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## RF Exposure Evaluation Report

<b>APPLICANT</b>	FIPLEX COMMUNICATIONS INC. 2101 NW 79th Ave. MIAMI FL 33122 USA
<b>FCC ID</b>	P3TDH140-R
<b>MODEL NUMBER</b>	DH140-R
<b>PRODUCT DESCRIPTION</b>	VHF DIGITAL REMOTE UNIT
<b>STANDARD APPLIED</b>	CFR 47 Part 2.1091
<b>PREPARED BY</b>	Franklin Rose

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:**

Franklin Rose, Engineering Project Manager

**Date: 2/ 16/ 2018**

Applicant: FIPLEX COMMUNICATIONS INC.  
FCC ID: P3TDH140-R  
Report: 179AUT18RF EXP MPE RPT Rev.DOCX

## RF Exposure Requirements

### General information

Device type: VHF DIGITAL REMOTE UNIT

### 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%.

### 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 1.1310, 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	<input type="text" value="10"/>	W	<i>equals</i>	Max Power	<input type="text" value="10000"/>	mW
Duty Cycle	<input type="text" value="100"/>	%	<i>equals</i>	Duty Factor	<input type="text" value="1"/>	numeric
Antenna Gain	<input type="text" value="0"/>	dBi	<i>equals</i>	Gain numeric	<input type="text" value="1"/>	numeric
Coax Loss	<input type="text" value="3"/>	dB		Gain - Coax Loss	<input type="text" value="0.501187"/>	numeric
Power Density	<input type="text" value="0.2"/>	mW/cm <sup>2</sup>				
	<b>Enter power Density from the chart to the right</b>					
Frequency	<input type="text" value="162"/>	MHz				

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

Frequency range	Power der	Enter this value
MHz	mW/cm <sup>2</sup>	mW/cm <sup>2</sup>
0.3-1.34	100	<b>100</b>
1.34-30	180/f <sup>2</sup>	<b>0.0</b>
30-300	0.2	<b>0.2</b>
300-1,500	f/1500	<b>0.1</b>
1,500-100,000	1	<b>1</b>

f = frequency in MHz

Minimum Separation Distance      44.65603 cm

<b>Minimum Separation Distance</b>	<b>45 cm</b>	<b>0.45 m</b>
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Minimum Separation in Inches      17.56768 Inches