

MEASUREMENT AND TECHNICAL REPORT

ADVANCED BRAIN MONITORING SYSTEMS
2850 Pio Pico Drive, Suite A
Carlsbad, CA 92008

DATE: 09 April 2003

This Report Concerns:	Original Grant: X	Class II Change:
Equipment Type:	EEG Acquisition System, Model B-Alert	
Deferred grant requested per 47 CFR 0.457(d)(1)(ii)?	Yes: Defer until:	No: X
Company Name agrees to notify the Commission by:	N/A	
of the intended date of announcement of the product so that the grant can be issued on that date.		
Transition Rules Request per 15.37?	Yes:	No: X*
(*) FCC Part 15, Paragraph(s) 15.209(a), 15.249		
<p>Report Prepared by:</p> <p>TÜV AMERICA, INC 10040 Mesa Rim Road San Diego, CA 92121-2912 Phone: 858 546 3999 Fax: 858 546 0364</p>		

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1.0 GENERAL INFORMATION

1.1 Product Description

CUSTOMER INFORMATION				
COMPANY NAME:		Advanced Brain Monitoring		
COMPANY ADDRESS:		2850 Pio Pico Dr. #A		
		Carlsbad, CA 92008		
PHONE NUMBER:		760-720-0099		
FAX NUMBER:		760-720-0094		
CUSTOMER CONTACT:		Daniel J. Levendowski		
PRODUCT DESCRIPTION				
NAME, MODEL, SERIAL # OF EUT:		B-Alert System, Model 603		
DESCRIPTION OF EUT:		6 channel EEG Acquisition system		
Components of EUT				
Description	Model Number (s)	Serial Number	FCC ID Number	
Head and Host Unit	57-8, and 57S respectively	925006, and 000025		
OPERATING MODE(S):		Normal		
EUT CONFIGURATIONS:				
POWER INTERFACE				
FREQUENCY/AC/DC VOLTAGE:		2 AAA Internal NiMH batteries 2*1.2V		
PHASES (φ)/CURRENT (amps):				
OSCILLATOR FREQUENCIES:				
POWER SUPPLY				
DESCRIPTION:		Internal		
MANUFACTURER, MODEL #, S/N #				
SWITCHING FREQUENCY:		300kHz +-40kHz		
POWERLINE FILTER: MODEL #:				
DESCRIPTION OF ENCLOSURE:		ABS Plastic		
CRITICAL EMI COMPONENTS:		TRF6900A, Crystal HE-MCC-125-B-26-E SAW filter SAFCH915MAL0N00		
INTERFACING AND/OR SIMULATORS PERIPHERAL EQUIPMENT:				
Description	Model #	Serial #	FCC ID/Other	
Host Computer				
I/O PORTS:				
Name of Line	Type of Line	Length of Cable	Status of Line	Kind of Transmission
EEG input 1.7	<input type="checkbox"/> Shielded <input checked="" type="checkbox"/> Unshielded	10"	<input type="checkbox"/> Passive <input checked="" type="checkbox"/> Active	<input checked="" type="checkbox"/> Analog <input type="checkbox"/> Digital
Reference	<input type="checkbox"/> Shielded <input checked="" type="checkbox"/> Unshielded	10"	<input checked="" type="checkbox"/> Passive <input type="checkbox"/> Active	<input checked="" type="checkbox"/> Analog <input type="checkbox"/> Digital
RS232 receive	<input type="checkbox"/> Shielded <input checked="" type="checkbox"/> Unshielded	3'	<input type="checkbox"/> Passive <input checked="" type="checkbox"/> Active	<input type="checkbox"/> Analog <input checked="" type="checkbox"/> Digital
Rs232 transmitt	<input type="checkbox"/> Shielded <input checked="" type="checkbox"/> Unshielded	3'	<input type="checkbox"/> Passive <input checked="" type="checkbox"/> Active	<input type="checkbox"/> Analog <input checked="" type="checkbox"/> Digital
CTS control	<input type="checkbox"/> Shielded <input checked="" type="checkbox"/> Unshielded	3'	<input type="checkbox"/> Passive <input checked="" type="checkbox"/> Active	<input type="checkbox"/> Analog <input checked="" type="checkbox"/> Digital
Ground	<input type="checkbox"/> Shielded <input checked="" type="checkbox"/> Unshielded	3'	<input checked="" type="checkbox"/> Passive <input type="checkbox"/> Active	<input type="checkbox"/> Analog <input checked="" type="checkbox"/> Digital

