

# RF Exposure Evaluation Report

**Product** : Ion Pro RT  
**Trade mark** : **BONTRAGER**  
**Model/Type reference** : 552373  
**Serial Number** : N/A  
**Report Number** : EED32K00141202  
**FCC ID** : 2AHXD-552373  
**Date of Issue** : Jul. 26, 2018  
**Test Standards** : 47 CFR Part 1.1307  
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:

**Centre Testing International Group Co., Ltd.**  
**Hongwei Industrial Zone, Bao'an 70 District,**  
**Shenzhen, Guangdong, China**  
**TEL: +86-755-3368 3668**  
**FAX: +86-755-3368 3385**

Tested By:

Peter  
Peter (Test Project)

Compiled by:

Tom - chen  
Tom chen (Project Engineer)

Reviewed by:

Kevin Yang  
Kevin yang (Reviewer)

Approved by:

Sheek Luo  
Sheek Luo (Lab supervisor)

Date:

Jul. 26, 2018

Check No.: 3336854612



## 2 Version

| Version No. | Date          | Description |
|-------------|---------------|-------------|
| 00          | Jul. 26, 2018 | Original    |
|             |               |             |
|             |               |             |

### 3 Contents

|                                                       | Page     |
|-------------------------------------------------------|----------|
| <b>1 COVER PAGE.....</b>                              | <b>1</b> |
| <b>2 VERSION.....</b>                                 | <b>2</b> |
| <b>3 CONTENTS.....</b>                                | <b>3</b> |
| <b>4 GENERAL INFORMATION.....</b>                     | <b>4</b> |
| 4.1 CLIENT INFORMATION.....                           | 4        |
| 4.2 GENERAL DESCRIPTION OF EUT.....                   | 4        |
| 4.3 TEST LOCATION.....                                | 5        |
| 4.4 DEVIATION FROM STANDARDS.....                     | 5        |
| 4.5 ABNORMALITIES FROM STANDARD CONDITIONS.....       | 5        |
| 4.6 OTHER INFORMATION REQUESTED BY THE CUSTOMER.....  | 5        |
| <b>5 SAR EVALUATION.....</b>                          | <b>6</b> |
| 5.1 RF EXPOSURE COMPLIANCE REQUIREMENT.....           | 6        |
| 5.1.1 Standard Requirement.....                       | 6        |
| 5.1.2 Limits.....                                     | 6        |
| 5.1.3 EUT RF Exposure.....                            | 6        |
| <b>PHOTOGRAPHS OF EUT CONSTRUCTIONAL DETAILS.....</b> | <b>7</b> |

## 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:                                                             | -1.52dBi                                                                             |
| Power Supply:                                                             | DC 3.6V, 4800mAh                                                                     |
| Test Voltage:                                                             | DC 3.6V, 4800mAh                                                                     |
| Test Power Grade:                                                         | N/A(manufacturer declare)                                                            |
| Test Software of EUT:                                                     | nRFgo Studio.exe(manufacturer declare)                                               |
| USB cable:                                                                | 22cm (unshielded)                                                                    |
| Conducted Peak Output Power:                                              | -1.893dBm<br>The Conducted Peak Output Power data refer to the report EED32K00141201 |
| Sample Received Date:                                                     | Jun. 06, 2018                                                                        |
| Sample tested Date:                                                       | Jun. 06, 2018 to Jul. 26, 2018                                                       |
| The tested samples and the sample information are provided by the client. |                                                                                      |

#### **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, Guangdong, China 518101

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. EED32K00141201 for EUT external and internal photos.

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

The test report is effective only with both signature and specialized stamp, The result(s) shown in this report refer only to the sample(s) tested. Without written approval of CTI, this report can't be reproduced except in full.