

#### CLASS II PERMISSIVE CHANGE TEST REPORT

Report Number: 103866135MPK-001 Project Number: G103866135 Issue Date: May 24, 2019

Testing performed on the Ceiling Fan Remote Models: K8635-01, K1403-02, K1131-01 FCC ID: IN2TX36 IC: 3558A-TX36

FCC 47 CFR PT 15.231 Industry Canada RSS-210 Issue 9 FCC Part 15, Subpart B Industry Canada ICES-003

For

#### **Hunter Fan Company**

Test Performed by:
Intertek
1365 Adams Court
Menlo Park, CA 94025 USA

Test Authorized by: Hunter Fan Company 545 E. Algonquin Road Arlington Heights, Illinois 60005 USA

Prepared by:	Aaron Chang	Date:	May 24, 2019
Reviewed by:	Krishna Vemuri	Date:	May 24, 2019

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Report No. 103866135MPK-001						
<b>Equipment Under Test:</b>	Ceiling Fan Remote					
Trade Name:	Hunter Fan Company					
<b>Model Number:</b>	K8635-01, K1403-02, K1131-01					
Serial Number:	MPK1903190911-001 (K1131-01) MPK1903190911-002 (K1403-02) MPK1903190911-003 (K8635-01)					
Applicant:	Hunter Fan Company					
Contact:	Julian Martin					
Address:	Hunter Fan Company 545 E. Algonquin Road Arlington Heights, Illinois 60005					
Country:	USA					
Tel. Number:	(901) 248-2810					
Email:	jmartin@hunterfan.com					
Applicable Regulation:	FCC 47 CFR PT 15.231 Industry Canada RSS-210 Issue 9 FCC Part 15, Subpart B Industry Canada ICES-003 Issue 6					
<b>Test Site Location:</b>	ITS – Site 1 1365 Adams Drive Menlo Park, CA 94025					
Date(s) of Test:	April 8-10 & May 16, 2019					

We attest to the accuracy of this report:

Aaron Chang EMC Project Engineer Krishna K Vemuri Engineering Team Lead



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# 1.0 Summary of Tests

TEST	REFERENCE FCC 15.231	REFERENCE RSS-210	RESULTS
Field Strength Of Fundamental	15.231(b)	RSS-210, A.1.2(a)	Complies
Transmitter Radiated Emissions	15.231(b)	RSS-210, A.1.2(a)	Complies
Line Conducted Emissions	15.207	RSS-GEN	Not Applicable <sup>2</sup>
Radiated Emission from Digital Part and Receiver	15.109	ICES 003	Complies
AC Line Conducted Emission	15.107	ICES 003	Not Applicable <sup>2</sup>
Antenna Requirement	15.203	RSS-GEN	Complies <sup>1</sup>

<sup>1</sup> EUT utilizes an internal Antenna.

<sup>2</sup> EUT is battery powered.



#### 2.0 General Description

#### 2.1 Product Description

Hunter Fan Company supplied the following description of the EUT:

The EUT was a handheld wireless transmitter used for remote control of a ceiling fan and light assembly.

For more information, refer to the following product specification, declared by the manufacturer.

Overview of the EUT						
Applicant name & address:	Hunter Fan Company 545 E. Algonquin Road Arlington Heights, Illinois 60005 USA					
Contact info / Email:	Julian Martin / jmartin@hunterfan.com					
Model:	K8635-01, K1403-02, K1131-01					
FCC Identifier:	IN2TX36					
IC Identifier:	3558A-TX36					
<b>Operating Frequency:</b>	433.9 MHz					
Number of Channels:	12					
Type of Modulation:	O-QPSK					
Antenna Type:	Permanent PCB Trace					

**EUT receive date:** April 8, 2019

**EUT receive condition:** The EUT was received in good condition with no apparent damage. As

declared by the Applicant it is identical to the production units.

**Test start date:** April 8, 2019 **Test completion date:** May 16, 2019

#### **Variant Models:**

The following variant models were not tested as part of this evaluation but have been identified by the manufacturer as being electrically identical models, depopulated models, or with reasonable similarity to the model(s) tested. Intertek does not make any claims of compliance for samples or variants which were not tested.

• K1131-02: same as K1131-01 with Hunter logo

• K1403-01: same as 99116 (part number change)



#### 2.2 Related Submittal(s) Grants

None

#### 2.3 Test Methodology

Configuration as required by ANSI C63.10-2013.

