TEST REPORT

Report Number: 100731916LAX-004
Project Number: G100731916
July 31, 2012

Testing performed on the
Pendant Wireless Remote
Model Number: IC 3000TX1

FCC ID: XO8-3000TX1

to

FCC Part 15.231
RSS 210

for

Instant Care, Inc.

Test Performed by:	**Test Authorized by:**
Intertek	Instant Care, Inc.
25791 Commercentre Drive	2310 Cousteau Ct.
Lake Forest, CA 92630 USA	Vista, CA 92081 USA

Prepared by: _____ Date: July 31, 2012
David O'Reilly
Engineering Team Leader

Reviewed by: _____ Date: July 31, 2012
Ollie Moyrong
Engineering Manager

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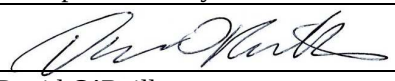
1.0 Summary of Tests

MODEL: IC 3000TX1
FCC ID: XO8-3000TX1

TEST	FCC REFERENCE	IC REFERENCE	RESULTS
Radiated Emission	15.231(b)	RSS-210 A1.1.2	Complies
Out of Band Radiated Emission	15.231(b)	RSS-210 A1.1.2	Complies
AC Conducted Emission	15.207	ICES-003	Not Applicable*
20 dB Bandwidth	15.231(c)	RSS-210 A1.1.3	Complies
Transmitter Deactivation Time	15.231(a)	RSS-210 A1.1.1(a)	Complies
Frequency Tolerance	15.231(d)	-	Not Applicable
Antenna Requirement	15.203	-	Complies**

*EUT is Battery Powered.
** EUT has internal antenna permanently attached.

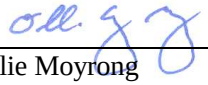
Tests performed by:



Date: July 31, 2012

David O'Reilly
Engineering Team Leader

Reviewed by:



Date: July 31, 2012

Ollie Moyrong
Engineering Manager

2.0 General Description

2.1 Product Description

Overview of the EUT

Applicant	Instant Care, Inc. 2310 Cousteau Ct. Vista, CA 92081 USA
Trade Name & Model No.	Instant Care, Inc. IC 3000TX1
FCC Identifier	XO8-3000TX1
Use of product	Pendant Wireless Remote
Transmitter activation	Manually operated. Deactivates within 5 seconds of being released.
Frequency Range (MHz)	433.9 MHz
Antenna Requirement	The EUT uses a permanently connected internal antenna.
Manufacturer name & address	Instant Care, Inc. 2310 Cousteau Ct. Vista, CA 92081 USA

EUT was received on July 23, 2012 in good operating condition.

Test dates: July 31, 2012.

2.2 Related Submittal(s) Grants

This report is for use with an application for certification of a low power transmitter. One transmitter is included in the application.

2.3 Test Methodology

Radiated emissions measurements were performed according to the procedures in ANSI C63.4 (2009). Radiated tests were performed at an antenna to EUT distance of 3 meters, unless stated otherwise in the **"Data Sheet"** of this Application. All other measurements were made in accordance with the procedures in part 2 of CFR 47.

2.4 Test Facility

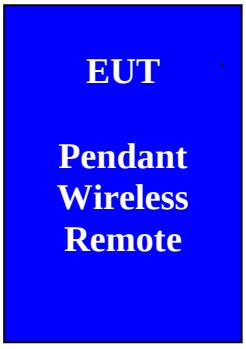
The 3 meter semi-anechoic chamber used to collect the radiated data is located in Lake Forest, CA. This test facility is on file with the FCC and A2LA accredited.

3.0 System Test Configuration

3.1 Support Equipment and Description

Actuator.

3.2 Block Diagram of Test Setup



3.3 Justification

For emission testing, the test procedures, as described in American National Standards Institute C63.4-2009, were employed. The equipment under test (EUT) was configured for testing in a typical fashion (as a customer would normally use it).

If the EUT attaches to peripherals, they are connected and operational (as typical as possible). The EUT is configured to transmit full power.

Each test was performed with a new battery.

3.4 Software Exercise Program

No special software program was required to exercise the EUT.

3.5 Mode of Operation During Test

The buttons on the EUT were pressed by an actuator.

