RF Exposure Evaluation Declaration

Product Name : Breeze

Model No. : Flying Camera******** (The "*" can be 0 to 9, a

to z, A to Z, blank or plus, for marketing purpose.)

FCC ID : 2ACS5-FCA

Applicant : Yuneec Technology Co., Limited

Address : 2/F Man Shung Industrial Building, 7 Lai Yip Street,

Kwun Tong, Hong Kong

Date of Receipt : Mar. 09, 2016

Issued Date : Aug. 11, 2016

Report No. : 1632039R-RF-US-P20V01

Report Version : V1.0

Test Report Certification

Issued Date : May. 12, 2016
Report No. : 1632039R-RF-US-P20V01

Product Name	:	Breeze
Applicant	:	Yuneec Technology Co., Limited
Address	:	2/F Man Shung Industrial Building, 7 Lai Yip Street, Kwun Tong, Hong Kong
Manufacturer	:	Yuneec International (China) Co., Ltd.
Address	:	No.388 East Zhengwei Road, Jinxi Town, Kunshan, Jiangsu 215324, China
Model No.	:	Flying Camera******** (The "*" can be 0 to 9, a to z, A to Z, blank or plus, for marketing purpose.)
FCC ID	:	2ACS5-FCA
Brand Name	:	YUNEEC
EUT Voltage	:	DC 12.6V
Applicable Standard	:	KDB 447498D01V06
		FCC Part1.1310(b)
Test Result	:	Complied
Performed Location	:	Quietek Corporation - Suzhou EMC Laboratory
		No.99 Hongye Rd., Suzhou Industrial Park, Suzhou, 215006, Jiangsu, China
		TEL: +86-512-6251-5088 / FAX: +86-512-6251-5098
		FCC Registration Number: 800392

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(Senior Engineer: Frank He)

Approved By : _Harry Zhao_

(Engineering Manager : Harry Zhao)

Laboratory Information

We, **QuieTek Corporation**, are an independent EMC and safety consultancy that was established the whole facility in our laboratories. The test facility has been accredited/accepted(audited or listed) by the following related bodies in compliance with ISO 17025, EN 45001 and specified testing scope:

Taiwan R.O.C.	**:**	**BSMI, NCC, TAF**
USA	**:**	**FCC**
Japan	**:**	**VCCI**
China	**:**	**CNAS**

The related certificate for our laboratories about the test site and management system can be downloaded from QuieTek Corporation's Web Site : http://www.quietek.com/english/about/certificates.aspx?bval=5
The address and introduction of QuieTek Corporation's laboratories can be founded in our Web site : http://www.quietek.com/index_en.aspx
If you have any comments, Please don't hesitate to contact us. Our contact information is as below:

HsinChu Testing Laboratory :
No.75-2, 3rd Lin, Wangye Keng, Yonghxing Tsuen, Qionglin Shiang, Hsinchu County 307, Taiwan, R.O.C.
TEL:+886-3-592-8858 / FAX:+886-3-592-8859   E-Mail : service@quietek.com

LinKou Testing Laboratory :
No.5-22, Ruishukeng, Linkou Dist., New Taipei City 24451, Taiwan, R.O.C.
TEL : 886-2-8601-3788 / FAX : 886-2-8601-3789   E-Mail : service@quietek.com

Suzhou Testing Laboratory :
No.99 Hongye Rd., Suzhou Industrial Park, Suzhou, 215006, Jiangsu, China
TEL : +86-512-6251-5088 / FAX : 86-512-6251-5098   E-Mail : service@quietek.com

History of This Test Report

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
1632039R-RF-US-P20V01	V1.0	Initial Issued Report	Aug. 11, 2016

1. RF Exposure Evaluation

1.1. Limits

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in 1.1307(b)

LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm2)	Average Time (Minutes)
(A) Limits for Occupational/ Control Exposures				
300-1500	--	--	F/300	6
1500-100,000	--	--	5	6
(B) Limits for General Population/ Uncontrolled Exposures				
300-1500	--	--	F/1500	6
1500-100,000	--	--	1	30

F= Frequency in MHz

Friis Formula

Friis transmission formula: $Pd = (Pout*G)/(4*pi*r2)$

Where

Pd = power density in mW/cm2

Pout = output power to antenna in mW

G = gain of antenna in linear scale

Pi = 3.1416

R = distance between observation point and center of the radiator in cm

Pd id the limit of MPE, 1 mW/cm2 . If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance r where the MPE limit is reached.

1.2. Test Procedure

Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.

The temperature and related humidity: 18℃ and 78％ RH.

1.3. Test Result of RF Exposure Evaluation

Product	:	Breeze
Test Item	:	RF Exposure Evaluation
Test Site	:	AC-6

- Antenna Information

Antenna Manufacturer	N/A				
Antenna Delivery	☐	1*TX+1*RX	☒ 1*TX+2*RX	☐	3*TX+3*RX
Antenna Technology	☒	SISO			
	☐	MIMO	☐ Basic methodology with NANT transmit antennas		
			☐ Sectorized antenna systems		
			☐ Cross-polarized antennas		
			☐ Unequal antenna gains, with equal transmit powers		
			☐ Spatial Multiplexing		
			☐ Cyclic Delay Diversity (CDD)		
Antenna Type	External Antenna				

Antenna Information				
No.			Ant Type	Ant Gain/ Direction Gain
☒ SISO	☒	Antenna 0	External Antenna	3.92dBi
	☒	Antenna 1	External Antenna	3.92dBi
	☐	Antenna 2		
☐ Basic				
☐ CDD				
☐ Beam-forming				

Note: There are two antennas and only one antenna can transmit at the same time.

● Output Power into Antenna & RF Exposure Evaluation Distance:

Test Mode	Frequency Band (MHz)	Maximum Output Power to Antenna (dBm)	Directional Gain (dBi)	Power Density at R = 20 cm (mW/cm2)
802.11a	5725MHz~5850MHz	17.68	3.92	0.0288

Safety Distance Calculation Formula:

The power flux:

$$S = \frac{P*G_{(\theta,\phi)}}{4*\pi*r^2}$$

So safety distance as following:

$$r = \sqrt{\frac{P*G}{4*\pi*S}}$$

P = input power of the antenna

G = antenna gain relative to an isotropic antenna

θ, Φ = elevation and azimuth angles.

r = distance from the antenna to the point of investigation

Frequency Range (MHz)	Maximum EIRP (dBm)	Limit of Power Density S(mW/cm2)	Safety Distance r(cm)
5725-5850	21.60	1.0	3.39

Note: The safety distance is 3.39cm for Breeze without any other radio equipment.

———————————— The End ————————————