

Test Report

Report No H0575-1

Client Dynastream Innovations

Phone 403-932-9292 Fax 403-932-6521

FRN 0008033557

Models HRM1B, A-661-200-040

FCC ID O6RHRM1B 3797A-HRM1B

Equipment Type Low Power Communication Device Transmitter DXX

Emissions Designator K1D

Tested To FCC 15.249 and RSS 210 Issue 7, RSS-GEN Issue 2

Results As detailed within this report

Prepared by David Harris – Test Engineer

Authorized by

Michael Buchholz – EMC Manager

Issue Date 8/2/07

Conditions of issue

This Test Report is issued subject to the conditions stated in the 'Conditions of Testing' section on page 17 of this report.

Curtis-Straus LLC is accredited to ISO/IEC 17025 by A2LA for the specific scope of accreditation under Certificate Number 1627-01. This report may contain data which is not covered by the A2LA accreditation. See our scope of accreditation at the end of this test report. Any opinions or interpretations expressed in this report are outside the scope of our A2LA accreditation as A2LA only accredits testing.

ACCREDITED
Cert No. 1627-01

REPORT: EH0575-1

FCC ID: O6RHRM1B IC ID: 3797A-HRM1B

Summary	3
Test Methodology	
Instrument Bandwidth Settings:	
EUT Configuration	
Statement of Conformity	6
Test Data and Plots	
Section 15.249	8
Section 15.249 (d)	9
Occupied BW	10
AC Line Conducted Emission Measurements	12
Test Equipment Used	13
Conditions Of Testing	

Summary

This report is an application for certification of a transmitter operating under 47 CFR 15.249 of the FCC rules and RSS-210 Issue 7 and RSS GEN Issue 2 provided for operation in the frequency band of 2434MHz ~ 2465Mhz. The product covered by this report is the MultiHRM MN HRM1B.

Dynastream Innovations has requested an additional model number that will be used by their customers so that they may sell the HRM1B under their name. The product that will be sold by this customer will be electrically identical to the one sold by Dynastream Innovations. The only difference will be the artwork and the model number placed on the device when it is manufactured. The additional name and model number is as follows.

Name: Cosmed Wireless HR Monitor

Number: A-661-200-040

Test Methodology

All testing was performed according to the procedures specified in ANSI C63.4 (2003). The product was tested with modulation on and peak readings were compared against the QP limit (below 1000MHz) presented in section CFR 15.249.

Frequency range investigated: 30MHz – 25GHz

Measurement Distance:		
Frequency (MHz)	Distance (m)	Comments
Fundamental (2434MHz ~ 2465Mhz)	3 m	Radiated
30MHz - 18GHz except 2434MHz ~	3m	Radiated Spurious
2465Mhz band		Measurements
18GHz-25GHZ	.3m	Radiated Spurious
		Measurements

The EUT was fully maximized. EUT was tested in 3 orthogonal axis in order to maximize the emissions. The product has multiple channels of operation and was evaluated at the lowest, highest, and middle channel. Fresh batteries were used during the testing.

The product is DC powered and derives its power from a battery.

All readings are peak unless otherwise noted.

Instrument Bandwidth Settings:

Fundamental Reading:

RBW 1MHz VBW 3MHz

Spurious Readings (below 30 MHz- 1000 MHz):

RBW 120 KHz VBW 300 KHz

Spurious Readings (above 1000 MHz):

RBW 1 MHz VBW 3 MHz

EUT Configuration

EUT Configuration

Work Order: H0575

Company: Dynastream Innovations Inc.

Company Address: 228 River Ave.

Cochrane, Alberta T4C2C1

Contact: Curtis Stafford

MN SN

1

EUT: HRM1B

EUT Description: Heart Rate Monitor

EUT Max Frequency: 2465MHz

Support Equipment:MNSNHRM Sensitivity jig
HRM ClampN/AN/A(in house diag device)N/AN/A(in house diag device)

EUT Cables: Qty Shielded? Length Ferrites

None

Unpopulated EUT Ports: Qty Reason

None

Software / Operating Mode Description:

Different samples of the EUT provide both normal and "constant on" operation at high, low, and mid channels. The Sensitivity jig and clamp are used to artificially stimulate the EUT during immunity testing and also spurious emissions testing.

Statement of Conformity

The Product has been found to conform to the following parts of the rules as detailed below:

RSS	RSS-210	47 CFR	Comments
Gen		Part #	
5.3	5.7	15.15(b)	The product contains no user accessible
			controls that increase transmission power
			above allowable levels.
5.2	5.10	2.925,	The label is shown in the label exhibit. The
		15.19	label is permanently attached.
7.1.5	5.11	15.21	Information to the user is shown in the instruction manual exhibit.
		15.27	No special accessories are required for compliance.
		15.31(e)	Voltage variation test was not performed on
			the product because it derives power from a
			battery.
7.1.4	5.5	15.203	The device utilizes antenna specific to the
			product. Antenna is permanently attached
		15.005	to PCB.
	A2.9	15.205	The fundamental is not in a Restricted band and
		15.209	the spurious comply with the general emission
7.2.2		45.007	limits of 15.209.
1.2.2		15.207	Unit is DC powered and derives its power
			from a battery, therefore AC line conducted emissions testing was not done.
	A2.9	15.249	The EUT meets the field strength limit of
	A2.3	(a)	50mV/m (93.97dBµV/m) at the
		(α)	fundamental.
	A2.9	15.249	Spurious emissions meet the general
		(d)	radiated emissions limits of section 15.209.
	A2.9	15.249	Spurious emissions found above 1GHz
		(e)	meet the FCC class B limits.
4.6.1	5.9.1		99% emissions bandwidth plot is provided.

Test Data and Plots

Table 1

Bandedo	ges								Curtis-St	raus LLC
Date:	30-May-07			Company:	Dynastre	eam	Work Order: H0575			
Engineer:	David Harris			EUT Desc:	HRM					
						М	easuremer	t Distance:	3 m	
Notes:	Duty cycle =	.02%; Averaç	ing factor =	= 20dB				RBW:	1MHz	
								VBW:	3MHz	
Antenna			Preamp	Antenna	Cable	Duty Cycle	Adjusted	15.209(a	a); RSS-210	Table 2
Polarization	Frequency	Reading	Factor	Factor	Factor	Factor	Reading	Limit	Margin	Result
(H / V)	(MHz)	(dBµV)	(dB)	(dB/m)	(dB)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	(Pass/Fail)
High Band Edge	(EUT operatin	g at 2465MHz)							
Hpk	2483.5	34.6	0.0	30.3	1.2	0.0	66.1	74.0	-7.9	Pass
Hav	2483.5	34.6	0.0	30.3	1.2	20.0	46.1	54.0	-7.9	Pass
Low Band Edge	(EUT operating	at 2434MHz)								
Hpk	2400.0	35.3	0.0	30.1	1.2	0.0	66.6	74.0	-7.4	Pass
Hav	2400.0	35.3	0.0	30.1	1.2	20.0	46.6	54.0	-7.4	Pass
Table	e Result:	Pass	by	-7.4	dB		Wo	rst Freq:	2390.0	MHz
Test Site:	"F"	Pre-Amp:	none	Cable: EMIR-HIGH-21 Antenna:					Black Horn	

Product's fundamental emission is within the band 2400-2483.5MHz.

Section 15.249

Table 2

Fundam	ental								Curtis-St	raus LLC
Date:	30-May-07			Company:	Dynastro	eam		٧	Vork Order:	H0575
Engineer:	David Harris			EUT Desc:	HRM					
						М	easuremen	nt Distance:	3 m	
Notes:	Duty cycle = .	.02%; Averag	ging factor :	= 20dB				RBW:	1MHz	
								VBW:	3MHz	
Antenna	enna Preamp Antenna Cable Duty Cycle Adjusted 15.249(a); RSS-210 A2.9									0 A2.9
Polarization	Frequency	Reading	Factor	Factor	Factor	Factor	Reading	Limit	Margin	Result
(H / V)	(MHz)	(dBµV)	(dB)	(dB/m)	(dB)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	(Pass/Fail)
Hpk	2434.0	70.9	0.0	30.2	1.2	0.0	102.3	113.9	-11.6	Pass
Hav	2434.0	70.9	0.0	30.2	1.2	20.0	82.3	93.9	-11.6	Pass
Hpk	2449.0	72.6	0.0	30.2	1.2	0.0	104.0	113.9	-9.9	Pass
Hav	2449.0	72.6	0.0	30.2	1.2	20.0	84.0	93.9	-9.9	Pass
Hpk	2465.0	71.1	0.0	30.2	1.2	0.0	102.5	113.9	-11.4	Pass
Hav	2465.0	71.1	0.0	30.2	1.2	20.0	82.5	93.9	-11.4	Pass
Table Result: Pass by -9.9 dB Worst Freq: 2449.0 MHz									MHz	
Test Site:	"F"	Pre-Amp:	none	Cable:	EMIR-HIGH-21 Antenna: Black Horn					

Sample calculation:

Adjusted Reading = reading + cable factor + antenna factor – distance factor

Section 15.249 (d)

