



Nemko Test Report: 10247265_TRF_FCC15C

Applicant: Backcountry Access, Inc.
2820 Wilderness Place
Unit H
Boulder, CO 80301
USA

**Equipment Under Test:
(E.U.T.)** Tracker 3


FCC Identifier: OUNT3

Industry Canada Identifier: 3561A-T3

In Accordance With: **FCC Part 15, Subpart C, Paragraph 15.209 and
Industry Canada RSS-210, Issue 8**
General Limits For Low Power Transmitters

Tested By: Nemko USA Inc.
802 N. Kealy
Lewisville, TX 75057

TESTED BY: 
Arturo Ruvalcaba **DATE:** 20-August-2013

APPROVED BY: 
Tom Tidwell, Reviewer **DATE:** 4 Sept 2013

Total Number of Pages: 17

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Section 1. Summary Of Test Results

Manufacturer: Backcountry Access, Inc.

Model No.: Tracker 3

Serial No.: Nemko Sample# 00000472

General: **All measurements are traceable to national standards.**

These tests were conducted on a sample of the equipment for the purpose of demonstrating compliance with FCC Part 15, Subpart C and Industry Canada RSS-210, Issue 8 for low power devices. All tests were conducted using measurement procedure ANSI C63.4-2003. Radiated Emissions were made on an open area test site.

New Submission

Production Unit

Class II Permissive Change

Pre-Production Unit

THIS TEST REPORT RELATES ONLY TO THE ITEM(S) TESTED.

THE FOLLOWING DEVIATIONS FROM, ADDITIONS TO, OR EXCLUSIONS FROM THE TEST SPECIFICATIONS HAVE BEEN MADE.

See " Summary of Test Data".



This report must not be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government. Nemko USA, Inc. is a NVLAP accredited laboratory.

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This report applies only to the items tested.

Summary Of Test Data

NAME OF TEST	PARA. NO.	RESULT
Powerline Conducted Emissions	15.207 / RSS-Gen 7.2.4	NA
Radiated Emissions	15.209 / RSS-210 2.5	Complies
Occupied Bandwidth	Not Specified	Complies

Footnotes For N/A's:

The device is battery powered.

Section 2. General Equipment Specification

Frequency Range: 457 kHz

Operating Frequency(ies) of Sample: 457 kHz

Integral Antenna

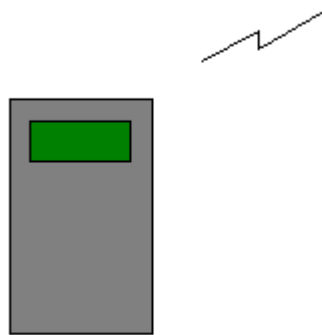
Yes

No

Description of EUT

457 kHz RFID used for locating persons when lost.

System Diagram



The system is a stand alone transmitter.

EQUIPMENT: Tracker 3

Section 3. Radiated Emissions

NAME OF TEST: Radiated Emissions	PARA. NO.: 15.209 / 2.5
TESTED BY: Arturo Ruvalcaba	DATE: 16 August 2013

Test Results: Complies.

Measurement Data: See attached table.

Notes:

- For handheld devices, the EUT was tested on three orthogonal axis'
- The device was tested on three channels per 15.31(l).
- No emissions were detected within 20 dB of the specification limit therefore none are reported per 15.31(o).

Equipment Used: 1733-1767-1783

Measurement Uncertainty: +/-3.6 dB

Temperature: 23 °C

Relative Humidity: 48 %

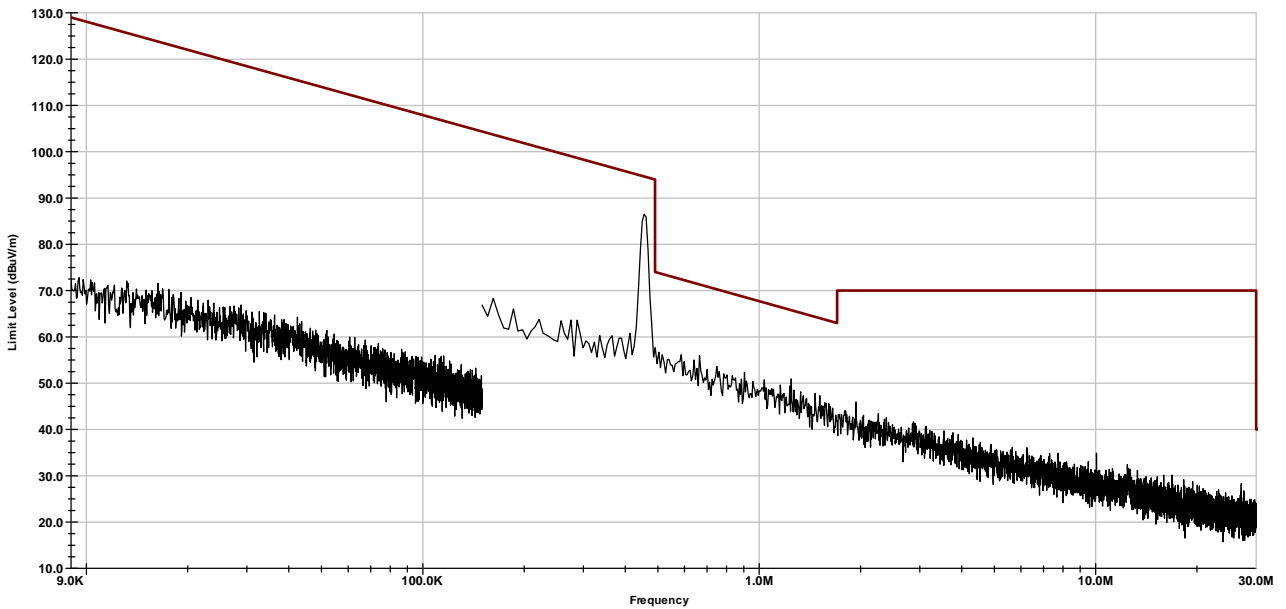
Spectrum analyzer settings:

RBW: 10 kHz
VBW: 30 kHz
Detector: Peak

The spectrum was searched up to 10 x the highest frequency generated in the device.

Test Data - Radiated Emissions

Meas. Freq. (MHz)	Ant. Pol.	Atten. (dB)	Meter Reading (dBuV)	Antenna Factor (dB)	Path Loss (dB)	RF Gain (dB)	Corrected Reading (dBuV/m)	Spec. limit (dBuV/m)	CR/SL Diff. (dB)	Pass Fail Unc.	Comment
0.457	Loop	0.0	68.9	18.0	0.1	0.0	87.0	94.4	-7.4	Pass	
0.9141	Loop	0.0	40.1	18.0	0.1	0.0	58.2	68.4	-10.2	Pass	
1.3711	Loop	0.0	29.8	18.3	0.1	0.0	48.2	65.3	-17.1	Pass	Noise Floor
1.8281	Loop	0.0	26.0	18.0	0.1	0.0	44.1	70.0	-25.9	Pass	Noise Floor
2.2852	Loop	0.0	25.6	18.0	0.1	0.0	43.7	70.0	-26.3	Pass	Noise Floor
2.742	Loop	0.0	24.1	17.5	0.1	0.0	41.7	70.0	-28.3	Pass	Noise Floor
3.1993	Loop	0.0	22.7	17.5	0.1	0.0	40.3	70.0	-29.7	Pass	Noise Floor
3.6564	Loop	0.0	22.1	17.5	0.1	0.0	39.7	70.0	-30.3	Pass	Noise Floor
4.1134	Loop	0.0	21.7	17.0	0.1	0.0	38.8	70.0	-31.2	Pass	Noise Floor
4.5704	Loop	0.0	18.6	17.0	0.1	0.0	35.7	70.0	-34.3	Pass	Noise Floor



Radiated Photographs



Section 4. Occupied Bandwidth

NAME OF TEST: Occupied Bandwidth	PARA. NO.: N/A
TESTED BY: Arturo Ruvalcaba	DATE: 20 August 2013

Minimum Standard: Not specified.

