

Pacific Northwest SOTA Newsletter



October-November-December 2026

photo by Amy-AG7GP

It's the Season to Wear Blaze Orange

W7W SOTA Campout Recap: A Change of Plans, a Weekend to Remember by Corrinne-KK7ULL

Two weeks before our second annual W7W SOTA campout in August, wildfire activity and poor AQI near Curlew Lake tried to derail our plans, but SOTA ops are nothing if not adaptable. 😊 We pivoted to a safer location in North Bend and had an amazing time. While a few operators couldn't make the switch in locations, several new ops signed up because Valley Camp was closer to home. In the end, we had over 30 operators on site, filling camp with radios, food, laughter, and infectious SOTA energy.

Even though those of us who'd camped at Curlew Lake last year were disappointed to cancel our reservations, Valley



Camp turned out to be a great fit for our group this year. Run by two hams (Teena-K9HAV and Thom-K7FZO) who've hosted lots of Field Days, SalmonCon, and other ham events before, the site gave us easy access to nearby summits, plenty of space to spread out, and even an onsite a tower with a 10/15/20 meter beam and 2m/440 high gain vertical! Over 40 people gathered on Friday night for a potluck dinner and a chance to plan our carpools and activations for Saturday morning. Josef-KD7QOW took a group photo under the SOTA banner and Etienne-K7ATN led us in our SOTA theme song sing-a-long, Little Black Buzzer by Ivon Cutler. Some of us heard

the song for the first time and others had practiced it at the W7O campout in July.



On Saturday morning, teams of ops fanned out across the Snoqualmie Pass area and the airwaves were busy with summit-to-summit contacts. We also had two notable accomplishments that day. My mother-in-law Kaye-KD7SHV made her first SOTA activation at age 76, and Corey-KD7LX reached Mountain Goat on his first summit of the day! We celebrated Corey's achievement back at camp that evening by singing "Happy Goat Day to You" to the tune of Happy Birthday. It may just become a new campout tradition. 😊

Despite the last-minute location change and worries over AQI, this campout delivered everything we love about SOTA: a community of awesome people, outdoor adventure, and a whole lot of radio fun! Next year, we plan to head back to Curlew Lake and do it earlier in the summer, when there's a smaller risk of wildfires changing our plans.

73, Corrinne-KK7ULL

"Peak-up my Signal" by Darryl-WW7D

Recently, I was at home chasing a summit on 2 meters. I could tell the activator was talking to me, but I could not copy the audio well enough to get a signal report. I said to the activator, "peak-up my signal" a few times, followed by a few more seconds of transmission to give the activator the opportunity to peak-up my signal. The next day, I received an email asking what, exactly, I was asking when I said "peak-up" my signal and how this is done.

Peaking up a signal can be helpful when operating VHF, UHF and microwave frequencies. One reason is that on these frequencies, activators typically deploy small, movable antennas, whips, small Yagis, or portable j-poles. On HF, our antennas tend to be fixed in place making it more difficult to peak up a signal in the same way.

There is usually a big disparity between the activator and chaser in the antenna system and power levels being used. Chasers may run 50 watts or more on VHF+ bands and pump that power through multi-element rotatable beams. Activators, on the other hand, typically use 10 watts or less through either a small Yagi or a whip antenna. Activators usually have an elevation advantage, but that advantage may be completely nullified by obstructions, low power, and less effective antennas. This asymmetry means it is more likely the activator hears the chaser than the other way around.

Here is the key concept: *when the activator peaks-up the chaser's signal, it tends to work in reverse and maximizes the activator's signal at the chaser's end.* Here are some practical methods to do this while listening to the activator or, better yet, listening while watching the S-meter. Of course, you will want to open the squelch for this.

Location and Elevation

Move around, particularly to higher ground. Signal strength on VHF can change considerably over just a few feet. And over a few inches on UHF. You should find locations that maximize the chaser's signal strength.

Why does moving around a few feet make such a difference? In an ideal (isotropic) far-field antenna system the signal strength is simply a function of distance from the transmitter, the closer the receive antenna is to the transmitter, the stronger the signal. In the real world, signals bounce off buildings, mountains, the ground, etc. resulting in a multitude of

signals being received with different phases that depend on the extra distance the signals have travelled. Additionally, reflected signals may change their polarization.

