Exhibit 6 – Test Report

Val Avionics Flight Systems
VHF COM-2000 Transceiver

FCC ID: EZN5PRCOM2000

Model No. COM-2000

Equipment Applicant: **Val Avionics LTD**
PO Box 13025
3280 25th ST SE
Salem, Oregon 97309

6.0.3 Standard References

47 CFR 2 Code of Federal Regulations, Title 47, Part 2, "Frequency Allocations and Radio Treaty Matters; General Rules and Regulations"

47 CFR 87 Code of Federal Regulations, Title 47, Part 87, "Aviation Services"

C63.4-2003 American National Standards Institute (ANSI), "Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz"

6.1 Test Requirements

The COM 2000 transceiver is capable of operating in one frequency band consisting of the allocation across the 117.975 MHz to 137 MHz. Operation within this VHF band is subject to the regulations of multiple CFR parts including Parts 2 and 87 for FCC Certification for units deployable in the United States. Table 6.1-1 illustrates the test requirements list, as specified in FCC CFR Part 2.

Table 6.1-1 FCC *Certification Technical Requirement List*

47 CFR Part 2 Requirements	***Requirement Description***	***Compliance***
2.1046	Power and Emissions	Yes
2.1047	Modulation Characteristics	Yes
2.1049	Occupied Bandwidth	Yes
2.1051	Spurious Emissions Antenna Terminal; Spectrum Mask	Yes
2.1053	Radiated Spurious Emissions	Yes
2.1055	Carrier Frequency Stability; Temperature and Voltage	Yes

6.1.1 Unit Description

The COM 2000 transceiver is a Voice Modulated communications equipment utilizing Amplitude modulation, with a maximum power of 10W, operating in the 6K00A3E emission designator, with a 25kHz channel spacing.

6.2 Test Results

The test results presented in this report are for the certification testing performed on COM 2000, S/N 20500. The majority of these tests were performed in partially shielded, low external RF office, weather and dates are provided after each section.

6.2.1 Power and Emissions

With no modulation the unit power measurements were taken. The COM 2000 is designed to transmit 10Wrms maximum with 8Wrms nominal in the Aviation Communications Band of 117.975MHz to 137.000 MHz.

Frequency	Output Power
118 MHz	8.49
119 MHz	8.54
120 MHz	8.54
121 MHz	8.53
122 MHz	8.45
123 MHz	8.42
124 MHz	8.32
125 MHz	8.20
126 MHz	8.03
127 MHz	7.82
128 MHz	7.62
129 MHz	7.36
130 MHz	7.17
131 MHz	7.01
132 MHz	6.93
133 MHz	7.13
134 MHz	7.62
135 MHz	8.22
136 MHz	8.25
136.975 MHz	7.97

Table 6.2.1-1: Power Response

6.2.1.1 Testing Information

Section 6.2.1 was performed on June 9, 2010
Internal temperature was 23 C
Barometric Pressure was 101.08 kPa
Humidity was 34%

Test was performed by James A. Mac Innes

James A. Mac Innes – Design Engineer

6.2.2 Occupied Bandwidth

The occupied bandwidth measurements for the COM-2000 are illustrated in Figures 6.2.2-1 through 6.2.2-3. These measurements were performed via antenna terminal conducted scans. These carrier measurements were taken with AM modulation of 2500 Hz tone at an input level 16dB greater than that necessary to produce 50 percent modulation as defined in 47 CFR 2.1049. The 99% occupied bandwidth measurement is an automated measurement performed by the Hewlett Packard 8595E spectrum analyzer.