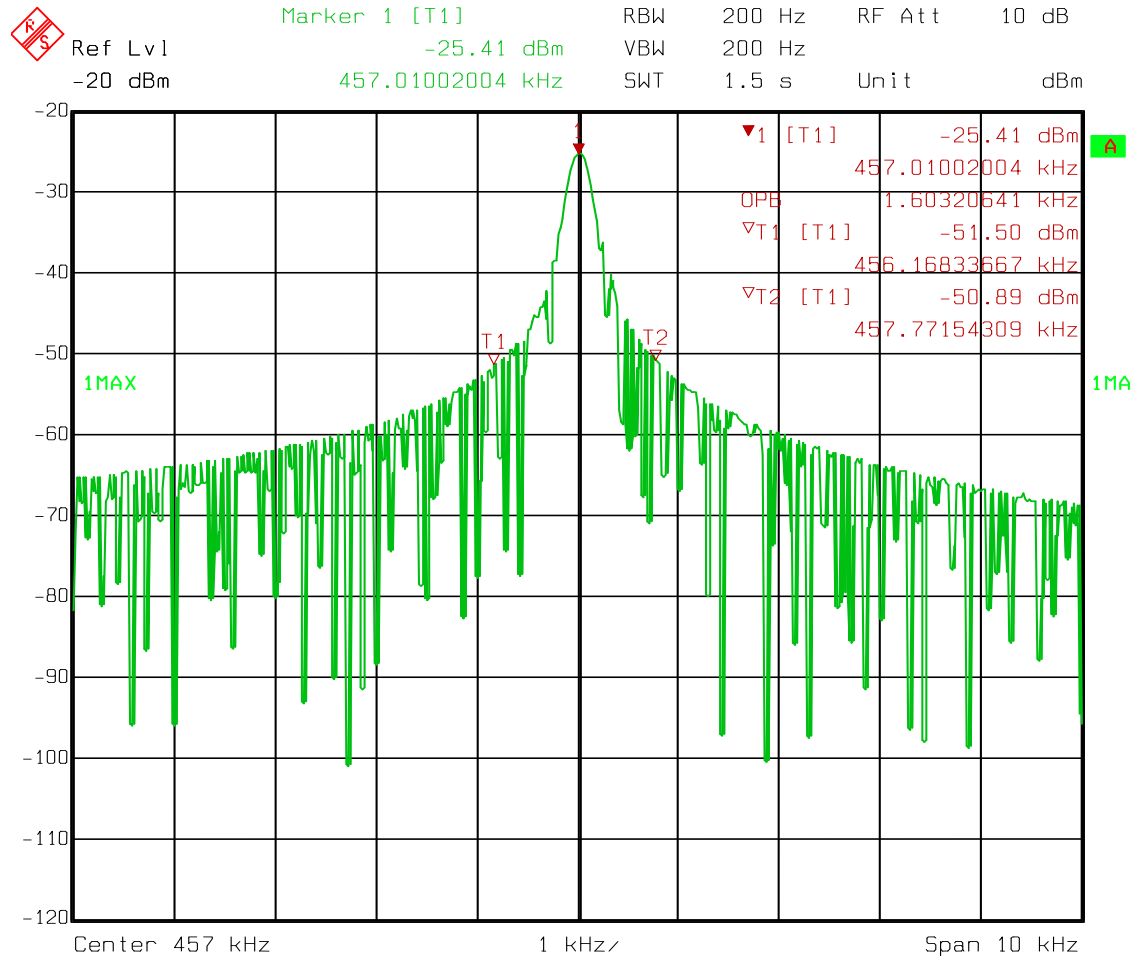
Test Results: The 99% power occupied bandwidth is 1.6 kHz

Measurement Data: See attached graph(s).

Method of Measurement:

A spectrum analyzer was used to measure the 99% power occupied bandwidth of the fundamental emission. This value is used as the bandwidth for the emission designator.

Test Data – 99% Occupied Bandwidth



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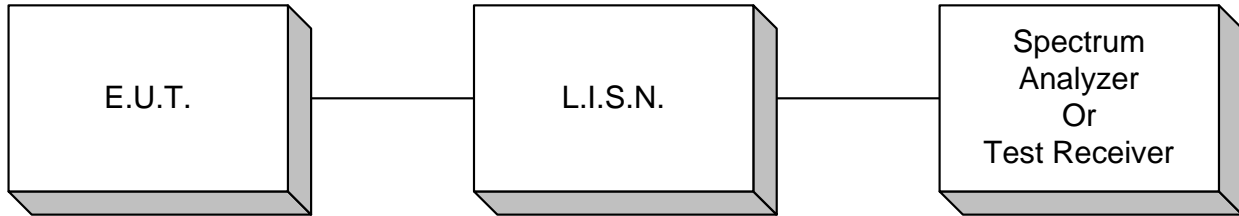
Section 5. Test Equipment List

Asset Tag	Description	Manufacturer	Model	Serial #	Last Cal	Next Cal
1733	Antenna, Active Loop	EMCO	6507	45939	18-Jun-2013	18-Jun-2014
1767	Receiver	Rohde & Schwartz	ESIB26	837491/0002	19-Dec-2012	19-Dec-2013
1783	Cable Assy, 3m Chamber	Nemko	Chamber		26-Sep-2012	26-Sep-2013

