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FCC Part 15, Subpart C, Section 15.249
Test Report

On

Wireless Flash / Camera Trigger
FCC ID: 2AWL4-R1

Customer Name:	Smart Team LLC
Customer P.O:	1010
Date of Report:	March 24, 2021
Test Report No:	R-6563H-3
Test Start Date:	January 5, 2021
Test Finish Date:	January 14, 2021
Test Technician:	M. Seamans
Test Engineer:	T. Hannemann
Approved By:	T. Hannemann
Report Prepared By:	P. Harris

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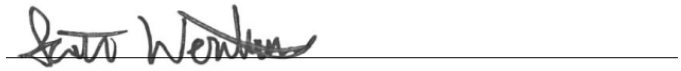
List of Tables

Certification and Signatures

We certify that this report is a true representation of the results obtained from the tests of the equipment stated. We further certify that the measurements shown in this report were made in accordance with the procedures indicated and vouch for the qualifications of all Retlif Testing Laboratories personnel taking them.

Todd Hannemann
EMC Test Engineer
iNARTE Certified Technician ATL-0255-T



Scott Wentworth
Branch Manager

Non-Warranty Provision
The testing services have been performed, findings obtained and reports prepared in accordance with generally accepted laboratory principles and practices. This warranty is in lieu of all others, either expressed or implied.

Non-Endorsement
This test report contains only findings and results arrived at after employing the specific test procedures and standards listed herein. It is not intended to constitute a recommendation, endorsement or certification of the product or material tested. This report must not be used by the client to claim product endorsement by ANSI National Accreditation Board (ANAB).

Revision History

Revisions to this document are listed below; the latest revised document supersedes all previous issues of this document.

Revision	Date	Pages Affected
-	March 24, 2021	Original Release

Technical Information

Report Number:	R-6563H-3
Customer:	Smart Team LLC
Address:	43 Golf Course Road
	South Burlington, VT 05403
Manufacturer:	Smart Team LLC
Manufacturer Address:	43 Golf Course Road
	South Burlington, VT 05403
Test Sample:	Wireless Flash / Camera Trigger
Model:	Raven
FCC ID:	2AWL4-R1
Antenna Type:	PCB Meandering F antenna, typical Gain 1.6 dBi
Power Requirements:	Internal battery powered charged via 120 VAC, 60 Hz
Frequency of Operation:	2403 MHz to 2479 MHz
Equipment Use:	Used in remote flash activation

Test Specification:
FCC Rules and Regulations Part 15, Subpart C, Section 15.249

Test Procedure:
ANSI C63.10:2013

Test Site:
ANSI C63.4:2014

Test Facility:
Retlif Testing Laboratories
101 New Boston Road
Goffstown, NH 03045

FCC Accreditation Designation Number: US2320

Tests Performed

The test methods performed on the Wireless Flash / Camera Trigger are shown below:

FCC Part 15, Subpart C	Test Method
15.249(a)	Field Strength of Emissions – Fundamental Field Strength
15.249(a)	Field Strength of Harmonics
15.249(d) / 15.209	Field Strength of Spurious Emissions
15.207(a)	Conducted Emissions
15.35	Duty Cycle

All test methods listed above are included in Retlif Testing Laboratories ANSI National Accreditation Board (ANAB), ISO/IEC 17025 Scope of Accreditation.

EUT Operation and Description

The Wireless Flash / Camera Trigger provides a means of communication with a flash or camera without a physical connectors. The EUT communicates / operates in the 340 to 350 MHz and 2404 MHz to 2479 MHz frequency bands. In its intended operation it is mounted and connected to a DSLR camera or remote flash unit and operates on an internal battery and is used in a variety of locations.

During the performance of all testing specified herein, the EUT was:

- Continuously Transmitting at Low, Mid and High frequencies while mounted / connected to a camera
- Standby (receive) while mounted\connected to a camera
- Transmitting while charging internal battery (Conducted emissions)

Table 1 - Electrical Characteristics (while charging)

EUT Component	Input Voltage	Frequency	Current	Phase
EUT	120 VAC	60 Hz	1.0 A	Single

Table 2 - Support Equipment

Description	Manufacturer	Model Number	Serial Number
Representative AC Adapter	Apple	A1265	N/A
DSLR Camera	Nikon	D3008	3041089

General Test Requirements

1. The measurement procedures of ANSI C63.10:2013 were utilized as specified in FCC Part 15, Subpart C, Section 15.31(a)(3).
2. All radiated emissions measurements were performed on an Open Area Test Site (OATS), listed with the FCC.
3. All measurements were performed at the specified 3 meter test distance.
4. The EUT was rotated throughout 360 degrees for all radiated emissions measurements.
5. All readily accessible EUT controls were adjusted in such a manner as to maximize the level of emissions.
6. Appropriate accessories were attached to all EUT ports during the performance of radiated emissions measurements.
7. The EUT operated from 2403 to 2479 MHz, testing was performed at low mid and high frequencies with in the band.
8. The frequency spectrum was investigated from the lowest frequency generated in the device up to the 10^{th} harmonic of the highest fundamental frequency.
9. All measurements were taken with a peak detector function.

