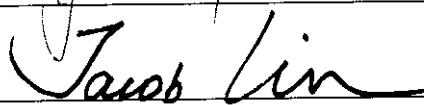


## ***EXHIBIT B***

***Test Report***

Report No.	M1115718
Specifications	FCC Part 15 Class B, Certification.
Test Method	ANSI C63.4 1992
Applicant Address	No. 234, Lien Chen Road, Chung Ho, Taipei Hsien, Taiwan, R.O.C.
Applicant	Multistar Industries Co., Ltd.
Kind of Equipment	Superregenerative Receiver
Items tested	Receiver of Car Alarm System
Model No.	CA750R (Sample # M11718)
Results	As detailed within this report
Sample received date	07/30/98 (month / day / year)
Prepared by	 project engineer
Authorized by	 Vice General Manager (Jacob Lin)
Issue date	Sep. 12, 1998 (month / day / year)
Modifications	None
Tested by	Training Research Co., Ltd.
Office at	2F, No. 571, Chung Hsiao E. Road, Sec.7, Taipei, Taiwan
Open site at	No. 5-3, Lane 21, Yen Chiu Yuan Rd., Sec. 4, Taipei, Taiwan

Conditions of issue:

- (1) This test report shall not be reproduced except in full, without written approval of TRC. And the test result contained within this report only relate to the sample submitted for testing.
- (2) This report must not be used by the client to claim product endorsement by NVLAP or any agency of U.S. Government.

★ FCC ID:LEZCA750R

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## ***Chapter 1 Introduction***

### ***Description of EUT:***

This device is a receiver of car alarm system that install in the car . The system contains a receiver and a remote controller .

### ***Connection of EUT:***

- (1)Two wires connect the EUT to a 12V battery .
- (2)Four wires connect the EUT to a shock sensor.
- (3)Two wires connect the EUT to a siren.
- (4)Two wires connect the EUT to a LED & Reset.
- (5)The alarm panel connects with cables unterminated .

### ***Test method:***

Plug the battery and make sure the EUT is in “receiving” mode. There is a near field probe placed approximately to the EUT to radiate an unmodulated continuous wave (CW) signal to EUT at its operating frequency in order to “cohere” from such a receiver. The signal level may need to be increased for this to occur pursuant to FCC ANSI C63.4 Section 12.1.1.1’ The amplitude and frequency of the signal was varied to yield the maximum emission.

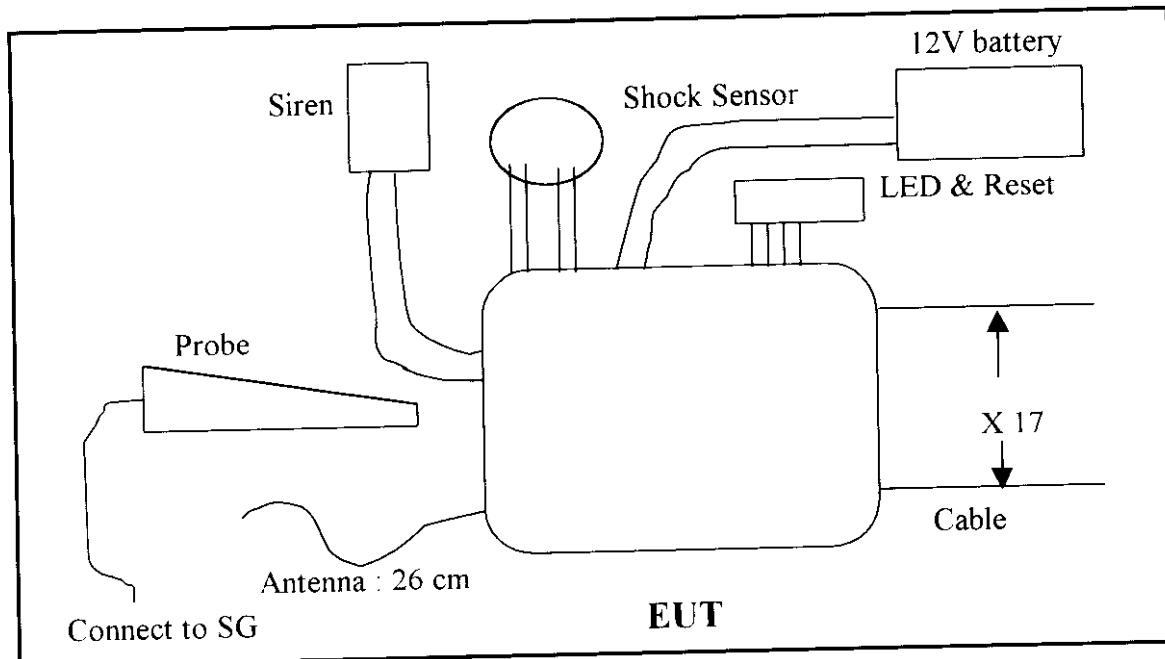
If the emission is less than 20 dB, no data can be recorded or the number of test data recorded is less than six.

### ***Statement of transition provision for compliance with the rules***

The EUT receives the signal which only send from the remote controller. The EUT won’t be influenced by the transition provision , it will be continuous comply with the regulations of the FCC Part 15 . ( The relative remote controller FCC ID : LEZCA750T).

***The testing configuration of test setup is showing in the next page.***

*Configuration of test setup:*



**EUT:**

- \* Between EUT and shock sensor --- four wires 82 cm long, 22 AWG, Non-shielded, no ferrite core.
- \* Between EUT and LED & Reset--- four wires 105 cm long, 22 AWG, Non-shielded, no ferrite core.
- \* Between EUT and siren --- two wires 250 cm & 270 cm long for 20 AWG, Non-shielded, no ferrite core.
- \* Other cable (17 wire ) is unterminated, 135 cm long for 16 wire (15 wire/22 AWG, 1 wire/20 AWG), one wire is 244 cm long , 22 AWG, non-shielded, no ferrite core.

