# Pacific Northwest SOTA Newsletter


**Upcoming Events –** Summer is winding down, but there are still summits out there to activate and our best hiking weather is coming up! Here's a few ways to combine other activities with radio from the peaks…

ARRL September VHF Contest – weekend of Sep 8-9: A chance for some mountain-top VHF/UHF action. You might also watch http://sotawatch.org/alerts.php for challenging activations and consider heading out to give those folks a Summit-to-Summit contact. For this month, I see KB7SGF on never activated Three Fingered Jack W7O/CM-008 – Sunday, September 9.

**What to do when 52 is "Busy?" –** The use of the National Simplex Calling Frequency for 2-meter FM (146.52MHz simplex) for long-winded chatting is sometimes putting folks on summits in a bind. It's nice to be able to carry only a HT and antenna to a summit to get four contacts…and for those new to SOTA and those with a Technician Class ticket – it's the only real option. And 52 is where most people hang out - it's the best frequency to use. But what to do if you find 52 busy? (Another opinion here.)

Insert your callsign in between transmissions by those on the frequency (do not use 'break' – that's for life safety issues). Hopefully they'll hear you and let you take a short turn to let any SOTA Chasers know to follow you to another simplex frequency – perhaps 146.58. And it would be nice to also make a formal exchange with those using 52 and get them in the log as well. I see that some activators are posting a second, alternative simplex QRG in alerts like 146.58 – this is a great idea (thanks Chris-WX7EMT).

In some parts of the Pacific Northwest, the calling frequency is quite busy even without SOTA operations. In those areas, it is worthwhile considering practices to avoid conflict and avoid putting SOTA in a bad light. Courtesy suggests that a SOTA activator should not tie up the frequency with a long string of QSOs. If you have a pile-up on 146.52, consider asking everyone to move to another frequency. After you work them on your alternative frequency, return to 146.52...rinse and repeat. This is an excellent practice especially after you have completed the first four QSOs. It keeps the frequency open for other uses and avoids hard feelings that might come from SOTA stations locking out other users on the calling frequency.

If you have been on the calling frequency for a while, be willing to vacate the frequency if someone else needs it. Eat lunch, take photos, explore your summit, move to another 2m frequency, try another band, and return to 146.52 later. Finally, if there are multiple nearby SOTA activations on the calling frequency, give them the opportunity to work the same stations you are working. You might think of it this way; the frequency is fair game for ANY station following the completion of each QSO…and those QSO are best short.

**Activation Report – CQ Worldwide VHF Contest – SOTA Hilltoppers around CN85 –** The Hilltopper Category for the CQ WW VHF Contest each July is limited to six hours of operation, QRP, and only two bands: 6m and 2m – perfect for SOTA. We had a great turnout around CN85 with **seventeen operators** (three first time ops!) on **eleven SOTA summits**, the majority operating 2m FM with some QRP on 6m and 2m SSB.

On the left is newbie Shawn-AG7JZ on Bald Peak-W7O/NC-051, and to the right, Jim-AJ7JT and his daughter on South Saddle Mountain, W7O/NC-002. (If you have SOTA operating events to talk about, I can post them in this newsletter.)

**When Turning Back is the Only Option –** Mark-K7EEX brings us this summer's story about knowing when to quit an activation he and Roland-K7FOP were on to Red Mountain-W7W/LC-036.

> *"As for us on Red Mountain, we started from the car with the skies overcast but otherwise peaceful. About halfway up, we encountered hail that grew from tiny at first to a painful half-inch. We huddled under a tree until it passed and then it started raining. We hastened our pace. By the time we got to the summit area, the lightning had really started. We were literally surrounded by flashes and booms, some startlingly close. The important parts of Freedom of the Hills rang out in my mind. It took us about two seconds to decide that staying was near suicidal. We scurried back down the road to the car in the downpour while the very energetic storm continued blasting the area around us.*
> *There are only a few times that I've been scared in the mountains. An avalanche on Mt. Hood comes to mind immediately. An unprotected, sketchy, and highly exposed move on Mt. Stuart sticks out. I can chalk up today as another one."*

