Exhibit B Test Report
Lowrance Electronics, Inc.
FM Modulator

Project Number: 06117-10

Prepared for:

Lowrance Electronics, Inc.

12000 E. Skelly Drive
Tulsa, OK 74128

By
Professional Testing (EMI), Inc.
1601 FM 1460, Suite B
Round Rock, Texas 78664

August 2005

CERTIFICATION
Electromagnetic Interference Test Report
Lowrance Electronics, Inc.
FM Modulator

Table of Contents

Certificate Of Compliance

Applicant:	Lowrance Electronics, Inc.
Applicant's Address:	12000 E. Skelly Drive Tulsa, OK 74128
FCC ID:	D6NLOWFMMOD1V1
IC Number	1542B-FMMOD1V1
Project Number:	06117-10
Test Dates:	August 23-24, 2005

I, Michael A. Royer, for Professional Testing (EMI), Inc., being familiar with the FCC and IC rules and test procedures have reviewed the test setup, measured data and this report. I believe them to be true and accurate.

The **Lowrance Electronics, Inc., FM Modulator** was tested to and found to be in compliance with FCC Part 15 Subpart C and IC RSS 210 for an Intentional Radiator.

The highest emissions generated by the above equipment are listed below:

	Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)
Fundamental	88.1	47.5	48	-0.5
Spurious	882	36.7	46	-9.3
Occupied Bandwidth	146.7 (kHz)			

Michael A. Royer, BSEE, NCE
EMC Department Manager

This report has been reviewed and accepted by Lowrance Electronics, Inc.. The undersigned is responsible for ensuring that **Lowrance Electronics, Inc., FM Modulator** will continue to comply with the FCC and IC rules.

1.0 EUT Description

This product is a modular built-in FM Stereo Modulator that enables you to play your pre-recorded music and turn-by-turn directions through your FM radio. The FM modulator wirelessly broadcasts the audio signal to your FM radio in your car. No additional wiring is necessary. The broadcast frequency is fully adjustable throughout the FM band in 200 kHz steps from 88.1 to 107.9 MHz. It is for use in several Lowrance GPS products.

The system tested consisted of the following:

Manufacturer & Model	FCC Number	IC Number	Description
Lowrance Electronics, Inc., FM Modulator	D6NLOWFMMOD1V1	1542B-FMMOD1V1	FM Modulator

1.1 Applicable Documents

Guidelines	FCC Rule Parts Part 15	IC Rule Parts RSS-210
Transmitter Characteristics	15.239	6.2.2(k)
Spurious Radiated Power	15.205, 15.209, 15.239	6.2.2(k), 6.3
Antenna Requirement	15.203	5.5

1.2 EUT Operation

The EUT was operated in continuous transmit mode at max power frequency modulated with a 1kHz test tone to measure fundamental, harmonics, and spurious radiation.

2.0 Electromagnetic Emissions Testing

Professional Testing (EMI), Inc. (PTI), follows the guidelines of NIST for all uncertainty calculations, estimates and expressions thereof for EMC testing.

2.1 Radiated Emissions Measurements

Radiated emission measurements were made of the Fundamental and Spurious Emission levels for FM Modulator. Measurements of the occupied bandwidth were also made for the EUT.

Measurements of the maximum emission levels for the spurious/harmonic emissions of the FM Modulator were made at the Professional Testing "Open Field" Site 3, located in Round Rock, Texas to determine the radio noise radiated from the EUT. Measurements of the maximum emission levels for the fundamental emissions of the FM Modulator were made at the AMD Semi-Anechoic Chamber, located in Austin, Texas. A “Description of Measurement Facilities” has been submitted to the FCC and approved pursuant to Section 2.948 of CFR 47 of the FCC rules.

Tests of the fundamental for the device were performed to determine the worst case polarization of the devices. The fundamental emissions of the device were measured with the antenna of the device in horizontal and vertical polarization.

2.1.1 Test Procedure

The EUT was placed on a non-conductive table 0.8 meters above the ground plane. The table was centered on a motorized turntable which allows 360 degree rotation. For measurements of the fundamental signal, a measurement antenna was positioned at a distance of 3 meters as measured from the closest point of the EUT. The radiated emissions were maximized by rotating the EUT.

A Spectrum Analyzer with peak detection was used to find the maximums of the radiated emissions during the variability testing. A drawing showing the test setup is given as Figure 2.

2.1.2 Test Criteria

The table below shows FCC radiated limits for an intentional radiator operating under the provisions of part 15.239. The measurement of the harmonics was performed to 1 GHz. The reference distance for each limit is also shown in this table.

Frequency MHz	Test Distance (Meters)	Field Strength (uV/m)@3m	(dBuV/m)@Test Distance
30 to 88	3	100	40.0
88 to 216	3	150	43.5
216 to 960	3	200	46.0
960 to 1000	3	500	54.0
Fundamental	3	250	48.0

Note: Fundamental and Harmonic Limits are expressed in Average field strengths. The spurious limits are expressed in Quasi-Peak.

