

# RF Exposure Evaluation

## FCC ID: 2A7ZM-G2MICROPHONE

### 1. Client Information

<b>Applicant</b>	:	JBU GLOBAL LLC
<b>Address</b>	:	19416 NE 26th Ave, 114B, Miami, Florida 33180
<b>Manufacturer</b>	:	NINGBO SUNNUO INTERNATIONAL TRADE CO., LTD
<b>Address</b>	:	No. 23, Jinshan Road, Taoyuan Street NINGBO Zhejiang Province 315600, China.

### 2. General Description of EUT

<b>EUT Name</b>	:	Presto G2 Microphone	
<b>Model(s)</b>	:	Presto G2 Microphone, Spinto G3 Microphone, Soprano X1 Microphone	
<b>Model Difference</b>	:	All these models are identical in the same PCB, layout and electrical circuit, the only difference is appearance.	
<b>Product Description</b>	Operation Frequency:	490.5MHz	
	Number of Channel:	1 Channels	
	Antenna Gain:	0.5dBi PCB Antenna	
	Modulation Type:	FM	
<b>Power Rating</b>	:	USB Input: DC 5V, 1A DC 3.7V 1200mAh by Li-ion Battery	
<b>Software Version</b>	:	ZH2074C-V1.7	
<b>Hardware Version</b>	:	310TX-V5.0	
<b>Connecting I/O Port(S)</b>	:	Please refer to the User's Manual	

**Remark:** The antenna gain provided by the applicant, the adapter and verified for the RF conduction test and adapter provided by TOBY test lab.

**Note:** More test information about the EUT please refer the RF Test Report.

## The RF Exposure Evaluation for FCC:

### SAR Test Exclusion Calculations

FCC: According to 447498 D04 Interim General RF Exposure Guidance v01.

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  $P_{th}$  (mW).

This method shall only be used at separation distances from 0.5 cm to 40 cm and at frequencies from 0.3 GHz to 6 GHz (inclusive).  $P_{th}$  is given by Formula (B.2).

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

where

$$x = -\log_{10} \left( \frac{60}{ERP_{20 \text{ cm}} \sqrt{f}} \right)$$

and  $f$  is in GHz,  $d$  is the separation distance (cm), and  $ERP_{20\text{cm}}$  is per Formula (B.1). The example values shown in Table B.2 are for illustration only.

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

**1. Calculation:**

Test separation: 5mm					
Frequency (MHz)	Eirp Power (dBm)	Turn-up Power Tolerance (dB)	Max power of tune up tolerance (dBm)	Max power of tune up tolerance (mW)	Limit P <sub>th</sub> (mW)
490.5	-32.43	-32 ± 1	-33.0	0.000001	3

The measurement results comply with the FCC Limit per 47 CFR 2.1093 for the uncontrolled RF Exposure and SAR Exclusion Threshold per KDB 447498 D04, No SAR is required.

**Conclusion:**

The measurement results comply with the FCC Limit per 47 CFR 2.1093 for the uncontrolled RF Exposure and SAR Exclusion Threshold per KDB 447498 v06.

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