FCC PART 15, SUBPART B and C
TEST REPORT

for

COMPASS CORRECTION TRANSMITTER

MODEL: CA-320A

Prepared for

CAPITAL AVIONICS, INC.
3248 CAPITAL CIRCLE S.W.
TALLAHASSEE REGIONAL AIRPORT
TALLAHASSEE, FLORIDA 32310

Prepared by: _____

KYLE FUJIMOTO

Approved by: _____

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DATE: OCTOBER 18, 2004

	REPORT	APPENDICES					TOTAL
	BODY	*A*	*B*	*C*	*D*	*E*	
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GENERAL REPORT SUMMARY

This electromagnetic emission test report is generated by Compatible Electronics Inc., which is an independent testing and consulting firm. The test report is based on testing performed by Compatible Electronics personnel according to the measurement procedures described in the test specifications given below and in the "Test Procedures" section of this report.

The measurement data and conclusions appearing herein relate only to the sample tested and this report may not be reproduced without the written permission of Compatible Electronics, unless done so in full.

This report must not be used to claim product endorsement by NVLAP, NIST or any other agency of the U.S. Government.

Device Tested:	Compass Correction Transmitter Model: CA-320A S/N: N/A
Product Description:	See Expository Statement
Modifications:	The EUT was not modified in order to meet the specifications.
Manufacturer:	Capital Avionics, Inc. 3248 Capital Circle S.W. Tallahassee Regional Airport Tallahassee, Florida 32310
Test Date:	October 8, 2004
Test Specifications:	EMI requirements CFR Title 47, Part 15 Subpart B; and Subpart C, Sections 15.205, 15207, 15.209 and 15.249
Test Procedure:	ANSI C63.4: 2001
Test Deviations:	The test procedure was not deviated from during the testing.

SUMMARY OF TEST RESULTS

TEST	DESCRIPTION	RESULTS
1	Conducted RF Emissions, 150 kHz - 30 MHz	Complies with the **Class B** limits of CFR Title 47, Part 15, Subpart B; and Subpart C, section 15.207.
2	Radiated RF Emissions, 10 kHz - 9300 MHz	Complies with the **Class B** limits of CFR Title 47, Part 15, Subpart B; and Subpart C, sections 15.205, 15.209, and 15.249.

1. PURPOSE

This document is a qualification test report based on the Electromagnetic Interference (EMI) tests performed on the Compass Correction Transmitter Model: CA-320A . The EMI measurements were performed according to the measurement procedure described in ANSI C63.4: 2001. The tests were performed in order to determine whether the electromagnetic emissions from the equipment under test, referred to as EUT hereafter, are within the **Class B** specification limits defined by CFR Title 47, Part 15, Subpart B; and Subpart C, sections 15.205, 15.207, 15.209, and 15.249.

2. ADMINISTRATIVE DATA

2.1 Location of Testing

The EMI tests described herein were performed at the test facility of Compatible Electronics, 114 Olinda Drive, Brea, California 92823.

2.2 Traceability Statement

The calibration certificates of all test equipment used during the test are on file at the location of the test. The calibration is traceable to the National Institute of Standards and Technology (NIST).

2.3 Cognizant Personnel

Capital Avionics, Inc.

Al Ingle	President

Compatible Electronics, Inc.

Kyle Fujimoto	Test Engineer
Michael Christensen	Lab Manager

2.4 Date Test Sample was Received

The test sample was received on October 7, 2004

2.5 Disposition of the Test Sample

The sample has not yet been returned to Capital Avionics, Inc. as of October 18, 2004.

2.6 Abbreviations and Acronyms

The following abbreviations and acronyms may be used in this document.

RF	Radio Frequency
EMI	Electromagnetic Interference
EUT	Equipment Under Test
P/N	Part Number
S/N	Serial Number
HP	Hewlett Packard
ITE	Information Technology Equipment
CML	Corrected Meter Limit
LISN	Line Impedance Stabilization Network

3. APPLICABLE DOCUMENTS

The following documents are referenced or used in the preparation of this EMI Test Report.

SPEC	TITLE
CFR Title 47, Part 15	FCC Rules – Radio frequency devices (including digital devices)
ANSI C63.4 2001	Methods of measurement of radio-noise emissions from low-voltage electrical and electronic equipment in the range of 9 kHz to 40 GHz

4. DESCRIPTION OF TEST CONFIGURATION

4.1 Description Of Test Configuration - EMI

Setup and operation of the equipment under test.

Specifics of the EUT and Peripherals Tested

For Radiated Emissions Testing (Compass Mode): The Compass Correction Transmitter Model: CA-320A (EUT) was mounted to a test fixture that simulated the way the EUT would normally be mounted on an aircraft. The EUT was tested as a stand alone unit. The EUT was continuously transmitting.

For Radiated Emissions Testing (Laser Mode): The Compass Correction Transmitter Model: CA-320A (EUT) was mounted to a test fixture that simulated the way the EUT would normally be mounted on an aircraft. The EUT was tested as a stand alone unit. The EUT was continuously sending out a laser beam. Note: The EUT does not transmit in this mode.

For Conducted Emissions Testing: The Compass Correction Transmitter Model: CA-320A (EUT) was connected to an AC Adapter via its charge port. The AC Adapter was charging the EUT's batteries on a continuous basis.

Note: The AC Adapter is only used to charge the batteries of the EUT.

The final radiated conducted data were taken in the mode above. For the radiated data, it was determined the worst case mode was the compass mode. Please see Appendix E for the data sheets.

4.1.1 Cable Construction and Termination

Cable 1 This is a 1.5 meter unshielded cable connecting the EUT to the AC Adapter. It has a 6 pin LEMO connector at the EUT end and is hard wired into the AC Adapter. The cable was bundled to a length of 1 meter.

