




FCC RF Exposure Report

Test Report Number	SRF-23082361-LC-FCC-MPE
FCC ID	CO6-A30C105
Applicant	SpotterRF, LLC
Applicant Address	720 Timpanogos Parkway, Orem, UT 84097, USA
Product Name	Ground Surveillance Radar
Model Number	A3000
Date of Receipt	09/20/23
Date of Test	10/26/2023 – 11/01/2023
Report Issue Date	12/04/2023
Test Standards	47 CFR §1.1307(b), 47 CFR §1.1310
Test Result	PASS
	<p>Issued by:</p> <p>Vista Compliance Laboratories 1261 Puerta Del Sol, San Clemente, CA 92673 USA www.vista-compliance.com</p>
 <hr style="width: 80%; margin: 0 auto;"/> <p>Devin Tai (Test Engineer)</p>	 <hr style="width: 80%; margin: 0 auto;"/> <p>David Zhang (Technical Manager)</p>
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REVISION HISTORY

Report Number	Version	Description	Issued Date
SRF-23082361-LC-FCC-MPE	01	Initial report	12/04/2023

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1 General Information

1.1 Applicant

Applicant	SpotterRF, LLC
Applicant Address	720 Timpanogos Parkway, Orem, UT 84097, USA
Manufacturer	SpotterRF, LLC
Manufacturer Address	720 Timpanogos Parkway, Orem, UT 84097, USA

1.2 Product information

Product Name	Ground Surveillance Radar
Model Number	A3000
Family Models	GX1500, WX2000, C1200
Serial Number	SP35233
Frequency Band	10.00 GHz – 10.50 GHz
Type of modulation	Continuous Wave
Equipment Class	TNB - Licensed Non-Broadcast Station Transmitter
Antenna Information	Patch antenna / 13 dBi Gain
Clock Frequencies	N/A
Input Power	24VDC
Power Adapter Manufacturer/Model	Phoenix Contract: UNO-PS/1AC/24DC/30W PoE Injector: L-COM / BT-CAT5-P1
Power Adapter SN	2902991032113P0752
Hardware version	N/A
Software version	N/A
Simultaneous Transmission	N/A
Additional Info	<p>A3000 is retested after product design change. The main changes are,</p> <ol style="list-style-type: none"> 1. Digital board changes <ol style="list-style-type: none"> a. Added alternate 13V switching regulator. b. Added alternate -5V switching regulator. c. Removed unused serial chip. d. Added ESD protection component. e. Added 3.3V switching regulator to replace obsolete ones. f. Added 1.8V linear regulator to replace obsolete ones. g. Removed unused voltage monitoring chip. 2. RF board changes <ol style="list-style-type: none"> a. The RF board has not received any hardware changes, but the overall bandwidth has been decreased by 10 MHz per channel. <p>Family models: GX1500, WX2000, C1200, physically same as A3000. Bandwidth is 30MHz. Radio is the same as A3000. Different model number is to reflect different application of the unit.</p>

1.3 Test standard and method

Test standard	47 CFR §1.1307(b), 47 CFR §1.1310
Test method	47 CFR §1.1307(b), 47 CFR §1.1310

2 Test Site Information

Lab performing tests	Vista Laboratories, Inc.
Lab Address	1261 Puerta Del Sol, San Clemente, CA 92673 USA
Phone Number	+1 (949) 393-1123
Website	www.vista-compliance.com

Test Condition	Temperature	Humidity	Atmospheric Pressure
RF Testing	23.5°C	55.1%	996 mbar
Radiated Emission Testing	23.5°C	55.1%	996 mbar

3 Test Results

3.1 Limits for Maximum Permissible Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Average Time (minutes)
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
300-1500	f/1500	30
1500-100,000	1.0	30

f = Frequency in MHz; *Plane-wave equivalent power density

3.2 MPE Calculation Formula

Equation: $S = PG / 4\pi R^2$ or $R = \sqrt{PG / 4\pi S}$

Where, S = Power Density

P = Power Input to Antenna

G = Antenna Gain

R = distance to the center of radiated antenna in cm

3.3 Classification

The antenna of this product, under normal use condition, is at least 57cm away from the body of the user. So, this device is classified as a Mobile Device.

3.4 Antenna Gain

EUT has an internal Patch antenna with 13 dBi gain.

4 Test Results

Band	Freq. (MHz)	Conducted Output Power (dBm)	Tune up RF Output Power (dBm)	Antenna Gain (dBi)	Separation distance (cm)	Power Density (mW/ cm ²)	MPE Limit (mW/ cm ²)
10GHz Radar	10475	30.737	33	13	20	0.975	1

The above results show that the device complies with the MPE requirement.

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