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MAJOR SUBASSEMBLIES OR INTERNAL DEVICES			
Description	Model #	Serial #	FCC ID #
Head Unit	57-8	925006	
Host Unit	57-S	000025	
BLOCK DIAGRAM:			

1.2 Related Submittal Grant

None

1.3 Tested System Details

The FCC ID's for all equipment, plus descriptions of all cables used in the tested system are:

None

1.4 Test Methodology

Purpose of Test: To demonstrate compliance with the following tests.

TEST	FCC CFR 47#	PASS/FAIL
Radiated Emissions	15.209(a)	Pass
Radiated Emissions	15.249	Pass

Both Conducted and Radiated testing were performed according to the procedures in FCC/ANSI C63.4 and CSA 108.8-M1983. Radiated testing was performed at an antenna-to-EUT distance of 3 meters (1 - 25 GHz).

1.5 Test Facility

The open area test site and conducted measurement data were tested by:

TÜV AMERICA, INC
10040 Mesa Rim Road
San Diego, CA 92121-2912
Phone: 858 546 3999
Fax: 858 546 0364

The Test Site Data and performance comply with ANSI C63.4 and are registered with the FCC, 7435 Oakland Mills Road, Columbia Maryland 21046. All Measurement Data is acquired according to the content of FCC Measurement Procedure and ANSI C63.4, unless supplemented with additional requirements as noted in the test report.

2.0 SYSTEM TEST CONFIGURATION

2.1 Justification

The EUT was initially tested for FCC emissions in the following configuration:

See Block Diagram

2.2 EUT Exercise Software

None

2.3 Special Accessories

None

2.4 Equipment Modifications

None

2.5 Configuration of Test System

See Block Diagram

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3.0 RADIATED EMISSIONS EQUIPMENT/DATA

See following page(s).

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Test Conditions: RADIATED EMISSIONS: FCC Part 15.209(a) and Part 15.249

The RADIATED EMISSIONS measurements were performed at the San Diego Testing Facility:

☐ - Test not applicable

Test Equipment Used:

■ - Canyon #2 (3- and 10-Meter Open Area Test Site), Carroll Canyon, San Diego, 3 meters

