


TEST REPORT FROM RFI GLOBAL SERVICES LTD

Test of: Datalogic Mobile SRL
Skorpio (U4G0020)

To: FCC Part 15: 2007 Class B (Sections 15.107 and 15.109)

Test Report Serial No:
RFI/EMCE1/RP49563JD01A

This Test Report Is Issued Under The Authority
Of: Claire Ashman, EMC Service Leader.



Checked By: Claire Ashman



Report Copy No: PDF01

Issue Date: 20 December 2007

Test Dates: 29 October 2007 to 30 October 2007

The Bluetooth® word mark and logos are owned by the *Bluetooth* SIG, Inc. and any use of such marks by RFI Global Services Ltd. is under license. Other trademarks and trade names are those of their respective owners.

This report is issued in Adobe Acrobat portable document format (PDF). It is only a valid copy of the report if it is being viewed in PDF format with the following security options not allowed: Changing the document, Selecting text and graphics, Adding or changing notes and form fields.

This report may be copied in full. The results in this report apply only to the sample(s) tested.

RFI Global Services Ltd

Pavilion A, Ashwood Park, Ashwood Way, Basingstoke, Hampshire RG23 8BG

Telephone: +44 (0)1256 312000 Facsimile: +44 (0)1256 312001

Email: info@rfi-global.com Website: www.rfi-global.com

RFI GLOBAL SERVICES LTD

TEST REPORT

S.No. RFI/EMCE1/RP49563JD01A

Page: 2 of 23

Issue Date: 20 December 2007

**Test Of: Datalogic Mobile SRL
Skorpio (U4G0020)**

To: FCC Part 15: 2007 Class B (Sections 15.107 and 15.109)

This page has been left intentionally blank.

Test Of: Datalogic Mobile SRL
Skorpio (U4G0020)

To: FCC Part 15: 2007 Class B (Sections 15.107 and 15.109)

Table of Contents

1. Client Information	4
2. Equipment Under Test (EUT).....	5
3. Test Specification, Methods and Procedures	7
4. Deviations from the Test Specification	7
5. Operation of the EUT during Testing.....	8
6. Summary of Test Results.....	9
7. Measurements, Examinations and Derived Results.....	10
8. Measurement Uncertainty	15
Appendix 1. Test Equipment Used.....	16
Appendix 2. Test Configuration Drawings	17
Appendix 3. Graphical Test Results	21

Test Of: Datalogic Mobile SRL
Skorpio (U4G0020)

To: FCC Part 15: 2007 Class B (Sections 15.107 and 15.109)

1. Client Information

Company Name:	Datalogic Mobile SRL
Address:	Via Candini, 2 Lippo di Calderara di Reno Bologna 40012
Contact Name:	Mr M Girolami

Test Of: Datalogic Mobile SRL
Skorpio (U4G0020)

To: FCC Part 15: 2007 Class B (Sections 15.107 and 15.109)

2. Equipment Under Test (EUT)

The following information (with the exception of the date of receipt) has been supplied by the client:

2.1. Identification of Equipment Under Test (EUT)

Description::	Handheld Scanner
Brand Name:	Skorpio (Datalogic)
Serial Number:	D07P01530
Country of Manufacture:	Italy
Date of Receipt:	29 October 2007

Description::	AC/DC Adaptor
Brand Name:	Datalogic
Model Name or Number:	SAL 115A-0525V-6
Country of Manufacture:	China
Date of Receipt:	29 October 2007

2.2. Description of EUT

The equipment under test is a Mobile Computer.

2.3. Modifications Incorporated in the EUT

During the course of testing the EUT was not modified.

