

Pacific Northwest SOTA Newsletter



Forbidden Peak-W7W/SK-007 by Ben-WA7BEN

October-November-December

The History of Hunter Orange

In Oregon, all hunters under age 17 are required to wear a hunter orange exterior garment (shirt, jacket, vest, etc.) or hat visible from all directions when hunting game mammals or upland game birds with a firearm. While not mandatory for adults, it is strongly recommended for all persons in the woods for safety. <https://www.onxmaps.com/hunt/blog/hunter-orange>



Practicing Emergency Communications...With SOTA

If you are involved with Amateur Radio Emergency Service (ARES), Community Emergency Response Teams (CERT), Neighborhood Emergency Teams (NET), or through supporting a public event such as a fun run, you have good opportunities to combine your volunteer efforts with your SOTA or POTA avocation.

Even ARRL regards contest skills as public service skills. With clear, consistent and efficient communications being critical to EMCOMM success, any opportunity to practice the phonetic alphabet, learn more about your equipment, antennas, propagation and good operating practices is welcome. Many of these skills are perishable...if you don't practice them, you may lose the skill.

Field Day every June is one of the easiest and certainly most social ways to practice ham radio communication skills. Your setup may not be particularly “portable” as you would for a SOTA activation or even a POTA, but you’ll be able to learn from others on your Field Day team, and perhaps contribute some of your own experience.

Besides Field Day, there are four major VHF Contests every year and each of them has a Portable category that can fit right in with a SOTA (or POTA) activation. Even simple 2m FM contacts from the kitchen table, while mobile, or on a summit or park can be a way to review operating practices and learn how to complete marginal contacts.

Here are two supporting documents that help make the case that the radiosport “games” that we play could make a difference in how we provide public service and emergency communications:

<https://www.arrl.org/news/putting-contesting-to-work-for-your-public-service-team>

<https://www.youtube.com/watch?v=b00yUN7qQEs>

Can You Hear Me Now? Propagation Now Bundled with the SOTA WeatherBot by Dave-N7LKL

Committed SOTA activators head for the hills, brave the elements, put up a wire, and hope for at least four QSOs in order to qualify for points credit. You do this whether the bands are cooperating or not. But wouldn't it be nice to know which bands are expected to be open? This could inform your choice of equipment and your summit operating strategy. To this end the [SOTA WeatherBot](#) now includes propagation predictions. As with most things though, the devil is in the details. Saying "40 meters is open" is meaningless in and of itself. You need to know to where, at what power, with what kind of antenna, at which time of day, for which operating mode, etc. The WeatherBot attempts to summarize all of this into a single table as follows:

BEST PREDICTED OPEN BANDS for CW @ 5W and SSB @ 10W													
500 mi		1,000 mi		2,500 mi		5,000 mi		7,500 mi		10,000 mi		LOCAL	
UTC	CW	SSB	CW	SSB	CW	SSB	CW	SSB	CW	SSB	CW	SSB	LOCAL
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
10:00	--	--	40	40	40	--	20	--	--	--	--	--	03:00
11:00	--	--	40	40	40	--	20	--	--	--	--	--	04:00
12:00	--	--	40	40	40	--	--	--	--	--	--	--	05:00
13:00	40	--	40	40	30	--	--	--	--	--	--	--	06:00
14:00	40	40	30	--	30	--	--	--	--	--	--	--	07:00
15:00	40	40	30	--	20	--	--	--	--	--	--	--	08:00
16:00	40	40	30	--	20	--	--	--	--	--	--	--	09:00
17:00	40	40	30	--	20	--	--	--	--	--	--	--	10:00
18:00	40	40	30	--	--	--	--	--	--	--	--	--	11:00
19:00	40	40	30	--	--	--	--	--	--	--	--	--	12:00
20:00	40	40	30	--	--	--	--	--	--	--	--	--	13:00
21:00	40	40	30	--	17	--	--	--	--	--	--	--	14:00
22:00	40	40	30	--	17	--	--	--	--	--	--	--	15:00
23:00	40	40	30	--	17	--	--	--	--	--	--	--	16:00
00:00	40	40	30	--	20	--	--	--	--	--	--	--	17:00
01:00	40	40	30	--	20	--	17	--	--	--	--	--	18:00
02:00	40	40	30	20	20	--	20	--	--	--	--	--	19:00

One conclusion from this chart would be that at your activation time of 18:00 UTC, 30 meters CW is your best bet to reach chasers 1,000 miles away. The double dash in the SSB column for this time/distance means that an SSB contact on any band will be challenging - but not necessarily that it will be impossible. Similarly, reaching Japan (about 5,000 miles from the PNW) is pretty unlikely on this outing.