Requirements and Test Results

Requirement:
FCC Section 15.249(a) and (d) - Operation within the bands 902 - 928 MHz, 2400 - 2483.5 MHz, 5725 - 5875 MHz and 24.0 - 24.25 GHz

This section provides standards for low-power devices that can be used for any application provided the following condition is met:

FCC Section 15.249(a): Except as provided in paragraph (b) of this section, the field strength of emissions from intentional radiators operated within these frequency bands shall comply with Table 3.

Table 3 - Field Strength of Emissions

Fundamental Frequency	Field Strength - Fundamental (millivolts/meter)	Field Strength - Harmonics (microvolts/meter)
902 to 928 MHz	50	500
2400 to 2483.5 MHz	50	500
5725 to 5875	50	500
24.0 to 24.25 GHz	250	2500

- Results:
  The EUT was operated at 2413 MHz, 2439 MHz and 2464.5 MHz. The field strength of the fundamental did not exceed 50 mV/m peak. The field strength of the harmonics did not exceed 500 µV/m peak.

FCC Section 15.249(d): Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in Section 15.209, whichever is the lesser attenuation.

- Results:
  Emissions radiated at the Band Edges and outside the specified frequency band were attenuated in accordance with the general radiated emissions limits of 15.209.

FCC Section 15.35(b)(2) - Duty Cycle Determination-Pulsed Operation
Intentional radiators operating under the provisions of the Section shall demonstrate compliance with the limits on the field strength emissions, as shown in Table 3, based on the average value of the measured emissions. As an alternative, compliance with the limits in the Table 3 may be based on the use of measurement instrumentation with a CISPR quasi-peak detector. The specific method of measurement employed shall be specified int eh application for equipment authorization. If average emission measurements are employed, the provisions in Section 15.35 for averaging pulsed emissions and for limiting peak emissions apply. Further, compliance with the provisions of Section 15.205 shall be demonstrated using the measurement instrumentation specified in that Section.

Requirement:
FCC Section 15.207(a) - Conducted Limits
For an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits shown in Table 4, as measured using a 50 µH/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of the paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applied at the boundary between the frequency ranges.

Except when the requirements applicable to a given device state otherwise, for any license-exempt radio communication device equipped to operate from the public utility AC power supply, either directly or indirectly, the radio frequency voltage that is conducted back onto the AC power lines in the frequency range of 0.15 MHz to 30 MHz shall not exceed the limits shown in Table 4. The tighter limit applies at the frequency range boundaries.

The conducted emissions shall be measured with a 50 ohm/50 microhenry line impedance stabilization network.

Table 4 - Conducted Emission Limits

Frequency of Emission (MHz)	**Conducted Limit (dBµV)**	
	Quasi-Peak	Average
0.15 to 0.5	66 to 56*	56 to 46*
0.5 to 5	56	46
5 to 30	60	50
*Decreases due to logarithm of the frequency		

- Results:
  The conducted emissions observed did not exceed the limits specified in Table 4.

General Requirements FCC

RF Exposure Limits

Transmitters operating under 15.249 must be operated in a manner that ensures the public is not exposed to RF energy levels in access of the commission's guidelines. Based on the transmitter power and maximum antenna gain (see calculation below) the minimum separation distance was calculated to determine the distance for acceptable MPE power density levels to meet both the Occupational/Controlled Exposure and the General Population/Uncontrolled Exposure requirements of FCC Part 1.1310. The calculation below uses the more stringent General Population MPE Limits.

Field strength to power calculations from ANSI C63.10

E= Measured Electric Field Strength = 110.72 dBuV/M *
d = Radiated test Measurement Distance = 3 Meters

EIRP Log = E + 20log(d) -104.7
EIRP Log= 110.72+ 20log(3) -104.7
EIRP Log = 15.56 dBm
EIRP Linear = 0.035995 W

Gain = Max Power Gain of Antenna = 1.6 dBi = 1.45 Numeric
Power = EIRP Linear / Gain Numeric
Power = 0.035995/1.45
Power = Max Power Input to Antenna = 0.02mW
D = Minimum Separation Distance in cm
S = Max allowed Power Density in mW/cmsq

Per 1.1310 For the Frequency of 2400 MHz S = 1 mW/cmsq

$$1\ \text{mW/cmsq} = \frac{0.0249 \times 1.45}{4 \times (3.14) \times D^2} = \frac{0.036105}{12.56 \times D^2}$$

$$D^2 = \frac{0.036105}{12.56 \times 1}$$

$$D = \sqrt{0.002875} = 0.054\ \text{cm}$$

* Field strength used is the maximum measured peak value

The test sample has an internal antenna and the minimum separation distance will always be maintained.