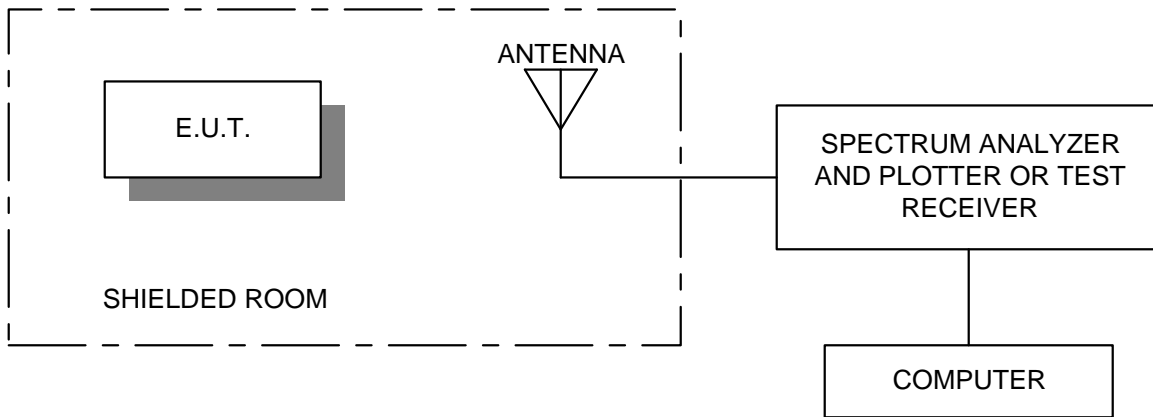
ANNEX A

TEST DIAGRAMS

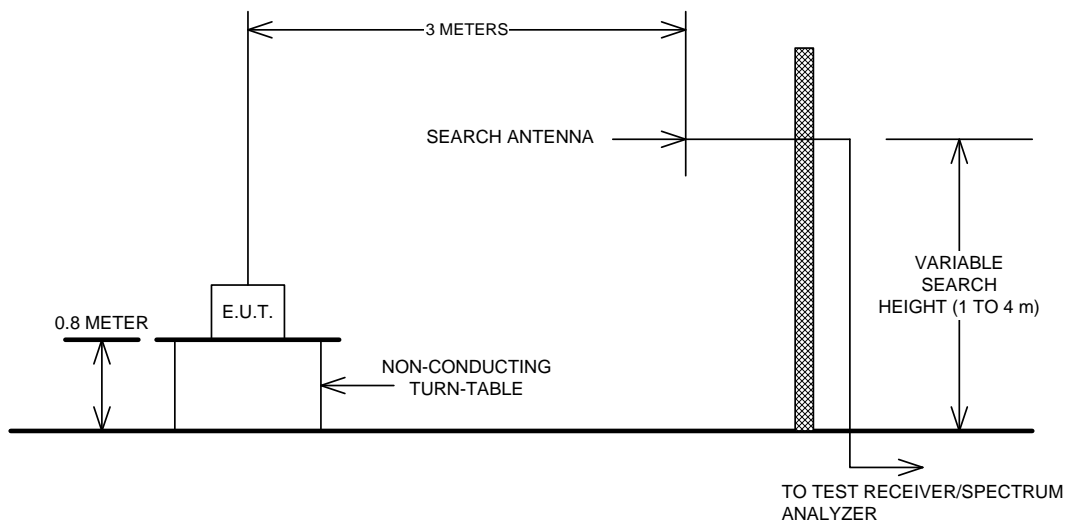
Conducted Emissions



Radiated Prescan



Test Site For Radiated Emissions



ANNEX B

TEST DETAILS

NAME OF TEST: Radiated Emissions

Minimum Standard: Radiated limits. (a) Except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009-0.490	2400F (kHz)	300
0.490-1.705	24000F (kHz)	30
1.705-30.0	30	30
30-88	100 ¹	3
88-216	150 ²	3
216-960	200 ³	3
Above 960	500	3

(b) In the emission table above, the tighter limit applies at the band edges.

(c) The level of any unwanted emissions from an intentional radiator operating under these general provisions shall not exceed the level of the fundamental emission. For intentional radiators which operate under the provisions of other sections within this part and which are required to reduce their unwanted emissions to the limits specified in this table, the limits in this table are based on the frequency of the unwanted emission and not the fundamental frequency. However, the level of any unwanted emissions shall not exceed the level of the fundamental frequency.

(d) The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector.

(e) The provisions in [§§15.31](#), [15.33](#), and [15.35](#) for measuring emissions at distances other than the distances specified in the above table, determining the frequency range over which radiated emissions are to be measured, and limiting peak emissions apply to all devices operated under this part.

(f) In accordance with [§15.33\(a\)](#), in some cases the emissions from an intentional radiator must be measured to beyond the tenth harmonic of the highest fundamental frequency designed to be emitted by the intentional radiator because of the incorporation of a digital device. If measurements above the tenth harmonic are so required, the radiated emissions above the tenth harmonic shall comply with the general radiated emission limits applicable to the incorporated digital device, as shown in [§15.109](#) and as based on the frequency of the emission being measured, or, except for emissions contained in the restricted frequency bands shown in

§15.205, the limit on spurious emissions specified for the intentional radiator, whichever is the higher limit. Emissions which must be measured above the tenth harmonic of the highest fundamental frequency designed to be emitted by the intentional radiator and which fall within the restricted bands shall comply with the general radiated emission limits in §15.109 that are applicable to the incorporated digital device.

(g) Perimeter protection systems may operate in the 54-72 MHz and 76-88 MHz bands under the provisions of this section. The use of such perimeter protection systems is limited to industrial, business and commercial applications.