3.6 Modifications Required for Compliance

No modifications were made by Intertek.

3.7 Additions, Deviations and Exclusions from Standards

No additions, deviations or exclusions from the standard were made.

4.0 Measurement Results

4.1 Radiated Emission
FCC Rule 15.231(b) and RSS-210 A1.1.2

The limit specified in section 15.231(b) was used.

4.1.1 Procedure

For radiated emission measurements, the EUT is placed on a plastic turntable. The signal is maximized through rotation and placement in the three orthogonal axes.

During the test the EUT is rotated and the antenna height and polarization are varied during the search for maximum signal level. The antenna height is varied from 1 to 4 meters.

Radiated emissions are taken at three meters unless the signal level is too low for measurement at that distance. If necessary, a pre-amplifier is used and/or the test is conducted at a closer distance. All readings are extrapolated back to the equivalent three-meter reading using inverse scaling with distance.

Radiated emission measurements were performed from 30 MHz to 5000 MHz.
Analyzer resolution is:
100 kHz or greater for frequencies below 1000 MHz,
1 MHz for frequencies above 1000 MHz.

The Peak and Average values of the Field Strength of the fundamental frequency and harmonics were measured.

Data is included of the worst-case configuration (the configuration which resulted in the highest emission levels). A sample calculation, configuration photographs and data tables of the emissions are included.

Field Strength Calculation

The field strength is calculated by adding the Antenna Factor and Cable Factor, and subtracting the Amplifier Gain (if any) from the measured reading. The basic equation is as follows:
FS = RA + AF + CF – AG – DCF(Duty Cycle Factor used Average measurements)
Where FS = Field Strength in dB (μV/m)
RA = Receiver Amplitude (including preamplifier) in dB (μV)
CF = Cable Attenuation Factor in dB
AF = Antenna Factor in dB(1/m)
AG = Amplifier Gain in dB
DCF = Duty Cycle Factor used Average measurements)

4.1.3 Test Results

The data below lists the significant emission frequencies, the limit and the margin of compliance.

Intertek
Radiated Emissions 30 MHz - 5000 MHz
FCC Part 15.231 (Vertical)
Engineer: David O'Reilly — Model Number: IC 3000TX1

July 31, 2012 — Company: Instant Care, Inc.

Frequency MHz	FS dB(uV/m)	Limit@3m dB(uV/m)	Margin dB	RA dB(uV)	AG dB	AF dB(1/m)	CF dB	DCF dB	Measurement Pk/Av
433.9	76.06	100.4	-24.34	58	0	16.6	1.46	0	Pk
433.9	57.66	80.4	-22.74	58	0	16.6	1.46	18.4	Av
867.9	43.2	80.4	-37.2	20.1	0	20.7	2.4	0	Pk
867.9	24.8	60.4	-35.6	20.1	0	20.7	2.4	18.4	Av
1301.67	68.99	80.4	-11.41	80.2	37.74	23.6	2.93	0	Pk
1301.67	50.99	60.4	-9.41	80.2	37.74	23.6	2.93	18.4	Av
1735.68	42.47	80.4	-37.93	52.25	38.22	25	3.44	0	Pk
1735.68	24.07	60.4	-36.33	52.25	38.22	25	3.44	18.4	Av
2169.47	64.26	80.4	-16.14	70.81	37.91	27.4	3.96	0	Pk
2169.47	45.86	60.4	-14.54	70.81	37.91	27.4	3.96	18.4	Av
2603.52	46.9	80.4	-33.5	52.31	37.71	28.1	4.2	0	Pk
2603.52	28.5	60.4	-31.9	52.31	37.71	28.1	4.2	18.4	Av
3037.35	58.4	80.4	-22	61.93	37.75	29.6	4.62	0	Pk
3037.35	40	60.4	-20.4	61.93	37.75	29.6	4.62	18.4	Av
3471.28	49.73	80.4	-30.67	51.97	37.59	30.5	4.85	0	Pk
3471.28	31.3	60.4	-29.1	51.97	37.59	30.5	4.85	18.4	Av
3905.03	58.68	80.4	-21.72	57.89	36.91	32.4	5.3	0	Pk
3905.03	40.28	60.4	-20.12	57.89	36.91	32.4	5.3	18.4	Av
4338.92	59.56	80.4	-20.84	58.57	36.98	32.3	5.67	0	Pk
4338.92	41.16	60.4	-19.24	58.57	36.98	32.3	5.67	18.4	Av

Test mode: Transmitting continuously
Temperature: 22 C
Humidity: 48 %
Note: Worse case emissions were found in the Vertical polarity.

