

**ELECTROMAGNETIC EMISSIONS COMPLIANCE REPORT
CERTIFICATION TO FCC PART 15 REQUIREMENTS**

for

INTENTIONAL RADIATOR

484, 494KHz TRANSMITTER

MODEL NO: AM1010H

FCC ID :NQ2AM1010H

REPORT NO: 99U0392

ISSUE DATE: AUGUST 02, 1999

Prepared for

**ADVANCED MOBIL SOLUTIONS, INC.
375 RHEEM BLVD.
MORAGA, CA 94556**

Prepared by

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d.b.a.
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1. VERIFICATION OF COMPLIANCE

COMPANY NAME : ADVANCED MOBIL SOLUTIONS, INC.
375 RHEEM BLVD.
MORAGA, CA 94556

CONTACT PERSON : SANDRA SOHN/ REGULATORY TEST
ENGINEER

TELEPHONE NO. : (925)377-3257

EUT DESCRIPTION : 484, 494KHz TRANSMITTER

MODEL NAME/NUMBER : AM1010H

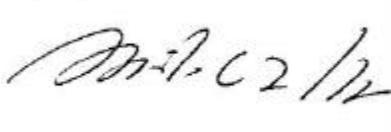
FCC ID : NQ2AM1010H

DATE TESTED : JULY 6,1999

REPORT NUMBER : 99U0392

TYPE OF EQUIPMENT	WIRELESS HEADSET TO BE USED INSIDE A VEHICLE FOR CELL PHONE
EQUIPMENT TYPE	484, 494KHz TRANSMITTER
MEASUREMENT PROCEDURE	ANSI C63.4 / 1992
LIMIT TYPE	CERTIFICATION
FCC RULE	CFR 47, PART 15

The above equipment was tested by Compliance Engineering Services, Inc. for compliance with the requirements set forth in CFR 47, PART 15. This said equipment in the configuration described in this report shows that maximum emission levels emanating from equipment are within the compliance requirements.



MIKE C.I. KUO / VICE PRESIDENT
COMPLIANCE ENGINEERING SERVICES, INC.

2. Product Description

Fundamental Frequency	484, 494KHz
Power Source	3.6VDC BATTERY
Usage	Audio
Power Requirement	3.6V DC
Antenna Requirement	Permanently attached
Associated Transceiver	FCC ID:NQ2AM1010B

3. Test Facility

The 3/10/30 meter open area test site and conducted measurement facility used to collect the radiated data is located at 561F Monterey Road, Morgan Hill, California, U.S.A. A detailed description of the test facility was submitted to the Commission on May 27,1994.

4. Measurement Standards

The site is constructed and calibrated in conformance with the requirements of ANSI C63.4/1992.

5. Test Methodology

For an intentional radiator, the spectrum shall be investigated from the lowest radio frequency signal generated in the device, without going below 9 KHz, up to at least the tenth harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower. (CFR 47 Section 15.33)

6. Measurement Equipment Used

Manufacturer	Model Number	Description	Cal Due Date
H.P.	8566B	Spectrum Analyzer (100Hz - 22GHz)	09/1999
EMCO	6502	Active Loop Antenna (.009-30.0MHZ)	2/2000
H.P.	8447D	Preamplifier	09/1999

		(0.1 - 1300 MHz)	
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7. RADIATED EMISSION LIMITS

GENERAL REQUIREMENTS	SECTION 15.209.
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8. SYSTEM TEST CONFIGURATION

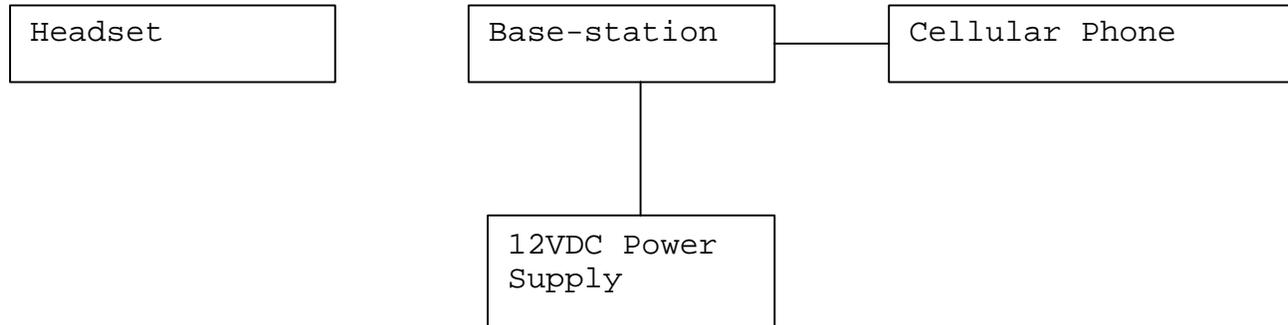
Support Equipment:

DC Power Supply, Kenwood, PA36-3A

Cellular Phone, Motorola Star Tac, 80067NABPA, FCC ID:IHDT5VG1 EE3

Base Station, Advanced Mobil Solutions, AH1010B

Radiated Open Site Test Set-up



9. Test Procedure

Radiated Emissions, 15.209

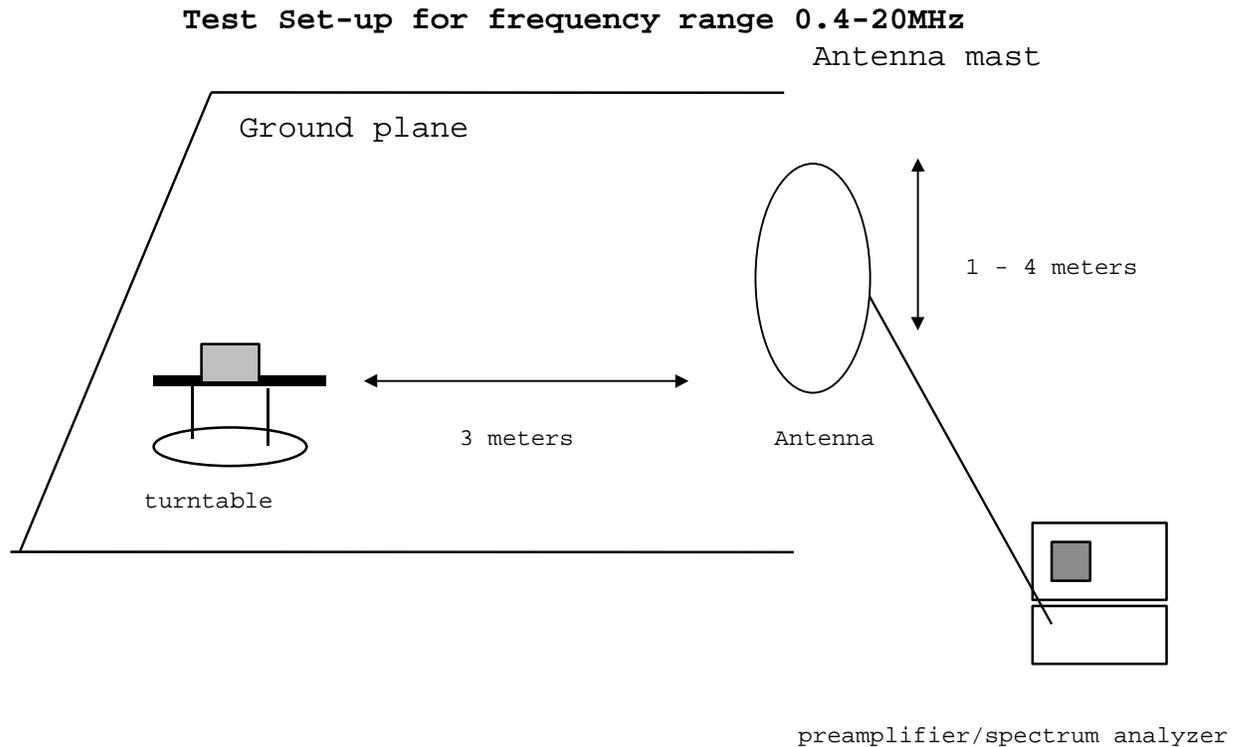


Fig. 1

1. The EUT was placed on a wooden table on the outdoor ground plane. The search antenna was placed 3-meters from the EUT.
2. The turntable was slowly rotated to locate the direction of maximum emission. The EUT was moved throughout the.
3. Once maximum direction was determined, the search antenna was raised and lowered. The maximum readings so obtained are recorded in the data listed below.
4. Steps 1-3 were repeated at 5 and 10 meters.
5. 3, 5 and 10 meter measurements were plotted on semi-log paper to extrapolate to 30 meter data.

