TIMCO **ENGINEERING INC.**
849 NW State Road 45
Newberry, Florida 32669
http://www.timcoengr.com
888.472.2424 F 352.472.2030 email: sid@timcoengr.com



Test Report

Product Name: ULTRASONIC DEVICE

FCC ID: QBTLTK-UP1

Applicant:

LEE TECHNOLOGY KOREA CO. LTD.
3RD FL. #499-2 SANG 3-DONG, WONMI-GU
BUCHON-CITY KYUNGKI-DO
KOREA

Date Receipt: 11/2/2005

Date Tested: 12/6/2005

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FCC ID: QBTLTK-UP1

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EXHIBITS INCLUDING:

REQUEST FOR CONFIDENTIALITY LETTER
BLOCK DIAGRAM
SCHEMATIC
LABEL SAMPLE
LABEL LOCATION
PARTS LIST
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CIRCUIT DESCRIPTION
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EMC Equipment List

Device	Manufacturer	Model	Serial Number	Cal/Char Date	Due Date
3-Meter OATS	TEI	N/A	N/A	Listed 1/13/03	1/12/06
Biconnical Antenna	Eaton	94455-1	1096	CAL 8/17/04	8/17/06
Biconnical Antenna	Electro-Metrics	BIA-25	1171	CAL 4/29/05	4/29/07
Blue Tower Quasi-Peak Adapter	HP	85650A	2811A01279	CAL 4/13/05	4/13/07
Blue Tower RF Preselector	HP	85685A	2926A00983	CAL 8/3/05	8/3/07
Blue Tower Spectrum Analyzer	HP	8568B	2928A04729 2848A18049	CAL 4/13/05	4/13/07
LISN	Electro-Metrics	ANS-25/2	2604	CAL 8/27/04	8/27/06
LISN	Electro-Metrics	EM-7820	2682	CAL 4/28/05	4/28/07
Loop Antenna	Electro Mechanics	6512	N/A	N/A	N/A

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TEST PROCEDURES

GENERAL: This report shall NOT be reproduced except in full without the written approval of TIMCO ENGINEERING, INC.

RADIATION INTERFERENCE: The test procedure used was ANSI STANDARD C63.4-2003 using a HEWLETT PACKARD spectrum analyzer with a pre-selector.
In the frequency range 10 kHz to 30 MHz the RBW was 10 kHz and from 30-1000 MHz the RBW of the spectrum analyzer was 100 kHz with an appropriate sweep speed. The analyzer was calibrated in dB above a microvolt at the output of the antenna. The resolution bandwidth was 100 kHz and the video bandwidth was 300 kHz. The ambient temperature of the UUT was &tempr& with a humidity of &humr&.

FORMULA OF CONVERSION FACTORS: The Field Strength at 3m was established by adding the meter reading of the spectrum analyzer (which is set to read in units of dBuV) to the antenna correction factor supplied by the antenna manufacturer. The antenna correction factors are stated in terms of dB. The gain of the Pre-selector was accounted for in the Spectrum Analyzer Meter Reading.

Example:
Freq (MHz) METER READING + ACF = FS
33 20 dBuV + 10.36 dB = 30.36 dBuV/m @ 3m

ANSI C63.4-2003 Section 8.2.1 MEASUREMENT PROCEDURES: The EUT was placed on a non-conducting table 80 cm above the ground plane with the EUT located in the center of the table. With the antenna vertical a preliminary scan was done at 1 meters distance, the EUT was moved to a 3.0-meter distance and the antenna height varied and also placed in a horizontal position. The frequency was scanned from 9.0 kHz to 1.0 GHz. When an emission was found, the table was rotated to produce the maximum signal strength. The EUT was measured in three (3) orthogonal planes. The unit was measured at TIMCO ENGINEERING, INC. located at 849 N.W. State Road 45 Newberry, Florida 32669.

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APPLICANT: LEE TECHNOLOGY KOREA CO., LTD.

FCC ID: QBTLTK-UP1

NAME OF TEST: RADIATION INTERFERENCE

RULES PART NO.: 15.109(a) and 15.209

REQUIREMENTS: CARRIER FREQUENCY WILL NOT EXCEED 2400/F (kHz) AT 300 METERS

OUT-OF-BAND EMISSIONS SHALL NOT EXCEED THE LEVEL OF THE FUNDAMENTAL.