5. LISTS OF EUT, ACCESSORIES AND TEST EQUIPMENT

5.1 EUT and Accessory List

EQUIPMENT	MANU-FACTURER	MODEL NUMBER	SERIAL NUMBER	FCC ID
COMPASS CORRECTION TRANSMITTER (EUT)	CAPITAL AVIONICS, INC.	CA-320A	N/A	**SKKCA-320A**
AC ADAPTER	CUI, INC.	EPA-121DA-12	P/N: DTS120160SUAC-P5-S7	N/A

5.2 EMI Test Equipment

EQUIPMENT TYPE	MANU-FACTURER	MODEL NUMBER	SERIAL NUMBER	CAL. DATE	CAL. CYCLE
Radiate Emissions Data Capture Program	Compatible Electronics	2.0	N/A	N/A	N/A
Emissions Program	Compatible Electronics	2.3 (SR19)	N/A	N/A	N/A
Spectrum Analyzer – Main Section	Hewlett Packard	8566B	3638A08768	June 24, 2004	1 Year
Spectrum Analyzer – Display Section	Hewlett Packard	85662A	3701A22262	June 24, 2004	1 Year
Quasi-Peak Adapter	Hewlett Packard	85650A	2811A01363	June 24, 2004	1 Year
EMI Receiver	Rhode & Schwarz	ESIB40	100172	July 22, 2003	2 Year
Preamplifier	Com-Power	PA-102	1017	January 6, 2004	1 Year
Biconical Antenna	Com Power	AB-900	15227	April 21, 2004	1 Year
Log Periodic Antenna	Com Power	AL-100	16203	February 18, 2004	1 Year
Antenna Mast	Com-Power	AM-100	N/A	N/A	N/A
Turntable	Com-Power	TT-100	N/A	N/A	N/A
Computer	Hewlett Packard	4530	US91912319	N/A	N/A
Monitor	Hewlett Packard	D5258A	TW74500641	N/A	N/A
Loop Antenna	Com-Power	AL-130	17089	September 3, 2004	1 Year
Horn Antenna	Antenna Research	DRG-118/A	1053	January 16, 2004	1 Year
Microwave Preamplifier	Com-Power	PA-122	25195	August 19, 2004	1 Year
LISN	Com Power	LI-215	12078	November 22,2003	1 Year
LISN	Com Power	LI-215	12082	November 22,2003	1 Year
RF Attenuator	Weinschel Corporation	2	BJ6396	August 12, 2004	1 Year

6. TEST SITE DESCRIPTION

6.1 Test Facility Description

Please refer to section 2.1 and 7.1 of this report for EMI test location.

6.2 EUT Mounting, Bonding and Grounding

The EUT was mounted on a 1.0 by 1.5 meter non-conductive table 0.8 meters above the ground plane.

The EUT was not grounded.

7. TEST PROCEDURES

The following sections describe the test methods and the specifications for the tests. Test results are also included in this section.

7.1 Conducted Emissions Test

The spectrum analyzer was used as a measuring meter. The data was collected with the spectrum analyzer in the peak detect mode with the "Max Hold" feature activated. The quasi-peak was used only where indicated in the data sheets. A 10 dB attenuation pad was used for the protection of the spectrum analyzer input stage, and the offset was adjusted accordingly to read the actual data measured. The LISN output was measured using the spectrum analyzer. The output of the second LISN was terminated by a 50 ohm termination. The effective measurement bandwidth used for this test was 9 kHz.

Please see section 6.2 of this report for mounting, bonding and grounding of the EUT. The EUT was powered through the LISN, which was bonded to the ground plane. The LISN power was filtered and the filter was bonded to the ground plane. The EUT was set up with the minimum distances from any conductive surfaces as specified in ANSI C63.4: 2001. The excess power cord was wrapped in a figure eight pattern to form a bundle not exceeding 0.4 meters in length.

The conducted emissions from the EUT were maximized for operating mode as well as cable placement. The final data was collected under program control by the Compatible Electronics conducted emissions software in several overlapping sweeps by running the spectrum analyzer at a minimum scan rate of 10 seconds per octave. The final qualification data is located in Appendix E.

Test Results:

The EUT complies with the **Class B** limits of CFR Title 47, Part 15, Subpart B; and Subpart C, section 15.207 for conducted emissions.

7.2 Radiated Emissions (Spurious and Harmonics) Test

The spectrum analyzer was used as a measuring meter along with the quasi-peak adapter. Amplifiers were used to increase the sensitivity of the instrument. The Com-Power Preamplifier Model: PA-102 was used for frequencies from 30 MHz to 1 GHz, and the Com-Power Microwave Preamplifier Model: PA-122 was used for frequencies from 1 GHz to 18 GHz. The spectrum analyzer was used in the peak detect mode with the "Max Hold" feature activated. In this mode, the spectrum analyzer records the highest measured reading over all the sweeps.

The measurement bandwidths and transducers used for the radiated emissions test were:

FREQUENCY RANGE	EFFECTIVE MEASUREMENT BANDWIDTH	TRANSDUCER
9 kHz to 150 kHz	200 Hz	Active Loop Antenna
150 kHz to 30 MHz	9 kHz	Active Loop Antenna
30 MHz to 300 MHz	120 kHz	Biconical Antenna
300 MHz to 1 GHz	120 kHz	Log Periodic Antenna
1 GHz to 9.3 GHz	1 MHz	Horn Antenna

The open field test site of Compatible Electronics, Inc. was used for radiated emission testing. This test site is set up according to ANSI C63.4: 2001. Please see section 6.2 of this report for mounting, bonding and grounding of the EUT. The turntable supporting the EUT is remote controlled using a motor. The turntable permits EUT rotation of 360 degrees in order to maximize emissions. Also, the antenna mast allows height variation of the antenna from 1 meter to 4 meters. Data was collected in the worst case (highest emission) configuration of the EUT. At each reading, the EUT was rotated 360 degrees and the antenna height was varied from 1 to 4 meters (for E field radiated field strength). The gunsight method was used when measuring with the horn antenna in order to ensure accurate results. The loop antenna was also rotated in the horizontal and vertical axis in order to ensure accurate results.

The presence of ambient signals was verified by turning the EUT off. In case an ambient signal was detected, the measurement bandwidth was reduced temporarily and verification was made that an additional adjacent peak did not exist. This ensures that the ambient signal does not hide any emissions from the EUT. The EUT was tested at a 3 meter test distance to obtain final test data. The final qualification data sheets are located in Appendix E.

8. CONCLUSIONS

The Compass Correction Transmitter Model: CA-320A meets all of the **Class B** specification limits defined in CFR Title 47, Part 15, Subpart B; and Subpart C, sections 15.205, 15.209, and 15.249.

