with 24 and 28 MHz Bands disabled

Power Gain 97.317 (a) (1) (2) (3), (c) (6) (ii)				Spurious emissions 97.307 (d)			
Frequency (MHz) f_1	**Power in (W)**	**Power out (W)**	**Gain dB**	**2f1 dBc**	**3f1 dBc**	**4f1 dBc**	**5-10f1 dBc**
1.900	50	1500	14.70	-51.50	-78.60	>-78.00	>-78.00
3.750	50	1500	14.70	-52.40	-77.90	>-78.00	>-78.00
7.150	50	1500	14.70	-56.50	>-78.00	>-78.00	>-78.00
10.125	51	1500	14.68	-53.30	>-78.00	>-78.00	>-78.00
14.175	50	1500	14.70	-55.10	-77.60	>-77.00	>-77.00
18.118	53	1500	14.51	-62.40	>-75.00	>-75.00	>-75.00
21.225	52.5	1500	14.55	-61.40	-76.00	>-76.00	>-76.00
97.317 (b) (1) (2) 0 dB gain was noted in the 12 & 10 meter amateur bands and measured at the points below							
24.940	50	50	0.0				
28.900	50	50	0.0				
97.317 (c) (6) (i) was not capable of full power output when driven with <40 watts							
1.9	38	800	13.2				
3.75	38	900	13.7				
7.150	38	900	13.7				
10.125	38	900	13.7				
14.175	38	850	13.5				
18.118	38	800	13.2				
21.225	38	800	13.2				

After owner modification to activate 24-28 MHz bands:

Frequency (MHz) f_1	**Power in (W)**	**Power out (W)**	**Gain dB**	**2f1 dBc**	**3f1 dBc**
24.940*	56	1500	14.3	-55.00	>-70
28.900*	50	1500	14.8	-54.00	>-70

*Not usable as shipped; data applicable only after enabling of 24 & 28 MHz bands as follows.

When delivered to any buyer located within the FCC's jurisdiction, the equipment is operable on authorized amateur bands only from 1.8 through 21.45 MHz. To meet the requirements of 97.317(b), the equipment employs a digital electronic lock-out system which disables the amplifier when the RF excitation frequency exceeds 21.45 MHz.

Operation on the 24 and 28 MHz amateur bands in full conformance with FCC rules only by amateurs whose FCC licenses authorize such operation is possible after such owners make a simple but subtle modification – cutting the lead on one resistor on the digital control module. ACOM International advises an owner how to perform this modification ONLY after receiving proof that he holds an appropriate FCC license. This is the FCC-approved process that has been adopted industry-wide to ensure that amateur amplifiers are used in conformance with FCC rules.

97.307(a)(b): Intermodulation & Linearity

Exciter operating in SSB (A3E, J3E) mode with two-equal-tone audio applied to the microphone input. Amplifier under test driven to 1.5 kW PEP output at center of each amateur band, approximately 50 W PEP excitation.

Intermodulation in dB relative to 1.5 kW PEP:

Order:	**D3**	**D5**	**D7**	**D9**	**D11**
Frequency (MHz)	**dB**	**dB**	**dB**	**dB**	**dB**
1.900	-40	-48	-48	-52	-55
3.750	-43	-47	-48	-52	-55
7.150	-41	-44	-48	-53	-52
10.125	-42	-42	-48	-54	-51
14.175	-43	-43	-48	-58	-55
18.118	-45	-46	-49	-55	-53
21.225	-45	-46	-52	-56	-54
24.940*	-43	-46	-50	-56	-54
28.900*	-42	-46	-50	-55	-53
Worst Case	-40	-46	-48	-52	-53

*Not usable as shipped; data applicable only after authorized owner modification.

97.317(a)(2)&(3): When the amplifier is in the “standby” or “off” positions, but still connected to the exciter, no measurable change from the normal output of the exciter is detectable with the spectrum analyzer (noise floor approximately –70dBc) when amplifier is driven with 0 to 150 W mean RF power.

97.317(c): The amplifier possesses none of the prohibited characteristics listed in this section.

97.317(c)(6)(iii): The amplifier gain does not exceed 15 dB for any level of input signal.

97.317(c)(6)(iv): The amplifier is capable of greater than 50% duty cycle at rated power output with A1A, A3E(J3E), or F1B,F3E J3F emission.

97.317(c)(7): Amplifier gain is established principally by RF negative feedback in the cathode circuit. The input swamping resistor is used only to present a 50 ohm load to the broadband grid matching circuit, not as an attenuator. Removal of this resistor or changing its value will result in a severe load mismatch to the exciter output.

Additional data: Information and data supplied by tube manufacturer SVETLANA concerning the GU74B/4CX800A tetrode is available by request from the manufacturer.