SOTA (Summits on the Air)

Eric Nystrom W4EON

Activators

Operate portable from a defined summit All equipment must be carried to summit Four unique contacts required for activation Points for summit are based on altitude Allowed to activate a summit for points once per year

Chasers

Contact activators Points same as activator points Allowed chaser points for a summit once per day

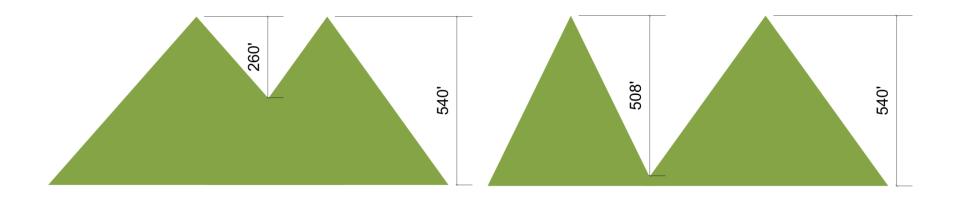
More info at

www.sota.org.uk www.sotawatch.org

What is a Summit?

One Peak

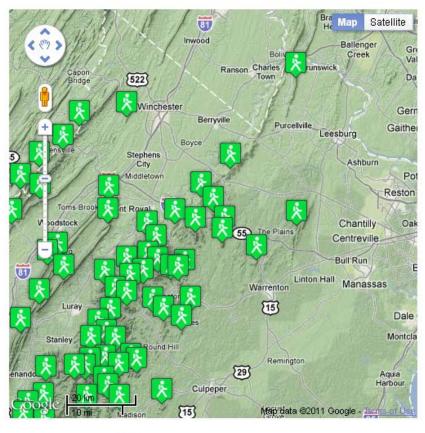
Two Peaks



The 500' Golden Rule

Virginia has lots of SOTA peaks

Naked Mountain - W4/SH-039



- County: Fauquier
- GridSquare: FM18aw
- Range: <u>Shenandoah(SH)</u> •
- Points: 1

- Coordinates: 38.919, -77.9833
- Height: 1470 feet
- Prominance: 560 feet

http://sota-w4-va.hamradio.me/

Fauquier too...

SELECT * FROM summits WHERE 1 AND County = 'Fauquier' ORDER BY name

Reference	Name	Height Meters	: Height Feet	Latitude	Longitude	Valid Start Date	End Date Points	Prom	Grid Square	County
<u>W4/SH-036</u> Big C	Cobbler Mountain	478	1570	38.8382	-77.9531	2011-02-01	2	880	FM18au	Fauquier
<u>W4/SH-030</u> Blue	Mountain	672	2210	38.9565	-78.0239	2011-02-01	4	1280	FM08xw	Fauquier
W4/SH-042 Little	Cobbler Mountair	440	1445	38.8679	-77.9447	2011-02-01	1	655	FM18au	Fauquier
<u>W4/SH-039 Nake</u>	ed Mountain	447	1470	38.919	-77.9833	2011-02-01	1	560	FM18aw	Fauquier
W4/SH-032 Rattle	esnake Mountain	654	2150	38.8648	-78.0434	2011-02-01	4	980	FM08xu	Fauquier
W4/SH-049 Signa	<u>l Mountain</u>	416	1369	38.8816	-77.7033	2011-02-01	1	799	FM18dv	Fauquier
<u>W4/SH-048</u> Wild	cat Mountain	417	1370	38.7925	-77.8391	2011-02-01	1	760	FM18bt	Fauquier

Upcoming Activations

new alert

Saturday 21st May 2011

- 18:00 AA5CK on <u>W5/QA-008</u> 10.106-cw,14.062-cw time approx, plan on a couple of hours, ssb if cndx ok (Posted by AA5CK)
- 19:15 W4EON on W4/SH-026 [edit] 14.275-ssb,144.200-ssb,146.470-fm 2 m at 19:15 and 20 m around 19:30 (Posted by W4EON)

