TEST NUMBER - 319-00

1999 CFR TITLE 47 PART 15.209 SUBPART C
IC RSS 210, ISSUE 3 Section 6.2
TESTING

for

Napco Security Systems, Inc.
333 Bayview Avenue
Amityville, NY 11701
516-842-9400

of

Proximity Door Lock

PDL 3000
FCC ID# AD8-PX4041

on

September 20, 2000

Tested by

_____

Clifton P. Brick

Reviewed by

_____

Larry K. Stillings

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Compliance Worldwide, Inc. - 357 Main Street - Sandown, NH 03873
(603) 887 3903 Fax 887 6445
http://www.cw-inc.com

TEST DESCRIPTION

1. TEST OBJECTIVE

To test the Proximity Door Lock to FCC 15.209 and RSS 210 limits and write a report.

2. E.U.T. DESCRIPTION

GENERAL

The Proximity Door Lock PDL3000 is a door lock that utilizes a transceiver module coupled with a microprocessor based system to read an access card and unlock the door.

SERIAL NUMBERS:

Pre-Production Unit

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TEST RESULTS AND CONCLUSIONS

PRODUCT TESTED - Proximity Door Lock

MODEL NUMBER - PDL 3000

RADIATED TEST RESULTS

The test results show that the emissions radiated from this equipment are in compliance with **FCC 15.209 and RSS 210 Section 6.2** Rules.

CONDUCTED TEST RESULTS

The EUT has no AC Mains connection therefore no conducted measurements were performed.

ANALYSIS AND CONCLUSIONS

Based upon the radiated and conducted measurements we find that this equipment is within the limits of the **FCC 15.209 and RSS 210 Section 6.2** rules. All results are based on a test of one sample, and represent other production units, only in as much as a sample represents other production units. If any significant changes are made to the unit, the changes shall be evaluated and a retest may be required.

NOTES (Special conditions unique to this test)

None

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TEST PROCEDURES AND EQUIPMENT

1. TEST EQUIPMENT

A. HP 8546A (9 kHz - 6.5 GHz) EMI Receiver w/ RF Filter Section
Calibration Date: 7-18-2000, calibrated annually.

B. Electro-Metrics BiConical Antenna, Model EM6912A, S/N 149.
Calibration Date: 2-22-2000, calibrated annually.

C. Electro-Metrics Log Periodic Antenna, Model EM-6950, S/N 1017.
Calibration Date: 2-22-2000, calibrated annually.

D. EMCO LISN, Model EM 3825/2, S/N 9109-1860.
Calibration Date: 2-22-2000, calibrated annually.

E. LISN, Compliance Worldwide, Model 50 µH / 50 ohm, S/N 100.
Calibration Date: 2-22-2000, calibrated annually.

F. EMCO 6502 Loop Antenna, Model EM6502 S/N 2197.
Calibration Date: 9-15-2000, calibrated annually.

2. FREQUENCY RANGES TO BE SCANNED.

A. Radiated Test from 100 kHz to 1.0 GHz.

B. Conducted Test not applicable.

3. TEST PROCEDURES.

Radiated test procedure:

The EUT, associated cables and peripheral devices are placed on the supporting table with any support equipment placed off the site. The EUT is turned on and any necessary operating or test software installed and is allowed to warm up. The frequency band from 100 kHz to 1 GHz is scanned. When a signal is found the emission is maximized by varying the bundle position of the connecting cables, the antenna height, the antenna polarization (vertical and horizontal) and the table orientation (360 degrees). The maximum reading is recorded and the next signal is searched for.

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TEST PROCEDURES and EQUIPMENT

3. TEST PROCEDURES (cont.)

All measurements are made according to the procedures defined in: "ANSI C63.4 – 1991/92 Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9kHz to 40GHz."