APPENDIX A

LABORATORY RECOGNITIONS

LABORATORY RECOGNITIONS

Compatible Electronics has the following agency accreditations:

National Voluntary Laboratory Accreditation Program - Lab Code: 200528-0

Voluntary Control Council for Interference - Registration Numbers: R-983, C-1026, R-984 and C-1027

Bureau of Standards and Metrology Inspection - Reference Number: SL2-IN-E-1031

Conformity Assessment Body for the EMC Directive Under the US/EU MRA Appointed by NIST

Compatible Electronics is recognized or on file with the following agencies:

Federal Communications Commission

Industry Canada

Radio-Frequency Technologies (Competent Body)

APPENDIX B

MODIFICATIONS TO THE EUT

MODIFICATIONS TO THE EUT

The modifications listed below were made to the EUT to pass FCC 15.249 or FCC Class B specifications.

All the rework described below was implemented during the test in a method that could be reproduced in all the units by the manufacturer.

No modifications were made during testing.

APPENDIX C

ADDITIONAL MODELS COVERED UNDER THIS REPORT

ADDITIONAL MODELS COVERED UNDER THIS REPORT

USED FOR THE PRIMARY TEST

Compass Correction Transmitter
Model: CA-320A
S/N: N/A

There were no additional models covered under this report.

APPENDIX D

DIAGRAMS, CHARTS, AND PHOTOS

FIGURE 1: CONDUCTED EMISSIONS TEST SETUP

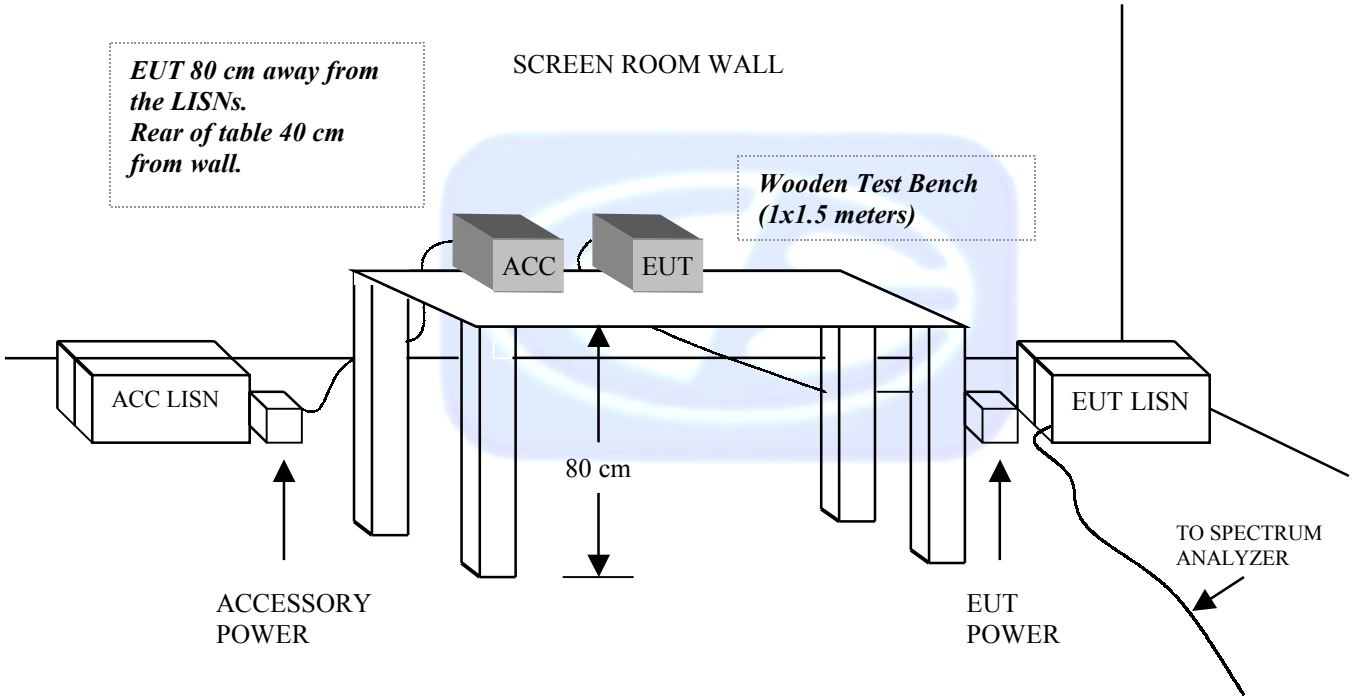
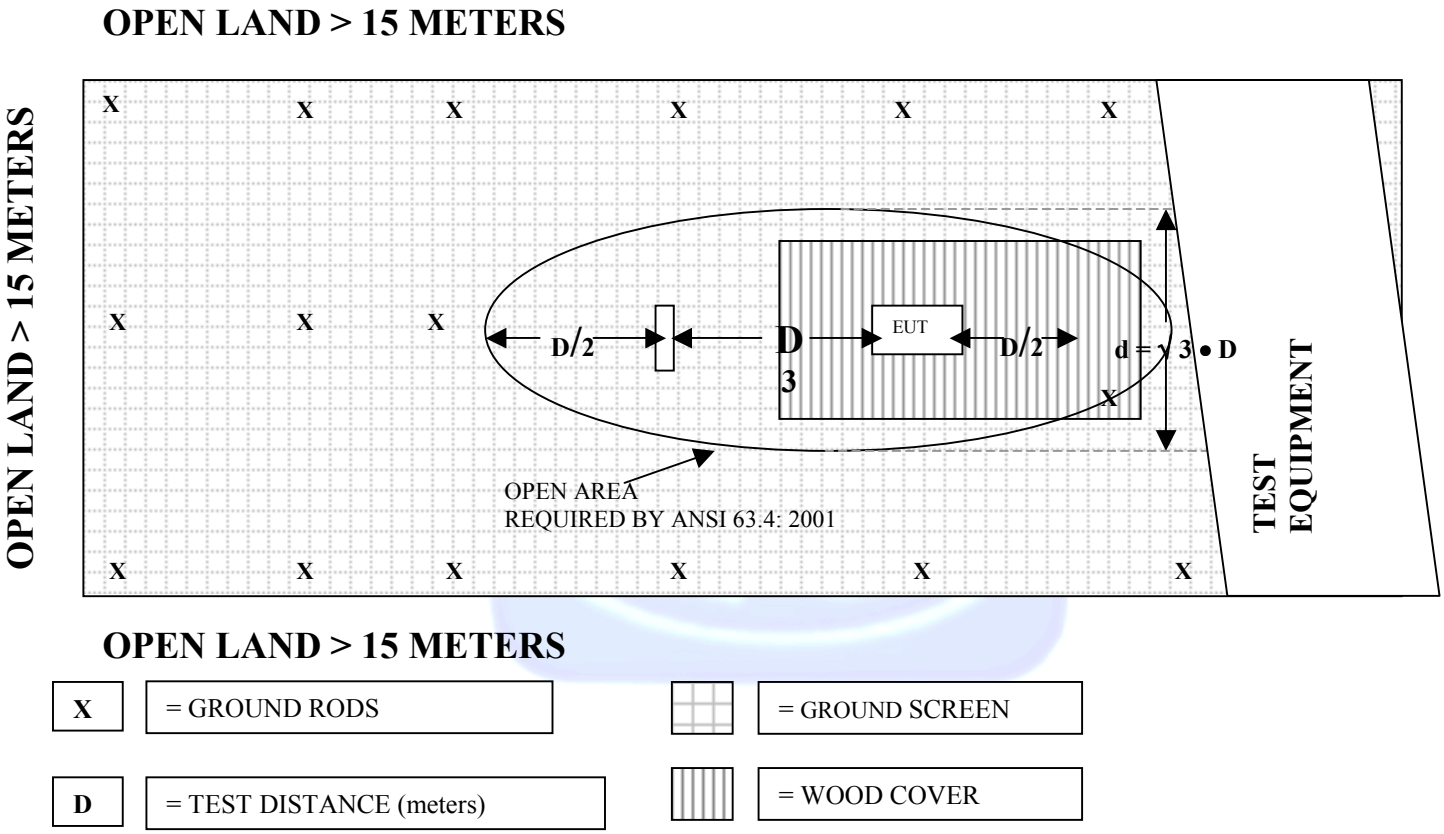


