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APPLICANT: KIN YAT INDUSTRIAL CO., LTD.

FCC ID: HDT80TX138

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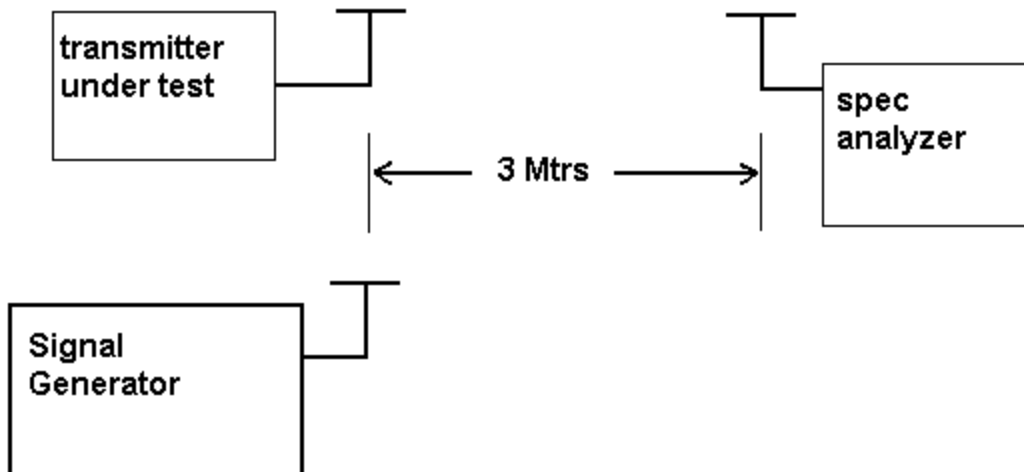
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GENERAL INFORMATION

- 2.1033(c) (1)(2) KIN YAT INDUSTRIAL CO., LTD. will sell the
FCC ID: HDT80TX138 Radio Control transmitter
in quantity, for use PART 95 SUBPART C.
- KIN YAT INDUSTRIAL CO., LTD.
7TH FLOOR, GALAXY FACTORY BUILDING
25-27 LUK HOP STREET, SAN PO KING
KOWLOON
HONG KONG
- 2.1033(c) (3) Instruction manual is included as exhibit #4.
- 2.1033 (4) Type of Emission: 8K0F1D
95.631 (b) (1)
- $B_n = 2M + 2DK$
 $M = 4,800$ Bits per second
 $D = 800$ Hz (Peak Deviation)
 $K = 1$
 $B_n = 2(4800/2) + 2(800)(1) = 4.8K + 3.2K = 8.0k$
- ALLOWED AUTHORIZED BANDWIDTH = 8.00 kHz.
- 95.631 (b) Authorized Bandwidth 8 kHz for RC Transmitter
- 2.1033(c) (5) Frequency Range: 26.995 – 27.195 MHz
- 95.623 (a) (6) Power Range and Controls: There are NO user
Power controls.
- (7) Function of each electron tube or semiconductor
device or other active circuit device: See
Exhibit #3.
- (8) Maximum Output Power Rating: 9.0 mW ERP.
- (9) DC Voltages and Current into Final Amplifier:
- FINAL AMPLIFIER ONLY
- $V_{ce} = 12.0$ Volts DC
 $I_{ce} = 46.0$ mA.
- 2.1033(c) (10) Tune-up procedure. The tune-up procedure is
included as Exhibit #9.

- 2.1033(c) (10) Complete Circuit Diagrams: The circuit diagram is included as part of Exhibit # 2.
- (10) Description of all circuitry and devices provided for determining and stabilizing frequency is given in EXHIBIT #10.
- 2.1033(c) (11) The Equipment identification is shown as Exhibit #5.
- 2.1033(c) (12) Photographs of the equipment are shown as Exhibits No. 7-8.
- 2.1033(c) (13) Equipment employing Digital modulation. N/A.
- 2.1033(c) (14) The data required by 2.1046-2.1057 follows;
- 2.1046 RF power is measured by the ERP METHOD. There are no provisions to limit the power. With a nominal battery voltage of 12.0 VDC, and the transmitter properly adjusted the RF output measures:
- $P_o = 0.0085$ Watts ERP
- 2.1046 RF power output.