Equipment Lists

FCC Section 15.249(a) - Field Strength of Emissions

EN	Manufacturer	Description	Range	Model No.	Cal Date	Due Date
1232	AGILENT / HP	PRE-AMPLIFIER	1 - 26.5 GHz	8449B	5/8/2020	5/31/2021
3258	ETS / EMCO	ANTENNA, DOUBLE RIDGED GUIDE	1 - 18 GHz	3115	12/2/2019	6/30/2021
4029B	RETLIF	OPEN AREA TEST SITE, ATTENUATION	3 / 10 Meters	RNH	9/30/2019	9/30/2021
5070	ROHDE & SCHWARZ	RECEIVER, EMI	20 Hz - 40 GHz	ESIB40	1/23/2020	1/31/2021
5134	NARDA MICROWAVE	ATTENUATOR, COAXIAL	10 dB, DC - 12.4 GHz, 2 W	757C-10	12/8/2020	12/31/2021
5179B	MICRO-COAX	CABLE, COAXIAL	10 kHz - 18 GHz	UFB311A-1-036050U50U	11/17/2020	11/30/2021

FCC Section 15.249(a) - Field Strength of Harmonics

EN	Manufacturer	Description	Range	Model No.	Cal Date	Due Date
1232	AGILENT / HP	PRE-AMPLIFIER	1 - 26.5 GHz	8449B	5/8/2020	5/31/2021
3258	ETS / EMCO	ANTENNA, DOUBLE RIDGED GUIDE	1 - 18 GHz	3115	12/2/2019	6/30/2021
3430	MCS	ANTENNA, HORN	18 - 26.5 GHz	K-5039	No Calibration Required	
4029B	RETLIF	OPEN AREA TEST SITE, ATTENUATION	3 / 10 Meters	RNH	9/30/2019	9/30/2021
5070	ROHDE & SCHWARZ	RECEIVER, EMI	20 Hz - 40 GHz	ESIB40	1/23/2020	1/31/2021
5144	MINI-CIRCUITS	FILTER, HIGH PASS	3400 - 9900 MHz	VHF-3100+	10/23/2020	10/31/2021
5179B	MICRO-COAX	CABLE, COAXIAL	10 kHz - 18 GHz	UFB311A-1-036050U50U	11/17/2020	11/30/2021
5229	FLORIDA RS TECHNOLOGY	CABLE, COAXIAL	DC - 40 GHz	FLRST-2.92 (102ö)	10/21/2020	10/31/2021
5234	PASTERNACK	CABLE, COAXIAL	10 kHz - 18 GHz	PE302-230	8/10/2020	8/31/2021

FCC Section 15.249(d) - Field Strength of Spurious Emissions

EN	Manufacturer	Description	Range	Model No.	Cal Date	Due Date
1232	AGILENT / HP	PRE-AMPLIFIER	1 - 26.5 GHz	8449B	5/8/2020	5/31/2021
3427B	ETS / EMCO	ANTENNA, BICONICAL	20 - 200 MHz	3104	10/27/2020	4/30/2022
3430	MCS	ANTENNA, HORN	18 - 26.5 GHz	K-5039	No Calibration Required	
4029B	RETLIF	OPEN AREA TEST SITE, ATTENUATION	3 / 10 Meters	RNH	9/30/2019	9/30/2021
443	ELECTRO-METRICS	ANTENNA, LOG PERIODIC	200 MHz - 1000 MHz	LPA-25	12/13/2019	6/29/2021
5070	ROHDE & SCHWARZ	RECEIVER, EMI	20 Hz - 40 GHz	ESIB40	1/23/2020	1/31/2021
5144	MINI-CIRCUITS	FILTER, HIGH PASS	3400 - 9900 MHz	VHF-3100+	10/23/2020	10/31/2021
5179B	MICRO-COAX	CABLE, COAXIAL	10 kHz - 18 GHz	UFB311A-1-036050U50U	11/17/2020	11/30/2021
5188	Cybertron	COMPUTER, CONTROL	N/A	TSVQJA2221	No Calibration Required	
5229	FLORIDA RS TECHNOLOGY	CABLE, COAXIAL	DC - 40 GHz	FLRST-2.92 (102ö)	10/21/2020	10/31/2021
5234	PASTERNACK	CABLE, COAXIAL	10 kHz - 18 GHz	PE302-230	8/10/2020	8/31/2021
5242	TELEDYNE MICROWAVE	CABLE, COAXIAL	10 kHz - 6 GHz	PR90-195-1275, 106'	9/21/2020	9/30/2021

FCC Section 15.207(a) - Conducted Limits

EN	Manufacturer	Description	Range	Model No.	Cal Date	Due Date
5070	ROHDE & SCHWARZ	RECEIVER, EMI	20 Hz - 40 GHz	ESIB40	1/23/2020	1/31/2021
5133	NARDA MICROWAVE	ATTENUATOR, COAXIAL	10 dB, DC - 12.4 GHz, 2 W	757C-10	12/8/2020	12/31/2021
5188	Cybertron	COMPUTER, CONTROL	N/A	TSVQJA2221	No Calibration Required	
5209	SOLAR ELECTRONICS	LISN	50 uH, 150 kHz - 30	21106-50-BP-25-BNC	5/26/2020	5/31/2021
5210	SOLAR ELECTRONICS	LISN	50 uH, 150 kHz - 30	21106-50-BP-25-BNC	5/26/2020	5/31/2021
5218	COM-POWER	GENERATOR, COMB	100 kHz - 400 MHz	CGC-510E	8/24/2020	8/31/2021
7044	OMEGA	HYGROMETER	-20 to 70 deg. C, 0 to 99% RH	OM-73	8/21/2020	8/31/2021