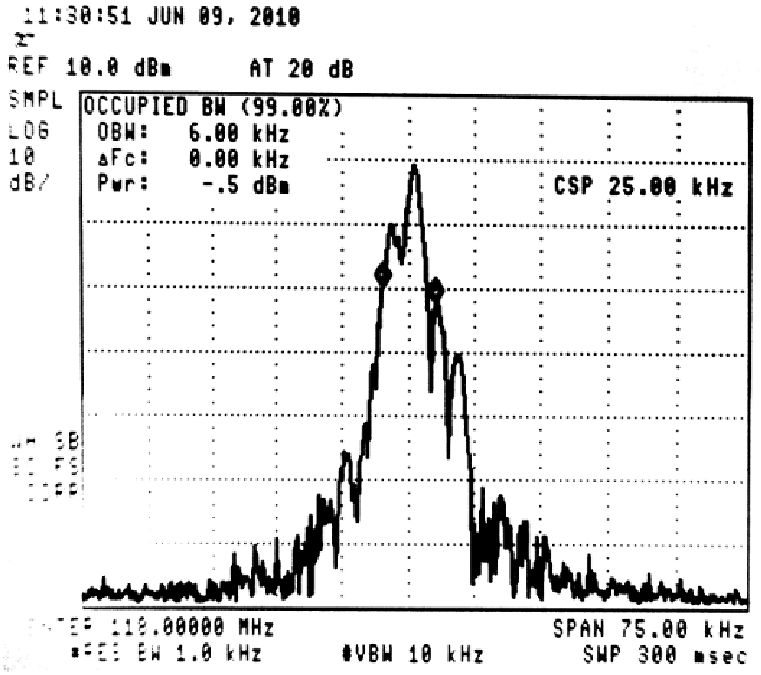

Figure 6.2.2-1 Occupied Bandwidth @ 118 MHz, AM

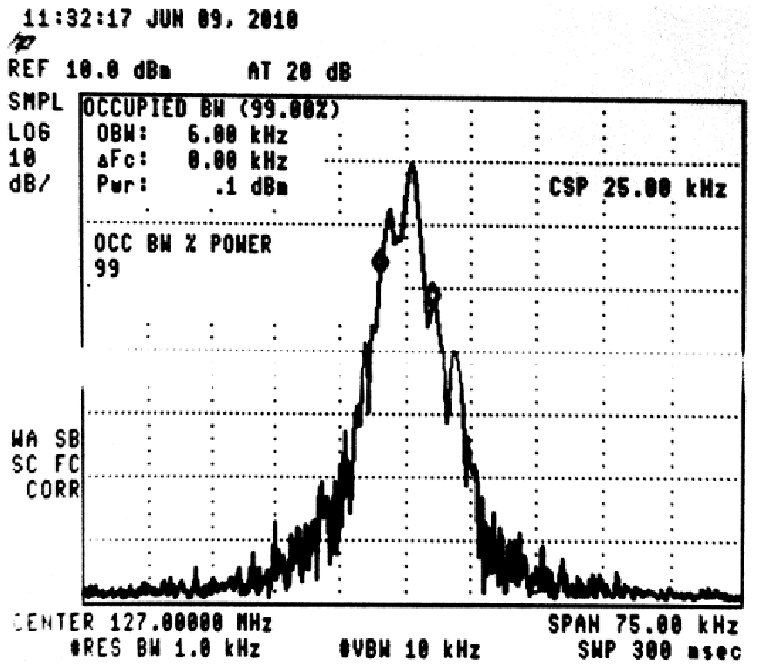

Figure 6.2.2-2 Occupied Bandwidth @ 127 MHz, AM

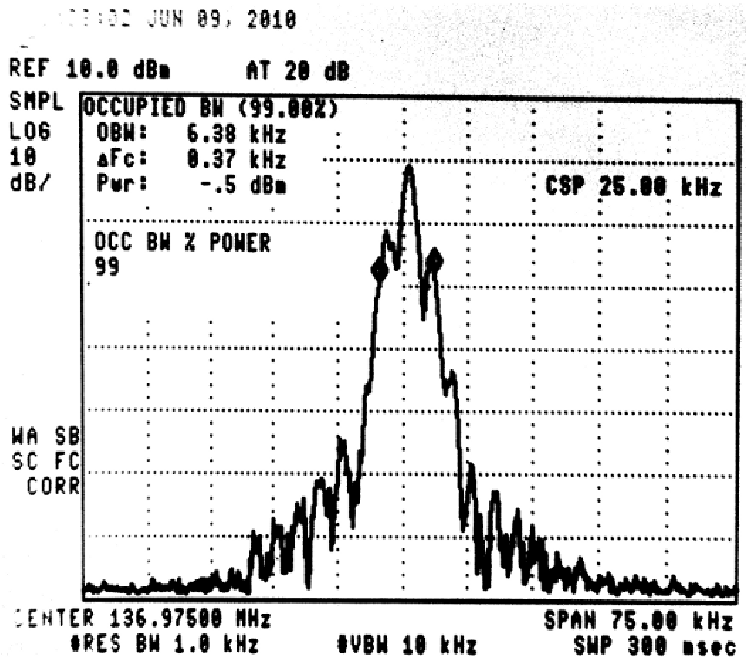

Figure 6.2.2-3 Occupied Bandwidth @ 136.975 MHz, AM

6.2.2.1 Additional Notes regarding test

The HP 8595E has a variable attenuator internal to the unit. While the measurements show that there is an attenuator active, (in this case 20dB) the viewed signal measurements are calibrated to include this attenuation. The setup diagram is shown below in figure 6.2.2.1-1

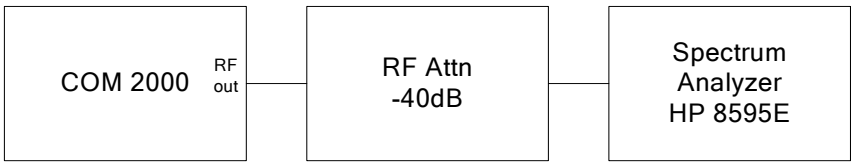

Figure 6.2.2.1-1: Bandwidth conducted emissions setup

Section 6.2.2 was performed on June 9, 2010
Internal temperature was 23 C
Barometric Pressure was 101.08 kPa
Humidity was 34%

Test was performed by James A. Mac Innes

James A. Mac Innes – Design Engineer

6.2.3 Spurious Emissions, Antenna Terminal

Conducted spurious emissions at the antenna port were measured over the frequency range of 30 MHz to 2 GHz. The first set of test data provided in Section 6.2.2.1 is for the spectral mask within + 250% frequency offset of the carrier fundamental frequency. The second set of test data, Section 6.2.2.2, is for all conducted spurious emissions at >250% frequency offset from the carrier frequency. All measurements are taken on the HP 8595E using a 50 dB attenuator to prevent damage to the test device.

6.2.3.1 Spectral Mask

The spectral mask was measured at frequencies ± 250% of the allocated bandwidth centered at the mid-operating frequency of 127.9 MHz. The requirement limits are specified as -25 dBc @ 50-100% offset, -35 dBc @ 100-250% offset, and -53 dBc (43+10LogP) @ >250% offset. The same modulation schemes used for the Occupied Bandwidth were used for these measurements. Provided in this section are the unmodulated (CW) peak power levels measured at carrier frequency, which ranged from +38.6 dBm to +39.5 dBm for the nominal power output.