When peaks and valleys of the overlapping waves meet at the antenna, they combine to make the signal stronger (constructive interference) or weaker (destructive interference). This phenomenon is called multipath interference. The two meter ham band has a wavelength of about 6.75 feet, so moving around in circle of that diameter is likely to find areas of peak constructive and destructive interference. So, keep in mind that small movements can make a big difference. In practice, moving around a larger area could produce even greater maximum signal strength. Elevation sometimes makes a big difference, so it is usually helpful to get as much elevation as possible. The same principle of multipath interference applies for elevation movements. In some cases, though, gaining elevation works by increasing the strength of the line-of-sight signal relative to reflected signals, reducing the effect from multipath peaks and nulls.

If you have an obstruction like, say, a large rock block, between you and the chaser, try moving around it. Here again, you will change the mix of direct and reflected signals being received. You may find a spot where a direct signal overwhelms reflected signals, or you may find the sweet spot where constructive interference peaks up the signal.

Antenna Polarization

Correct antenna polarization is incredibly important in theoretical antennas. Suppose you receive an S7 signal from a chaser while both of your antennas are vertically polarized. If you tilt your antenna 45 degrees from vertical, you should expect to lose $\frac{1}{2}$ S-unit (a 3.01 dB reduction). The polarization loss factor is $\cos^2(\theta)$, where θ is the angle of polarization misalignment between the transmitting and the receiving antenna so the loss in dB from polarization mismatch is $10 \times \log_{10}(\cos^2(\theta))$. Move your antenna to 60 degrees from vertical and that signal should drop to S6 (6.02 dB reduction). At 89 degrees the signal would be about S1, a loss of 35.2 db. At 90 degrees, the theoretical loss is infinite. In the real world, losses are not so severe. Typically, the chaser's signal will decline by several S-units with a 90-degree mismatch (try it!). This is because a signal will bounce off different things resulting in a multitude of signals at different angles of polarization. What is received at the activator's antenna are numerous signals at slightly different times, with different polarizations. Usually, matching the polarization used by the chaser's antenna will maximize the signal at the activator's antenna. It is worth a quick change from vertical to horizontal polarization to figure out what the chaser is using. Then, minor angle changes from there might make the signal a bit stronger.

Antenna Direction

Another important technique is to find the direction of strongest signal. When using a single element vertical antenna like a whip, if the best signal comes from holding the antenna vertically, then you are done with directional changes. Vertical whips are omnidirectional. If the best signal is horizontal, then you should swing around (keeping the antenna horizontal) to give you the best strength for the activator's signal. For line-of-sight signals, the peak will occur when the antenna is broadside (perpendicular) to the transmitting station. Likewise, if you are using a beam antenna, whether with horizontal or vertical polarization, swing it around to find the direction of peak signal strength. With a beam antenna, you can sometimes tweak the signal a bit by tilting the antenna slightly up or down. This is particularly noticeable if there is a ridge between you and the chaser. Tilting the antenna up a bit may maximize the signal. This is because the chaser's signal may reach you by knife-edge refraction over the ridge. Moving the Yagi up to point toward the top of the ridge (to match the so-called shadow angel) should maximize the chaser's signal. The direction that maximizes the chaser's signal may not be the direct path to the chaser. This is because signals bounce. A tried-and-true trick in the weak signal VHF+ circles is to use Mt. Rainer as a signal reflector. This can allow VHF+ communication across the Cascade mountains. Additionally, you can get knife-edge refractions *around* large mountains, making it seem as if you are communicating *through* the mountain. The take-home is that you can try pointing at large mountains, mountain ranges, ridges, etc. You might find a fortuitous path from (and to) the chaser. Here is the important thing: once you peak up a chaser's signal, *hold the antenna in that position* while you transmit. There is a good chance you have maximized the signal strength at the chaser's end, as well. The above list may seem like a lot of things to try in the short time the chaser is transmitting. But with a bit of practice, you can learn to quickly peak up a chaser's signal. Eventually, you will be peaking up the chaser's signals without really thinking about it.