2.1047

Modulation characteristics:

AUDIO FREQUENCY RESPONSE

Voice is NOT allowed in this band.

2.1049
95.635 (b)

Occupied bandwidth:

- (1) At least 25dB on any frequency removed from the center of the authorized bandwidth by more than 50% up to and including 100% of the authorized bandwidth.
- (10) At least 45 dB on any frequency removed from the center of the authorized bandwidth by more than 100% up to and including 125% of the authorized bandwidth.
- (11) At least 55 dB on any frequency removed from the center of the authorized bandwidth by more than 125% up to and including 250% of the authorized bandwidth.
- (12) At least $56 + 10 \log_{10} (T)$ dB on any frequency removed from the center of the authorized bandwidth by more than 250%.

Radiotelephone Transmitter with Modulation Limiter
Test Procedure Diagram

OCCUPIED BANDWIDTH MEASUREMENT



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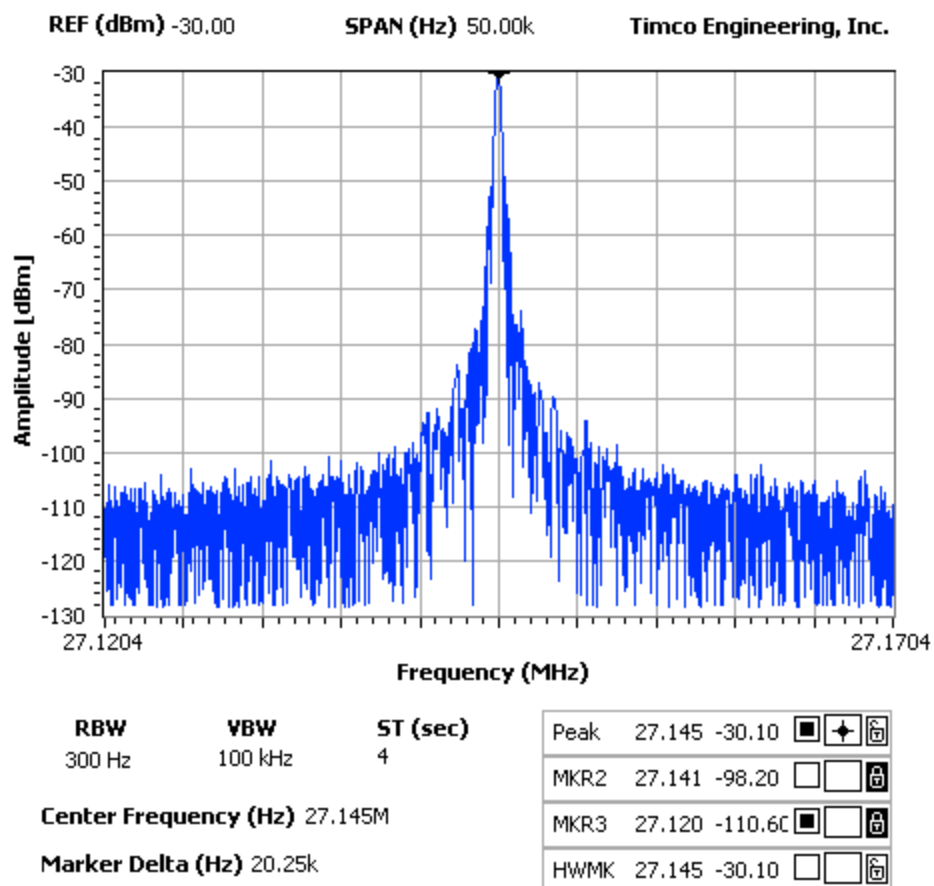
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OCCUPIED BANDWIDTH PLOT

NOTES:

KIN YAT INDUSTRIAL CO. LTD.
FCC ID: HDT 10091 - Occupied Bandwidth



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2.1051 SPURIOUS EMISSIONS AT ANTENNA TERMINALS. NOT APPLICABLE, NO antenna port. This UUT has a permanently attached antenna.

