



FCC TEST REPORT

**Test report
On Behalf of
D&T Inc.
For
OS-1000CW
Model No.: OS-1000CW
FCC ID: THCOS-1000CW**

Prepared for : D&T Inc.
26-121, Gajeongbuk-ro, Yuseong-gu, Daejeon, South Korea

Prepared By : Shenzhen Tongzhou Testing Co.,Ltd
1th Floor, Building 1, Haomai High-tech Park, Huating Road 387, Dalang
Street, Longhua, Shenzhen, China

Date of Test: Jun. 3, 2021 ~ Jun. 7, 2021

Date of Report: Jun. 8, 2021

Report Number: TZ210502207-E2

The test report apply only to the specific sample(s) tested under stated test conditions
It is not permitted to copy extracts of these test result without the written permission of the test laboratory.



TEST RESULT CERTIFICATION

Applicant's name : D&T Inc.

Address : 26-121, Gajeongbuk-ro, Yuseong-gu, Daejeon, South Korea

Manufacture's Name : BLUE ELVES POWER TECHNOLOGY CO.,LTD

Address : 4fl,B3Bd,Jidali,Xinhedadao,Gonghesequ,Shajingjiedao,
Baoanqu,Shenzhen-city,Guangdong-sheng,China

Product description

Trade Mark : N/A

Product name : OS-1000CW

Model and/or type reference : OS-1000CW

Standards : FCC Rules and Regulations Part 2.1091,
KDB680106 D01v03r01

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Date of Test :

Date (s) of performance of tests : Jun. 3, 2021 ~ Jun. 7, 2021

Date of Issue : Jun. 8, 2021

Test Result : **Pass**

Testing Engineer : _____

Nancy Li

(Nancy Li)

Technical Manager : _____

Hugo Chen

(Hugo Chen)

Authorized Signatory : _____

Andy Zhang

(Andy Zhang)



1. GENERAL INFORMATION

1.1 General Description of EUT

Equipment	OS-1000CW
Model Name	OS-1000CW
Serial No.	N/A
Model Difference	N/A
Trade Mark	N/A
FCC ID	THCOS-1000CW
Antenna Type	Coil Antenna
Antenna Gain	0dBi
Operation frequency	110-205KHz
Modulation Type	ASK
Power Rating	Input: 5V $\overline{\text{---}}$ 2A, 9V $\overline{\text{---}}$ 1.5A Output: 5V $\overline{\text{---}}$ 1A, 9V $\overline{\text{---}}$ 1A
Test Sample ID	TZ210502207-1#

Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

The EUT antenna is Coil Antenna. No antenna other than that furnished by the responsible party shall be used with the device.



2. SUMMARY OF TEST RESULTS

2.1 Test procedures according to the technical standards:

FCC KDB 680106 D01 RF Exposure Wireless Charging App v03r01

FCC CFR 47			
Standard Section	Test Item	Judgment	Remark
FCC CFR 47 part1, 1.1310 KDB680106 D01v03r01 (3)(c)	Electric Field Strength (E) (V/m)	PASS	
	Magnetic Field Strength (H) (A/m)	PASS	

2.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement $y \pm U$, where expanded uncertainty U is based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately **95 %**.

No.	Item	Uncertainty
1	All emissions, radiated(<30M)(9KHz-30MHz)	$\pm 2.45\text{dB}$
2	Temperature	$\pm 0.5^\circ\text{C}$
3	Humidity	$\pm 2\%$

2.3 TEST FACILITY

Test Firm : Shenzhen Tongzhou Testing Co.,Ltd

Address 1th Floor, Building 1, Haomai High-tech Park, Huating Road 387,
Dalang Street, Longhua, Shenzhen, China

FCC

Designation Number: CN1275

Test Firm Registration Number: 167722

Shenzhen Tongzhou Testing Co.,Ltd has been listed on the US Federal Communications Commission list of test facilities recognized to perform electromagnetic emissions measurements.

A2LA

Certificate Number: 5463.01

Shenzhen Tongzhou Testing Co.,Ltd has been listed by American Association for Laboratory Accreditation to perform electromagnetic emission measurement.

**IC**

ISED#: 22033

CAB identifier: CN0099

Shenzhen Tongzhou Testing Co.,Ltd has been listed by Innovation, Science and Economic Development Canada to perform electromagnetic emission measurement.