Table 3

Spurious	Spurious Radiated Emissions Table Curtis-Straus LLC													
Date:	30-May-07			Company:	Dynastr	eam		٧	Vork Order:	H0575				
Engineer:	David Harris		I	EUT Desc:	HRM									
	Freque	ncy Range:	1-25GHz			М	leasuremer	nt Distance:	3 m					
Notes:	Duty cycle = .	02%; Averag	ing factor =	= 20dB				RBW:	1MHz					
	VBW: 3MHz													
Antenna			Preamp	Antenna	Cable	Duty Cycle	Adjusted	15.209(a); RSS-210	Table 2				
Polarization	Frequency	Reading	Factor	Factor	Factor	Factor	Reading	Limit	Margin	Result				
(H / V)	(MHz)	(dBµV)	(dB)	(dB/m)	(dB)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	(Pass/Fail)				
Hpk	4868.0	67.0	40.9	35.6	1.8	0.0	63.5	74.0	-10.5	Pass				
Hav	4868.0	67.0	40.9	35.6	1.8	20.0	43.5	54.0	-10.5	Pass				
Hpk	7302.0	68.2	40.7	39.2	2.2	0.0	68.9	74.0	-5.1	Pass				
Hav	7302.0	68.2	40.7	39.2	2.2	20.0	48.9	54.0	-5.1	Pass				
Hpk	9736.0	65.9	41.5	41.2	2.6	0.0	68.2	74.0	-5.8	Pass				
Hav	9736.0	65.9	41.5	41.2	2.6	20.0	48.2	54.0	-5.8	Pass				
Hpk	12170.0	63.3	39.6	41.1	2.9	0.0	67.7	74.0	-6.3	Pass				
Hav	12170.0	63.3	39.6	41.1	2.9	20.0	47.7	54.0	-6.3	Pass				
Hpk	14604.0	67.5	41.0	43.2	3.2	0.0	72.9	74.0	-1.1	Pass				
Hav	14604.0	67.5	41.0	43.2	3.2	20.0	52.9	54.0	-1.1	Pass				
Table	e Result:	Pass	by	-1.1	dB		Wo	orst Freq:	14604.0	MHz				
Test Site: "F" Pre-Amp: Red-Greer Cable: EMIR-HIGH-21 Antenna: Black Horn														

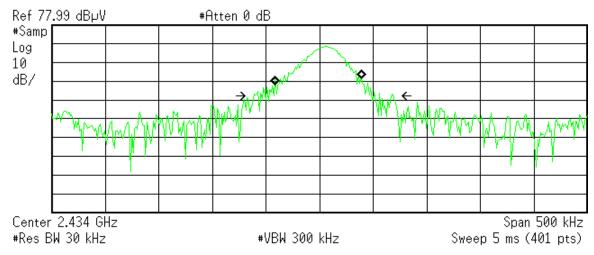
Sample calculation:

Adjusted reading = Reading + Antenna factor + Cable factor - Pre amp factor

Occupied BW

*** Agilent** 11:34:08 Jun 1, 2007

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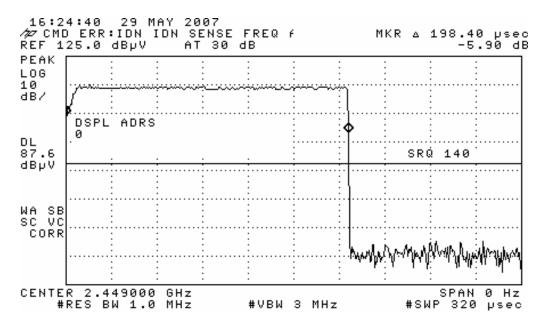


Occupied Bandwidth 79.5528 kHz Occ BW % Pwr 99.00 % x dB -26.00 dB

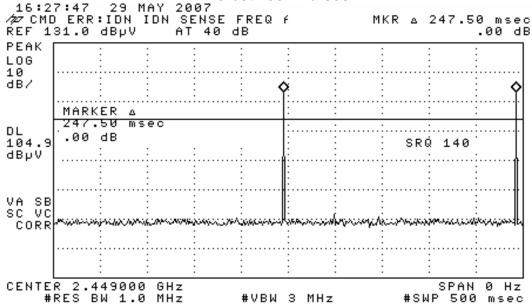
Transmit Freq Error -894.717 Hz x dB Bandwidth 130.455 kHz*

Duty Cycle

Width of a Single Pulse



Time between Pulses



Duty Cycle = 0.2uS / (247.5uS + 0.2uS) = .0008 = .08%Duty Cycle in 100mS window = $(0.2 \times 1)/100ms = 0.002 = 0.2\%$

AC Line Conducted Emission Measurements

AC line conducted emissions testing was not performed because the product is run by a battery.

LIMITS

Quasi-Peak: $250\mu V = 47.9dB\mu V$ in the range 450kHz to 30MHz [47 CFR 15.207(a) Revised as of October 1, 2001]

Note: On July 12, 2004, FCC adopts the conducted emissions limits of the European CISPR 22 standard as outlined below

Frequency of	Quasi-peak limit	Average limit		
emission (MHz)	(dBµV)	(dBµV)		
0.15-0.5	66 to 56*	56 to 46*		
0.5-5	56	46		
5-30	60	50		

^{*}Decreases with the logarithm of the frequency.

[47 CFR 15.207(a) Revised as of October 1, 2002; amended by ET Docket 98-80; FCC 02-157, published in the Federal Register Vol. 67, No. 132, on Wednesday, July 10, 2002]

Test Equipment Used

SPECTRUM ANALYZ	7ED\$ /						R	EV. 21-MAY		
RECEIVERS	ZEKS/	RANGE	MN	MFF	?	SN	ASSET	Сат	ī	CALIBRATION DUE
RED		9kHz-1.8GHz	8591	E Agile	nt 3441	A03559	00024	- 1		08-JAN-2008
WHITE		9kHz-22GHz	8593	E Agile	nt 3547	'U01252	00022			06-OCT-2007
BLUE		9kHz-1.8GHz	8591	E Agile	nt 3223	3A00227	00070	- 1		18-DEC-2007
YELLOW		9kHz-2.9GHz	8594			3A01958	00100	- 1		05-JUN-2007
GREEN		9kHz-26.5GHz	8593		nt 3829	A03618	00143	- 1		05-SEP-2007
BLACK		9kHz-12.8GHz	8596	E Agile	nt 3710	A00944	00337	1		08-DEC-2007
TELECOM 3585	5A	20Hz-40.0MHz	3585			A05219	00030	- 1		15-FEB-2008
TELECOM 3585	5A	20Hz-40.0MHz	3585	A Agile	nt 1750	A03418	00558	- 1		Out of Service
TELECOM 3585	5A	20Hz-40.0MHz	3585			A02762	01067	1		Out of Service
ORANGE		9kHz-26.5GHz	E440			9440975	00394			Out of Service
BROWN (RENTA	AL)	9kHz-26.5GHz	E440			4210511	Rental			01-FEB-2008
EMI TEST RECEI		20-1000MHz	ESVS		827	957/001	01098			27-OCT-2008
RENTAL 7405/	A	100Hz-26.5 GHz	E740			4212795	Rental			28-DEC-2007
LISNS/MEASUREME PROBES	ENT .	RANGE	N	ΛN	MFR	SI	N	ASSET	CA	T CALIBRATION DUE
RED		10kHz-30MHz		R-24-BNC	SOLAR	956		00753	II	
BLUE (DC)		10kHz-30MHz		R-24-BNC	SOLAR	956		00752	II.	
YELLOW-BLACK		10kHz-30MHz		R-24-BNC	SOLAR	984		00248	II	05-JUN-2007
ORANGE		10kHz-30MHz		R-24-BNC	SOLAR	903	-	00754	I	07-MAY-2008
GOLD (DC)		10kHz-30MHz	8012-50-	R-24-BNC	SOLAR	984		00247	II	05-JUN-2007
Brown		10kHz-30MHz		R-24-BNC	SOLAR	0411		00986	II	05-JUN-2007
GREEN		10kHz-30MHz	8012-50-	R-24-BNC	SOLAR	0411		00987	II	08-JUN-2007
YELLOW		10kHz-30MHz	8012-50-	R-24-BNC	SOLAR	0411	658	1080	II	05-JUN-2007
WHITE-BLACK		10kHz-30MHz	8610-50	-TS-100-N	SOLAR	9720	019	00678	I	17-MAY-2008
BLACK		10kHz-30MHz	8610-50	-TS-100-N	SOLAR	9720	017	00675	- 1	18-MAY-2008
RED-BLACK		10kHz-30MHz	8610-50	-TS-100-N	SOLAR	9720	016	00677	- 1	18-MAY-2008
BLUE-BLACK		10kHz-30MHz	8610-50	-TS-100-N	SOLAR	9720		00676	- 1	17-MAY-2008
BLUE MONITORING PR	ROBE	0.01-150MHz	915	550-2	TEGAM	123	50	00807	- 1	26-MAY-2007
YELLOW MONITORING F	PROBE	0.01-150MHz	915	550-2	ETS	509	72	00493	I	23-JAN-2008
GREEN CURRENT TRANSFO	ORMER	40Hz-20MHz	1	50	PEARSON	102	26	00793	I	19-APR-2009
BLUE CISPR LINE PRO	OBE	150kHz-30MHz	١	I/A	C-S	N/	Α	00805	II	08-JUN-2007
BLACK CISPR LINE PR	ROBE	150kHz-30MHz	١	I/A	C-S	N/	Α	1254	II	08-JUN-2007
CISPR TELCO VOLTAGE	PROBE	10kHz-30MHz	CS A	VC-10	C-S	CS	01	00296	II	17-NOV-2007
CISPR 22 TELCO IS	SN	9кHz-30MHz	FCC-T	LISN-T4	FISCHER	201	15	00746		15-NOV-2007
Open Apen Teor	· Sizes (O	ATC)	FCC Cc	NDE	IC Cope	\/0	CI Cope	CAT		CALIDDATION DUE
OPEN AREA TEST SITE		413)	FCC Cc 93448		IC CODE		CI CODE R-1688	CAT II		CALIBRATION DUE 23-JUN-2008
SITE			93448		IC 2762A-		R-905	ii		23-JUN-2008
SITE			93448		IC 2762-A		R-903	ii		20-JUN-2008
SITE			93448		IC 2762-N		R-904	ii		19-JUN-2008
SITE			93448		IC 2762A-		R-2377	ii		12-APR-2008
<u> </u>										
CONDUCTED TEST SIT	ES (MAINS	/TELCO)	FCC Cc	DDE	IC CODE		CCI Cod		Сат	CALIBRATION DUE
EMI			93448		N/A		801, T-2		Ш	NA
EMI	2		93448	3	N/A	C-1	802, T-2	269	Ш	NA
EMI	3		93448	3	N/A	C-1	803, T-2	270	III	NA
MIXERS/DIPLEXERS	DANCE	MN		MED		SN		ASSET	CAT	CALIBRATION DUE
	RANGE		110.0	MFR	0000404				CAT	CALIBRATION DUE
MIXER / HORN	26.5-40 GH			HP/ATM		695/A04690		1087	- !	23-AUG-2007
MIXER / HORN	26.5-40 GHz			HP/ATM		825/A04690		1086	- !	19-SEP-2007
MIXER / HORN	40-60 GHz			OML		30110-1		00821	- !	26-MAR-2009
MIXER	33-50 GHz			HP		03A03155		00104	- !	08-NOV-2007
MIXER / HORN	50-75 GHz			HP/QUINSTAR		1197/87940		1179	ı.	15-NOV-2007
MIXER MIXER / LIOPN	75-110 GHz			HP		21A01334		00105	- !	22-NOV-2007
MIXER / HORN	60-90 GHz			OML		30110-1		00822	- !	26-MAR-2009
MIXER / HORN	90-140 GHz			OML		21206-1		00811	- !	26-MAR-2009
MIXER / HORN	140-220 GH			OML	G	21206-1		00812	!	26-MAR-2009
DIPLEXER	40-220 GHz	z DPL.2	0	OML		N/A		00813	<u> </u>	26-MAR-2009