**The Burning Question: "Are we there yet?" or "When are you at the summit?"** We'll refer to the General Rules for SOTA for questions like this one, with specific information from each Association Reference Manual. Here's the General Rules on the Activation Zone (AZ):

> "…each Association shall define the Vertical Distance from the precise summit, within which a Summit operation will be considered valid. This Vertical Distance will define a contour outlining an Activation Zone within which a Summit operation will be considered valid. This Vertical Distance will normally be 25 metres."
>
> "The Operating Position must be within the Activation Zone. The operating position must lie within a closed contour line at the permitted maximum Vertical Distance below the summit. (Typically the contour line is 25 metres below peak height of the summit)."

The Vertical Distance of 25 metres is about 82 feet – so, if the operating position is within 82 VERTICAL feet of the summit within a closed contour line, you are good to go. Measuring Vertical Distance is easiest to do with a calibrated altimeter or GPS. If there is some impediment to getting within 25 metres (fence, barking dog, no trespassing sign, sheer rock pitch, impassable vegetation, etc.) that essentially defines the peak as not activatable – there is no alternative operating location outside of the AZ for SOTA. There are some summits like this Northwest that can't be activated but thankfully, there are several thousand other peaks.

**Trail Restoration in the Columbia River Gorge: Video –** Although Angel's Rest doesn't lead to any SOTA summits, this video gives some idea of the work required to restore trails in the Gorge after the Eagle Creek Fire. Plus, this video features our own Guy-N7UN who has devoted his time to leading trail crews (perhaps why we don't hear him on the air so much).

**Wire Antennas –** Some time ago I offered to write up a piece on wire antennas. So what follows are my opinions – YMMV…and if you ask five hams what's the best SOTA antenna, no doubt you'll get eight different answers – all of them correct. Frankly, many of these antennas don't look too much different from each other when wound up and ready to deploy. But let's admit that it's hard to take good pictures of wire antennas when erected – especially when using Poly-Stealth 26-gauge wire.

Most of my antennas are built around using a telescopic fiberglass pole to hold them up (I steer clear of carbon fiber – it's slightly conductive and more expensive). Usually the pole is about 22 feet or so and gets leaned up against a tree or strapped to a bush, railing or stanchion. On balds, the pole might be supported by a backpack or even held vertically by an accomplice (or horizontally if the summit has a sheer drop). You'll see that kite winders are also a feature of my antennas. When the antenna is wound up in a figure-of-eight, there's much less tangling of the wire and they can be unwound quickly.

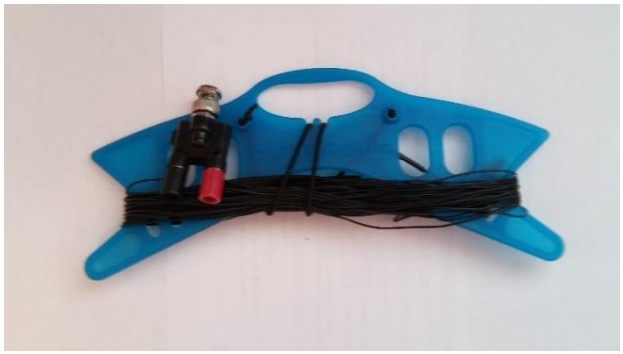
Wire antennas for HF have some attractive traits – they can be effective radiators, lightweight, easy and fast to deploy (and take down!), plus they are inexpensive and I can make them myself! An antenna analyzer goes a long way to getting antennas tuned – I use an MFJ but I see that there are some inexpensive options (or this one) now available on eBay to consider.

