



**TEST REPORT
FROM
RFI GLOBAL SERVICES LTD**

Test of: Easyprox Compact Keypad 746-583

To: FCC Part 15 Subpart C: 2007
Clause 15.209 & 15.215

Test Report Serial No:
RFI/RPT2/RP73738JD05A

Supersedes Test Report Serial No:
RFI/RPT1/RP73738JD05A

This Test Report Is Issued Under The Authority Of Brian Watson, Operations Director:	
	 pp
Checked By:	A. Henriques
Signature:	
Date of Issue:	23 December 2008

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 not be reproduced other than in full, except with the prior written approval of RFI Global Services Ltd. The results in this report apply only to the sample(s) tested.

This page has been left intentionally blank.

Table of Contents

1. Customer Information 4

2. Equipment Under Test (EUT) 5

3. Test Specification, Methods and Procedures 6

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 14

Appendix 1. Test Equipment Used..... 15

Appendix 2. Test Configuration Photographs..... 16

1. Customer Information

Company Name:	Paxton Access Ltd
Address:	Paxton House Home Farm Brighton Sussex BN1 9HU

2. Equipment Under Test (EUT)

2.1. Identification of Equipment Under Test (EUT)

Description:	Lock and access control reader.
Brand Name:	Easyprox Compact Keypad
Model Name or Number:	746-583
Serial Number:	None stated
FCC ID Number:	USE746583

2.2. Description of EUT

The equipment under test was a standalone battery powered lock and access control reader.

2.3. Modifications Incorporated in EUT

During the course of testing the EUT was not modified to demonstrate compliance.

2.4. Additional Information Related to Testing

Power Supply Requirement:	Internal battery supply of: 6 V (4 x 1.5 AA batteries)	
Type of Unit:	Base (Fixed Use)	
Modulation Type:	Amplitude Modulation	
Data Rate:	4000 bits/second	
Transmit Frequency Range:	N/A (single frequency operation)	
Transmit Channels Tested:	Channel ID	Frequency (MHz)
	Single Channel	0.125

2.5.2.5. Support Equipment

No support equipment was used to exercise the EUT during testing.

3. Test Specification, Methods and Procedures

3.1. Test Specifications

Reference:	FCC Part 15 Subpart C: 2007 (Sections 15.209 & 15.215)
Title:	Code of Federal Regulations, Part 15 (47CFR) Radio Frequency Devices.

3.2. Methods and Procedures

The methods and procedures used were as detailed in:

ANSI C63.2 (1996)

Title: American National Standard for Instrumentation - Electromagnetic Noise and Field Strength Instrumentation, 10 Hz to 40 GHz.

ANSI C63.4 (2003)

Title: American National Standard Methods of Measurement of radio-Noise 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.

3.3. Definition of Measurement Equipment

The measurement equipment used complied with the requirements of the standards referenced in the methods and 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.

5. Operation of the EUT During Testing

5.1. Operating Modes

The EUT was tested in the following operating modes, unless otherwise stated:

- Transmit mode

5.2. Configuration and Peripherals

The EUT was tested in the following configuration:

- Standalone.

The sample was modified to allow the EUT to be placed into a permanent transmit mode which bypassed the wake-up function to allow measurements to be performed.

6. Summary of Test Results

Range of Measurements	Section Reference	Port Type	Result
Transmitter Radiated Emissions	C.F.R. 47 FCC Part 15: 2007 Section 15.209	Enclosure	Complied
Transmitter 20 dB Bandwidth	C.F.R. 47 FCC Part 15: 2007 Section 15.215 (c)	Antenna	Complied

6.1. Location of Tests

All the measurements described in this report were performed at the premises of RFI Global Services Ltd, Wade Road, Basingstoke, Hampshire, RG24 8AH.

6.2. Date of Tests

21 October 2008 to 19 December 2008

6.3. FCC Site Registration Number

209735

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.

As the EUT is a transceiver which transmits and receives at simultaneously when activated and is not capable of being put into a 'receive only' mode only measurements of transmitter spurious emissions were performed.