2.4 Test Instruments

Description	Brand	Model No.	Frequency Range	Calibrated Date	Calibrated Until
Broadband Field Meter	NARDA	NBM-550	-	Dec. 27, 2020	Dec. 27, 2021
Magnetic Field Meter	NARDA	ELT-400	1 – 400kHz	Dec. 27, 2020	Dec. 27, 2021
Magnetic Probe	NARDA	HF-3061	300kHz – 30MHz	Dec. 27, 2020	Dec. 27, 2021
Magnetic Probe	NARDA	HF-0191	27 – 1000MHz	Dec. 27, 2020	Dec. 27, 2021
Broadband Field Meter	NARDA	NBM-550	-	Dec. 27, 2020	Dec. 27, 2021
Electric Field Meter	COMBINOVA	EFM 200	5Hz – 400kHz	Dec. 27, 2020	Dec. 27, 2021
E-Field Probe	NARDA	EF-0391	100kHz – 3GHz	Dec. 27, 2020	Dec. 27, 2021
E-Field Probe	NARDA	EF-6091	100MHz – 60GHz	Dec. 27, 2020	Dec. 27, 2021

NOTE: 1. The calibration interval of the above test instruments is 12 months.

2.5 Special Accessories

No.	Equipment	Manufacturer
1	Intelligent wireless charging full function test module	YBZ



2.6 Operation of EUT during testing

Test Modes:		
Mode 1	AC/DC Adapter (9V/1.5A) + EUT + Wireless charger tester (Load 9W)	Record
Mode 2	AC/DC Adapter (9V/1.5A) + EUT + Wireless charger tester (Load 7.5W)	Pre-test
Mode 3	AC/DC Adapter (9V/1.5A) + EUT + Wireless charger tester (Load 5W)	Pre-test
Mode 4	AC/DC Adapter (5V/2A) + EUT + Wireless charger tester (Load 9W)	Pre-test
Mode 5	AC/DC Adapter (5V/2A) + EUT + Wireless charger tester (Load 7.5W)	Pre-test
Mode 6	AC/DC Adapter (5V/2A) + EUT + Wireless charger tester (Load 5W)	Pre-test
Note: All test modes were pre-tested, but we only recorded the worst case in this report.		



3. MAXIMUM PERMISSIBLE EXPOSURE

Table1 Limit of Maximum Permissible Exposure

Limits for Occupational / Controlled Exposure				
Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842 / f	4.89 / f	(900 / f)*	6
30-300	61.4	0.163	1.0	6
300-1500			F/300	6
1500-100,000			5	6
Limits for General Population / Uncontrolled Exposure				
Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180 / f)*	30
30-300	27.5	0.073	0.2	30
300-1500			F/1500	30
1500-100,000			1	30

Note 1: f = frequency in MHz ; *Plane-wave equivalent power density

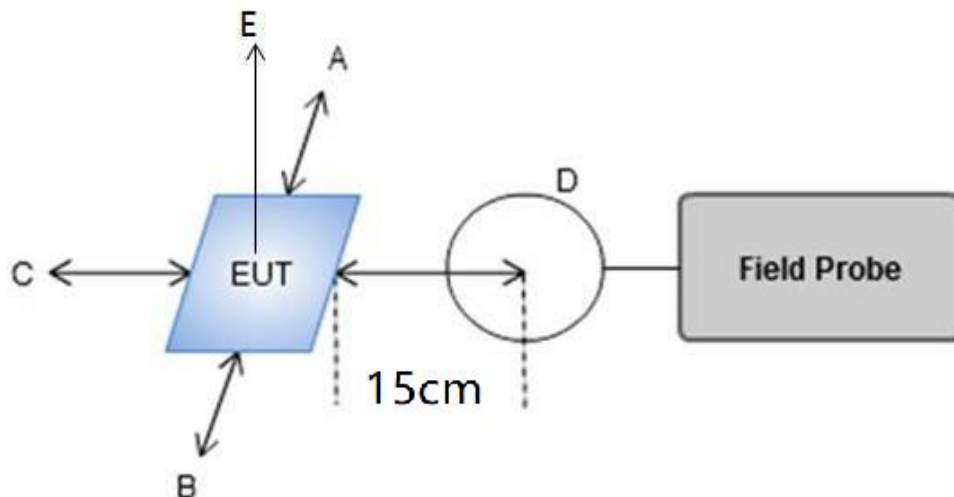
Note 2: For the applicable limit, see FCC 1.1310, 680106 D01 v03r01 RF Exposure Wireless Charging App

Note 3: Emissions between 100 kHz to 300 kHz should be assessed versus the limits at 300 kHz in Table1 of Section 1.1310: 614 V/m and 1.63 A/m.