FCC ID: O6RHRM1B

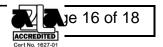
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ABSORBING CLAMPS	RANGE		MN	MFR		SN	Asse	T C	AT	CALIBRATION DUE
FISCHER CLAMP	30-1000MHz	F-20	01-23мм	FISCHER		10	3000	31	I	20-JAN-2008
HARMONIC & FLICKER AI	NALYZER	MN	MFR		SN		As	SSET	Сат	CALIBRATION DUE
HFTS		IP6842A	HP		3531A-0	0169		738	II	30-DEC-2007
10001I/2 AC POWER SY	STEM	(2) 5001	CALIFORNIA INSTRUM	ENTS HK	(53687/H	K53688		376	II	09-JAN-2008
PREAMPS /									0	0
ATTENUATORS / FILTERS	RANGE		MN		İ FR	18		ASSET	Сат	CALIBRATION DUE
RED	0.009-2000		ZFL-1000-LN		:-S	N/		00798	II	20-APR-2008
BLUE	0.009-20001		ZFL-1000-LN		-S	N/		00759	II	17-APR-2008
BLUE-BLACK	0.009-20001		ZFL-1000-LN		:-S	N/		00800	II 	18-JAN-2008
GREEN BLACK	0.009-2000l 0.009-2000l		ZFL-1000-LN ZFL-1000-LN		:-S :-S	N/ N/		00802 00799	II II	02-MAY-2008 20-JUL-2007
ORANGE	0.009-2000		ZFL-1000-LN ZFL-1000-LN	_	,-S :-S	N/		00799	ii	02-MAY-2008
RED-WHITE	0.009-2000		ZFL-1000-LN	_)-S	N/		1258	ii	08-MAY-2008
WHITE	1-20GH		SMC-12A		;-S	4266		00760	ii	22-JUL-2007
Brown	1-20GH		38-218-4R5-17-15-S		;-S	PL1		1132	ii	02-APR-2008
YELLOW-BLACK	1-20GH		SMC-12A		-S	5350		00801	ii	OUT OF SERVICE
RED-GREEN	1-20GH		38-218-4R5-17-15-S		S-S	N/		1256	П	14-AUG-2007
RED-BLUE	1-20GH	z PE2-3	38-218-4R5-17-15-SI	FF C	-S	PL3	177	1257	II	19-APR-2008
HF (YELLOW)	18-26.5GI	Hz AFS	S4-18002650-60-8P-4	4 C	-S	4675	559	00758	П	23-AUG-2007
HIGH PASS FILTER	1-18 GH	Z	SPA-F-55204	K	&L	36	6	00817	II	05-JAN-2008
Low Pass Filter	1-9 GHz		L10-4100/X4400-O/0) K	&L	4		00816	П	05-JAN-2008
HF 20dB 50W ATTENUATOR	0.03-20 G		PE 7019-20		ERNACK	0.		00791	II	08-MAY-2009
HF 30dB 50W ATTENUATOR	0.03-20 G		PE 7019-30		ERNACK	02		1168	II	08-MAY-2009
40dB 100W ATTENUATOR	0.09-4000N		BW-40N100W+		CIRCUITS	V N0149		1231	II	08-NOV-2007
Low FREQ LPF	10-100kH	IZ	L200K1G1	CIR	CUITS	4460-01 l	DC0432	1019	II	OUT OF SERVICE
Low Freq LPF	10-100ĸF	lz	L200K1G1		CUITS	4777-01	DC0434	1088	II	OUT OF SERVICE
ANTENNAS	RANGE	MN	MFR	SN	A	SSET	Сат		CALIBR	ATION DUE
GREEN BILOG	30-2000MHz			2742		0620	II			AN-2008
GREEN-BLACK BILOG	30-2000MHz			2412		0127	ii			AN-2008
GREEN-RED BILOG	30-2000MHz			2435		0990	ï			PR-2008
BLUE BILOG	30-1000MHz	3143	EMCO	1271	0	0803	II		06-JI	UN-2007
GRAY BILOG	20-2000MHz	3141	EMCO	9703-10	0° 380	0066	П	06-JUN-2	2007(EMI	I) / 04-FEB-2008(RFI2)
YELLOW-BLACK BILOG	20-2000MHz			1112		0126	Ш	06-JUN-	2007(EM	II) /20-APR-2008(RFI)
RED-WHITE BILOG	30-2000MHz		SUNOL	A09160		1105	I			OV-2008
RED-BLACK BILOG	30-2000MHz		SUNOL	A09160		1106	ļ.			CT-2008
RED-BROWN BILOG	30-2000MHz		SUNOL	A00324		1218	I		N4-ΔI	UG-2008
YELLOW HORN										
BLACK HORN	1-18GHz	3115	EMCO	9608-48		0037	ļ	47 11111	27-MAY	7-2007(EMI)
ODANIOE HODAI	1-18GHz	3115	EMCO	9703-51	148 0	0056	 		27-MAY 2007(EMI	/-2007(EMI)) / 17-MAY-2008 (RFI)
ORANGE HORN	1-18GHz 1-18GHz	3115 3115	EMCO EMCO	9703-5′ 0004-6′	148 0 123 0	0056 0390	 		27-MAY 2007(EMI 2007(EMI	(-2007(EMI)) / 17-MAY-2008 (RFI)) / 17-MAY-2008 (RFI)
HF (WHITE) HORN	1-18GHz 1-18GHz 18-26.5GHz	3115 3115 801-WL	EMCO EMCO M Waveline	9703-57 0004-67 0075	148 00 123 00 8 00	0056 0390 0758	 		27-MAY 2007(EMI 2007(EMI 26-AI	(-2007(EMI)))/ 17-MAY-2008 (RFI)))/ 17-MAY-2008 (RFI) UG-2007
HF (WHITE) HORN SMALL LOOP	1-18GHz 1-18GHz 18-26.5GHz 10кHz-30MHz	3115 3115 801-WL PLA-130	EMCO EMCO .M Waveline D/A ARA	9703-5 ² 0004-6 ² 0075 1024	148 00 123 00 8 00 4 00	0056 0390 0758 0755	 		27-MAY 2007(EMI 2007(EMI 26-AI 22-F	(-2007(EMI)))/ 17-MAY-2008 (RFI)))/ 17-MAY-2008 (RFI) UG-2007 EB-2008
HF (WHITE) HORN SMALL LOOP LARGE LOOP	1-18GHz 1-18GHz 18-26.5GHz 10кHz-30MHz 20Hz-5MHz	3115 3115 801-WL PLA-130 6511	EMCO EMCO LM WAVELINE D/A ARA EMCO	9703-5 ² 0004-6 ² 0075 1024 9704-1 ²	148 00 123 00 8 00 4 00 154 00	0056 0390 0758 0755	 		27-MAY 2007(EMI 2007(EMI 26-AI 22-F 23-J	/-2007(EMI)) / 17-MAY-2008 (RFI)) / 17-MAY-2008 (RFI) UG-2007 EB-2008 AN-2008
HF (WHITE) HORN SMALL LOOP LARGE LOOP ACTIVE MONOPOLE	1-18GHz 1-18GHz 18-26.5GHz 10кHz-30MHz 20Hz-5MHz 30Hz-30MHz	3115 3115 801-WL PLA-130 6511 3301E	EMCO EMCO M WAVELINE D/A ARA EMCO B EMCO	9703-52 0004-62 0075 1024 9704-12 3824	148 00 123 00 8 00 4 00 154 00	0056 0390 0758 0755 0067	 		27-MAY 2007(EMI 2007(EMI 26-AI 22-F 23-J 06-D	/-2007(EMI)) / 17-MAY-2008 (RFI)) / 17-MAY-2008 (RFI) UG-2007 EB-2008 AN-2008 EC-2007
HF (WHITE) HORN SMALL LOOP LARGE LOOP	1-18GHz 1-18GHz 18-26.5GHz 10кHz-30MHz 20Hz-5MHz	3115 3115 801-WL PLA-130 6511 3301E 1000-4	EMCO EMCO .M WAVELINE D/A ARA EMCO B EMCO -8 C-S	9703-5 ² 0004-6 ² 0075 1024 9704-1 ²	148 00 123 00 8 00 4 00 154 00 4 00	0056 0390 0758 0755	 		27-MAY 2007(EMI 2007(EMI 26-AI 22-F 23-J 06-D 26-S	/-2007(EMI)) / 17-MAY-2008 (RFI)) / 17-MAY-2008 (RFI) UG-2007 EB-2008 AN-2008
HF (WHITE) HORN SMALL LOOP LARGE LOOP ACTIVE MONOPOLE INDUCTION COIL	1-18GHz 1-18GHz 18-26.5GHz 10кHz-30MHz 20Hz-5MHz 30Hz-30MHz 50-60Hz	3115 3115 801-WL PLA-130 6511 3301E 1000-4 31210	EMCO EMCO M WAVELINE ARA EMCO B EMCO -8 C-S C EMCO	9703-5 0004-6 0075 1024 9704-1 3824 N/A	148 0: 123 0: 8 0: 4 0: 154 0: 4 0: 0 0:	0056 0390 0758 0755 0067 0068 0778			27-MAY 2007(EMI 2007(EMI 26-AI 22-F 23-J 06-D 26-S 26-O	(-2007(EMI) () / 17-MAY-2008 (RFI) () / 17-MAY-2008 (RFI) UG-2007 EB-2008 AN-2008 EC-2007 EP-2007