FCC Part 15.35 - Duty Cycle Determination

EN	Manufacturer	Description	Range	Model No.	Cal Date	Due Date
1232	AGILENT / HP	PRE-AMPLIFIER	1 - 26.5 GHz	8449B	5/8/2020	5/31/2021
3258	ETS / EMCO	ANTENNA, DOUBLE RIDGED GUIDE	1 - 18 GHz	3115	12/2/2019	6/30/2021
4029B	RETLIF	OPEN AREA TEST SITE, ATTENUATION	3 / 10 Meters	RNH	9/30/2019	9/30/2021
5070	ROHDE & SCHWARZ	RECEIVER, EMI	20 Hz - 40 GHz	ESIB40	1/23/2020	1/31/2021
5134	NARDA MICROWAVE	ATTENUATOR, COAXIAL	10 dB, DC - 12.4 GHz, 2 W	757C-10	12/8/2020	12/31/2021
5179B	MICRO-COAX	CABLE, COAXIAL	10 kHz - 18 GHz	UFB311A-1-036050U50U	11/17/2020	11/30/2021

Test Data

FCC Section 15.249(a) - Field Strength of Emissions
Test Data

EMISSIONS TEST DATA SHEET	
Method:	**Field Strength of Emissions - Fundamental Field Strength**
Test Specification:	FCC Part 15, Subpart C Paragraph: 15.249(a)
Job Number:	R-6563H-3
Customer:	Smart Team LLC
Test Sample:	Wireless Flash/Camera Trigger
Model Number:	Raven
Serial Number:	001
Operating Mode:	Transmitting Profoto Protocol
Technician:	M. Seamans
Date(s):	January 11th, 2021
Notes:	Test Distance: 3 meters Detector: Peak Resolution BW: 1 MHz

TEST PARAMETERS								
Frequency	**Axis/ Antenna Position**	**Measured level**	**Correction Factor**	**Corrected Peak Reading**	**Duty Cycle Factor**	**Average Reading**	**Converted Average Reading**	**Average Limit at 3m**
MHz	**(X/Y/X) (H/V)**	**dBuV**	**dB**	**dBuV/m**	**dB**	**dBuV/m**	**mV/m**	**mV/m**
2403.00	X/H	106.98	2.34	109.32	-48.18	61.14	1.14	50
2447.00	Y/V	106.90	2.54	109.44	-48.18	61.26	1.16	50
2479.00	X/H	107.72	2.68	110.40	-48.18	62.26	1.30	50

TEST PARAMETERS								
Frequency	**Antenna Position**	**Measured level**	**Correction Factor**	**Corrected Peak Reading**			**Converted Peak Reading**	**Peak Limit at 3m**
MHz	**H/V**	**dBuV**	**dB**	**dBuV/m**			**mV/m**	**mV/m**
2403.00	X/H	106.98	2.34	109.32			292.42	500
2447.00	Y/V	106.90	2.54	109.44			296.48	500
2479.00	X/H	107.72	2.68	110.40			331.13	500
Peak Limit is 20dB higher than the Average limit.								

EMISSIONS TEST DATA SHEET	
Method:	**Field Strength of Emissions - Fundamental Field Strength**
Test Specification:	FCC Part 15, Subpart C Paragraph: 15.249(a)
Job Number:	R-6563H-3
Customer:	Smart Team LLC
Test Sample:	Wireless Flash/Camera Trigger
Model Number:	Raven
Serial Number:	001
Operating Mode:	Transmitting Godox Protocol
Technician:	M. Seamans
Date(s):	January 11th, 2021
Notes:	Test Distance: 3 meters Detector: Peak Resolution BW: 1 MHz

TEST PARAMETERS								
Frequency	**Axis/ Antenna Position**	**Measured level**	**Correction Factor**	**Corrected Peak Reading**	**Duty Cycle Factor**	**Average Reading**	**Converted Average Reading**	**Average Limit at 3m**
MHz	**(X/Y/X) (H/V)**	**dBuV**	**dB**	**dBuV/m**	**dB**	**dBuV/m**	**mV/m**	**mV/m**
2413.00	Y/H	105.99	2.38	108.37	-48.18	60.19	1.06	50
2439.00	Y/V	105.99	2.50	108.49	-48.18	60.31	1.04	50
2464.50	X/H	108.11	2.61	110.72	-48.18	52.54	1.29	50

TEST PARAMETERS								
Frequency	**Antenna Position**	**Measured level**	**Correction Factor**	**Corrected Peak Reading**			**Converted Peak Reading**	**Peak Limit at 3m**
MHz	**H/V**	**dBuV**	**dB**	**dBuV/m**			**mV/m**	**mV/m**
2413.00	Y/H	105.99	2.38	108.37			262.12	500
2439.00	Y/V	105.99	2.50	108.49			265.77	500
2464.50	X/H	108.11	2.61	110.72			343.56	500
Peak Limit is 20dB higher than the Average limit.								

