

Report No.: DRTFCC1212-0845

Total 18 Pages

RF TEST REPORT

	Test item		Industrial PDA	
	Model No.		MT760	
	Order No.	:	DEMC1208-01642	
	Date of receipt	:	2012-08-30	
	Test duration	:	2012-11-05 ~ 2012-11-09	
	Date of issue	•	2012-12-03	
	Use of report	:	FCC Original Grant	
Applicant	: Bluebird So	ft In	C.	
	1242, Gaep	o-d	ong ,Gangnam-Gu, Seoul, k	Korea
	D: ::-! E140	_		
Test laboratory	: Digital EMC			V 16
	683-3, Yuba	ıng-	Dong, Cheoin-Gu, Yongin-S	i, Kyunggi-Do, 449-080, Korea
	Test specification		: FCC Part 15.225 Subpa	rt C
	Test environment		: See appended test repo	rt
	Test result		: 🛛 Pass 🗌 Fail	
			est report are limited only to the sam	
the use of this			than its purpose. This test report s rritten approval of DIGITAL EMC C	shall not be reproduced except in full, O., LTD.
Tested by:		\/\/it	nessed by:	Reviewed by:
rested by.		VVIC	nessed by.	Neviewed by.
C 1				
24	9			86
Engineer	_	N/A		Deputy General Manager
HongHee Lee				WonJung Lee

 DEMC1208-01642
 FCCID:
 SS4MT760

 Report No.:
 DRTFCC1212-0845

Test Report Version

Test Report No.	Date	Description
DRTFCC1212-0845	Dec. 03, 2012	Final version for approval

Report No.: DRTFCC1212-0845

CONTENTS

1. Equipment information	4
1.1 Equipment description	4
1.2 Ancillary equipment	4
2. Information about test items	5
2.1 Test mode	5
2.2 Auxiliary equipment	5
2.3 Tested frequency	5
2.4 Tested environment	5
2.5 EMI Suppression Device(s)/Modifications	5
3. Test Report	6
3.1 Summary of tests	6
3.2 Transmitter requirements	7
3.2.1 20dB Bandwidth Measurement	7
3.2.2 In-Band Radiated Spurious Emission	8
3.2.3 Radiated Spurious Emission Measurements, Out-of-Band	9
3.2.4 Frequency Stability	11
3.2.5 AC Line Conducted Emissions	12
ADDENDIY	15

1. Equipment information

1.1 Equipment description

FCC Equipment Class	Low Power Communications Device Transmitter(DXX)
Equipment type	Industrial PDA
Equipment model name	MT760
Equipment add model name	N/A
Equipment serial no.	Identical prototype
Frequency band	13.56MHz
Modulation type	ASK
Channel	1
Power	Li-ion polymer Battery: DC 7.4V
Antenna type	Loop Antenna

1.2 Ancillary equipment

Equipment	Model No.	Serial No.	Manufacturer	Note
-	-	-	-	-
-	-	-	-	-

DEMC1208-01642 Report No.: **DRTFCC1212-0845**

2. Information about test items

2.1 Test mode

Test mode	Continuous transmitting mode
	Š

Note: For this test mode, a test program was supported by manufacturer.

2.2 Auxiliary equipment

Equipment	Model No.	Serial No.	Manufacturer	Note
-	-	-	-	-
-	-	-	-	-

2.3 Tested frequency

	TXFrequency(MHz)	RX Frequency(MHz)
Lowest Channel	13.56	13.56
Middle Channel	-	-
Highest Channel	-	-

2.4 Tested environment

Temperature	: 21 ~ 24°C
Relative humidity content	: 40 ~ 60 % R.H.
Details of power supply	Battery: DC 7.4V AC 120V 60Hz

2.5 EMI Suppression Device(s)/Modifications

EMI suppression device(s) added and/or modifications made during testing \rightarrow None

