



Summits On The Air

Mountain Top Activations and Amateur Radio
(Including Chasing)

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June 6, 2015

Summits on the Air



- What is it?
- Roles and principles
- Some statistics, scoring and awards
- Activation bands and equipment
- Chasing and software tools

What is the SOTA program?



“**Summits on the Air (SOTA)** is an award program for radio amateurs and shortwave listeners that encourages portable operation in mountainous areas. SOTA has been carefully designed to make participation possible for everyone - **this is not just for mountaineers!** There are awards for activators (those who ascend to the summits) and chasers (who either operate from home, a local hilltop or are even Activators on other summits).” From www.sota.org.uk



General SOTA Principles

- Patterned after IOTA, Islands on the Air
- One set of generic rules for everyone
- DX entities form one or more “Associations”
- Associations maintain a list of summits
- SOTA scoring is based on elevation
- Activators, Chasers & SWLs are participants
- Various awards, honor rolls, etc.
- Totally Internet based administration
- Honor system – follow the spirit of SOTA



Participation Roles

- **Activators** – those who “activate” a peak
- **Chasers** – those who work the activator
- **Short Wave Listeners** – those who can confirm a qso
- Each group scores “points” for their participation. Points then total for awards.

Mountain safety



- Safety is important to SOTA
- Competence rule... Don't take risks
- SOTA does not add to the risks
 - Mountain peaks are dangerous already
- Golden rules
 - Don't take abnormal or unreasonable risks
 - Keep track of time, especially in winter
 - Don't get cold
 - Drink water, have food, be prepared for emergencies

wG0AT and N7UN on Humboldt Pk, CO



NØB

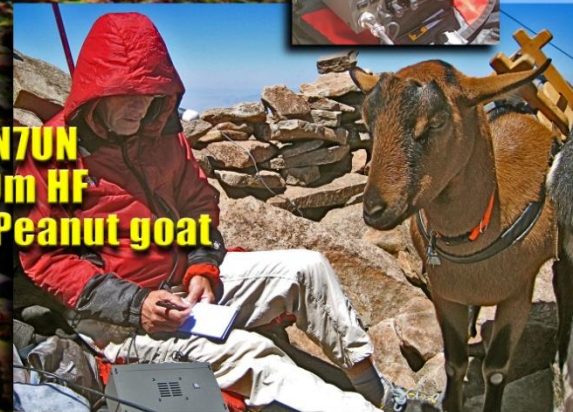
August 9th 2009

**Special Event 'Ham-14er' on Humboldt Peak
Sangre de Cristo Range in the
Colorado Rocky Mountains
Elevation: 14,065 feet**

**Steve/wG0AT
runs VHF QSOs
with CO 14ers**



**Guy/N7UN
on 20m HF
with Peanut goat**



WebBlog: <http://n0b-14er.blogspot.com/>
Ham-14er Info: <http://www.14er.org/>



Some Statistics

- Launched on March 2nd 2002 in the UK
- Internet based activity
 - Industrial strength database
 - About 2.2 million QSO's in SOTA Database
 - More than 8,500 registered users
 - Sophisticated web portal: alerting, spotting, forum, etc
 - About 90 SOTA Associations
 - Over 63,000 peaks (only 16,800 have been activated)



When is a peak not a SOTA peak?

- A qualified SOTA peak is when:
 - Prominence is greater than 500 ft (150m) from surrounding peaks
- Peak qualification rules:
 - Vertical separation concept (500' prominence)
 - Must be a readily accessible summit
 - Private property with permission only
 - Respect for Native American and Government properties
- PNW SOTA peaks
 - 2663 in WA, 1992 in OR, 2461 in ID

SOTA Scoring



- Summit designators: W7O/CN-001 (Mt Hood)
- Based on ASL elevation of a qualified peak
 - Varies by Association
 - May include a “seasonal bonus” for activators
 - Same principles for Chasers and SWLs
- Scoring example for W7O – Oregon:

Under 3000'	1 point	(462 peaks)
3000' to <5000'	2 points	(645 peaks)
5000' to <6000'	4 points	(398 peaks)
6000' to <8000'	6 points	(388 peaks)
8000' to <9000'	8 points	(64 peaks)
9000' +	10 points	(35 peaks)