Earlyish in my SOTA career I moved towards antennas with shorter feedlines (for lighter weight) – the Endfed Halfwave (EFHW) being a prime example. The SOTA Tuner example below has a modification from the original with insulated banana plug binding posts to keep you away from high voltages. It can be connected directly to the radio using the BNC barrel connector shown. Tuning can be by peaking noise or using internal SWR indicators (FT-817 has one), but there's also a built in SWR bridge. The design I built allowed a single length of 63 feet wire to tune 40m, 20m (as a Fullwave) and somehow also 30m, making it pretty easy to switch bands. The second EFHW version show on the right is a three-band (17m, 20m, 30m) no-tune trapped version using SOTABeams Pico Traps with the matching network in a floss case. This antenna was specifically built to go with an MTR 3-band transceiver and deployed as an inverted vee relatively low to the ground (3-4 meters) for travel. The traps are hard to see in this photo, being coated with liquid tape, and it's a bit of trouble to adjust initially with the interactive effects of the traps and each length of wire, but it's a no tune solution that's hard to beat for ease of use and band changes at will.

Two Endfed Half Wave Antennas

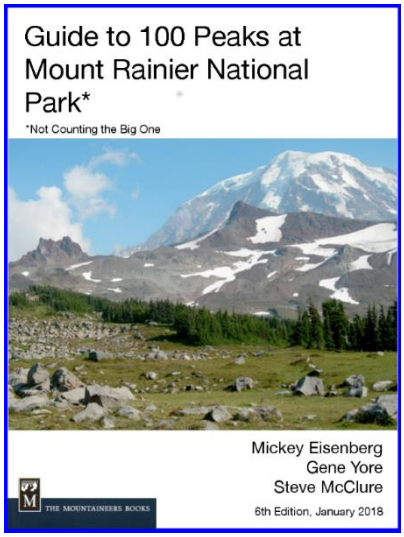
Below are two resonant antennas – ones that really work well for 20 meters and can be used with radios like the FT-817, MTR or QCX. Set up as a "vertical dipole" they have one wire going up the fiberglass pole (or tree), and one (or two) wires deployed horizontally off the ground in the direction of interest. You can see the small loop on the leftmost antenna, intended to be clipped to the pole tip (see small caribiner recommendations in the July-August Newsletter) and feedline soldered right to the wire ends. The kite winder can be secured to the pole with it's bungee – keeping the antenna form at right angles. The right antenna is an earlier version built on a project box. The tight single-direction windings on the box just about guarantee tangling. It features a small inline switch on the vertical portion of wire to allow operation on 17m, so long as at least one of the horizontal wires is also shortened. Each end has a bit of bungee to allow easy temporary wrapping around a branch or bush and the velcro that secures the wire also keeps the vertex where you want it near the pole. With the KX3 tuner these antennas will tune on 30m and even 60m, and higher bands. They are often easier to set up when space is limited than other antennas – these are my back-up for activations.

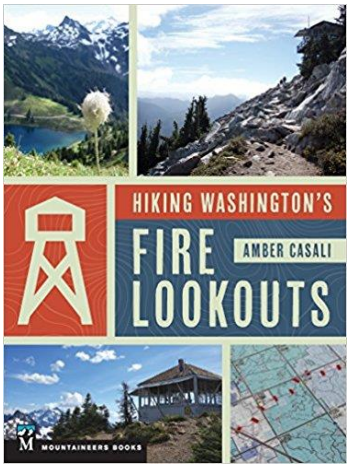
These last two antennas pictured were built with the internal tuner of a KX3 (or KX2, or Electraft T1 Tuner) in mind. The leftmost is a 53 foot endfed wire with a 9:1 unun in the floss container. There's about 2-meters of RG-174 for feedline. This antenna will tune from 80m to 6m and is easy to put up over a branch or with a telescopic pole as an inverted vee. The antenna on the right is one that many KX2/3 folks use – a BNC to binding post with two "random" wire lengths of 24 to 28 feet as suggested by Elecraft – one wire up in the air and the other laying on the ground – it tunes bands 40m and up.