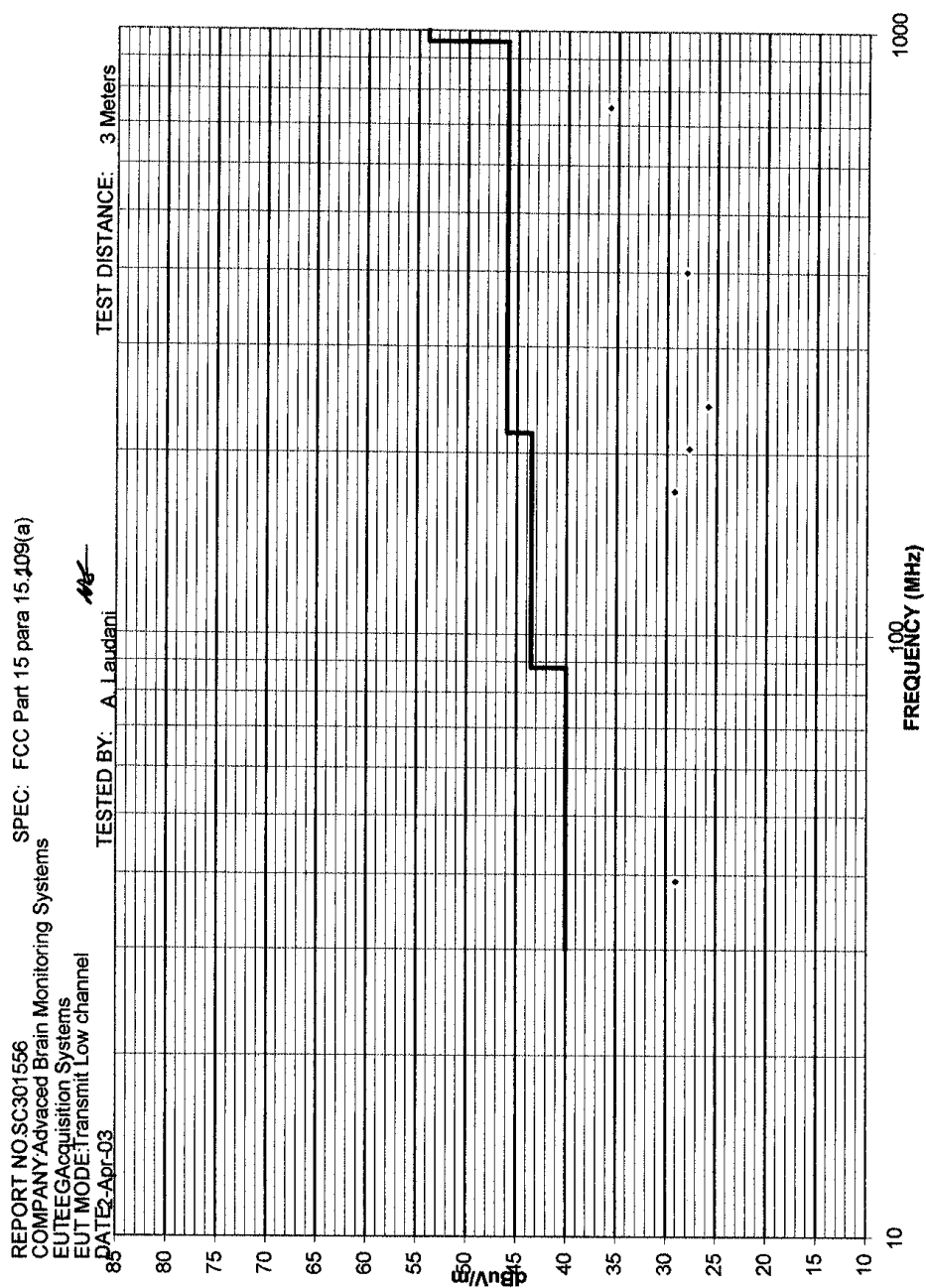
Model No.	Prop. No.	Description	Manufacturer	Serial No.	Date Cal'ed
LPB 2520/A	739	Antenna, Bilog	Antenna Research	1170	05/02
ESVS 30	427	EMI Test Receiver	Rohde & Schwarz	830350/006	12/02

■ - Roof (Small Open Area Test Site), 3 meters

Model No.	Prop. No.	Description	Manufacturer	Serial No.	Date Cal'ed
HP8566B	743	Spectrum Analyzer	Hewlett Packard	2618A02913	11/02
Cable 1	731	30' cable	United Microwave Pro	--	NCR*
Cable 2	756	10' Cable	United Microwave Pro	--	NCR*
Cable 3	6788	3' Cable	United Microwave Pro	--	NCR*
AMF-5D-010180-35-10P	719	PreAmplifier	Miteq	549460	NCR*
3115	251	Double Ridge Horn Antenna	EMCO	2495	12/02
8445B	6677	Preselector	Hewlett Packard	1442A01127	NCR*

Remarks: One year calibration cycle for all test equipment and sites. (*) No Calibration Required.

