# TEST REPORT

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|---|---|---|
| **Report No.** | : | SHATBL2310007W04 |
| **FCC ID** | : | 2BDAL-RC-36 |
| **Product Name** | : | Bluetooth voice remote control |
| **Brand Name** | : | N/A |
| **Test Model** | : | RC-36 |
| **Series Model** | : | N/A |
| **Date of Sample Arrival** | : | N/A |
| **Issue Date** | : | 2023.11.06 |
| **Test Standards** | : | FCC 47CFR 2.1093<br>447498 D04 lnterim General RF Exposure Guidance v01 |

**Report Prepared by** : Jack Suo

( Jack Suo)

**Report Approved by** : Ghost Li.

(Ghost Li)

**Authorized Signatory** : Terry Yang

(Terry Yang)

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# Revision History

| Rev. | Issue Date | Revisions | Revised by |
|---|---|---|---|
| A0 | 2023.11.06 | Initial Release | Ghost Li |

# DECLARATION OF REPORT

The device has been tested by ATBL, and the test results show that the equipment under test (EUT) is in compliance with the requirements of FCC 47CFR 2.1093. And it is applicable only to the tested sample identified in the report.

1. This report shall not be reproduced except in full, without the written approval of ATBL, this document only be altered or revised by ATBL, personal only, and shall be noted in the revision of the document.
2. The general information of EUT in this report is provided by the customer or manufacture, ATBL is only responsible for the test data but not for the information provided by the customer or manufacture.
3. The results in this report is only apply to the sample as tested under conditions. The customer or manufacturer is responsible for ensuring that the additional production units of this model have the same electrical and mechanical components.

# 1. General Information

## 1.1. Applicant

| | | |
|---|---|---|
| Name | : | HuiZhou WanZhiSheng New Energy Technology CO.,LTD |
| Address | : | 2-3F, 1st Workshop (Jingtai Group), 51 Dongxin Ave, Dongjiang Tech Park, Huicheng, Huizhou, China |

## 1.2. Manufacturer

| | | |
|---|---|---|
| Name | : | HuiZhou WanZhiSheng New Energy Technology CO.,LTD |
| Address | : | 2-3F, 1st Workshop (Jingtai Group), 51 Dongxin Ave, Dongjiang Tech Park, Huicheng, Huizhou, China |

## 1.3. Factory

| | | |
|---|---|---|
| Name | : | HuiZhou WanZhiSheng New Energy Technology CO.,LTD |
| Address | : | 2-3F, 1st Workshop (Jingtai Group), 51 Dongxin Ave, Dongjiang Tech Park, Huicheng, Huizhou, China |

## 1.4. General Description OF The EUT

| General Information | |
|---|---|
| Equipment Name | Bluetooth voice remote control |
| Brand Name | N/A |
| Model Name | RC-36 |
| Series Model | N/A |
| Model Difference | N/A |
| Operation Frequency | 2402~2480 MHz |
| Modulation Type | GFSK |
| Antenna gain | 1.8128dBi |
| Antenna Designation | Onboard Antenna |
| Power supply | DC 3V |
| Hardware version | V1.0 |
| Software version | V0.04 |

## 1.5. Test Factory

| | | |
|---|---|---|
| Name | : | Shanghai ATBL Technology Co., Ltd |
| Address | : | 5-6/F., Unit 1, No 8, Free Trade One Life Science and Sci-Tech Industrial Park,No. 160 Basheng Road, Pudong, Shanghai, China |

# 2. FCC 47CFR §2.1093 Requirement

## 2.1. Test Standards

Follow the maximum permissible exposure (MPE) limits specified in 447498 D04 Interim General Radio Frequency Exposure Guidelines v01. The gain of the antenna used in the product was extracted from the supplied antenna data sheet and the maximum total power input to the antenna was also measured. Calculate the distance from the product to the MPE limit by the formula.

