



849 NW STATE ROAD 45
NEWBERRY, FL 32669 USA
PH: 888.472.2424 OR 352.472.5500
FAX: 352.472.2030
EMAIL: INFO@TIMCOENGR.COM
[HTTP://WWW.TIMCOENGR.COM](http://WWW.TIMCOENGR.COM)

RF Exposure Evaluation Report

APPLICANT	VOSTEK ELECTRONICS
	1032 PAPE AVE. P.O. BOX 60043 TORONTO ONTARIO M4K 3Z3 CANADA
FCC ID	OGRLX-3000
MODEL NUMBER	LX-3000/MIL
PRODUCT DESCRIPTION	AUDIO / VIDEO 2.4GHz TRANSMITTER
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: **6/4/2014**



GENERAL INFORMATION

EUT Description	TV TRANSMITTER
FCC ID	OGRRPO60043
Model Number	LX-3000/MIL
Frequency Range (MHz)	2452-2452, 2481-2481
Type of Emission	6M00F3F & 6M00F3E
Modulation	FM
EUT Power Source	<input type="checkbox"/> 110-120Vac/50- 60Hz
	<input checked="" type="checkbox"/> DC Power 12V
	<input type="checkbox"/> Battery Operated Exclusively
Test Item	<input type="checkbox"/> Prototype
	<input checked="" type="checkbox"/> Pre-Production
	<input type="checkbox"/> Production
Type of Equipment	<input type="checkbox"/> Fixed
	<input checked="" type="checkbox"/> Mobile
	<input type="checkbox"/> Portable
Test Conditions	The temperature was 26°C with a relative humidity of 50%.
Revision History to the EUT	None
Test Facility	Timco Engineering Inc. at 849 NW State Road 45 Newberry, FL 32669 USA.

RF Exposure Requirements

General information

Device type: Part 90 Audio / Video Transmitter designed to transmit in the 2.4GHz band.

Device category: Mobile

Environment: Uncontrolled Exposure

Mobile devices that operate under Part 90 of this chapter are subject to RF exposure evaluation prior to equipment authorization or use.

Antenna

Panel Type antenna with a gain of 14 dBi

Configuration	Antenna p/n	Type	Max. Gain (dBi)
mobile mounted	Any	Panel	14

Operating configuration and exposure conditions:

The conducted output power is 5 Watts. Typical use qualifies for a maximum duty cycle factor of 100%.

- The unit is for mobile operations and it will be used for Government applications, commercial use. A typical installation would consist of a panel type antenna with 3-6 ft of 50 ohm cable, with a loss of about 1 dB at 2.4GHz

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 population/uncontrolled exposure environment below 300 MHz is 0.2 mW/cm².

Frequency: 2452MHz & 2481MHz
The conducted power output is 5 watt.
100% talk time in 30 minutes

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	5	W	<i>equals</i>	Max Power	5000 mW
Duty Cycle	100	%	<i>equals</i>	Duty Factor	1 numeric
Antenna Gain	14	dBi	<i>equals</i>	Gain numeric	25.11886 numeric
Coax Loss	1	dB		Gain - Coax Loss	19.95262 numeric
Power Density	1	mW/cm ²			
Enter power Density from the chart to the right			Rule Part 1.1310, Table 1		
Frequency	2452	MHz		Frequency range	Power density Enter this value
				MHz	mW/cm ²
				0.3-1.34	100
				1.34-30	180/f ²
				30-300	0.2
				300-1,500	f/1500
				1,500-100,000	1
				f = frequency in MHz	
Minimum Separation Distance		89 cm		0.89 m	
		35.05213 Inches			