Proper Execution

You've tried everything and the chaser still cannot hear you. Here are a few things you can check. These are not really "peaking-up" tips, but a few miscellaneous things, mostly learned from my own mistakes:

- Ensure you are operating at the highest power the radio has.
- Make sure you are exactly on frequency. If you bump the tuning knob by 500 KHz it will have an effect similar to cutting power.
- If your radio has different modes, check that you are using the correct mode. (I learned this the hard way after accidentally putting my Yaesu FT5D into digital mode.)
- Don't touch the base of the antenna with your finger. Some people habitually wrap their index finger around the antenna base on a hand-held radio. Doing so will probably change the antenna impedance and reduce the effective radiated power.
- When you speak, articulate clearly with proper audio modulation set in the radio. This is particularly helpful in SSB, where low or muffled audio will degrade your signal much like reducing power.
- Get high – Stand on a high point – a stump, a rock or a picnic table (safely, of course).

Every SOTA enthusiast—chaser and activator alike—has been in the situation where they needed that extra ½ dB to eke out a QSO. This is where the small, low power, highly portable VHF+ radios and antennas used by SOTA activators can have a real advantage. By knowing a few simple tricks, activators can usually manage to squeeze out that extra bit of performance that gets the job done.

Restricted Access Summits – by SOTA Management Team

There are many summits listed in the SOTA summits list that have restricted access. By restricted we mean that you cannot access the land or operate a transmitter without permission.

Not every country allows unfettered access to private land, in many countries you need to obtain permission from the land owner to access the land. Other reasons why you may not be able to access the land are:

- military installations
- proximity to a national border
- religious sensitivities
- science installations (radio astronomy)
- contaminated land
- and as already stated, private land

The SOTA summits lists every summit that has the required prominence for the association. That's the only requirement for a summit to appear on the list. A summit will be listed whether anyone can access it or not. The reason for this is the access limits are not permanent but subject to arbitrary change.

For example, a military installation can close, be demolished and access returns. Likewise, science installations can change their purpose or close. Private land ownership can change and a new owner may be happy to allow access. In the extremes, contaminated land can be cleaned up and access returned. It's even possible for borders to move.

If we only listed summits where there was known permission to visit, the summits team would spend their entire time adding or removing summits as the access restrictions changed. This would be an extremely wasteful way to run the program. Instead, every valid summit is listed and the SOTA rules make it very clear and plain that **IT IS YOUR RESPONSIBILITY TO CHECK YOU CAN LEGALLY VISIT THE SUMMIT**. We get regular requests to delete summits because they cannot be accessed. This is not going to happen.

As stated, all valid summits are listed, you have to ensure you can legally visit and operate.

The contaminated land reason may seem extreme but Mount Umunhum [W6/CC-052](#) was originally closed to the public due to waste, contamination and unsafe structures from a former Cold War RADAR station. Over the years there has been significant removal of contaminants and contaminated land and repair or removal of dangerous structures making the site safe to visit. It's been activated 177 times.

We will continue to list all summits that qualify whether they can be accessed or not. So please make sure you have permission to visit or that access is free before you visit a summit. Or you may end up being stopped by armed soldiers and police and subjected to detailed questioning about your activities like some Polish hams experienced in Norway recently.

Andy, GM4LLD, SOTA Management Team

Vintage Rigs -- The Ten-Tec Power-Mite by Josh-WU7H

In this edition we will take a look at Ten-Tec's very first assembled commercial radio offering - the Power-Mite. Ten-Tec was founded in 1968 by Al Kahn (K4FW) and Jack Burchfield (K4JU). They initially sold electronic modules and circuit boards that QRP enthusiasts could cobble together into a working solid state CW transceiver. In the late 1960's Ten-Tec put these modules together into an enclosure and the Power-Mite (PM) series was born.



Various versions of the PM were produced over the years. The PM-1 offered VFO control for 80 and 40 meters, with an option for 15 meters. The early PM-1 had a manual T/R switch and no sidetone. Input power was about 2W (output less than 1W). Audio was only available via 600 ohms 'headphone tip jacks' on the front panel. The cost was \$49.95 (about \$450 in 2026 dollars). The PM-2 added side tone, and the option to have the 20-meter band. Both the PM1 and PM2 had a crystal socket on the front panel for crystal control, making the rigs suitable for Novice class operators.

