



RFx Exhibit Serial No.  
021010NC3-T1006-S24G

RFx Exhibit Issue Date  
March 02, 2010

RFx Exhibit Revision No.  
Rev. 1.1 (2nd Release)



## RF EXPOSURE EXHIBIT (FCC KDB INQUIRY TRACKING NUMBER 727730)

**Pro Tech Monitoring Inc. Model: WMTD3418 Dual-Band GPRS Ankle-worn Tracking Device FCC ID: NC3WMTD3418**

### **Per FCC KDB Inquiry Tracking Number 727730**

This device has been excluded from SAR testing based on source-based time-averaged conducted output power is less than 60/f per manufacturer-specified 1/10 minutes maximum transmission duration in addition to the GPRS Class 10 transmission duty factor of 2/8 slots utilized. This document serves as the RF exposure exhibit in the FCC Form 731 application in lieu of a SAR report and has been reviewed and accepted by the FCC prior to submittal to the TCB.

### **Operational Description**

The WMTD is an ankle-worn offender tracking device utilizing GPS to establish an offender's location. Positional (data) points are stored every minute while the offender is not in violation of any rule and every 15 seconds whenever the offender is in violation. The GPRS transmitter is utilized to transmit the data back to servers at the Pro Tech Monitoring data center.

### **RF Exposure Conditions**

The WMTD ankle-worn tracking device is intended for operation in the General Population / Uncontrolled RF exposure environment.

### **GPRS Antenna-to-Ankle Separation Distance**

~ 0.420 inches (per manufacturer)

### **Transmission Mode**

The WMTD tracking system utilizes an internal GPRS Class 10 transmitter (2/8 uplink slots).

### **Duty Cycle**

The WMTD tracking system collects GPS position information once a minute. This data is sent back to the Pro Tech Monitoring datacenter no more than every 10 minutes. It typically takes approximately 1 minute to send this information.

### **RF Output Power**

#### **GPRS Mode - Cellular 850 Band**

Average Conducted Output Power = 32.0 dBm / 1.6 Watts

Source-Based Time-Averaged Duty Cycle - 2/8 uplink slots = 25%

Source-Based Time-Averaged Duty Cycle - 1/10 minutes = 10%

Source-Based Time-Averaged Output Power = 16 dBm (40 mW)

$60/f_{(GHz)}$  mW = 70.7 mW

Source-based time-averaged conducted output power = < 60/f

#### **GPRS Mode - PCS 1900 Band**

Average Conducted Output Power = 30.0 dBm / 1 Watt

Source-Based Time-Averaged Duty Cycle - 2/8 uplink slots = 25%

Source-Based Time-Averaged Duty Cycle - 1/10 minutes = 10%

Source-Based Time-Averaged Output Power = 14 dBm (25 mW)

$60/f_{(GHz)}$  mW = 31.4 mW

Source-based time-averaged conducted output power = < 60/f

### **Simultaneous Transmission**

418 MHz Beacon Transmitter

Antenna-to-Antenna Spacing = 0.140"

Manuf. Rated Cond. Power = +12 dBm

Tx-on time = 1.8ms / Tx-off time = 14.8s

Manufacturer Duty Cycle Spec. = 0.012%


$60/f_{(GHz)}$  mW = 143.5 mW

Source-based time-averaged conducted output power = < 60/f

### **RF Exposure Exhibit Revision No.s**

Revision 1.1 - Corrected GPRS duty factor and source-based time-averaged output power levels - March 02, 2010

Revision 1.0 - Initial Release - March 01, 2010

<b>Applicant:</b>	<b>Pro Tech Monitoring, Inc.</b>	<b>FCC ID:</b>	<b>NC3WMTD3418</b>	<b>FCC KDB Inquiry Track No. 727730</b>	
<b>Model:</b>	<b>WMTD3418</b>	<b>Device Type:</b>	<b>Dual-Band PCS/Cellular GPRS Ankle-worn Tracking Device</b>		
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