#### 2.4 Test Facility

The radiated emission test site and conducted measurement facility used to collect the data is 10m semi-anechoic chamber located in Menlo Park, California. This test facility and site measurement data have been fully placed on file with the FCC and Industry Canada (Site # 2042L-1).



#### 3.0 System Test Configuration

#### 3.1 Support Equipment and description

No support equipment was used for testing.

#### 3.2 Block Diagram of Test Setup

Equipment Under Test							
Description Manufacturer Model Number Serial Number							
		K8635-01	MPK1903190911-001 (K1131-01)				
Ceiling Fan Remote	Hunter Fan Company	K1403-02	MPK1903190911-002 (K1403-02)				
		K1131-01	MPK1903190911-003 (K8635-01)				

The diagram shown below details the interconnection of the EUT and support equipment. For specific layout, refer to the test configuration photograph in the relevant section of this report.

EUT

S = Shielded	<b>F</b> = With Ferrite
U = Unshielded	m = Length in Meters

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#### 3.3 Justification

For radiated emission measurements the EUT is placed on a non-conductive table.

Class II permissive change testing was performed based on: K8635-01: same as 99116 with different touch pad and color

K1403-02: same as 99116 in current IC certificate in white finish

K1131-01: same as K1403 with different shape and color

#### 3.4 Software Exercise Program

The EUT exercise program used during radiated and conducted testing was provided by Hunter Fan Company

#### 3.5 Mode of Operation during test

During transmitter testing, the transmitter was setup to continuously transmit.

#### 3.6 Modifications required for Compliance

No modifications were installed by Intertek Testing Services during compliance testing in order to bring the product into compliance.

#### 3.7 Additions, deviations and exclusions from standards

No additions, deviations or exclusion have been made from standard.



#### 4.0 Measurement Results

#### 4.1 Fundamental Field Strength

#### 4.1.1 Requirements

The field strength of emissions, measured at 3 meters, from intentional radiators operated under this section shall not exceed the following:

Fundamental frequency (MHz)	Field strength of fundamental (microvolts/meter)	Field strength of harmonics (microvolts/meter)		
40.66-40.70	2,250	225		
70-130	1,250	125		
130-174	<sup>1</sup> 1,250 to 3,750	<sup>1</sup> 125 to 375		
174-260	3,750	375		
260-470	<sup>1</sup> 3,750 to 12,500	<sup>1</sup> 375 to 1,250		
Above 470	12,500	1,250		

<sup>&</sup>lt;sup>1</sup>Linear interpolations.

#### 4.1.2 Procedure

Tests are performed in accordance with ANSI C63.10-2013.

The EUT was placed on a non-conducting table 80 cm (below 1 GHz) or 1.5 meters (above 1 GHz) above the ground plane (turntable). The antenna to EUT distance was 3 meters.

The transmitter configured to transmit continuously. The turntable containing the EUT was rotated through 360 degrees and the receive antenna height was varied from 1 to 4 meters to locate the worst-case emissions levels. Measurements were made with the antenna in both the horizontal and vertical polarizations. EUT was tested at horizontal and vertical orientations, the possible orientations used by the end users. The worst-case data is recorded in this report.

New or fully charged batteries were used during measurement.



# 4.1.3 Test Results

#### K1131-01:

Frequency (MHz)	Measured Field Strength @3m dB(µV/m)	Duty Cycle Correction Factor	Final Field Strength @3m dB(µV/m)	Lim @3m dB(µV/m)	Margin (dB)	Height (m)	Angle (°)	Antenna Polarization	Correction (dB)	Detection
433.963	80.08	0.00	80.08	100.83	-20.75	1.98	96.25	Horizontal	-5.59	PK
433.963	80.08	-7.5	72.58	80.83	-8.25	1.98	96.25	Horizontal	-5.59	AV

<sup>\*</sup>DCF was taken from original report (100937514ATL-001)

#### K1403-02:

Frequency (MHz)	Measured Field Strength @3m dB(μV/m)	Duty Cycle Correction Factor	Final Field Strength @3m dB(µV/m)	Lim @3m dB(µV/m)	Margin (dB)	Height (m)	Angle (°)	Antenna Polarization	Correction (dB)	Detection
433.963	80.25	0.00	80.25	100.83	-20.58	2.00	107.7	Horizontal	-5.59	PK
433.963	80.25	-7.5	72.65	80.83	-8.18	2.00	107.7	Horizontal	-5.59	AV