3. Test Report

3.1 Summary of tests

FCC Part Section(s)	Parameter	Limit	Test Condition	Status Note 1		
I. Test Items						
2.1049	20 dB Bandwidth	N/A		С		
15.225 (a)	In-Band Emissions	15,848 µV/m @ 30m 15.553 – 13.567 MHz		С		
15.225 (b)	In-Band Emissions	334 μV/m @ 30m 13.410 – 13.553 MHz 13.567 – 13.710 MHz	Radiated	С		
15.225 (c)	In-Band Emissions	106 كا//m @ 30m 13.110 – 13.410 MHz 13.710 – 14.010 MHz		С		
15.225 (d) 15.205 15.209	Out-of Band Emissions	Emissions outside of the specified band (13.110-14.010 MHz) must meet the radiated limits detailed in 15.209		С		
15.225 (e)	Frequency Stability Tolerance	±0.01% of operating frequency	Conducted	С		
15.207	AC Conducted Emissions	EN 55022	AC Line Conducted	С		
15.203	Antenna requirements	FCC Part 15.203	-	С		
Note 1: C=Comply NC=Not Comply NT=Not Tested NA=Not Applicable						

The sample was tested according to the following specification: ANSI C-63.4-2003

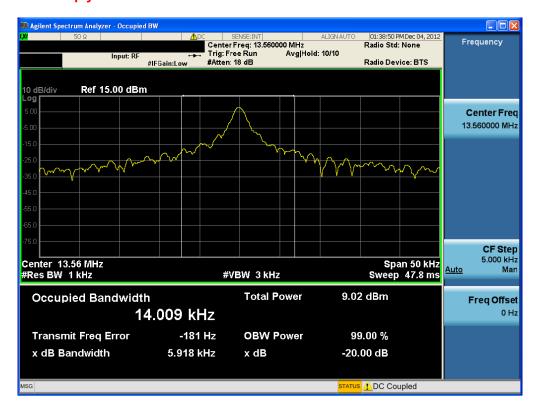
3.2 Transmitter requirements

3.2.1 20dB Bandwidth Measurement

- Procedure:

The 20dB Bandwidth is measured with a spectrum analyzer connected via a receive antenna placed near the EUT while the EUT is operating in transmission mode.

- Measurement Data: Comply



- Minimum Standard: Part 2.1049

None

3.2.2 In-Band Radiated Spurious Emission

- Procedure:

The EUT was placed on a 0.8m high wooden table inside a 10m semi anechoic chamber. An antenna was placed at 3 m distance from the EUT Measurements were performed with the EUT oriented in 3 orthogonal axis and rotated 360 degrees to determine worst-case orientation for maximum emissions. A loop antenna was used for this test item. And this test item was performed for both vertical and horizontal polarization.

- Measurement Data: Comply

Test Frequency Band [MHz]	Freq. [MHz]	EUT Posi.	Reading Level [dBuV]	T.F	Field Strength @3m [dBuV/m]	Field Strength @30m [dBuV/m]	Limit [dBuV/m]	Margin [dB]
13.110 ~ 13.410	13.345	Υ	53.20	-4.60	48.60	8.60	40.51	31.91
13.410 ~ 13.553	13.486	Υ	52.60	-4.60	48.00	8.00	50.47	42.47
13.553 ~ 13.567	13.560	Υ	70.20	-4.60	65.60	25.60	84.00	58.40
13.567 ~ 13.710	13.703	Υ	51.30	-4.60	46.70	6.70	50.47	43.77
13.710 ~ 14.010	13.778	Υ	55.00	-4.60	50.40	10.40	40.51	30.11

- **Note 1.** This test item was performed using a loop antenna.
- **Note 2.** This test item was performed at 3m and the data were extrapolated to the specified measurement distance of 30m using the square of an inverse linear distance extrapolation factor (40 dB/decade) as specified in §15.31(f)2.
 - Extrapolation Factor = $20 \log_{10}(30/3)^2 = 40 dB$
- **Note 3.** All data were recorded using a spectrum analyzer employing a peak detector.

If PK results were meet Quasi-peak limit, Quasi-peak measurements were omitted.

Note 4. Sample Calculation.

 $\label{eq:margin} \begin{tabular}{ll} Margin = Limit - Field Strength @ 30m & / & Field Strength @ 30m & Field Strength @ 3m - 40 \\ Field Strength @ 3m & + T.F & / & T.F & + CL - AG \\ \end{tabular}$

Where, T.F = Total Factor, AF = Antenna Factor, CL = Cable Loss, AG = Amplifier Gain

- Minimum Standard: Part 15.225(a), (b), (c)

Frequency Band [MHz]	Limit		
r requericy band [Wiriz]	[uV/m]	[dBuV/m]	
13.553-13.567	15,848	84.00	
13.410-13.553 13.567-13.710	334	50.47	
13.110-13.410 13.710-14.010	106	40.51	

3.2.3 Radiated Spurious Emission Measurements, Out-of-Band

- Procedure:

The EUT was tested from 9kHz up to the 1GHz excluding the band 13.110-14.010MHz. All measurements were recorded with spectrum analyzer employing a peak detector for emissions below 30MHz. Above 30MHz a Quasi-peak detector was used. All out-of-band emissions must not exceed the limits §15.209. A loop antenna was used for searching for emissions below 30MHz.