4.2 AC Line Conducted Emission
FCC Rule 15.207

Note applicable. The EUT is battery powered.

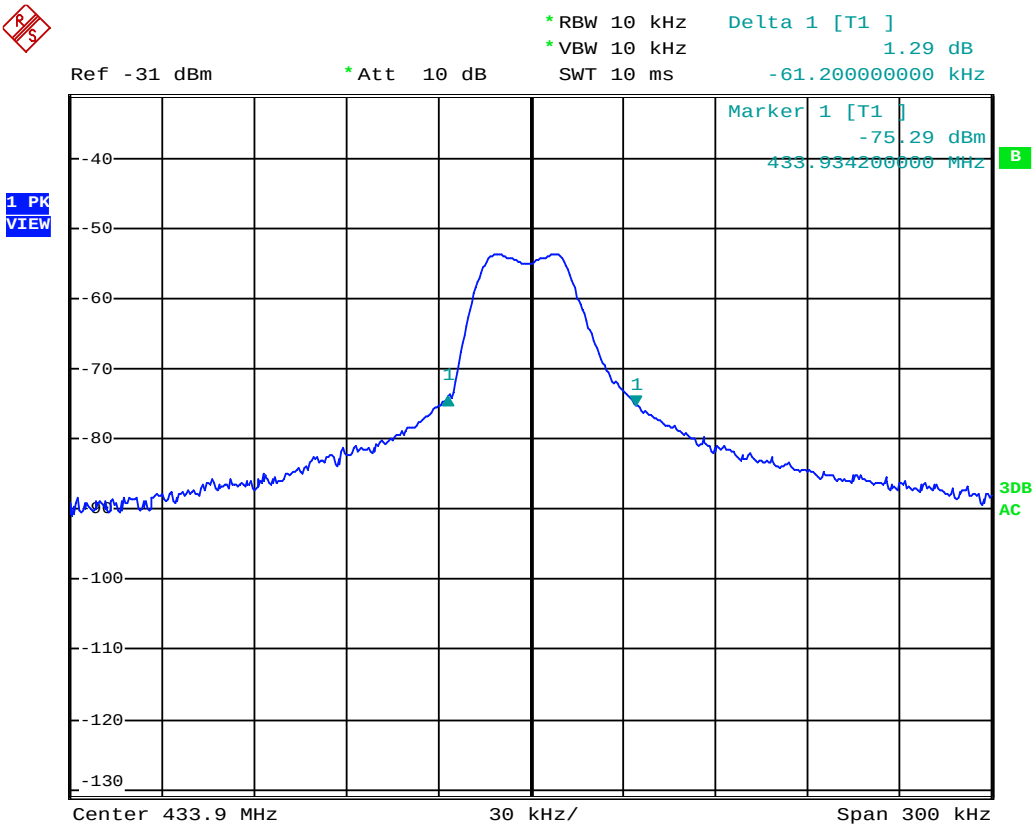
4.3 Occupied Bandwidth

The 15.231(c) emission bandwidth requirement: no wider than **0.25%** of the fundamental frequency

