

VHF Roving and Mountaintopping

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This presentation is
aimed at “Joe 706”

Why rove or mountaintop?

- CCR's
- Lack of space for antennas
- Mobile/Rover operations help develop paths, operating procedures, etc., for emergency communications

- It is FUN!
- You are nuts!
- You like to meet uneasy cops!

Roving

- Run and gun

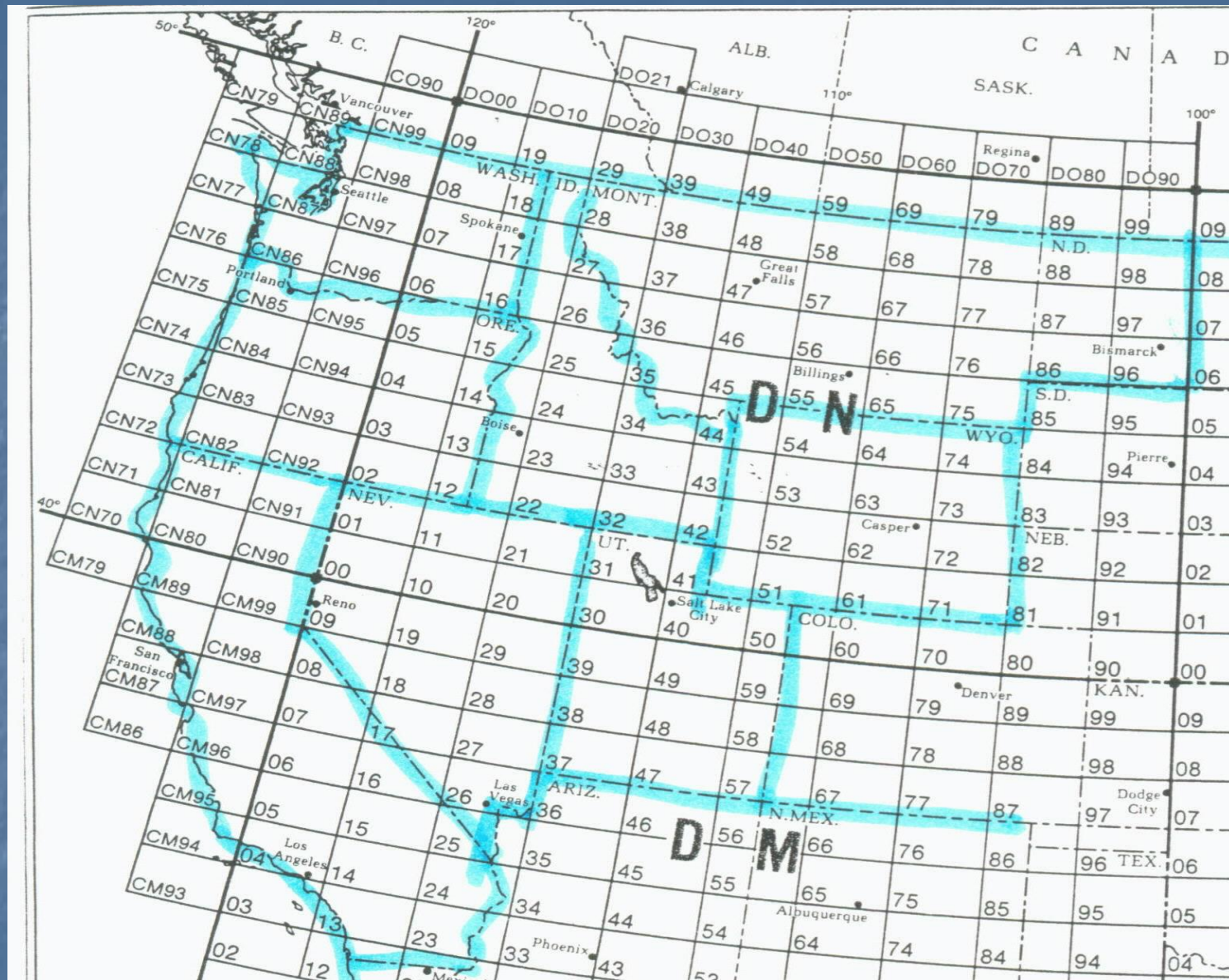
-or-

- Stop and shoot

What is a Maidenhead grid?

- 1 degree latitude by 2 degrees longitude
(Wider than they are tall)
- We are in CN87
- Many scarce grids are in close driving range





Mountaintopping

- Operating from a single fixed location
- Usually from a rare grid
- Much more comfortable way to spend your time

I will talk about:

- Strategy
- Equipment
- Power
- Antennas
- Navigation
- Logging

Most activity is during contests, but “Grid-Xpeditions” can generate incredible amounts of traffic

Grid-Xpedition

- Pick a good place and go there
- Make sure it is on high ground
- Notify people in advance
- Try to anticipate good operating conditions
- Stand back!

The contest!

