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FCC ID: AEKA14327

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Equipment List

	DEVICE	MFGR	MODEL	SERNO	CAL/CHAR DATE	DUE DATE or STATUS
<input checked="" type="checkbox"/>	3-Meter OATS	TEI	N/A	N/A	Listed 12/22/99	12/22/02
<input type="checkbox"/>	3/10-Meter OATS	TEI	N/A	N/A	Listed 3/26/01	3/26/04
<input checked="" type="checkbox"/>	Receiver, Beige Tower Spectrum Analyzer (Tan)	HP	8566B Opt 462	3138A07786 3144A20661	CAL 8/31/01	8/31/02
	RF Preselector (Tan)	HP	85685A	3221A01400	CAL 8/31/01	8/31/02
	Quasi-Peak Adapter (Tan)	HP	85650A	3303A01690	CAL 8/31/01	8/31/02
<input type="checkbox"/>	Receiver, Blue Tower Spectrum Analyzer (Blue)	HP	8568B	2928A04729 2848A18049	CHAR 10/22/01	10/22/02
	RF Preselector (Blue)	HP	85685A	2926A00983	CHAR 10/22/01	10/22/02
	Quasi-Peak Adapter (Blue)	HP	85650A	2811A01279	CHAR 10/22/01	10/22/02
X	Biconnical Antenna	Electro-Metrics	BIA-25	1171	CAL 4/26/01	4/26/03
<input type="checkbox"/>	Biconnical Antenna	Eaton	94455-1	1096	CAL 10/1/01	10/1/02
<input type="checkbox"/>	Biconnical Antenna	Eaton	94455-1	1057	CHAR 3/15/00	3/15/01
<input type="checkbox"/>	BiconiLog Antenna	EMCO	3143	9409-1043		
<input type="checkbox"/>	Log-Periodic Antenna	Electro-Metrics	LPA-25	1122	CAL 10/2/01	10/2/02
<input type="checkbox"/>	Log-Periodic Antenna	Electro-Metrics	EM-6950	632	CHAR 10/15/01	10/15/02
<input type="checkbox"/>	Log-Periodic Antenna	Electro-Metrics	LPA-30	409	CHAR 10/16/01	10/16/02
<input type="checkbox"/>	Dipole Antenna Kit	Electro-Metrics	TDA-30/1-4	152	CAL 3/21/01	3/21/02
<input type="checkbox"/>	Dipole Antenna Kit	Electro-Metrics	TDA-30/1-4	153	CHAR 11/24/00	11/24/01
<input type="checkbox"/>	Double-Ridged Horn Antenna	Electro-Metrics	RGA -180	2319	CAL 12/19/01	12/19/02

	DEVICE	MFGR	MODEL	SERNO	CAL/CHAR DATE	DUE DATE or STATUS
<input type="checkbox"/>	Horn Antenna	Electro-Metrics	EM-6961	6246	CAL 3/21/01	3/21/02
<input type="checkbox"/>	Horn Antenna	ATM	19-443-6R	None	No Cal Required	
<input checked="" type="checkbox"/>	Passive Loop Antenna	EMC Test Systems	EMCO 6512	9706-1211	CHAR 7/10/01	7/10/02
<input type="checkbox"/>	Line Impedance Stabilization . . .	Electro-Metrics	ANS-25/2	2604	CAL 10/9/01	10/9/02
<input type="checkbox"/>	Line Impedance Stabilization . . .	Electro-Metrics	EM-7820	2682	CAL 3/16/01	3/16/02
<input type="checkbox"/>	Termaline Wattmeter	Bird Electronic Corporation	611	16405	CAL 5/25/99	(5/25/00)
<input type="checkbox"/>	Termaline Wattmeter	Bird Electronic Corporation	6104	1926	CAL 12/12/01	12/12/02
<input type="checkbox"/>	Oscilloscope	Tektronix	2230	300572	CHAR 2/1/01	2/1/02
<input type="checkbox"/>	Temperature Chamber	Tenney Engineering	TTRC	11717-7	CHAR 1/22/02	1/22/03
<input type="checkbox"/>	AC Voltmeter	HP	400FL	2213A14499	CAL 10/9/01	10/9/02
<input type="checkbox"/>	AC Voltmeter	HP	400FL	2213A14261	CHAR 10/15/01	10/15/02
<input type="checkbox"/>	AC Voltmeter	HP	400FL	2213A14728	CHAR 10/15/01	10/15/02
<input checked="" type="checkbox"/>	Digital Multimeter	Fluke	77	35053830	CHAR 1/8/02	1/8/03
<input type="checkbox"/>	Digital Multimeter	Fluke	77	43850817	CHAR 1/8/02	1/8/03
<input type="checkbox"/>	Digital Multimeter	HP	E2377A	2927J05849	CHAR 1/8/02	1/8/03
<input type="checkbox"/>	Multimeter	Fluke	FLUKE-77-3	79510405	CAL 9/26/01	9/26/02
<input type="checkbox"/>	Peak Power Meter	HP	8900C	2131A00545	CHAR 1/26/01	1/26/02
<input type="checkbox"/>	Digital Thermometer	Fluke	2166A	42032	CAL 1/16/02	1/16/03
<input type="checkbox"/>	Thermometer	Traulsen	SK-128		CHAR 1/22/02	1/22/03
<input type="checkbox"/>	Temp/Humidity gauge	EXTech	44577F	E000901	CHAR 1/22/02	1/22/03
<input type="checkbox"/>	Frequency Counter	HP	5352B	2632A00165	CAL 11/28/01	11/28/02
<input type="checkbox"/>	Power Sensor	Agilent Technologies	84811A	2551A02705	CAL 1/26/01	1/26/02
<input type="checkbox"/>	Injection Probe	Fischer Custom Communications	F-120-9A	270	CAL 6/1/01	6/1/02

