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APPLICANT: ADCON TELEMETRY, INC.

FCC ID: MQX550660-001

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TEST EQUIPMENT LIST

1. Spectrum Analyzer: HP 8566B-Opt 462, S/N 3138A07786, w/ preselector HP 85685A, S/N 3221A01400, Quasi-Peak Adapter HP 8565OA, S/N 3303A01690 & Preamplifier HP 8449B-OPT H02, S/N 3008A00372
2. Biconnical Antenna: Eaton Model 94455-1, S/N 1057
3. Biconnical Antenna: Electro-Metrics Model BIA-25, S/N 1171
4. Log-Periodic Antenna: Electro-Metrics Model EM-6950, S/N 632
5. Log-Periodic Antenna: Electro-Metrics Model LPA-30, S/N 409
6. Double-Ridged Horn Antenna: Electro-Metrics Model RGA-180, 1-18 GHz, S/N 2319
7. 18-26.3GHz Systron Donner Standard Gain Horn #DBE-520-20
8. Horn 40-60GHz: ATM Part #19-443-6R
9. Line Impedance Stabilization Network: Electro-Metrics Model EM-7820, w/NEMA Adapter S/N 2682
10. Temperature Chamber: Tenney Engineering Model TTRC, S/N 11717-7
11. Frequency Counter: HP Model 5385A, S/N 3242A07460
12. Peak Power Meter: HP Model 8900C, S/N 2131A00545
13. Open Area Test Site #1-3meters
14. Signal Generator: HP 8640B, S/N 2308A21464
15. Signal Generator: HP 8614A, S/N 2015A07428
16. Passive Loop Antenna: EMCO Model 6512, 9KHz to 30MHz, S/N 9706-1211
17. Dipole Antenna Kit: Electro-Metrics Model TDA-30/1-4, S/N 153
18. AC Voltmeter: HP Model 400FL, S/N 2213A14499
19. Digital Multimeter: Fluke Model 8012A, S/N 4810047
20. Digital Multimeter: Fluke Model 77, S/N 43850817
21. Oscilloscope: Tektronix Model 2230, S/N 300572

TEST PROCEDURE

GENERAL: This report shall NOT be reproduced except in full without the written approval of TIMCO ENGINEERING, INC. The UUT was transmitting a test signal during the testing.

RADIATION INTERFERENCE: The test procedure used was ANSI STANDARD C63.4-1992 using a HEWLETT PACKARD spectrum analyzer with a preselector. The analyzer was calibrated in dB above a microvolt at the output of the antenna. The resolution bandwidth was 100kHz and the video bandwidth was 300kHz up to 1.0GHz and 1.0MHz with a video BW of 3.0MHz above 1.0GHz. The ambient temperature of the UUT was 77oF with a humidity of 77%.

FORMULA OF CONVERSION FACTORS: The Field Strength at 3m was established by adding the meter reading of the spectrum analyzer (which is set to read in units of dBuV) to the antenna correction factor supplied by the antenna manufacturer. The antenna correction factors are stated in terms of dB. The gain of the Preselector was accounted for in the Spectrum Analyzer Meter Reading.

Example:

Freq (MHz)	METER READING + ACF = FS
33	20 dBuV + 10.36 dB = 30.36 dBuV/m @ 3m

ANSI STANDARD C63.4-1992 10.1.7 MEASUREMENT PROCEDURES: The UUT was placed on a table 80 cm high and with dimensions of 1m by 1.5m. The UUT was placed in the center of the table (1.5m side). The table used for radiated measurements is capable of continuous rotation.

When an emission was found, the table was rotated to produce the maximum signal strength. At this point, the antenna was raised and lowered from 1m to 4m. The antenna was placed in both the horizontal and vertical planes.

POWER LINE CONDUCTED: This is a battery operated device.

APPLICANT: ADCON TELEMETRY, INC.

FCC ID: MQX550660-001

NAME OF TEST: RADIATION INTERFERENCE

RULES PART NO.: 15.109(b) - Class A Computing Device

REQUIREMENTS:

30-88	MHz	49.0	dBuV/m measured at 3 meters
88-216	MHz	53.5	dbuV/m
216-960	MHz	56.4	dbuV/m
ABOVE 960	MHz	59.5	dbuV/m

TEST DATA:

TEST RESULTS: This unit DOES meet the FCC requirements.