<sup>\*</sup>DCF was taken from original report (100937514ATL-001)

#### K8635-01:

Frequency (MHz)	Measured Field Strength @3m dB(μV/m)	Duty Cycle Correction Factor	Final Field Strength @3m dB(µV/m)	Lim @3m dB(µV/m)	Margin (dB)	Height (m)	Angle (°)	Antenna Polarization	Correction (dB)	Detection
433.963	80.28	0.00	80.28	100.83	-20.55	2.00	89.25	Horizontal	-5.59	PK
433.963	80.28	-7.5	72.78	80.83	-8.05	2.00	89.25	Horizontal	-5.59	AV

<sup>\*</sup>DCF was taken from original report (100937514ATL-001)

Results	Complies	
Test date:	May 16, 2019	

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# 4.2 Transmitter Radiated Emissions FCC Rules: 15.231, 15.209, 15.205; RSS-210;

#### 4.2.1 Requirements

The field strength of emissions, measured at 3 meters, from intentional radiators operated under this section shall not exceed the following:

Fundamental frequency (MHz)	Field strength of fundamental (microvolts/meter)	Field strength of harmonics (microvolts/meter)
40.66-40.70	2,250	225
70-130	1,250	125
130-174	<sup>1</sup> 1,250 to 3,750	<sup>1</sup> 125 to 375
174-260	3,750	375
260-470	<sup>1</sup> 3,750 to 12,500	<sup>1</sup> 375 to 1,250
Above 470	12,500	1,250

<sup>&</sup>lt;sup>1</sup>Linear interpolations.

Radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

#### 4.2.2 Procedure

Tests are performed according to the procedures in ANSI C63.10-2013.

The EUT was placed on a non-conducting table 80 cm (below 1 GHz) or 1.5 meters (above 1 GHz) above the ground plane (turntable). Radiated test was performed at an antenna to EUT distance of 3 meters.

The spectrum from 30 MHz to the 10<sup>th</sup> harmonic was investigated with the transmitter configured to continuously transmit. The turntable containing the EUT was rotated through 360 degrees and the receive antenna height was varied from 1 to 4 meters to locate the worst-case emissions levels. Measurements were made with the antenna in both the horizontal and vertical polarizations. EUT was tested at horizontal and vertical orientations, the possible orientations used by the end users. The worst-case data is recorded in this report.

New or fully charged batteries were used during measurement.



#### 4.2.3 Field Strength Calculation

#### 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 with a sample calculation is as follows:

FS = RA + AF + CF - AG; if measurement is performed at a distance other than specified in the rule, a Distance Correction Factor (DCF) shall be added.

Where  $FS = Field Strength in dB(\mu V/m)$ 

 $RA = Receiver \ Amplitude \ (including \ preamplifier) \ in \ dB(\mu V); \ AF = Antenna \ Factor \ in \ dB(1/m)$ 

CF = Cable Attenuation Factor in dB; AG = Amplifier Gain in dB

Assume a receiver reading of  $52.0 \text{ dB}(\mu\text{V})$  is obtained. The antennas factor of 7.4 dB(1/m) and cable factor of 1.6 dB is added. The amplifier gain of 29 dB is subtracted, giving field strength of  $32 \text{ dB}(\mu\text{V/m})$ . This value in  $dB(\mu\text{V/m})$  was converted to its corresponding level in  $\mu\text{V/m}$ .

 $RA = 52.0 dB(\mu V)$ 

AF = 7.4 dB(1/m)

CF = 1.6 dB

 $AG = 29.0 \, dB$ 

 $FS = 52.0 + 7.4 + 1.6 - 29.0 = 32 dB(\mu V/m)$ .

Level in  $\mu V/m = Common Antilogarithm [(32 dB<math>\mu V/m)/20] = 39.8 \mu V/m$ .

