MAXIUM PERMISSIBLE EXPOSURE

TEST REPORT

For

Shenzhen Jihezaowu Technology Co., Ltd.

1/F., Building A, Changyuan New Material Port, Science & Industry Park, Nanshan District, Shenzhen, Guangdong, P.R. China

FCC ID : 2AX6N-CW310

Report Type:	**Product Type:**
Original Report	Wireless Charger

Report Number:	RTZ201123007
Report Date:	Dec. 31, 2020
Reviewed By:	Jimmy Xiao RF Engineer
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1.1.GENERAL INFORMATION

Product	Wireless Charger
Tested Model	CW310
Modulation Type	ASK
Type of Antenna	Coil Antenna
Rating	DC 5V or 9V
Antenna Gain	0dBi
Date of Test	2020-12-29
Sample number	RTZ201123007-RF-S3(Assigned by BACL, Shenzhen)
Received date	2020-12-27
Sample/EUT Status	Good condition

1.2.Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Shenzhen) to collect test data is located on the 6/F., West Wing, Third Phase of Wanli Industrial Building, Shihua Road, Futian Free Trade Zone, Shenzhen, Guangdong, China.

The test site has been approved by the FCC under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No.: 342867, the FCC Designation No.: CN1221.

The test site has been registered with ISED Canada under ISED Canada Registration Number 3062B.

1.3.Measuring Standard

FCC CFR 47 Part 1(1.1310) KDB 680106 D01 v03

1.4.Requirements

The EUT does comply with item 5(b) of KDB 680106 D01 v03

1) Power transfer frequency is less than 1MHz
2) Output power from each primary coil is less than or equal to 15 watts.
3) The transfer system includes only single primary and secondary coils. This includes charging systems that may have multiple primary coils and clients that able to detect and allow coupling only between individual pair of coils.
4) Client device is inserted in or placed directly in contact with the transmitter.
5) Mobile exposure conditions only (portable exposure conditions are not covered by this exclusion)
6) The aggregate 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.

1.5.Test Configuration

1) The field strength of both E-field and H-field was measured at 15cm using the equipment list above for determining compliance with the MPE requirements of FCC Part 1.1310.
2) The RF power density was measured at Under maximum load test
3) Maximum E-field and H-field measurements were made 15cm from each side of the EUT. Along the side of the EUT and still 15cm away from the edge of the EUT, the field probes were positioned at the location where there is maximum field strength. The maximum E-field and H-field is reported below.
4) This device uses a wireless charging circuit for power transfer operating at the frequency of 110–205kHz. Thus, the 300kHz limits were used: E-field Limit = 614 (V/m); H-field limit = 1.63 (A/m).

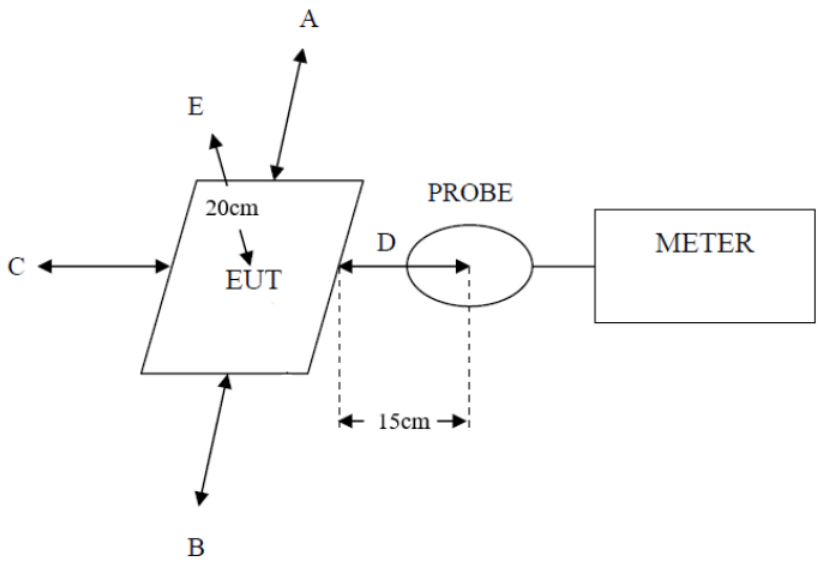
1.6.Test Procedure

1) The RF exposure test was performed in anechoic chamber.
2) The aggregate H-field strengths at 15 cm surrounding the device and 20 cm above the top surface
3) The highest emission level was recorded and compared with limit as soon as measurement of each points (A, B, C, D, E) were completed.
4) The EUT was measured according to the dictates of KDB 680106 D01 v03.