So how are these open band predictions generated? The WeatherBot uses [VOACAP](#), the Voice of America Coverage Analysis Program, which was originally developed to predict what frequencies to use to most effectively reach target audiences around the world. The theoretical foundation of the prediction engine is the [Friis Transmission Equation](#) but it also leverages thousands of empirical ionospheric observations.

Check out [Signal-to-Noise Predictions Using VOACAP](#) if you want to take a deep dive (and I mean deep!) into how VOACAP performs its magic. But the layman's explanation is as follows. The Friis transmission equation calculates power detected at a receive antenna given a known amount of power emitted by a transmitting antenna at a given distance away. Combine this with empirical measurements of D, E, F1, and F2 layer characteristics over long time periods (height, absorption, etc.) and one can make accurate predictions for propagation between points A and B. These predictions include not only what frequencies will get through but also things like signal loss, propagation mode (e.g.: 2-hop via F2-layer refraction), and more.

As most radio amateurs know, ionospheric conditions are directly related to sunspot activity. Correspondingly, predicted sunspot numbers are a key input to the VOACAP algorithm. This may sound like a [turtles all the way down](#) type problem where propagation prediction depends on sunspot number prediction, which in turn depends on yet another prediction, ad infinitum. But in reality, there's a lot of empirical evidence to show that sunspot activity is cyclical and thus can be predicted with a fair amount of accuracy. The WeatherBot uses [McNish & Lincoln](#) smoothed sunspot number predictions provided by the Royal Observatory of Belgium's [Solar Influences Data Analysis Center](#).

The challenge for the WeatherBot is to generate actionable data given only a minimal set of inputs - namely activation time and summit lat/lon. It does this by making a whole bunch of assumptions. Activators are using a ground-mount vertical monopole with a representative gain pattern. Activators transmit either CW at 5 watts or SSB at 10 watts. Chasers are using a dipole at an elevation of 10 meters, also with a representative gain pattern. Chasers transmit both CW and SSB at 100 watts.

Now what to calculate? VOACAP predicts propagation between two points, or more specifically, from point A to point B. So any prediction must actually be done twice, once in each direction, and then the two predictions somehow combined to reflect the bidirectional circuit. We know where point A is - that's the activator's summit. For point B, the WeatherBot uses representative distances as seen in the chart above - in miles for US summits, in kilometers for everywhere else.

But wait! CW and SSB are at different power levels and have different signal-to-noise ratio requirements with respect to accurate copy by humans. Lastly, propagation is directionally dependent. You may be heard 1,000 miles east but not west, for example. To accommodate this reality, the WeatherBot actually runs predictions for 6 distances at 8 different compass bearings. Ultimately, each activation alert triggers 192 VOACAP point-to-point runs generating 27,648 individual circuit predictions which are then synthesized into the chart above.

So, there you have it, the SOTA activator's answer to "Can you hear me now?" - only before you've even set foot out the door. Please send your feedback on the usefulness and accuracy of this feature to sotawxbot@gmail.com. Gratitude to Bill Jordens (WJ7WJ) who listened to me blather about this stuff for way too long on many SOTA outings. And many thanks to Jari Primak (OH6BG), one of only a handful of true VOACAP experts worldwide, who graciously answered my many questions making this effort possible.









73, Dave-N7LKL

Activations Across UTC Midnight by Greg-K7AGL

I started SOTA in 2019 and thought I had a pretty good handle on the rules. But it turns out in one instance, I was making an assumption that was not true. When I looked at the activation history for someone and I saw the activation date that was shown, I always assumed that *all* the QSOs had to be within that activation date. Like this:

Date ↓	Summit	Name	Altitude	Points	Activations	Callsign used	QSOs
14 Sep 2025	 W7O/NC-013	Nicolai Mountain 	3028 ft	<div>0</div>	<div>54</div>	NR7Y	<div>3</div> 
13 Sep 2025	 W7O/NC-013	Nicolai Mountain 	3028 ft	<div>2</div>	<div>54</div>	NR7Y	<div>45</div> 

Well, what about this activation? Is this not logged correctly?