FIGURE 2: PLOT MAP AND LAYOUT OF RADIATED SITE



COM-POWER AB-900

BICONICAL ANTENNA

S/N: 15227

CALIBRATION DATE: APRIL 21, 2004

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
30	11.20	120	12.50
35	10.90	125	12.90
40	11.40	140	12.40
45	8.90	150	12.10
50	11.40	160	12.40
60	10.30	175	15.80
70	8.20	180	15.70
80	6.00	200	17.40
90	7.60	250	14.60
100	10.50	300	19.50

COM-POWER AL-100

LOG PERIODIC ANTENNA

S/N: 16203

CALIBRATION DATE: FEBRUARY 18, 2004

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
300	13.00	700	19.40
400	15.10	800	21.30
500	16.70	900	20.70
600	18.70	1000	22.60

COM-POWER PA-102

PREAMPLIFIER

S/N: 1017

CALIBRATION DATE: JANUARY 6, 2004

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
30	37.8	300	37.6
40	37.5	350	37.5
50	37.7	400	37.5
60	37.5	450	37.0
70	37.5	500	37.1
80	37.5	550	37.3
90	37.5	600	37.1
100	37.5	650	37.4
125	37.8	700	37.1
150	37.5	750	37.1
175	37.5	800	36.8
200	37.6	850	36.2
225	37.6	900	36.7
250	37.5	950	36.2
275	37.6	1000	35.3

COM-POWER PA-122

MICROWAVE PREAMPLIFIER

S/N: 25195

CALIBRATION DATE: AUGUST 19, 2004

FREQUENCY (GHz)	FACTOR (dB)	FREQUENCY (GHz)	FACTOR (dB)
1.0	30.50	6.0	30.57
1.1	30.24	6.5	30.39
1.2	30.44	7.0	30.08
1.3	30.38	7.5	29.92
1.4	30.11	8.0	28.88
1.5	29.91	8.5	28.08
1.6	29.74	9.0	28.08
1.7	30.26	9.5	29.11
1.8	30.41	10.0	30.21
1.9	30.19	11.0	29.00
2.0	30.37	12.0	29.10
2.5	30.69	13.0	29.77
3.0	31.63	14.0	28.67
3.5	31.61	15.0	29.72
4.0	31.46	16.0	30.54
4.5	31.45	17.0	30.05
5.0	31.33	18.0	28.47
5.5	31.15		

ANTENNA RESEARCH DRG-118/A

HORN ANTENNA

S/N: 1053

CALIBRATION DATE: JANUARY 16, 2004

FREQUENCY (GHz)	FACTOR (dB)	FREQUENCY (GHz)	FACTOR (dB)
1.0	24.4	10.0	38.7
1.5	25.2	10.5	39.0
2.0	28.2	11.0	38.9
2.5	28.5	11.5	41.3
3.0	30.1	12.0	40.5
3.5	31.0	12.5	40.0
4.0	31.2	13.0	40.2
4.5	31.9	13.5	40.5
5.0	33.2	14.0	41.6
5.5	33.7	14.5	44.8
6.0	34.3	15.0	41.4
6.5	35.0	15.5	39.2
7.0	36.7	16.0	39.4
7.5	37.3	16.5	40.9
8.0	37.1	17.0	42.6
8.5	37.3	17.5	45.1
9.0	37.7	18.0	41.7
9.5	38.6		

COM-POWER AL-130

LOOP ANTENNA

S/N: 17089

CALIBRATION DATE: SEPTEMBER 3, 2004

FREQUENCY (MHz)	MAGNETIC (dB/m)	ELECTRIC (dB/m)
0.009	-40.8	10.7
0.01	-40.9	10.6
0.02	-41.8	9.7
0.05	-42.0	9.5
0.07	-41.5	10.0
0.1	-41.7	9.8
0.2	-44.1	7.4
0.3	-41.6	9.9
0.5	-41.5	10.0
0.7	-41.4	10.1
1	-41.0	10.5
2	-40.6	10.9
3	-40.8	10.7
4	-41.0	10.5
5	-40.4	11.1
10	-40.7	10.8
15	-41.6	9.9
20	-41.3	10.2
25	-43.0	8.5
30	-42.6	8.9

FRONT VIEW

CAPITAL AVIONICS, INC.
COMPASS CORRECTION TRANSMITTER
MODEL: CA-320A
FCC SUBPART B AND FCC SUBPART C - RADIATED EMISSIONS – 10-08-04