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#### 4.2.4 Test Result

#### K1131-01:

K1131-01:								
Frequency (MHz)	Measured Field Strength @3m (dBuV/m)	Limit @3m (dBuV/m)	Margin (dB)	Antenna Height (m)	Angle °	Antenna Polarization	Correction	Detector
867.854	42.03	80.8	-38.77	2	288.5	Vertical	0.4	PK
867.854	34.53	60.8	-26.27	2	288/5	Vertical	-7.1	AV
1301.467	53.06	74	-20.94	1.02	344.25	Horizontal	-19.16	PK
1301.467	45.56	54	-8.44	1.02	344.25	Horizontal	-26.66	AV
1735.600	51.87	80.8	-28.93	1.02	344.25	Horizontal	-17.43	PK
1735.600	44.37	60.8	-16.43	1.02	344.25	Horizontal	-24.93	AV
2169.333	50.86	80.8	-29.94	1.01	8	Vertical	-16.51	PK
2169.333	43.36	60.8	-17.44	1.01	8	Vertical	-24.01	AV
3037.867	49.19	80.8	-31.61	3.02	128	Horizontal	-13.78	PK
3037.867	41.69	60.8	-19.11	3.02	128	Horizontal	-21.28	AV
3471.333	47.65	80.8	-33.15	3.02	304.5	Horizontal	-12.79	PK
3471.333	40.15	60.8	-20.65	3.02	304.5	Horizontal	-20.29	AV
3906.000	42.7	74	-31.3	3.99	329.5	Horizontal	-10.79	PK
3906.000	35.2	54	-18.8	3.99	329.5	Horizontal	-18.29	AV
4339.467	42.82	80.8	-37.98	2.01	358.75	Vertical	-10.13	PK
4339.467	35.32	60.8	-25.48	2.01	358.75	Vertical	-17.63	AV



#### K1403-02:

Frequency (MHz)	Measured Field Strength @3m (dBuV/m)	Limit @3m (dBuV/m)	Margin (dB)	Antenna Height (m)	Angle °	Antenna Polarization	Correction	Detector
867.854	40.13	80.8	-40.67	2	309.75	Vertical	0.4	PK
867.854	32.63	60.8	-28.17	2	309.75	Vertical	-7.1	AV
1301.733	51.11	74	-22.89	1	340.75	Horizontal	-19.15	PK
1301.733	43.61	54	-10.39	1	340.75	Horizontal	-26.65	AV
1735.467	51.41	80.8	-29.39	1	0	Horizontal	-17.43	PK
1735.467	43.91	60.8	-16.89	1	0	Horizontal	-24.93	AV
2169.600	51.3	80.8	-29.5	1	351.25	Vertical	-16.51	PK
2169.600	43.8	60.8	-17	1	351.25	Vertical	-24.01	AV
2603.600	45.43	80.8	-35.37	1	295.25	Vertical	-14.97	PK
2603.600	37.93	60.8	-22.87	1	295.25	Vertical	-22.47	AV
3037.733	48.14	80.8	-32.66	1	318	Vertical	-13.79	PK
3037.733	40.64	60.8	-20.16	1	318	Vertical	-21.29	AV
3471.467	44.04	80.8	-36.76	1.98	298.25	Horizontal	-12.79	PK
3471.467	36.54	60.8	-24.26	1.98	298.25	Horizontal	-20.29	AV
3905.067	43.7	74	-30.3	2.98	346.75	Horizontal	-10.79	PK
3905.067	36.2	54	-17.8	2.98	346.75	Horizontal	-18.29	AV



#### K8635-01:

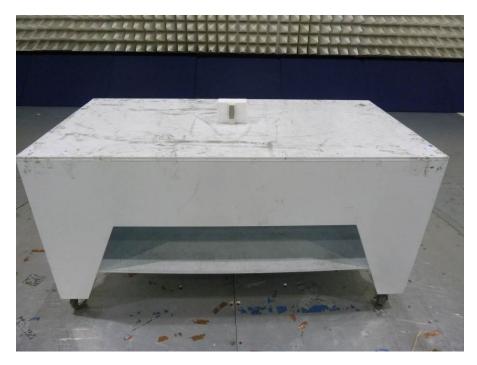
Frequency (MHz)	Measured Field Strength @3m (dBuV/m)	Limit @3m (dBuV/m)	Margin (dB)	Antenna Height (m)	Angle °	Antenna Polarization	Correction	Detector
867.854	40.79	80.8	-40.01	2	304.25	Vertical	0.4	PK
867.854	33.29	60.8	-40.01	2	304.25	Vertical	-7.1	AV
1301.600	50.66	74	-23.34	2.99	64	Vertical	-19.15	PK
1301.600	43.16	54	-10.84	2.99	64	Vertical	-26.65	AV
1735.467	56.35	80.8	-24.45	1.98	184	Horizontal	-16.05	PK
1735.467	48.85	60.8	-11.95	1.98	184	Horizontal	-23.55	AV
2169.600	51.99	80.8	-28.81	2.98	215.5	Horizontal	-16.51	PK
2169.600	44.49	60.8	-16.31	2.98	215.5	Horizontal	-24.01	AV
2603.733	48.53	80.8	-32.27	2.98	239.75	Horizontal	-14.97	PK
2603.733	41.03	60.8	-19.77	2.98	239.75	Horizontal	-22.47	AV
3037.333	50.38	80.8	-30.42	1.98	17	Horizontal	-13.79	PK
3037.333	42.88	60.8	-17.92	1.98	17	Horizontal	-21.29	AV
3471.200	44.42	80.8	-36.38	2.98	104	Horizontal	-12.79	PK
3471.200	36.92	60.8	-23.88	2.98	104	Horizontal	-20.29	AV