HF (WHITE) HORN SMALL LOOP LARGE LOOP ACTIVE MONOPOLE INDUCTION COIL ADJUSTABLE DIPOLE	1-18GHz 1-18GHz 18-26.5GHz 10KHz-30MHz 20Hz-5MHz 30Hz-30MHz 50-60Hz 30-1000MHz	3115 3115 801-WL PLA-130 6511 3301E 1000-4 31210	EMCO EMCO M WAVELINE O/A ARA EMCO B EMCO -8 C-S C EMCO C EMCO	9703-5 ² 0004-6 ² 0075 1024 9704-1 ² 3824 N/A 1370	148 00 123 00 8 00 4 00 154 00 4 00 0 00 1 00	0056 0390 0758 0755 0067 0068 0778	 		27-MAY 2007(EMI 2007(EMI 26-AI 22-F 23-J 06-D 26-S 26-O 09-N	7-2007(EMI) () / 17-MAY-2008 (RFI) () / 17-MAY-2008 (RFI) UG-2007 EB-2008 AN-2008 EC-2007 EP-2007 CT-2008
HF (WHITE) HORN SMALL LOOP LARGE LOOP ACTIVE MONOPOLE INDUCTION COIL ADJUSTABLE DIPOLE ADJUSTABLE DIPOLE	1-18GHz 1-18GHz 18-26.5GHz 10KHz-30MHz 20Hz-5MHz 30Hz-30MHz 50-60Hz 30-1000MHz 30-1000MHz	3115 3115 801-WL PLA-130 6511 3301E 1000-4 31210 31210	EMCO EMCO M WAVELINE D/A ARA EMCO B EMCO -8 C-S C EMCO C EMCO .3CM C-S	9703-5 0004-6 0075 1024 9704-1 3824 N/A 1370	148 00 123 00 8 00 1 00 154 00 1 00 1 00	0056 0390 0758 0755 0067 0068 0778 0757	II I		27-MAY 2007(EMI 2007(EMI 26-AI 22-F 23-J 06-D 26-S 26-O 09-N 22-M	/-2007(EMI))/ 17-MAY-2008 (RFI))/ 17-MAY-2008 (RFI) UG-2007 EB-2008 AN-2008 EC-2007 EP-2007 CT-2008 OV-2008
HF (WHITE) HORN SMALL LOOP LARGE LOOP ACTIVE MONOPOLE INDUCTION COIL ADJUSTABLE DIPOLE ADJUSTABLE DIPOLE RE101 LOOP SENSOR	1-18GHz 1-18GHz 18-26.5GHz 10кHz-30MHz 20Hz-5MHz 30Hz-30MHz 50-60Hz 30-1000MHz 30-1000MHz 30-1000KHz	3115 3115 801-WL PLA-130 6511 3301E 1000-4 31210 31210 RE101-13	EMCO EMCO MAVELINE ARA EMCO BEMCO BEMCO CEMCO CO C	9703-5' 0004-6' 0075: 1024 9704-1' 3824 N/A 1370 1371	148	0056 0390 0758 0755 0067 0068 0778 0757	 - - 		27-MA\\ 2007(EMI\) 2007(EMI\) 2007(EMI\) 22-F\ 23-J 06-D\ 26-S\ 26-O\ 09-N\ 22-M\ 22-M\ 22-M\	7-2007(EMI))/ 17-MAY-2008 (RFI))/ 17-MAY-2008 (RFI) UG-2007 EB-2008 AN-2008 EC-2007 EP-2007 CT-2008 OV-2008
HF (WHITE) HORN SMALL LOOP LARGE LOOP ACTIVE MONOPOLE INDUCTION COIL ADJUSTABLE DIPOLE ADJUSTABLE DIPOLE RE101 LOOP SENSOR RS101 RADIATING LOOP RS101 LOOP SENSOR	1-18GHz 1-18GHz 18-26.5GHz 10кHz-30MHz 20Hz-5MHz 30-60Hz 30-1000MHz 30-1000MHz 30-1000MHz 30Hz-100kHz	3115 3115 801-WL PLA-130 6511 3301E 1000-4 31210 31210 RE101-13 RS101-4	EMCO EMCO EMCO WAVELINE D/A ARA EMCO B EMCO C EMCO C EMCO C C EMCO C C C C C C C C C C C C C C C C C C C	9703-5' 0004-6' 0075: 1024 9704-1' 3824 N/A 1370 1371 N/A N/A	148	0056 0390 0758 0755 0067 0068 0778 0757 0756 0818 0819 0820	 - - - -	09-JUN-2	27-MAY 2007(EMI 2007(EMI 26-AI 22-F 23-J, 06-D 26-S 26-O 09-N 22-M 22-M	7-2007(EMI))/ 17-MAY-2008 (RFI))/ 17-MAY-2008 (RFI) UG-2007 EB-2008 EC-2007 EP-2007 CT-2008 OV-2008 AR-2009 AR-2009 AR-2009
HF (WHITE) HORN SMALL LOOP LARGE LOOP ACTIVE MONOPOLE INDUCTION COIL ADJUSTABLE DIPOLE ADJUSTABLE DIPOLE RE101 LOOP SENSOR RS101 RADIATING LOOP RS101 LOOP SENSOR	1-18GHz 1-18GHz 18-26.5GHz 10кHz-30MHz 20Hz-5MHz 30Hz-30MHz 30-1000MHz 30-1000MHz 30-1000KHz 30Hz-100kHz 30Hz-100kHz	3115 3115 801-WL PLA-130 6511 3301E 1000-4 31210 31210 2 RE101-13 2 RS101-12 1 RS101-4	EMCO EMCO EMCO WAVELINE D/A ARA EMCO B EMCO C EMCO C EMCO C C EMCO C C C C C C C C C C C C C C C C C C C	9703-5' 0004-6' 0075: 1024 9704-1' 3824 N/A 1370 1371 N/A N/A	148	0056 0390 0758 0755 0067 0068 0778 0756 0818 0819 0820	 - - - -	09-JUN-2	27-MAY 2007(EMI 2007(EMI 26-AI 22-F 23-J, 06-D 26-S 26-O 09-N 22-M 22-M	7-2007(EMI) 1) / 17-MAY-2008 (RFI) 1) / 17-MAY-2008 (RFI) UG-2007 EB-2008 AN-2008 EC-2007 EP-2007 CT-2008 OV-2008 IAR-2009 AR-2009 CALIBRATION DUE
HF (WHITE) HORN SMALL LOOP LARGE LOOP ACTIVE MONOPOLE INDUCTION COIL ADJUSTABLE DIPOLE ADJUSTABLE DIPOLE RE101 LOOP SENSOR RS101 RADIATING LOOP RS101 LOOP SENSOR	1-18GHz 1-18GHz 18-26.5GHz 10кHz-30MHz 20Hz-5MHz 30Hz-30MHz 30-1000MHz 30-1000MHz 30-1000KHz 30Hz-100kHz 30Hz-100kHz	3115 3115 801-WL PLA-130 6511 3301E 1000-4 31210 31210 RE101-13 RS101-4	EMCO EMCO EMCO WAVELINE D/A ARA EMCO B EMCO C EMCO C EMCO C C EMCO C C C C C C C C C C C C C C C C C C C	9703-5' 0004-6' 0075: 1024 9704-1' 3824 N/A 1370 1371 N/A N/A	148	0056 0390 0758 0755 0067 0068 0778 0757 0756 0818 0819 0820	 - - - -	09-JUN-2	27-MAY 2007(EMI 2007(EMI 26-AI 22-F 23-J, 06-D 26-S 26-O 09-N 22-M 22-M	7-2007(EMI))/ 17-MAY-2008 (RFI))/ 17-MAY-2008 (RFI) UG-2007 EB-2008 EC-2007 EP-2007 CT-2008 OV-2008 AR-2009 AR-2009 AR-2009
HF (WHITE) HORN SMALL LOOP LARGE LOOP ACTIVE MONOPOLE INDUCTION COIL ADJUSTABLE DIPOLE ADJUSTABLE DIPOLE RE101 LOOP SENSOR RS101 RADIATING LOOP RS101 LOOP SENSOR	1-18GHz 1-18GHz 18-26.5GHz 10кHz-30MHz 20Hz-5MHz 30Hz-30MHz 30-1000MHz 30-1000MHz 30-1000KHz 30Hz-100kHz 30Hz-100kHz	3115 3115 801-WL PLA-130 6511 3301E 1000-4 31210 31210 2 RE101-13 2 RS101-12 1 RS101-4	EMCO EMCO EMCO WAVELINE D/A ARA EMCO B EMCO C EMCO C EMCO C C EMCO C C C C C C C C C C C C C C C C C C C	9703-5' 0004-6' 0075i 1024 9704-1' 3824 N/A 1370 1371 N/A N/A	148	0056 0390 0758 0755 0067 0068 0778 0756 0818 0819 0820 SN	 - - - -	09-JUN-2	27-MAY 2007(EMI 2007(EMI 26-AI 22-F 23-J, 06-D 26-S 26-O 09-N 22-M 22-M CAT	7-2007(EMI) 1) / 17-MAY-2008 (RFI) 1) / 17-MAY-2008 (RFI) UG-2007 EB-2008 AN-2008 EC-2007 EP-2007 CT-2008 OV-2008 IAR-2009 AR-2009 CALIBRATION DUE