Object: Make as many contacts on as many bands with as many grids as you can

- Operate either fixed or Rover
- Rovers compete with only other rovers
- Many stations mountaintop in June and September

The contest!

Contests are a good chance to:

- Get feet wet in contesting
- Learn VHF/UHF capabilities
- Put 6/2/440 SSB to work on that new radio
- Work new grids

The contest!

- Rules are in QST and on web.
- Work stations in all available bands once, other than rovers, regardless of mode
- FM is fine
- Exchange is "N7CFO, CN87"
- You may hear "CN87 rover", etc.

Contests

- Everybody is willing to help out with locations, advice, etc.
- There is a tremendous feeling of “Community”

Contest Strategies

- Sit at home
- Mountaintop
- Rove

Prime rover/portable locations

- Rainout Ridge (up behind Carbonado)
- Mt. Pilchuck
- Buck Mt.
- Mt. Crag
- Paulina Peak (South of Bend, OR)
- Lion Rock

- Steptoe Butte
- Ryegrass rest stop (I-90 east of Ellensburg)
- Frenchman's Ridge (east of Vantage – on a grid line)

- Mt. Hebo
- Mary's Peak
- Forest Service lookouts
- Look for cell phone towers

Go to N7CFO.COM for more

Pacific Northwest Rover and Mountaintop Locations

(Last update August 10, 2008)

These are proven Pacific Northwest VHF operating locations. Many of the descriptions and driving directions listed were provided from memory by various VHFers, so please remember that they may not be absolutely accurate.

I have listed known factors about these locations. Since this information may change, please email me at [n7cfo\(at\)n7cfo.com](mailto:n7cfo(at)n7cfo.com) and provide me with updated information if you visit these locations. You will note that I have listed several closed locations or locations that were not successful for one reason or another. I think that it is important to do so - this could save another VHFer a wasted trip.

The "DeLorme" locations refer to the map page and grid in the DeLorme map books. If you provide information about a site, please specify the altitude in feet. The height above local terrain will also be helpful.

		CO72	CO82	CO92	DO02	DO12	DO22	DO32	DO42	DO52	DO62
		CO71	CO81	CO91	DO01	DO11	DO21	DO31	DO41	DO51	DO61
CO50	CO60	CO70	CO80	CO90	DO00	DO10	DO20	DO30	DO40	DO50	DO60
	CN69	CN79	CN89	CN99	DN09	DN19	DN29	DN39	DN49	DN59	DN69
		CN78	CN88	CN98	DN08	DN18	DN28	DN38	DN48	DN58	DN68
		CN77	CN87	CN97	DN07	DN17	DN27	DN37	DN47	DN57	DN67
		CN76	CN86	CN96	DN06	DN16	DN26	DN36	DN46	DN56	DN66
		CN75	CN85	CN95	DN05	DN15	DN25	DN35	DN45	DN55	DN65
		CN74	CN84	CN94	DN04	DN14	DN24	DN34	DN44	DN54	DN64
		CN73	CN83	CN93	DN03	DN13	DN23	DN33	DN43	DN53	DN63
		CN72	CN82	CN92	DN02	DN12	DN22	DN32	DN42	DN52	DN62
		CN71	CN81	CN91	DN01	DN11	DN21	DN31	DN41	DN51	DN61

Paulina Peak

CN93iq

(Last update December 30, 2001)

General. This is one of the premier operating locations in the state. Paulina Peak is the very top (and I mean the **VERY TOP**) of what was a pretty fair mountain until it turned into a volcano a few years back. The road to the peak is quite good, and passenger cars make it with no problems. There are no microwave towers in the way, and they even provide restrooms at the top. There are excellent paths in all directions with no obstructions. At the very top there is a gravel parking lot that will accommodate 15 or 20 vehicles. There is a high point to the SE slightly blocking the path, but other than that things are wide open.

Paulina Peak is in the Newberry National Volcanic Monument, a major recreation area in Central Oregon. Below the peak there are numerous campgrounds, at least two resorts and two large lakes. The resorts offer cabins, RV parks, showers, etc. [Map of Newberry Caldera Area in PDF](#). [Map of Newberry National Volcanic Monument in PDF](#). [USGS Map of Newberry Volcano area](#). [Washington State University Quadrangle Map](#). [Link to Photo of Peak from the north](#).

Driving Instructions: From Hiway 97 south of bend, Take the Newberry-Paulina road to the east. It is well marked. Go uphill about 11 miles to the guard station. You will have to pay a \$5 day use fee to park on the peak. These passes are available at the entry guard station or at the Ranger Station. The road to the peak is opposite Paulina Lake Campground at about mile 13. It goes to the right (south) Motorhomes and trailers are prohibited. This is a one lane road with turnouts.



