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## RF Exposure Evaluation Report

<b>APPLICANT</b>	WORLDCAST SYSTEMS, INC. 19595 NE 10TH AVENUE SUITE A MIAMI FL 33179 USA
<b>FCC ID</b>	O35EFM0300W
<b>IC</b>	10552A-EFM0300W
<b>MODEL NUMBER</b>	EFM0300W
<b>PRODUCT DESCRIPTION</b>	300W FM BROADCAST TRANSMITTER
<b>STANDARD APPLIED</b>	CFR 47 Part 2.1091
<b>PREPARED BY</b>	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.

Applicant: WORLDCAST SYSTEMS, INC.

FCC ID: 035EFM0300W

IC: 10552A-EFM0300W

Report: V:\W\WORLDCAST\1448AUT16\1448AUT16RF EXP MPE RPT.DOCX

## 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: October 24, 2016**

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# RF Exposure Requirements

## General information

Device type: 300W FM BROADCAST TRANSMITTER

Devices that operate under Part 73 of this chapter are subject to RF exposure evaluation prior to equipment authorization or use.

## 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

## 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 1.11310, Table 1.

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**Minimum Separation Distance for Mobile or Fixed Devices  
Controlled Exposure**

**Insert values in yellow highlighted boxes to determine Minimum Separation Distance**

Max Power	<b>300</b> W	<i>equals</i>	Max Power	<b>300000</b> mW
Duty Cycle	<b>100</b> %	<i>equals</i>	Duty Factor	<b>1</b> numeric
Antenna Gain	<b>0</b> dBi	<i>equals</i>	Gain numeric	<b>1</b> numeric
Coax Loss	<b>0</b> dB		Gain - Coax Loss	<b>1</b> numeric
Power Density	<b>0.4</b> mW/cm <sup>2</sup>			

**Enter power Density from the chart to the right**

Frequency **108** MHz

**Rule Part 1.1310, Table 1 (A)**

Freq range	Power density	Enter this value
MHz	mW/cm <sup>2</sup>	mW/cm <sup>2</sup>
0.3 - 3	100	<b>100</b>
3 - 30	900/f <sup>2</sup>	<b>0.1</b>
30-300	1	<b>1</b>
300-1,500	f/300	<b>0.4</b>
1,500-100,000	5	<b>5</b>

f = frequency in MHz

<b>Minimum Separation Distance</b>	<b>244 cm</b>	<b>2.44 m</b>
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Minimum Separation in Inches      96.10811 Inches