Test Of: Datalogic Mobile SRL
Skorpio (U4G0020)

To: FCC Part 15: 2007 Class B (Sections 15.107 and 15.109)

2.4. Additional Information Related to Testing

Equipment Category:	<i>Bluetooth</i> , 802.11 (x)
Type of Unit:	Base Station (fixed used) and Portable (standalone battery powered device).
Weight:	300g
Dimensions:	20 x 7 x 3 cm
Power Supply Requirement:	
DC Supply (Volts)	Not applicable
AC Supply (Volts)	Nominal 110 V, 60 Hz AC Mains Supply
Internal Battery Supply (Volts)	3.7 V
Intended Operating Environment:	Commercial
Cycle Time:	Less than 2.5 seconds

2.5. Port Identification

Port	Description	Type	Applicable
1	Enclosure	Not applicable	Yes
2	USB/Powerport	< 3m	Yes

Test Of: Datalogic Mobile SRL
Skorpio (U4G0020)

To: FCC Part 15: 2007 Class B (Sections 15.107 and 15.109)

3. Test Specification, Methods and Procedures

3.1. Test Specification

Reference:	FCC Part 15: 2007 Class B (Sections 15.107 and 15.109)
Title:	Code of Federal Regulations, Part 15 (47CFR15) Radio Frequency Devices.

3.2. Methods And Procedures

The methods and procedures used were as detailed in:

ANSI/TIA-603-B-2002

Land Mobile Communications Equipment, Measurements and performance Standards

ANSI C63.2 (1987)

Title: American National Standard for Instrumentation - Electromagnetic noise and field strength.

ANSI C63.4 (2001)

Title: American National Standard Methods of Measurement of Electromagnetic Emissions from Low Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz.

ANSI C63.5 (1988)

Title: American National Standard for the Calibration of antennas used for Radiated Emission measurements in Electromagnetic Interference (EMI) control.

ANSI C63.7 (1988)

Title: American National Standard Guide for Construction of Open Area Test Sites for performing Radiated Emission Measurements.

CISPR 16-1: (1999)

Title: Specification For Radio Disturbance and Immunity Measuring Apparatus and Methods. Part 1: Radio Disturbance and Immunity Measuring Apparatus.

Public Notice DA00-705 (2000)

Title: Filing and Frequency Measurement Guidelines for Frequency Hopping Spread Spectrum Systems.

3.3. Definition of Measurement Equipment

The measurement equipment used complied with the requirements of the standards referenced in the methods & procedures section above. Appendix 1 contains a list of the test equipment used.

4. Deviations from the Test Specification

There were no deviations from the test specification.

Test Of: Datalogic Mobile SRL
Skorpio (U4G0020)

To: FCC Part 15: 2007 Class B (Sections 15.107 and 15.109)

5. Operation of the EUT during Testing

5.1. Operating Modes

The EUT was tested in the following operating mode(s):

Powered via 110 V AC, 60 Hz and running scanner test.

5.2. Configuration and Peripherals

The EUT was tested in the following configuration(s):

EUT powered via Datalogic SRL 115A-0525 –V6 power supply.

Please refer to Appendix 2 for a schematic drawing of the test configuration, drawing number
DRG\49563JD01\001

Test Of: Datalogic Mobile SRL
Skorpio (U4G0020)

To: FCC Part 15: 2007 Class B (Sections 15.107 and 15.109)

6. Summary of Test Results

Range of Measurements	Specification Reference	Port Type	Compliance Status
Conducted Emissions	FCC Part 15.107	AC Mains Input	Complied
Radiated Emissions Electric Field Strength, 30 MHz to 1000 MHz	FCC Part 15.109	Enclosure	Complied

6.1. Location of Tests

All the measurements described in this report were performed at the premises of RFI Global Services Ltd, Ewhurst Park, Ramsdell, Basingstoke, Hampshire, RG26 5RQ.

Test Of: Datalogic Mobile SRL
Skorpio (U4G0020)

To: FCC Part 15: 2007 Class B (Sections 15.107 and 15.109)

7. Measurements, Examinations and Derived Results

7.1. General Comments

This section contains test results only.

Measurement uncertainties are evaluated in accordance with current best practice. Our reported expanded uncertainties are based on standard uncertainties, which are multiplied by an appropriate coverage factor to provide a statistical confidence level of approximately 95%. Please refer to section 8 for details of measurement uncertainties.

Test Of: Datalogic Mobile SRL
Skorpio (U4G0020)

To: FCC Part 15: 2007 Class B (Sections 15.107 and 15.109)

7.2. Test Results

7.2.1. AC Mains Conducted Emissions - Quasi Peak Detector Measurements on Live and Neutral Lines

Tests were performed using the test methods detailed in ANSI C63.4 Section 7.

