Curtis-Straus

Worldwide Regulatory Approvals Experts

(A2LA Certificate Number 1627-01)

Technical Report

Company:	Beltronics USA, Inc.
FRN:	0007600588
Models:	Express 906
	Express 916
	Express 926
	Express 936
FCC ID:	QL4G3M1
Equipment Code:	CRD

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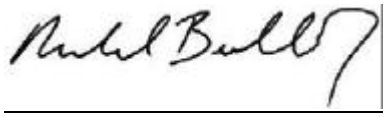

EMC Manager

Introduction

This report is an application for Certification of Radar Detectors operating pursuant to 47 CFR 15.109, as amended by ET Docket No. 01-278; FCC 02-211, published in the Federal Register Vol. 67, No. 145 on Monday July 29, 2002.

Statement of Conformity

47 CFR 15.109(h) states that "*Radar detectors shall comply with the emissions limits...of* [section 15.109(a)] *over the frequency range of 11.7 – 12.2GHz."* The applicable limit being 500µV/m measured at a distance of 3m. The following Beltronics M1 platform models have been tested and found to comply with this requirement:

Express 906
Express 916

The M1 platform versions of the Express 926 and 936 were not tested, however the RF portions of all four of these models are identical. The only differences between the models are low frequency interface circuitry. Therefore, the Express 926 and 936 are considered compliant with the requirement stated above.

Test Methodology

Radiated emission testing was performed according to the procedures in ANSI C63.4 (2001). The testing was performed at an antenna to EUT distance of 1 meter. Performance was investigated in the range 11.7-12.2GHz. The Express models were powered by a R.O.C. SPN4025A 12VDC 400mA power supply. Since the devices are hand-held units, the emissions were maximized around the three orthogonal axes and the maximum reading was recorded. The integrated antenna cannot be maximized separately.

Test Equipment

SPECTRUM ANALYZERS					
x	**Analyzer**	**Model No.**	**Company**	**Serial No.**	**Calibration Due**
X	**ORANGE** 9kHz-26.5GHz	E4407B	HP	US39440975	07-JUN-2003

OPEN AREA TEST SITES (OATS)					
x	**Site**	**FCC Code**	**IC Code**	**VCCI Code**	**Calibration Due**
X	**"T"** Texas	93448	IC 2762-T	R-905/ C-480	04-FEB-2004
X	**"M"** Maine	93448	IC 2762-M	R-904/ C-480	04-FEB-2004

ANTENNAS					
x	**Antenna**	**Model No.**	**Company**	**Serial No.**	**Calibration Due**
X	**YELLOW** Horn: 1-18GHz	3115	EMCO	9608-4898	08-MAY-2003
X	**BLACK** Horn: 1-18GHz	3115	EMCO	9703-5148	12-JUN-2003

PREAMPLIFIERS / ATTENUATORS					
x	**Preamplifier**	**Model No.**	**Company**	**Serial No.**	**Calibration Due**
X	**ORANGE-BLACK** 1-20GHz	SMC-12A	MITEQ	690639	06-SEP-2002

Unless otherwise noted the calibration interval is one year. All equipment is calibrated using standards traceable to NIST or other nationally recognized calibration standard. All Open Area Test Sites are located at 527 Great Road, Littleton, MA 01460.

Sample Setup Photo

Model: Express 906

Measurement Results

All measurements taken were peak detector readings of the noise floor.
There were no emissions detected from the EUTs.

Radiated Emissions Table — *Curtis-Straus LLC*

Date: 08-Aug-02 16-Aug-02 23-Aug-02 **Company:** Beltronics **Table** 1
Engineer: Evan Gould **EUT Desc:** various radar detector models **Work Order:** C0610

Frequency Range: 11.7-12.2GHz **Measurement Distance:** 1 m

Notes: Emissions maximized Horizontally and Vertically.
All measurements are noise floor readings.

Antenna Polarization (H / V)	Frequency (MHz)	Reading (dBµV)	Preamp Factor (dB)	Antenna Factor (dB/m)	Cable Factor (dB)	Adjusted Reading (dBµV/m)	47 CFR 15.209(a) Limit (dBµV/m)	Margin (dB)	Result (Pass/Fail)
906 M1	12150.0	31.7	20.1	38.9	4.7	55.2	63.5	-8.3	Pass
E916 M1	11700.0	31.7	20.2	39.0	4.6	55.1	63.5	-8.4	Pass

Test Sites: "T" "M" **Pre-Amp:** Or-Blk **Cable:** 3m Microflex **Analyzer:** Orange **Antennas:** Black Horn Yellow Horn

Sample Emission Plot