Remark:

The EUT's test position A, B, C, D, and E is valid for the E and H field measurements.

1.7.Test Setup



1.8.Limits

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm^2)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposure				
0.3-3.0	614	1.63	*100	6
3.0-30	1842/f	4.89/f	*900/f^2	6
30-300	61.4	0.163	1.0	6
300-1,500			f/300	6
1,500-100,000			5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*100	30
1.34-30	824/f	2.19/f	*180/f^2	30
30-300	27.5	0.073	0.2	30
300-1,500			f/1500	30
1,500-100,000			1.0	30

f = frequency in MHz * = Plane-wave equivalent power density

Remark: Emissions between 100 kHz to 300 kHz should be assessed versus the limits at 300 kHz in Table 1 of Section 1.1310: 614 V/m and 1.63 A/m

1.9.Measuring Device and Test Equipment

For MPE Measurement

Item	Equipment	Manufacturer	Model No.	Serial No	Last Cal.	Cal. Interval
1.	Exposure Level Tester	Narda	ELT-400	N-0229	Nov. 15, 2019	3 Year
2.	B Field Probe	Narda	ELT Probe 100cm2	M-0666	Nov. 15, 2019	3 Year
3.	Isotropic Field Probe	ETS-Lindgreen	HI－6005	69461	Sep. 28, 2018	4 Year

* **Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Shenzhen) attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

1.10.Measuring Results

Environmental Conditions

Temperature:	**25ºC**
Relative Humidity:	**46%**
ATM Pressure:	**101.0 kPa**

The testing was performed by Joker Chen on 2020-12-29.

Table 1: E-Field Strength at 15 cm from the edges surrounding the EUT and 20cm from the top surface of the EUT

Frequency Range (kHz)	Measured E-Field Strength Values (V/m)					50% Limit (V/m)	Limit (V/m)
	Test Position A	Test Position B	Test Position C	Test Position D	Test Position E		
110-205	1.118	1.302	1.053	1.289	1.342	307	614

Table 2: H-Field Strength at 15 cm from the edges surrounding the EUT and 20cm from the top surface of the EUT

Frequency Range (kHz)	Measured H-Field Strength Values (A/m)					50% Limit (A/m)	Limit (A/m)
	Test Position A	Test Position B	Test Position C	Test Position D	Test Position E		
110-205	0.262	0.216	0.180	0.211	0.336	0.815	1.63

Result: Compliance

Considerations of compliance 680106 D01 RF Exposure Wireless Charging App v03 clause 5 b:

(1) Power transfer frequency is less than 1 MHz.

Yes, the operation frequency is 110-205 kHz.

(2) Output power from each primary coil is less than or equal to 15 watts.

No, the maximum output power of primary coil is 10 Watts.

(3) The transfer system includes only single primary and secondary coils. This includes charging systems that may have multiple primary coils and clients that are able to detect and allow coupling only between individual pairs of coils.

The transfer system includes two coils to detect and allow coupling only between individual pairs of coils.

① Wireless charging area which has two charging coils.

② Note: The two wireless charging areas are independent. The coils and clients are able to detect and coupling only between individual pairs of coils.

(4) Client device is placed directly in contact with the transmitter.

Yes, client device is placed directly in contact with the transmitter

(5) Mobile exposure conditions only (portable exposure conditions are not covered by this exclusion).