Plots of the initial scans can be found in Appendix 3.

The following table lists frequencies at which emissions were measured using a quasi peak detector:

Test Summary:

Port:	AC Mains Input
Basic Standard:	FCC Part 15.107

Environmental Conditions:

Temperature Variation (°C):	19.3 to 19.3
Relative Humidity Variation (%):	50 to 50
Atmospheric Pressure Variation (mb):	1008 to 1008

Results:

Frequency (MHz)	Line	Quasi Peak Level (dB μ V)	Limit (dB μ V)	Margin (dB)	Note(s)	Result
0.155	Neutral	42.0	65.8	23.8	-	Complied
0.195	Live	48.5	63.8	15.3	-	Complied
0.200	Live	52.4	63.6	11.2	-	Complied
0.267	Neutral	48.7	61.2	12.5	-	Complied
0.398	Neutral	46.1	57.9	11.8	-	Complied
3.444	Live	40.1	56.0	15.9	-	Complied
3.512	Live	41.9	56.0	14.1	-	Complied
3.579	Live	41.5	56.0	14.5	-	Complied
3.777	Live	36.9	56.0	19.1	-	Complied
3.845	Live	37.0	56.0	19.0	-	Complied

Test Of: Datalogic Mobile SRL
Skorpio (U4G0020)

To: FCC Part 15: 2007 Class B (Sections 15.107 and 15.109)

7.2.2. AC Mains Conducted Emissions - Average Detector Measurements on Live and Neutral Lines

Tests were performed using the test methods detailed in ANSI C63.4 Section 7.

Following the initial scans and quasi peak measurements, further measurements were made at the relevant frequencies using an average detector. The measured levels were as follows:

Test Summary:

Port:	AC Mains Input
Basic Standard:	FCC Part 15.107

Environmental Conditions:

Temperature Variation (°C):	19.3 to 19.3
Relative Humidity Variation (%):	50 to 50
Atmospheric Pressure Variation (mb):	1008 to 1008

Results:

Frequency (MHz)	Line	Average Level (dBμV)	Limit (dBμV)	Margin (dB)	Note(s)	Result
0.398	Neutral	43.7	47.9	4.2	-	Complied
0.663	Live	36.0	46.0	10.0	-	Complied
2.054	Live	37.0	46.0	9.0	-	Complied
2.517	Live	36.8	46.0	9.2	-	Complied
3.444	Live	35.3	46.0	10.7	-	Complied
3.512	Live	39.2	46.0	6.8	-	Complied
3.579	Live	39.3	46.0	6.7	-	Complied
3.845	Live	31.0	46.0	15.0	-	Complied
3.908	Live	37.2	46.0	8.8	-	Complied
3.975	Live	38.2	46.0	7.8	-	Complied

Test Of: Datalogic Mobile SRL
Skorpio (U4G0020)

To: FCC Part 15: 2007 Class B (Sections 15.107 and 15.109)

7.2.3. Radiated Emissions - Electric Field Strength Measurements (Frequency Range: 30 to 1000 MHz)

Tests were performed using the test methods detailed in ANSI C63.4 Section 8, and Public Notice DA 00-705 (March 30, 2000).

Plots of the initial scans can be found in Appendix 3.

The following table lists frequencies at which emissions were measured using a quasi peak detector, at a test measurement distance of 3 metres:

Test Summary:

Port:	Enclosure
Basic Standard:	FCC Part 15.109

Environmental Conditions:

Temperature Variation (°C):	17 to 17
Relative Humidity Variation (%):	45 to 45
Atmospheric Pressure Variation (mb):	1012 to 1012

Results:

Frequency (MHz)	Antenna Polarity	Quasi Peak Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Note(s)	Result
80.646	Horizontal	28.5	40.0	11.5	-	Complied
85.989	Vertical	26.4	40.0	13.6	-	Complied
95.217	Vertical	27.19	43.5	16.31	1	Complied
100.987	Vertical	21.95	43.5	21.55	1	Complied
104.349	Vertical	36.4	43.5	7.1	-	Complied
107.154	Vertical	30.4	43.5	43.1	-	Complied
159.721	Horizontal	23.9	43.5	19.6	-	Complied
200.750	Vertical	11.8	43.5	31.7	-	Complied
234.005	Vertical	36.0	46.0	10.0	-	Complied
311.984	Horizontal	24.8	46.0	21.2	-	Complied
568.285	Horizontal	25.6	46.0	20.4	-	Complied
519.998	Vertical	26.5	46.0	19.5	-	Complied
844.995	Vertical	33.2	46.0	12.8	-	Complied
73.707	Vertical	17.5	40.0	22.5	-	Complied

Note(s):

1. Due to the presence of close high ambient signals, this emission was re-measured using a substitution method. At the emission frequency, a high level signal was generated in the same screened room as was used for the preliminary initial swept measurements. This measurement was then repeated on the open area test site. The difference in amplitude between the screened room measurement and the open area test site measurement was then used to correct the value obtained in the screened room from the test sample.

RFI GLOBAL SERVICES LTD

TEST REPORT

S.No. RFI/EMCE1/RP49563JD01A

Page: 14 of 23

Issue Date: 20 December 2007

**Test Of: Datalogic Mobile SRL
Skorpio (U4G0020)**

To: FCC Part 15: 2007 Class B (Sections 15.107 and 15.109)

Test Of: Datalogic Mobile SRL
Skorpio (U4G0020)

To: FCC Part 15: 2007 Class B (Sections 15.107 and 15.109)

8. Measurement Uncertainty

No measurement or test can ever be perfect and the imperfections give rise to error of measurement in the results. Consequently, the result of a measurement is only an approximation to the value of the measurand (the specific quantity subject to measurement) and is only complete when accompanied by a statement of the uncertainty of the approximation.

The expression of uncertainty of a measurement result allows realistic comparison of results with reference values and limits given in specifications and standards.

The uncertainty of the result may need to be taken into account when interpreting the measurement results.

The reported expanded uncertainties below are based on a standard uncertainty multiplied by an appropriate coverage factor, such that a confidence level of approximately 95% is maintained. For the purposes of this document "approximately" is interpreted as meaning "effectively" or "for most practical purposes".

Measurement Type	Range	Confidence Level	Calculated Uncertainty
Conducted Emissions AC (and DC) Lines	150 kHz to 30 MHz	95%	± 3.66 dB
Radiated Emissions	30 to 1000 MHz	95%	± 4.54 dB

The methods used to calculate the above uncertainties are in line with those recommended within the various measurement specifications. Where measurement specifications do not include guidelines for the evaluation of measurement uncertainty, the published guidance of the appropriate accreditation body is followed. Where it has been necessary to perform measurements using the substitution method, it has not been possible to calculate an uncertainty for this measurement. Due to the complex effects on the emissions levels measured within a screened room with either a signal source or the equipment under test, the calculation of a general measurement uncertainty for this process would be unrepresentative for all possible measured results.

Test Of: Datalogic Mobile SRL
Skorpio (U4G0020)

To: FCC Part 15: 2007 Class B (Sections 15.107 and 15.109)

Appendix 1. Test Equipment Used

RFI No.	Instrument	Manufacturer	Type No.	Serial No.	Last Calibrated	Cal Interval (Months)
A1037	Green Bilog Antenna	Chase EMC Ltd	CBL6112B	2413	21 Dec 2006	12
A1830	N-Type Pulse Limiter	Rhode & Schwarz	ESH3-Z2	100668	18 Jan 2007	12
A259	Bilog Antenna	Chase	CBL6111	1513	13 Mar 2008	12
A392	DC to 18 GHz	Suhner	6803.17.B	None	16 July 2007	12
C151	Cable	Rosenberger	UFA210A-1-1181-70x70	None	22 Apr 2007	12
C160	Cable	Rosenberger	UFA210A-1-1181-70x70	None	22 Apr 2007	12
C348	Cable	Rosenberger	UFA210A-1-1181-70x70	2993	22 Apr 2007	12
C363	Cable	Rosenberger	RG142	None	22 Apr 2007	12
C461	Cable	Rosenberger	UFA210A-1-1182-704704	98H0305	22 Apr 2007	12
C468	Cable	Rosenberger	UFA210A-1-3937-504504	98L0440	22 Apr 2007	12
M024	EZM Spectrum Monitor	Rohde & Schwarz	EZM	873 952/006	N/A	N/A
M044	ESVP Receiver	Rohde & Schwarz	ESVP	891 845/026	08 Mar 2007	12
M1263	EMI Test Receiver	Rohde & Schwarz	ESIB7	100265	25 Jan 2007	12