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REPORT No: SC301556

SPEC: FCC Part 15 para 15.109(a)

CUSTOMER: Advanced Brain Monitoring Systems

TEST DIST: 3 Meters

EUT: EEGAcquisition Systems

TEST SITE: 3

EUT MODE: Transmit Low channel

BICONICAL: 739

DATE: 2-Apr-03

TESTED BY: A. Laudani *AL*

LOG PERIODIC: 739

NOTES: Quasi-Peak with 120 KHz measurement bandwidth.
2 "AAA" Batteries

RCVR: 427

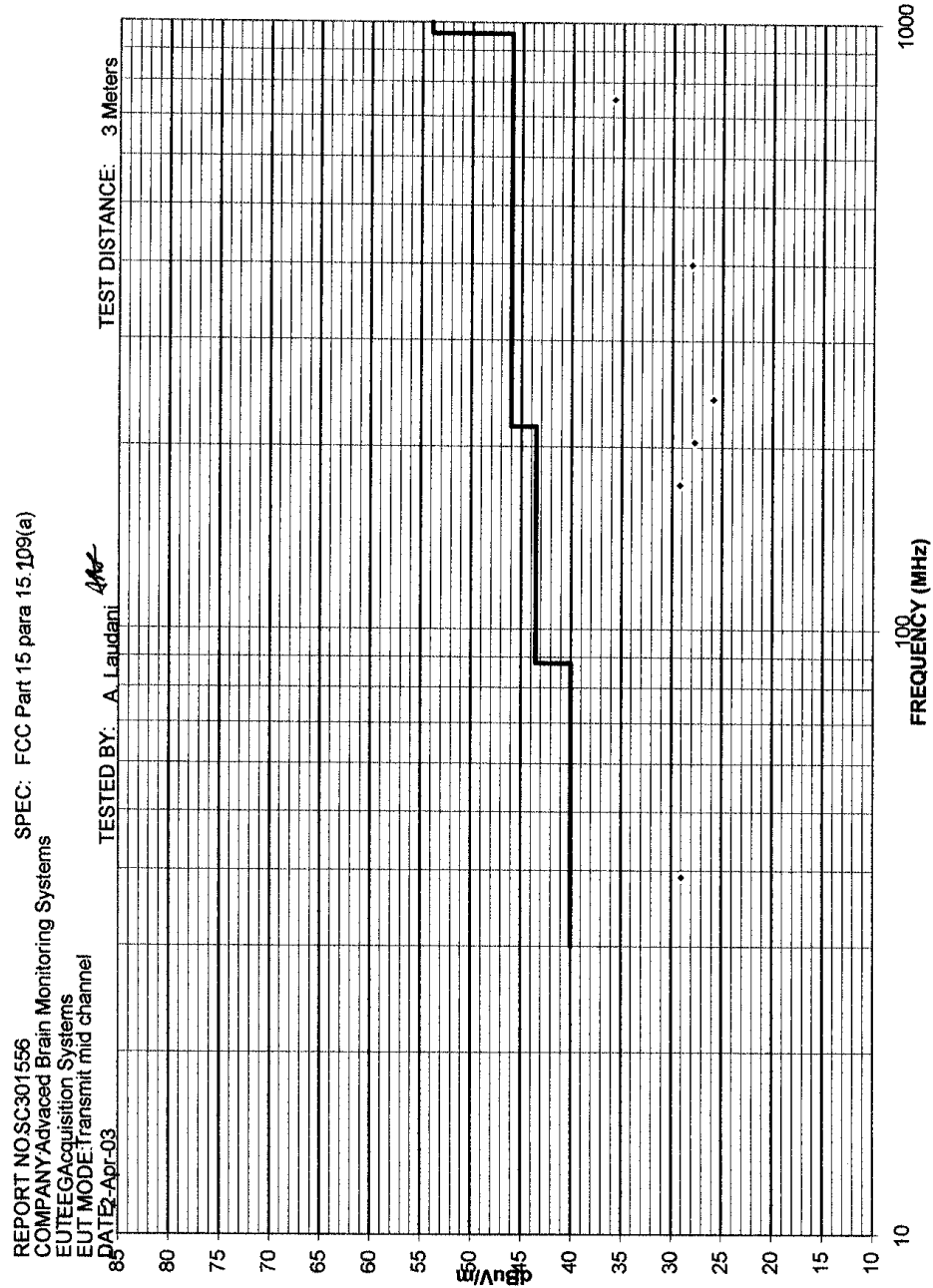
Temperature: 20 C Relative Humidity: 37%