Results	Complies	
Test date:	April 8-10 & May 16, 2019	



### 4.1.5 Test Configuration Photographs

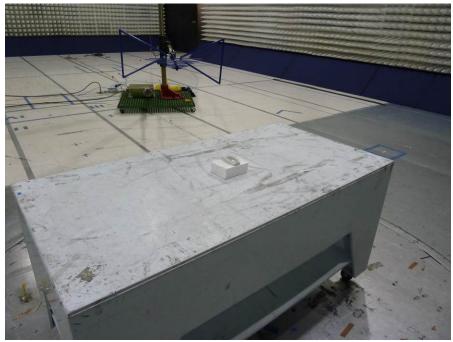
The following photographs show the testing configurations used.









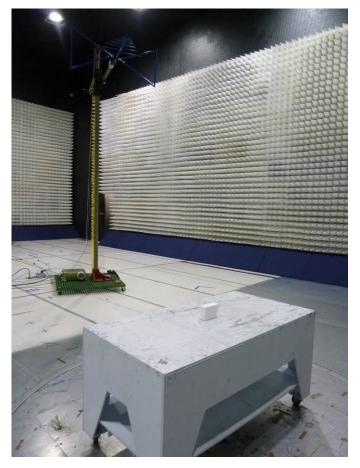












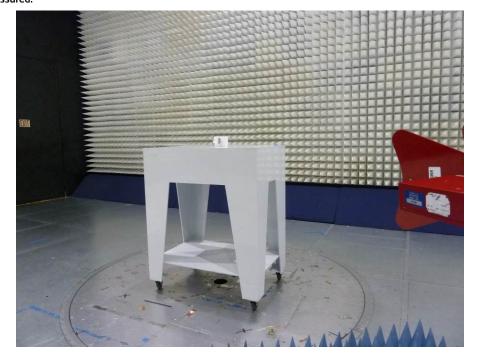


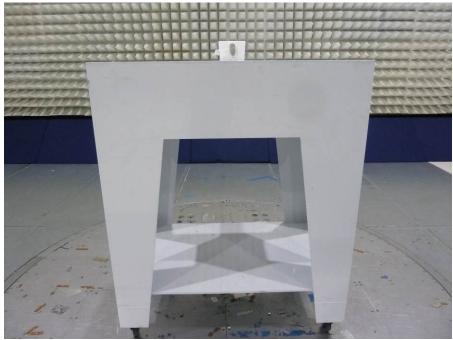




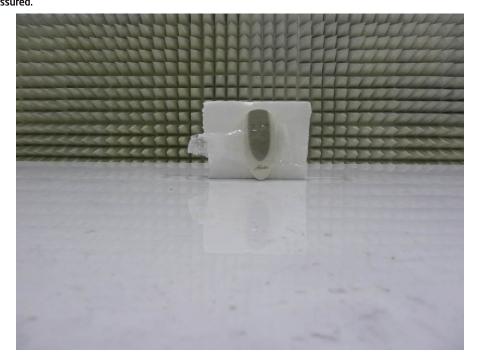


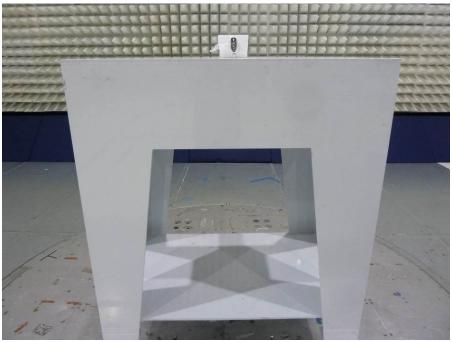




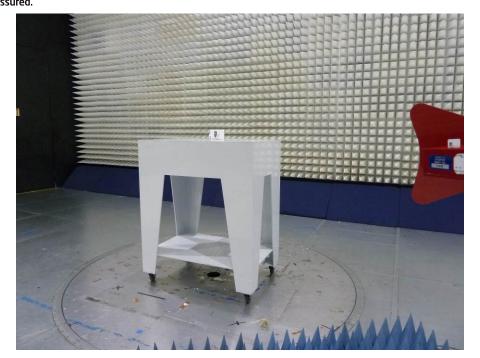














# 4.3 Digital Parts Radiated Emissions FCC Ref: 15.109, ICES 003

#### 4.3.1 Requirements

Limits for Electromagnetic Radiated Emissions FCC Section 15.109(b), ICES 003\*, RSS GEN

Frequency	Class A at 10m	Class B at 3m
(MHz)	$dB(\mu V/m)$	$dB(\mu V/m)$
30-88	39	40.0
88-216	43.5	43.5
216-960	46.4	46.0
Above 960	49.5	54.0

<sup>\*</sup> According to FCC Part 15.109(g) an alternative to the radiated emission limits shown above, digital devices may be shown to comply with the limit of CISPR Pub. 22



#### 4.3.2 Procedure

Measurements are conducted with a quasi-peak detector instrument in the frequency range of 30 MHz to 1000 MHz and with the average detector instrument in the frequency range above 1000 MHz. The measuring receiver meets the requirements of Section One of CISPR 16 and the measuring antenna correlates to a balanced dipole.

Measurements of the radiated field are made with the antenna located at a distance of 10 meters from the EUT. If the field-strength measurements at 10m cannot be made because of high ambient noise level or for other reasons, measurements of Class B equipment may be made at a closer distance, for example 3m. An inverse proportionality factor of 20 dB per decade should be used to normalize the measured data to the specified distance for determining compliance.