Test Of: Datalogic Mobile SRL
Skorpio (U4G0020)

To: FCC Part 15: 2007 Class B (Sections 15.107 and 15.109)

Appendix 2. Test Configuration Drawings

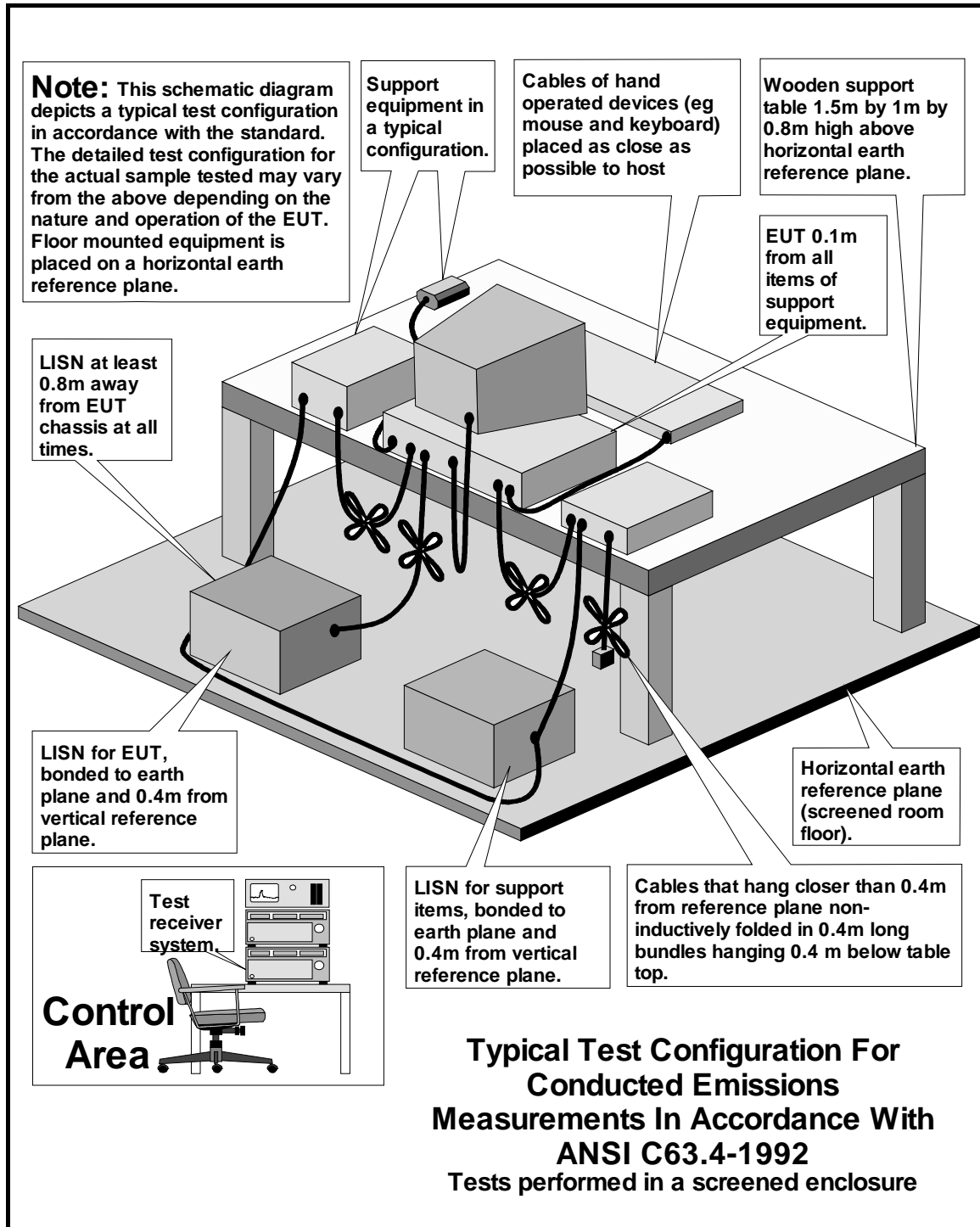
This Appendix contains the following drawings:

Drawing Reference Number	Title
DRG\49563JD01\EMICON	Test configuration for measurement of conducted emissions
DRG\49563JD01\EMIRAD	Test configuration for measurement of radiated emissions
DRG\49563JD01\001	Schematic diagram of the EUT, support equipment and interconnecting cables used for the test

Test Of: Datalogic Mobile SRL
Skorpio (U4G0020)

To: FCC Part 15: 2007 Class B (Sections 15.107 and 15.109)

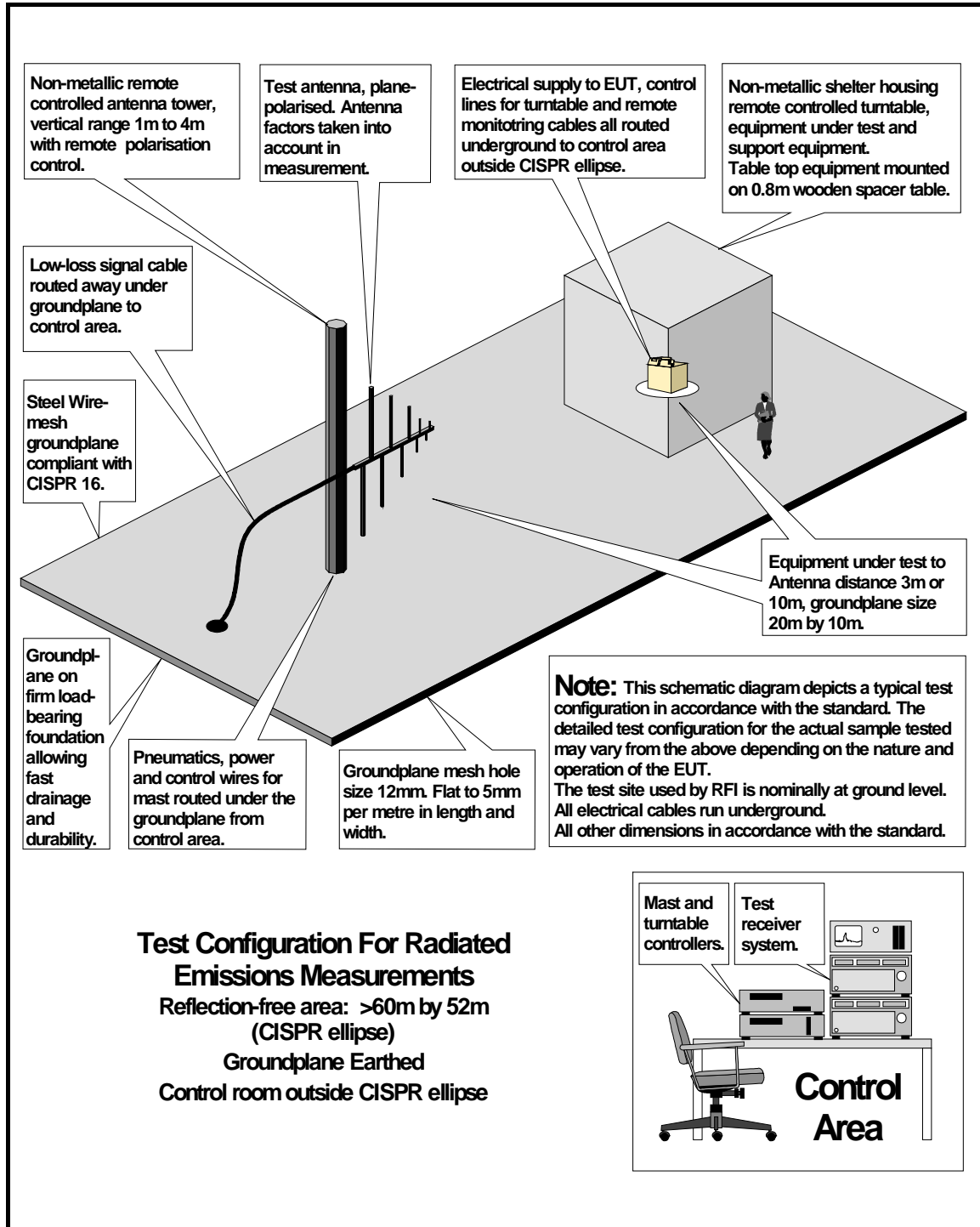
DRG\49563JD01\EMICON