7.2. Test Results

7.2.1. Transmitter Radiated Emissions: Section 15.209

7.2.2. Electric Field Strength Measurements (Frequency Range: 0.009 to 1000 MHz)

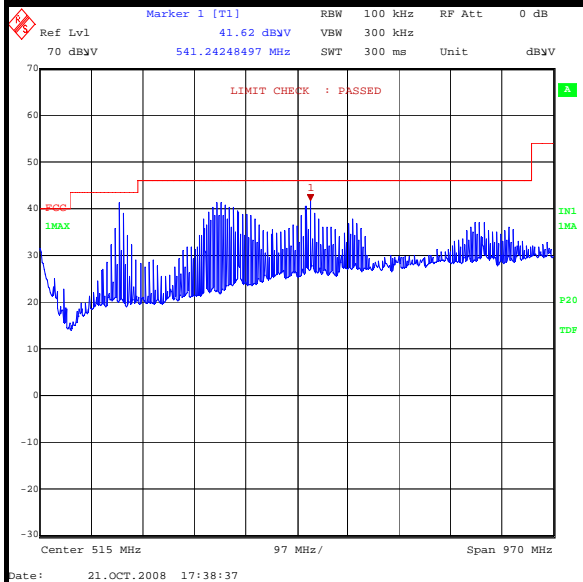
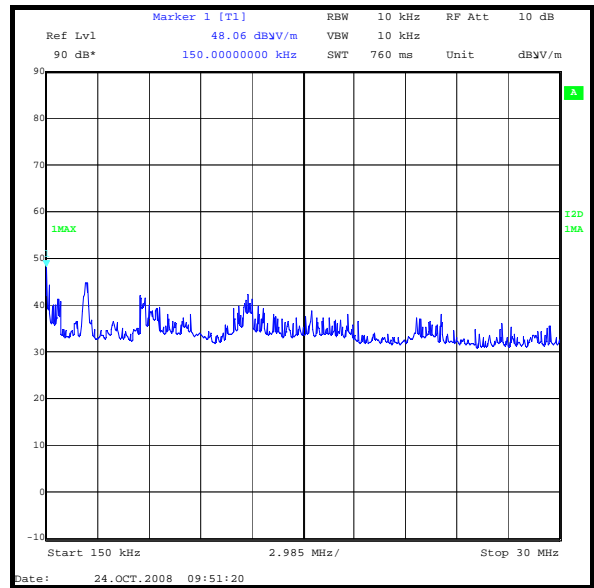
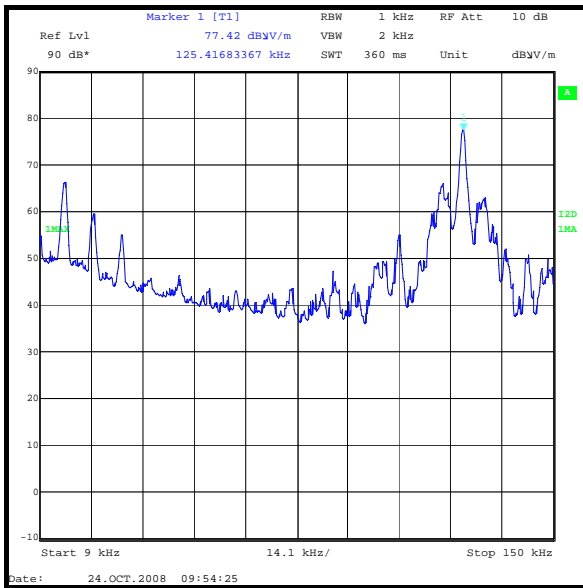
Tests were performed using the test methods detailed in ANSI C63.4 Section 8.

Limits below 30 MHz are specified at test distance of 30 metres, whilst below 0.49 MHz they are specified at a test distance of 300 metres. However as specified by section 15.31 (f)(2), measurements may be performed at a closer distance, and the measured level corrected to the specified measurement distance by using the square of an inverse linear distance extrapolation factor (40 dB/decade).

The measurement distance was 3 metres for all emissions in the range 9 kHz to 30 MHz in addition to 3 metres for the range 30 MHz to 1000 MHz. The limits below 30 MHz were extrapolated to the 3 metre test distance.

Frequency (MHz)	Antenna Polarity	QP Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Result
0.125	Loop Antenna	77.4	105.7	28.3	Complied
180.000	Vertical	41.1	43.5	2.4	Complied
244.000	Vertical	29.6	46.0	16.4	Complied
364.000	Vertical	39.5	46.0	6.5	Complied
428.000	Vertical	38.9	46.0	7.1	Complied
540.000	Vertical	39.9	46.0	6.1	Complied
620.000	Horizontal	38.0	46.0	8.0	Complied
860.000	Vertical	38.8	46.0	7.2	Complied
916.000	Horizontal	38.2	46.0	7.8	Complied

Transmitter Radiated Emissions: Section 15.209 - Continued



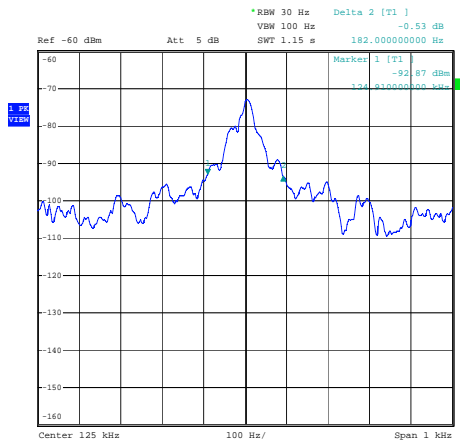
Note: These plots are pre-scans and for indication purposes only. For final measurements, see accompanying tables

7.2.3. Transmitter 20 dB Bandwidth : Section 15.215(c)

Tests were performed using the test methods detailed in ANSI C63.4 Section 8. with the only deviation being that the 20 dBc bandwidth was reported.

Results:

Transmitter 20 dB Bandwidth (Hz)
182



Date: 19.DEC.2008 15:20:28

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
Radiated Spurious Emissions	9 kHz to 1000 MHz	95%	± 5.26 dB
Occupied Bandwidth	N/A	95%	± 11.4 Hz

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.