HF (WHITE) HORN SMALL LOOP LARGE LOOP ACTIVE MONOPOLE INDUCTION COIL ADJUSTABLE DIPOLE ADJUSTABLE DIPOLE RE101 LOOP SENSOR RS101 RADIATING LOOP RS101 LOOP SENSOR	1-18GHz 1-18GHz 18-26.5GHz 10кHz-30MHz 20Hz-5MHz 30Hz-30MHz 30-1000MHz 30-1000MHz 30-1000MHz 30Hz-100kHz 30Hz-100kHz	3115 3115 801-WL PLA-130 6511 3301E 1000-4 31210 31210 RE101-13 RS101-4 MN N/A	EMCO EMCO EMCO WAVELINE O/A ARA EMCO -8 C-S EMCO -8 C-S	9703-5' 0004-6' 0075: 1024 9704-1' 3824 N/A 1370 1371 N/A N/A	148 00 123 00 8 00 4 00 154 00 1 00 00 00 00	0056 0390 0758 0755 0065 0068 0778 0756 0818 0819 0820 SN 01	 	09-JUN-2 ASSET 00794	27-MAY 2007(EMI 2007(EMI 26-AI 22-F 23-J, 06-D 26-S 26-O 09-N 22-M 22-M CAT	7-2007(EMI) 1) / 17-MAY-2008 (RFI) 1) / 17-MAY-2008 (RFI) UG-2007 EB-2008 EC-2007 EP-2007 CT-2008 OV-2008 AR-2009 AR-2009 CALIBRATION DUE 06-FEB-2008
HF (WHITE) HORN SMALL LOOP LARGE LOOP ACTIVE MONOPOLE INDUCTION COIL ADJUSTABLE DIPOLE ADJUSTABLE DIPOLE RE101 LOOP SENSOR RS101 RADIATING LOOP RS101 LOOP SENSOR	1-18GHz 1-18GHz 18-26.5GHz 10кHz-30MHz 20Hz-5MHz 30Hz-30MHz 30-1000MHz 30-1000MHz 30-1000KHz 30Hz-100kHz 30Hz-100kHz	3115 3115 801-WL PLA-130 6511 3301E 1000-4 3121C 3121C 2 RE101-13 2 RS101-12 3 RS101-4	EMCO EMCO EMCO WAVELINE D/A ARA EMCO B EMCO C EMCO C EMCO C C EMCO MFIT MFR MFR	9703-5' 0004-6' 0075: 1024 9704-1' 3824 N/A 1370 1371 N/A N/A	148 00 123 00 8 00 1 00 154 00 1 00 0 00 00 SN	0056 0390 0758 0755 0067 0068 0778 0756 0818 0819 0820 SN 01	II I II II II SSET	09-JUN-2 ASSET 00794	27-MAY 2007(EMI 2007(EMI 26-AI 22-F 23-J, 06-D 26-S 26-O 09-N 22-M 22-M CAT	7-2007(EMI) 1) / 17-MAY-2008 (RFI) 1) / 17-MAY-2008 (RFI) UG-2007 EB-2008 EC-2007 EP-2007 CT-2008 OV-2008 AR-2009 AR-2009 CALIBRATION DUE CALIBRATION DUE
HF (WHITE) HORN SMALL LOOP LARGE LOOP ACTIVE MONOPOLE INDUCTION COIL ADJUSTABLE DIPOLE ADJUSTABLE DIPOLE RE101 LOOP SENSOR RS101 RADIATING LOOP RS101 LOOP SENSOR	1-18GHz 1-18GHz 18-26.5GHz 10кHz-30MHz 20Hz-5MHz 30Hz-30MHz 30-1000MHz 30-1000MHz 30-1000KHz 30Hz-100kHz 30Hz-100kHz	3115 3115 801-WL PLA-130 6511 3301E 1000-4 31210 31210 2 RE101-13 2 RS101-12 3 RS101-4 MN N/A	EMCO EMCO EMCO MAVELINE JA ARA EMCO B EMCO B EMCO C EMCO C EMCO C EMCO C SCM C-S EMCO C SCM C-S EMCO MFR SCHAFFF	9703-5' 0004-6' 0075: 1024 9704-1' 3824 N/A 1370 1371 N/A N/A N/A S NER NER	148 00 123 00 8 00 4 00 154 00 1 00 00 00 00 00 00 00 00 00 00 00 00 00	0056 0390 0758 0755 0067 0068 0778 0756 0818 0819 0820 SN 01	 	09-JUN-2 ASSET 00794	27-MAY 2007(EMI 2007(EMI 26-AI 22-F 23-J, 06-D 26-S 26-O 09-N 22-M 22-M CAT	7-2007(EMI) 1) / 17-MAY-2008 (RFI) 1) / 17-MAY-2008 (RFI) UG-2007 EB-2008 AN-2008 EC-2007 EP-2007 CT-2008 OV-2008 AR-2009 AR-2009 CALIBRATION DUE 25-OCT-2007
HF (WHITE) HORN SMALL LOOP LARGE LOOP ACTIVE MONOPOLE INDUCTION COIL ADJUSTABLE DIPOLE ADJUSTABLE DIPOLE RE101 LOOP SENSOR RS101 RADIATING LOOP RS101 LOOP SENSOR EFT EFT DIRECT COUPLING (ESD GENERATORS GREEN RED YELLOW	1-18GHz 1-18GHz 18-26.5GHz 10кHz-30MHz 20Hz-5MHz 30Hz-30MHz 30-1000MHz 30-1000MHz 30-1000KHz 30Hz-100kHz 30Hz-100kHz	3115 3115 801-WL PLA-130 6511 3301E 1000-4 31210 31210 RE101-13 RS101-12 MN N/A MN N/A	EMCO EMCO EMCO EMCO EMCO Waveline ARA EMCO BEMCO CS CEMCO CS COME COME EMCO EMCO	9703-5' 0004-6' 0075: 1024 9704-1' 3824 N/A 1370 1371 N/A N/A S	148 00 123 00 8 00 4 00 154 00 00 00 00 SN 000839 001625 201	0056 0390 0758 0755 0067 0068 0778 0756 0818 0819 0820 SN 01	II I II II II SSET 0763	09-JUN-2 ASSET 00794 CAT I	27-MAY 2007(EMI 2007(EMI 26-AI 22-F 23-JJ 06-D 26-S 26-O 09-N 22-M 22-M	7-2007(EMI) 1) / 17-MAY-2008 (RFI) 1) / 17-MAY-2008 (RFI) UG-2007 EB-2008 AN-2008 EC-2007 EP-2007 CT-2008 OV-2008 AR-2009 AR-2009 CALIBRATION DUE 25-OCT-2007 06-FEB-2008 18-AUG-2007
HF (WHITE) HORN SMALL LOOP LARGE LOOP ACTIVE MONOPOLE INDUCTION COIL ADJUSTABLE DIPOLE ADJUSTABLE DIPOLE RE101 LOOP SENSOR RS101 RADIATING LOOP RS101 LOOP SENSOR EFT EFT DIRECT COUPLING O ESD GENERATORS GREEN RED	1-18GHz 1-18GHz 18-26.5GHz 10кHz-30MHz 20Hz-5MHz 30Hz-30MHz 30-1000MHz 30-1000MHz 30-1000KHz 30Hz-100kHz 30Hz-100kHz	3115 3115 801-WL PLA-130 6511 3301E 1000-4 31210 31210 2 RE101-13 2 RS101-12 2 RS101-4 MN N/A	EMCO EMCO EMCO EMCO EMCO Waveline ARA EMCO BEMCO BEMCO COS COS COS COS COS COS COS COS COS C	9703-5' 0004-6' 0075: 1024 9704-1' 3824 N/A 1370 1371 N/A N/A N/A S NER NER	148 00 123 00 8 00 4 00 154 00 00 00 00 SN 000839 001625 201	0056 0390 0758 0755 0067 0068 0778 0756 0818 0819 0820 SN 01	II I II II II SSET 0763	ASSET 00794 CAT I I CA	27-MAY 2007(EMI 2007(EMI 26-AI 22-F 23-JJ 06-D 26-S 26-O 09-N 22-M 22-M	7-2007(EMI) 1) / 17-MAY-2008 (RFI) 1) / 17-MAY-2008 (RFI) UG-2007 EB-2008 AN-2008 EC-2007 EP-2007 CT-2008 OV-2008 AR-2009 AR-2009 CALIBRATION DUE 25-OCT-2007 06-FEB-2008 18-AUG-2007