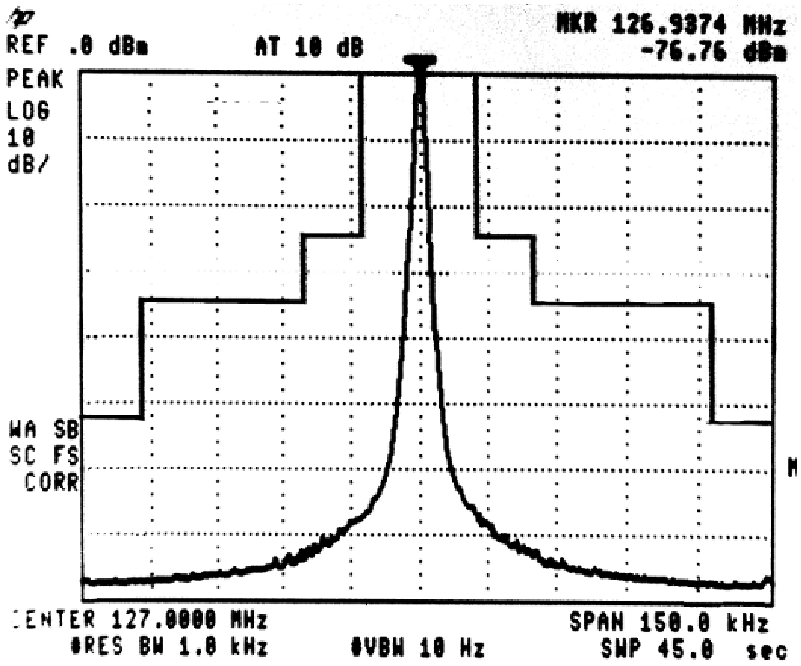

Figure 6.2.3.1-1 Spectrum Mask @ 127.9 MHz, CW

6.2.3.2 Conducted Spurious Emissions

This data illustrates the out-of-band conducted spurious emissions measured between 30 MHz and 2 GHz. The test requirement limit specified at >250% frequency offset from the carrier frequency is -53 dBc (43+10Log P) or, for 10 W maximum power output, approximately -13 dBm.

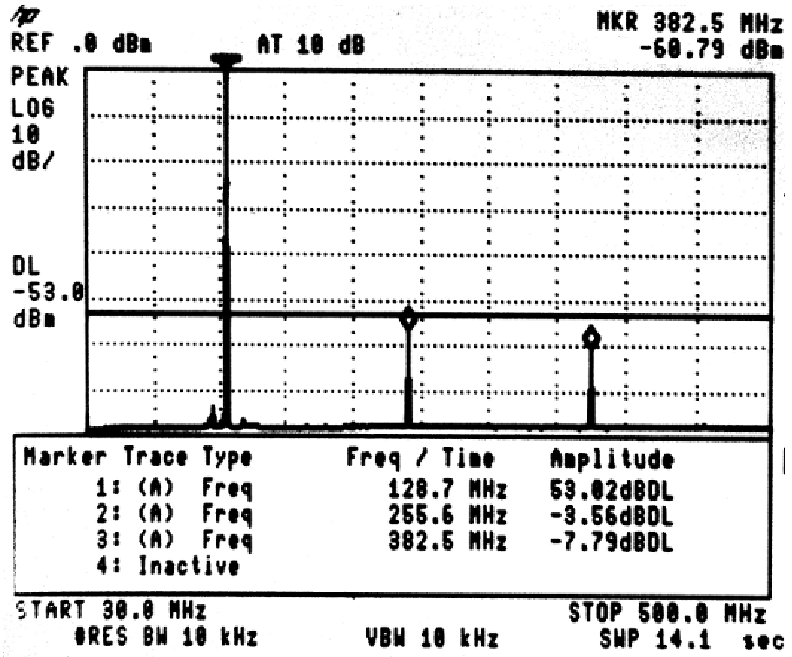

Figure 6.2.3.2-1 Conducted spurious emissions, 127 MHz (30 MHz – 500 MHz)

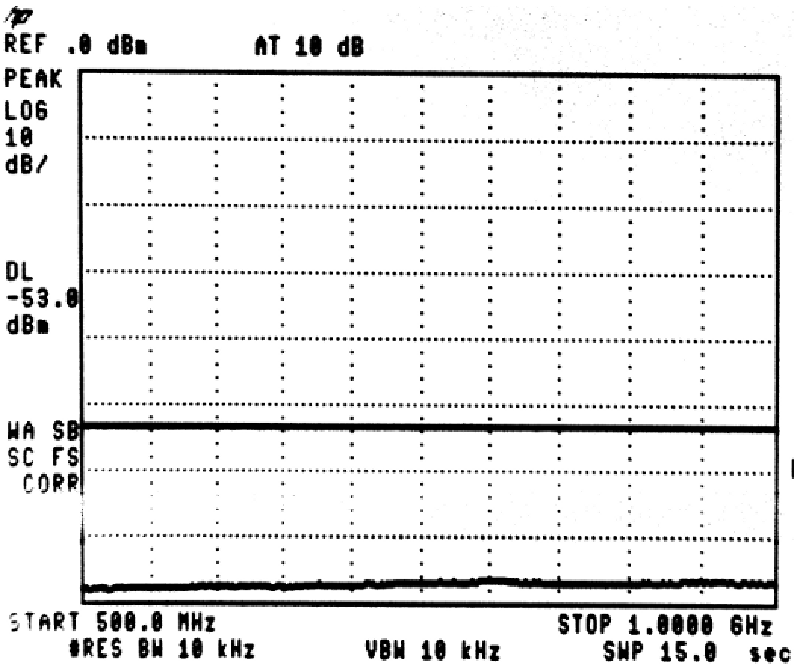

Figure 6.2.3.2-2 Conducted spurious emissions, 127 MHz (500 MHz – 1000 MHz)