The antenna is adjusted between 1m and 4m in height above the ground plane for maximum meter reading at each test frequency.

The antenna-to-EUT azimuth is varied during the measurement to find the maximum field-strength readings.

The antenna-to-EUT polarization (horizontal and vertical) is varied during the measurements to find the maximum field-strength readings.

The EUT, where intended for tabletop use, is placed on a table whose top is 0.8m above the ground plane. The table is constructed of non-conductive materials. Its dimensions are 1m by 1.5m, but may be extended for a larger EUT.

Floor standing EUT are placed on a horizontal metal ground plane and isolated from the ground plane by resting on an insulating material.

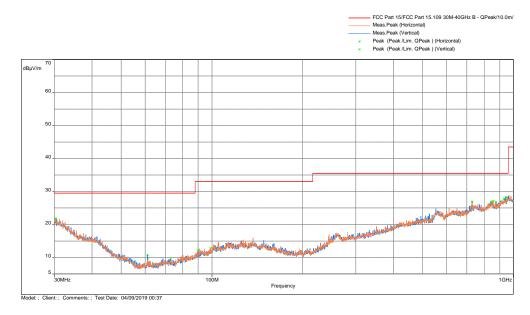
Equipment setup for radiated disturbance tests followed the guidelines of ANSI C63.4-2014.



#### 4.3.4 Test Result

The EUT met the radiated disturbance requirements of FCC & ICES 003 for a Class B device.

#### 15.109 Radiated Emissions 30 MHz – 1 GHz, Class B K1131-01

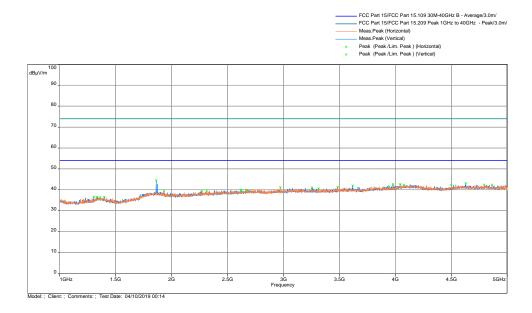


Frequency (MHz)	QPeak@10m dB(μV/m)	Lim. QPeak dB(µV/m)	Margin (dB)	Angle (°)	Height (m)	Antenna Polarization	Correction (dB)
30.162	21.77	29.5	-7.73	2.02	70.5	Horizontal polarization	-10.82
30.453	21.75	29.5	-7.75	4	30.25	Vertical polarization	-11.02
929.513	27.73	35.5	-7.77	1.02	58.75	Horizontal polarization	0.06
935.754	27.67	35.5	-7.83	2	241	Vertical polarization	0.31
942.059	28.29	35.5	-7.21	2	319.75	Vertical polarization	0.41
951.532	28.17	35.5	-7.33	4	247.25	Horizontal polarization	0.53