KG7EJT on W7W/CW-030 (Lion Rock), 16 Aug 2025				
Time	Callsign	Band	Mode	Notes
00:00	 W6TDX	40m	SSB	Chris, Oregon
00:07	 K4RNY	40m	SSB	Ronnie, POTA US-9664
00:08	 W6AFA	20m	SSB	Alex, California
00:11	 W7CXX	20m	SSB	Jack, Utah
00:17	 KK7UKE	2m	FM	Soren, S2S W7W/RS-026
00:18	 N1ELS	2m	FM	Niels, S2S W7W/RS-026
00:20	 KK7ULL	2m	FM	Corrinne, S2S W7W/RS-026
00:25	 K9WTP	2m	FM	Will, Blewett Pass, WA
23:53	 K6JO	20m	SSB	Lee, California
23:55	 K7AGL	40m	SSB	Greg, Gresham, OR
23:58	 WW7D	40m	SSB	Darryl, Redmond

To me that seemed like an incorrect log. The activation date is 8/16 and there are UTC times at the very end of the day. But then times from UTC Day 8/17. To me that seems wrong. Shouldn't that be two activations? I emailed Tim about it and that started me down a deeper dive to test my assumptions.

It turns out I was wrong. The activation date shown in SOTA Data is for the Activation START date – the first QSO of the activation. The SOTA Management Team, knowing that many areas around the world have a UTC day boundary that is in the middle of the morning (like Australia) or afternoon (like on the West Coast US) have allowed a single activation to span a UTC day.

In my head I confused the rule that allows a Chaser to get points across the UTC day with thinking that a single activation could *not* span across a UTC day. Not true!

The way it works is that an activator can CHOOSE which way they want to log it. Both ways are valid. The SOTA database will allow either case. You can log two activations, one for each UTC day, or one that spans the same UTC day. The one exception is that magical New Years Day activation. If you activate on December 31 and cross over into January 1 the SOTA Database will automagically split the log into two activations so that your summit activation points can count twice – one for each calendar year. So make sure you get at least four on each side of the UTC New Years!

Want to dig into the history? check out:

<https://reflector.sota.org.uk/t/stupid-question-of-the-day/38635/12>

...My point being this 'can of worms' has been discussed, litigated and exhausted many times before. And the conclusion (from the MT) in the past has been that it is the activator's call whether they can class a single summit visit crossing the UTC day as a single or two separate activations. The details (workarounds) of how the database can be made to understand that are also discussed...

SOTA Clickbait – Videos Worth a Look

Tim-N7KOM documents the fun of the 2025 W7O SOTA Campout:

https://www.youtube.com/watch?v=euC_S1tW7E

James-WA7JNJ gives an overall view of the 2025 W7O SOTA Campout:

<https://www.youtube.com/watch?v=YNhktPyaLvI&t=2s>

Soren-KK7UKE put this video together for the 2025 W7W SOTA Campout:

<https://www.youtube.com/watch?v=9WjD4kZpc7E>

Joe-OE5JFE created this video of SOTA Around the World:

<https://www.youtube.com/watch?v=fc5rHcuwRX4&t=615s>

(Featuring our own KD7QOW and WA7JNJ.)

Oregon (and Washington) Distracted Driving Law and Amateur Radio – by Sean-KK7OVF

Many of us operate our radios from a mobile “shack” – our vehicles. Oregon’s distracted driving law, however, raised concerns for amateur operators when it was first enacted in 2017.

When Oregon considered broad restrictions on handheld electronic devices, the ARRL with support from local amateurs, including John Core-KX7YT (then the ARRL Oregon Section Manager) stepped in to ensure our role in public service communications was recognized.

Amateur radio has long been an auxiliary communications system for public safety, especially in disasters and emergencies when other systems fail. Thanks to this advocacy, Oregon law provides an affirmative defense for licensed amateur radio operators using FCC-authorized equipment. This means that if you are cited, you can demonstrate that you were legally operating amateur radio equipment under your license.

Oregon Revised Statutes – ORS 811.507 – “This section does not apply to a person” who was “18 years of age or older, held a valid amateur radio operator license issued or any other license issued by the Federal Communications Commission and was operating an amateur radio.” There is a similar provision in Washington State – RCW 46.37.480.

It’s important to remember that the exemption is not a free pass to be careless. As hams, we pride ourselves on operating responsibly. Please keep your primary focus on the road and use mobile radios and microphones in a way that does not distract from driving. It’s a good practice to carry:

- A copy of your current FCC license
- Documentation that the equipment you are using is amateur radio gear (e.g., manuals, model numbers, etc.)

Amateur radio remains a recognized and valuable part of Oregon and Washington’s emergency communications framework. Let’s continue to demonstrate the trust placed in us by operating safely, legally, and courteously whenever we’re on the air and on the road.

What Came Before the KX2 – Vintage Rigs: FT-817 – by Josh-WU7H

In this installment we take a look at the legendary QRP radio, the Yaesu FT-817.

