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RF Exposure Evaluation Report

APPLICANT	BARON SERVICES INC.
	4930 Research Dr. Huntsville, Alabama 35805
FCC ID	NX5-GEN3-1000HSK
MODEL NUMBER	GEN3-1000HSK
PRODUCT DESCRIPTION	S BAND RADAR
STANDARD APPLIED	CFR 47 Part 2.1091
PREPARED BY	Tim Royer

We, TIMCO ENGINEERING, INC. would like to declare that the device has been evaluated in accordance with 47 CFR Part 2.1091 and meets the requirements.

The attached report shall not be reproduced except in full without the written approval of TIMCO ENGINEERING, INC.

GENERAL REMARKS

Attestations

This equipment has been evaluated in accordance with the standards identified in this report. To the best of my knowledge and belief, these evaluations were performed using the procedures described in this report.

I attest that the necessary evaluations were made, under my supervision, at:

Timco Engineering Inc.
849 NW State Road 45
Newberry, FL 32669

Authorized Signatory Name:



Sr. EMC Engineer
EMC-003838-NE



Tested by:

Name and Title: Tim Royer, Project Manager/Testing Engineer

Date: 02/26/2018

Applicant: BARON SERVICES INC.
FCC ID: NX5-GEN3-1000HSK
Report: 1677AUT17RF EXP MPE RPT.DOCX

RF Exposure Requirements

General information

Device type: S BAND RADAR

MPE Calculation:

The minimum separation distance is calculated as follows:

$$E(V/m) = \frac{\sqrt{30 \times P \times G}}{d} \quad \text{Power density: } P_d (mW/cm^2) = \frac{E^2}{3770}$$

The limit for general uncontrolled exposure environment is shown in FCC rule Part 1.1310, Table 1.

Minimum Separation Distance for Mobile or Fixed Devices General Population/Uncontrolled Exposure					
Insert values in yellow highlighted boxes to determine Minimum Separation Distance					
Max Power	1,000,000	W	<i>equals</i>	Max Power	1000000000 mW
Duty Cycle	0.11	%	<i>equals</i>	Duty Factor	0.0011 numeric
Antenna Gain	45	dBi	<i>equals</i>	Gain numeric	31622.7766 numeric
Coax Loss	2.5	dB		Gain - Coax Lo	17782.7941 numeric
Power Density	1	mW/cm ²			
Enter power Density from the chart to the right			Rule Part 1.1310, Table 1 (B)		
Frequency	3550	MHz		Frequency range	Power density Enter this value
				MHz	mW/cm ² mW/cm ²
				0.3-1.34	100 100
				1.34-30	180/f ² 0.0
				30-300	0.2 0.2
				300-1,500	f/1500 2.4
				1,500-100,000	1 1
			f = frequency in MHz		
Minimum Separation Distance		39454 cm		394.54 m	
Minimum Separation in Inches		15521.22 Inches			