2.1.3 Test Results

The radiated test data for the fundamental is included in Appendix A. Peak detection was used during the test for the fundamental and harmonics. Quasi-Peak detection was used for spurious emissions below 1 GHz. The radiated emission test data is included in Appendix A. The radiated emissions generated by the FM Modulator are below the FCC Part 15.239 limits.

3.0 Occupied Bandwidth Measurements

Measurements of the occupied bandwidth for the fundamental signals were made at Professional Testing Round Rock, Texas site. All measurements were made in a controlled indoor environment in a configuration which did not present measurement distortion or ambient interference.

3.1 Test Procedure

The EUT was placed on a non-conductive table 0.8 meters above the floor. The table was rotated to an angle which presented the highest signal level. The occupied bandwidth was based on a 20 dB criteria (20 dB down either side of the emission from the peak emission). A drawing showing the test setup is given as Figure 1.

3.2 Test Criteria

According to FCC Part 15.239, the bandwidth of the emission shall be less than 200 kHz.

3.3 Test Results

The occupied bandwidth test data is included in Appendix A. The maximum occupied bandwidth for the fundamental frequency 98.1 MHz is 146.7 kHz. This occupied bandwidth complies with the FCC requirement.

4.0 Antenna Requirement

An analysis of the FM Modulator was performed to determine compliance with FCC Section 15.203. This section requires specific handling and control of antennas used for devices subject to regulations.

4.1 Evaluation Procedure

The structure and application of the FM Modulator was analyzed with respect to the rules. The antenna is an internal antenna, and is not accessible to the user. An auxiliary antenna port is not present.

4.2 Evaluation Criteria

Section 15.203 of the rules states that the subject device must meet at least one of the following criteria:

(a) Antenna must be permanently attached to the unit.

(b) Antenna must use a unique type of connector to attach to the EUT.

(c) Unit must be professionally installed. Installer shall be responsible for verifying that the correct antenna is employed with the unit.

4.3 Evaluation Results

The FM Modulator meets the criteria of this rule by virtue of having an internal antenna inaccessible to the user. The EUT is therefore compliant.

5.0 Modifications to Equipment

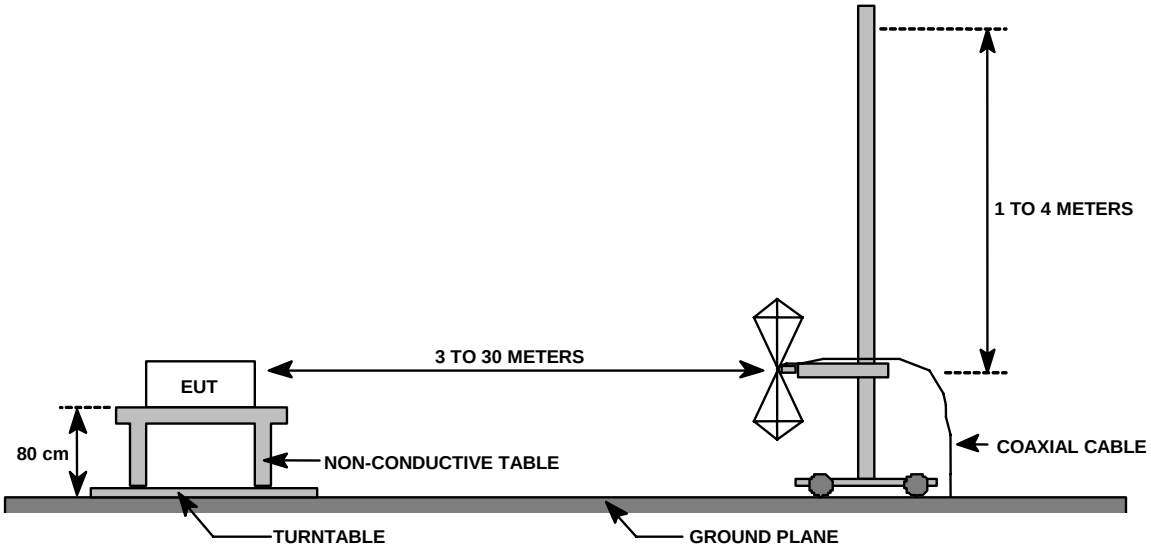
A 25 dB attenuator was added to the RF output and the antenna was trimmed to 7 inches.

6.0 List of Test Equipment

A list of the test equipment utilized to perform the testing is given below. The date of calibration is given for each.