Appendix 1. Test Equipment Used

RFI No.	Instrument	Manufacturer	Type No.	Serial No.	Date Last Calibrated	Cal. Interval (Months)
A007	Antenna	Rohde & Schwarz	HFH2-Z2	880 458/020	28 Feb 2008	12
A1299	Antenna	Schaffner	CBL6143	5094	28 Jul 2008	12
K0001	Site Reference 4420	Rainford EMC	N/A	N/A	13 Aug 2008	12
M1124	Spectrum Analyser	Rohde & Schwarz	ESIB26	100046K	19 Feb 2008	12
M1242	Spectrum Analyser	Rohde & Schwarz	FSEM30	845986/022	29 Nov 2008	12

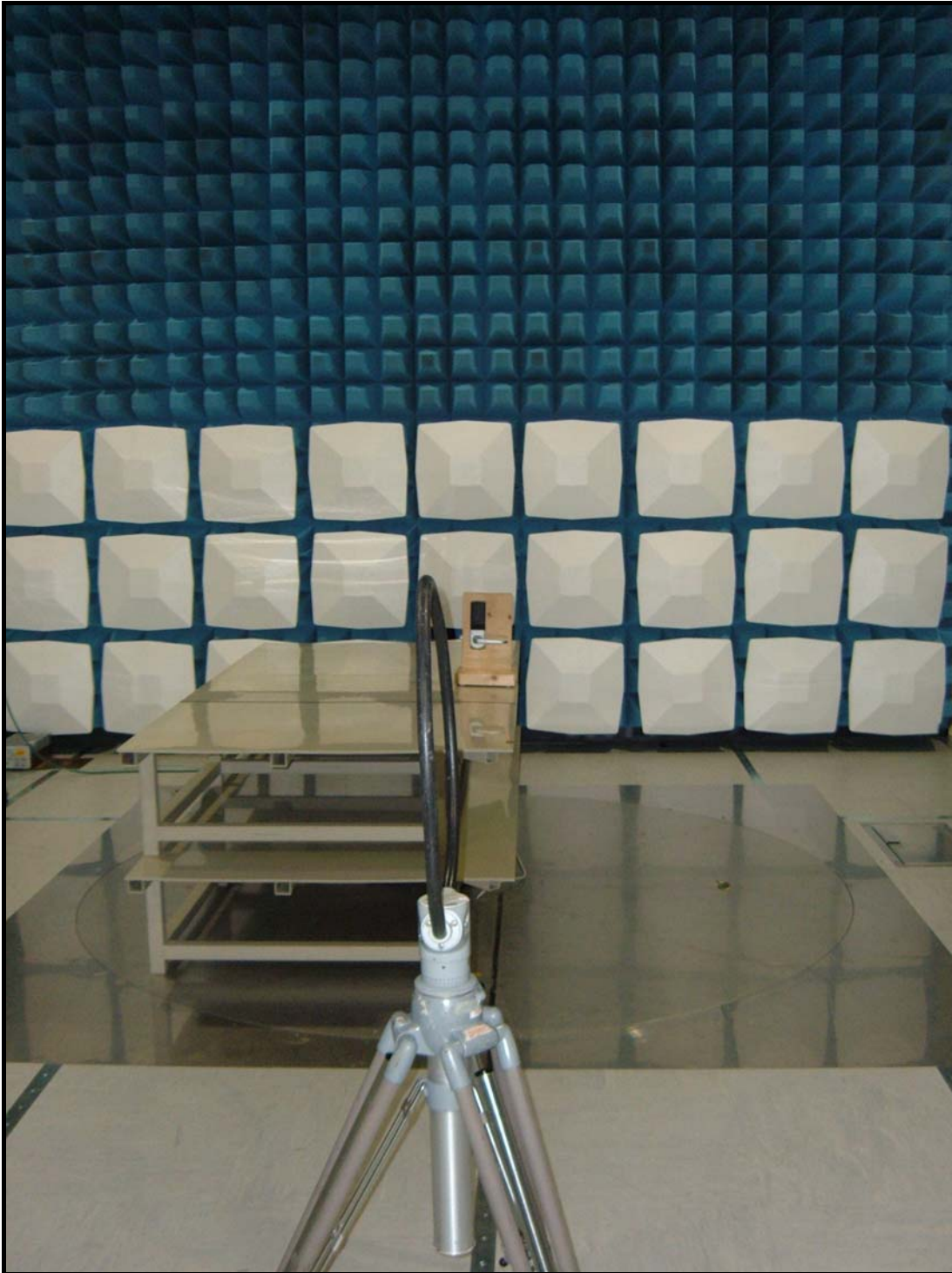
NB In accordance with UKAS requirements, all the measurement equipment is on a calibration schedule.

Appendix 2. Test Configuration Photographs

This appendix contains the following photographs:

Photo Reference Number	Title
PHT/73738JD05/001	View 1 of test configuration for measurement of radiated emissions.
PHT/73738JD05/002	View 2 of test configuration for measurement of radiated emissions

PHT/73738JD05/001



PHT/73738JD05/002