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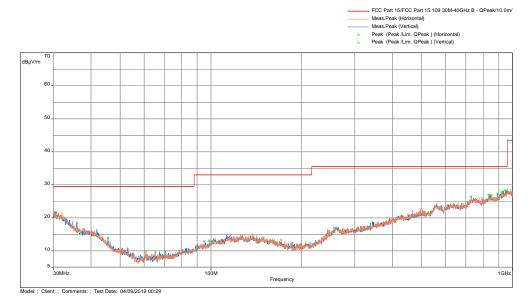


#### Radiated Emissions 1000 - 5000 MHz, Peak Scan vs Avg Limit





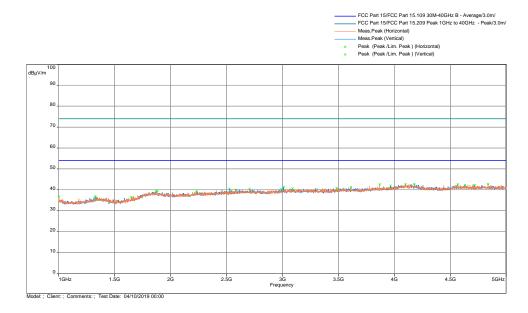
#### 15.109 Radiated Emissions 30 MHz – 1 GHz, Class B K1403-02



Frequency (MHz)	QPeak@10m dB(μV/m)	Lim. QPeak dB(µV/m)	Margin (dB)	Angle (°)	Height (m)	Antenna Polarization	Correction (dB)
30.226	21.78	29.5	-7.72	1.98	56.25	Horizontal polarization	-10.86
30.679	21.72	29.5	-7.78	3	308.25	Vertical polarization	-11.17
919.102	27.83	35.5	-7.67	1.98	0.5	Horizontal polarization	-0.33
932.488	28.02	35.5	-7.48	1	358.75	Vertical polarization	0.15
945.809	28.35	35.5	-7.15	3	63.75	Vertical polarization	0.41
959.551	28.24	35.5	-7.26	3	299.5	Vertical polarization	0.69

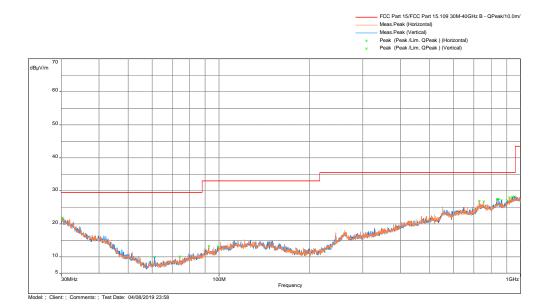


#### Radiated Emissions 1000 - 5000 MHz, Peak Scan vs Avg Limit





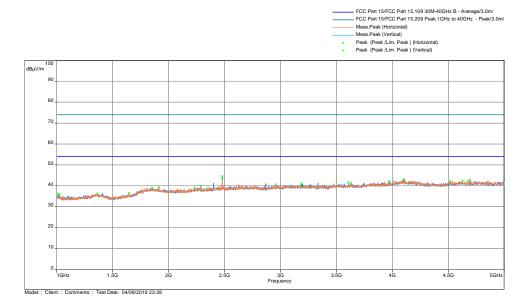
#### 15.109 Radiated Emissions 30 MHz – 1 GHz, Class B K8635-01



Frequency (MHz)	QPeak@10m dB(μV/m)	Lim. QPeak dB(µV/m)	Margin (dB)	Angle (°)	Height (m)	Antenna Polarization	Correction (dB)
30.259	21.81	29.5	-7.69	3.02	349.75	Horizontal polarization	-10.88
918.132	27.96	35.5	-7.54	1.02	14.75	Horizontal polarization	-0.35
935.592	27.78	35.5	-7.72	1.02	262.75	Horizontal polarization	0.31
940.086	28.14	35.5	-7.36	4	196	Vertical polarization	0.4
944.516	27.91	35.5	-7.59	3.02	199.5	Horizontal polarization	0.41
954.927	28.26	35.5	-7.24	4	299.5	Vertical polarization	0.64