FCC ID: O6RHRM1B IC ID: 3797A-HRM1B

MULTIFUCTION SYSTEMS	IING	MN	MFR		SN	Ass	SET	Сат		CALIBF	RATION DUE
BLUE BESTEM RED BESTEM MODULA 600	C-2 7	'11-1100	SCHAFFNER SCHAFFNER SCHAFFNER		824-002SC 122-074SC	001 006 DEI	323	 		2008 (SURGE	or Service / EFT) / 17-APR-2008 (D+I) ge) / 10-JAN-2008 (EFT)
EMC PRO PL		CPRO PLUS	KEYTEK	Λ	608208	REN		II	09-JA	,	7-2008 (EFT)
EMC PRO		MC PRO	KETTEK		005292	REN		II	04-1Δ		GE) / 17-JAN-2008 (EFT)
USC 500-N		SC 500 M6B	EMTEST		616101357	DEI		ii	04-07	,	2008 (SURGE)
	,, 50	70 000 11102	Liviteor				VIO .			00 07 1	2000 (00:102)
CHAMBERS AND	STRIRI INE	MN			MFR		SN	ASSET	Сат		CALIBRATION DUE
RFI 1 CHA		3 METER CC	MPACT		PANASHIELD	<u> </u>	N/A	00797			20-APR-2008
RFI 2 CHA		04' x 07' SHIELDII			LINDGREN	,	13329	00795			04-FEB-2008
RFI 3 STR		N/A	NO OTOTEM		C-S		N/A	00796			NA
ENVIRONMENT		ECL5	;		B-M-A Inc.		2041	00029			03-JAN-2008
ENVIRONMENT	AL (SAFETY)	SGTH-3	31S		B-M-A Inc.		2245	00321	1		03-JAN-2008
AMPLIFIERS	RANGE	MN	MFR		SN	ASSET	Сат		(CALIBRATION	N DUE
RED	0.5-1000MHz	10W1000B	AR		18708	00032	II			28-JAN-2008	
GREEN	0.5-1000MHz		AR		23423	00123	П			04-FEB-2008	
BLUE	0.01-250MHz	75A250	AR		19165	00039	II			/-2007 (NEBS	
BLACK	0.01-250MHz	75A250	AR	:	23411	00122	II	29-DE0	C-2007 (NE	BS & EÙ CRF	T) / 20-APR-2008 (RFI1)
ORANGE	0.01-250MHz	75A250	AR	:	26827	00367	Ш	16-MA	Y-2008 (EU	J CRFI)/ 18-M	IAY-2008 (NEBS CRFI)
BROWN 150W	0.1-250MHz		AR	3	313454	1255	II		C	04-FEB-2008	
GTC 1-2.6	1.0-2.6 GHz	GRF5016A	GTC		1221	RENTAL	II			16-MAY-2	
HUGHES 10W	2.0-4.0GHz	1177H01	HUGHES		055	RENTAL	II			008	
HUGHES 10W	4.0-8.0GHz	8010H02F	HUGHES		240	RENTAL	II			008	
HUGHES 10W HP495A	8-10.0GHz 7.0-10.0GHz	80108 HP495A	Hughes HP	20	138 4-00237	RENTAL 00086	II II		Out	008 : (Spare)	
AUDIO AMP	AUDIO FREQ	MPA-200	RADIO SHACK		700438	NONE	'' 		001	(SPARE)	
AUDIO AMP	AUDIO FREQ	MPA-200	RADIO SHACK		708545	00862	III				
7 TODIO 7 TIVII	7 TODIO I NEQ	1011 71 200	7.0.0.0 01.0.0		00010	00002				NA	
	PROBES	RANGE	MI		MFF		SN		ASSET	Сат	CALIBRATION DUE
	ED	0.01-1000MI			HOLAD		90369		00031	!	23-MAR-2008
GRI		0.01-1000MI			HOLAD		97363		00136	!	25-JUL-2007
MICROWAVE S	UE	0.01-1000Ml 2450MHz			HOLAE		95696 000754		01100 1244	OUT OF CAL 09-JAN-2008	
WICKOWAVE 3	OURVEY WIETER	2430101112	□I-13	301	HOLAE	JAY	000754	04	1244		09-JAIN-2000
SIGNAL GENE	ERATORS	RANGE	MN		MFR		12	N	ASSET	Сат	CALIBRATION DUE
RED		0.09-2000MHz	HP8648B		Agilent		3847U	02192	00366	ı	03-APR-2008
BLUE		0.1-1000MHz	HP8648A		Agilent		3426A	00548	00034	1	23-AUG-2007
GREE	N	0.09-2000MHz	HP8648B		Agilent		3623A	02072	00125	I	16-OCT-2007
ORANG		0.1-1000MHz	HP8648B		Agilent		3537A		00025	I	29-JUN-2007
Brow		0.01Hz-15MHz	HP33120A		Agilent		US360		1211	Į.	OUT OF SERVICE
WHITE		0.01Hz-15MHz	HP33120A		Agilent		US360		1219	ļ.	OUT OF CAL
Brown-W		0.01Hz-15MHz	HP33120A		Agilent		SG400		1232	!	10-NOV-2007
BLUE-WI		0.1Hz-13MHz	HP3312A		Agilent		1432A		00775		21-MAR-2008
SWEEP		0.01-20.0GHz	HP83752A		Agilent		3610A		00087	II.	08-MAY-2008 10-OCT-2008
AM/FM STEREO IMPULSE GEN		0.1-170MHz 1-100Hz	LG3236 CIG-25	Eı	LEADER ECTRO-ME		3687 29		00959 00942	i i	05-AUG-2007
IIVIFOLSE GEN	ERATOR	1-100112	010-23		LECTRO-IVIE	TRICS	23	0	00342	ı	03-A00-2007
BULK INJECTI	ON CLAMPS	RANGE	MN	MFR	SN	ASSET	Сат		(CALIBRATION	N DUE
GREEN (NE	BS CRFI)	0.01-100MHz	95236-1	ETS	50215	00118	II	03-NOV-	-2007(BLUE)	29-DEC-2007(E	BLK) 18-MAY-2008(ORANGE)
GREEN (EI	U CRFI) [′]	0.10-100MHz	95236-1	ETS	50215	00118	II	03-NOV-	-2007(BLUE)	29-DEC-2007(E	BLK) 16-MAY-2008(ORANGE)
RED (NÈB	S CRFÍ)	0.01-100MHz	95236-1	ETS	34026	1020	II	07-NOV	-2007(BLUE)	29-DEC-2007(E	BLK) 18-MAY-2008(ORANGE)
RED (EU	CRFI)	0.10-100MHz	95236-1	ETS	34026	1020	II	06-NOV	-2007(BLUE)	02-JAN-2008(E	BLK) 16-MAY-2008(ORANGE)
BLUE (RTCA	,	2-450MHz		SOLAR	063824	1237	II				
RENT	AL	2–450MHz	9142-1N	SOLAR	008508	RENTAL	_			10-AUG-20	007
Oscill	.OSCOPES	MI	N _	M	1FR		SN		ASSET	Сат	CALIBRATION DUE
EMC	100MHz	TDS	220	TEKT	RONIX	(C036986	;	1166		25-APR-2008
	RENCE 1GHZ	TDS 6	884B	TEKT	RONIX	ı	B011287	•	RENTAL	I	03-APR-2008
	AFETY 100 MH				RONIX		B012357		00737	I	03-OCT-2007
TELECO	м 100 MHz	5464	15A	HP/A	GILENT	US	363204	52	00103		30-JUN-2007