SOTA Awards

- Certificates
- 100, 250 and 500 points
- Mountain Goat trophy
 - 1000 activating points
- Shack Sloth trophy
 - 1000 chasing points
- SWL
- Association awards
- Further certificates at 2500, 5000, 10000 points





Web Tools for SOTA

- www.sota.org.uk
 - The main site about the SOTA program
- www.sotawatch.org
 - Alerts, spots and a forum
 - Register to participate
 - Anyone can read information posted
- database.sota.org.uk/
 - Log chasing and activating QSO's
 - Register to enter QSO's and see more detail



Bands and Modes

- VHF+
 - A lot of 2m FM
 - SSB is popular
 - CW is also used occasionally
- HF
 - A lot of CW, due to use of QRP equipment
 - SSB is catching on quickly
 - 10110 kHz, 14060 kHz, 14342.5 kHz are popular

Activation Equipment



- It's all a lot easier these days!
 - Equipment is smaller, lighter and more efficient
 - Battery technology has improved immensely
- Typical activator radios
 - FT817, IC-703, Elecraft K1, K2, KX1, KX3
 - Various handy-talkies for 2m FM, etc
- Typical activation antennas
 - Wires (doublet, EFHW, random length, etc.)
 - Small loops
 - Whips, J-poles, small beams for VHF+

Typical HF SOTA Equipment





Activation Rules

- See General Rules and the Association Reference Manual (ARM) for the area
- No activation from vicinity of vehicles
- Walk the final distance to the summit's activation zone carrying your gear
- Use battery power
- No repeaters



Chasing

What most of us will do.

Chasing Tips



- Think of the activator as rare DX (often very weak)
- Time your calls carefully (keep calls minimized)
- Offset your CW transmit frequency for a distinctive note
- Don't be afraid to ask for a QSY
- Plan chasing sessions, especially on busy weekends
- Remember that east coast summits can be early
- SOTA ops are generally quite polite: play nice!



Good Equipment Helps

- Most activators are at 5 to 10 watts to wire
 - They will be weak at your end
 - A good receiver helps pull them in
 - Sensitive, low noise, good filtering
- The chasers will be stronger
- Chasing equipment
 - Beams and big wires get through faster
 - Power is helpful - most chasers are using at least 100 watts

Software Tools: SOTAwatch



- SOTA spotting tool: www.sotawatch.org
- Center of SOTA activity
- Alerts of upcoming activations
- Spots of current and recent activations
- Location, frequencies and modes of summits
- Forum for discussions
- Links to much else, including summit data



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Latest Spots

>> [more spots](#) | [new spot](#)

- Tue 15:37 **S56LXN/P** on [S5/TK-023](#) (Posted by W4DOW) **14.280 ssb**
- Tue 15:30 **W1ZU** on [W1/GM-077](#) (Posted by W1ZU) **7.032 cw**
- Tue 15:26 **OE7PHI/P** on [OE/OO-130](#) (Posted by M3FEH) **14.285 ssb**
- Tue 15:26 **S56LXN/P** on [S5/TK-023](#) (Posted by S56LXN) **21.280 ssb**
- Tue 15:22 **AC4M/P** on [W4V/GC-013](#) (Posted by WX4ET) **21.287 ssb**
- Tue 15:15 **W1ZU/P** on [W1/GM-077](#) (Posted by W4DOW) **14.061 cw**
- Tue 15:14 **AC4M/P** on [W4V/GC-013](#) (Posted by WX4ET) **21.285 ssb**
- Tue 15:12 **S56LXN/P** on [S5/TK-023](#) (Posted by S56LXN) **7.136 ssb**
- Tue 15:08 **W1ZU** on [W1/GM-077](#) (Posted by W1ZU) **14.061 cw**
- Tue 15:01 **W2CKL** on [W2/GC-112](#) (Posted by W3ATT) **7.061 cw**

Upcoming Activations

>> [more alerts](#) | [new alert](#)

- Tue 15:00 **WA3WSJ/PM** on [W3/PT-001](#) **7.031-cw, 14.061-cw, 18.089-cw**
- Tue 15:00 **AC4M/P** on [W4V/GC-013](#) **7.19-ssb, 14.285-ssb, 21.285-ssb, 28.39-ssb**
- Tue 15:00 **W2CKL** on [W2/GC-112](#) **10.110-cw, 14.060-cw**