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<input type="checkbox"/>	Service Monitor	IFR	FM/AM 500A	5182	CAL 11/22/00	11/22/01
<input type="checkbox"/>	Comm. Serv. Monitor	IFR	FM/AM 1200S	6593	CAL 11/12/99	11/12/00
<input type="checkbox"/>	Signal Generator	HP	8640B	2308A21464	CAL 11/15/01	11/15/02
<input type="checkbox"/>	Modulation Analyzer	HP	8901A	3435A06868	CAL 9/5/01	9/5/02
<input type="checkbox"/>	Power Line Coupling/ Decoupling Network	Fischer Custom Communications	FCC-801-M2- 16A	01048	CAL 8/29/01	8/29/02
<input type="checkbox"/>	Power Line Coupling/ Decoupling Network	Fischer Custom Communications	FCC-801-M3- 16A	01060	CAL 8/29/01	8/29/02
<input type="checkbox"/>	VHF/UHF Current Probe	Fischer Custom Communications	F-52	130	CAL 8/30/01	8/30/02
<input type="checkbox"/>	Passive Impedance Adapter	Fischer Custom Communications	FCC-801-150- 50-CDN	01117 & 01118	CAL 8/29/01	8/29/02
<input type="checkbox"/>	Radiating Field Coil	Fischer Custom Communications	F-1000-4- 8/9/10-L-1M	9859	CAL 10/15/98	10/15/99
<input type="checkbox"/>	Near Field Probe	HP	HP11940A	2650A02748	CHAR 2/1/01	2/1/02
<input type="checkbox"/>	BandReject Filter	Lorch Microwave	5BR4-2400/ 60-N	Z1	CHAR 3/2/01	3/2/02
<input type="checkbox"/>	BandReject Filter	Lorch Microwave	6BR6-2442/ 300-N	Z1	CHAR 3/2/01	3/2/02
<input type="checkbox"/>	BandReject Filter	Lorch Microwave	5BR4-10525/ 900-S	Z1	CHAR 3/2/01	3/2/02
<input type="checkbox"/>	High Pas Filter	Microlab	HA-10N		CHAR 10/4/01	10/4/02
<input type="checkbox"/>	Audio Oscillator	HP	653A	832-00260	CHAR 3/1/01	3/1/02
<input type="checkbox"/>	Frequency Counter	HP	5382A	1620A03535	CHAR 3/2/01	3/2/02
<input type="checkbox"/>	Frequency Counter	HP	5385A	3242A07460	CHAR 12/11/01	12/11/02
<input type="checkbox"/>	Preamplifier	HP	8449B-H02	3008A00372	CHAR 3/4/01	3/4/02
<input type="checkbox"/>	Amplifier	HP	11975A	2738A01969	CHAR 3/1/01	3/1/02
<input type="checkbox"/>	Egg Timer	Unk			CHAR 2/28/01	2/28/02
<input type="checkbox"/>	Measuring Tape, 20M	Kraftixx	0631-20		CHAR 2/28/01	2/28/02
<input type="checkbox"/>	Measuring Tape, 7.5M	Kraftixx	7.5M PROFI		CHAR 2/28/01	2/28/02
<input type="checkbox"/>	EMC Immunity Test System	Keytek	CEMASTER	9810210		
<input type="checkbox"/>	AC Power Source	California Instruments	1251RP	L05865		