						IC	1D: 3/9//	H-UKIN	ID
CDN NETWORKS	RANGE	1M	N MFR	ASSET	Сат		CALIBRAT	TION DUE	
BLUE	0.10-100MHz	20A I		00806		03-NOV-2007 (BLUE A			16-MAY-2008 (ORANGE)
RED	0.10-100MHz	15A I		00780					16-MAY-2008 (ORANGE)
YELLOW-BLACK	0.10-100MHz	15A I		00784		,	,	٠,	16-MAY-2008 (ORANGE)
GREEN	0.10-100MHz	30A I		00784		,	,	, ,	16-MAY-2008 (ORANGE)
YELLOW	0.10-100MHz	30A I		00804	II 				2008 (ORANGE)
BROWN	0.10-100MHz	M-		1169		,	,	٠,	16-MAY-2008 (ORANGE)
BROWN-WHITE	0.10-100MHz	M-		1170		,	,	, ,	16-MAY-2008 (ORANGE)
BROWN-BLACK	0.10-100MHz	M-2 (1171					16-MAY-2008 (ORANGE)
RED-BLACK	0.10-100MHz	M-2 (1177		,	,	, ,	16-MAY-2008 (ORANGE)
GREEN-WHITE	0.10-100MHz	M-2 (,	1259	II	03-NOV-2007 (BLUE A	AмP) 29-DEC-	2007 (BLK)	16-MAY-2008 (ORANGE)
YELLOW (RES)	0.10-100MHz	100		00810	П	04-NOV-2007(BLUE A	MP) 16-MAY-	2008 (OPA	NGE) 02-JAN-2008(BLK)
TELLOW (INLS)	0.10-100W112	Resis	TOR	00010	"	04 110 V 2007 (BLOL 7	10 10 17 1	2000 (OKA	140L) 02 07114 2000(BLIV)
GREEN (RES)	0.10-100MHz	100 Resis	(1172	II	03-NOV-2007(BLUE A	Амр) 16-МАҮ-	2008 (ORA	NGE) 02-JAN-2008(BLK)
RMS VOLTMETERS	S/CURRENT CLA	AMP	MN	Mn	FR	SN	ASSET	Сат	CALIBRATION DUE
TRUE-RMS I	MULTIMETER		79III	FLU	JKE	71700298	00769		27-OCT-2007
TRUE RMS I	MULTIMETER		179	FLU	JKE	89280616	1228	I	31-OCT-2007
TRUE-RMS MULTIM	ETER (REFEREN	CE)	177	FLU	JKE	83390024	00973	1	22-MAR-2008
TRUE-RMS I		,	177	FLU		83390025	00974	i	22-MAR-2008
TRUE-RMS MULT)	177	FLU		83430419	00975	i	22-MAR-2008
AC/DC CUR		,	A622	TEKTE		08DD 6275DV	1246	i	31-JAN-2008
AO/DO OUR	NENT I NOBE		NULL	IENIF	CONIA	0000 02100	1240	ı	01-0AN-2000
Super G	ENERATORS		MN		MFR	SN	ASSET	Сат	CALIBRATION DUE
			TWM-			003982			
	EFORM MONITOR			5	CDI		00323	II	05-JUN-2007
	RGE GENERATOR		M5		CDI	003966	00324	II	CAL BEFORE USE
	COUPLING NWK		3CN		CDI	003455	00325	II	Cal Before Use
1.2x50∪S PL	UGIN MODULE		1.2x50uS F	LUGIN	CDI	N/A	00842	II	CAL BEFORE USE
10x160uS Pi	LUGIN MODULE		10x160uS F	PLUGIN	C-S	N/A	00843	II	CAL BEFORE USE
10x560uS Pt	LUGIN MODULE		10x560uS F	PLUGIN	C-S	N/A	00841	II	CAL BEFORE USE
PSURGE CONT	ROLLER MODULE		PSURGE	8000	HAEFELY	150267	00879	II	06-JUN-2007
	OUPLING MODULE		PCD 90	00	HAEFELY		00880	II	06-JUN-2007
	MODULE		PIM 90	-	HAEFELY		00881	ii	06-JUN-2007
HIGH VOLTAGE CAF		Q.,F	CS-HV		C-S	01	00772	ii	14-JUN-2008
	E GENERATOR	Ομι	N/A	,,	C-S	N/A	00088	ii	18-OCT-2007
	GENERATOR GE GENERATOR		2x10u	c	C-S		00086		
				_		N/A		II	06-JUN-2007
	RGE GENERATOR		10x700	03	C-S	N/A	00847	II	08-JUN-2007
12 PAIR SURGE F		-E	N/A		C-S	N/A	00768	II	18-OCT-2007
	500-M		TSS 500 M		EMTEST		1155	II	CAL BEFORE USE
	500-M		TSS500 I	M10	EMTEST		1156	II	CAL BEFORE USE
SCHAFFNER 2050	1.2x50 GENERAT	ΓOR	2050		SCHAFFNE	R	D EMO	<u>II</u>	09-JAN-2008
Power/No.			MN		/IFR	SN	ASSET	Сат	CALIBRATION DUE
Power			435B		HP	2445A11012	00773	I	03-APR-2008
Power			437B		HP	2912A01367	01099	I	03-APR-2008
Power	SENSOR		8481A	ŀ	I P	2702A61351	00774	1	04-APR-2008
Psopho			2429	BRUEL	& KJAER	1237642	00585	II	23-FEB-2009
TRANSMISSION LINI	E TESTER (DBRN	C)	185T	A۱	//REL	18507030010	1236	Ш	20-APR-2008
TRANSMISSION LINI			185T	A۱	//REL	998658	00823	Ш	OUT OF SERVICE
	- (
OVERVOLTAGE CH	HAMBERS	MN	MFR			SN	ASSET	Сат	CALIBRATION DUE
72kW Power Fault	SIMULATOR	OV1	C-S			N/A	00792	III	N/A
POWER FAULT SIM	IULATOR	OV2	C-S			N/A	00116	III	N/A
DIPOLE TAPE ME		М			1 FR	SN	ASSET	Сат	CALIBRATION DUE
26FT TAPE	#1	2338	CME	Lu	FKIN	C3166-1	00776	II	22-MAR-2009
26FT TAPE	#2	2338	CME	Lu	FKIN	C3166-2	00777	II	22-MAR-2009
METEOROLOG	NON METERS		MN		MFR	SN	ASSET	Сат	CALIBRATION DUE
				aII					
TEMP./HUMIDITY/ATM			7400 PERCEPTI		DAVIS	N/A	00965	II.	09-FEB-2009
TEMPERATURE /			THG-912		Huger	4000562	00789	Į.	31-JAN-2009
MEATHER CLOCK	(Pressure Onl)	Y)	BA928	0	REGON SCIEN	TIFIC C3166-1	00831		08-FEB-2009

All equipment is calibrated using standards traceable to NIST or other nationally recognized calibration standard.



Conditions Of Testing

parties in respect of the tested goods.