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS

REAR VIEW

CAPITAL AVIONICS, INC.
COMPASS CORRECTION TRANSMITTER
MODEL: CA-320A
FCC SUBPART B AND FCC SUBPART C - RADIATED EMISSIONS – 10-08-04

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS

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CAPITAL AVIONICS, INC.
COMPASS CORRECTION TRANSMITTER
MODEL: CA-320A
FCC SUBPART B AND FCC SUBPART C - RADIATED EMISSIONS – 10-08-04

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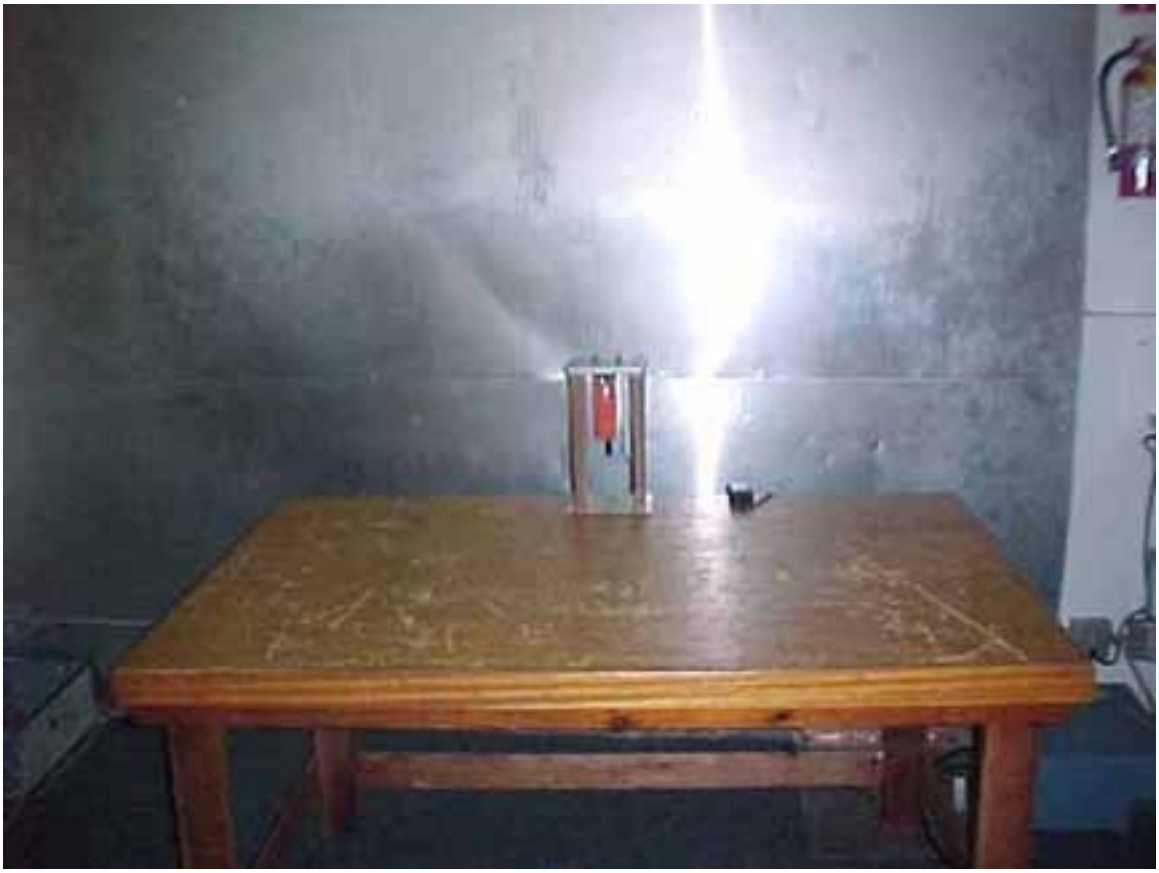
MODEL: CA-320A
FCC SUBPART B AND FCC SUBPART C - RADIATED EMISSIONS – 10-08-04

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS



FRONT VIEW

CAPITAL AVIONICS, INC.
COMPASS CORRECTION TRANSMITTER
MODEL: CA-320A
FCC SUBPART B AND FCC SUBPART C - CONDUCTED EMISSIONS – 10-08-04

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS

REAR VIEW

CAPITAL AVIONICS, INC.
COMPASS CORRECTION TRANSMITTER
MODEL: CA-320A
FCC SUBPART B AND FCC SUBPART C - CONDUCTED EMISSIONS – 10-08-04

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS

APPENDIX E

DATA SHEETS

RADIATED EMISSIONS

DATA SHEETS

FCC 15.249

Capital Avionics　　Date: 10/08/04
Compass Correction Transmitter　　Lab: B
Model: CA-320A　　Tested By: Michael Christensen
S/N: 454
Configuration -- Continuous Transmit Mode

Fundamental

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
916.5	93.03	V	114	-20.97	Peak	1.5	270	
916.5	91.68	V	94	-2.32	QP	1.5	270	
916.5	87.33	H	114	-26.67	Peak	1.5	270	
916.5	86.45	H	94	-7.55	QP	1.5	270	

FCC 15.249

Capital Avionics — Date: 10/08/04
Compass Correction Transmitter — Lab: B
Model: CA-320A — Tested By: Michael Christensen
S/N: 454
Configuration -- Continuous Transmit Mode

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1833	46.27	V	74	-27.73	Peak	2	0	
1833	43.24	V	54	-10.76	Avg	2	0	
2749.5	46.74	V	74	-27.26	Peak	1.5	90	
2749.5	42.35	V	54	-11.65	Avg	1.5	90	
3666	42.02	V	74	-31.98	Peak	1	0	
3666	28.6	V	54	-25.4	Avg	1	0	
4582.5	45.36	V	74	-28.64	Peak	1.2	90	
4582.5	33.45	V	54	-20.55	Avg	1.2	90	
5499		V	74	-74	Peak			NO EMISSION FOUND
5499		V	54	-54	Avg			
6415.5		V	74	-74	Peak			NO EMISSION FOUND
6415.5		V	54	-54	Avg			
7332		V	74	-74	Peak			NO EMISSION FOUND
7332		V	54	-54	Avg			
8248.5		V	74	-74	Peak			NO EMISSION FOUND
8248.5		V	54	-54	Avg			
9165		V	74	-74	Peak			NO EMISSION FOUND
9165		V	54	-54	Avg			