***List of support equipment***

**Field Probe :** **HP Field Probe 30MHz~1GHz**

Model No. : HP11940A

Serial No. : 2650A03038

**Signal Generator :** **HP 9KHz~4000MHz**

Model No. : 8648D

Serial No. : 3613A00117

Power type : 110vac 60Hz

Power cord : Non - Shielded

## ***Chapter 2 Conducted emission test***

### ***Test condition and setup:***

All the equipment is placed and setup according to the ANSI C63.4 - 1992. The EUT is assembled on a wooden table which is 80 cm high, is placed 40 cm from the back-wall which is a vertical conducting plane. One LISN is for EUT, the other LISN is for support equipment. They are all placed on the conductive ground. The EUT's LISN connect a line switch box for selecting L1 or L2, then connect to a preamplifier and Spectrum.

The spectrum scans from 450KHz to 30MHz. Conducted emission levels are detected at max. peak mode. But if the max. peak mode failed, it will be measured by CISPR's quasi-peak detection mode.

While testing, there is the worst-emission plot printed at peak detection mode, and there are more than 6 highest emissions relative to limit recorded. The plot is kept as the original data, not included in test report.

### ***List of test Instrument:***

<u>Instrument Name</u>	<u>Model No.</u>	<u>Brand</u>	<u>Serial No.</u>	<u>Calibration Date</u>	<u>Last time</u>	<u>Next time</u>
Spectrum analyzer	8591EM	H P	3619A00821	10/06/97	10/06/98	
LISN (EUT)	3825/2	EMCO	9411-2284	05/15/98	05/15/99	
Preamplifier	8447F	H P	2944A03706	05/13/98	05/15/99	
Line switch box	AC1-003	TRC	-----	05/15/98	05/15/99	
Line selector	AC1-002	TRC	-----	05/15/98	05/15/99	

The level of confidence of 95%, the uncertainty of measurement of conducted emission is  $\pm 2.4$  dB.

### ***Test Result: N/A***

## Chapter 3 Radiated emission test

### Test condition and setup:

**Pretest:** Prior to the final test (OATS test), the EUT is placed in a shielded enclosure, GTEM, and scan from 30MHz to 1GHz. This is done to ensure the radiation exactly emits from the EUT.

**Final test:** Final radiation measurements is made on a **3 – meter**, open-field test site. The EUT is placed on a nonconductive table which is 0.8 m height, the top surface is 1.0 x 1.5 meter. All the placement is according to ANSI C63.4 - 1992.

The spectrum is examined from 30 MHz to 1 GHz measured by HP spectrum.

The EMCO whole range Antenna is used to measure frequency from 30 MHz to 1GHz. The final test is used the spectrum HP 8594EM.

Measure more than six top marked frequencies generated form pretest by computer step by step at each frequency. The EUT is rotated 360 degrees, and antenna is raised and lowered from 1 to 4 meters to find the maximum emission levels. The antenna is used with both horizontal and vertical polarization.

Appropriated preamplifier which is made by TRC is used for improving sensitivity and precautions is taken to avoid overloading .The spectrum analyzer's 6dB bandwidth is set to 120 K Hz, and the EUT is measured at quasi-peak mode.

If the emission is close to the frequency band of ambient, the data will be rechecked by the tester and the corrected data will be written in the test data sheet. If the emission is just within the ambient, the data from GTEM will be taken as the final data.

### List of test Instrument:

Instrument Name	Model No.	Brand	Serial No.	Last	Calibration Date	Next
Spectrum analyzer	8568B	H P	3004A18617	05/15/98	05/15/99	
Quasi-peak Adapter	85650A	H P	2521A00984	05/15/98	05/15/99	
RF Pre-selector	85685A	H P	2947A01011	05/15/98	05/15/99	
Spectrum analyzer	8594EM	H P	3619A00198	08/10/98	08/10/99	
Spectrum analyzer	8564E	H P	US36433002	08/13/98	08/13/99	
Antenna (30M-2G Hz)	3142	EMCO	1296	06/10/98	06/10/99	
Open test side (Antenna, Amplify, cable calibrated together)				05/15/98	05/15/99	

The level of confidence of 95%. the uncertainty of measurement of radiated emission is  $\pm 4.96$  dB.

### Test Result: Pass (Appendix A)

## Appendix A

### ***Radiated Emission Test Result: (Horizontal)***

### Test Conditions:

Testing room : Temperature : 31 ° C      Humidity : 72% RH

Testing site : Temperature : 34 ° C      Humidity : 81% RH

Frequency	Reading Amplitude	Ant. Height	Table	Correction Factors	Corrected Amplitude	Class B limit	Margin
MHz	dBuV	m	degree	dB/m	dBuV/m	dBuV/m	dB

Note:

| Margin = Amplitude - limit, if margin is minus means under limit.

2. Corrected Amplitude = Reading Amplitude + Correction Factors

3 Correction factor  $\equiv$  Antenna factor + ( Cable Loss - Amplitude gain)

(For example : 30MHz correction factor =  $15.5 + (-15.26) = 0.24 \text{ dB/m}$ )

### **Radiated Emission Test Result: (Vertical)**

Frequency	Reading Amplitude	Ant. Height	Table	Correction Factors	Corrected Amplitude	Class B limit	Margin
MHz	dBuV	m	degree	dB/m	dBuV/m	dBuV/m	dB

### *Final statement:*

*This test report, measurements made by TRC are traceable to the NIST.*