



# Compliance Testing, LLC

Previously Flom Test Lab

EMI, EMC, RF Testing Experts Since 1963

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## Test Report

Prepared for: Time Keeping Systems Inc.

Model: DD-005

Description: Battery Powered, wireless positioning and duress alarm for prison guards

Serial Number: N/A

FCC ID: MTD-0005

To

FCC Part 1.1310

Date of Issue: March 27, 2018

On the behalf of the applicant:

Time Keeping Systems Inc.  
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Attention of:

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Project No: p1830001

Poona Saber  
Project Test Engineer

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All results contained herein relate only to the sample tested



### Test Report Revision History

Revision	Date	Revised By	Reason for Revision
1.0	March 9, 2018	Poona Saber	Original Document
2.0	March 26, 2018	Kenneth Lee	Updated Duty Cycle used in Calculations.

## ILAC / A2LA

Compliance Testing, LLC, has been accredited in accordance with the recognized International Standard ISO/IEC 17025:2005. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer joint ISO-ILAC-IAF Communiqué dated January 2009)

The tests results contained within this test report all fall within our scope of accreditation, unless below

Please refer to <http://www.compliancetesting.com/labscope.html> for current scope of accreditation.

Testing Certificate Number: **2152.01**



**FCC Site Reg. #349717**

**IC Site Reg. #2044A-2**

**Non-accredited tests contained in this report:**

**N/A**

### **EUT Description**

**Model:** DD-005

**Description:** Battery Powered, wireless positioning and duress alarm for prison guards

**Firmware:** NA

**Software:** NA

**Serial Number:** NA

#### **Additional Information:**

Unit is incorporating Bluetooth Low Energy technology with frequency range of 2402-2480 MHz.

For Conducted testing an unassembled device with RF connector was utilized and it was powered up with DC power supply of 6.0 V. The regular radiated emissions test device work with batteries

### **EUT Operation during Tests**

The production sample of Model DD-005 transmits once every second on 3 channels, with each transmission taking 184µsec, or 0.000184 seconds. Total transmission time, on each channel, per second is 184µsec or 0.000184 seconds. This results in a duty cycle of 0.018%.

## Source Based Time Averaged Power Calculation

Frequency (MHz)	Output Power (dBm)	Duty Cycle (%)	Time Averaged Power (dBm)	Antenna Gain (dB)	EIRP (dBm)	EIRP (mW)
2402	24.11	0.018	-13.24	3.3	-9.94	0.101

Calculating SAR exclusion per KDB 447498.

1) The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at *test separation distances*  $\leq 50$  mm are determined by:

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f_{\text{(GHz)}}}] \leq 3.0$  for 1-g SAR and  $\leq 7.5$  for 10-g extremity SAR,<sup>25</sup> where

- $f_{\text{(GHz)}}$  is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation<sup>26</sup>
- The result is rounded to one decimal place for comparison
- 3.0 and 7.5 are referred to as the numeric thresholds in the step 2 below

Per formula above:

$$\frac{0.101 \text{ mW}}{5 \text{ mm}} \times \sqrt{2.402} = 0.031306742$$

This unit is exempt from SAR testing.

END OF TEST REPORT