Device	Description	Calibration Due
HP8566B	Spectrum Analyzer	March 2006
HP85650	Quasi-peak Adapter	March 2006
HP 85685	Preselector	March 2006
Compliance Design B-100	Biconical Antenna	June 2006
EMCO 3146	Log Periodic Antenna	June 2006
HP8447D	Preamplifier	November 2005

FIGURE 1: Radiated Emissions Test Setup

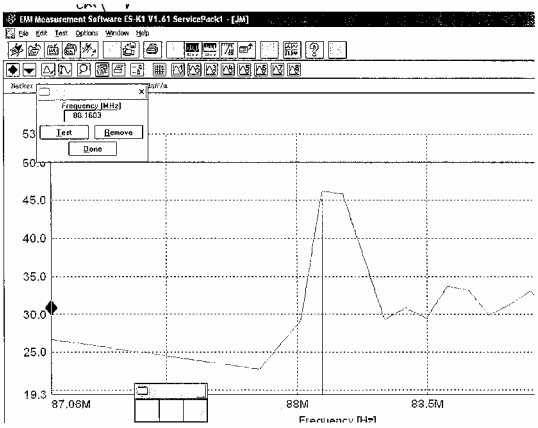


APPENDIX A EMISSIONS DATA SHEET

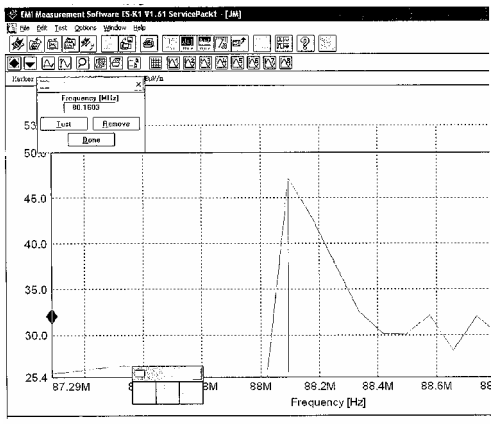
Radiated Data Sheet
Peak Power
Lowrance Electronics, Inc.
FM Modulator
Peak Detection RBW =120 kHz

Test Date: August 24, 2005
Measurement Distance (Meters): 3

Channel 1 Vertical



Channel 1 Horizontal



Frequency (MHz)	Vertical (dBuV/m)	Horizontal (dBuV/m)	Maximum (dBuV/m)	Limit (dBuV/m)	Margin (dB)
88.1	46.2	47.5	46.2	48	-0.5

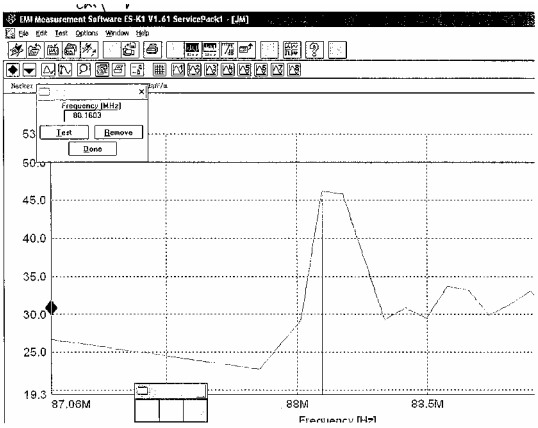
Result: PASS

TEST ENGINEER: Jason Anderson

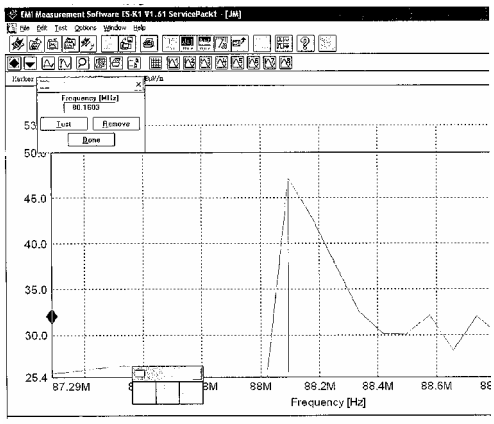
Radiated Data Sheet
Peak Power
Lowrance Electronics, Inc.
FM Modulator
Peak Detection RBW =120 kHz

Test Date: August 24, 2005
Measurement Distance (Meters): 3

Channel 2 Vertical



Channel 2 Horizontal



Frequency (MHz)	Vertical (dBuV/m)	Horizontal (dBuV/m)	Maximum (dBuV/m)	Limit (dBuV/m)	Margin (dB)
98.1	45.0	46.2	46.2	48	-1.8

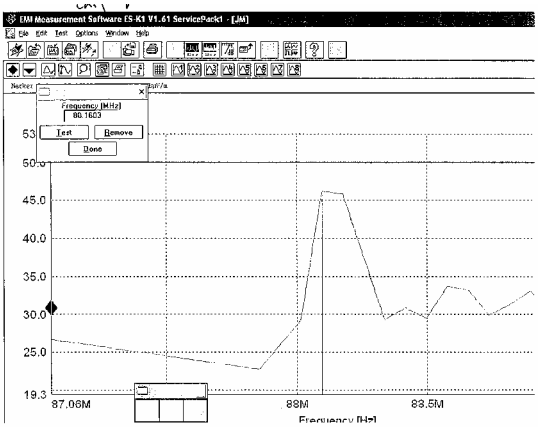
Result: PASS

TEST ENGINEER: Jason Anderson

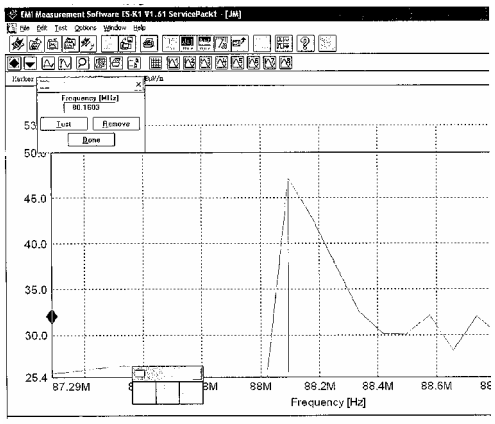
Radiated Data Sheet
Peak Power
Lowrance Electronics, Inc.
FM Modulator
Peak Detection RBW =120 kHz