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FCC 15.209 & IC RSS 210 Section 6.2 TEST LIMITS

Class C Radiation Limits:

Frequency MHz	Distance meters	Limit dBuV/m	Limit μV/m
0.009 – 0.490	300	20 Log (2400/F)	2400/F (kHz) Avg
0.490 – 1.705	30	20 Log (24000/F)	24000/F (kHz)
1.705 - 30	30	29.5	30
30 – 88	3	40.0	100
88 – 216	3	43.5	150
216 – 960	3	46.0	200
960 and above	3	54.0	500

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TEST FACILITY DESCRIPTION

Compliance Worldwide is located on 357 Main Street in Sandown, New Hampshire. The conducted and radiated test sites, located at C.W. are used for Federal Communications Commission (FCC) testing and Industry Canada Testing. A site description is on file with the FCC in Columbia, MD USA. Site information is also on file with Industry Canada, anyone wishing to review this Test Facility Description is referred to file number **IC 3023**. This is currently on file at Industry Canada, 1241 Clyde Avenue, Ottawa, ON K2C 1Y3.

The radiated site is a 3/10 meter indoor site with an enclosure for the product and a basement for the personnel, support equipment and test equipment.

The conducted site is part of a 16' x 20' x 12' ferrite tile chamber and uses one of the walls for the vertical metal wall required by EN 55022.

Both sites are designed to test products or systems 1.5 meter x 1.0 meter, floor standing or table top.

DATE ON FILE FCC: August 10, 2000

DATE ON FILE IC: August 11, 2000

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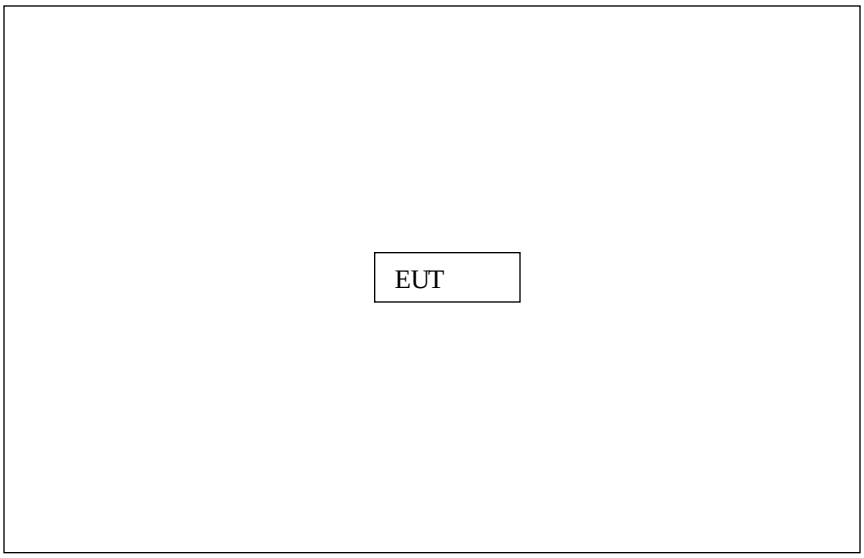
TEST SET UP
AND
PERIPHERAL CONNECTION INFORMATION



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Proximity Door Lock - PDL 3000

The cables directly connected to this equipment are listed below. Please see below for a complete list of FCC ID's etc. on the supporting equipment.

No Cables are associated with this test.

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Proximity Door Lock - PDL 3000

RADIATED TEST RESULTS

Frequency Range:	100kHz - 1000 MHz.
Measurement Distance:	As Noted.
Bandwidth:	120 kHz, Per CISPR 16.1 9 kHz below 30MHz
Detector Functions:	Peak, Quasi Peak.
Video Filter:	300 kHz
Table Height:	0.8 meters
Antenna Height Variation:	1 - 4 Meters.

Horizontal and Vertical Polarization Measurements Taken.