FCC Section 15.249(a) - Field Strength of Harmonics
Test Data

EMISSIONS TEST DATA SHEET	
Method:	**Field Strength of Emissions – Harmonics**
Test Specification:	FCC Part 15, Subpart C Paragraph: 15.249(a)
Job Number:	R-6563H-3
Customer:	Smart Team LLC
Test Sample:	Wireless Flash/Camera Trigger
Model Number:	Raven
Serial Number:	001
Operating Mode:	Transmitting Godox Protocol
Technician:	M. Seamans
Date(s):	January 12th, 2021
Notes:	Test Distance: 3 meters Detector: Peak and Average (Ambient Emissions Only)

TEST PARAMETERS

Test Frequency	Antenna Position	EUT Orientation	Peak Reading	Duty Cycle Correction	Corrected Reading		Converted Reading	Average Limit at 3M
MHz	(H/V)	X/Y/Z	dBuV	dB	dBuV/m		uV/m	uV/m
1000.00	-	-	-	-	-		-	500.00
|	-	-	-	-	-		-	|
|	-	-	-	-	-		-	|
4929.00	H	X	61.71	-48.18	13.53		4.75	|
7393.50*	H	X	41.18	-	41.18		114.55	|
9858.00*	H	X	44.32	-	44.32		164.44	|
12322.50*	H	X	47.88	-	47.88		247.75	|
14787.00*	H	X	50.83	-	50.83		347.94	|
17251.50*	H	X	51.69	-	51.69		384.15	|
19716.00*	H	X	29.51	-	29.51		29.89	|
22180.50*	H	X	30.60	-	30.60		33.88	|
24645.00*	H	X	31.42	-	31.42		37.24	|
|	-	-	-	-	-		-	|
|	-	-	-	-	-		-	|
25000.00	-	-	-	-	-		-	500.00

EUT emissions observed throughout the given frequency spectrum were recorded and evaluated. *This emission is not from the EUT. It is a measurement of minimum measurement system sensitivity (Noise Floor).

EMISSIONS TEST DATA SHEET	
Method:	**Field Strength of Emissions – Harmonics**
Test Specification:	FCC Part 15, Subpart C Paragraph: 15.249(a)
Job Number:	R-6563H-3
Customer:	Smart Team LLC
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Model Number:	Raven
Serial Number:	001
Operating Mode:	Transmitting Godox Protocol
Technician:	M. Seamans
Date(s):	January 12th, 2021
Notes:	Test Distance: 3 meters Detector: Peak

TEST PARAMETERS

Test Frequency	Antenna Position	EUT Orientation	Peak Reading	Correction Factor	Corrected Reading		Converted Reading	Average Limit at 3M
MHz	**(H/V)**	**X/Y/Z**	**dBuV**	dB	**dBuV/m**		**uV/m**	**uV/m**
1000.00	-	-	-	-	-		-	5000.00
|	-	-	-	-	-		-	|
|	-	-	-	-	-		-	|
4929.00	H	X	58.19	3.52	61.71		1217.59	|
7393.50*	H	X	45.32	7.62	52.44		418.79	|
9858.00*	H	X	47.34	10.21	57.55		754.22	|
12322.50*	H	X	47.16	14.02	61.18		1145.51	|
14787.00*	H	X	47.63	16.97	64.29		1638.70	|
17251.50*	H	X	47.32	18.50	65.82		1954.34	|
19716.00*	H	X	47.13	-4.34	42.79		137.88	|
22180.50*	H	X	47.25	-4.10	43.15		143.71	|
24645.00*	H	X	47.19	-3.20	43.99		158.31	|
|	-	-	-	-	-		-	|
|	-	-	-	-	-		-	|
25000.00	-	-	-	-	-		-	5000.00

EUT emissions observed throughout the given frequency spectrum were recorded and evaluated. *This emission is not from the EUT. It is a measurement of minimum measurement system sensitivity (Noise Floor).

EMISSIONS TEST DATA SHEET	
Method:	**Field Strength of Emissions – Harmonics**
Test Specification:	FCC Part 15, Subpart C Paragraph: 15.249(a)
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Model Number:	Raven
Serial Number:	001
Operating Mode:	Transmitting Profoto Protocol
Technician:	M. Seamans
Date(s):	January 12th, 2021
Notes:	Test Distance: 3 meters Detector: Peak and Average (Ambient Emissions Only)

TEST PARAMETERS

Test Frequency	Antenna Position	EUT Orientation	Peak Reading	Duty Cycle Correction	Corrected Reading		Converted Reading	Average Limit at 3M
MHz	(H/V)	X/Y/Z	dBuV	dB	dBuV/m		uV/m	uV/m
1000.00	-	-	-	-	-		-	500.00
|	-	-	-	-	-		-	|
|	-	-	-	-	-		-	|
4958.00	H	X	61.70	-48.18	13.52		4.74	|
7393.50*	H	X	41.18	-	41.18		114.55	|
9858.00*	H	X	44.32	-	44.32		164.44	|
12322.50*	H	X	47.88	-	47.88		247.75	|
14787.00*	H	X	50.83	-	50.83		347.94	|
17251.50*	H	X	51.69	-	51.69		384.15	|
19716.00*	H	X	29.51	-	29.51		29.89	|
22180.50*	H	X	30.60	-	30.60		33.88	|
24645.00*	H	X	31.42	-	31.42		37.24	|
|	-	-	-	-	-		-	|
|	-	-	-	-	-		-	|
25000.00	-	-	-	-	-		-	500.00

EUT emissions observed throughout the given frequency spectrum were recorded and evaluated. *This emission is not from the EUT. It is a measurement of minimum measurement system sensitivity (Noise Floor).