2.1053 UNWANTED RADIATION:
95.635(1)(3)(7)(10)(11)(12)

REQUIREMENTS:

At least $56 + 10\log(T)$ on any frequency removed from the center of the authorized bandwidth by more than 250%.

$$56 + 10\log(0.0085) = 35.29 \text{ dB}$$

TEST DATA:

Emission Frequency MHz	Ant. Polarity	Corrected EUT Signal Reading	Coax Loss (dB)	Substitution Antenna (dBd)	dB Below Carrier (dBc)
27.14	V	9.30	0	0	0.00
54.26	V	-45.10	0	-1.21	55.61
81.40	V	-47.30	0	-1.56	58.16
108.55	V	-42.50	0	-1.52	53.32
135.65	V	-41.80	0	-1.44	52.54
162.85	V	-48.70	0	-1.57	59.57
189.99	V	-40.90	0	-1.33	51.53
217.12	V	-60.20	0	-1.24	70.74
244.25	V	-66.70	0	-1.26	77.26
271.43	V	-62.20	0	-1.25	72.75

METHOD OF MEASUREMENT: The procedure used was C63.4-1992. The unit was operating into its permanently attached antenna at a height of 80 cm. The spectrum was scanned from 30 to at least the tenth harmonic of the fundamental using a HP model 8566B spectrum analyzer and an appropriate antenna. Measurements were made at the open field test site of TIMCO ENGINEERING INC. located at 849 N.W. State Road 45 Newberry, FL 32669.

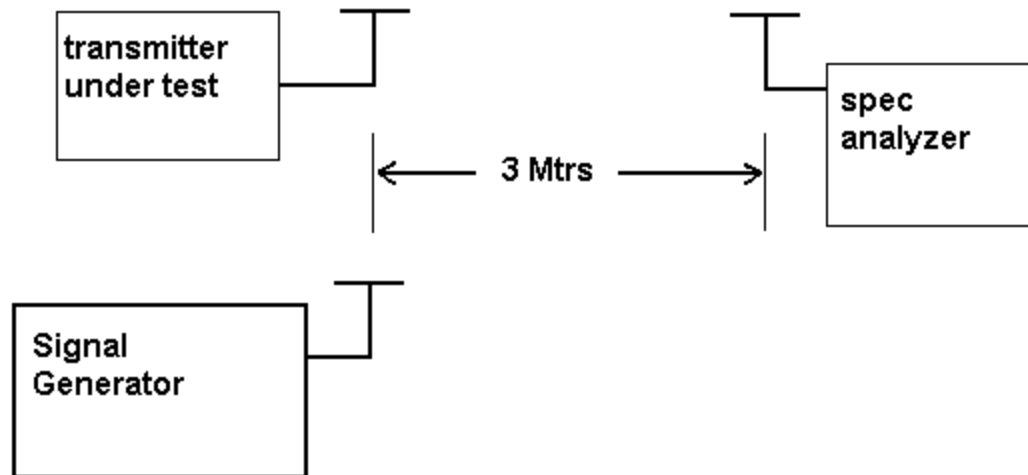
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Method of Measuring Radiated Spurious Emissions



2.1055(a)(1) Frequency stability:
95.623(b)

Temperature and voltage tests were performed to verify that the frequency remains within the .002%, 20-ppm specification limit. The test was conducted as follows:

The transmitter was placed in the temperature chamber at 25 degrees C and allowed to stabilize for one hour. The transmitter was keyed ON for one minute during which four frequency readings were recorded at 15-second intervals. The worse case number was taken for temperature plotting. The assigned channel frequency was considered to be the reference frequency. The temperature was then reduced to -30 degrees C after which the transmitter was again allowed to stabilize for one hour. The transmitter was keyed ON for one minute, and again frequency readings were noted at 15-second intervals. The worst-case Number was recorded for temperature plotting. This procedure was repeated in 10 degree increments up to + 50 degrees C.