**What does a Portable SOTA Station Weigh?** Steve-WGØAT shows us his four portable stations: KX2, MTR3b, ATS4 & MTR5b – all packaged up with the radio, key/paddle, battery and antenna. Each is ready to deploy except for an antenna support. If headed above timberline or treeless summit he would add a mast (which is often in his pack already). The MTR3b's waterproof plastic case weighs almost more than the contents but worth the protection if caught in wet weather! Note the KX2 package weighs twice any of the others but offers more capability with both CW and SSB and eight bands over just three or five!


**Book recommendation by John-K7JRO – *Guide to 100 Peaks at Mt. Rainier National Park* by Eisenberg, Yore and McClure –**
"Not all of these 100 are SOTA peaks of course, but it is a very nice format and guidebook. It is an interactive guide to peaks in the Mt. Rainier area. The maps link directly to CalTopo and you can download the waypoints and tracks. Lots of really good information and this could very well be the format for future guide books. Click on either of the two links on the web site for the online version. Note that it states 'An online version is available free to all Mountaineer members, a perk of membership.' But the links open up the online version."
https://www.mountaineers.org/locations-lodges/seattle-branch/committees/seattle-climbing-committee/100-peaks-at-mount-rainier-info/guide-to-100-peaks-at-mount-rainier




**Another book that relates to SOTA is *Hiking Washington's Fire Lookouts* by Amber Casali –** Many SOTA summits have fire lookouts or are former lookout sites. Here's another resource for all those climbs you want to do in the Washington Cascades.
https://www.amazon.com/Hiking-Washingtons-Lookouts-Amber-Casali/dp/1680510606

For the rest of the region, there's Rex's Forest Fire Lookout Page with detailed maps and information of active and former lookout sites for Oregon, Washington, Idaho, Montana, Wyoming and even South Dakota. There's also a single page with some information on British Columbia Forest Fire Lookouts.

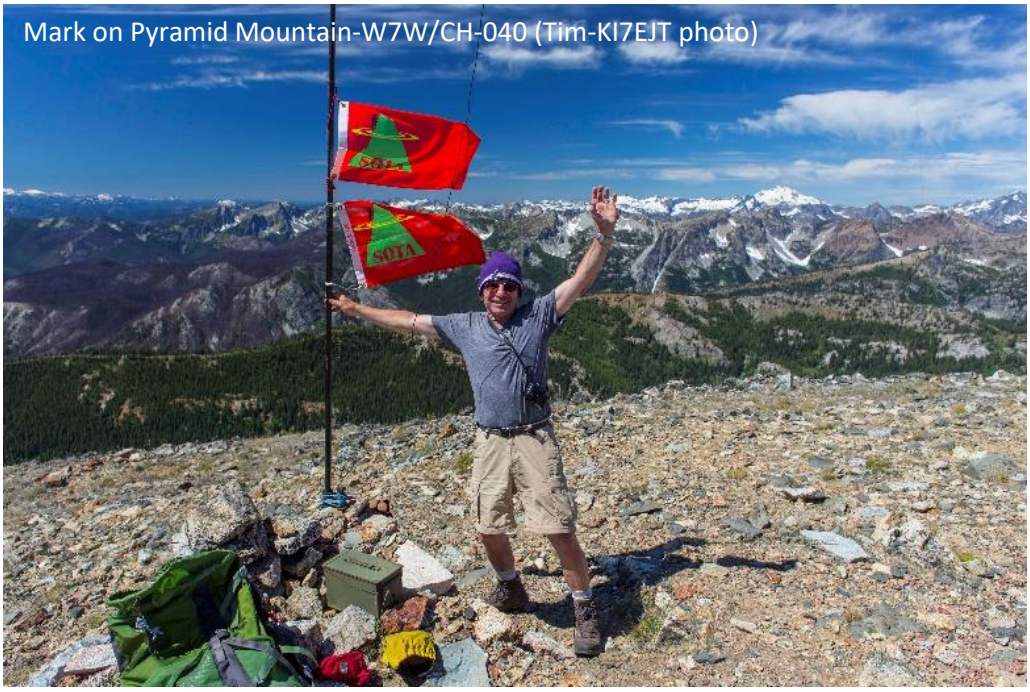
**Congratulations to Mark-K7MAS on Achieving SOTA Mountain Goat! Well Done Mark!** by Tim-KG7EJT

Mark-K7MAS started his SOTA journey in September 2011 and after seven years of effort, activating 156 summits has resulted this August in 1000 points for Mountain Goat. Congratulations to Mark!