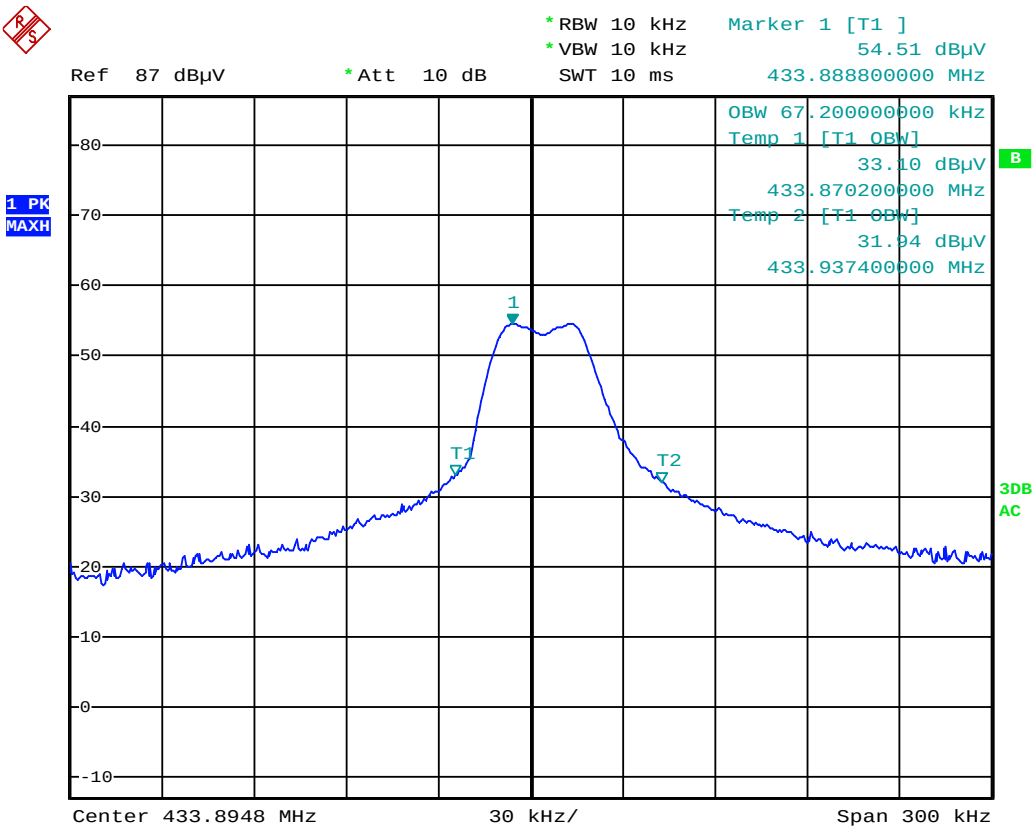
The worst-case (widest) emission bandwidth at 20 dBc is 61.2 kHz, which is 0.014% of the fundamental frequency.

The following plots show the emission bandwidth of the transmitter:

FCC 20dB BW



Industry Canada Occupied Bandwidth measured at 99%: 67.2 kHz



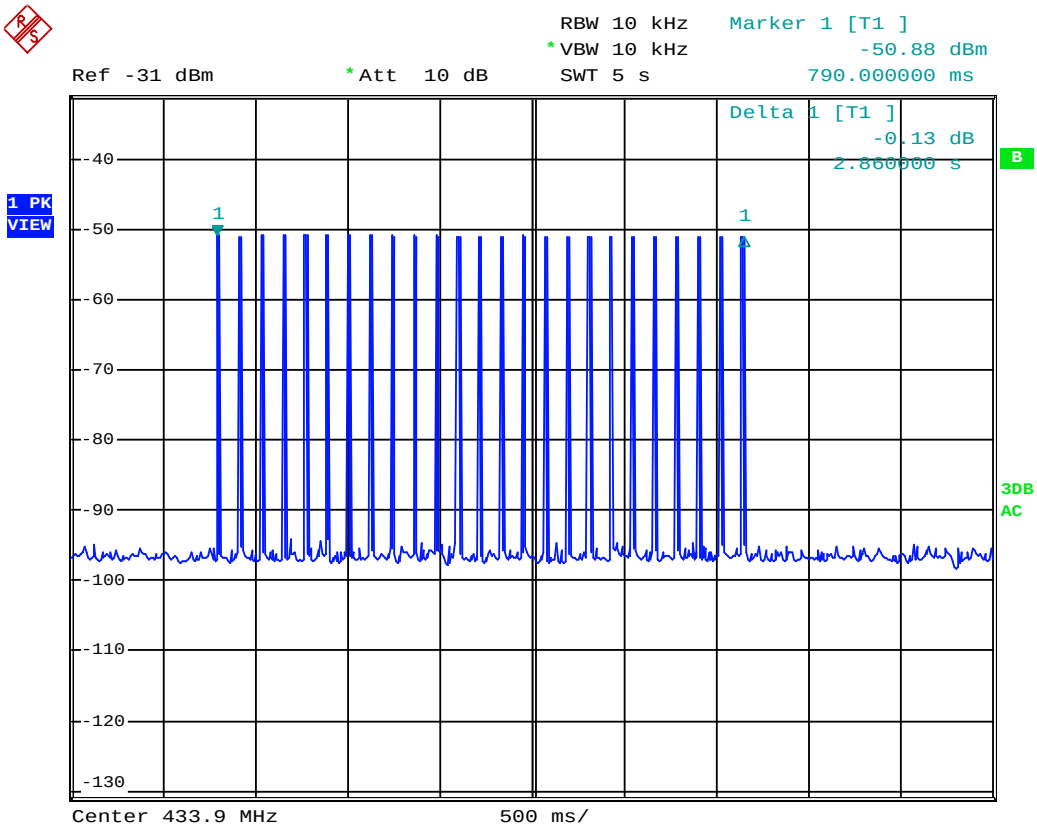
4.4 Transmitter Deactivation Time

FCC Rule 15.231(a) and RSS-210 A1.1.1
Maximum allowed deactivation time: 5 Seconds

Manually operated transmitter shall employ a switch that will automatically deactivate the transmitter within not more than 5 seconds of being released.

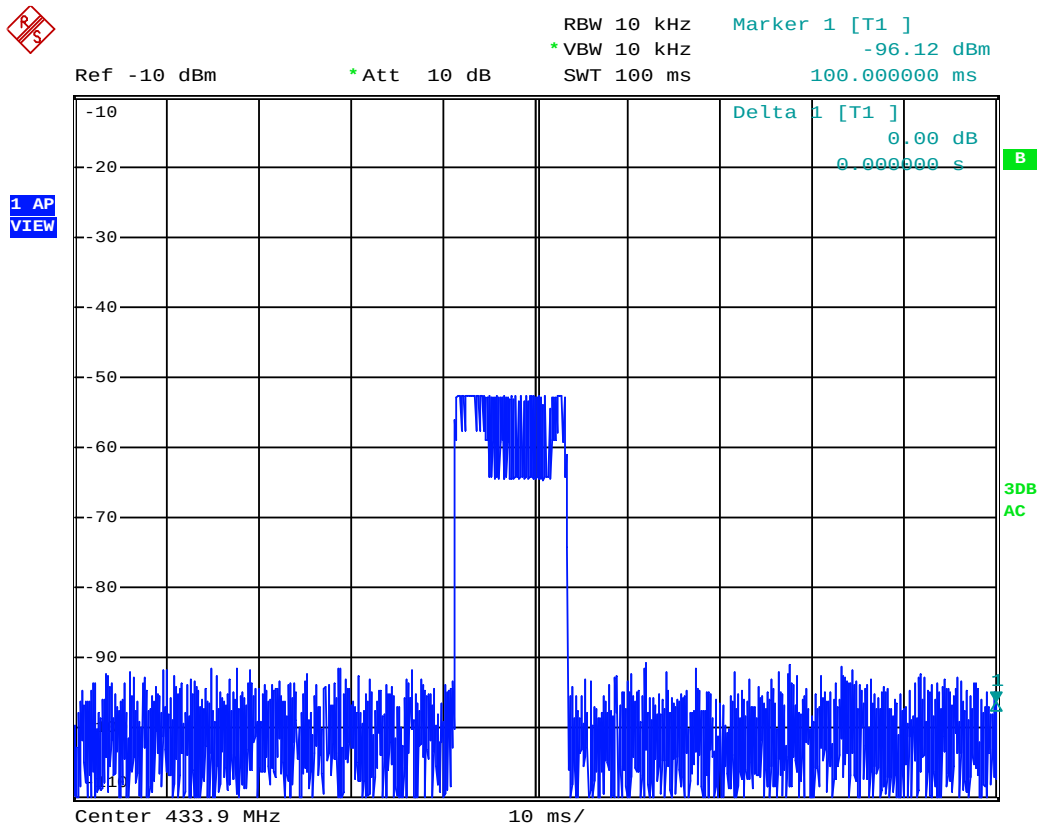
Test Results: Pass

Pendant Wireless Remote controller stopped transmitting within not more than 5 seconds of being released. Actual time = 2.86 seconds.