Sunday 22nd May 2011

- 07:00 OE5HCE/P on OE/OO-332 145.500-fm,14.285-ssb,14.060-cw +/- 30min, +/- QRG in CW pse QRS QRS QRS (Posted by OE5HCE)
- 08:00 S57AX/P on S5/KA-013 145.575-fm,433.400-fm with S57CJ/P +/- UTC ??? (Posted by S57AX)
 - 08:00 E71DX on E7/BO-032 Depending on WX (Posted by E71DX) 14.060-cw,7.030-cw

Latest Spots		35 spots in the last 12 hours <u>new spot</u>		
Sat 19:48	W4EON/P on <u>W4/SH-026</u> In and out of noise in NM (Posted	14.2725 ssb I by KE5AKL)		
Sat 19:36	W4EON/P on <u>W4/SH-026</u> Eric here now with a wee bit QSB	14.272.5 ssb B but workable (Posted by MMOUSU)		
Sat 18:59	AA5CK on <u>W5/QA-008</u> Ted - 569 with QSB in MN (Poste	14.0621 cw d by NDOC)		

 Sat 18:37
 W4EON/P on W4/HB-036
 14.340 ssb

 *Spot[W4EON]: qrv now (Posted by SMS_NA)







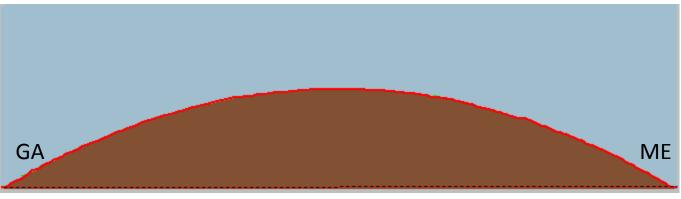
APRS Golden Packet

Bob Bruninga's combining of hiking, hamradio and packet radio.

John Huggins KX4O

Simple Goal

- Move an APRS packet the entire length of the Appalachian Trail. (Parallel effort on the Pacific Coast)
- Only one problem...



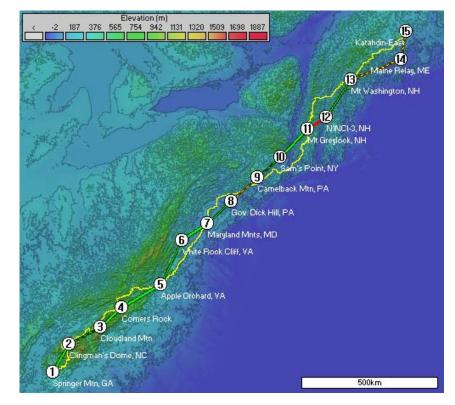
- Earth is in the way!
- Digipeating to the rescue.