Starting out as many do on 2-meter FM, Mark soon turned to HF for his summit work. His first activation was a ten-pointer in Nevada, and his final activation for MG was an eight-pointer in Mt. Rainier National Park - Tamanos Mountain. All told he activated 100 unique summits for the award and made almost 1,500 contacts - an average of about 10 for each activation.

Israel, Spain, Switzerland are included in Mark's activation history along with six US states, with the majority of his effort right at home in Washington.

I (Tim) met Mark on a local repeater in the spring of 2015, and we became "SOTA buddies" through our mutual enjoyment of the great outdoors in the Pacific Northwest. Mark's attitude towards the objective of Mountain Goat is true to the header on the SOTA Activator Roll of Honour, which states, "SOTA is not inherently a competitive activity, it's about individual aspirations and working towards a goal at your own pace."



Mark on Pyramid Mountain-W7W/CH-040 (Tim-KI7EJT photo)

I've had the pleasure of Mark's company on many joint Activations. We've experienced some challenging activations, complete with swarming insects, excessive heat, limited water, forgotten power cords, and route-finding challenges. Despite these obstacles, we've always had a heck of a good time!

As joint Activators, Mark and I were destined to succeed on every joint Activation using a simple strategy; Mark deployed HF, while I would set-up a Yagi for 2-meter FM. With this approach we shared the load, and shared radios as needed to make the required contacts. There were occasions where we almost yanking the microphone from each other if one of us snagged a contact in a remote area! Some tense moments, all for points!

I want to thank Mark for introducing me and mentoring me with SOTA, and ham radio. It's been a fun and fascinating journey, and I look forward to many more SOTA Activations with Mark, his XYL Sharon, and Dexter the SOTA Dog!

**Darryl-WW7D Achieves SOTA Mountain Goat on East Faye Peak** by Etienne-K7ATN

Another Mountain Goat has joined the tribe, again in Washington, when Darryl-WW7D crossed the 1000-point barrier on a first activation of East Faye Peak-W7W/RS-021. That climb was particularly challenging as only a 'bootpath' leads to the Class 2 scramble on the rotten rock ridge of East Faye.

Darryl started his Summits on the Air quest in August 2014, making over 3,500 QSOs during about 230 activations from six states. Over four years he activated 124 unique summits, with a bunch of his contacts made on 50MHz up to 1296MHz – supporting his interest in VHF/UHF and Microwave frequencies. As the Association Manager of W7W, he's been encouraging others to get out and activate the many beautiful peaks in Washington and getting attention from VHF/UHF operators by operating from peaks around W7W.

As I (Etienne) introduced Darryl to this radiosport, I fear I am complicit in infecting Darryl with the joys of mountaintopping for Summits on the Air. And mountain tops contribute to his interest in frequencies VHF and above, as high points rule for miles and miles of Line of Sight paths on the high bands.

Not just an Activator for Summits on the Air, as a Chaser Darryl has accumulated almost 14 times the points needed for a Shack Sloth award, and is #1 in W7W for Summit-to-Summit, having exceeded 1,600 points for that recognition. On the 23cm band (1296 MHz) Darryl has over 6,900 km of total contact distance during 102 SOTA QSOs – and we don't have a good way to check what he's done on 902 MHz!