10. SETUP PHOTO



11. TEST RESULT

All harmonics were measured at 3, 5 and 10 meters. Only the frequency with the highest set of readings in each frequency/field strength limit were extrapolated to 30 meters. See attached data sheet and semi-log plots:

Head Set

FREQ KHz	3M dBuV	5M dBuV	10M dBuV	AF dB	3M dBuV/m	5M dBuV/m	10M dBuV/m
Peak							
484.25	53.65	40.5	28.1	9.7	63.35	50.2	37.8
968.5	27.77	17	14.4	9.8	37.57	26.8	24.2
1452	25.1	15.6	10.1	9.8	34.9	25.4	19.9
1937	20.03	11.1	6.8	9.9	29.93	21	16.7
2421	16	7.8	2.2	9.9	25.9	17.7	12.1
2905	14.4	6.1	2.9	9.9	24.3	16	12.8
3390	11.4	4.8	3.5	9.7	21.1	14.5	13.2
3874	9.6	2.9	5.8	9.6	19.2	12.5	15.4
4358	7.3	1.4	-2.1	9.6	16.9	11	7.5
4842	6	-1.8	-3.4	9.6	15.6	7.8	6.2
Quasi-Peak							
484.25	51.8	39.7	24.3	9.9	61.7	49.6	34.2
968.5	25.2	12.1	7.7	9.9	35.1	22	17.6
1452	20.5	8.3	1.7	9.5	30	17.8	11.2
1937	17.1	4.7	-1.6	9.3	26.4	14	7.7
2421	14.6	1.2	-4.4	9.1	23.7	10.3	4.7
2905	12.1	0.1	-5.4	8.8	20.9	8.9	3.4
3390	8.7	-2	-7.1	8.7	17.4	6.7	1.6
3874	6.7	-4.8	-8.2	8.6	15.3	3.8	0.4
4358	4.4	-5.3	-9.1	8.5	12.9	3.2	-0.6
4842	2.2	-9.4	-9.8	8.4	10.6	-1	-1.4
Peak							
494.75	51.76	38.6	26.9	9.9	61.66	48.5	36.8
989.6	26.6	16.8	14.1	9.9	36.5	26.7	24
1484	24.3	15.2	9.8	9.5	33.8	24.7	19.3
1979.3	19.8	10.9	6.1	9.3	29.1	20.2	15.4
2474	16.1	7.2	1.8	9.1	25.2	16.3	10.9
2969	14.1	5.8	2	8.8	22.9	14.6	10.8
3463	10.8	4.6	2.8	8.7	19.5	13.3	11.5
3958	9.2	2.5	5.1	8.6	17.8	11.1	13.7

4453	7.1	1.3	-2.9	8.5	15.6	9.8	5.6
4948	6	-1.9	-3.4	8.4	14.4	6.5	5

Quasi-Peak

494.75	51	37.1	23.2	9.9	60.9	47	33.1
989.6	24.9	11.9	7.6	9.9	34.8	21.8	17.5
1484	20	8	1.5	9.5	29.5	17.5	11
1979.3	16.9	4.5	-2	9.3	26.2	13.8	7.3
2474	14.6	0.2	-5.1	9.1	23.7	9.3	4
2969	11.9	-1	-6.6	8.8	20.7	7.8	2.2
3463	8.4	-2.2	-7.9	8.7	17.1	6.5	0.8
3958	6.5	-5.1	-9	8.6	15.1	3.5	-0.4
4453	4.2	-5.3	-10.1	8.5	12.7	3.2	-1.6
4948	2.3	-9.5	-10.3	8.4	10.7	-1.1	-1.9

Results from extrapolation:

494.75KHz @ 30meters=7dBuV/m limit=33.7dBuV/m margin=-26.7dB QP

1937KHz @ 30meters=-8dBuV/m limit=29.5dBuV/m margin=-37.5dB QP

484.25KHz @ 300meters= less than 0dBuV/m limit=13.9dBuV/m margin=at least -13.9dB

K·E SEMI-LOGARITHMIC 5 CYCLES X 70 DIVISIONS
KEUFFEL & ESSER CO. MADE IN U.S.A.