TEST DATA FOR CLASS A COMPUTING DEVICE PORTION:

Emission Frequency MHz	Meter Reading dBuv	Ant. Polarity	Coax Loss dB	Correction Factor dB	Field Strength dBuv/m	Margin dB
43.60	23.0	v	0.74	10.76	34.50	14.50
48.00	26.0	v	0.78	10.92	37.70	11.30
49.20	26.9	v	0.79	10.97	38.66	10.34
56.10	28.6	v	0.86	9.02	38.48	10.52
57.30	30.8	v	0.87	8.63	40.30	8.70
59.90	33.2	v	0.90	7.78	41.88	7.12
61.60	36.3	v	0.92	7.59	44.81	4.19
62.20	36.0	v	0.92	7.53	44.45	4.55
83.70	32.9	v	1.07	12.33	46.30	2.70
110.00	18.0	v	1.24	9.49	28.73	24.77
120.40	18.0	v	1.28	10.78	30.06	23.44
137.60	18.9	v	1.35	14.15	34.40	19.10
142.70	18.2	v	1.37	15.28	34.85	18.65
151.70	18.2	v	1.41	16.88	36.49	17.01
174.10	14.1	v	1.59	16.68	32.37	21.13
199.90	13.8	v	1.80	12.62	28.22	25.28
205.00	22.2	v	1.82	11.70	35.72	17.78
211.00	15.7	v	1.84	11.57	29.11	24.39

APPLICANT: ADCON TELEMETRY, INC.

FCC ID: MQX550660-001

NAME OF TEST: RADIATION INTERFERENCE

RULES PART NUMBER: 15.249, 15.209

REQUIREMENTS:

FIELD STRENGTH	FIELD STRENGTH	S15.209
of Fundamental:	of Harmonics	30 - 88 MHz 40 dBuV/m @3M
902-928 MHZ		88 -216 MHz 43.5
2.4-2.4835 GHz		216 -960 MHz 46
94 dBuV/m @3m	54 dBuV/m @3m	ABOVE 960 MHz 54dBuV/m

EMISSIONS RADIATED OUTSIDE OF THE SPECIFIED FREQUENCY BANDS, EXCEPT FOR HARMONICS, SHALL BE ATTENUATED BY AT LEAST 50 dB BELOW THE LEVEL OF THE FUNDAMENTAL OR TO THE GENERAL RADIATED EMISSION LIMITS IN 15.209, WHICHEVER IS THE LESSER ATTENUATION.

TEST RESULTS: This unit DOES meet the FCC requirements.

TEST DATA FOR RF FUNDAMENTAL AND HARMONICS:

Emission Frequency MHz	Meter Reading dBuv	Ant. Polarity	Coax Loss dB	Correction Factor dB	Field Strength dBuv/m	Margin dB
904.03	63.5	H	4.11	24.85	92.46	1.54
1,808.00	9.8	V	2.80	27.42	40.02	13.98
2,712.00	4.5	V	3.57	29.78	37.85	16.15
908.80	63.5	H	4.00	24.79	92.29	1.71
1817.60	9.8	V	2.81	27.45	40.06	13.94
2726.40	4.5	V	3.58	29.82	37.90	16.10

TEST PROCEDURE: ANSI STANDARD C63.4-1992 using a Hewlett Packard Model 8566B spectrum analyzer, a Hewlett Packard Model 85685A Preselector, a Hewlett Packard Model 85650A Quasi-Peak adapter, and an appropriate antenna. The bandwidth of spectrum analyzer was 100 kHz with an appropriate sweep speed. When an emission was found, the table was rotated to produce the maximum signal strength. The antenna was placed in both the horizontal and vertical planes and the worse case emissions were reported. The spectrum was searched to at least the tenth(10) harmonic of the fundamental.

PERFORMED BY: STUART LOPATA DATE: SEPTEMBER 20, 2001

APPLICANT: ADCON TELEMETRY, INC.