4. TEST PROCEDURE

a. For devices designed for typical desktop applications, such a wireless charging pads, RF exposure evaluation should be conducted assuming a user separation distance of 15 cm. E and H field strength measurements or numerical modeling may be used to demonstrate compliance. Measurements should be made from all sides and the top of the primary/client pair, with the 15 cm measured from the center of the probe(s) to the edge of the device.

4.1 TEST SETUP



4.2 RESULT OF MAXIMUM PERMISSIBLE EXPOSURE

Temperature	22.8°C	Humidity	55%
Test Engineer	Tony Luo	Configurations	TM 1 – TM 3

E-Field Strength at 15 cm from the edges surrounding the EUT and 15cm from the top surface of the EUT

Power Load	Unit	Frequency Range (MHz)	Measured E-Field Strength Values (V/m)					FCC E-Field Strength 50% Limits (V/m)	FCC E-Field Strength Limits (V/m)
			Test Position A	Test Position B	Test Position C	Test Position D	Test Position E		
9W	v/m	0.132	98.1331	76.6441	80.0371	94.2123	91.611	307.0	614.0
7.5W	v/m	0.132	64.1654	66.7667	65.2964	70.0089	81.055	307.0	614.0
5W	v/m	0.132	71.3284	61.6772	63.9769	75.777	70.499	307.0	614.0

Note: V/m= A/m *377



H-Field Strength at 15 cm from the edges surrounding the EUT and 15cm from the top surface of the EUT

Power Load	Unit	Frequency Range (MHz)	Measured H-Field Strength Values (A/m)					FCC H-Field Strength 50 % Limits (A/m)	FCC H-Field Strength Limits (A/m)
			Test Position A	Test Position B	Test Position C	Test Position D	Test Position E		
9W	uT	0.132	0.3254	0.2541	0.2654	0.3124	0.3038	--	--
9W	A/m	0.132	0.2603	0.2033	0.2123	0.2499	0.2430	0.815	1.63
7.5W	uT	0.132	0.2128	0.2214	0.2165	0.2321	0.2688	--	--
7.5W	A/m	0.132	0.1702	0.1771	0.1732	0.1857	0.2150	0.815	1.63
5W	uT	0.132	0.2365	0.2045	0.2121	0.2513	0.2338	--	--
5W	A/m	0.132	0.1892	0.1636	0.1697	0.2010	0.1870	0.815	1.63

H-Field Strength at 20cm from the top surface of the EUT

Power Load	Unit	Frequency Range (MHz)	Measured H-Field Strength Values (A/m)	FCC H-Field Strength 50% Limits (A/m)	FCC H-Field Strength Limits (A/m)
			Test Position E		
9W	uT	0.132	0.2406	--	--
9W	A/m	0.132	0.1925	0.815	1.63
7.5W	uT	0.132	0.2114	--	--
7.5W	A/m	0.132	0.1691	0.815	1.63
5W	uT	0.132	0.1914	--	--
5W	A/m	0.132	0.1531	0.815	1.63

Note: A/m = uT/1.25



4.3 Equipment Approval Considerations

The EUT does comply with KDB 680106 D01v03r01 as follow table.