FCC 15.249

Capital Avionics
Compass Correction Transmitter
Model: CA-320A
S/N: 454
Configuration -- Continuous Transmit Mode

Date: 10/08/04
Lab: B
Tested By: Michael Christensen

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1833	42.59	H	74	-31.41	Peak	1.84	225	
1833	38.41	H	54	-15.59	Avg	1.84	225	
2749.5	42.98	H	74	-31.02	Peak	2.27	90	
2749.5	36	H	54	-18	Avg	2.27	90	
3666	45.8	H	74	-28.2	Peak	2.9	0	
3666	39.33	H	54	-14.67	Avg	2.9	0	
4582.5	43.95	H	74	-30.05	Peak	2.09	270	
4582.5	30.02	H	54	-23.98	Avg	2.09	270	
5499		H	74	-74	Peak			NO EMISSION FOUND
5499		H	54	-54	Avg			
6415.5		H	74	-74	Peak			NO EMISSION FOUND
6415.5		H	54	-54	Avg			
7332		H	74	-74	Peak			NO EMISSION FOUND
7332		H	54	-54	Avg			
8248.5		H	74	-74	Peak			NO EMISSION FOUND
8248.5		H	54	-54	Avg			
9165		H	74	-74	Peak			NO EMISSION FOUND
9165		H	54	-54	Avg			

COMPATIBLE ELECTRONICS

Customer : Capital Avionics, Inc.
Manufacturer : Capital Avionics, Inc.
Eut name : Compass Correction Transmitter
Model : CA-320A
Serial # : 454
Specification : FCC Class B
Distance correction factor (20 * log(test/spec) : 0.00
Test Mode : Test Range: 10 kHz - 9.2 GHz
Vertical and Horizontal Polarizations
EUT Continuously Transmitting
Tested By: Kyle Fujimoto

Date : 10/08/2004
Time : 17:42:17
Lab : D
Test Distance : 3.0 Meters

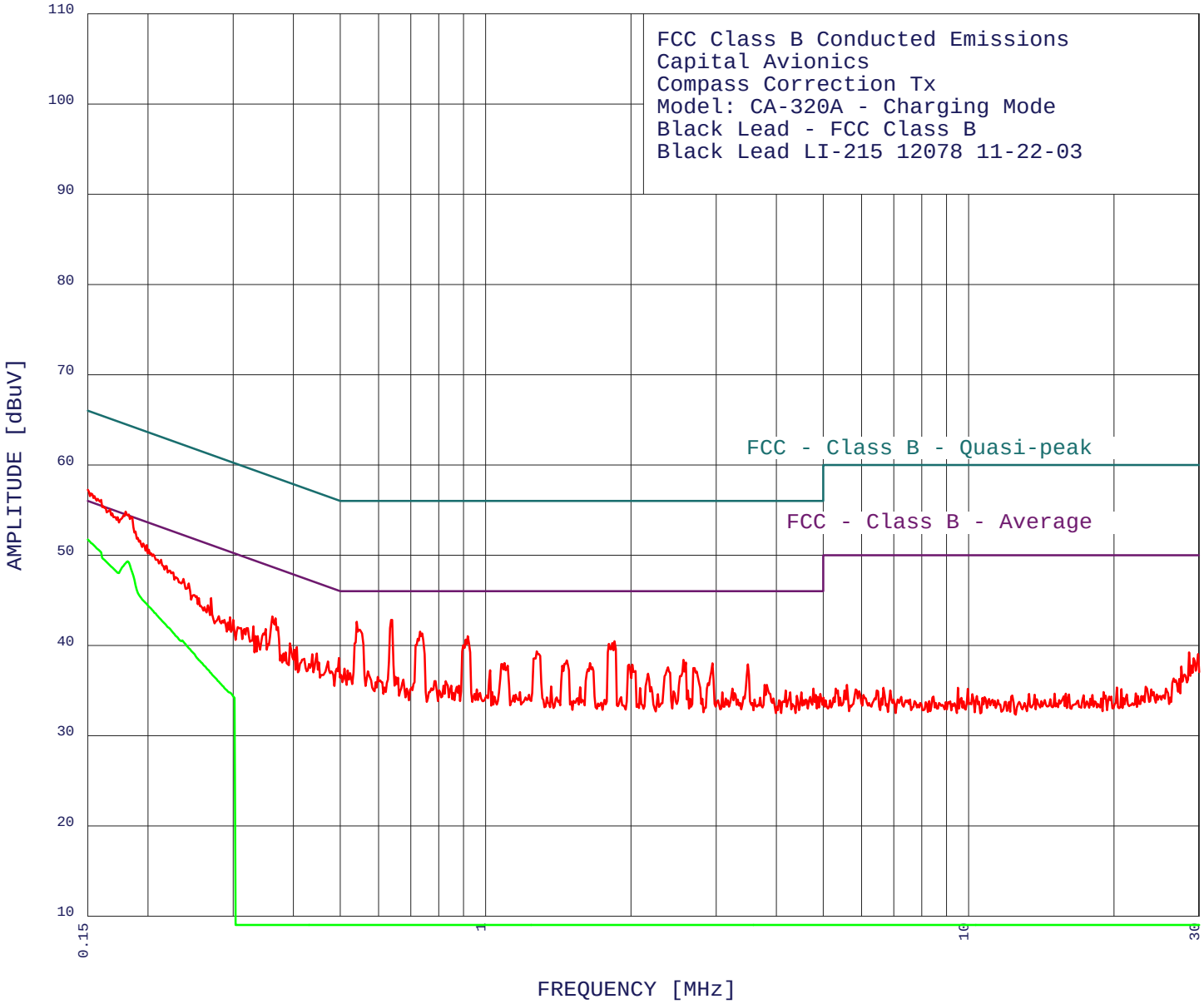
Pol	Freq	Rdng	Cable loss	Ant factor	Amp gain	Cor'd rdg = R	Limit = L	Delta R-L
	MHz	dBuV	dB	dB	dB	dBuV	dBuV/m	dB
1V	76.000	49.70	0.86	6.85	37.50	19.91	40.00	-20.09
2V	80.000	52.10	0.90	6.00	37.50	21.50	40.00	-18.50
3V	120.000	51.40	1.06	12.50	37.75	27.22	43.50	-16.28
4H	120.002	43.90	1.06	12.50	37.75	19.72	43.50	-23.78
5V	160.002	48.50	1.20	12.40	37.50	24.60	43.50	-18.90
6V	160.002	48.90	1.20	12.40	37.50	25.00	43.50	-18.50
7V	200.002	42.30	1.40	17.40	37.60	23.50	43.50	-20.00
8H	200.002	44.10	1.40	17.40	37.60	25.30	43.50	-18.20
9V	240.000	45.00	1.56	15.11	37.54	24.13	46.00	-21.87
10V	250.002	49.00	1.60	14.60	37.50	27.70	46.00	-18.30
11V	275.002	38.20	1.60	18.20	37.60	20.40	46.00	-25.60
12V	280.002	43.20	1.62	18.47	37.60	25.69	46.00	-20.31
13V	300.316	45.20	1.70	13.01	37.60	22.31	46.00	-23.69
14H	324.854	37.70	1.70	13.58	37.55	15.43	46.00	-30.57
15H	350.005	42.80	1.70	14.13	37.50	21.13	46.00	-24.87
16H	375.022	46.40	1.91	14.63	37.50	25.44	46.00	-20.56
17H	400.005	43.10	2.10	15.10	37.50	22.80	46.00	-23.20
18H	420.005	37.20	2.10	15.45	37.29	17.46	46.00	-28.54
19H	440.005	39.70	2.10	15.78	37.10	20.49	46.00	-25.51
20H	480.005	42.50	2.22	16.41	37.06	24.07	46.00	-21.93
21H	500.005	52.20	2.30	16.70	37.10	34.10	46.00	-11.90
22V	550.050	37.30	2.30	17.75	37.30	20.05	46.00	-25.95
23H	727.222	32.80	2.90	19.94	37.10	18.54	46.00	-27.46
24H	800.034	37.60	3.30	21.30	36.80	25.40	46.00	-20.60