Darryl on Mt. Lillian W7W/CW-036 (Dave-KI7YQV photo)

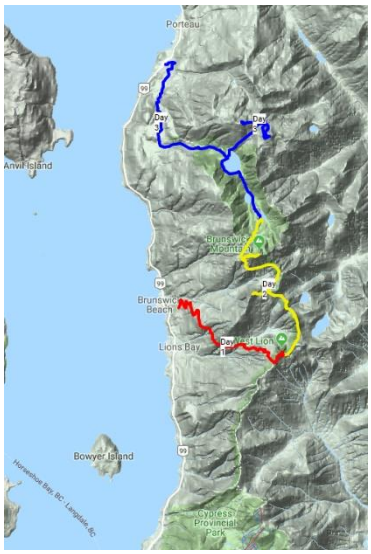
Here's one of Darryl's recent activation stories, typical for an experienced activator looking for a new way up a peak:

*"…and what an EXCELLENT day it was. I have never done Pyramid Peak (W7W/CW-050) before, and decided to try ascending a trail mapped on the north ridge. Actually, there <u>used</u> to be a trail, but it is no more and I ended up doing the greatest scramble / bushwhack up a really steep ridge. My buddy Dave-KI7YQV, in the meantime, traversed around to the south side on the Pacific Crest Trail (PCT) and walked up a very tame trail on the south ridge, arriving as I was finishing up with my activation. We went down the south ridge, and then drove a few miles, and picked up the PCT again at Green Pass, a couple of trail miles from Blowout Mountain (W7W/CW-045). It was a fun summit, and really easy. I was right on the East/West divide of the Cascades and worked people in Eastern and Western Washington on 2 meters with great (but smoky) views in both directions. I also picked up two S2S QSOs on 2 meters at 4:30pm!"*

Darryl is well known in the Northwest for his “Rover” (mobile) efforts for VHF contesting and also HF achievements for events like the 7 Call Area QSO Party (7QP) and the Salmon Run with many First and Second Place awards. His VHF Rover set-ups are famous – you would absolutely know his rig anywhere once you’ve seen a stack of antennas in the pickup bed AND another hanging off the front bumper.

Darryl is a great asset to Summits on the Air and we wish him many more rewarding activations on all bands, with wavelengths both short and long.

**Howe Sound Crest Trail Traverse** by John-VA7JBE




In Mid-July I set off on the Howe Sound Crest Trail (HSCT) with my friend and former co-worker Carmi. The trail runs north to south along the closest mountain range west of Howe Sound. Over three days we hiked 34 km (21 miles) from one end to the other at the height of summer heat and, just for kicks, climbed to the top of every summit along the way. Overall we climbed (and descended) 4000m (13,100 feet) across eight peaks and activated five of them, three of them for the first time, all on VHF FM. I racked up 20 points and checked into the Wild Card Net on our first night while camping between the East and West Lions. After the first day we had the whole trail to ourselves and didn't see anything larger than a Raven until we exited at Porteau Cove. Unfortunately (or fortunately) we didn't see any bears, though we did encounter a large number of well stripped blueberry bushes along the way.


Mt. Brunswick VE7/SL-115

The HSCT is an excellent example of the rugged and often vertical beauty that lies just beyond sight of the city of Vancouver. It is an area dense with SOTA summits and a worthy objective for anyone with a radio and a sense of adventure. Because we were traveling light and fast I only brought my 2m/70cm portable with a quarter wave antenna and left my HF gear at home. Despite this, I was able to drum up enough action to qualify every summit that we visited. I was even able to set a new personal distance record of 185 km with KB7PYF from Mt. Harvey (VE7/GV-024) as well as getting some aircraft scatter from Eric VA7NX from Deeks Peak (VE7/SL-027). An absolutely fabulous expedition and one I won't be forgetting anytime soon. There are lots more spectacular photos and trip details to be found in John’s blog here.

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*Your ideas for this newsletter are welcome – there’s a great crew making contributions and I appreciate every one. Share the newsletter with others or subscribe or unsubscribe by email to climb2ski@gmail. This newsletter is brought to you by the W7O Association Manager, Etienne-K7ATN. Find back issues here:* www.pnwsota.org/content/pacific-northwest-sota-newsletters.