Test Of: Datalogic Mobile SRL
Skorpio (U4G0020)

To: FCC Part 15: 2007 Class B (Sections 15.107 and 15.109)

DRG\49563JD01\EMIRAD

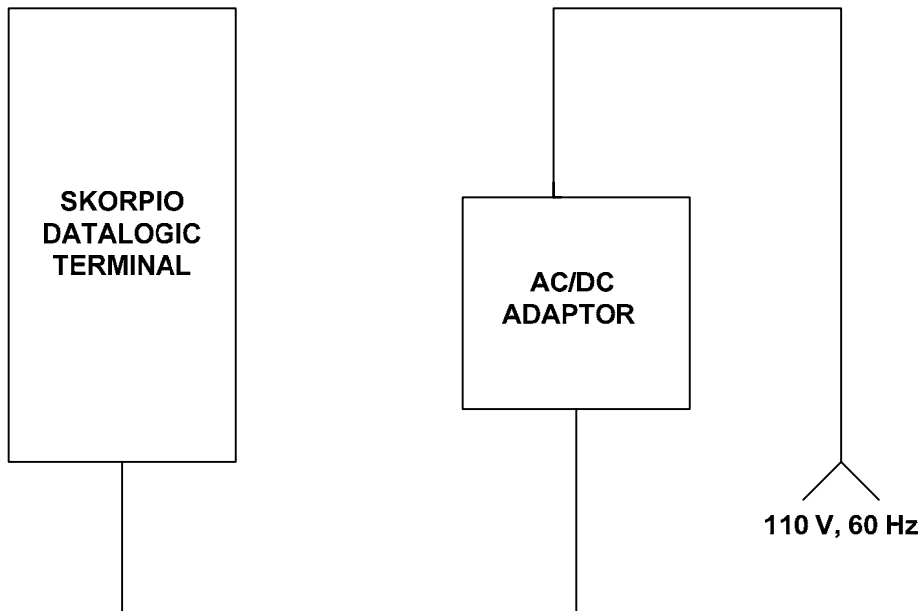


Test Of: Datalogic Mobile SRL
Skorpio (U4G0020)

To: FCC Part 15: 2007 Class B (Sections 15.107 and 15.109)

DRG\49563JD01\001

Configuration of EUT and Local Support Equipment



Test Of: Datalogic Mobile SRL
Skorpio (U4G0020)

To: FCC Part 15: 2007 Class B (Sections 15.107 and 15.109)

