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RF Exposure Evaluation Report

APPLICANT	GUIDANCE MARINE LIMITED
	5 TIBER WAY MERIDIAN BUSINESS PARK LEICESTER LE19 1QP UNITED KINGDOM
FCC ID	VYMARTEMIS
MODEL NUMBER	ARTEMIS
PRODUCT DESCRIPTION	MARINE RADAR
STANDARD APPLIED	CFR 47 Part 2.1091
PREPARED BY	Christian Pawlak

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:

Christian Pawlak

Engineering Project Manager

Date: 1/25/2017

Applicant: GUIDANCE MARINE LIMITED
FCC ID: VYMARTEMIS
Report: W:\G\GUIDANCE\1422AUT16\1422AUT16RF EXP MPE RPT.DOCX

RF Exposure Requirements

General information

Device type: MARINE RADAR

Devices that operate under Part 80 of this chapter are subject to RF exposure evaluation prior to equipment authorization or use.

MPE Calculation:

The minimum separation distance is calculated as follows:

$$E(V/m) = \frac{\sqrt{30 \times P \times G}}{d}$$

$$\text{Power density: } P_d(mW/cm^2) = \frac{E^2}{3770}$$

The limit for general uncontrolled exposure environment is shown in FCC rule Part 1.11310, Table 1.

Minimum Separation Distance for Mobile or Fixed Devices
Controlled Exposure

Insert values in yellow highlighted boxes to determine Minimum Separation Distance

Max Power	0.033	W	equals	Max Power	33	mW
Duty Cycle	100	%	equals	Duty Factor	1	numeric
Antenna Gain	28	dBi	equals	Gain numeric	630.9573445	numeric
Coax Loss	0	dB		Gain - Coax Loss	630.9573445	numeric
Power Density	5	mW/cm ²				

Enter power Density from the chart to the right

Frequency 9300 MHz

Rule Part 1.1310, Table 1 (A)

Freq range	Power density	Enter this value
MHz	mW/cm ²	mW/cm ²
0.3 - 3	100	100
3 - 30	900/f ²	0.0
30-300	1	1
300-1,500	f/300	31.0
1,500-100,000	5	5

f = frequency in MHz

Minimum Separation Distance

18 cm

0.18 m

Minimum Separation in Inches

7.161457 Inches