- Measurement Data: Comply(refer to the next page)

- Minimum Standard: Part 15. 205, 209, 225(d)

• FCC Part 15.205 (a): Only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	MHz	GHz	GHz
0.009 ~ 0.110	8.41425 ~ 8.41475	108 ~ 121.94	1300 ~ 1427	3.6 ~ 4.4	14.47 ~ 14.5
0.495 ~ 0.505	12.29 ~ 12.293	123 ~ 138	1435 ~ 1626.5	4.5 ~ 5.15	15.35 ~ 16.2
2.1735 ~ 2.1905	12.51975 ~ 12.52025	149.9 ~ 150.05	1645.5 ~ 1646.5	5.35 ~ 5.46	17.7 ~ 21.4
4.125 ~ 4.128	12.57675 ~ 12.57725	156.52475 ~ 156.52525	1660 ~ 1710	7.25 ~ 7.75	22.01 ~ 23.12
4.17725 ~ 4.17775	13.36 ~ 13.41	156.7 ~ 156.9	1718.8 ~ 1722.2	8.025 ~ 8.5	23.6 ~ 24.0
4.20725 ~ 4.20775	16.42 ~ 16.423	162.0125 ~ 167.17	2200 ~ 2300	9.0 ~ 9.2	31.2 ~ 31.8
6.215 ~ 6.218	16.69475 ~ 16.69525	167.72 ~ 173.2	2310 ~ 2390	9.3 ~ 9.5	36.43 ~ 36.5
6.26775 ~ 6.26825	16.80425 ~ 16.80475	240 ~ 285	2483.5 ~ 2500	10.6 ~ 12.7	Above 38.6
6.31175 ~ 6.31225	25.5 ~ 25.67	322 ~ 335.4	2655 ~ 2900	13.25 ~ 13.4	
8.291 ~ 8.294	37.5 ~ 38.25	399.90 ~ 410	3260 ~ 3267		
8.362 ~ 8.366	73 ~ 74.6	608 ~ 614	3332 ~ 3339		
8.37625 ~ 8.38675	74.8 ~ 75.2	960 ~ 1240	3345.8 ~ 3358		

• FCC Part 15.205(b):

The field strength of emissions appearing within these frequency bands shall not exceed the limits shown in §15.209. At frequencies equal to or less than 1000 MHz, compliance with the limits in §15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000 MHz, compliance with the emission limits in §15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in §15.35 apply to these measurements.

• FCC Part 15.209(a):

Frequency [MHz]	Field Strength [uV/m]	Measurement Distance [Meters]
0.009 ~ 0.490	2400/F(kHz)	300
0.490 ~ 1.705	24000/F(kHz)	30
1.705 ~ 30	30	30
30 ~ 88	100 **	3
88 ~ 216	150 **	3
216 ~ 960	200 **	3
Above 960	200	3

^{**} Except as provided in 15.209(g), fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54-72 MHz, 76-88MHz, 174-216MHz or 470-806MHz. However, operation within these frequency bands is permitted under other sections of this Part, e.g. 15.231 and 15.241.

• FCC Part 15.209(b):

In the emission table above, the tighter limit applies at the band edges.

DEMC1208-01642 Report No.: **DRTFCC1212-0845**

- Measurement Data:

Tested Frequency : 13.56MHz

Measurement Distance : 3 Meters

Frequency [MHz]	EUT Posi.	ANT Pol	Reading [dBuV]	T.F [dB/m]	Distance factor	Field Strength [dBuV/m]	Limit [dBuV/m]	Margin [dB]
14.625	Y	N/A	40.20	-4.06	40	-3.86	29.54	33.40
27.144	Y	N/A	37.10	-3.50	40	-6.40	29.54	35.94
575.624	Y	V	37.70	-2.4	N/A	35.30	46.00	10.70
600.496	Y	V	35.30	-1.90	N/A	33.40	46.00	12.60
-	-	-	-	-	-	-	-	-