The PM3 was the last and most refined of the series. Input power was increased to 5W (around 1.5W of output power). The crystal socket was deleted, and integral break-in keying with adjustable delay (PM3A only) was added. The PM3A requires 12V 30 mA to receive, 450 mA to transmit. The cost for a PM3A was \$79.95 in 1970.

I recently acquired a clean and completely unmodified PM3A. What is it like to operate a PM3A? In a word, quirky! Like all my other vintage Ten-Tec rigs, the PM has a direct conversion receiver. Unlike a superhet receiver that rejects one of the sidebands, you hear both sidebands on a direct conversion receiver. When you are tuning in a signal, you tune 'between' the sidebands until you no longer hear the signal - this is called 'zero beating'. Unlike my other Ten-Tec rigs, the PM3A has no offset. This means that you have to very slightly change your frequency when you are receiving the other station, or you can't hear them. However, you need to be zero beat again before you start transmitting or else you will be too far off frequency for them to hear you. On all of my other direct conversion rigs, there is an offset control (basically a RIT control) - not so with the PM!

Another quirk is that you have to throw THREE switches to change bands, similar to a Mountain Topper. Then there is the tune-up procedure, which is reminiscent of tuning up a tube rig. You start with the load and tune controls fully clockwise, then you switch to 'tune' mode and adjust the tune control for a dip in the current (as indicated by the meter on the front panel). You alternate between increasing the load and adjusting the tune while looking for the dip. You also have to adjust the 'recv' control to peak up received signals.

The rig is a little drifty until it fully warms up, but it works quite well. The audio has that smooth direct conversion sound. There is no adjustable filter, so you hear everything within 2 KHz. Despite only putting out about 1.5 watts, I have been making QSOs without too much trouble. I plan to try the PM3A on a SOTA summit soon - watch for my spots!

Financing of SOTA – by SOTA Management Team

There has been much discussion about the facilities provided by the SOTA Management Team and the availability of these services to everybody free of any direct charge. It may come as a surprise to some that these IT facilities do cost a great deal of money to provide. Currently we supply and actively support the following:

- SOTA website
- SOTA spotting and alerting facility
- SOTA Reflector

- SOTA mapping project
- SOTA database
- SOTA shopping site
- Mobile phone spotting
- and much, much more that is not immediately obvious.

Supporting these facilities are a small number of professional IT personnel who provide their services free of charge, just because they enjoy SOTA. These facilities have to be supported on professional, and therefore costly, servers and these are funded by the Awards scheme, merchandise sales and donations.

Over the years we have managed to build a small surplus from Award and merchandise sales (based on our exclusive use of our Copyright and Trademark logo - something that seems to escape the notice of certain bodies who recently have pirated the logo for their own commercial ends) and the very generous donations made by a few participants. That surplus is now being eroded by the need to utilise increasingly expensive servers around the World and provide redundancy as necessary to support the demands made on the IT facilities.

We do not wish, *and have no intention*, of charging for the SOTA services so now I am appealing to the greater community to help support the Summits on the Air awards scheme. You may not collect Awards and have no great interest in the merchandise but it would help us all if you were to find it in your ability to **make a small donation** towards the ongoing costs.

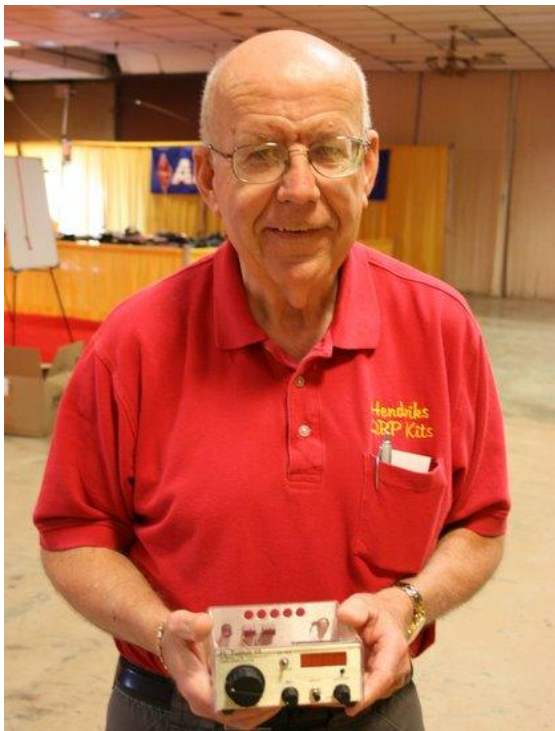
Relevant pages can be found at the following URL's:

Merchandise & Awards: [Categories](#) | [SOTA Awards](#)

Donations: [Donations](#) | [SOTA Awards](#)

Thank you,

Barry GM4TOE, on behalf of the SOTA Management Team



Doug Hendricks – KI6DS, SK

Many thanks to those who reached out to tell me of the passing of Doug-KI6DS.

I knew Doug for nearly two decades, and he had an absolute passion for QRP and for making the world of amateur radio affordable and educational through kits. Over the years, I've purchased so many kits from Hendricks QRP Kits and other ventures he's been behind.

I saw him almost every year at FIDM, where I'd get a full update about his life—and especially the connection he made with grandkids, giving them a brush with the world of making things. He was tireless and always promoting QRP. Earlier this year, he invited me to present at Pacificon, which sadly I couldn't do because of a scheduling conflict.

Doug was first licensed in 1976 and went on to co-found the NorCal QRP Club in 1993, serving as a driving force behind their kit programs that produced well over 20,000 kits. He was inducted into the QRP Hall of Fame and served as Master of Ceremonies at OzarkCon for many years.

I'll miss Doug personally—for the conversations at FIDM, the encouragement he offered quietly over the years, and the way he made room for newcomers in our hobby. There are few in QRP who haven't benefited from what he gave us.

72 de Thomas – K4SWL

One to GO!!! The First to Activate All States, Tom-K6TAA, by Fred KT5X

My good friend Tom-K6TAA, has been on a multi-year quest to do a Summits on the Air, SOTA, activation in every state (that has a SOTA peak). After several years traveling in his van camper with his wife, sight-seeing, visiting relatives and friends, all the while ascending peaks, the quest has almost resolved. He needed three more states, Washington, Alaska, and Hawaii. Tom's wife was all in for Hawaii, but less excited about climbing a Washington peak probably in the rain, or an Alaskan peak, in the rain AND cold. She wanted someone to go with Tom, and I was "elected."



Tom-K6TAA on Blowout Mountain in Washington State



Josh-WU7H, Darryl-WW7D, Fred-KT5X, Tom-K6TAA, Derek-W7DLZ on Blowout Mountain

We thought it would be appropriate to commemorate these final peaks in the unique quest with the special events 1x1 call-sign, NOB. This call sign was first used/obtained by Guy-N7UN, in 2010 for a SOTA outing which we called "The Rocky Mountain Rendezvous." This took place three years in a row during which many "fourteeners" in Colorado, peaks over 14 thousand feet elevation, were first activated.

Tom and I set out for Washington and Alaska on August 21. Washington super activators, Josh-WU7H, and Darryl-WW7D, were our guides. We were delighted to also be joined by Derek-W7DLZ.

We were thwarted from our planned peak by wildfires in Mount Rainier National Park. Instead, Josh and Darryl guided us to Kelly Butte. It was a great hike; steep, good trail, and enveloped in clouds.

After the successful activation for Tom and NOB, we climbed Blowout Mountain. By then the clouds were partially clearing and a remarkable view revealed!

We culminated our Washington weekend at a bar/restaurant in Enumclaw. Enumclaw seemed to me a curious name. It is a Native American Salish term that translates to a "loud, thundering noise," or a "place of evil spirits." I thought the "spirits" at the bar were quite good!

We were joined there by Guy-N7UN. Guy was the first to use the special events call, NOB, for a SOTA outing that we called, The Rocky Mountain Rendezvous. He wore his NOB T-shirt from that outing labeled 2010. The comradery and warmth shared by these six SOTA activators made for a special two hours together none of us will soon forget. This

group collectively have activated over four thousand peaks, climbed over four million feet of ascents at elevations exceeding fourteen thousand feet, in every state (that has a peak), and quite a few peaks abroad as well.