Yes, mobile exposure conditions only

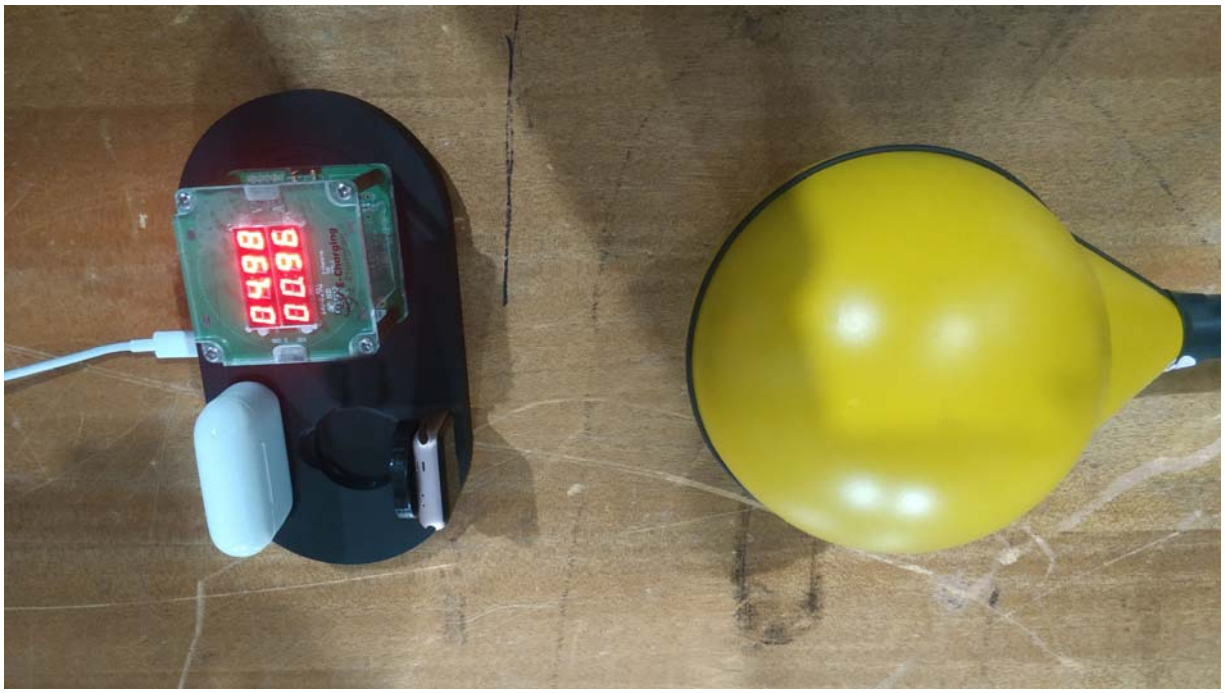
(6) The aggregate H-field strengths at 15 cm surrounding the device and 20 cm above the top surface from all simultaneous transmitting coils are demonstrated to be less than 50% of the MPE limit.

Yes, the test result for H and E-filed strength less than 50% of the MPE limit.

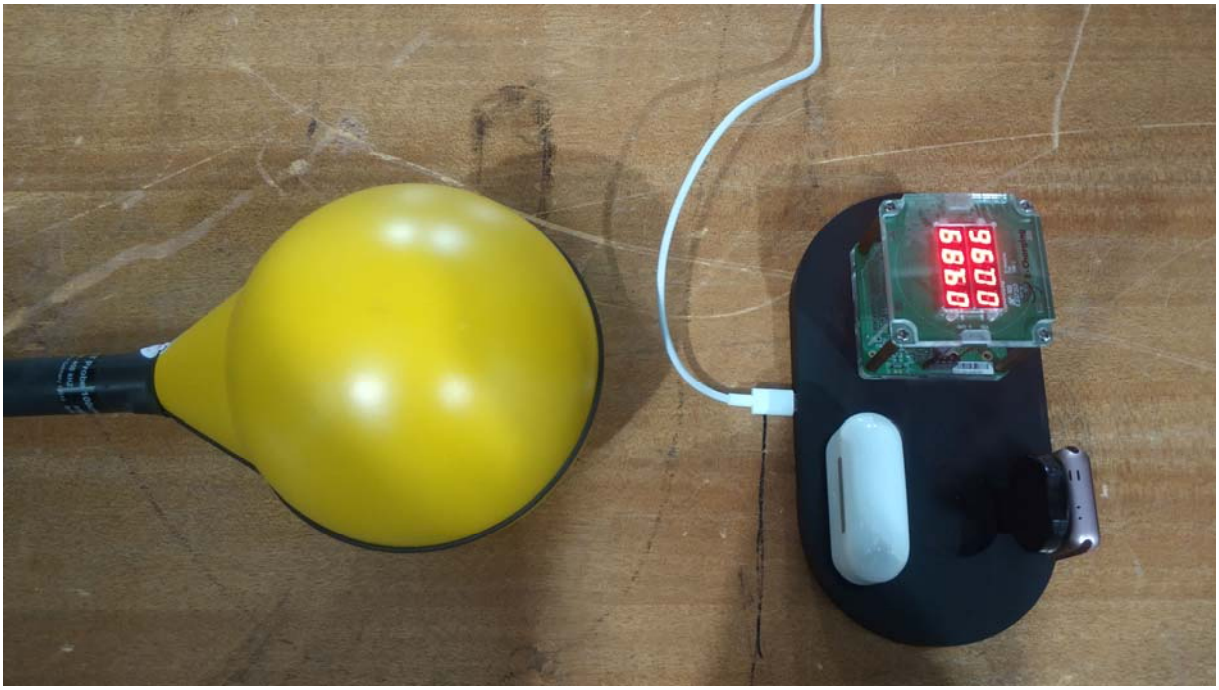
1.11.Photographs of Test Setup

H-field strengths:

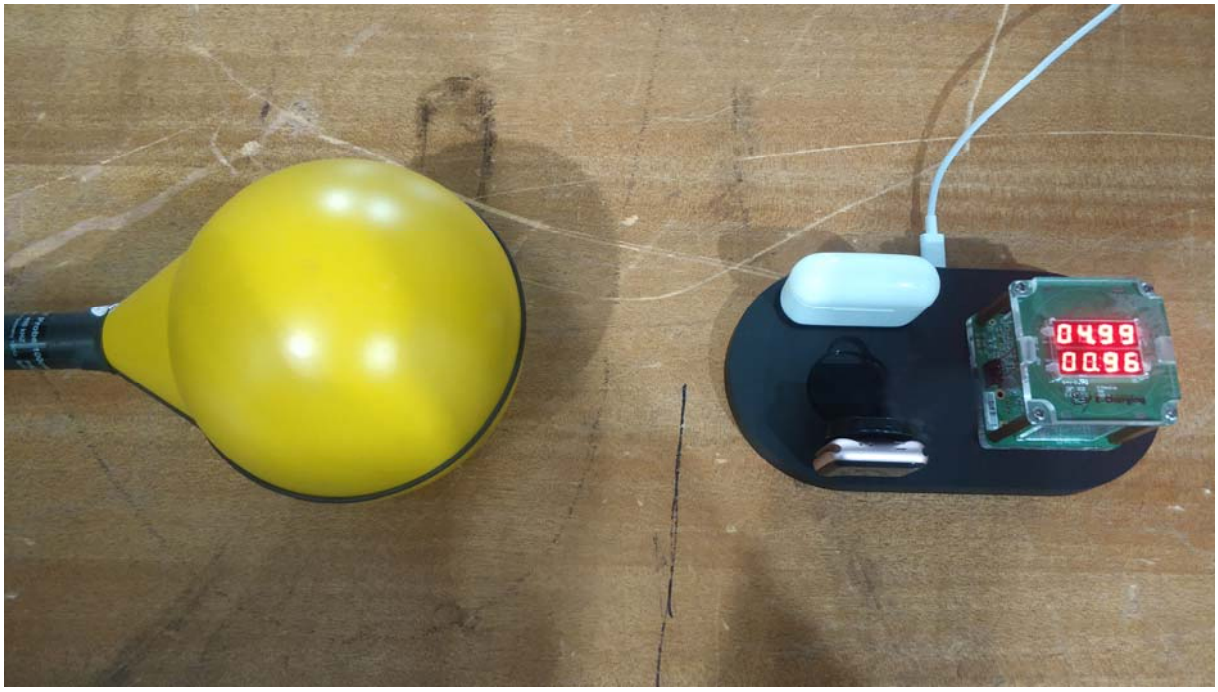
Position A



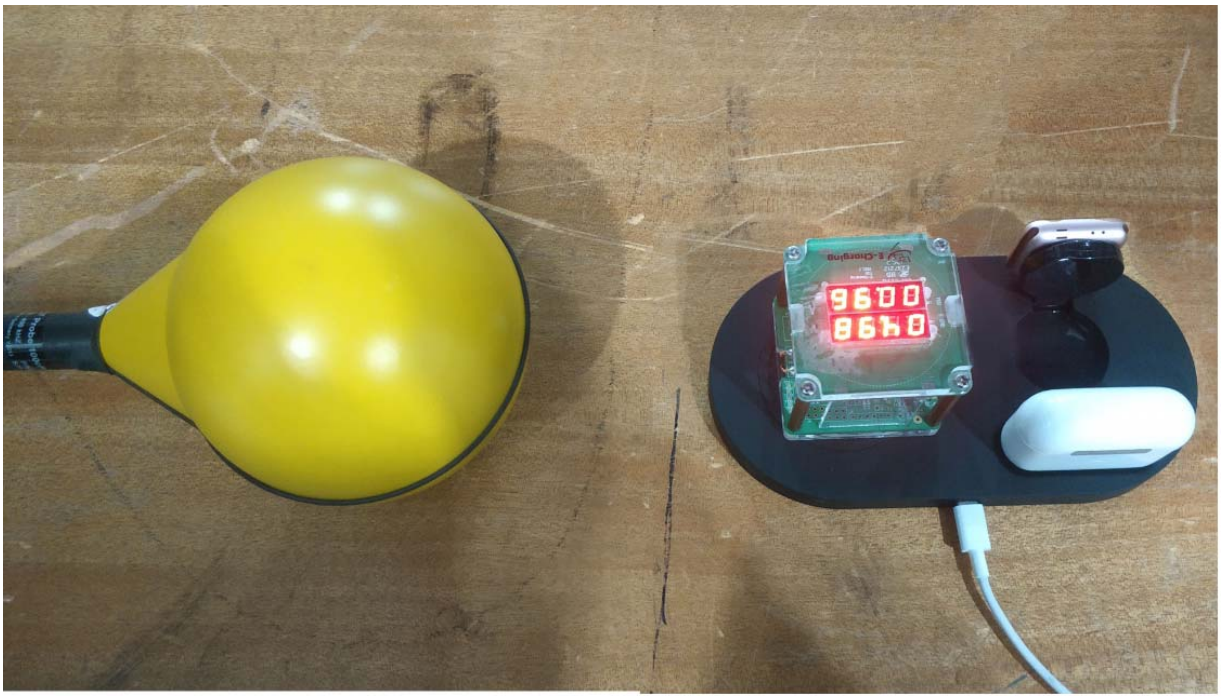