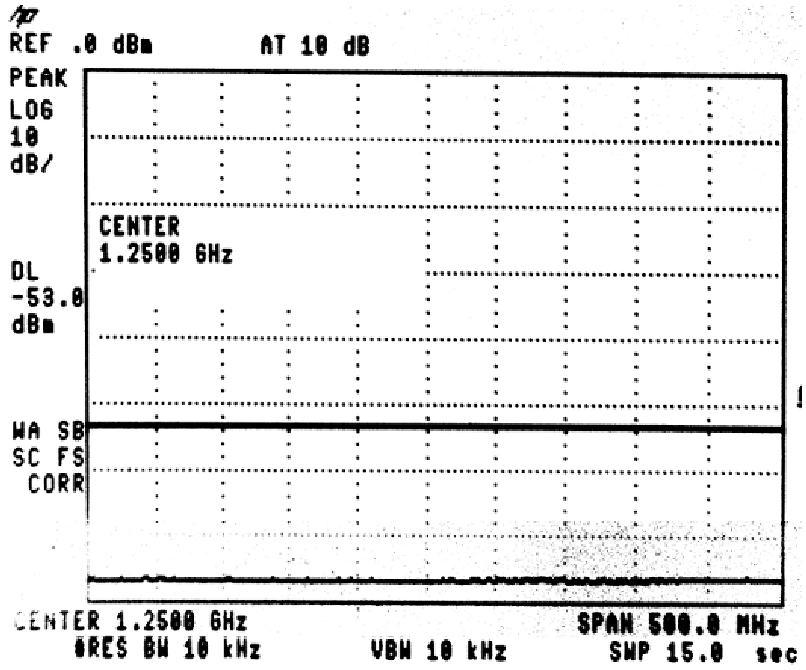

Figure 6.2.3.2-3 Conducted spurious emissions, 127 MHz (1 GHz – 1.5 GHz)

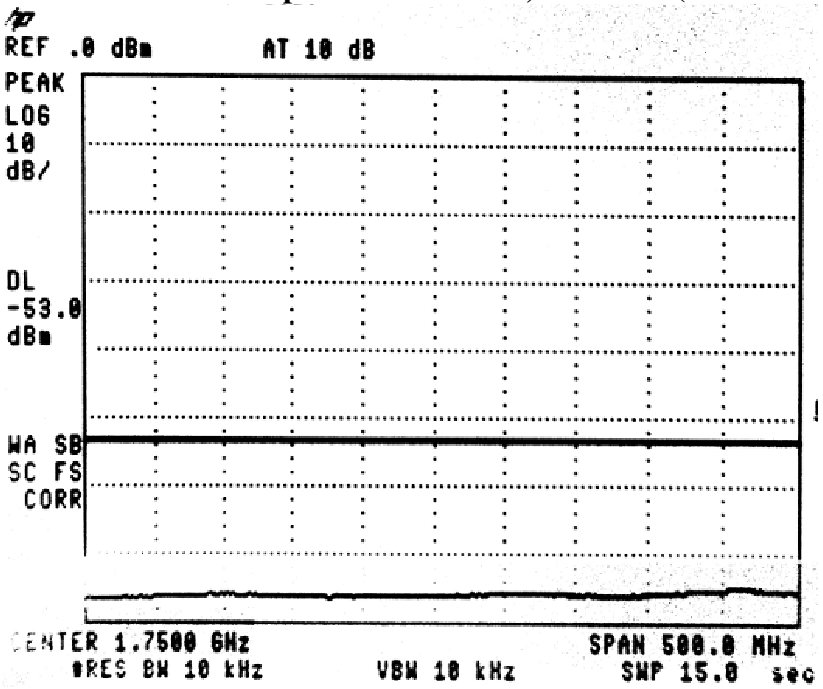

Figure 6.2.3.2-4 Conducted spurious emissions, 127 MHz (1.5 GHz – 2 GHz)

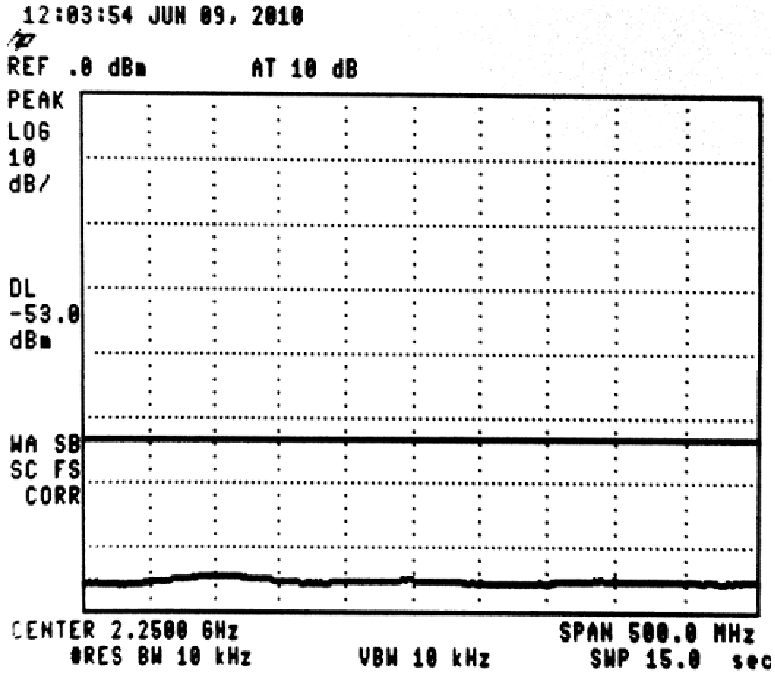

Figure 6.2.3.2-5 Conducted spurious emissions, 127 MHz (2 GHz – 2.5 GHz)

6.2.3.2 Testing Information

Figure 6.2.3.1-1: Spurious conducted emissions setup

Section 6.2.3 was performed on June 9, 2010
Internal temperature was 23 C
Barometric Pressure was 101.08 kPa
Humidity was 34%

Test was performed by James A. Mac Innes

James A. Mac Innes – Design Engineer

6.2.4 Radiated Spurious Emissions, Chassis/Cables

See documents provided by Northwest EMC documented exhibit 7.