- **Note 1.** All measurements were recorded using a spectrum analyzer employing a peak detector for blew 30MHz and a Quasi-peak detector for above 30MHz.
- **Note 2.** Both Vertical and Horizontal polarities of the receiver antenna were evaluated with the worst case emissions being reported.
- Note 3. The worst-case emissions are reported.
- **Note 4.** No other spurious and harmonic emissions were reportedgreater than listed emissions above table.
- Note 5. Sample calculation

Margin = Limit – Field Strength

Field Strength = Reading + T.F – Distance factor

T.F = AF + CL - AG

Distance factor = 20log(Measurement distance / The measured distance)²

Where, T.F = Total Factor, AF = Antenna Factor, CL = Cable Loss, AG = Amplifier Gain

DEMC1208-01642 Report No.: **DRTFCC1212-0845**

3.2.4 Frequency Stability

- Procedure:

Part 15.225 requires that devices operating in the 13.553 – 13.567 MHz shall maintain the carrier frequency within 0.01% of the operating frequency over the temperature variation of -20 degrees to + 50 degrees C at normal supply voltage.

- Measurement Data: Comply

Operating Frequency : 13,560,000Hz

VOLTAGE (%)	POWER (VDC)	TEMP (℃)	Frequency (Hz)	Freq. Dev. (Hz)	Deviation (%)
100%		+23(ref)	13,560,000	0	0.000000
100%		-20	13,559,919	-81	-0.000597
100%		-10	13,559,921	-79	-0.000583
100%		0	13,559,923	-77	-0.000568
100%	7.400	+10	13,559,920	-80	-0.000590
100%		+20	13,559,921	-79	-0.000583
100%		+30	13,559,917	-83	-0.000612
100%		+40	13,559,937	-63	-0.000465
100%		+50	13,559,928	-72	-0.000531
85%	6.290	+23	13,559,947	-53	-0.000391
115%	8.510	+23	13,559,951	-49	-0.000361
BATT.ENDPOINT	5.800	+23	13,559,963	-37	-0.000273

- Minimum Standard: Part 15. 225(e)

The frequency tolerance of the carrier signal shall be maintained within ±0.01% of the operating frequency.

DEMC1208-01642 Report No.: **DRTFCC1212-0845**

3.2.5 AC Line Conducted Emissions

- Procedure:

The conducted emissions are measured in the shielded room with a spectrum analyzer in peak hold. While the measurement, EUT had its hopping function disabled at the middle channels in line with Section 15.21(m). Emissions closest to the limit are measured in the quasi-peak and average detector mode with the tuned receiver using a bandwidth of 9 kHz. The emissions are maximized further by cable manipulation and Exerciser operation. The highest emissions relative to the limit are listed.

- **Measurement Data: Comply**(refer to the next page)

Note.: This test item was performed EUT with dummy load instead of the antenna

- Minimum Standard: FCC Part 15.207(a)

Frequency Range	Conducted Limit (dBuV)				
(MHz)	Quasi-Peak	Average			
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

DEMC1208-01642 Report No.: **DRTFCC1212-0845**

- Measurement Data:



Results of Conducted Emission

Digital EMC Date: 2012-11-09

 Model No.
 :
 MT760
 Reference No.
 :
 120 V 60 Hz

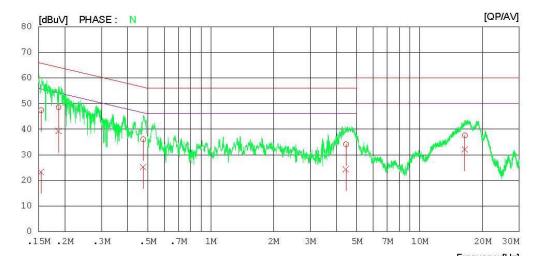
 Type
 :
 Power Supply
 :
 120 V 60 Hz

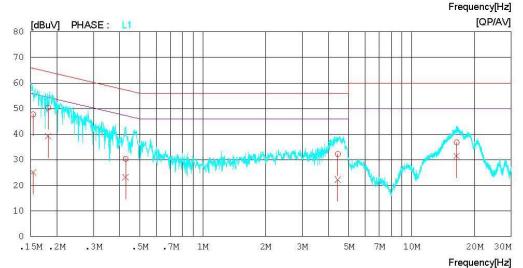
 Serial No.
 :
 NONE
 Temp/Humi.
 :
 21 'C 40 % R.H.