#### Radiated Emissions 1000 - 5000 MHz, Peak Scan vs Avg Limit



Results	Complies
Test date:	April 8-9, 2019



### 4.3.5 Test Configuration Photographs

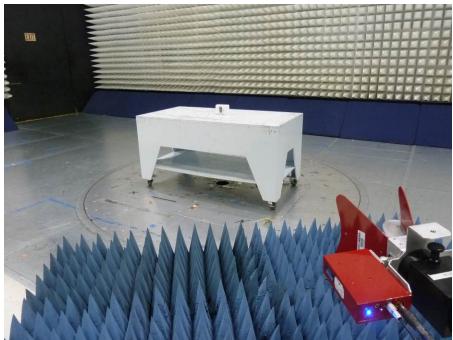
The following photographs show the testing configurations used.













# 4.4 AC Line Conducted Emission FCC Rule 15.107/15.207

#### 4.4.1 Requirement

Frequency Band	Class B Lin	nit dB(µV)	Class A Li	mit dB(μV)
MHz	Quasi-Peak	Average	Quasi-Peak	Average
0.15-0.50	66 to 56 *	56 to 46 *	79	66
0.50-5.00	56	46	73	60
5.00-30.00	60	50	73	60

Note: \*Decreases linearly with the logarithm of the frequency. At the transition frequency the lower limit applies.

#### 4.4.2 Procedure

Measurements are carried out using quasi-peak and average detector receivers in accordance with CISPR 16. An AMN is required to provide a defined impedance at high frequencies across the power feed at the point of measurement of terminal voltage and also to provide isolation of the circuit under test from the ambient noise on the power lines. An AMN as defined in CISPR 16 shall be used.

The EUT is located so that the distance between the boundary of the EUT and the closest surface of the AMN is 0.8m.

Where a flexible mains cord is provided by the manufacturer, this shall be 1m long or if in excess of 1m, the excess cable is folded back and forth as far as possible so as to form a bundle not exceeding 0.4m in length.

The EUT is arranged and connected with cables terminated in accordance with the product specification.

Conducted disturbance is measured between the phase lead and the reference ground, and between the neutral lead and the reference ground. Both measured values are reported.

The EUT, where intended for tabletop use, is placed on a table whose top is 0.8m above the ground plane. A vertical, metal reference plane is placed 0.4m from the EUT. The vertical metal reference-plane is at least 2m by 2m. The EUT shall be kept at least 0.8m from any other metal surface or other ground plane not being part of the EUT. The table is constructed of non-conductive materials. Its dimensions are 1m by 1.5m but may be extended for larger EUT.

Floor standing EUT are placed on a horizontal metal ground plane and isolated from the ground plane by resting on an insulating material. The metal ground plane extends at least 0.5m beyond the boundaries of the EUT and has minimum dimensions of 2m by 2m.

EUT was placed in transmission mode then tested for conducted emissions per 15.207 and 15.107.



#### 4.4.3 Test Result

This test is not applicable as the equipment under test is battery powered.

EMC Report for Acuity Brands Lighting Inc. on the Ceiling Fan Remote File: 103866135MPK-001



#### 5.0 List of test equipment

Measurement equipment used for emission compliance testing utilized the equipment on the following list:

1 1	1 1			<u> </u>		
Equipment	Manufacturer	Model/Type	Serial No.	Calibration Interval	Cal Due	
EMI Receiver	Rohde and Schwarz	ESR	ITS 01607	12	10/24/19	
EMI Receiver	Rohde and Schwarz	ESU40	ITS 00961	12	10/26/19	
BI-Log Antenna	Teseq	CBL 6111D	ITS 01058	12	09/20/19	
Pre-Amplifier	Com-Power	PAM-103	ITS 01645	12	03/06/20	
Active Horn Antenna	ETS Lindgren	3117-PA	ITS 01636	12	01/17/20	

Software used for emission compliance testing utilized the following:

Name	Manufacturer	Version	Template/Profile
BAT-EMC	BAT-EMC Nexio		Hunter_4-8-2019



# 6.0 Document History

Revision/ Job Number	Writer Initials	Reviewer Initials	Date	Change
1.0 / G103866135	AC	KV	May 24, 2019	Original document

# **END OF REPORT**