6.2.5 Modulation Characteristics

The COM 2000 is an AM dual sideband transmitter. Figure 6.3-34 illustrates the test setup used for measuring the audio response of the modulator and filter circuitry. Data was taken and recorded with the Fluke 87 multimeter. The IFR1200 S/A noise source output was adjusted such that the modulation percentage of the signal at 1000 Hz was 50%. This signal was then routed to the Audio-In port on the COM 2000. The frequency response data is presented in Figure 6.2.5-2.

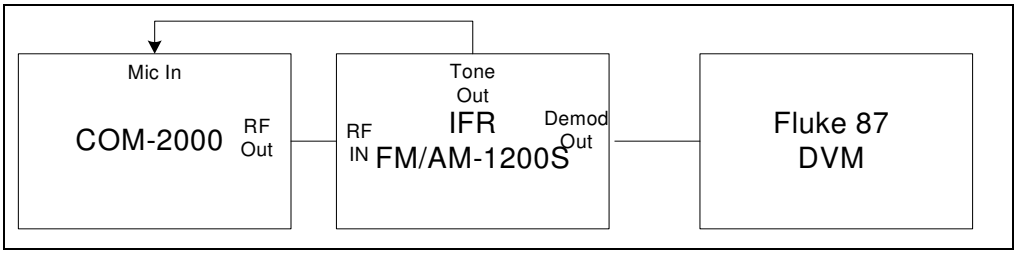

Figure 6.2.5-1: Modulation Characteristic testing setup

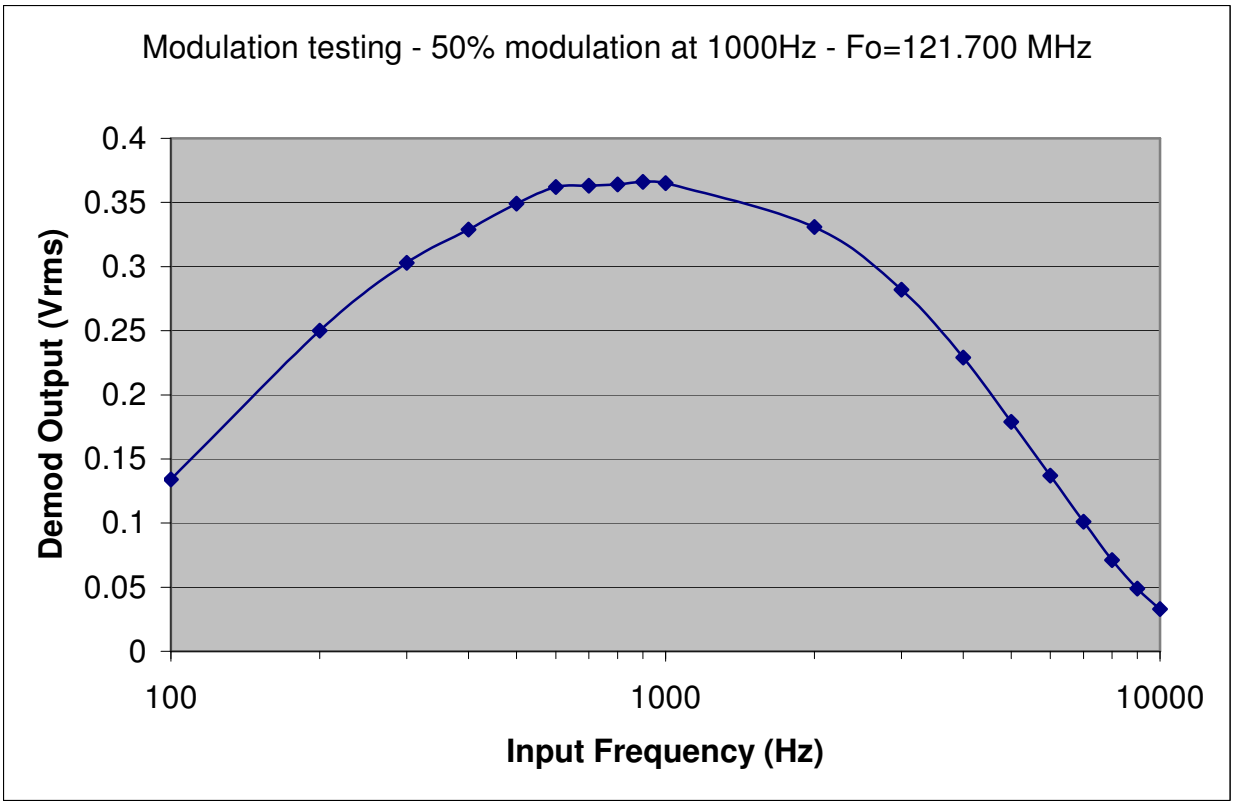

Figure 6.2.5-2: Modulation Response

6.2.5.1 Testing Information

Section 6.2.5 was performed on June 10, 2010
Internal temperature was 23 C
Barometric Pressure was 101.83 kPa
Humidity was 31%

Test was performed by James A. Mac Innes

James A. Mac Innes – Design Engineer

6.2.6 Frequency Stability

The COM 2000 was tested for frequency stability when operated in a CW mode at maximum rated power over the temperature range of -30°C to +55°C. This included testing at three (3) operating frequencies (118.0 MHz, 127 MHz, and 136.975 MHz). Frequency stability was also measured over an input power voltage range of 83% to 116% at DC voltage extremes for operation. The data is presented below in Tables 6.2.6-1 through 6.2.6-6.