[Bureau Veritas Consumer Products Services, Inc., a Massachusetts corporation], and/or its affiliates (collectively, the "Company") will conduct, at the request of the Submitter ("Client"), the tests specified on the submitted Test Request Form or equivalent in accordance with, and subject to, the following terms and conditions (collectively, "Conditions"):

- 1. All orders for tests are subject to acceptance by the Company, and no order will constitute a binding commitment of the Company unless and until such order is accepted by it, as evidenced by the issuance of a written report ("Test Report") by the Company. The Test Report is issued solely by the Company, is intended for the exclusive use of Client and shall not be published, used for advertising purposes, copied or replicated for distribution to any other person or entity or otherwise publicly disclosed without the prior written consent of the Company. By submitting a request for services to the Company, Client consents to the disclosure to accreditation bodies of those records of Client relevant to the accreditation body's assessment of the Company's competence and compliance with relevant accreditation criteria. The Company shall not be liable for any loss or damage whatsoever resulting from the failure of the Company to provide its services within any time period for completion estimated by the Company. If Client anticipates using the Test Report in any legal proceeding, arbitration, dispute resolution forum or other proceeding, it shall so notify the Company prior to submitting the Test Report in such proceeding. The Company has no obligation to provide a fact or expert witness at such proceeding unless the Company agrees in advance to do so for a separate and additional fee.
- 2. The Test Report will set forth the findings of the Company solely with respect to the test samples identified therein. Unless specifically and expressly indicated in the Test Report, the results set forth in such Test Report are not intended to be indicative or representative of the quality or characteristics of the lot from which a test sample is taken, and Client shall not rely upon the Test Report as being so indicative or representative of the lot or of the tested product in general. The Test Report will reflect the findings of the Company at the time of testing only, and the Company shall have no obligation to update the Test Report after its issuance. The Test Report will set forth the results of the tests performed by the Company based upon the written information provided to the Company. The Test Report will be based solely on the samples and written information submitted to the Company by Client, and the Company shall not be obligated to conduct any independent investigation or inquiry with respect thereto.
- 3. The Company may, in its sole discretion, destroy samples which have been furnished to the Company for testing and which have not been destroyed in the course of testing. The Company may delegate the performance of all or a portion of the services contemplated hereunder to an affiliate, agent or subcontractor of the Company, and Client consents to such delegation.
- 4. These Conditions and the Test Report represent the entire understanding of the parties hereto with respect to the subject matter hereof and of the Test Report, and no modification, variance or extrapolation with respect thereto shall be permitted without the prior written consent of the Company.
- 5. The names, service marks, trademarks and copyrights of the Company and its affiliates, including the names "BUREAU VERITAS," "BUREAU VERITAS CONSUMER PRODUCTS SERVICES," "BVCPS", "MTL", "ACTS", "MTL-ACTS" and CURTIS-STRAUS (collectively, the "Marks") are and shall remain the sole property of the Company or its affiliates and shall not be used by Client except solely to the extent that Client obtains the prior written approval of the Company and then only in the manner prescribed by the Company. Client shall not contest the validity of the Marks or take any action that might impair the value or goodwill associated with the Marks or the image or reputation of the Company or its affiliates.
- 6. Payment in full shall be due 30 days after the date of invoice. Interest shall be due on overdue amounts from the due date until paid at an interest rate of 1.5% per month or, if less, the maximum rate permitted by law. The Company reserves the right, at any time and from time to time, to revoke any credit extended to Client. Client shall reimburse the Company for any costs it incurs in collecting past due amounts, including court costs and fees and expenses of attorneys and collection agencies. The Test Report may not be used or relied upon by Client if and for so long as Client fails to pay when due any invoice issued by the Company or any affiliate of it to Client or any affiliate or subsidiary of Client together with interest and penalties, if any, accrued thereon.
- 7. The Company disclaims any and all responsibility or liability arising out of or in connection with e-mail transmissions of such information.
- 8. Client understands and agrees that the Company is neither an insurer nor a guarantor, that the Company does not take the place of Client or any designer, manufacturer, agent, buyer, distributor or transportation or shipping company, and that the Company disclaims all liability in such capacities. Client further understands that if it seeks assurance against loss or damage, it should obtain appropriate insurance.
- 9. Client agrees that the Company, by providing the services, does not take the place of Client nor any third party, nor does the Company release them from any of their obligations, nor does the Company otherwise assume, abridge, abrogate or undertake to discharge any duty of any third party to Client or any duty of Client or any third party to any other third party, and Client will not release any third party from its obligations and duties with respect to the tested goods.

 10. Client shall, on a timely basis, (a) provide adequate instructions to the Company in order to enable the Company to perform properly its services, (b) provide, or cause Client's suppliers and contractors to provide, the Company with all relevant information regarding Client's intended use and purposes of the tested goods, (d) advise the Company of essential dates and deadlines relevant to the tested goods and (e) fully exercise all rights and remedies available to Client against third
- 11. The Company shall undertake due care and ordinary skill in the performance of its services to Client, and the Company shall accept responsibility only were such skill has not been exercised and, even in such event, only to the extent of the limitation of liability set forth herein.

12. If Client desires to assert a claim arising from or relating to (i) the performance, purported performance or non-performance of any services by the Company or (ii) the sale, resale, manufacture, distribution or use of any tested goods, it must submit that claim to the Company in a writing that sets forth with particularity the basis for such claim within 60 days from discovery of the potential claim and not more than six months after the date of issuance of the Test Report to Client. Client waives any and all such claims including, without limitation, claims that the Test Report is inaccurate, incomplete or misleading or that additional or different testing is required, unless and then only to the extent that Client submits a written claim to the Company within both such time periods.

- 13. CLIENT SHALL, EXCEPT TO THE EXTENT OF COMPANY'S LIABILITY TO CLIENT HEREUNDER (WHICH IN NO EVENT SHALL EXCEED THE LIMITATION OF LIABILITY HEREIN), HOLD HARMLESS AND INDEMNIFY THE COMPANY, ITS AFFILIATES AND THEIR RESPECTIVE DIRECTORS, OFFICERS, EMPLOYEES, AGENTS AND SUBCONTRACTORS AGAINST ALL ACTUAL OR ALLEGED THIRD PARTY CLAIMS FOR LOSS, DAMAGE OR EXPENSE OF WHATSOEVER NATURE AND HOWSOEVER ARISING FROM OR RELATING TO (i) THE PERFORMANCE, PURPORTED PERFORMANCE OR NON-PERFORMANCE OF ANY SERVICES BY THE COMPANY OR (ii) THE SALE, RESALE, MANUFACTURE, DISTRIBUTION OR USE OF ANY TESTED GOODS.
- 14. EXCEPT AS MAY OTHERWISE BE EXPRESSLY AGREED TO IN WRITING BY THE COMPANY AND NOTWITHSTANDING ANY PROVISION TO THE CONTRARY CONTAINED HEREIN OR IN ANY TEST REPORT, NO WARRANTY OR GUARANTEE, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE, IS MADE.
- 15. (A) IN NO EVENT WHATSOEVER SHALL THE COMPANY BE LIABLE FOR ANY CONSEQUENTIAL, SPECIAL, INCIDENTAL, EXEMPLARY OR PUNITIVE DAMAGES IN CONNECTION WITH, RELATING TO OR ARISING OUT OF THE TEST REPORT OR THE SERVICES PROVIDED BY THE COMPANY HEREUNDER, INCLUDING WITHOUT LIMITATION LOSS OF OR DAMAGE TO PROPERTY; LOSS OF INCOME, PROFIT OR USE; OR ANY CLAIMS OR DEMANDS MADE AGAINST CLIENT OR ANY OTHER PERSON BY ANY THIRD PARTY IN CONNECTION WITH, RELATING TO OR ARISING OUT OF THE SERVICES PROVIDED BY THE COMPANY HEREUNDER.

(B)NOTWITHSTANDING ANY PROVISION TO THE CONTRARY CONTAINED HEREIN, AND IN RECOGNITION OF THE RELATIVE RISKS AND BENEFITS TO CLIENT AND THE COMPANY ASSOCIATED WITH THE TESTING SERVICES CONTEMPLATED HEREBY, THE RISKS HAVE BEEN ALLOCATED SUCH THAT UNDER NO CIRCUMSTANCES WHATSOEVER SHALL THE LIABILITY OF THE COMPANY TO CLIENT OR ANY THIRD PARTY IN RESPECT OF ANY CLAIM FOR LOSS, DAMAGE OR EXPENSE, OF WHATSOEVER NATURE OR MAGNITUDE, AND HOWSOEVER ARISING, EXCEED AN AMOUNT EQUAL TO FIVE (5) TIMES THE AMOUNT OF THE FEES PAID TO THE COMPANY FOR THE SPECIFIC SERVICES WHICH GAVE RISE TO SUCH CLAIM OR U.S.\$10,000, WHICHEVER IS THE LESSER AMOUNT.

- 16. The Company shall not be liable for any loss or damage resulting from any delay or failure in performance of its obligations hereunder resulting directly or indirectly from any event of force majeure or any event outside the control of the Company. If any such event occurs, the Company may immediately cancel or suspend its performance hereunder without incurring any liability whatsoever to Client.
- 17. Company's services, including these Conditions, shall be governed by, and construed in accordance with, the local laws of the country where the Company performs the tests or, in the case of tests performed in the United States of America, the laws of Massachusetts without regard to conflicts of laws principles. If any aspect(s) of these Conditions is found to be illegal or unenforceable, the validity, legality and enforceability of all remaining aspects of these Conditions shall not in any way be affected or impaired thereby. Any proceeding related to the subject matter hereof shall be brought, if at all, in the courts of the country where the Company performs the tests or, in the case of tests performed in the United States of America, in the courts of Massachusetts. Client waives the right to interpose any counterclaim or setoffs of any nature in any litigation arising hereunder.

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