Test Date: August 24, 2005
Measurement Distance (Meters): 3

Channel 3 Vertical



Channel 3 Horizontal



Frequency (MHz)	Vertical (dBuV/m)	Horizontal (dBuV/m)	Maximum (dBuV/m)	Limit (dBuV/m)	Margin (dB)
107.9	45.5	46.5	46.5	48	-1.5

Result: PASS

TEST ENGINEER: Jason Anderson

Radiated Data Sheet
Spurious/Harmonics
Lowrance Electronics, Inc.
FM Modulator
Quasi-Peak Detection RBW=120kHz

Test Date: August 23, 2005
Measurement Distance (Meters): 3

Channel 1 Vertical

Frequency (MHz)	EUT Direction (degrees)	Antenna Elevation (Meters)	Recorded Level (dBuV)	Amplifier Gain (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Corrected Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Function
176.2	noise	floor	21.3	26.7	15.8	13.7	24.1	43.5	-19.4	Quasi-peak
264.3	noise	floor	20.8	27.0	13.3	14.6	21.7	46	-24.3	Quasi-peak
352.4	noise	floor	21	27.3	14.8	15.5	24.0	46	-22.0	Quasi-peak
440.5	noise	floor	20.7	27.4	16.4	16.3	26.0	46	-20.0	Quasi-peak
528.6	noise	floor	20.3	27.1	18.1	17.1	28.4	46	-17.6	Quasi-peak
616.7	noise	floor	20.2	26.9	19.2	17.7	30.2	46	-15.8	Quasi-peak
704.8	noise	floor	19.8	26.4	21.4	18.3	33.1	46	-12.9	Quasi-peak
792.9	noise	floor	19.3	26.0	21.1	19.2	33.6	46	-12.4	Quasi-peak
881	noise	floor	19.6	26.3	22.5	20.5	36.3	46	-9.7	Quasi-peak

Channel 1 Horizontal

Frequency (MHz)	EUT Direction (degrees)	Antenna Elevation (Meters)	Recorded Level (dBuV)	Amplifier Gain (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Corrected Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Function
176.2	noise	floor	21.3	26.7	15.8	13.7	24.1	43.5	-19.4	Quasi-peak
264.3	noise	floor	20.8	27.0	13.3	14.6	21.7	46	-24.3	Quasi-peak
352.4	noise	floor	21	27.3	14.8	15.5	24.0	46	-22.0	Quasi-peak
440.5	noise	floor	20.7	27.4	16.4	16.3	26.0	46	-20.0	Quasi-peak
528.6	noise	floor	20.3	27.1	18.1	17.1	28.4	46	-17.6	Quasi-peak
616.7	noise	floor	20.2	26.9	19.2	17.7	30.2	46	-15.8	Quasi-peak
704.8	noise	floor	19.8	26.4	21.4	18.3	33.1	46	-12.9	Quasi-peak
792.9	noise	floor	19.3	26.0	21.1	19.2	33.6	46	-12.4	Quasi-peak
881	noise	floor	19.6	26.3	22.5	20.5	36.3	46	-9.7	Quasi-peak

TEST ENGINEER: Jason Anderson

Radiated Data Sheet
Spurious/Harmonics
Lowrance Electronics, Inc.
FM Modulator
Quasi-Peak Detection RBW=120kHz

Test Date: August 23, 2005
Measurement Distance (Meters): 3

Channel 2 Vertical

Frequency (MHz)	EUT Direction (degrees)	Antenna Elevation (Meters)	Recorded Level (dBuV)	Amplifier Gain (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Corrected Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Function
196	noise	floor	21.3	26.9	16.6	13.9	24.9	43.5	-18.6	Quasi-Peak
294	noise	floor	20.9	27.1	15.1	14.9	23.9	46	-22.1	Quasi-Peak
392	noise	floor	21.2	27.3	15.7	16.0	25.5	46	-20.5	Quasi-Peak
490	noise	floor	21.1	27.4	17.4	16.7	27.8	46	-18.2	Quasi-Peak
588	noise	floor	20	27.1	18.6	17.5	29.0	46	-17.0	Quasi-Peak
686	noise	floor	20.3	26.5	21.2	18.2	33.2	46	-12.8	Quasi-Peak
784	noise	floor	19.7	26.1	21.1	19.2	33.9	46	-12.1	Quasi-Peak
882	noise	floor	19.9	26.2	22.5	20.5	36.7	46	-9.3	Quasi-Peak
980	noise	floor	18.7	26.6	24.3	21.6	38.0	54	-16.0	Quasi-Peak

