Microwave Activity Day

Up

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A small group of PNW Microwave operators joined together to activate 10 and 24 GHz bands on April 27 2025. Ray (W7GLF) and Frank (AG6QV) drove to Sequim, WA on the 26th to look for good places to operate with the expectations to make contacts with Dino (VE7NX) and Scott (VA7SC) in Canada. We drove to the top of Hurricane Ridge on Mount Angeles in the Olympic National Park. At the top there is a large parking lot that faces south (wrong direction for working the Canadians) and a small pawed path that leads to a lookout towards the north. The lookout was found to be in CN87GX03, but the first 50 feet of the path was still covered in snow as the altitude is about 5500 feet. We decided to be back the next morning before 9am to have enough time to carry the equipment to the lookout and setup in time for the planned contacts around 10am.

Back at the hotel in Sequim we checked maps to find other possible locations and found a candidate on the route to the top. This is called Morse Creek Overlook (appropriate name for a location to make contacts). The maps did not provide information to possible directions or if the place would be blocked by trees or other mountains. After breakfast we started the assent towards to top and shortly after the park entrance we stopped at a parking lot that was facing mostly east. We took a quick look at the view, at the time that was mostly clouds as we were at 789m or 2588 feet ASL or above the cloud coverage. There was a map indicating both Mount Baker and Victoria on Vancouver Island would be visible on a clear day. We decided that it would be worth testing the equipment from this location rather than driving to the top.

My 10 GHz rig is very easy to setup, tripod, radio and battery. It takes just a minute or two. I aimed it at the direction I thought to be Vancouver where a beacon was recently activated on 10,368.225 MHz (VE7SAR). Although my radio is fast to get from the car to an operational state it's also an older rig from 1991/92. Back then it was not common to use GPS locked system so the radio will not be on frequency. That does not matter too much if the direction is known or guessed. I usually bring a GPS weak signal source to test how far off frequency is radio is at any given time. It usually stabilizes close to the correct frequency in about 15-20 min depending on the ambient temperature, but is starts off about 15 kHz low.

We turned on the radio and started to move up in frequency. When the dial read 8.210 we were able to hear the beacon loud and clear. The beacon is located on a building in Vancouver and runs at about 150 mW. This was encouraging since we expected the other stations to be at a higher elevation with more power. We decided to

stay there for the day and unpacked the second 10 GHz rig as well as the 24 GHz rig.

A short voice recording of the signal from the beacon. No need to peak the signal, the first random direction was the right one.

Around 9:30am all radios were ready to make contacts. We did not have access to cell phone so we made attempts to communicate over FM repeaters, but the Canadians were not able to reach the pre-selected repeaters. The next thing was to start calling on the calling frequency and this turned out to work well. Within a few minutes we had completed contacts with VE7NX, VA7SC on the Canadian site (CN89JI60) and W7GLF and AG6QV on the American site (CN88HA53). The distance is about 147km and the signal strength S9+ on both sides. W7GLF then turned on the beacon on the 24 GHz radio and waited for the confirmation from the other side. Within a few minutes they came back on 10 GHz and asked us to switch to SSB. We were able to complete contacts with S5-S8 signal strength, almost FM like conditions on 24 GHz.

Dave (KG0D) who is located in Sequim about 17km to the east was also able to make contact with us on 10 GHz. At first we were reflecting off of something to the north, we only had enough signal strength for a CW contact. Later in the day we moved the antennas to point to Mount Baker on the Seattle site and was able to use sideband with strong signals.

Kirk (VA7RGM) located in Victoria also joined the fun. He was also pointing to the north east and was reflecting off of mountains in Vancouver. We were able to make SSB contacts with him. In addition there was a special event call used (VB7MAN) and we made connections on 10 GHz.

A final view from Morse Creek Overlook after the clouds cleared up a bit and after we were done operating. Time for lunch and the drive back.

A final thanks to Nick (N0CYT), Mike (K7MDL) and Paul (WA9BTV) for setting up equipment and making attempts to contact both groups. Unfortunately without success. Too many trees and other obstacles. We will make more activities like this in the future and hopefully get more stations activated.

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