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<input type="checkbox"/>	AC Power Source	California Instruments	PACS-1	X71484		
<input type="checkbox"/>	Isotropic Field Probe	Amplifier Research	FP5000	22839		
<input type="checkbox"/>	Isotropic Field Probe	Amplifier Research	FP5000	300103		
<input type="checkbox"/>	Capacitor Clamp	Keytek	CM-CCL	9811359	No Cal Required	
<input type="checkbox"/>	Amplifier	Amplifier Research	10W1000B	23117	No Cal Required	
<input type="checkbox"/>	Field Monitor	Amplifier Research	FM5004	22288	No Cal Required	
<input type="checkbox"/>	ELF Meter	F. W. Bell	4060	Not serialized		
<input type="checkbox"/>	Coaxial Cable #51	Insulated Wire Inc.	NPS 2251-2880	Timco #51	CHAR 1/23/02	1/23/03
<input type="checkbox"/>	Coaxial Cable #64	Semflex Inc.	60637	Timco #64	CHAR 1/24/02	1/24/03
<input type="checkbox"/>	Coaxial Cable #65	General Cable Co.	E9917 RG233/U	Timco #65	CHAR 1/23/02	1/23/03
<input type="checkbox"/>	Coaxial Cable #106	Unknown	Unknown	Timco #106	CHAR 1/23/02	1/23/03

TEST PROCEDURE

GENERAL: This report shall NOT be reproduced except in full without the written approval of TIMCO ENGINEERING, INC.

RADIATION INTERFERENCE: The test procedure used was ANSI STANDARD C63.4-1992 using a HEWLETT PACKARD spectrum analyzer with a preselector. The bandwidth of the spectrum analyzer was 100 kHz with an appropriate sweep speed. The analyzer was calibrated in dB above a microvolt at the output of the antenna. The resolution bandwidth was 100 kHz and the video bandwidth was 300 kHz. The ambient temperature of the UUT was 79° with a humidity of 41%.

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

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NAME OF TEST: RADIATION INTERFERENCE

RULES PART NO.: 15.227

REQUIREMENTS: CARRIER FREQUENCY WILL NOT EXCEED 80 dBuV/m AT 3M.
OUT-OF-BAND EMISSIONS SHALL NOT EXCEED:

30 - 88 MHz	40.0 dBuV/M MEASURED AT 3 METERS
88 - 216 MHz	43.5 dBuV/M
216 - 960 MHz	46.0 dBuV/M
ABOVE 960 MHz	54.0 dBuV/M

TEST DATA:

Emission Frequency MHz	Meter Reading dBuV	Ant. Polarity	Coax Loss dB	Correction Factor dB	Field Strength dBuV/m	Margin dB
27.10	65.0	v	0.31	13.96	79.27	0.74
54.20	12.9	v	0.84	10.37	24.11	15.89

SAMPLE CALCULATION: $FSdBuV/m = MR(dBuV) + ACFdB$.

TEST PROCEDURE: The procedure used was ANSI STANDARD C63.4-1992. The spectrum was scanned from 30 MHz to 1000 MHz. 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 UUT was tested in 3 orthogonal planes.

TEST RESULTS: THE UNIT DOES MEET THE FCC REQUIREMENTS.

PERFORMED BY: JOE SCOGLIO

DATE: FEBRUARY 6, 2002

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NAME OF TEST: Occupied Bandwidth
RULES PART NO.: 15.227
REQUIREMENTS: The field strength of any emissions appearing outside the 26.96-27.28 MHz band shall not exceed the general radiated emission limits in (15.209).

THE GRAPH ON THE FOLLOWING PAGE REPRESENTS THE WORSE CASE OCCUPPIED BANDWIDTH EMISSIONS FOR THIS DEVICE.

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

TEST RESULTS: The unit DOES meet the FCC requirements.

PERFORMED BY: JOE SCOGLIO