9 to 490 KHz:	2400/F (kHz) uV/m @ 300 METERS
490 to 1705 KHz:	24000/F (kHz) uV/m @ 30 METERS
1705 to 30 MHz:	29.54 dBuV/M @ 30 METERS
30 to 88 MHz:	40.00 dBuV/M @ 3 METERS
88 to 216 MHz:	43.50 dBuV/M
216 to 960 MHz:	46.02 dBuV/M
ABOVE 960 MHz:	54.00 dBuV/M

TEST CONFIGURATION: The INTENTIONAL RADIATOR was connected to an ignition switch and a harness simulator cable box. The device was tested in both transmitting modes.

TEST DATA: The Measured Signal level was at or below noise floor.

The spectrum was scanned from 10 kHz to 1000 MHz and no emissions were found.

TEST PROCEDURE: The procedure used was ANSI C63.4-2003 Section 8.2. The frequency was scanned from 9.0 kHz to 1.0 GHz. When an emission was found, the table was rotated to produce the maximum signal strength. The EUT was measured in three (3) orthogonal planes. The unit was measured at TIMCO ENGINEERING, INC. located at 849 N.W. State Road 45 Newberry, Florida 32669.

TEST RESULTS: THE UNIT DOES MEET THE FCC REQUIREMENTS.

PERFORMED BY: JOE SCOGLIO DATE: 12/6/05

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APPLICANT: LEE TECHNOLOGY KOREA CO. LTD.

FCC ID: QBTLTK-UP1

NAME OF TEST: Occupied Bandwidth

RULES PART NO.: 15.209

REQUIREMENTS: The field strength of any emissions appearing between the band edges and up to 10 kHz above and below the band edges shall be attenuated at least 26 dB below the level of the un-modulated carrier or to the general limits of 15.209, whichever permits the higher emission levels.

THE GRAPH ON THE FOLLOWING PAGE REPRESENTS THE EMISSIONS TAKEN FOR THE DEVICE.

METHOD OF MEASUREMENT: A small sample of the transmitter output was fed into the spectrum analyzer and the above photo was taken. The vertical scale is set to -10 dBm per division. The horizontal scale is set to 5 kHz per division.

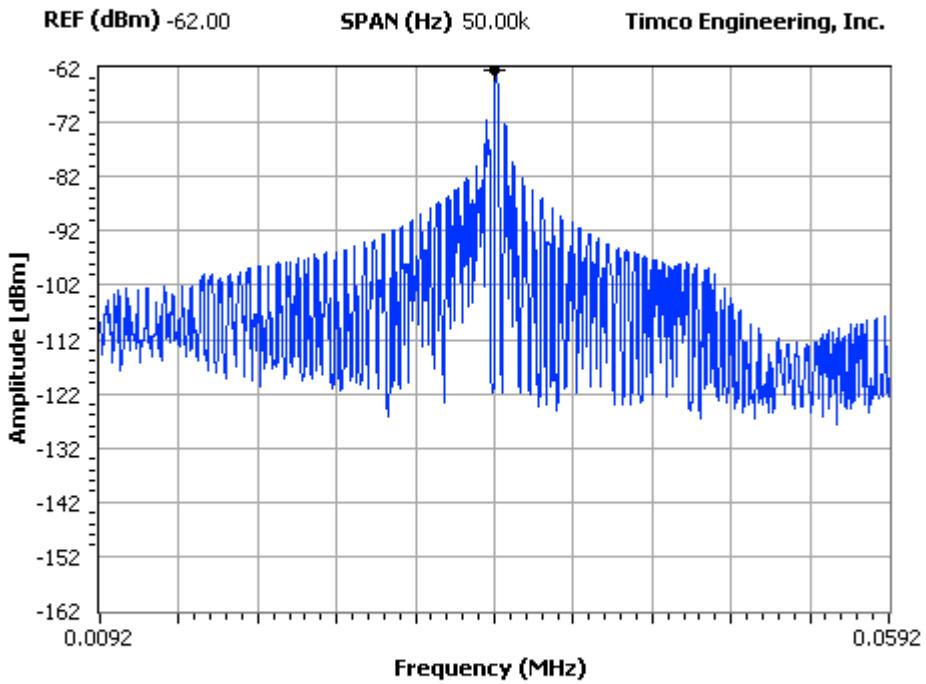
TEST RESULTS: The unit DOES meet the FCC requirements.

PERFORMED BY: JOE SCOGLIO **DATE:** 12/6/05

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NOTES:

2234ut5 occupied bandwidth



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TEST SET UP PHOTO