Table 6.2.6-1 Frequency Stability over Temperature – 118 MHz

Temp (C)	Soak (min)					
-30	60	Set Frq (MHz)	118	118	118	118
	A3E	time	9:02	9:04	9:07	9:12
		t delta	0	2	5	10
		Freq (MHz)	117.999609	117.999608	117.9996	117.9996
		offset (Hz)	-391	-392	-400	-401
		PPM	-3.31	-3.32	-3.39	-3.40

Temp (C)	Soak (min)					
-20	60	Set Frq (MHz)	118	118	118	118
	A3E	time	10:34	10:36	10:39	10:44
		t delta	0	2	5	10
		Freq (MHz)	118.000163	118.000165	118.000166	118.00016
		offset (Hz)	163	165	166	164
		PPM	1.38	1.40	1.41	1.39

Temp (C)	Soak (min)					
-10	60	Set Frq (MHz)	118	118	118	118
	A3E	time	12:05	12:07	12:10	12:15
		t delta	0	2	5	10
		Freq (MHz)	118.000507	118.000507	118.000509	118.00051
		offset (Hz)	507	507	509	512
		PPM	4.30	4.30	4.31	4.34

Temp (C)	Soak (min)					
0	60	Set Frq (MHz)	118	118	118	118
	A3E	time	13:37	13:39	13:42	13:47
		t delta	0	2	5	10
		Freq (MHz)	118.000263	118.000261	118.00026	118.00027
		offset (Hz)	263	261	260	274
		PPM	2.23	2.21	2.20	2.32

Temp (C)	Soak (min)					
10	60	Set Frq (MHz)	118	118	118	118
	A3E	time	15:09	15:11	15:14	15:19
		t delta	0	2	5	10
		Freq (MHz)	117.999989	117.999993	117.999986	117.99998
		offset (Hz)	-11	-7	-14	-17
		PPM	-0.09	-0.06	-0.12	-0.14

Temp (C)	Soak (min)					
20	60	Set Frq (MHz)	118	118	118	118
	A3E	time	16:40	16:42	16:45	16:50
		t delta	0	2	5	10
		Freq (MHz)	117.999642	117.999637	117.999635	117.99963
		offset (Hz)	-358	-363	-365	-368
		PPM	-3.03	-3.08	-3.09	-3.12

Temp (C)	Soak (min)					
30	60	Set Frq (MHz)	118	118	118	118
	A3E	time	18:13	18:15	18:18	18:23
		t delta	0	2	5	10
		Freq (MHz)	117.999332	117.999336	117.999334	117.99933
		offset (Hz)	-668	-664	-666	-674
		PPM	-5.66	-5.63	-5.64	-5.71

Temp (C)	Soak (min)					
40	60	Set Frq (MHz)	118	118	118	118
	A3E	time	9:03	9:05	9:08	9:13
		t delta	0	2	5	10
		Freq (MHz)	117.999098	117.999102	117.9991	117.99909
		offset (Hz)	-902	-898	-900	-909
		PPM	-7.64	-7.61	-7.63	-7.70

Temp (C)	Soak (min)					
50	60	Set Frq (MHz)	118	118	118	118
	A3E	time	10:35	10:37	10:40	10:45
		t delta	0	2	5	10
		Freq (MHz)	117.999055	117.999042	117.999046	117.99905
		offset (Hz)	-945	-958	-954	-955
		PPM	-8.01	-8.12	-8.08	-8.09

Temp (C)	Soak (min)					
55	60	Set Frq (MHz)	118	118	118	118
	A3E	time	12:07	12:09	12:12	12:17
		t delta	0	2	5	10
		Freq (MHz)	117.999093	117.9991	117.999092	117.9991
		offset (Hz)	-907	-900	-908	-902
		PPM	-7.69	-7.63	-7.69	-7.64

Table 6.2.6-2 Frequency Stability over Temperature – 127 MHz

Temp (C)	Soak (min)					
-30	1	Set Frq (MHz)	127	127	127	127
	A3E	time	9:13	9:15	9:18	9:23
		t delta	0	2	5	10
		Freq (MHz)	126.999618	126.999642	126.999662	126.999697
		offset (Hz)	-382	-358	-338	-303
		PPM	-3.01	-2.82	-2.66	-2.39

Temp (C)	Soak (min)					
-20	1	Set Frq (MHz)	127	127	127	127
	A3E	time	10:45	10:47	10:50	10:55
		t delta	0	2	5	10
		Freq (MHz)	127.000182	127.000186	127.000162	127.000135
		offset (Hz)	182	186	162	135
		PPM	1.43	1.46	1.28	1.06

Temp (C)	Soak (min)					
-10	1	Set Frq (MHz)	127	127	127	127
	A3E	time	12:16	12:18	12:21	12:26
		t delta	0	2	5	10
		Freq (MHz)	127.00053	127.000534	127.000518	127.000518
		offset (Hz)	530	534	518	518
		PPM	4.17	4.20	4.08	4.08

Temp (C)	Soak (min)					
0	1	Set Frq (MHz)	127	127	127	127
	A3E	time	13:48	13:50	13:53	13:58
		t delta	0	2	5	10
		Freq (MHz)	127.000309	127.000303	127.00031	127.000333
		offset (Hz)	309	303	310	333
		PPM	2.43	2.39	2.44	2.62

Temp (C)	Soak (min)					
10	1	Set Frq (MHz)	127	127	127	127
	A3E	time	15:20	15:22	15:25	15:30
		t delta	0	2	5	10
		Freq (MHz)	126.999974	126.999989	126.999992	126.999999
		offset (Hz)	-26	-11	-8	-1
		PPM	-0.20	-0.09	-0.06	-0.01

