

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: 27MHz RC TOY-TRANSMITTER

FCC ID: NLB27081TX

Applicant:

**DICKIE-SPIELZEUG GmbH & CO KG
WERKSTRABE 1
D-90765 FUERTH D-90765
GERMANY**

Date Receipt: 7/15/2005

Date Tested: 7/15/2005

APPLICANT: DICKIE-SPIELZEUG GmbH & CO KG
FCC ID: NLB27081TX
REPORT #: D\DICKIE\1495UT5\1495UT5TestReport.doc

COVER SHEET

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LABEL SAMPLE
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EMC Equipment List

| Device | Manufacturer | Model | Serial Number | Cal/Char Date | Due Date |
|-------------------------------|-----------------|----------|--------------------------|----------------|----------|
| 3/10-Meter OATS | TEI | N/A | N/A | Listed 3/27/04 | 3/26/07 |
| 3-Meter OATS | TEI | N/A | N/A | Listed 1/13/03 | 1/12/06 |
| Biconnical Antenna | Eaton | 94455-1 | 1057 | CAL 3/18/03 | 3/18/05 |
| 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 | 2620A00294 | CAL 4/27/04 | 4/27/06 |
| 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 |
| Log-Periodic Antenna | Eaton | 96005 | 1243 | CAL 5/8/03 | 5/8/05 |

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TEST PROCEDURE

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. The bandwidth 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 80°C with a humidity of 76%.

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 STANDARD C63.4-2003 10.1.7 MEASUREMENT PROCEDURES: The unit under test was placed on a table 80 cm high and with dimensions of 1m by 1.5m. The table used for radiated measurements is capable of continuous rotation.

When an emission was found, the table was rotated to produce the maximum signal strength. At this point, the antenna was raised and lowered from 1m to 4m. The antenna was placed in both the horizontal and vertical planes.

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APPLICANT: DICKIE-SPIELZEUG GmbH & CO KG

FCC ID: NLB27081TX

NAME OF TEST: RADIATION INTERFERENCE

RULES PART NO.: 15.227

REQUIREMENTS: CARRIER FREQUENCY WILL NOT EXCEEDS 80 dBuV/m AT 3M.
OUT-OF-BAND EMISSIONS SHALL NOT EXCEED:

| | |
|---------------|----------------------------------|
| 30 - 88 MHz | 40.0 dBuV/M MEASURED AT 3 METERS |
| 88 - 216 MHz | 43.5 dBuV/M |
| 216 - 960 MHz | 46.0 dBuV/m |
| ABOVE 960 MHz | 54.0 dBuV/m |

TEST DATA:

| Tuned Frequency MHz | Emission Frequency MHz | Meter Reading dBuV | Ant. Polarity | Coax Loss dB | Correction Factor dB | Field Strength dBuV/m | Margin dB |
|---------------------|------------------------|--------------------|---------------|--------------|----------------------|-----------------------|-----------|
| 27.1 | 27.14 | 58.0 | H | 0.80 | 13.76 | 72.56 | 7.44 |
| 27.1 | 27.14 | 65.5 | V | 0.80 | 12.44 | 78.74 | 1.26 |
| 27.1 | 54.28 | 15.1 | V | 1.01 | 9.84 | 25.95 | 14.05 |
| 27.1 | 54.28 | 15.1 | H | 1.01 | 10.06 | 26.17 | 13.83 |
| 27.1 | 81.42 | 15.5 | V | 1.24 | 8.45 | 25.19 | 14.81 |
| 27.1 | 81.42 | 19.4 | H | 1.24 | 8.60 | 29.24 | 10.76 |
| 27.1 | 108.49 | 14.2 | H | 1.46 | 10.59 | 26.25 | 17.25 |
| 27.1 | 108.56 | 11.5 | V | 1.46 | 10.82 | 23.78 | 19.72 |
| 27.1 | 135.70 | 10.2 | V | 1.65 | 14.91 | 26.76 | 16.74 |
| 27.1 | 135.70 | 15.6 | H | 1.65 | 14.05 | 31.30 | 12.20 |
| 27.1 | 162.84 | 9.7 | H | 1.84 | 16.59 | 28.13 | 15.37 |
| 27.1 | 162.84 | 9.9 | V | 1.84 | 17.53 | 29.27 | 14.23 |
| 27.1 | 189.98 | 9.7 | V | 2.03 | 14.60 | 26.33 | 17.17 |
| 27.1 | 189.98 | 11.7 | H | 2.03 | 14.00 | 27.73 | 15.77 |
| 27.1 | 217.12 | 10.0 | H | 2.19 | 11.59 | 23.78 | 22.22 |
| 27.1 | 217.12 | 11.6 | V | 2.19 | 11.46 | 25.25 | 20.75 |
| 27.1 | 244.26 | 11.3 | H | 2.32 | 12.17 | 25.79 | 20.21 |
| 27.1 | 244.26 | 12.2 | V | 2.32 | 12.16 | 26.68 | 19.32 |
| 27.1 | 271.40 | 9.0 | H | 2.46 | 13.24 | 24.70 | 21.30 |
| 27.1 | 271.40 | 12.1 | V | 2.46 | 13.27 | 27.83 | 18.17 |