CONDUCTED EMISSIONS

DATA SHEETS

EMISSION LEVEL [dBuV] PEAK
Graph for Peak & Average

10/08/2004 18:37:35



COMPATIBLE ELECTRONICS

COMPATIBLE ELECTRONICS

10/08/2004 18:37:35

FCC Class B Conducted Emissions
Capital Avionics
Compass Correction Tx
Model: CA-320A - Charging Mode
Black Lead - FCC Class B
Black Lead LI-215 12078 11-22-03
TEST ENGINEER : Kyle Fujimoto

48 highest peaks above -50.00 dB of EN 55022 - Class B - Average limit line
Peak criteria : 0.10 dB, Curve : Peak

Peak#	Freq(MHz)	Amp(dBuV)	Limit(dB)	Delta(dB)
1	0.152	56.83	55.86	0.97**
2	0.155	56.53	55.73	0.80**
3	0.160	56.12	55.47	0.65**
4	0.157	56.23	55.60	0.63**
5	0.180	54.81	54.50	0.31**
6	0.185	54.20	54.24	-0.03**
7	0.167	55.02	55.11	-0.10**
8	0.178	54.41	54.59	-0.18**
9	0.169	54.62	55.03	-0.41**
10	0.173	54.21	54.81	-0.60**
11	0.196	51.30	53.80	-2.50**
12	0.199	51.09	53.67	-2.57**
13	0.201	50.59	53.58	-2.98**
14	0.641	42.82	46.00	-3.18
15	0.205	50.09	53.40	-3.31**
16	0.541	42.61	46.00	-3.39
17	0.213	49.48	53.09	-3.61**
18	0.217	48.78	52.91	-4.14**
19	0.550	41.71	46.00	-4.29
20	0.731	41.52	46.00	-4.48
21	0.221	48.28	52.78	-4.51**
22	0.739	41.32	46.00	-4.68
23	0.237	47.36	52.21	-4.85**
24	0.228	47.57	52.52	-4.95**
25	0.919	41.03	46.00	-4.97
26	0.243	46.86	52.00	-5.14**
27	0.724	40.72	46.00	-5.28
28	0.909	40.63	46.00	-5.37
29	0.362	43.21	48.69	-5.48
30	1.849	40.46	46.00	-5.54
31	0.367	43.01	48.56	-5.56
32	1.830	40.26	46.00	-5.74
33	1.800	40.16	46.00	-5.84
34	0.270	45.24	51.11	-5.87**
35	0.899	40.03	46.00	-5.97
36	0.248	45.55	51.82	-6.26**
37	0.255	45.25	51.60	-6.35**
38	0.371	42.01	48.47	-6.46
39	1.276	39.34	46.00	-6.66
40	0.266	44.44	51.24	-6.80**
41	0.262	44.24	51.38	-7.13**
42	0.350	41.81	48.95	-7.15
43	0.296	43.12	50.36	-7.25**
44	0.331	42.11	49.44	-7.33
45	0.300	42.81	50.23	-7.42**
46	0.497	38.61	46.05	-7.44
47	0.280	43.23	50.81	-7.58**
48	2.568	38.38	46.00	-7.62

**Please See the Average Readings on the Next Page and on the Plot

COMPATIBLE ELECTRONICS

10/08/2004 18:37:35

FCC Class B Conducted Emissions
Capital Avionics
Compass Correction Tx
Model: CA-320A - Charging Mode
Black Lead - FCC Class B
Black Lead LI-215 12078 11-22-03
TEST ENGINEER : Kyle Fujimoto