 Test Condition
 :
 NFC
 Operator
 :
 H.H.Lee

Memo : With dummy load(Not ANT)

LIMIT : CISPR22_B QP CISPR22_B AV





FCCID: **SS4MT760** DEMC1208-01642

Report No.: DRTFCC1212-0845

Results of Conducted Emission

Digital EMC Date : 2012-11-29

: MT760 Model No.

: : 120 V 60 Hz : 21 'C 40 % R.H. : H.H.Lee Referrence No. Power Supply Type Serial No. Temp/Humi.
Operator : NON : NFC NONE Test Condition

Memo : With dummy load(Not ANT)

LIMIT : CISPR22_B QP CISPR22_B AV

No) FREQ	READING			Diego.	LIM			Proceedings and	PHASE	
	[MHz]	QP A [dBuV] [dE	AV BuV] [dB]	QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]		
1	0.15408	47.2 23	3.1 0.2	47.4	23.3	65.8	55.8	18.4	32.5	N	
2	0.18668	48.4 39	9.0 0.2	48.6	39.2	64.2	54.2	15.6	15.0	N	
3	0.47501	35.8 25	5.1 0.2	36.0	25.3	56.4	46.4	20.4	21.1	N	
4	4.44250	33.8 24	1.0 0.3	34.1	24.3	56.0	46.0	21.9	21.7	N	
5	16.47650	36.7 31	1.3 0.8	37.5	32.1	60.0	50.0	22.5	17.9	N	
6	0.15405	47.5 24	1.9 0.2	47.7	25.1	65.8	55.8	18.1	30.7	L1	
7	0.18179	50.2 39	9.1 0.2	50.4	39.3	64.4	54.4	14.0	15.1	L1	
8	0.42725	30.2 23	3.0 0.2	30.4	23.2	57.3	47.3	26.9	24.1	L1	
9	4.43700	32.0 22	2.0 0.3	32.3	22.3	56.0	46.0	23.7	23.7	L1	
10	16.44250	36.0 30	0.7	36.8	31.5	60.0	50.0	23.2	18.5	L1	

DEMC1208-01642 Report No.: **DRTFCC1212-0845**

APPENDIX

TEST EQUIPMENT FOR TESTS

To facilitate inclusion on each page of the test equipment used for related tests, each item of test equipment.

