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## RF Exposure Evaluation Report

<b>APPLICANT</b>	LAIRD CONTROLS NORTH AMERICA INC.
	655 N. RIVER ROAD NW SUITE A WARREN OH 44483-2254 USA
<b>FCC ID</b>	CN278970
<b>IC</b>	1007A-78970
<b>MODEL NUMBER</b>	78970 TRX
<b>PRODUCT DESCRIPTION</b>	ADL 450 MHZ 2PCA-7897-X001
<b>STANDARD APPLIED</b>	CFR 47 Part 2.1091, ISED RSS-102
<b>PREPARED BY</b>	TIM ROYER

We, TIMCO ENGINEERING, INC. would like to declare that the device has been evaluated in accordance with 47 CFR Part 2.1091 and ISED RSS-102 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:**

Tim Royer

Engineering Project Manager

**Date: 9/15/2017**

Applicant: LAIRD CONTROLS NORTH AMERICA INC.  
FCC ID: CN278970  
IC: 1007A-78970  
Report: 1063AUT17RF Exp MPE Rpt.docx

## RF Exposure Requirements

### General information

Device type: ADL 450 MHZ 2PCA-7897-X001

### 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 and ISSED RSS-102 § 4 Table 3.

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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	0.017	W	<i>equals</i>	Max Power	17
Duty Cycle	100	%	<i>equals</i>	Duty Factor	1
Antenna Gain	2.15	dBi	<i>equals</i>	Gain numeric	1.64059
Coax Loss	0	dB		Gain - Coax Loss	1.64059
Power Density	0.3	mW/cm <sup>2</sup>			
Enter power Density from the chart to the right			Rule Part 1.1310, Table 1 (B)		
Frequency	470	MHz		Frequency range	Power density
				MHz	mW/cm <sup>2</sup>
				0.3-1.34	100
				1.34-30	180/f <sup>2</sup>
				30-300	0.2
				300-1,500	f/1500
				1,500-100,000	1
			f = frequency in MHz		
<b>Minimum Separation Distance</b>			<b>3 cm</b>		<b>0.03 m</b>
Minimum Separation in Inches		1.070023 Inches			

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