On Sunday we flew on to Anchorage. There we were met by SOTA ops, Bobby-AL5KA, and his wife, Amy-KL5LW. Bobby is quite an adventurer! He became the first SOTA op to activate Denali, 21,310 ft (6,190 meters). He was a para-jumper in the military, which led to both he and his wife learning to parasail. He also scuba dives in the frigid Alaskan waters. He emailed me recently to tell me he had just surfed the tidal bore in Cook's Inlet. Cook's Inlet has a 40-foot tide!

Bobby and Amy guided us up two peaks. The first is above their ski basin. It is called Rendezvous Peak, and is listed at 4,010 feet elevation. It is impressive rising from sea level. We managed to have day with plenty of clouds, humidity, but no rain. Good fortune. The mountain is covered in mid-calf high blueberry bushes with plenty of blueberries which also drew plenty of local blueberry pickers. There was a good trail up, albeit steep. We wouldn't have wanted it any other way. Tom activated on both HF and 2 meters as Bobby had alerted locals of our intentions.

This activation put, Tom, K6TAA, who will soon be first to do an activation in all states, Bobby, AL5KA, first to activate Denali, and Fred, KT5X, first mountain goat in the Western Hemisphere, all on a peak together. A SOTA celebration!



N0B / KL7 team: Amy-KL5LW, SCUBA-SOTA Pup, Bobby-AL5KA, Fred-KT5X, Tom-K6TAA

We hiked on to KLA/AN-167, Gordon Lyon Peak, for a second activation. From there we logged a group of stations from Japan, and Tom was even chased by a station on Taipan! Following the activation, Amy took a short-cut off the mountain. She flew down to sea level from our 4,000 ft elevation!

Our two-state quest was successful, but we weren't done. The next day the clouds and rain returned. Determined, we drove two hours south toward Seward and the one glacier in Alaska that can be approached by land. It is called Exit Glacier.

This is a national park. We stopped at the ranger station and asked if we could get right up to the glacier. We were told, no, but we could go to an

overlook several miles up the mountain, called Marmot Mesa. We headed up while enduring on again off again rain and mist.



Most of the way up the very good albeit steep wet and muddy trail, I stopped to more closely examine a mushroom. I recognize and collect edibles. As I bent over beside a barrier of thimble berry bushes, a bear poked his head out from behind the leaves and huffed at me! He wasn't more than two arm lengths away.

Mostly interested in the thimble berries and only wanting to be left to his feast, he pulled back into the thicket to resume eating. I said, "well, if this is your spot, I'll move on!" And left him to his berries while I walked away with an Alaskan bear story!

We reached the aforementioned overlook. Poking around I found a hardly discernible opening through dense undergrowth going down. The glacier was yet far away. I said to Tom, "if you're game, let's see where this might go until such time we feel at risk." He was game.

We went down, and down some more, muddy, slippery, be careful, let's go!

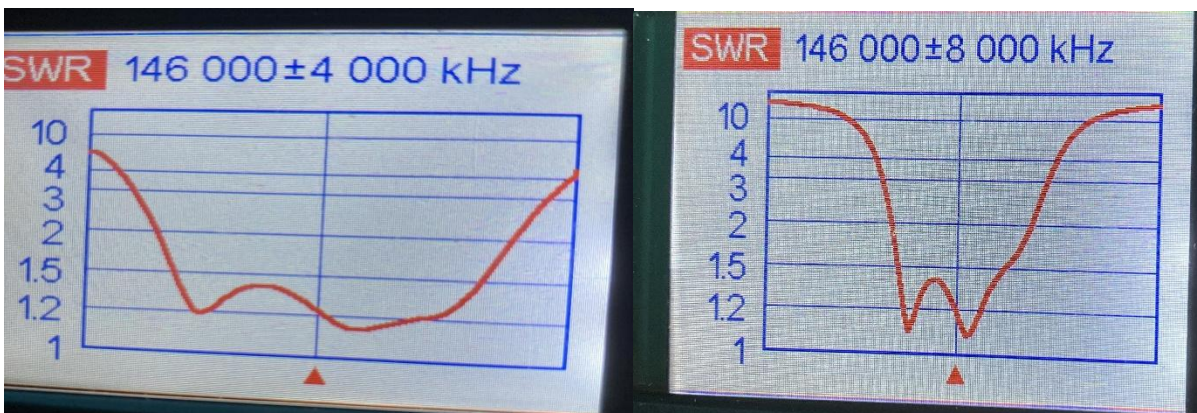
Then we burst out of the dense rain forest above the out wash of the melting glacier.