EMISSIONS TEST DATA SHEET	
Method:	**Field Strength of Emissions – Harmonics**
Test Specification:	FCC Part 15, Subpart C Paragraph: 15.249(a)
Job Number:	R-6563H-3
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Model Number:	Raven
Serial Number:	001
Operating Mode:	Transmitting Profoto Protocol
Technician:	M. Seamans
Date(s):	January 12th, 2021
Notes:	Test Distance: 3 meters Detector: Peak

TEST PARAMETERS

Test Frequency	Antenna Position	EUT Orientation	Peak Reading	Correction Factor	Corrected Reading		Converted Reading	Average Limit at 3M
MHz	(H/V)	X/Y/Z	dBuV	dB	dBuV/m		uV/m	uV/m
1000.00	-	-	-	-	-		-	5000.00
|	-	-	-	-	-		-	|
|	-	-	-	-	-		-	|
4929.00	H	X	58.13	3.57	61.70		1216.19	|
7393.50*	H	X	45.32	7.62	52.44		418.79	|
9858.00*	H	X	47.34	10.21	57.55		754.22	|
12322.50*	H	X	47.16	14.02	61.18		1145.51	|
14787.00*	H	X	47.63	16.97	64.29		1638.70	|
17251.50*	H	X	47.32	18.50	65.82		1954.34	|
19716.00*	H	X	47.13	-4.34	42.79		137.88	|
22180.50*	H	X	47.25	-4.10	43.15		143.71	|
24645.00*	H	X	47.19	-3.20	43.99		158.31	|
|	-	-	-	-	-		-	|
|	-	-	-	-	-		-	|
25000.00	-	-	-	-	-		-	5000.00

EUT emissions observed throughout the given frequency spectrum were recorded and evaluated. *This emission is not from the EUT. It is a measurement of minimum measurement system sensitivity (Noise Floor).

FCC Section 15.249(d) - Field Strength of Spurious Emissions
Test Data

EMISSIONS TEST DATA SHEET	
Method:	**Spurious (Restricted Bands) 30 MHz to 25 GHz**
Test Specification:	FCC Part 15, Subpart C Paragraph: 15.249(d)/205/209
Job Number:	R-6563H-3
Customer:	Smart Team LLC
Test Sample:	Wireless Flash/Camera Trigger
Model Number:	Raven
Serial Number:	001
Operating Mode:	Transmitting
Technician:	M. Seamans
Date(s):	January 12th, 2021
Notes:	Test Distance: 3 meters Detector: Quasi-Peak

TEST PARAMETERS

Frequency	Antenna Position	EUT Orientation	Meter Reading	Correction Factor	Corrected Reading		Converted Reading	Limit at 3M
MHz	(H/V) / Height	Degrees	dBuV	dB	dBuV/m		uV/m	uV/m
30.00	-	-	-	-	-		-	100
|	-	-	-	-	-		-	|
35.00*	H-1m	0.0	11.80	12.10	23.90		15.67	|
|	-	-	-	-	-		-	|
88.00	-	-	-	-	-		-	100
88.00	-	-	-	-	-		-	150
|	-	-	-	-	-		-	|
110.00*	H-1m	0.0	7.40	14.30	21.70		12.16	|
130.00*	V-1m	0.0	6.99	15.11	22.10		12.74	|
195.00*	H-1m	0.0	8.69	16.62	25.30		18.41	|
|	-	-	-	-	-		-	|
216.00	-	-	-	-	-		-	150
216.00	-	-	-	-	-		-	200
|	-	-	-	-	-		-	|
600.00*	H-1m	0.0	8.77	23.33	32.10		40.27	|
|	-	-	-	-	-		-	|
960.00	-	-	-	-	-		-	200
960.00	-	-	-	-	-		-	500
|	-	-	-	-	-		-	|
995.00*	H-1m	0.0	8.85	30.35	39.20		91.20	|
|	-	-	-	-	-		-	|
25000.00	-	-	-	-	-		-	500

No EUT emissions were observed throughout the given frequency spectrum. * This emission is not from the EUT. It is a measurement of minimum measurement system sensitivity (Noise Floor).