Reflector Latest

[SOTA NEWS MAY 2015 Part 1](#)

by G4SSH, #3 by G4YSS, 34mins ago

[SOTA NEWS MAY 2015 Part 2](#)

by G4SSH, #3 by EA2BD, 2days ago

[Sota watch 2 face book link](#)

by M3FEH, #19 by G8ADD, 2hrs ago

[NA6MG Super Sloth](#)

by WA6RIC, #14 by KQ2RP, 2hrs ago

[1. Activation of EA5/AT-028 \(L](#)

by DL8DBW, #2 by G6TUH, 4hrs ago

['Near Vicinity'](#)

by M0VFR, #28 by G4OIG, 6hrs ago

[Ingleborough G/NP-005 \(magic](#)

by M1BUU, #7 by M1BUU, 6hrs ago

[DeLorme inReach](#)

by M1MAJ, #13 by MW0WML, 7hrs ago

[YO8SEP/P Activation Report: \](#)

by YO8SEP, #2 by G6TUH, 22hrs ago



SOTAwatch2

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Summit Information for W7O/CE-009

Paulina Peak - 2434m, 6 points

Association: USA - Oregon **Region:** OR-Central Oregon

Latitude: 43 41 21 N, **Longitude:** 121 15 16 W

Today's Sunrise: 12:43 UTC, **Today's Sunset:** 03:19 UTC

Relative to home QTH: 177.1 km, 103 degrees

[Google Map](#) | [Google Earth](#) | [OpenStreetMap](#)
[SOTA Map](#)

Resources

Feel free to add external links [↗](#) and articles relating to this summit that activators and chasers may find useful or interesting. Please read the disclaimer notice at the bottom of the page.

[Paulina Peak- My first SOTA activation](#) *(Submitted by KFTWNS on 03 Sep 2014)*

[PNWSOTA: Activating Paulina Peak | 28-Sep-2012](#) [↗](#) *(Submitted by PNWSOTA on 09 Oct 2012)*

[Add new external link](#) | [Add new article](#)

DISCLAIMER: The SOTA programme and its Management Team is not responsible for the content of external internet sites or for information added by third parties to this website. Please contact the SOTA

Summit Activity

Total Activations: 7

Latest By:

ND7PA on 03 Sep 2014

K7ATN on 15 Sep 2013

K7NIT on 15 Sep 2013

AE7LD on 18 Aug 2013

N7CNH on 29 Jun 2013

First Activated by:

N7CNH on 18 Aug 2012

Chased by You on:

18 Aug 2012 - 14MHz, SSB

28 Sep 2012 - 14MHz, SSB

29 Jun 2013 - 14MHz, SSB

15 Sep 2013 - 14MHz, SSB

15 Sep 2013 - 7MHz, CW

03 Sep 2014 - 14MHz, CW

78 QSOs on these bands:

40m 5 6%

20m 68 87%

17m 5 6%

Software Tools: RBN Gate



- Download from www.KU6J.com
- For windows computers
- Monitors the RBN and compares to SOTA alerts
- Automated CW spots as soon as they CQ
- Spot notification with audio feedback
 - Configurable filters
 - Select just what notifications you want
- Chasers should use this or SOTA Goat (or both)

Software Tools: iOS



- SOTA Goat
 - My favorite chasing tool next to SOTAwatch!
 - Provides searchable summit data
 - Alerts and spots (mined from SOTAwatch database)
 - Easy way to spot yourself in the field
 - The best are the audible notifications for new spots (a cute goat bleat) – this immediately announces the new spots to the chaser
- Pocket SOTA (I think there is an Android version too)
 - Portable summit database
 - Good for finding summits
 - Links to SOTAwatch and other SOTA sites



Other Software Tools

- SOTA Finder
 - Android
 - Summit location
- Mac OS10
 - SOTA DB
 - For viewing the SOTA database

Have a go!



- You don't have to be a mountaineer!
 - Some summits where you can almost drive to the top
 - You can participate from your shack
- But if you are...
 - There are many first expeditions yet to be done
 - It's a good excuse to enjoy the outdoors on the summit looking at the views
 - It's a great way to bring two hobbies together

Summary



- So now go take a hike; go climb a peak!
 - Chasing
 - Activating
- Use the SOTA Internet based tools
 - Alerting
 - Spotting
 - Database
- Be careful – it's addictive!

Ollallie Butte, Central Oregon





Questions?

NS7P: phils@riouusa.com

www.sota.org.uk

www.sotawatch.org