4.5 Duty Cycle Graphs

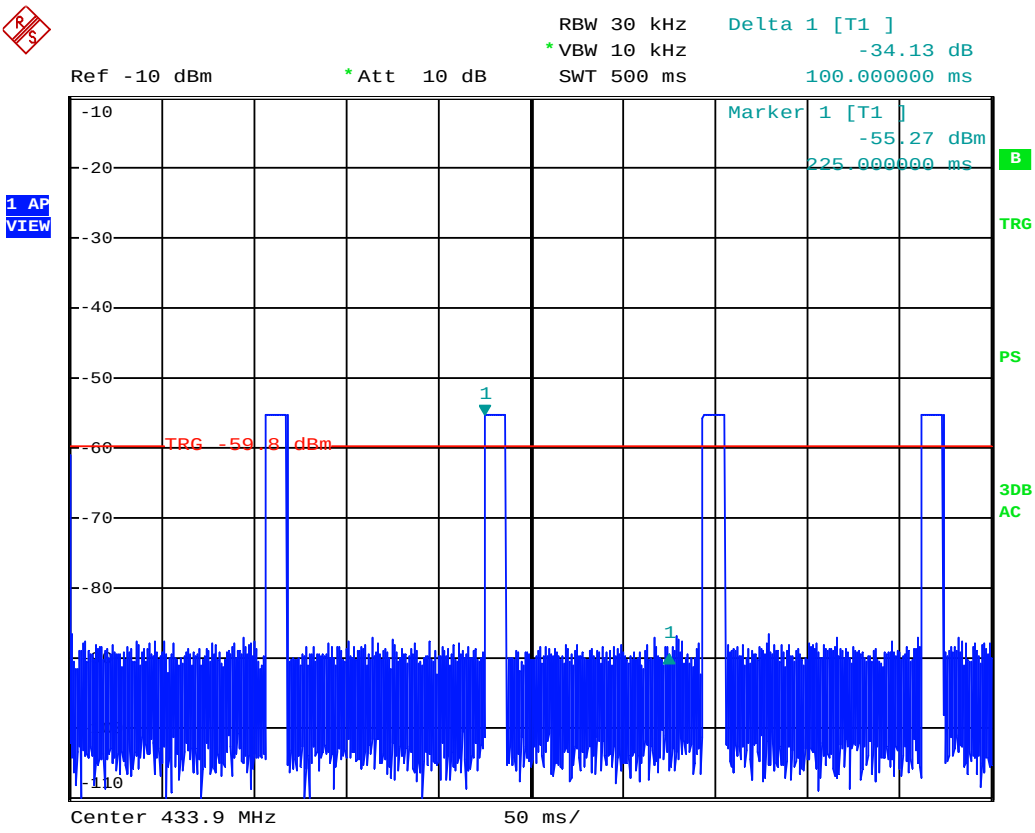
Graph 1:



100mS @ 10ms / div

Time on = 12ms

Graph 2:



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Delta marker indicates 100ms duration, 50ms / div

Duty Cycle Calculation

The duty cycle was calculated by measuring one pulse train in a 100 ms period. The pulse train consists of only “1 Short” 12ms pulse.

Total ON time = 12.0 ms
Duty Cycle calculation: 20Log (12/100) = -18.4 dB

5.0 List of Test Equipment

DESCRIPTION	MANUFACTURER	MODEL	SERIAL NO.	INTERTEK ID	CAL DUE	USED
EMI Test Receiver	Rohde & Schwarz	ESCI7	100825	1140	01/10/2013	☒
Biconilog Antenna	TESEQ	CBL 6112D	32852	1147	01/05/13	☒
Barometer Temp/Humidity	MicroServer	Omega	846078	1016	01/12/13	☒
LISN	EMCO	3825/2	2527	547	12/19/12	☐
Horn Antenna	A.H. Systems, Inc.	SAS-571	1513	1093	10/11/12	☒

6.0 Document History

Revision Number	Contents	Date	Prepared By	Reviewed By
2012154	Changed C63.4 (3003) to C3.4 (2009) Also fixed band width calculation from 0.00014% to 0.014% on page 14.	10/25/2012