## 2.2. Limit

For single RF sources (i.e., any single fixed RF source, mobile device, or portable device, as defined in paragraph (b)(2) of this section): A single RF source is exempt if:

(A) The available maximum time-averaged power is no more than 1 mW, regardless of separation distance. This exemption may not be used in conjunction with other exemption criteria other than those in paragraph (b)(3)(ii)(A) of Part 1.1307. Medical implant devices may only use this exemption and that in paragraph (b)(3)(ii)(A);

(B) Evaluation of compliance with the exposure limits in § 1.1310 of this chapter, and preparation of an EA if the limits are exceeded, is necessary for portable devices having single RF sources with more than an available maximum time-averaged power of 1 mW, more than the ERP listed in Table 1 to § 1.1307(b)(3)(i)(C), or more than the Pth in the following formula, whichever is greater. The following formula shall only be used in conjunction with portable devices not exempt by § 1.1307(b)(3)(i)(C) at distances from 0.5 centimeters to 20 centimeters and frequencies from 0.3 GHz to 6 GHz.

$$P_{th}\ (\text{mW}) = \begin{cases} ERP_{20\,cm}(d/20\ \text{cm})^x & d \le 20\ \text{cm} \\ ERP_{20\,cm} & 20\ \text{cm} < d \le 40\ \text{cm} \end{cases}$$

Where

$$x = -\log_{10}\left(\frac{60}{ERP_{20\,cm}\sqrt{f}}\right) \text{ and f is in GHz;}$$

$$ERP_{20\,cm}\ (\text{mW}) = \begin{cases} 2040f & 0.3\ \text{GHz} \le f < 1.5\ \text{GHz} \\ 3060 & 1.5\ \text{GHz} \le f \le 6\ \text{GHz} \end{cases}$$

$d$ = the minimum separation distance (cm) in any direction from any part of the device antenna(s) or radiating structure(s) to the body of the device user.

(C) The separation distance is the smallest distance from any part of the antenna or radiating structure for all persons, during operation at the applicable ERP. In the case of mobile or portable devices, the separation distance is from the outer housing of the device where it is closest to the antenna.

The SAR-based exemption formula of § 1.1307(b)(3)(i)(B), repeated here as Formula (B.2), applies for single fixed, mobile, and portable RF sources with available maximum time-averaged power or effective radiated power (ERP), whichever is greater, of less than or equal to the threshold Pth (mW).

| Table B.2-Example Power Thresholds(mW) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Frequency(MHz) | Distance(mm) | | | | | | | | | |
| | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 |
| 300 | 39 | 65 | 88 | 110 | 129 | 148 | 166 | 184 | 201 | 217 |
| 450 | 22 | 44 | 67 | 89 | 112 | 135 | 158 | 180 | 203 | 226 |
| 835 | 9 | 25 | 44 | 66 | 90 | 116 | 145 | 175 | 207 | 240 |
| 1900 | 3 | 12 | 26 | 44 | 66 | 92 | 122 | 157 | 195 | 236 |
| 2450 | 3 | 10 | 22 | 38 | 59 | 83 | 111 | 143 | 179 | 219 |
| 3600 | 2 | 8 | 18 | 32 | 49 | 71 | 96 | 125 | 158 | 195 |
| 5800 | 1 | 6 | 14 | 25 | 40 | 58 | 80 | 106 | 136 | 169 |

## 2.3. Test Result

| Turn up | | |
|---|---|---|
| **Mode** | **Detector** | **Turn up Power** |
| BLE | PK | -0.43±1 dBm |

| Protocol | Fre. (GHz) | Separation distance (mm) | Max Turn up power (dBm) | ANT Gain (dBi) | Max EIRP (dBm) | Max EIRP (mW) | Limit (mW) | Ratio | Result |
|---|---|---|---|---|---|---|---|---|---|
| BLE | 2.480 | 5 | 0.57 | 1.8128 | 2.38 | 1.73 | 3 | 0.58 | Pass |

**Multiple transmission:**
BLE=0.58＜1

Note: The Maxinum power is less than the limit, complies with the exemption requirements.

※※※※※END OF THE REPORT※※※※※