FCC ID: MQX550660-001

NAME OF TEST: Occupied Bandwidth

RULES PART NO.: 15.249

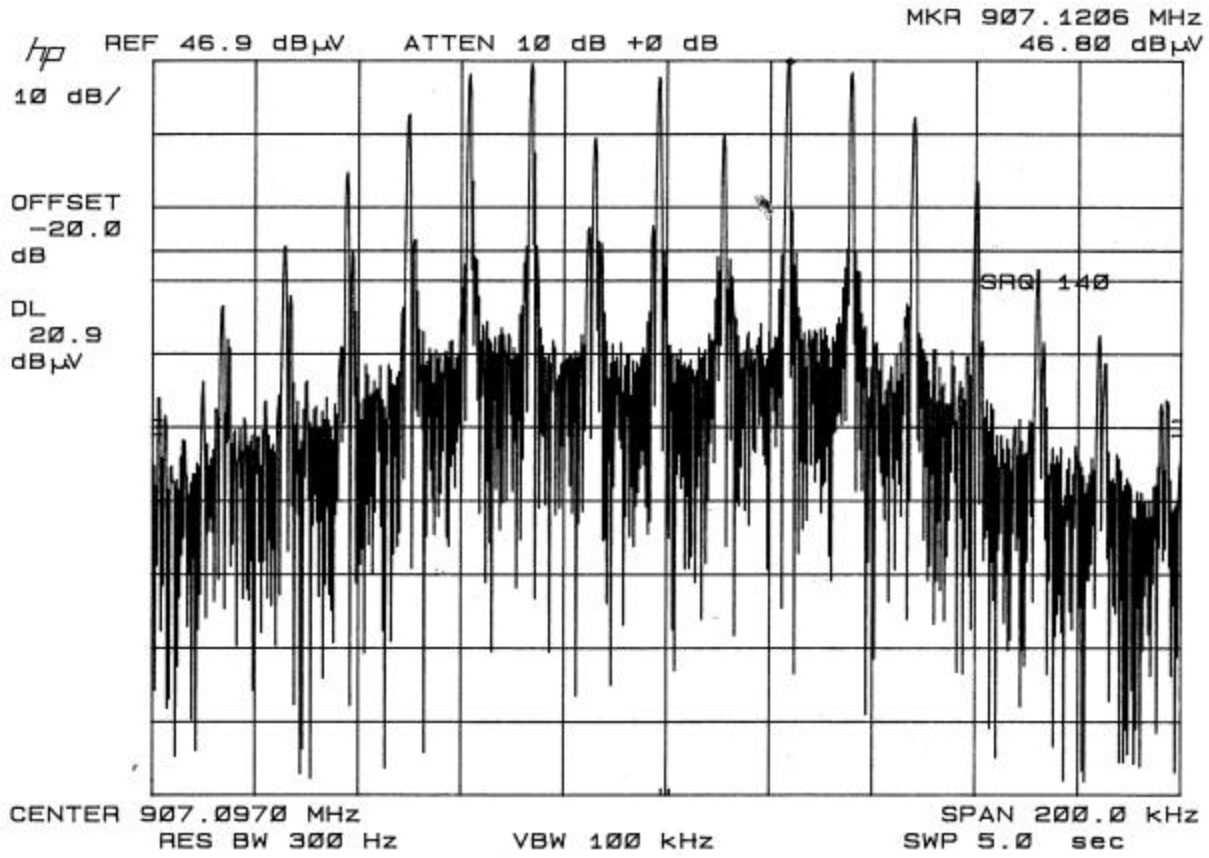
REQUIREMENTS: The field strength of any emissions appearing outside the band edges and up to 10 kHz above and below the band edges shall be attenuated at least 50 dB below the level of the carrier or to the general limits of 15.249.

THE PLOT ON THE NEXT PAGE REPRESENTS THE EMISSIONS TAKEN FOR THIS DEVICE.

METHOD OF MEASUREMENT: A small sample of the transmitter output was fed into the spectrum analyzer and the attached plot was printed. The vertical scale is set to -10 dBm per division. The horizontal scale is set to 20 kHz per division.

TEST RESULTS: The unit DOES meet the FCC requirements.

PERFORMED BY: STUART LOPATA DATE: SEPTEMBER 20, 2001


MKR 907.1206 MHz
REF 46.9 dBµV
ATTEN 10 dB +0 dB
46.80 dBµV
10 dB/
OFFSET
-20.0
dB
DL
20.9
dBµV
SRQ 140
CENTER 907.0970 MHz
SPAN 200.0 kHz
RES BW 300 Hz
VBW 100 kHz
SWP 5.0 sec