Channel 2 Horizontal

Frequency (MHz)	EUT Direction (degrees)	Antenna Elevation (Meters)	Recorded Level (dBuV)	Amplifier Gain (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Corrected Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Function
196	180	3	30.1	26.9	16.6	13.9	33.7	43.5	-9.8	Quasi-Peak
294	noise	floor	20.9	27.1	15.1	14.9	23.9	46	-22.1	Quasi-Peak
392	noise	floor	21.2	27.3	15.7	16.0	25.5	46	-20.5	Quasi-Peak
490	noise	floor	21.1	27.4	17.4	16.7	27.8	46	-18.2	Quasi-Peak
588	noise	floor	20	27.1	18.6	17.5	29.0	46	-17.0	Quasi-Peak
686	noise	floor	20.3	26.5	21.2	18.2	33.2	46	-12.8	Quasi-Peak
784	noise	floor	19.7	26.1	21.1	19.2	33.9	46	-12.1	Quasi-Peak
882	noise	floor	19.9	26.2	22.5	20.5	36.7	46	-9.3	Quasi-Peak
980	noise	floor	18.7	26.6	24.3	21.6	38.0	54	-16.0	Quasi-Peak

TEST ENGINEER: Jason Anderson

Radiated Data Sheet
Spurious/Harmonics
Lowrance Electronics, Inc.
FM Modulator
Quasi-Peak Detection RBW=120kHz

Test Date: August 23, 2005
Measurement Distance (Meters): 3

Channel 3 Vertical

Frequency (MHz)	EUT Direction (degrees)	Antenna Elevation (Meters)	Recorded Level (dBuV)	Amplifier Gain (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Corrected Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Function
215.8	noise	floor	20	26.8	11.4	13.9	18.5	43.5	-25.0	Quasi-Peak
323.7	noise	floor	20.2	27.1	15.1	14.9	23.1	46	-22.9	Quasi-Peak
431.6	noise	floor	20.6	27.4	16.2	16.0	25.4	46	-20.6	Quasi-Peak
539.5	noise	floor	19.9	27.2	18.1	16.7	27.6	46	-18.4	Quasi-Peak
647.4	noise	floor	19.6	27.1	19.9	17.5	29.9	46	-16.1	Quasi-Peak
755.3	noise	floor	19.2	26.1	21.2	18.2	32.5	46	-13.5	Quasi-Peak
863.2	noise	floor	19	26.1	22.3	19.2	34.4	46	-11.6	Quasi-Peak
971.1	noise	floor	18.7	26.6	24.0	20.5	36.6	54	-17.4	Quasi-Peak