Temp (C)	Soak (min)					
20	1	Set Frq (MHz)	127	127	127	127
	A3E	time	16:51	16:53	16:56	17:01
		t delta	0	2	5	10
		Freq (MHz)	126.999602	126.999608	126.999611	126.999623
		offset (Hz)	-398	-392	-389	-377
		PPM	-3.13	-3.09	-3.06	-2.97

Temp (C)	Soak (min)					
30	1	Set Frq (MHz)	127	127	127	127
	A3E	time	18:24	18:26	18:29	18:34
		t delta	0	2	5	10
		Freq (MHz)	126.999267	126.999266	126.999272	126.999286
		offset (Hz)	-733	-734	-728	-714
		PPM	-5.77	-5.78	-5.73	-5.62

Temp (C)	Soak (min)					
40	1	Set Frq (MHz)	127	127	127	127
	A3E	time	9:14	9:16	9:19	9:24
		t delta	0	2	5	10
		Freq (MHz)	126.999044	126.999037	126.999042	126.999043
		offset (Hz)	-956	-963	-958	-957
		PPM	-7.53	-7.58	-7.54	-7.54

Temp (C)	Soak (min)					
50	1	Set Frq (MHz)	127	127	127	127
	A3E	time	10:46	10:48	10:51	10:56
		t delta	0	2	5	10
		Freq (MHz)	126.99896	126.998952	126.998956	126.998956
		offset (Hz)	-1040	-1048	-1044	-1044
		PPM	-8.19	-8.25	-8.22	-8.22

Temp (C)	Soak (min)					
55	1	Set Frq (MHz)	127	127	127	127
	A3E	time	12:18	12:20	12:23	12:28
		t delta	0	2	5	10
		Freq (MHz)	126.999014	126.999005	126.998986	126.998986
		offset (Hz)	-986	-995	-1014	-1014
		PPM	-7.76	-7.83	-7.98	-7.98

Table 6.2.6-3 Frequency Stability over Temperature – 136.975 MHz

Temp (C)	Soak (min)					
-30	1	Set Frq (MHz)	136.975	136.975	136.975	136.975
	A3E	time	9:24	9:26	9:29	9:34
		t delta	0	2	5	10
		Freq (MHz)	136.974704	136.974743	136.97478	136.974817
		offset (Hz)	-296	-257	-220	-183
		PPM	-2.16	-1.88	-1.61	-1.34

Temp (C)	Soak (min)					
-20	1	Set Freq (MHz)	136.975	136.975	136.975	136.975
	A3E	time	10:55	10:57	11:00	11:05
		t delta	0	2	5	10
		Freq (MHz)	136.975174	136.975184	136.975186	136.975185
		offset (Hz)	174	184	186	185
		PPM	1.27	1.34	1.36	1.35

Temp (C)	Soak (min)					
-10	1	Set Freq (MHz)	136.975	136.975	136.975	136.975
	A3E	time	12:27	12:29	12:32	12:37
		t delta	0	2	5	10
		Freq (MHz)	136.975575	136.975585	136.975587	136.975581
		offset (Hz)	575	585	587	581
		PPM	4.20	4.27	4.29	4.24

Temp (C)	Soak (min)					
0	1	Set Frq (MHz)	136.975	136.975	136.975	136.975
	A3E	time	13:59	14:01	14:04	14:09
		t delta	0	2	5	10
		Freq (MHz)	136.975379	136.975369	136.975379	136.975371
		offset (Hz)	379	369	379	371
		PPM	2.77	2.69	2.77	2.71

Temp (C)	Soak (min)					
10	1	Set Frq (MHz)	136.975	136.975	136.975	136.975
	A3E	time	15:31	15:33	15:36	15:41
		t delta	0	2	5	10
		Freq (MHz)	136.975018	136.975016	136.975019	136.975024
		offset (Hz)	18	16	19	24
		PPM	0.13	0.12	0.14	0.18

Temp (C)	Soak (min)					
20	1	Set Frq (MHz)	136.975	136.975	136.975	136.975
	A3E	time	17:02	17:04	17:07	17:12
		t delta	0	2	5	10
		Freq (MHz)	136.974601	136.974601	136.974601	136.9746
		offset (Hz)	-399	-399	-399	-400
		PPM	-2.91	-2.91	-2.91	-2.92

Temp (C)	Soak (min)					
30	1	Set Frq (MHz)	136.975	136.975	136.975	136.975
	A3E	time	18:35	18:37	18:40	18:45
		t delta	0	2	5	10
		Freq (MHz)	136.974229	136.974223	136.97423	136.974232
		offset (Hz)	-771	-777	-770	-768
		PPM	-5.63	-5.67	-5.62	-5.61

Temp (C)	Soak (min)					
40	1	Set Frq (MHz)	136.975	136.975	136.975	136.975
	A3E	time	9:25	9:27	9:30	9:35
		t delta	0	2	5	10
		Freq (MHz)	136.973964	136.973972	136.973975	136.973978
		offset (Hz)	-1036	-1028	-1025	-1022
		PPM	-7.56	-7.51	-7.48	-7.46

Temp (C)	Soak (min)					
50	1	Set Frq (MHz)	136.975	136.975	136.975	136.975
	A3E	time	10:57	10:59	11:02	11:07
		t delta	0	2	5	10
		Freq (MHz)	136.973877	136.973876	136.97388	136.973895
		offset (Hz)	-1123	-1124	-1120	-1105
		PPM	-8.20	-8.21	-8.18	-8.07

