



RF Exposure Evaluation Report

APPLICANT	BELTRONICS USA INC.
ADDRESS	5442 WEST CHESTER ROAD
FCC ID	QL4G1S5
MODEL NUMBER	BEL GT-1
PRODUCT DESCRIPTION	RADAR DETECTOR WITH BLUETOOTH MODULE
DATE SAMPLE RECEIVED	04/17/2018
FINAL TEST DATE	07/02/2018
PREPARED BY	Franklin Rose

Report Number	Report Version	Description	Issue Date
529AUT18 MPE_TestReport_	Rev1	Initial Issue	07/02/2018
	Rev2	Corrected FCC ID	07/03/2018

THE ATTACHED REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL WITHOUT THE WRITTEN APPROVAL OF TIMCO ENGINEERING, INC.



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GENERAL REMARKS

Summary

The device under test does:

- Fulfill the general approval requirements as identified in this test report and was selected by the customer.
- Not fulfill the general approval requirements as identified in this test report

Attestations

This equipment has been tested in accordance with the standards identified in this test report. To the best of my knowledge and belief, these tests were performed using the measurement procedures described in this report.

All instrumentation and accessories used to test products for compliance to the indicated standards are calibrated regularly in accordance with ISO 17025 requirements.

I attest that the necessary measurements were made at:

Timco Engineering Inc.
849 NW State Road 45
Newberry, FL 32669
Designation #: US1070

Prepared by:



Name and Title	Franklin Rose, Project Manager / EMC Testing Technician
Date	07/02/2018

GENERAL INFORMATION

EUT Description	RADAR DETECTOR WITH BLUETOOTH MODULE
Model Number	BEL GT-1
EUT Power Source	<input type="checkbox"/> 110–120Vac/50– 60Hz
	<input checked="" type="checkbox"/> DC Power (12.0 V)
	<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 Relative humidity of 50%.
Modification to the EUT	No Modification to EUT.
Applicable Standards	FCC CFR 47 Part 2.1091
Test Facility	Timco Engineering Inc. at 849 NW State Road 45 Newberry, FL 32669 USA. Designation #: US1070

ANTENNA INFORMATION

Manufacturer Provides Antenna	Type	Max Gain (dBi)
No	Integral	0

MPE CALCULATION

The Minimum Separation Distance is calculated using the following formula:

$$E(V/m) = \frac{\sqrt{30 \times P \times G}}{d} \quad \text{Power density: } P_d(mW/cm^2) = \frac{E^2}{3770}$$

FCC SAR Exclusion: In accordance with KDB 447498 D01 RF Exposure Guidance v05r02, devices operating from 100 MHz to 6 GHz with test separation distances ≤ 50 mm may qualify for SAR test exclusion. The result of the SAR Exclusion formula (below) must be less than 3.0 for SAR exclusion.

- a) For 100 MHz to 6 GHz and *test separation distances* ≤ 50 mm, the 1-g and 10-g SAR test exclusion thresholds are determined by the following:

$$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f_{(\text{GHz})}}] \leq 3.0 \text{ for 1-g SAR, and } \leq 7.5 \text{ for 10-g extremity SAR,}^{30} \text{ where}$$

- $f_{(\text{GHz})}$ is the RF channel transmit frequency in GHz

Variable	Value
Max Power	0.00053 W
Max Antenna Gain	0 dBi
Coax Loss	0 dBm
Tx Frequency	2.480 GHz
Minimum Separation Distance	20.537 mm
SAR Exclusion formula result:	0.2

Conclusion: The device is exempt from SAR testing requirements.