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RF Exposure Evaluation Report

APPLICANT	STANDARD COMMUNICATIONS PTY.LTD.
	PO BOX 96 WINSTON HILLS NSW 2153 AUSTRALIA
FCC ID	TXJGX400
MODEL NUMBER	GX400
PRODUCT DESCRIPTION	MARINE CB TRANSCEIVER
STANDARD APPLIED	CFR 47 Part 2.1091
PREPARED BY	Cory Leverett

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:

Cory Leverett
Engineering Project Manager

Date: 12/26/2014

RF Exposure Requirements

General information

Device type: Part 95 CB Transceiver.

Antenna

The manufacturer does not specify an antenna, but a typical antenna has a gain of 0 dBi.

Configuration	Antenna p/n	Type	Max. Gain (dBi)
Fixed mounted	Any	omni	0

Operating configuration and exposure conditions:

The conducted output power is shown in the table below. Typical use qualifies for a maximum duty cycle factor of 100%.

Operation: A typical installation consists of an antenna system with a 10 meter coaxial cable of the type RG 213/ U type which has a loss as follows;

Nom. Attenuation for RG 213/U:

Frequency MHz	Attenuation per 100ft. dB
1	.27
10	.55
50	1.3
100	1.9
200	2.7
400	4.1
700	6.5
900	7.6
1000	8.0
4000	21.5

MPE Calculation:

The minimum separation distance is calculated as follows:

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

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

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 General Population/Uncontrolled Exposure						
Insert values in yellow highlighted boxes to determine Minimum Separation Distance						
Max Power	4	W	equals	Max Power	4000	mW
Duty Cycle	50	%	equals	Duty Factor	0.5	numeric
Antenna Gain	0	dBi	equals	Gain numeric	1	numeric
Coax Loss	0.55	dB		Gain - Coax Loss	0.881049	numeric
Power Density	0.24	mW/cm ²				
Enter power Density from the chart to the right				Rule Part 1.1310, Table 1		
Frequency	27.405	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	0.2
				30-300	0.2	0.2
				300-1,500	f/1500	0.0
				1,500-100,000	1	1
				f = frequency in MHz		
Minimum Separation Distance				24 cm		0.24 m
Minimum Separation in Inches		9.509087 Inches				

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