Headset 49,4.75 KHZ

(meters)

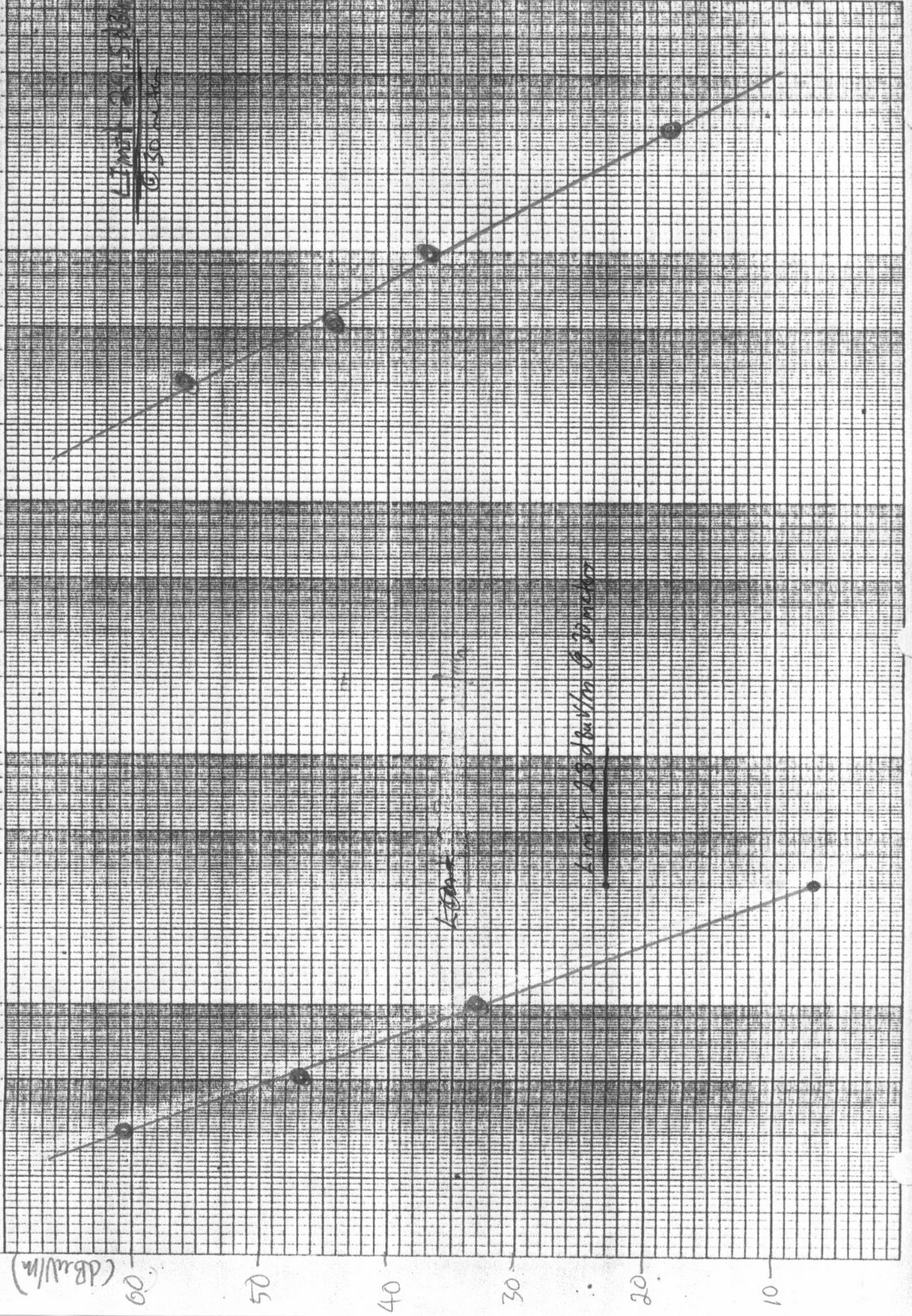
(dBu/m)

46 6210
1937 KHZ

Limit 20.5 meters
@ 30 meters

Headset

Limit 25 meters @ 30 meters



46 6210

K·E SEMI-LOGARITHMIC 5 CYCLES X 70 DIVISIONS
KEUFFEL & ESSER CO. MADE IN U.S.A.

Headset 484.25KHZ QP
meters