	Туре	Manufacturer	Model	Cal.Date (yy/mm/dd)	Next.Cal.Date (yy/mm/dd)	S/N
	Spectrum Analyzer	Agilent	E4440A	12/09/18	13/09/18	MY45304199
	Spectrum Analyzer	Rohde Schwarz	FSQ26	12/01/09	13/01/09	200445
	Spectrum analyzer	Agilent	E4404B	12/03/05	13/03/05	US41061134
	Spectrum Analyzer(RE)	H.P	8563E	11/10/04	Calibrating	3551A04634
\boxtimes	MXA Signal Analyzer	Agilent Technologies, Inc	N9020A	12/01/09	13/01/09	MY49100833
	Spectrum Analyzer	Agilent	E4440A	12/10/22	13/10/22	US45303022
	Power Meter	H.P	EPM-442A	12/07/01	13/07/01	GB37170413
	Power Sensor	H.P	8481A	12/07/01	13/07/01	3318A96332
	Power Sensor	Rohde Schwarz	NRP-Z81	12/06/28	13/06/28	1137.9009.02- 101001
	Virtual Power Meter(S/W)	Rohde Schwarz	R&S Power Viewer Plus	-	-	V 4.1.0
	Power Divider	Agilent	11636B	12/09/17	13/09/17	56471
	4-Way Power Divider	ET Industries	D-0526-4	12/11/02	13/11/02	210195001
	Power Splitter	Anritsu	K241B	12/09/17	13/09/17	020611
	Power Splitter	Anritsu	K241B	12/07/01	13/07/01	017060
	Power Splitters & Dividers	Aeroflex/Weinschel	1594	12/02/07	13/02/07	1177
	Frequency Counter	H.P	5342A	12/07/01	13/07/01	2119A04450
\boxtimes	TEMP & HUMIDITY Chamber	JISCO	KR-100/J-RHC2	12/09/17	13/09/17	30604493/021031
	TEMP & HUMIDITY Chamber	SJ SCIENCE	TEMI850-10	12/03/06	13/03/06	S7400LE267 1226
	Digital Multimeter	H.P	34401A	12/03/05	13/03/05	3146A13475, US36122178
	Multifunction Synthesizer	HP	8904A	12/10/16	13/10/16	3633A08404
	Signal Generator	Rohde Schwarz	SMR20	12/03/05	13/03/05	101251
	Signal Generator	H.P	ESG-3000A	12/07/01	13/07/01	US37230529
\boxtimes	Vector Signal Generator	Rohde Schwarz	SMJ100A	12/01/09	13/01/09	100148
	Vector Signal Generator	Rohde Schwarz	SMBV100A	12/01/09	13/01/11	255571
	Audio Analyzer	H.P	8903B	12/07/02	13/07/02	3011A09448
	Modulation Analyzer	H.P	8901B	12/07/01	13/07/01	3028A03029
	8960 Series 10 Wireless Comms. Test Set	Agilent	E5515C	12/03/05	13/03/05	GB43461134
	Universal Radio communication Tester	Rohde Schwarz	CMU200	12/03/06	13/03/06	106760
	Bluetooth Tester	TESCOM	TC-3000B	12/07/01	13/07/01	3000B640046
	Thermo hygrometer	BODYCOM	BJ5478	12/01/13	13/01/13	090205-3
\boxtimes	Thermo hygrometer	BODYCOM	BJ5478	12/01/13	13/01/13	090205-2
	Thermo hygrometer	BODYCOM	BJ5478	12/01/13	13/01/13	090205-4
	Thermo hygrometer	BODYCOM	BJ5478	12/06/20	13/06/20	120612-1
	Thermo hygrometer	BODYCOM	BJ5478	12/06/20	13/06/20	120612-2
	AC Power supply	DAEKWANG	5KVA	12/03/05	13/03/05	20060321-1
\boxtimes	DC Power Supply	HP	6622A	12/03/05	13/03/05	3448A03760
	DC Power Supply	HP	6633A	12/03/05	13/03/05	3524A06634

Cal.Date Next.Cal.Date Manufacturer Model S/N **Type** (yy/mm/dd) (yy/mm/dd) SDP30-5D DC Power Supply SM techno 12/06/08 13/06/08 305DKA013 **BAND Reject Filter** Microwave Circuits N0308372 12/09/17 13/09/17 3125-01DC0352 13/09/17 **BAND Reject Filter** Wainwright WRCG1750 12/09/17 2 **ANRITSU** MP526D 12/09/17 13/09/17 M27756 High-Pass Filter High-pass filter Wainwright WHNX2.1 12/09/17 13/09/17 1 High-pass filter Wainwright WHNX3.0 12/09/17 13/09/17 9 WHNX5.0 12/09/17 13/09/17 8 High-pass filter Wainwright High-Pass Filter Wainwright WHKX8.5 12/09/17 13/09/17 1 WHKX1.0 12/09/17 13/09/17 9 High-Pass Filter Wainwright WRCT800.0 Tunable Notch Filter Wainwright N/A N/A 32 /960.0-0.2/40-8SSK WRCD1700.0 Tunable Notch Filter /2000.0-0.2/40-N/A N/A Wainwright 53 10SSK WRCT1900.0/ Tunable Notch Filter Wainwright N/A N/A 30 2200.0-5/40-10SSK **HORN ANT ETS** 3115 11/09/06 13/09/06 21097 **HORN ANT ETS** 3115 12/02/20 14/02/20 6419 **HORN ANT** SAS-574 11/03/25 13/03/25 154 A.H.Systems 13/03/25 **HORN ANT** A.H.Systems SAS-574 11/03/25 155 Dipole Antenna Schwarzbeck VHA9103 11/11/22 13/11/22 2116 Schwarzbeck VHA9103 11/11/22 13/11/22 2117 Dipole Antenna **UHA9105** 11/11/22 13/11/22 2261 Dipole Antenna Schwarzbeck Dipole Antenna Schwarzbeck **UHA9105** 11/11/22 13/11/22 2262 LOOP Antenna **ETS** 6502 10/10/29 Calibrating 3471 \boxtimes LOOP Antenna Schwarzbeck FMZB1513 12/09/24 13/09/24 1513-128 Coaxial Fixed Attenuators 8491B 12/07/02 13/07/02 MY39260700 Agilent WEINSCHEL 56-3 13/09/17 Y2342 Attenuator (3dB) 12/09/17 13/09/17 Y2370 WEINSCHEL 56-3 12/09/17 Attenuator (3dB) WEINSCHEL 12/09/17 13/09/17 BP4386 Attenuator (10dB) 23-10-34 Attenuator (10dB) WEINSCHEL 23-10-34 12/01/.9 13/01/09 BP4387 Attenuator (10dB) WEINSCHEL 86-10-11 12/09/17 13/09/17 446 WEINSCHEL 86-10-11 12/09/17 13/09/17 408 Attenuator (10dB) Attenuator (20dB) WEINSCHEL 86-20-11 12/09/17 13/09/17 432 Attenuator (30dB) JFW 50FH-030-300 12/03/05 13/03/05 060320-1 Attenuator (40dB) WEINSCHEL 57-40-33 12/09/17 13/09/17 NN837 H.P HP-909D 12/07/01 13/07/01 02750 Termination H.P Termination HP-909D 12/07/01 13/07/01 02702