Temp (C)	Soak (min)					
55	1	Set Frq (MHz)	136.975	136.975	136.975	136.975
	A3E	time	12:29	12:31	12:34	12:39
		t delta	0	2	5	10
		Freq (MHz)	136.973897	136.973895	136.973906	136.973919
		offset (Hz)	-1103	-1105	-1094	-1081
		PPM	-8.05	-8.07	-7.99	-7.89

Table 6.2.6-4 Frequency Stability at DC Voltage extremes – 118 MHz

VDC	Nom %					
12	100	Set Frq (MHz)	118	118	118	118
		time	8:25	8:27	8:30	8:35
		t delta	0	2	5	10
		Freq (MHz)	117.999647	117.999646	117.999636	117.99964
		offset (Hz)	-353	-354	-364	-365
		PPM	-2.99	-3.00	-3.08	-3.09

VDC	Nom %					
10	83	Set Frq (MHz)	118	118	118	118
		time	8:37	8:39	8:42	8:47
		t delta	0	2	5	10
		Freq (MHz)	117.999653	117.999649	117.99964	117.99964
		offset (Hz)	-347	-351	-360	-365
		PPM	-2.94	-2.97	-3.05	-3.09

VDC	Nom %					
14	117	Set Frq (MHz)	118	118	118	118
		time	8:49	8:51	8:54	8:59
		t delta	0	2	5	10
		Freq (MHz)	117.999654	117.999645	117.999642	117.99963
		offset (Hz)	-346	-355	-358	-370
		PPM	-2.93	-3.01	-3.03	-3.14

Table 6.2.6-5 Frequency Stability at DC Voltage extremes – 127 MHz

VDC	Nom %					
12	100	Set Frq (MHz)	127	127	127	127
		time	9:05	9:07	9:10	9:15
		t delta	0	2	5	10
		Freq (MHz)	126.999605	126.999616	126.999612	126.999623
		offset (Hz)	-395	-384	-388	-377
		PPM	-3.11	-3.02	-3.06	-2.97

VDC	Nom %					
10	83	Set Frq (MHz)	127	127	127	127
		time	9:17	9:19	9:22	9:27
		t delta	0	2	5	10
		Freq (MHz)	126.999597	126.999608	126.999614	126.999627
		offset (Hz)	-403	-392	-386	-373
		PPM	-3.17	-3.09	-3.04	-2.94

VDC	Nom %					
14	117	Set Frq (MHz)	127	127	127	127
		time	9:29	9:31	9:34	9:39
		t delta	0	2	5	10
		Freq (MHz)	126.999605	126.999608	126.999612	126.99963
		offset (Hz)	-395	-392	-388	-370
		PPM	-3.11	-3.09	-3.06	-2.91

Table 6.2.6-6 Frequency Stability at DC Voltage extremes – 136.975 MHz

VDC	Nom %					
12	100	Set Frq (MHz)	136.975	136.975	136.975	136.975
		time	9:05	9:07	9:10	9:15
		t delta	0	2	5	10
		Freq (MHz)	136.974601	136.974599	136.974599	136.974601
		offset (Hz)	-399	-401	-401	-399
		PPM	-2.91	-2.93	-2.93	-2.91

VDC	Nom %					
10	83	Set Frq (MHz)	136.975	136.975	136.975	136.975
		time	9:17	9:19	9:22	9:27
		t delta	0	2	5	10
		Freq (MHz)	136.974597	136.974604	136.974605	136.974603
		offset (Hz)	-403	-396	-395	-397
		PPM	-2.94	-2.89	-2.88	-2.90

VDC	Nom %					
14	117	Set Frq (MHz)	136.975	136.975	136.975	136.975
		time	9:29	9:31	9:34	9:39
		t delta	0	2	5	10
		Freq (MHz)	136.974604	136.974603	136.974597	136.9746
		offset (Hz)	-396	-397	-403	-400
		PPM	-2.89	-2.90	-2.94	-2.92

6.2.6.1 Testing Information

Section 6.2.6 was performed on June 8th and 9th, 2010
Internal temperature was 23 C
Barometric Pressure was 101.95 and 101.08kPa respectively
Humidity was 33% and 34%

Test was performed by James A. Mac Innes

James A. Mac Innes – Design Engineer

6.3.1 Equipment List

HP 8595E Spectrum Analyzer, SN 3512U00425, Calibration good thru 12/9/2012
IFR 1200S, SN 10542, Calibration date 10/3/2009 – 10/31/2010
Fluke 87 Multimeter, SN 5504687, Calibration date 10/30/2009 – 10/31/2010
Communication Instruments Power Pad 100

6.3.2 Setup Diagrams

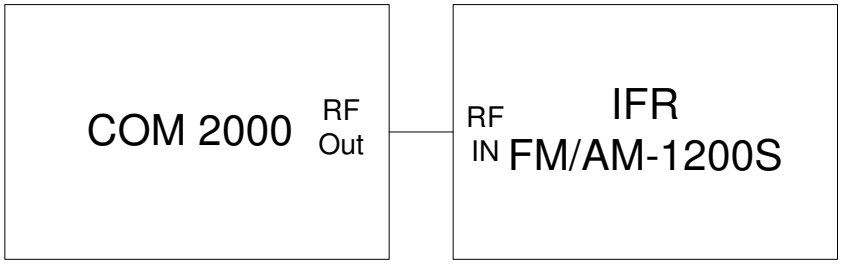

Figure 6.3.2-1: Power and Frequency measurement setup

6.3.3 Setup / Calibration Notes

Power Pad 100 was calibrated using the IFR-1200S and HP 8595E Spectrum Analyzer

6.4 Revision History

June 2010 – Initial Creation Date
Oct 2011 - Additional setup diagrams added
April 2012 – Updated Figures to match Document numbering. Added Tester signatures.