

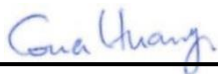
# RF EXPOSURE EVALUATION REPORT

FCC ID : MMATGC150  
Equipment : Midland Wireless Audio System - Charger  
Brand Name : Midland TeamComm®  
Model Name : TGC150  
Marketing Name : Midland TeamComm® Gang Charger  
Applicant : Midland Radio  
5900 Parretta Drive Kansas City, MO 64120  
Manufacturer : Midland Radio  
5900 Parretta Drive Kansas City, MO 64120  
Standard : 47 CFR Part 1.1307

We, SPORTON INTERNATIONAL INC has been evaluated this product in accordance with 47 CFR Part 1.1307 and it complies with applicable limit.

Sporton Lab is accredited to ISO 17025 by Taiwan Accreditation Foundation (TAF code: 1190) and the FCC designation No. TW1190 under the FCC 2.948(e) by Mutual Recognition Agreement (MRA) in FCC evaluation.

The results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, the test report shall not be reproduced except in full



Approved by: Cona Huang / Deputy Manager



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## History of this test report

| Report No. | Version | Description             | Issued Date   |
|------------|---------|-------------------------|---------------|
| FA152534   | Rev. 01 | Initial issue of report | Aug. 30, 2021 |
|            |         |                         |               |
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**1. Description of Equipment Under Test (EUT)**

| Product Feature & Specification         |                                         |
|-----------------------------------------|-----------------------------------------|
| EUT Type                                | Midland Wireless Audio System - Charger |
| Brand Name                              | Midland TeamComm®                       |
| Model Name                              | TGC150                                  |
| Marketing Name                          | Midland TeamComm® Gang Charger          |
| FCC ID                                  | MMATGC150                               |
| Wireless Technology and Frequency Range | 2.4GHz Band: 2400 MHz ~ 2483.5 MHz      |
| Mode                                    | FHSS                                    |
| HW Version                              | 2                                       |
| SW Version                              | 402.03.00                               |

**Remark:** The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

**Reviewed by:** Jason Wang

**Report Producer:** Carlie Tsai

**2. Maximum RF average output power among production units**

| Band / Mode        | Average Power (dBm)       |       |
|--------------------|---------------------------|-------|
|                    | Radio 2 (2402MHz~2480MHz) |       |
|                    | 1Mbps                     | 2Mbps |
| 2.4GHz Proprietary | 19.5dBm (+0.5dB/-2.5dB)   |       |



### **3. RF Exposure Limit Introduction**

According to ANSI/IEEE C95.1-1992, the criteria listed in Table 1 shall be used to evaluate the environmental impact of human exposure to radio frequency (RF) radiation as specified in §1.1310.

| Frequency range (MHz)                                          | Electric field strength (V/m) | Magnetic field strength (A/m) | Power density (mW/cm <sup>2</sup> ) | Averaging time (minutes) |
|----------------------------------------------------------------|-------------------------------|-------------------------------|-------------------------------------|--------------------------|
| <b>(A) Limits for Occupational/Controlled Exposures</b>        |                               |                               |                                     |                          |
| 0.3-3.0                                                        | 614                           | 1.63                          | *(100)                              | 6                        |
| 3.0-30                                                         | 1842/f                        | 4.89/f                        | *(900/f <sup>2</sup> )              | 6                        |
| 30-300                                                         | 61.4                          | 0.163                         | 1.0                                 | 6                        |
| 300-1500                                                       |                               |                               | f/300                               | 6                        |
| 1500-100,000                                                   |                               |                               | 5                                   | 6                        |
| <b>(B) Limits for General Population/Uncontrolled Exposure</b> |                               |                               |                                     |                          |
| 0.3-1.34                                                       | 614                           | 1.63                          | *(100)                              | 30                       |
| 1.34-30                                                        | 824/f                         | 2.19/f                        | *(180/f <sup>2</sup> )              | 30                       |
| 30-300                                                         | 27.5                          | 0.073                         | 0.2                                 | 30                       |
| 300-1500                                                       |                               |                               | f/1500                              | 30                       |
| 1500-100,000                                                   |                               |                               | 1.0                                 | 30                       |

The MPE was calculated at 20 cm to show compliance with the power density limit.

The following formula was used to calculate the Power Density:

$$S = \frac{PG}{4\pi R^2}$$

Where:

S = Power Density

P = Output Power at Antenna Terminals

G = Gain of Transmit Antenna (linear gain)

R = Distance from Transmitting Antenna



## **4. Radio Frequency Radiation Exposure Evaluation**

### **4.1. Standalone Power Density Calculation**

| Band               | Antenna Gain (dBi) | Maximum Power (dBm) | Maximum EIRP (dBm) | Maximum EIRP (W) | Average EIRP (mW) | Power Density at 20cm (mW/cm <sup>2</sup> ) | Limit (mW/cm <sup>2</sup> ) |
|--------------------|--------------------|---------------------|--------------------|------------------|-------------------|---------------------------------------------|-----------------------------|
| 2.4GHz Proprietary | 0.0                | 20.0                | 20.0               | 0.10             | 100.00            | 0.020                                       | 1.000                       |

### **Conclusion:**

According to 47 CFR §2.1091, the RF exposure analysis concludes that the RF Exposure is FCC compliant.