FCC Section 15.207(a) - Conducted Limits
Test Data

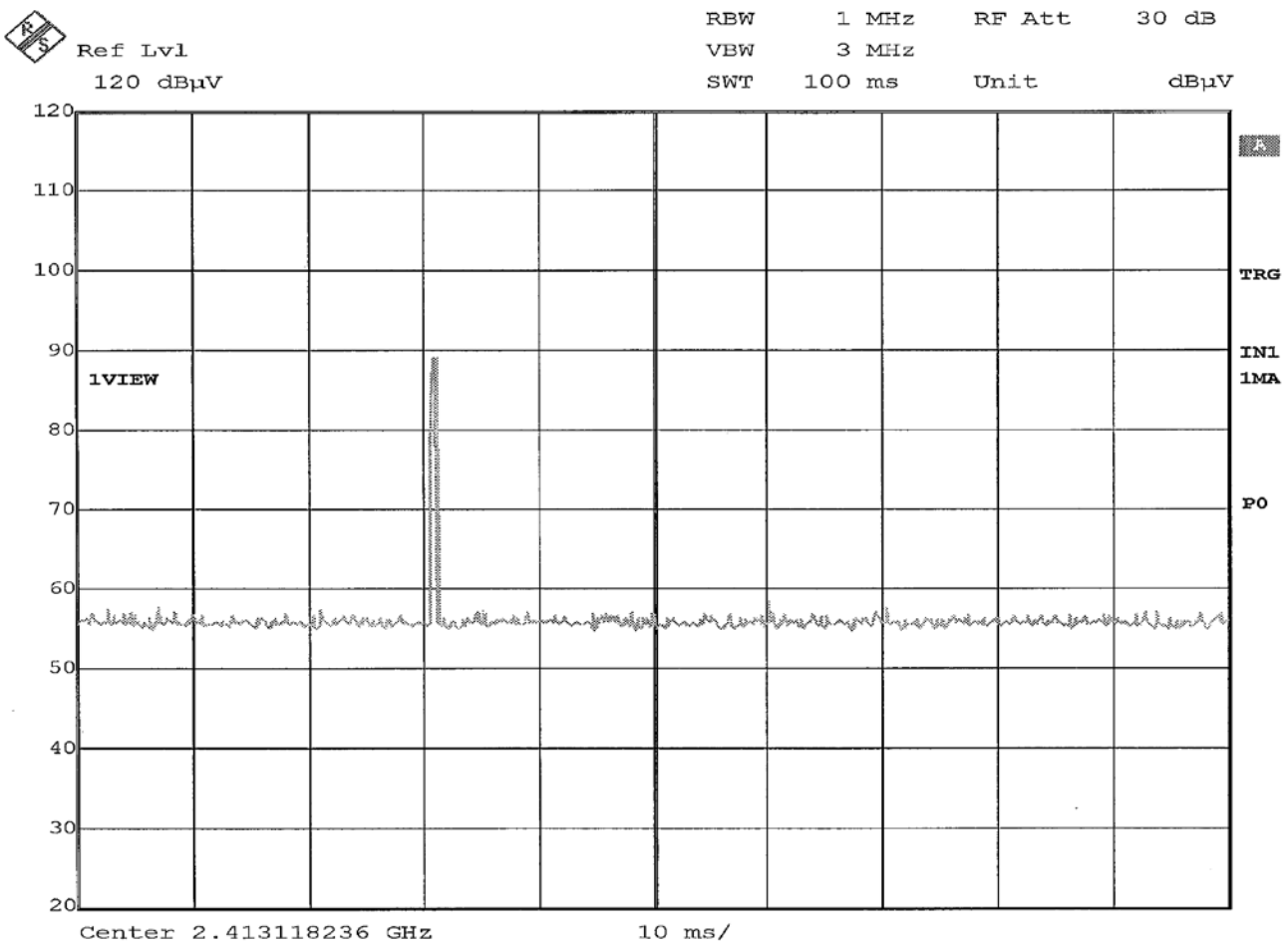
EMISSIONS TEST DATA SHEET	
Test Specification:	FCC Part 15, Subpart B, Section 15.207(a), Conducted Emissions, Class B
Method:	ANSI C63.4, Section 7., AC power-line conducted emission measurements
Job Number/Customer:	R-6563H-3 / Smart Team LLC
Test Sample:	Wireless Flash/Camera Trigger
Model Number:	Raven
Part Number:	N/A
Serial Number:	001
Operating Mode:	Transmitting, charging battery
Technician:	M. Seamans
Date(s):	January 14th, 2021
Temperature:	20.8 ºC
Relative Humidity:	25.9 %
Port Tested:	120 VAC, 60 Hz

Frequency	Lead Tested	Peak Meter Reading	Quasi-Peak Meter Reading	Average Meter Reading	Quasi-Peak Limit	Average Limit
MHz		**dBuV**	**dBuV**	**dBuV**	**dBuV**	**dBuV**
0.250	Hot	71.18	53.90	35.70	61.76	51.76
0.159	Neutral	59.87	41.60	17.60	65.52	55.52
0.370	Hot	63.23	43.70	25.40	58.50	48.50
0.252	Neutral	56.40	48.20	29.40	61.69	51.69
0.495	Hot	55.99	41.80	24.90	56.08	46.08
0.387	Neutral	48.56	39.90	24.30	58.13	48.13
0.620	Hot	51.58	37.50	21.90	56	46
0.536	Neutral	46.75	35.70	21.30	56	46
0.743	Hot	48.83	36.90	16.30	56	46
0.667	Neutral	42.25	34.10	20.10	56	46
0.876	Hot	47.45	39.20	20.70	56	46
1.067	Neutral	46.21	40.80	21.60	56	46