PLEASE SEE NEXT PAGE FOR RADIATED TEST DATA

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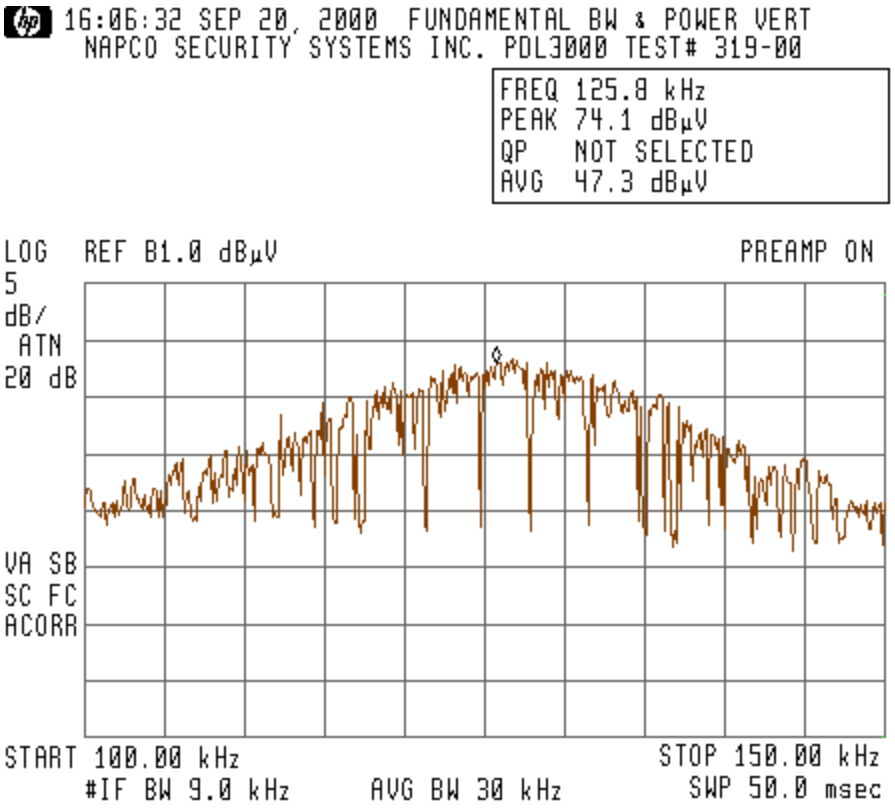
Radiated output power of the transmitter @ .3 Meters



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Worst Case Radiated Data and Transmitter output Power

Freq. (MHz)	Azimuth (Degrees)	Antenna Height (Meters)	Polarization (H/V)	Measure Distance (Meters)	Peak Amplitude (dBuV)	QP Amplitude (dBuV)	Limit (dBuV)	Margin (dB)
711.25	89	2.8	V	3	29.9	26.7	37.0	-10.3
.12575	350	1.0	V	.3	74.1	*47.3	145.6#	-98.3
.12575	350	1.0	V	1	47.9	*30.7	125.6#	-94.9
.378	350	1.0	V	.1	68.1	N/M	156.0#	-87.9
.655	350	1.0	V	.1	53.2	N/M	131.3#	-78.1
.881	350	1.0	V	.1	47.1	N/M	128.7#	-81.6
1.142	350	1.0	V	.1	26.5	N/M	126.5#	-100

*Fundamental Transmitter output power measured using an Average Detector at 1 Meter.

#Limit is extrapolated at 40 dB per decade.

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CONDUCTED TEST RESULTS

Frequency Range:	150 kHz to 30.0 MHz.
Bandwidth:	9 kHz per CISPR 16.1
Detector Functions:	Peak, Quasi-Peak, Average
Table Height:	0.8 meters
Video Bandwidth:	30 kHz.

This device is completely powered by internal batteries, no conducted limits apply.

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NOTES AND COMMENTS

(Special conditions unique to this test)

None.

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PHOTOGRAPHS

Radiated Test Setup (Front)

Low Frequency 1 Meter Test Set Up.

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PHOTOGRAPHS

Radiated Test Setup (Rear)

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