	Туре	Manufacturer	Model	Cal.Date (yy/mm/dd)	Next.Cal.Date (yy/mm/dd)	S/N
	Type N Coaxial CIRCULATOR	NOVA MICROWAVE	0185CAN	12/07/01	13/07/01	790
	Amplifier (30dB)	Agilent	8449B	12/03/05	13/03/05	3008A01590
	Amplifier (30dB)	H.P	8449B	12/03/05	13/03/05	3008A00370
	Amplifier	EMPOWER	BBS3Q7ELU	12/09/18	13/09/18	1020
	RF Power Amplifier	OPHIRRF	5069F	12/07/01	13/07/01	1006
\boxtimes	EMI TEST RECEIVER	R&S	ESU	12/01/09	13/01/09	100014
\boxtimes	BILOG ANTENNA	SCHAFFNER	CBL 6112D	10/12/21	12/12/21	22609
\boxtimes	Amplifier (22dB)	H.P	8447E	12/01/09	13/01/09	2945A02865
	EMI TEST RECEIVER	R&S	ESCI	12/03/06	13/03/06	100364
	BICONICAL ANT.	Schwarzbeck	VHA 9103	12/10/04	14/10/04	91032789
	LOG-PERIODIC ANT.	Schwarzbeck	UHALP9108A1	10/11/29	12/11/29	1098
	BICONICAL ANT.	Schwarzbeck	VHA 9103	10/12/21	12/12/21	91031946
	LOG-PERIODIC ANT.	Schwarzbeck	UHALP9108A1	12/10/04	14/10/04	9108-A0590
	Low Noise Pre Amplifier	TSJ	MLA-100K01-B01-2	12/03/05	13/03/05	1252741
	Low Noise Pre Amplifier	TSJ	MLA-00108-B02-36	12/01/09	13/01/09	1518831
	Amplifier (25dB)	Agilent	8447D	12/07/01	13/07/01	2648A04922
	Spectrum Analyzer(CE)	H.P	8591E	12/03/05	13/03/05	3649A05889
	LISN	Kyoritsu	KNW-407	12/01/09	13/01/09	8-317-8
	Artificial Mains Network	Narda S.T.S. / PMM	PMM L2-16B	12/03/13	13/03/13	000WX20305
	CVCF	NF Electronic	4420	12/09/15	13/09/15	304935/4420023
	50 ohm Terminator	HME	CT-01	12/01/09	13/01/09	N/A
	RFI/FIELD Intensity Meter	Kyoritsu	KNM-2402	12/07/02	13/07/02	4N-170-3
	EMI Test Receiver	R&S	ECSI	12/03/05	13/03/05	100364
\boxtimes	ARTIFICIAL MAINS NETWORK	R&S	ESH2-Z5	12/09/18	13/09/18	828739/006
	CVCF	NF Electronic	4420	12/03/05	13/03/05	304935/337980
\boxtimes	RFI/FIELD Intensity Meter	ES4152	424059	12/09/17	13/09/17	424059
	Wideband Radio Communication Tester	R&S	CMW500	12/09/18	13/09/18	100989
	Audio Analyzer	R&S	UPL	12/03/06	13/03/06	101156