Channel 3 Horizontal

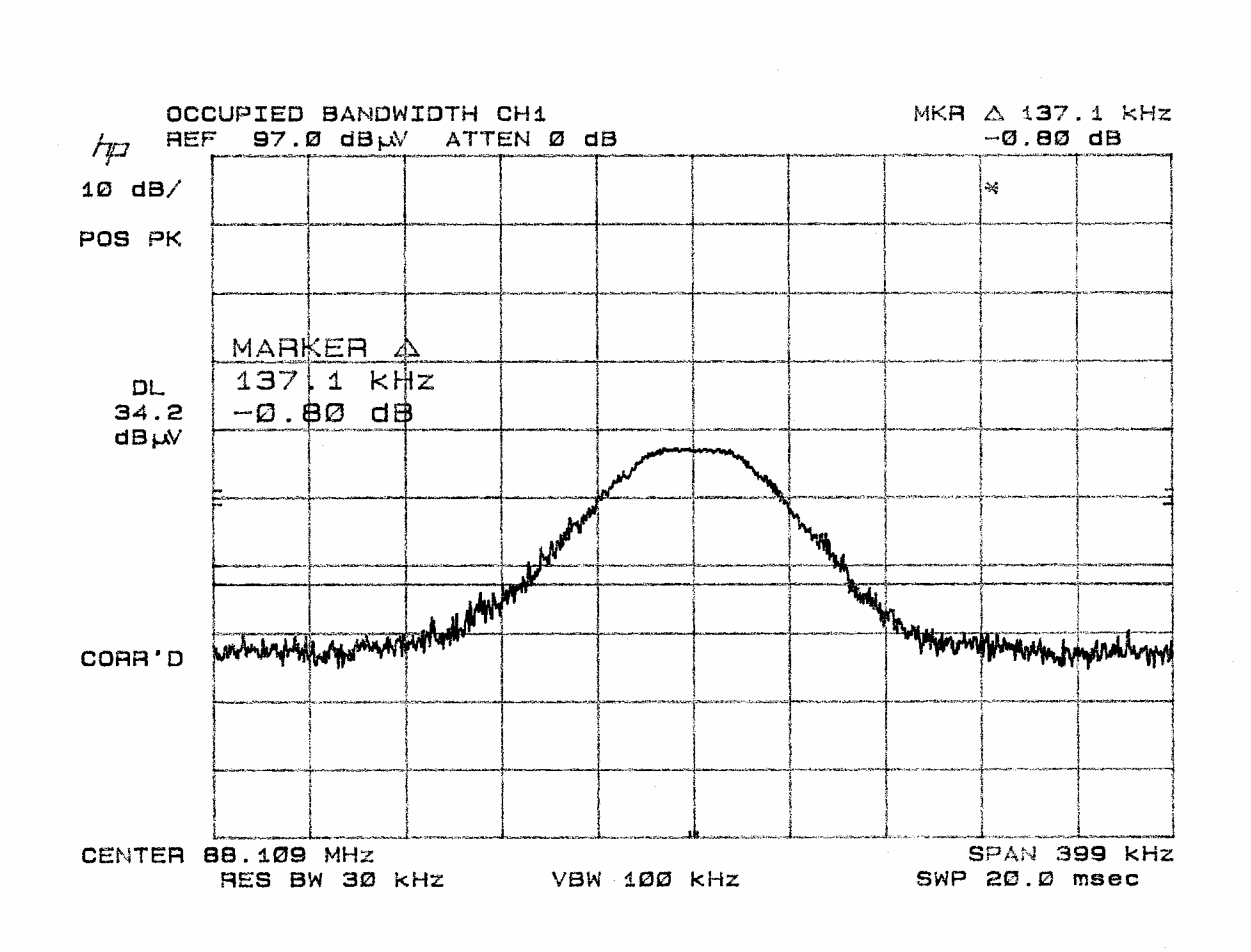
Frequency (MHz)	EUT Direction (degrees)	Antenna Elevation (Meters)	Recorded Level (dBuV)	Amplifier Gain (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Corrected Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Function
215.8	noise	floor	20	26.8	11.4	14.1	18.7	43.5	-24.8	Quasi-Peak
323.7	noise	floor	20.2	27.1	15.1	15.2	23.4	46	-22.6	Quasi-Peak
431.6	noise	floor	20.6	27.4	16.2	16.3	25.7	46	-20.3	Quasi-Peak
539.5	noise	floor	19.9	27.2	18.1	17.2	28.1	46	-17.9	Quasi-Peak
647.4	noise	floor	19.6	27.1	19.9	17.9	30.3	46	-15.7	Quasi-Peak
755.3	noise	floor	19.2	26.1	21.2	18.9	33.2	46	-12.8	Quasi-Peak
863.2	noise	floor	19	26.1	22.3	20.2	35.4	46	-10.6	Quasi-Peak
971.1	noise	floor	18.7	26.6	24.0	21.4	37.5	54	-16.5	Quasi-Peak