The Yaesu FT-817, introduced in 2001, marked a significant milestone in the evolution of QRP radios. The FT-817 was the first self-contained, battery-powered, multi-mode portable transceiver covering HF, VHF, and UHF. While a few small CW-only radios like the ATS / MTRs had been around for a while, the 817 offered HF, VHF, and UHF bands and supported SSB, CW, AM, FM, and digital modes. With 5W output and features found in much larger rigs, the FT-817 quickly became a popular QRP rig of its day.

In 2004, Yaesu released the FT-817ND, which added 60-meter band support (for U.S. models), improved RF components, and a (slightly) better internal battery pack. The FT-817 quickly gained a reputation for being rugged and versatile. A pair of 817's became a setup for full duplex satellite work, and it's also used as transverter IF for 222MHz or microwave.

In 2018 Yaesu released the FT-818 as a successor to the venerable 817. Most of the QRP world felt that Yaesu really missed the boat with this 'update' - it was the same old 817 with one extra Watt of output (6W). The design felt very dated considering all the SDR-based QRP radios that were arriving on the scene at the time. The 818 was the final iteration, and was discontinued in 2022.

Over its two-decade lifespan, the FT-817 has developed a near cult-like following. Despite its drawbacks—such as tiny screen and controls, a complex menu system, and no internal ATU—it was celebrated for its ruggedness and capability. Today many 817/818's are being hauled up SOTA summits around the world, and it is still a solid rig choice. Used 817/818 can be found for a fair price on the used market, and will continue to be a popular SOTA rig for years to come. Some background information can be found here:

https://en.wikipedia.org/wiki/Yaesu_FT-817 and <https://www.universal-radio.com/catalog/hamhf/0817spec.html> and <https://www.eham.net/reviews/view-product/6270>



2025 W7W SOTA Campout by Corrinne-KK7ULL

The First Annual W7W SOTA Campout at [Curlew Lake State Park](#) in Republic, Washington was a great success and a lot of fun! There were 16 hams in attendance, six family members who *are not yet* hams, and one SOTA pup named Sam. 🐕

We had four first activations, a Do-Si-Do, lots of joint activations and S2S, great shared food, conversations, hiking, swimming, paddle boarding, fishing, stargazing and even some POTA! We all gathered for a potluck dinner on Friday night, hung the SOTA banner, met each other, and planned activations for the next day. Although that was the only planned potluck meal, we wound up gathering and sharing food for all the other meals at camp as well!

It was such a great group of people and we all really enjoyed our time together. We are planning to do it again in the same place over the weekend of August 14-17, 2026 and would

love for more to join us! Make your reservations starting November 14 [here](#). The campground is situated right on the lake and has good shower facilities as well. It's a great vacation spot for the whole family, even if some aren't hams - yet.

😊 73, Corrinne-KK7ULL (See the video [here](#).)



My Mountain Goat Journey by Franzi-WE7CAT (via the NA-SOTA Group)

I was drawn into this hobby by my husband – Will-KL0NP. I already enjoyed hiking, and **Summits on the Air** (SOTA)



Franzi-WE7CAT on Mount Olympus

turned out to be a perfect way to get him excited about hiking with me. It's often motivating to have a goal or purpose, and SOTA provided exactly that. All I had to do was choose a peak I wanted to climb—luckily, there are countless SOTA peaks near our home in western Washington.

At first, I didn't find the radio side particularly thrilling. A typical exchange went something like: "My call sign is this. What is your call sign? I can hear you. How well can you hear me? Goodbye." I usually enjoy conversations full of adjectives and feelings, and these bare-bones interactions felt strange and mechanical.

I could easily have planned the trips, hiked along, and skipped the radio work altogether. I loved napping on the summit while Will made his contacts—it gave me time to appreciate the effort it takes to get up there. But Will had a clever way of drawing everyone in. He offered cash prizes to anyone in the family who passed the ham radio test. At first, the bribes were just for our kids: Pass the test and I'll pay you. Then I asked if the offer applied to me, and it did. Soon his parents were involved too, and before long we were all studying for our licenses, motivated by the promise of a reward.

As our experience grew and our equipment improved, activating peaks became more enjoyable. I even started doing a few summits on my own. My main goal was still to climb specific peaks, but activating them with the radio made the hikes feel more legitimate, as if I wasn't just out for a walk—I had a mission. Will encouraged me every step of the way. Gradually, those awkward, minimalist radio exchanges began to add up. I learned to answer some technical questions about my setup, and familiar call signs started to emerge. A funny little community formed. I never would have predicted that a simple "My name, your name, yes I hear you" could evolve into a real sense of support and connection.