Position B



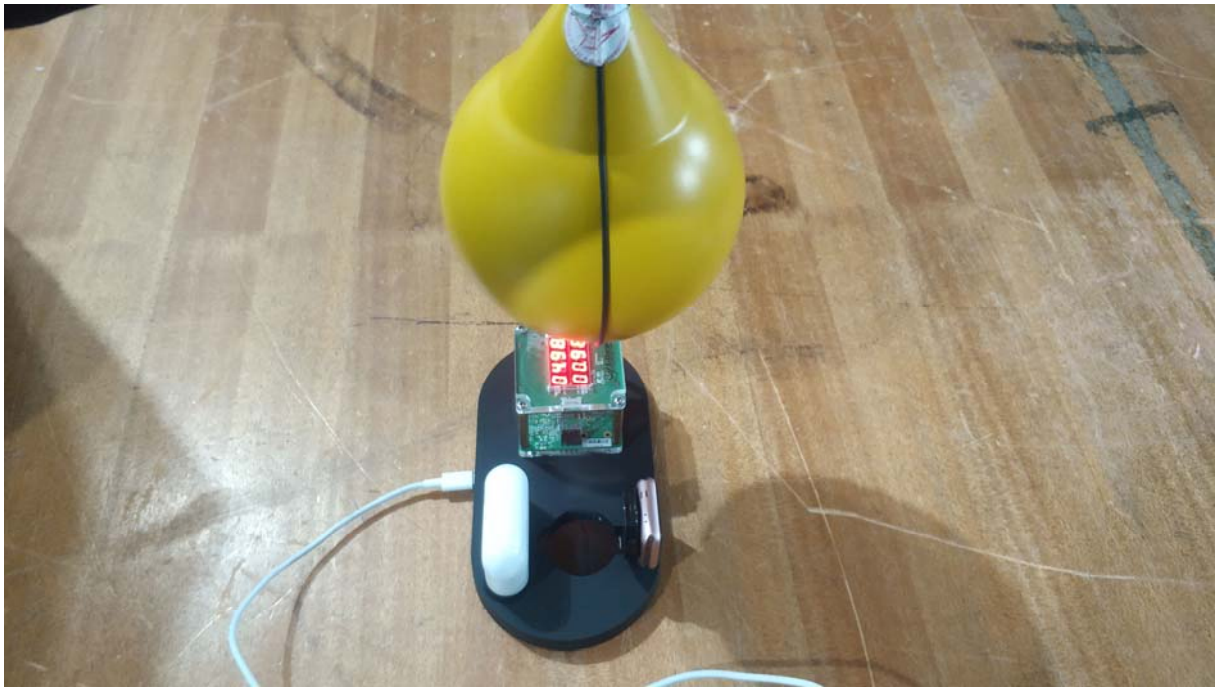
Position C



Position D