Links to Newberry Volcano and Paulina Peak sites:

[USGS](#) [Descutes and Ochocho National Forests](#) [GORP](#)

Rove

- If roving, best to go north and south because grids are wider than they are tall
- Best to go south to north - less sun in your eyes.
- Start and end on high ground
- Trade off between operating and moving to another grid.
- Ideal rove would have high ground within seconds of the freeway.

High ground is important, but you can do well from low spots if the terrain favors it

- Kalama grid line
- Granite falls



Everything is a trade-off.
The idea rover rig would have:

- 100' tower
- Stacked Yagis
- 1KW on all bands
- 100 MPH capability on back roads
- A flush toilet

If you think you have really messed up on
Field Day - -

Try Roving!

Equipment

- IC-706 models
- Yaesu FT-100, etc.
- Kenwood TS-2000 & older variations
- Monoband radios
- Transverters

Weak Signal Frequencies

- 50.125 SSB & CW
- 144.200 SSB & CW
- 222.100 SSB & CW
- 903.100 SSB & CW
- 432.100 SSB & CW
- 1296.100 SSB & CW

CW exchanges are brief and slow,
so you can do well even if you
only can do 5 WPM

Don't worry, be happy....

There is a lot of FM activity on:

- 52.525 FM
- 146.580 FM (PNW STANDARD)
- 223.500 FM
- 446.00 FM
- 927.500 FM
- 1294.500 FM

Equipment

- Single vs multi band radios
- IC-706, FT-100, etc. have made major changes in rover operations. Mobile mounts make for “heads-up” displays which are a lot safer when moving.

Equipment

- With single band radios you can listen to more than one band at once
- Multi band radio has cleaner feedline and power set up
- Microphone confusion with multiple radios

Transverters

- Transmit – receive converters
- Use a multi band radio as an IF
 - This gives you all of the features of the IF radio
 - One IF can serve several transverters

Transverters

- 220
- 902
- 1296
- 2304
- 5.7
- 10 GHz

FM!

- Cheap and easy
 - Use your VHF/UHF rig
 - IC-3AT on 220
 - Converted 900 MHz rigs

Power

- Deep cycle batteries generally best
- Must be secured
- Terminals must be protected
- Vehicle battery - Take care to not kill it
- Generators can be used mobile
- Generators practical for re-charging batteries

Mobile Power

- Power surges when starting the engine may cause glitches
- Best to run heavy duty leads direct to battery - fuse both hot and ground leads
- If using vehicle battery, cigar lighter is only light duty

Navigation

- GPS is by far the best
 - Mark mountains as waypoints
 - External or dash antenna may be needed
 - Some Garmin products support Maidenhead grid system
- Maps may lie because of projection info

Navigation

- ToPo USA by Delorme
- DeLorme maps
- Thomas Bros. guide
- State freebie maps for WA and OR have lat/long
- Compass needed for heading info when stationery
- Have routes planned in advance

Logging

- Computer is fastest and easiest
- N3FJP logging software is the standard
- Carry back-up manual log sheets
- Can log into tape recorder, but is tricky
- Digital recorders put time/date stamp on recording

Antennas - mobile

- Mobile loops work well, and you gain horizontal polarization
- A lot of 220 MHz activity is on FM, so a 5/8 wave whip is a good start
- Major problem is mounting them securely. I prefer metal racks. Others use hitch or canopy mounts
- Mount tallest masts on left side
- High mounts catch a lot of brush

Antennas - Portable

All a trade off - gain/size/setup time

- 20' of TV mast will meet most portable needs
- Tripod mount smaller antennas
- 3 element Yagi excellent compromise for 6 meters
- Other bands, as big as you can carry/handle
- Quick setups include crank up towers, rack mounted TV masts & “pull over” mounts.
- Tag or color code all feed lines

Too much antenna?

Boomer Yagis have enormous gain

-but-

they are very narrow, especially on UHF!

Rover book

- Maps
- Rules
- Frequency list
- Route
- Emergency numbers
- Grid map
- NOAA frequencies

SO – what do these
things look like?

N7CFO/R











N7CFO/Stuck



N7CFO/P





KB7DQH/R



KU7M/R



N7EPD/P



N7EPD/P



N7CFO/P & KB7DQH/R



N7CFO/P & N7FYP/P









Resources

- N7CFO.COM
- <http://www.n3fjp.com/> (Software)
- <http://www.downeastmicrowave.com/>
(DownEast Microwave)
- <http://www.m2inc.com/> (M² Antennas)
- WWW.PNWVHFS.ORG

Pacific Northwest VHF Society

- Started September 2001 by myself and W7DHC
- Replaced an informal organization
- Washington, Oregon, Idaho & BC
- “Parent” organization.
- 120 members in six months, 409 now. One of largest in the U.S.!
- Low hassle - BOD does the work
- Web page

Pacific Northwest VHF Society

- Newsletter on line
- E-mail reflector – you don't have to be a member
- Annual conference in Seaside this year
- Serves as a Voice for PNW
- Membership applications here or on the web
- \$10 for membership for life
- No dues!

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