EUT MARGIN

-2.2 dB at 909 MHz

ver 1.8b

[illegible]



REPORT No: SC301556

SPEC: FCC Part 15 para 15.109(a)

CUSTOMER: Advanced Brain Monitoring Systems

TEST DIST: 3 Meters

E U T: EEGAcquisition Systems

TEST SITE: 3

EUT MODE: Transmit mid channel

BICONICAL: 739

DATE: 2-Apr-03

TESTED BY: A. Laudani

LOG PERIODIC: 739

NOTES: Quasi-Peak with 120 KHz measurement bandwidth.
2 "AAA" Batteries

RCVR: 427

Temperature: 20 C Relative Humidity: 37%

	Temperature:	20 °C
EUT MARGIN	-2.3	dB at 915 MHz

ver 1.8b

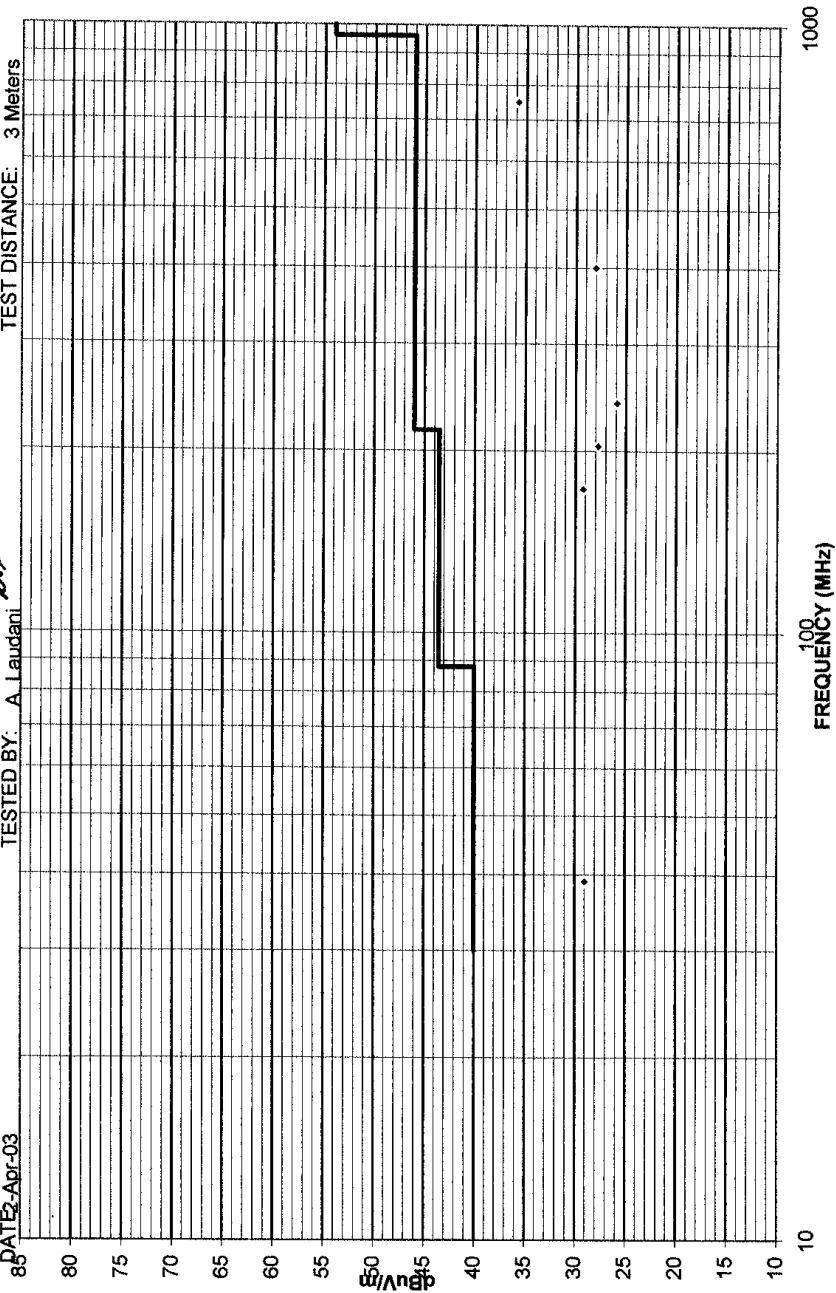
[illegible]