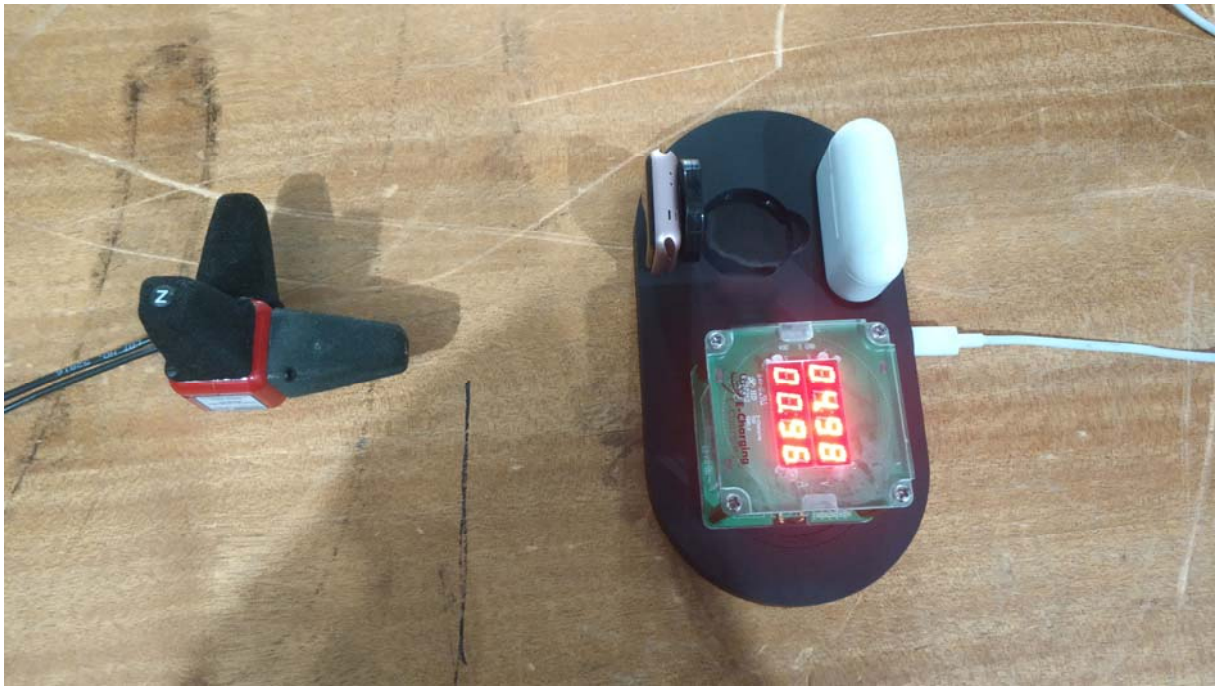


Position E

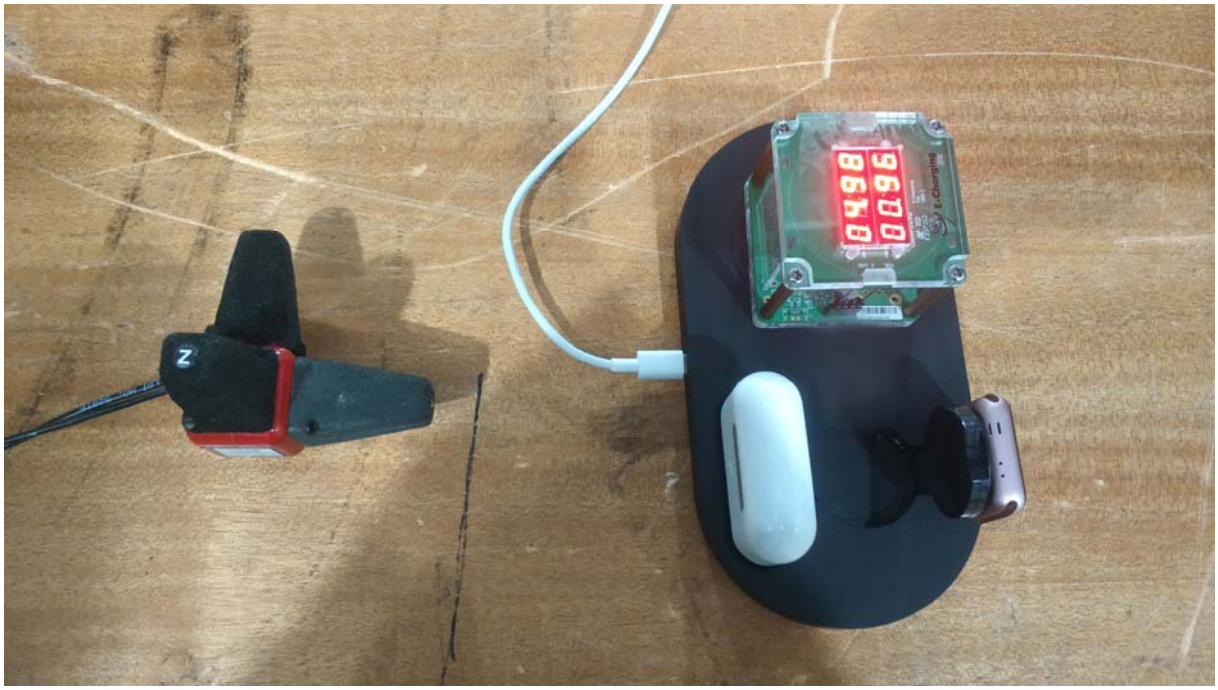


E-field strengths:

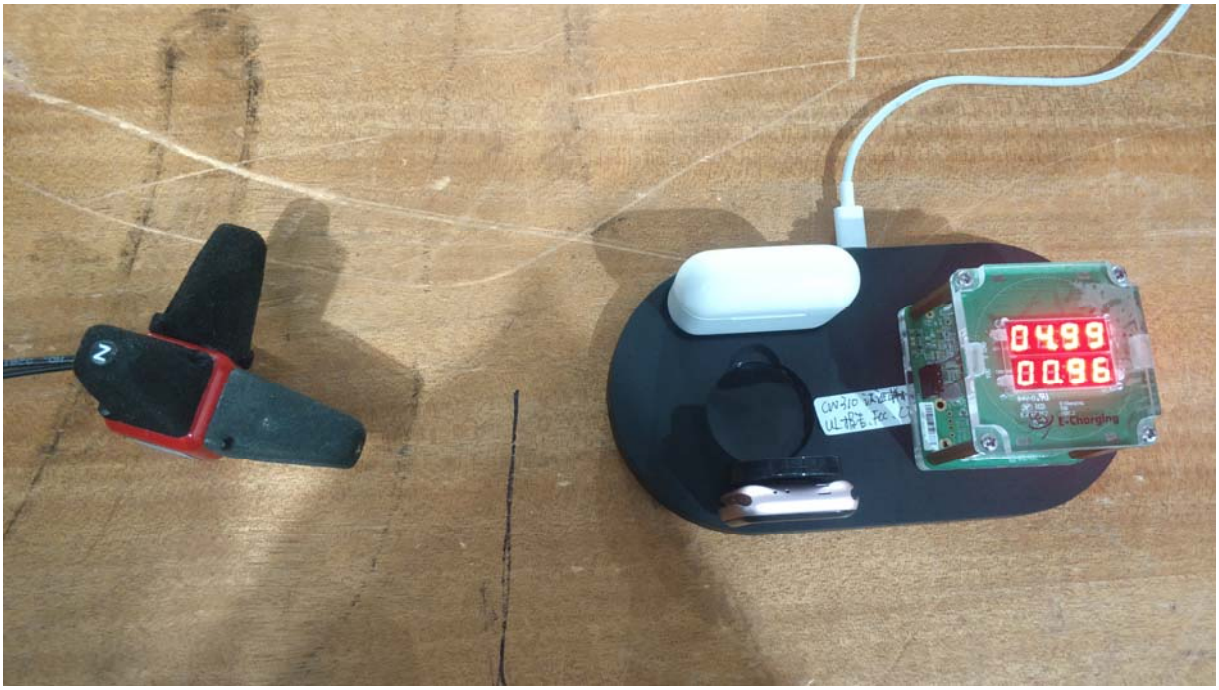
Position A



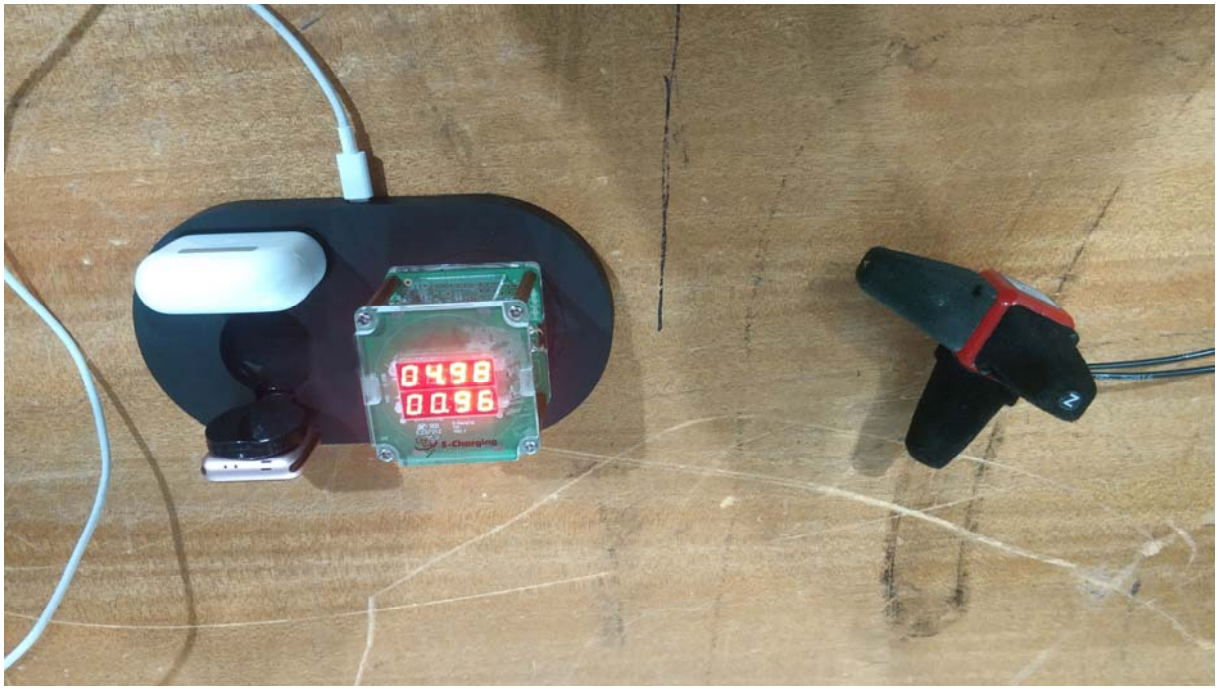
Position B