Appendix 3. Graphical Test Results

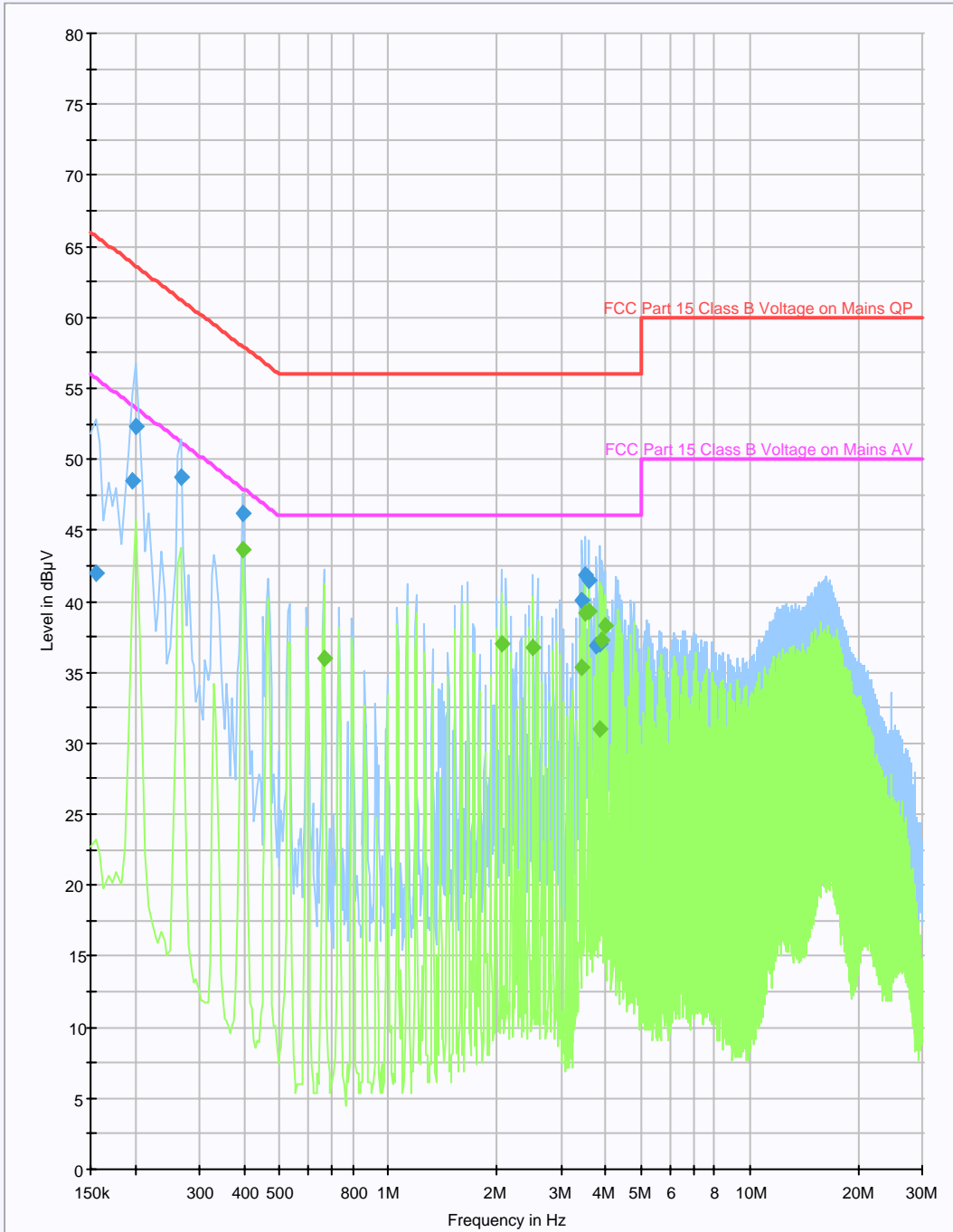
This Appendix contains the following graphs:

Graph Reference Number	Title
GPH\49563JD01\001	Conducted Emissions Pre-Scan (0.15 MHz to 30.0 MHz)
GPH\49563JD01\002	Radiated Emissions Pre-Scan (30.0 MHz to 1000.0 MHz)

Test Of: Datalogic Mobile SRL
Skorpio (U4G0020)

To: FCC Part 15: 2007 Class B (Sections 15.107 and 15.109)

GPH\49563JD01\001
Conducted Emissions Pre-Scan
(0.15 MHz to 30.0 MHz)



Test Of: Datalogic Mobile SRL
Skorpio (U4G0020)

To: FCC Part 15: 2007 Class B (Sections 15.107 and 15.109)

GPH\49563JD01\002
Radiated Emissions Pre-Scan
(30.0 MHz to 1000.0 MHz)