I've been activating peaks for about six years now. In the beginning, I was especially excited by "first activations" or challenging alpine routes. Mount Olympus was a highlight—its beautiful, massive terrain and final rope work made it unforgettable. Early on, I relied on Will for these adventure peaks. Some climbs were simply too technical or risky to attempt alone, and hiking with a partner is always safer. But as time passed, Will became busier with work and especially with grad school, and our kids grew up and moved out. I began tackling more summits solo.

Doing SOTA alone, and observing how others pursued it, gradually shifted my vision. I went from chasing big adventure climbs to chasing **1,000 points**—the coveted Mountain Goat award. When I had about 750 points, I headed to Arizona, a state rich with accessible ten-point peaks. I declared, "I'm not coming home until I'm a Mountain Goat." Most of these peaks were reached by driving dirt roads, then hiking a mile or so with 500–800 feet of elevation gain. I assumed it would be easier than it was. Some of the roads were nerve-wracking, and I was glad I'd brought two spare tires when I got a flat over an hour from the nearest pavement (although I should have also brought a spare jack!) The hikes were generally moderate, but the August heat and afternoon monsoon thunderstorms made them more challenging. I combined the trip with tent camping at unimproved BLM and Forest Service sites—a new experience that added its own layer of adventure. Solo camping beside remote dirt roads brought a few concerns, but I was fortunate to encounter no problems with people or wildlife.

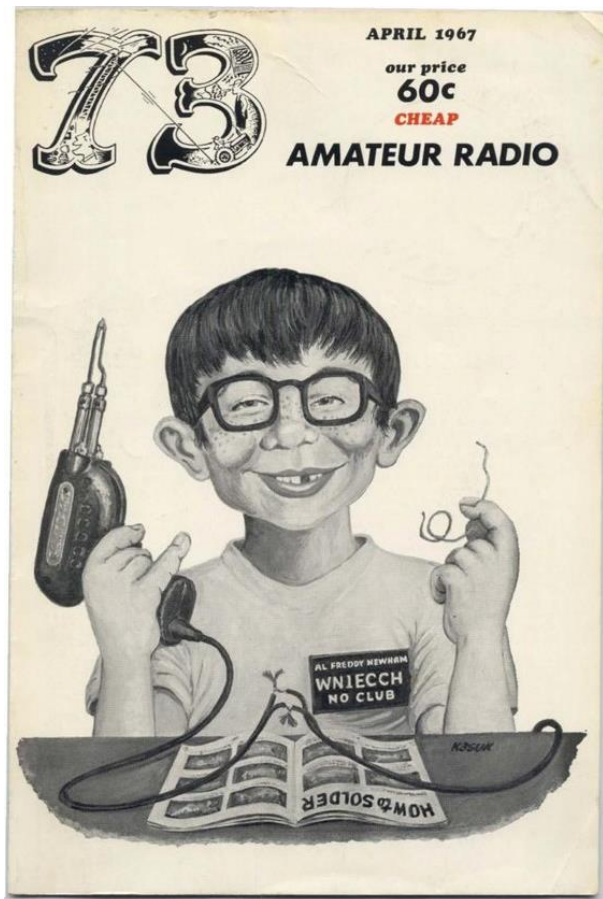
Along the way, I met other SOTA operators and activated peaks with them—something I had never done before. I was nervous at first, worried they might judge my setup, my radio etiquette, or my hiking pace. By then, I was so used to activating alone that joining others felt oddly vulnerable. But it turned out to be wonderful. We shared funny videos, swapped stories about past climbs, and, of course, checked out each other's gear. These meetups reinvigorated me near the end of my journey.

Finally, the day arrived for my 1,000th point. I needed to summit two peaks that day. I tackled the first one early to avoid afternoon storms. My husband, who had been tracking my progress and logging my points, was at work but wanted to hear the activation of my “Mountain Goat” peak from his remotely connected home radio. I waited until noon, hoping to catch him on his lunch break. Unfortunately, a thunderstorm was approaching fast. My vision of leisurely contacts and celebratory chatter quickly turned into a race to log my required contacts and get down before the lightning.

Even though the finale didn’t unfold exactly as I imagined, I reached 1,002 points and officially became a Mountain Goat. I finished the trip with a profound sense of support—from friends and family as well as from people I know only through the exchange of call signs. It’s amazing how simple greetings and well-wishes, repeated across countless summits, can grow into a genuine feeling of goodwill and community.



SOTA Bird, Created by Franzi-WE7CAT <https://www.youtube.com/watch?v=UvBL7j8VxbU>



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