TEST ENGINEER: Jason Anderson

Occupied Bandwidth Datasheet
Lowrance Electronics, Inc.
FM Modulator

Test Date: August 23, 2005
Measurement Distance (Meters): 3

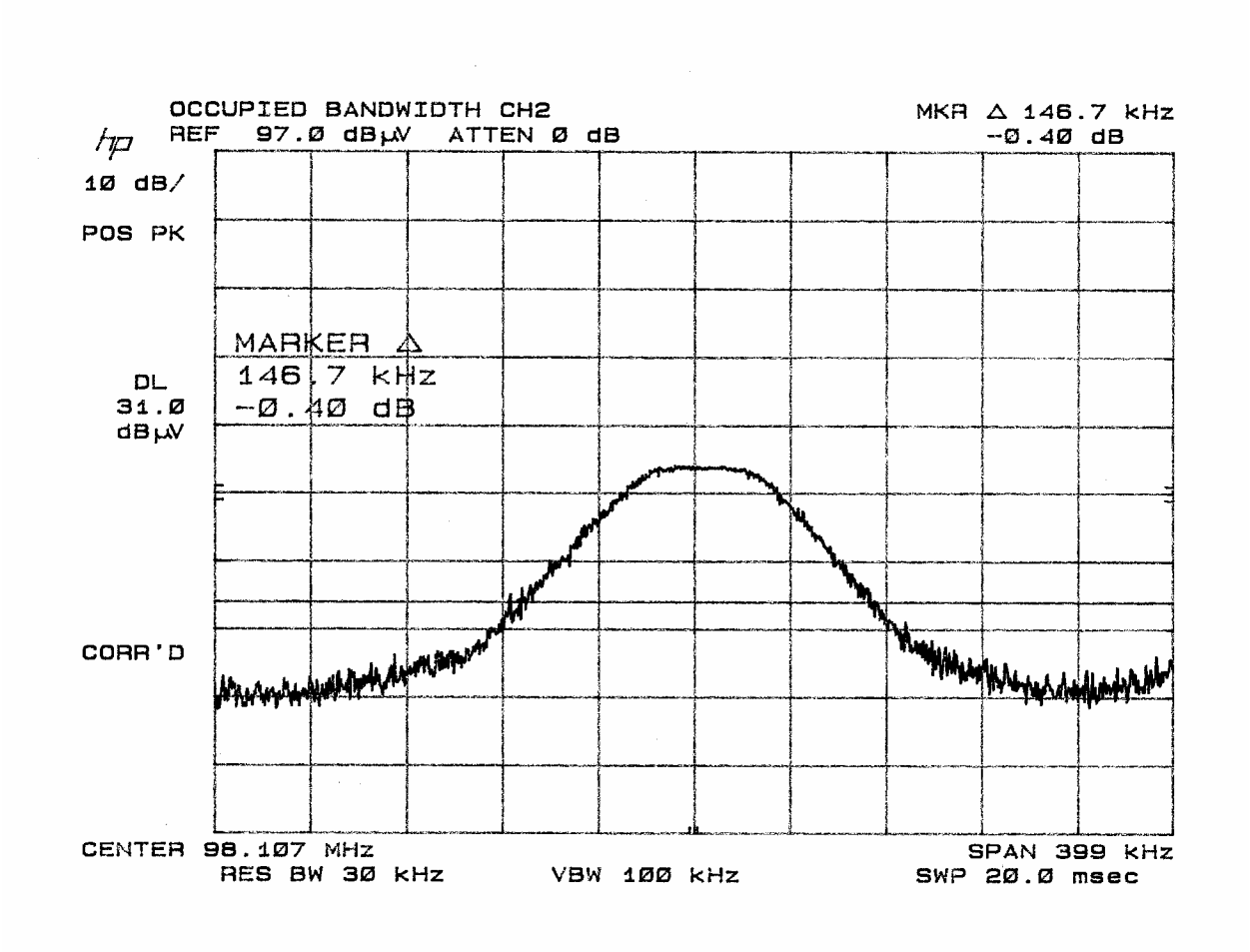
Channel 1



Occupied Bandwidth Datasheet
Lowrance Electronics, Inc.
FM Modulator

Test Date: August 23, 2005
Measurement Distance (Meters): 3

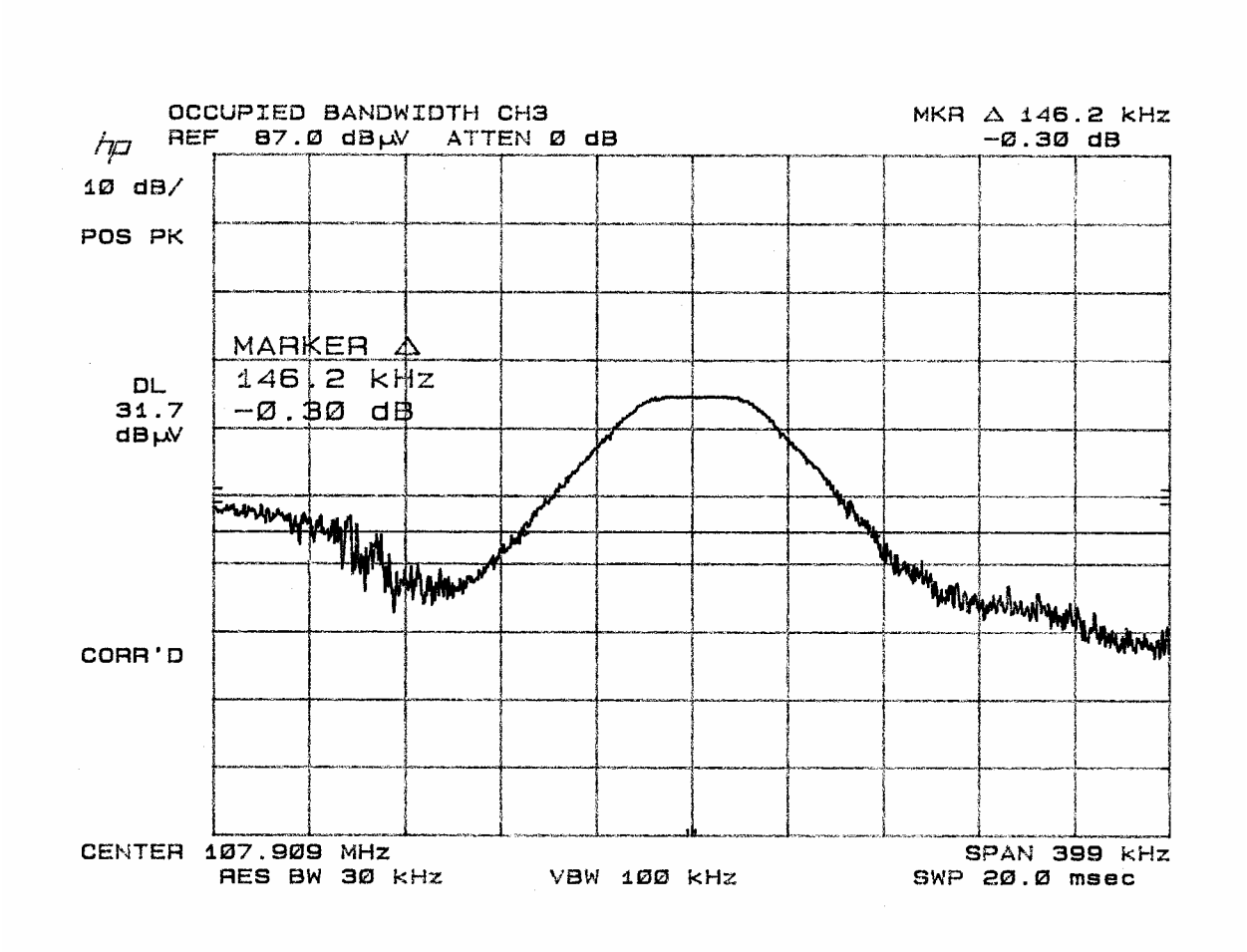
Channel 2



Occupied Bandwidth Datasheet
Lowrance Electronics, Inc.