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NAME OF TEST: RADIATION INTERFERENCE

SAMPLE CALCULATION: $FSdBuV/m = MR (dBuV) + ACFdB$.

TEST PROCEDURE: The procedure used was ANSI STANDARD C63.4-2003. The spectrum was scanned from 30 MHz to 1000 MHz. When an emission was found, the table was rotated to produce the maximum signal strength. The antenna was placed in both the horizontal and vertical planes and the worse case emissions were reported. The UUT was tested in 3 orthogonal planes.

TEST RESULTS: THE UNIT DOES MEET THE FCC REQUIREMENTS.

PERFORMED BY: MARIO R. de ARANZETA **DATE:** 7/15/2005

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FCC ID: NLB27081TX

NAME OF TEST: OCCUPIED BANDWIDTH

RULES PART NO.: 15.227

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 to the general limits of 15.209.

TEST DATA:

THE GRAPH ON THE NEXT 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 attached plot was taken. The vertical scale is set to 10 dB per division.

TEST RESULTS: The unit DOES meet the FCC requirements.

PERFORMED BY: JOSEPH SGOGLIO

DATE: July 20, 2005

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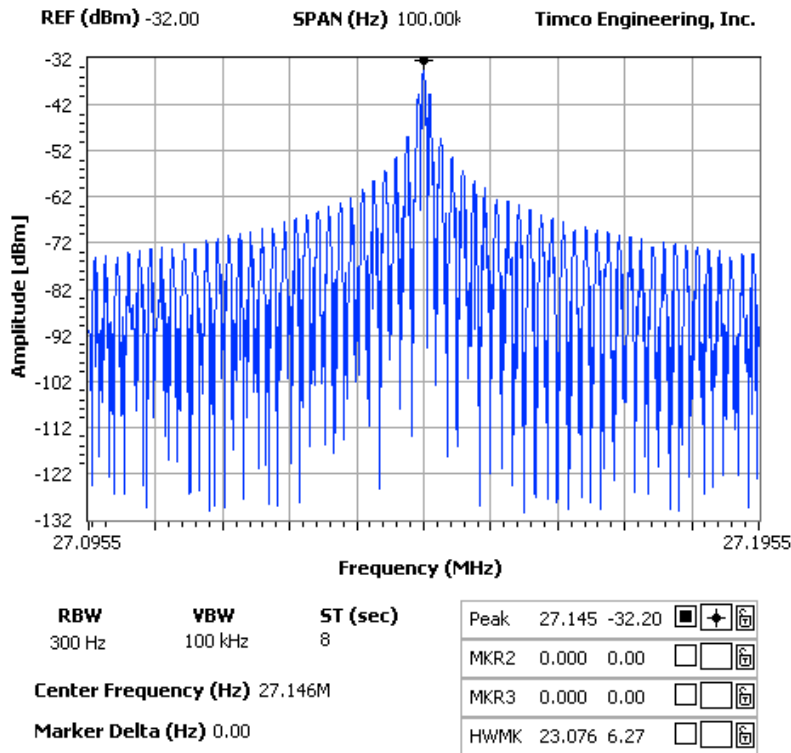
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FCC ID: NLB27081TX

NAME OF TEST: OCCUPIED BANDWIDTH PLOT

NOTES:

DICKIE-SPIELZEUG GmbH & CO KG - FCC ID: NLB27081
OCCUPIED BANDWIDTH PLOT



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