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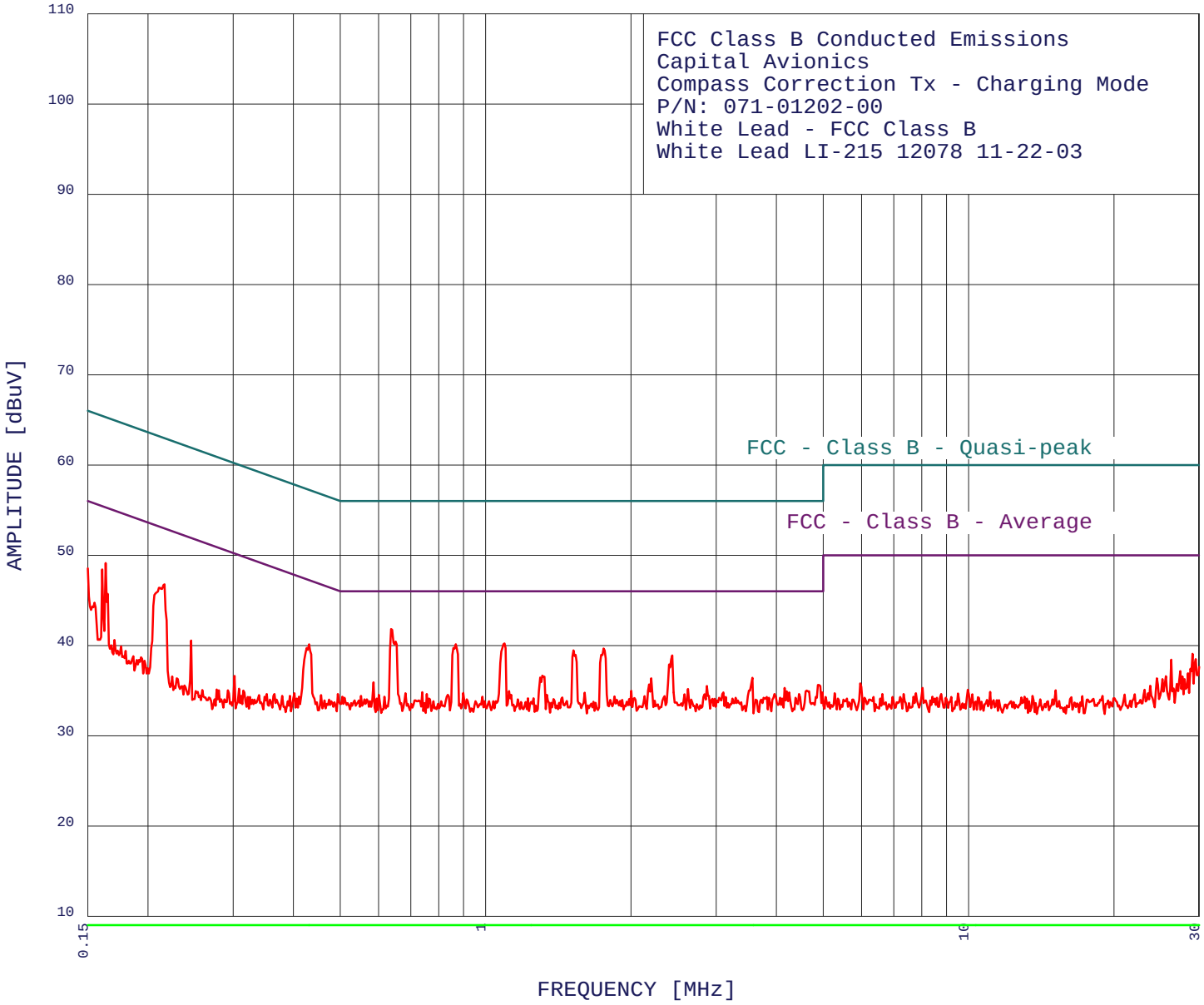
2 highest peaks above -50.00 dB of EN 55022 - Class B - Average limit line
Peak criteria : 0.00 dB, Curve : Average

Peak#	Freq(MHz)	Amp(dBuV)	Limit(dB)	Delta(dB)
1	0.182	49.31	54.41	-5.11
2	0.235	40.53	52.25	-11.72

EMISSION LEVEL [dBuV] PEAK
Graph for Peak & Average

10/08/2004 18:45:42



COMPATIBLE ELECTRONICS

COMPATIBLE ELECTRONICS

10/08/2004 18:45:42

FCC Class B Conducted Emissions
Capital Avionics
Compass Correction Tx - Charging Mode
Model: CA-320A
White Lead - FCC Class B
White Lead LI-215 12078 11-22-03
TEST ENGINEER : Kyle Fujimoto

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48 highest peaks above -50.00 dB of EN 55022 - Class B - Average limit line
Peak criteria : 1.00 dB, Curve : Peak

Peak#	Freq(MHz)	Amp(dBuV)	Limit(dB)	Delta(dB)
1	0.637	41.82	46.00	-4.18
2	1.094	40.23	46.00	-5.77
3	0.867	40.12	46.00	-5.88
4	0.163	49.12	55.29	-6.17
5	0.216	46.78	52.96	-6.18
6	1.754	39.66	46.00	-6.34
7	1.520	39.45	46.00	-6.55
8	0.161	48.42	55.43	-7.00
9	2.436	38.88	46.00	-7.12
10	0.431	40.11	47.24	-7.13
11	1.311	36.64	46.00	-9.36
12	3.565	36.41	46.00	-9.59
13	2.201	36.37	46.00	-9.63
14	0.586	35.92	46.00	-10.08
15	4.902	35.61	46.00	-10.39
16	2.870	35.49	46.00	-10.51
17	4.159	35.31	46.00	-10.69
18	2.624	35.19	46.00	-10.81
19	29.078	39.06	50.00	-10.94
20	4.624	35.01	46.00	-10.99
21	2.002	34.96	46.00	-11.04
22	1.118	34.93	46.00	-11.07
23	4.204	34.91	46.00	-11.09
24	0.739	34.82	46.00	-11.18
25	4.980	34.81	46.00	-11.19
26	4.249	34.81	46.00	-11.19
27	3.107	34.80	46.00	-11.20
28	1.603	34.75	46.00	-11.25
29	0.899	34.73	46.00	-11.27
30	0.683	34.72	46.00	-11.28
31	0.246	40.56	51.90	-11.35
32	0.755	34.62	46.00	-11.38
33	4.456	34.61	46.00	-11.39
34	3.966	34.61	46.00	-11.39
35	2.582	34.58	46.00	-11.42
36	1.338	34.54	46.00	-11.46
37	0.835	34.52	46.00	-11.48
38	0.494	34.61	46.09	-11.48
39	0.601	34.52	46.00	-11.48
40	29.542	38.49	50.00	-11.51
41	26.278	38.42	50.00	-11.58
42	0.552	34.41	46.00	-11.59
43	2.134	34.37	46.00	-11.63
44	1.849	34.36	46.00	-11.64
45	0.984	34.33	46.00	-11.67
46	0.618	34.32	46.00	-11.68
47	3.820	34.31	46.00	-11.69
48	3.141	34.30	46.00	-11.70