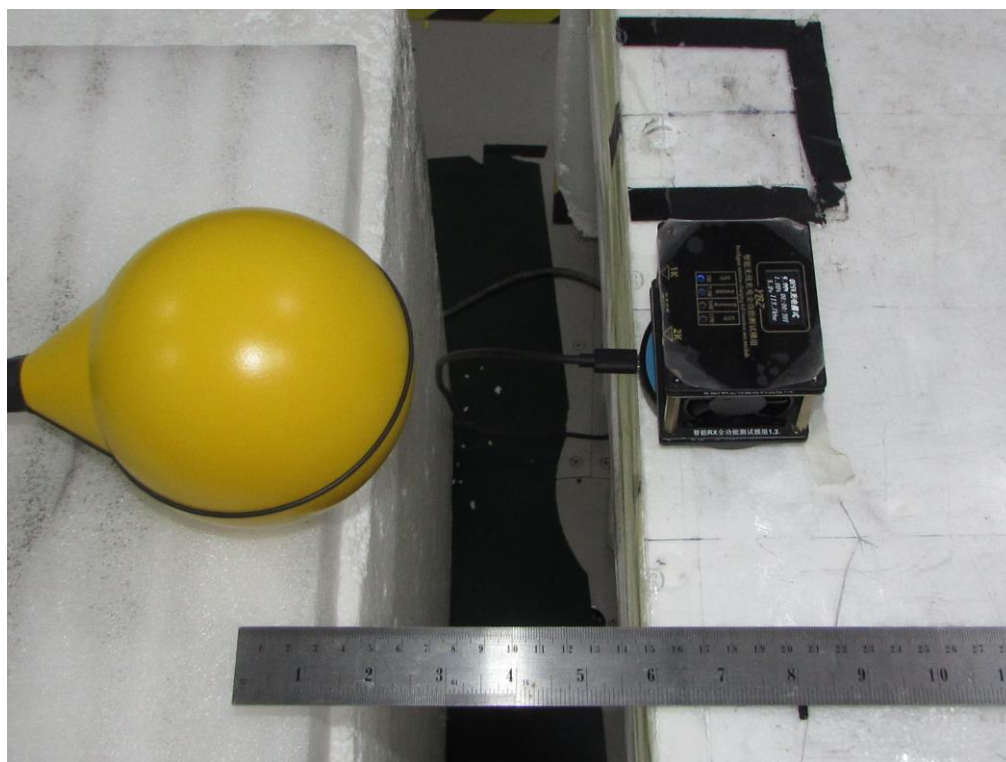
Requirements of KDB 680106 D01	Yes / No	Description
Power transfer frequency is less than 1 MHz	Yes	The device operate in the frequency range 110KHz~205KHz
Output power from each primary coil is less than or equal to 15 watts.	Yes	The maximum output power for each primary coil is 9W.
The system may consist of more than one source primary coils, charging one or more clients. If more than one primary coil is present, the coil pairs may be powered on at the same time.	Yes	The transfer system includes one primary coils and are able to detect and allow coupling only between individual pairs of coils at the same time.
Client device is placed directly in contact with the transmitter.	Yes	Client device is placed directly in contact with the transmitter.
Mobile exposure conditions only (portable exposure conditions are not covered by this exclusion).	Yes	Mobile exposure conditions only
The aggregate H-field strengths anywhere at or beyond 15 cm surrounding the device, and 20 cm away from the surface from all coils that by design can simultaneously transmit, and while those coils are simultaneously energized, are demonstrated to be less than 50% of the applicable MPE limit.	Yes	The EUT H-field strengths at 15 cm surrounding the device and 20 cm above the top surface from all simultaneous transmitting coils are demonstrated to be less than 50% of the MPE limit.

4.4 Conclusion

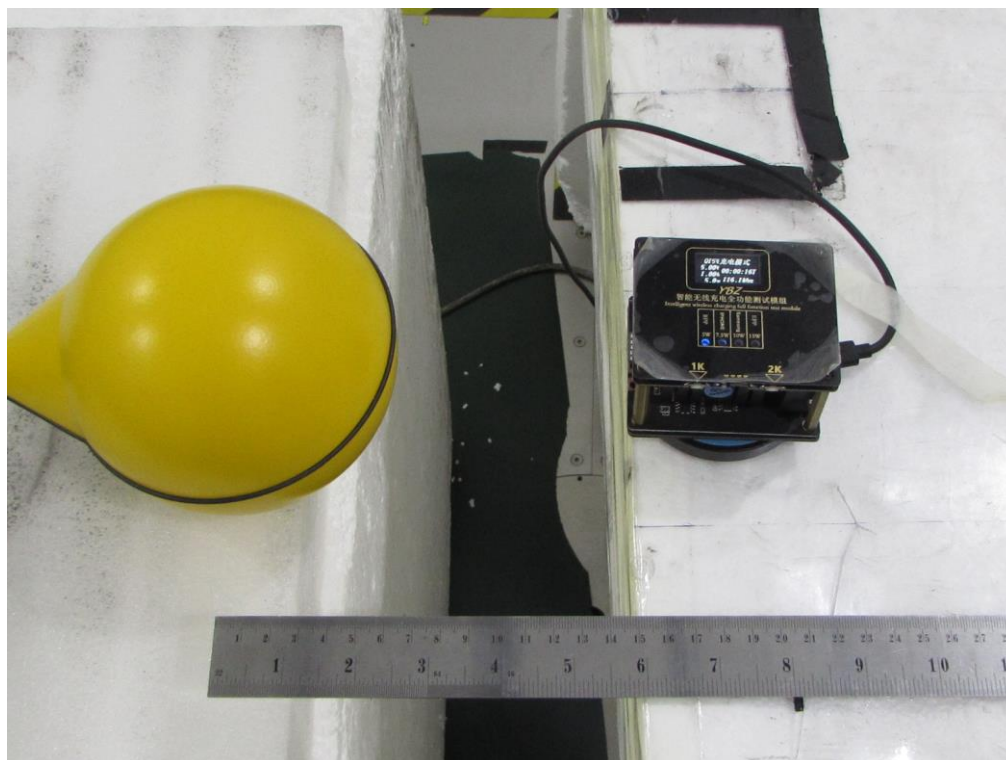
The detected emissions with a distance of 15cm surrounding the device and 20 cm above the top surface of the device are below the FCC E-Field Strength & H-Field Strength limits; and comply with the requirements of FCC KDB 680106 D01.