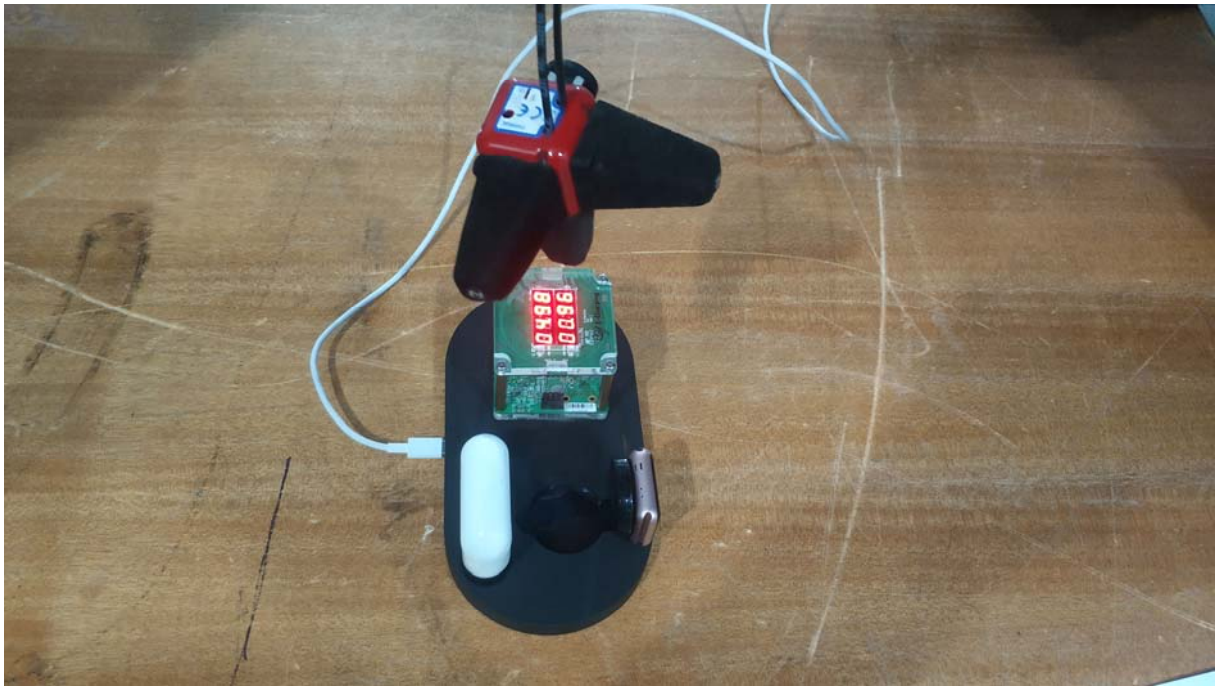
Position C



Position D



Position E



******* End of Test Report *******