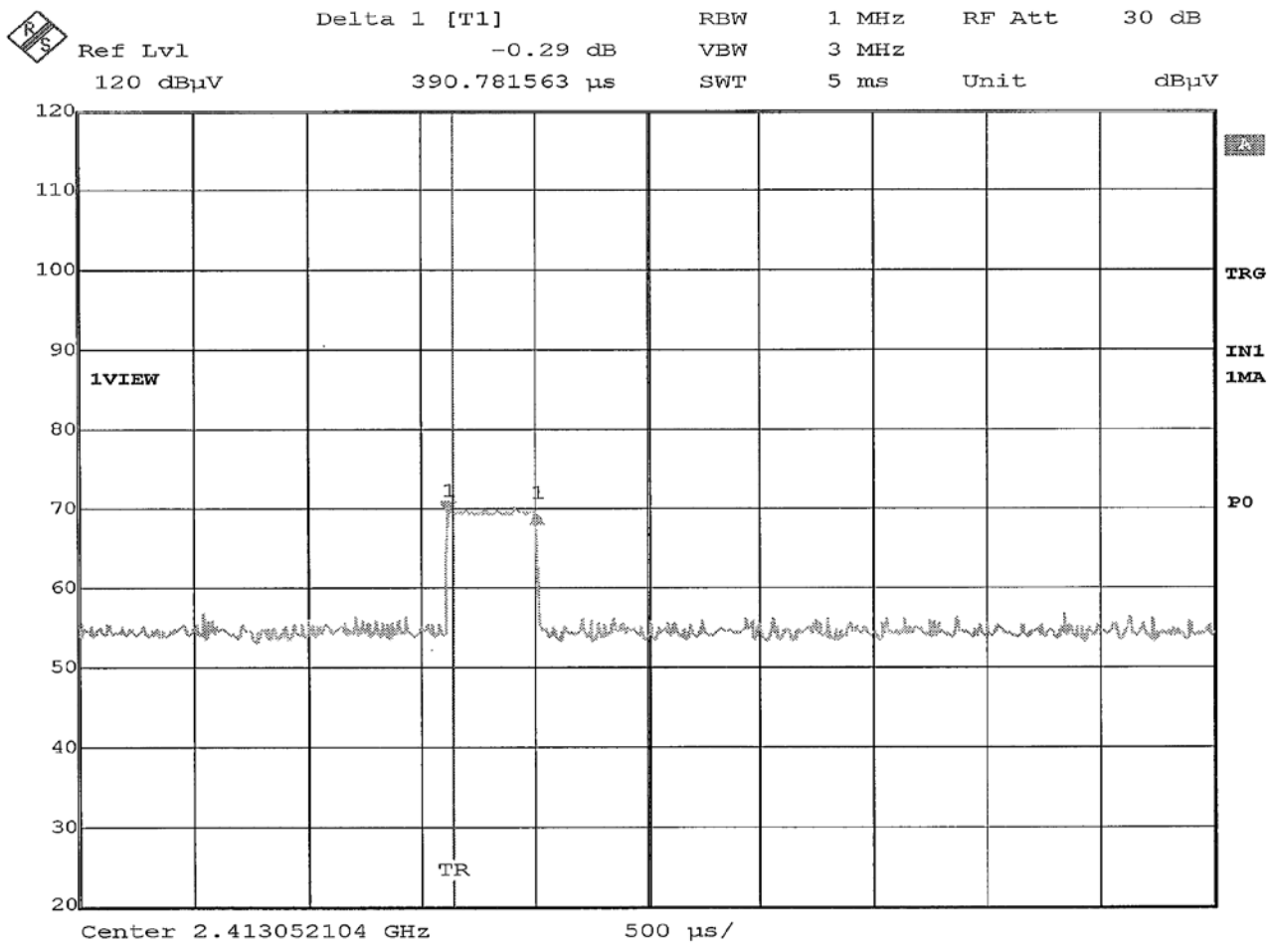
The frequency range was scanned from 0.15 MHz to 30 MHz.
The six highest emissions relative to the limit are presented.
The emissions observed from the EUT do not exceed the specified limits.

FCC Part 15.35 - Duty Cycle Determination

EMISSIONS TEST DATA SHEET	
Method:	**Duty Cycle Determination**
Test Specification:	FCC Part 15.35
Job Number:	R-6563H-3
Customer:	Smart Team LLC
Test Sample:	Wireless Flash/Camera Trigger
Model Number:	Raven
Serial Number:	001
Operating Mode:	Transmitting Profoto Protocol (worst case duty cycle)
Technician:	M. Seamans
Date(s):	January 11th, 2021
Notes:	One pulse in 100ms window



EMISSIONS TEST DATA SHEET	
Method:	**Duty Cycle Determination**
Test Specification:	FCC Part 15.35
Job Number:	R-6563H-3
Customer:	Smart Team LLC
Test Sample:	Wireless Flash/Camera Trigger
Model Number:	Raven
Serial Number:	001
Operating Mode:	Transmitting Profoto Protocol (worst case duty cycle)
Technician:	M. Seamans
Date(s):	January 11th, 2021
Notes:	Pulse width: 390.781 uS



EMISSIONS TEST DATA SHEET	
Method:	**Duty Cycle Determination**
Test Specification:	FCC Part 15.35
Job Number:	R-6563H-3
Customer:	Smart Team LLC
Test Sample:	Wireless Flash/Camera Trigger
Model Number:	Raven
Serial Number:	001
Operating Mode:	Transmitting Profoto Protocol (worst case duty cycle)
Technician:	M. Seamans
Date(s):	January 11th, 2021
Notes:	Duty Cycle Factor: -48.178 dB

TEST PARAMETERS				
Measured on time	**Measured time interval**	**Duty Cycle Factor Calculation**	**Result**	**Duty Cycle Factor**
msec	**msec**		**dB**	**dB**
0.390	100	= 20*Log_{10} (0.390 ms/ 100 ms)	-48.178	-48.178