PHOTOGRAPH OF TEST

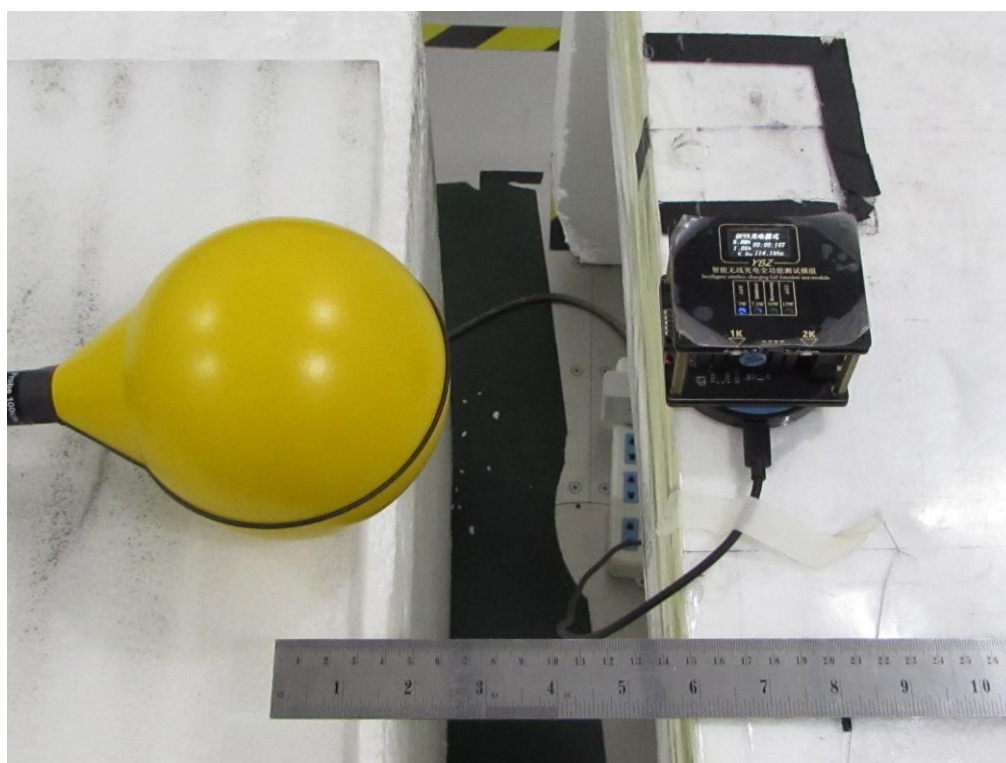
Position A



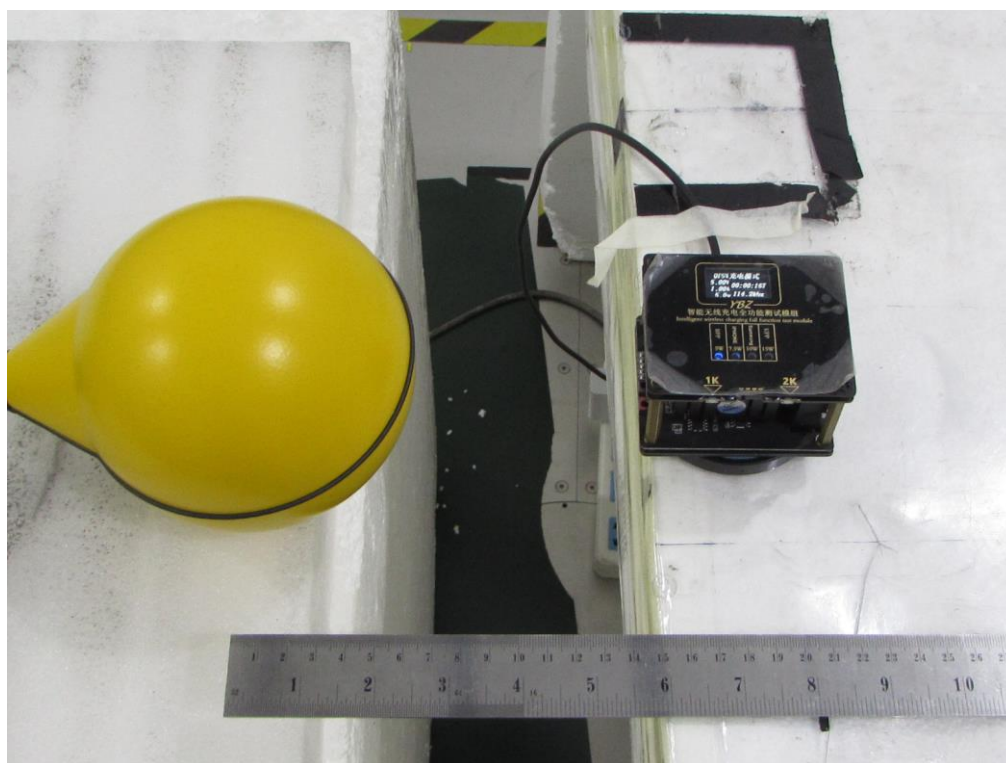