And at last, we were right up to the glacier. The glacier is melting. It has crevices, tunnels, streams coming out, not a good idea to mess with. "Don't push your luck!"

And then there was one. Tom has just one state to go, Hawaii. He has a plan. It will be mid-October. Look for N0B/KH6 and the final activation of the first AAS, Activate All States!
73, Fred-KT5X

SOTA Beams 2M Bandpass Filter Review - by Bill Jordens, WJ7WJ

Here is what my antenna analyzer showed for the bandwidth. Set up was the filter in series with a 50-ohm dummy load in the lab: 16MHz and 8MHz Bandwidth.



Here is a practical test I did on Cornell Mountain using my Yasu FTX-1 and the car antenna. As can be seen on the left image without a filter: s+10. The right image with filter s zero.



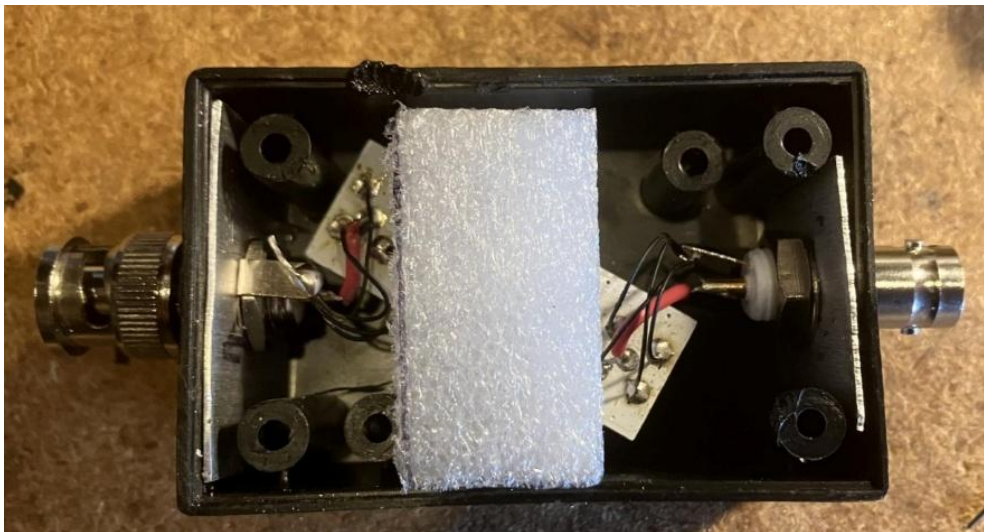
Later I went back up to Cornell Mountain on my bike and easily made actual contacts on 2m SSB. On a previous trip I was only barely able to make a couple of CW contacts from the summit due to no filter and the RFI.

What I don't like about the filter is its form factor. I like that it is small, but it has two SMA female connectors on each end.



So, I unpackaged and repackaged it with BNC male and female on each end so that I did not need adapters. The original package seemed to make the whole thing a little delicate when supporting a whip on top of an HT. Here are the images of that procedure.





Comparison of filter packaging:



There was a small increase in SWR in the lower end of the band. (If you think that is an issue, please read about SWR in your ARRL handbook or ARRL Antenna Book - also available at your public library.)



Caveats: Experience and the right tools are needed to remove the SMA connectors; too bad it is not offered as a kit. It would be easier to assemble everything else than to remove the SMAs. If you are wondering what the "right" tools are you don't have enough experience.

Conclusions: It works great, modified or not. If you operate on summits with commercial transmitters you will be glad to have it. The robustness of the modified version may not be worth the effort of the mods, but I am happy with it.