

# RF Exposure Evaluation Report

**Product** : Ion Pro RT  
**Trade mark** : **BONTRAGER**  
**Model/Type reference** : 552373  
**Serial Number** : N/A  
**Report Number** : EED32M00014302  
**FCC ID** : 2AHXD-552373  
**Date of Issue** : Apr. 13, 2020  
47 CFR Part 1.1307  
**Test Standards** : 47 CFR Part 2.1093  
KDB 447498 D01 General RF Exposure Guidance v06  
**Test result** : PASS

Prepared for:

**Trek Bicycle Corporation**  
**801 West Madison Street, Waterloo WI 53594**

Prepared by:

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Date:

Apr. 13, 2020

Check No.: 3336877703



## 2 Version

| Version No. | Date          | Description |
|-------------|---------------|-------------|
| 00          | Apr. 13, 2020 | Original    |
|             |               |             |
|             |               |             |

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## 4 General Information

### 4.1 Client Information

|                          |                                                                                |
|--------------------------|--------------------------------------------------------------------------------|
| Applicant:               | Trek Bicycle Corporation                                                       |
| Address of Applicant:    | 801 West Madison Street, Waterloo WI 53594                                     |
| Manufacturer:            | Trek Bicycle Corporation                                                       |
| Address of Manufacturer: | 801 West Madison Street, Waterloo WI 53594                                     |
| Factory:                 | EISO ENTERPRISE CO., LTD.                                                      |
| Address of Factory:      | NO.2, JHONGHUA LANE, SHANYING RD., GUEISHAN DIST.,<br>TAOYUAN CITY 333, TAIWAN |

### 4.2 General Description of EUT

|                                                                                                                                                                                                                                                                                                 |                                                                                         |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| Product Name:                                                                                                                                                                                                                                                                                   | Ion Pro RT                                                                              |
| Model No.(EUT):                                                                                                                                                                                                                                                                                 | 552373                                                                                  |
| Trade mark:                                                                                                                                                                                                                                                                                     | <b>BONTRAGER</b>                                                                        |
| EUT Supports Radios application:                                                                                                                                                                                                                                                                | BT 4.0 single mode, 2402-2480MHz                                                        |
| Modulation Type:                                                                                                                                                                                                                                                                                | GFSK                                                                                    |
| Antenna Type:                                                                                                                                                                                                                                                                                   | Integral Antenna                                                                        |
| Antenna Gain:                                                                                                                                                                                                                                                                                   | -1.52 dBi                                                                               |
| Power Supply:                                                                                                                                                                                                                                                                                   | Rechargeable Li-ion Battery Pack 21700 3.63V 4900mAh 17.787Wh<br>DC 5V and AC 120V/60Hz |
| Test Voltage:                                                                                                                                                                                                                                                                                   | AC 120V, 60Hz                                                                           |
| Test Power Grade:                                                                                                                                                                                                                                                                               | N/A(manufacturer declare)                                                               |
| Test Software of EUT:                                                                                                                                                                                                                                                                           | nRFgo Studio.exe(manufacturer declare)                                                  |
| Conducted Peak Output Power:                                                                                                                                                                                                                                                                    | -1.893 dBm<br>The Conducted Peak Output Power data refer to the report EED32K00141201   |
| Sample Received Date:                                                                                                                                                                                                                                                                           | Jan. 16, 2020                                                                           |
| Sample tested Date:                                                                                                                                                                                                                                                                             | Jan. 16, 2020 to Mar. 29, 2020                                                          |
| <p>The tested samples and the sample information are provided by the client.</p> <p>This test report (Ref. No.:EED32M00014302) is only valid with the original test report (Ref. No.: EED32K00141202).</p> <p>Review this report and original report, this report only replaces the battery</p> |                                                                                         |

#### **4.3 Test Location**

All tests were performed at:

Centre Testing International Group Co., Ltd.

Building C, Hongwei Industrial Park Block 70, Bao'an District, Shenzhen, China

Telephone: +86 (0) 755 3368 3668 Fax: +86 (0) 755 3368 3385

No tests were sub-contracted.

FCC Designation No.: CN1164

#### **4.4 Deviation from Standards**

None.

#### **4.5 Abnormalities from Standard Conditions**

None.

#### **4.6 Other Information Requested by the Customer**

None.

## 5 SAR Evaluation

### 5.1 RF Exposure Compliance Requirement

#### 5.1.1 Standard Requirement

According to KDB447498D01 General RF Exposure Guidance v05

Standalone SAR test exclusion considerations

Unless specifically required by the published RF exposure KDB procedures, standalone 1-g head or body and 10-g extremity SAR evaluation for general population exposure conditions, by measurement or numerical simulation, is not required when the corresponding SAR Exclusion Threshold condition, listed below, is satisfied.

#### 5.1.2 Limits

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, 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>17</sup>

The result is rounded to one decimal place for comparison

The test exclusions are applicable only when the minimum test separation distance is  $\leq 50$  mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is  $< 5$  mm, a distance of 5 mm is applied to determine SAR test exclusion

#### 5.1.3 EUT RF Exposure

The Max Conducted Peak Output Power is -1.893dBm in highest channel(2.402GHz);

The best case gain of the antenna is -1.52dBi.

$\text{EIRP} = -1.893\text{dBm} + (-1.52\text{dBi}) = -3.413\text{dBm}$

-3.413dBm logarithmic terms convert to numeric result is nearly 0.46mW

According to the formula. calculate the EIRP test result:

$[(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}]$

General RF Exposure =  $(0.46\text{mW} / 5 \text{ mm}) \times \sqrt{2.402\text{GHz}} = 0.14$ ①

SAR requirement:

S= 3.0

② ;

① < ②.

So the SAR report is not required.

## **PHOTOGRAPHS OF EUT Constructional Details**

Refer to Report No. EED32M00014301 for EUT external and internal photos.

**\*\*\* End of Report \*\*\***

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