REPORT NO: SC301556
 COMPANY: Advanced Brain Monitoring Systems
 EUTECG Acquisition Systems
 EUT MODE: Transmit high channel
 DATE: Apr-03

SPEC: FCC Part 15 para 15.109(a)

TESTED BY: A. Laudani

TEST DISTANCE: 3 Meters



REPORT No: SC301556

SPEC: FCC Part 15 para 15.109(a)

CUSTOMER: Advanced Brain Monitoring Systems

TEST DIST: 3 Meters

E U T: EEGAcquisition Systems

TEST SITE: 3

EUT MODE: Transmit high channel

BICONICAL: 739

DATE: 2-Apr-03

TESTED BY: A. Laudani *ML*

LOG PERIODIC: 739

NOTES: Quasi-Peak with 120 KHz measurement bandwidth.
2 "AAA" Batteries

RCVR: 427

Temperature: 20 C Relative Humidity: 37%

EUT MARGIN

-3.9 dB at 927 MHz

ver 1.8b

[illegible]

REPORT No: SC301556 TESTER: Alan Laudani SPEC: FCC 15.249

CUSTOMER: Advanced Brain Monitoring Systems TEST DIST: 3 Meters

EUT: EEG Acquisition System TEST SITE: Roof

EUT MODE: Transmit BICONICAL: N/A

DATE: April 2, 2003 LOG: N/A

NOTES: _____ OTHER: 251

above 1GHz: RBW & VBW 1 MHz for Pk; RBW 1MHz and VBW 10Hz for AVG
below 1GHz: Quasipeak, 120 kHz BW, Test Site Canyon 2

No other emissions evident.

v.beta1a

[illegible]

REPORT No: SC301556 TESTER: Alan Laudani SPEC: FCC 15.249

CUSTOMER: Advanced Brain Monitoring Systems TEST DIST: 3 Meters

EUT: EEG Acquisition System TEST SITE: Roof

EUT MODE: Transmit BICONICAL: N/A

DATE: April 2, 2003 LOG: N/A

NOTES: _____ OTHER: 251

above 1GHz: RBW & VBW 1 MHz for Pk; RBW 1MHz and VBW 10Hz for AVG
below 1GHz: Quasipeak, 120 kHz BW, Test Site Canyon 2

No other emissions evident.

[illegible]

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4.0 ATTESTATION STATEMENT

GENERAL REMARKS:

SUMMARY:

All tests were performed per CFR 47, Part(s) 15.209(a), 15.249

■ - Performed

The Equipment Under Test

■ - **Fulfills** the requirements of CFR 47, Part(s) 15.209(a), 15.249

Testing Start Date: 02 April 2003

Testing End Date: 02 April 2003

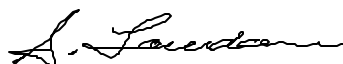
- TÜV AMERICA, INC. -

Responsible Engineer:



Jim Owen
(EMC Chief Engineer)

Responsible Engineer:



Alan Laudani
(EMC Engineer)