Position B



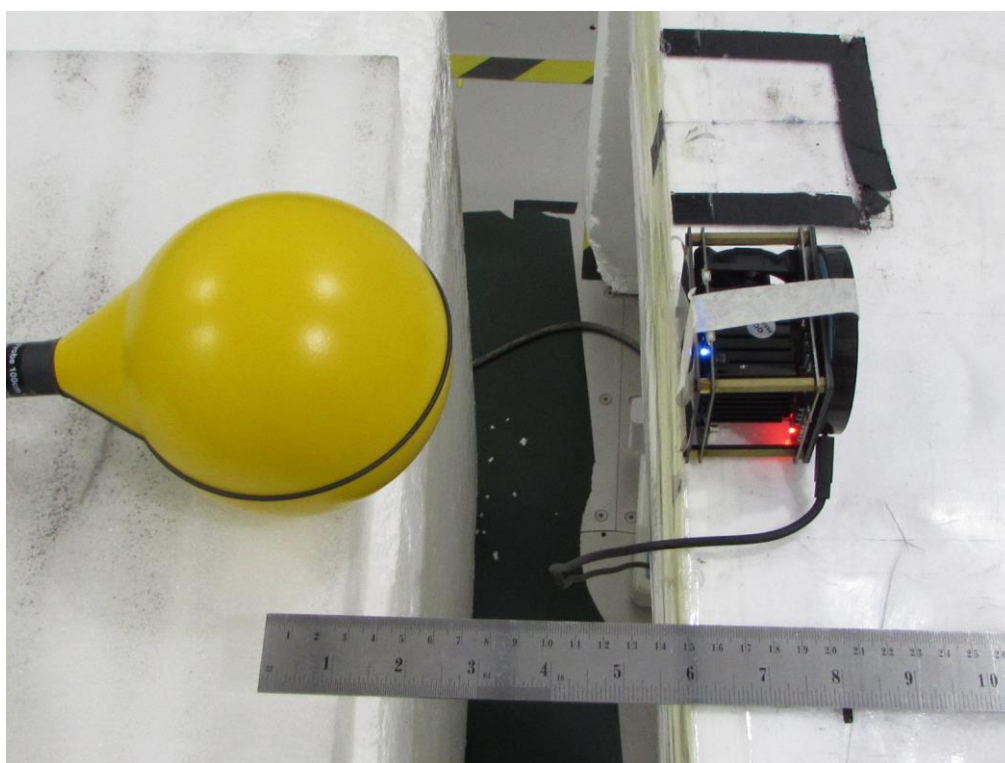
Position C



Position D



Position E



※※※※※THE END※※※※※