



# Compliance Testing, LLC

Previously Flom Test Lab

EMI, EMC, RF Testing Experts Since 1963

toll-free: (866) 311-3268

fax: (480) 926-3598

<http://www.ComplianceTesting.com>

[info@ComplianceTesting.com](mailto:info@ComplianceTesting.com)

## Test Report

Prepared for: Bird Technologies

Model: 3-26076-XX

Description: Public Safety Class B Signal Booster

Serial Number: N/A

FCC ID: EZZ26076

To

FCC Part 1.1310

Date of Issue: October 28, 2016

On the behalf of the applicant:

Bird Technologies  
30303 Aurora Road  
Cleveland, OH 44139

Attention of:

Tim O'Brien, Technical Product Manager  
Ph: (440)519-2194  
Email: [tobrien@bird-technologies.com](mailto:tobrien@bird-technologies.com)

Prepared By  
Compliance Testing, LLC  
1724 S. Nevada Way  
Mesa, AZ 85204  
(480) 926-3100 phone / (480) 926-3598 fax  
[www.compliancetesting.com](http://www.compliancetesting.com)  
Project No: p1680008

Alex Macon  
Project Test Engineer

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All results contained herein relate only to the sample tested



### Test Report Revision History

Revision	Date	Revised By	Reason for Revision
1.0	September 23, 2016	Alex Macon	Original Document

**ILAC / A2LA**

Compliance Testing, LLC, has been accredited in accordance with the recognized International Standard ISO/IEC 17025:2005. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer joint ISO-ILAC-IAF Communiqué dated January 2009)

The tests results contained within this test report all fall within our scope of accreditation, unless below

Please refer to <http://www.compliancetesting.com/labscope.html> for current scope of accreditation.

Testing Certificate Number: **2152.01**



**FCC Site Reg. #349717**

**IC Site Reg. #2044A-2**

**Non-accredited tests contained in this report:**

N/A

**EUT Description**

**Model:** 3-26076-XX

**Description:** Public Safety Class B Signal Booster

**Firmware:** N/A

**Software:** N/A

**Serial Number:** N/A

**Additional Information:**

The EUT is classified as a Part 90 PS **Class B** industrial signal booster.

The EUT is a Bi-directional Amplifier that operates in the Frequency ranges listed in Table 1.

System Power is 120 VAC @ 60 Hz. The device also has a selection for battery backup at 24 VDC

The emission designators listed in Table 1 are representative emission designators used by transmitters whose signal is amplified by this booster.

Frequency (MHz)	Emission Designators
450 - 512	F3E, G1D, G1E, W7W, F2D



**Average Power calculations**

Average Power = Peak Power \* duty-cycle%

<b>Tuned Frequency (MHz)</b>	<b>Conducted Peak Output Power (mW)</b>	<b>Duty Cycle (%)</b>	<b>Average Power (mW)</b>
460	3320	100	3320mW

All calculations below are with a 0dBi antenna in mind.

20% is added to the highest power in the calculations below.



**MPE Evaluation**

This is a fixed device used in Uncontrolled Exposure environment.

**Limits Uncontrolled Exposure  
47 CFR 1.1310  
Table 1, (B)**

0.3-1.234 MHz:	Limit [mW/cm <sup>2</sup> ] = 100
1.34-30 MHz:	Limit [mW/cm <sup>2</sup> ] = (180/f <sup>2</sup> )
30-300 MHz:	Limit [mW/cm <sup>2</sup> ] = 0.2
300-1500 MHz:	Limit [mW/cm <sup>2</sup> ] = f/1500
1500-100,000 MHz	Limit [mW/cm <sup>2</sup> ] = 1.0

**Test Data**

Test Frequency, MHz	450
Power, Conducted, mW (P)	3984
Antenna Gain Isotropic	0dBi
Antenna Gain Numeric (G)	1
Distance (R)	20 cm

$S = \frac{P * G}{4\pi r^2}$
Power Density (S) mw/cm <sup>2</sup>
0.793

Power Density (S) = 0.793
Limit =(from above table) = 0.30

The power density is over the limit so the minimum safe distance was calculated

formula $R = \sqrt{(PG/4\pi L)}$			
Distance (R) (cm)	Power (mW)	Numeric Gain (G)	Limit (mW/cm)
32.51653181	3984	1	0.3

The minimum safe distance is 32.5 cm

END OF TEST REPORT