FM Modulator

Test Date: August 23, 2005
Measurement Distance (Meters): 3

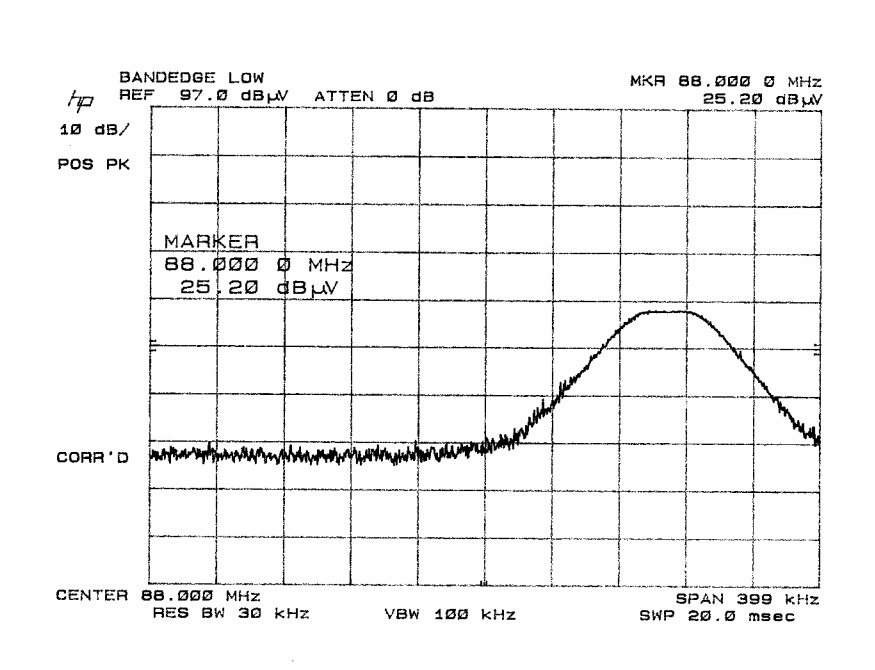
Channel 3



Bandedge Datasheet
Lowrance Electronics, Inc.
FM Modulator

Test Date: August 23, 2005
Measurement Distance (Meters): 3

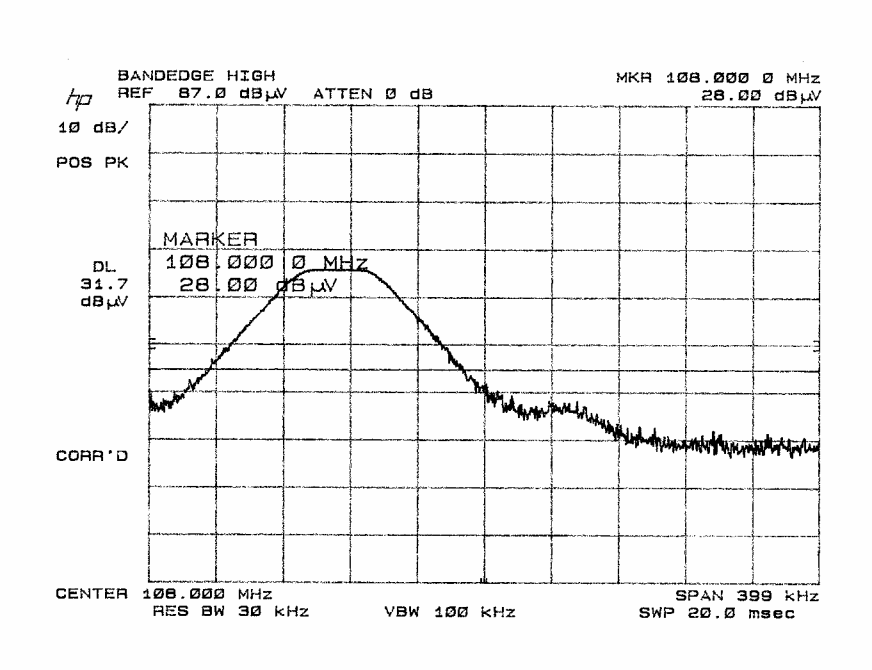
Bandedge Low



Bandedge Datasheet
Lowrance Electronics, Inc.
FM Modulator

Test Date: August 23, 2005
Measurement Distance (Meters): 3

Bandedge High



Bandedge High Ambient