Readings were also taken at the end point of the battery voltage of 12.0VDC.

MEASUREMENT DATA

REFERENCE FREQUENCY: 27.145275

TEMPERATURE °C	FREQUENCY MHz	PPM
-30C	27.145284	0.33
-20C	27.145284	0.33
-10C	27.145297	0.81
0C	27.145303	1.03
10C	27.145292	0.63
20C	27.145275	0.00
30C	27.145260	-0.55
40C	27.145258	-0.63
50C	27.145294	0.70

	DATA	VOLTS	PPM
-15% BATTERY END POINT	27.145 287	12	0.44

RESULTS OF MEASUREMENTS: The maximum frequency variation over the temperature range was -0.63 to +1.03ppm. The maximum frequency variation with voltage was 0.44 ppm.

EMC Equipment List

Device	Manufacturer	Model	Serial Number	Cal/Char Date	Due Date
3/10-Meter OATS	TEI	N/A	N/A	Listed 3/26/01	3/26/04
3-Meter OATS	TEI	N/A	N/A	Listed 1/13/03	1/13/06
Biconnical Antenna	Eaton	94455-1	1057	CAL 3/18/03	3/18/05
Biconnical Antenna	Eaton	94455-1	1096	CAL 10/1/01	10/1/03
Biconnical Antenna	Electro- Metrics	BIA-25	1171	CAL 4/26/01	4/26/03
Blue Tower Quasi-Peak Adapter	HP	85650A	2811A01279	CAL 4/15/03	4/15/05
Blue Tower RF Preselector	HP	85685A	2926A00983	CAL 4/15/03	4/15/05
Blue Tower Spectrum Analyzer	HP	8568B	2928A04729 2848A18049	CAL 4/15/03	4/15/05
LISN	Electro- Metrics	ANS-25/2	2604	CAL 10/9/01	10/9/03
LISN	Electro- Metrics	EM-7820	2682	CAL 3/12/03	3/12/05
Log-Periodic Antenna	Eaton	96005	1243	CAL 5/8/03	5/8/05
Log-Periodic Antenna	Electro- Metrics	EM-6950	632	CHAR 10/15/01	10/15/03
Log-Periodic Antenna	Electro- Metrics	LPA-25	1122	CAL 10/2/01	10/2/03
Log-Periodic Antenna	Electro- Metrics	LPA-30	409	CAL 3/4/03	3/4/05
Modulation Analyzer	HP	8901A	3435A06868	CAL 9/5/01	9/5/03
Modulation Meter	Boonton	8220	10901AB	CAL 4/15/03	4/15/05
Oscilloscope	Tektronix	2230	300572	CAL 7/3/03	7/3/05
Silver Tower Preamplifier	HP	8449B	3008A01075	CHAR 1/28/02	1/28/04
Silver Tower Quasi-Peak Adapter	HP	85650A	3303A01844	CAL 10/14/02	10/14/04
Silver Tower RF Preselector	HP	85685A	2620A00294	CAL 10/14/02	10/14/04
Silver Tower Spectrum Analyzer	HP	8566B Opt 462	3552A22064 3638A08608	CAL 10/14/02	10/14/04
Tan Tower Preamplifier	HP	8449B-H02	3008A00372	CHAR 3/4/01	3/4/03
Tan Tower Quasi-Peak Adapter	HP	85650A	3303A01690	CAL 8/31/01	8/31/03
Tan Tower RF Preselector	HP	85685A	3221A01400	CAL 8/31/01	8/31/03
Tan Tower Spectrum Analyzer	HP	8566B Opt 462	3138A07786 3144A20661	CAL 8/31/01	8/31/03

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