Shenzhen Most Technology Service Co., Ltd.
No.5, 2nd Langshan Road, North District, Hi-tech Industrial Park, Nanshan, Shenzhen, Guangdong, China.

TEST REPORT

FCC Rules Part 15.231

Report Reference No.....:	**MTWG2207142-H**
FCC ID..... :	**2A33F-TWS-1**
Compiled by (position+printed name+signature)..:	File administrators Alisa Luo
Supervised by (position+printed name+signature)..:	Test Engineer Sunny Deng
Approved by (position+printed name+signature)..:	Manager Yvette Zhou
Date of issue.....:	**Aug.08, 2022**
Representative Laboratory Name .:	**Shenzhen Most Technology Service Co., Ltd.**
Address .....:	No.5, 2nd Langshan Road, North District, Hi-tech Industrial Park, Nanshan, Shenzhen, Guangdong, China.
Applicant's name.....:	**TrolMaster Agro Instruments Co., Ltd**
Address .....:	Room 02-03, 25/F, Well Tech Centre, 9 Pat Tat Street, San Po Kong, Kowloon, Hong Kong.
Test specification/ Standard .....**:**	**47 CFR Part 1.1307** **47 CFR Part 2.1093**
TRF Originator.....:	Shenzhen Most Technology Service Co., Ltd.

Test item description .....:	TrolMaster Wireless Station
Trade Mark .....:	**TrolMaster**
Model/Type reference.....:	TWS-1
Listed Models .....:	N/A
Modulation Type .....:	FSK
Operation Frequency.....:	915MHz
Hardware version .....:	V1.0
Software version .....:	V1.0
Rating .....:	DC12V
Result.....:	**PASS**

TEST REPORT

Equipment under Test	:	TrolMaster Wireless Station
Model /Type	:	TWS-1
Listed Models	:	N/A
Remark:		N/A
Applicant	:	TrolMaster Agro Instruments Co., Ltd
Address	:	Room 02-03, 25/F, Well Tech Centre, 9 Pat Tat Street, San Po Kong, Kowloon, Hong Kong
Manufacturer	:	TrolMaster Agro Instruments Co., Ltd
Address	:	Room 02-03, 25/F, Well Tech Centre, 9 Pat Tat Street, San Po Kong, Kowloon, Hong Kong
Factory 1		TOPE (XIAMEN) ELECTRONICS CO.,LTD No.98-2, North Xinglin 2nd Road, Jimer District, XIAMEN, Fujian 361022
Factory 2		Alder Optomechanical Corp. No. 171 Tianjin Street, Pingzhen Dist. Taoyuan 32458, Taiwan
Factory 3		Amber Horticultural Technology Ltd. No.39, Daji Rende Dist, Tainan City, 717007, Taiwan

Test Result:	**PASS**

The test report merely corresponds to the test sample.
It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

Contents

1. Revision History

Revision	Issue Date	Revisions	Revised By
00	2022.08.08	Initial Issue	Alisa Luo

2.1 RF Exposure Compliance Requirement

2.1.1 Standard Requirement

According to KDB447498D01 General RF Exposure Guidance v06
4.3.1. 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.

2.1.2 Limits

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:
[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] · [√f(GHz)] ≤ 3.0 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, where
f(GHz) is the RF channel transmit frequency in GHz
Power and distance are rounded to the nearest mW and mm before calculation[17]
The result is rounded to one decimal place for comparison
The test exclusions are applicable only when the minimum test separation distance is ≤ 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

2.1.3 EUT RF Exposure

EIRP =PT*GT= $(E \times D)^2 /30$
where:
PT = transmitter output power in watts,
GT = numeric gain of the transmitting antenna (unitless),
E = electric field strength in V/m, ---$10^{(dB\mu V/m)/20)}/10^6$,
D = measurement distance in meters (m)---3m,
So PT = $(E \times D)^2 /30$ / GT

The worst case (refer to report MTWG2207120s below:

Antenna polarization: Horizontal		
Frequency (MHz)	Level (dBuV/m)	Polarization
915.0	77.85	Peak
915.0	66.02	Average

Antenna polarization: Vertical		
Frequency (MHz)	Level (dBuV/m)	Polarization
915.0	79.84	Peak
915.0	65.02	Average

For 915.0MHz wireless:
Field strength=66.02 dBuV/m
Ant gain:5dBi;so Ant numeric gain=3.2

EIRP = PT*GT = $(E \times D)^2 /30=(10^{(dB\mu V/m)/20)}/10^6*3)^2/30=0.000002$
So PT= EIRP/GT=0.0000006W=0.0006mW
So(0.0006mW/5mm)* $\sqrt{}$0.915=0.00001

exclusion=0.00001<3.0 for 1-g SAR

So the SAR report is not required.