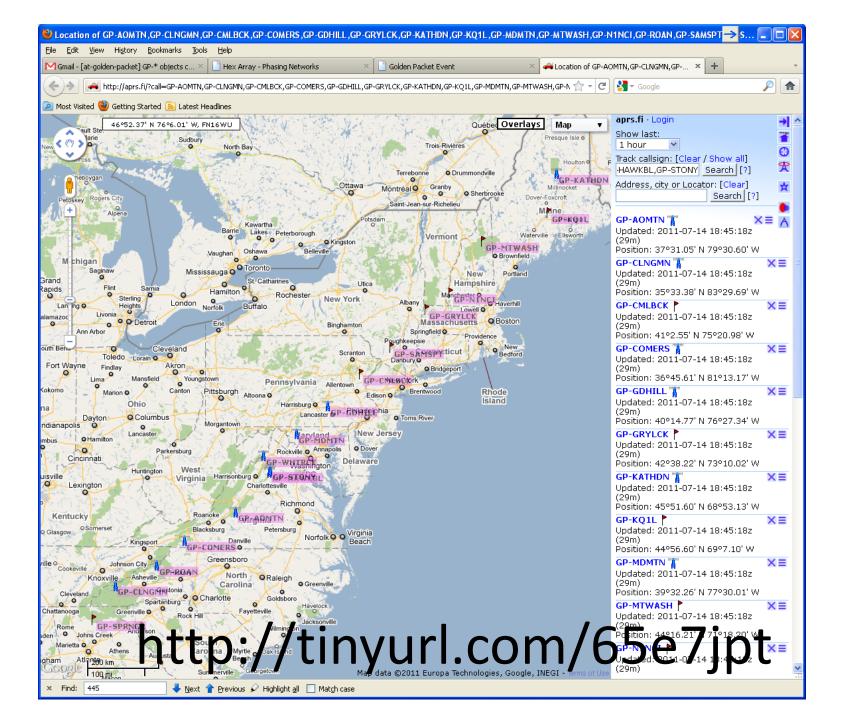
Requirements

- Pass packet from GA to ME and back.
- Line of Sight between stations No Sproadic E here.
- Kenwood D700, D710, D7 or the new D72
 - to attain tested sensitivity of -115 dBm
 - Yaesu equiv. might work also not tested
- Path set to HOP7-7, HOP7-7
- 144.340 Packet (the balloon frequency)
- 445.925 MHz station to station voice

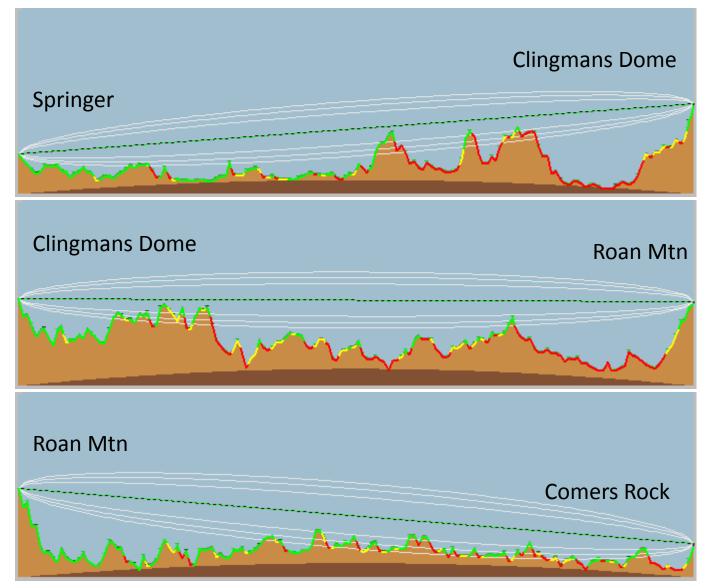
Break the problem into pieces.

Name	Latitude	Longitude	Altitude	Station #
Springer	34 37 36.0 N	84 11 37.5 W	1,146	1
Clingmans	35 33 08.4 N	83 29 42.0 W	1,777	2
Roan Mtn	36 06 15.6 N	82 07 57.6 W	1,881	3
Comers Rock	36 45 48.0 N	81 13 25.8 W	1,152	4
Apple Orchd	37 31 03.0 N	79 30 36.0 W	1,281	5
Wht Rk Clfs	38 58 24.0 N	78 35 30.0 W	913	6
MD Mtns	39 29 42.0 N	77 29 56.4 W	522	7
GD Hill	40 14 45.0 N	76 27 19.8 W	347	8
Camelback	41 02 33.0 N	75 20 58.8 W	642	9
Sams Pt	41 42 18.0 N	74 20 30.0 W	675	10
Greylock	42 38 13.2 N	73 10 01.2 W	1,057	11
N1NCI-3	43 02 00.0 N	72 22 02.4 W	459	12
Mt Wash	44 16 12.6 N	71 18 12.0 W	1,911	13
Maine Rly	44 56 36.0 N	69 07 06.0 W	152	14
Katahdin-Abol	45 52 25.8 N	68 57 49.2 W	397	15

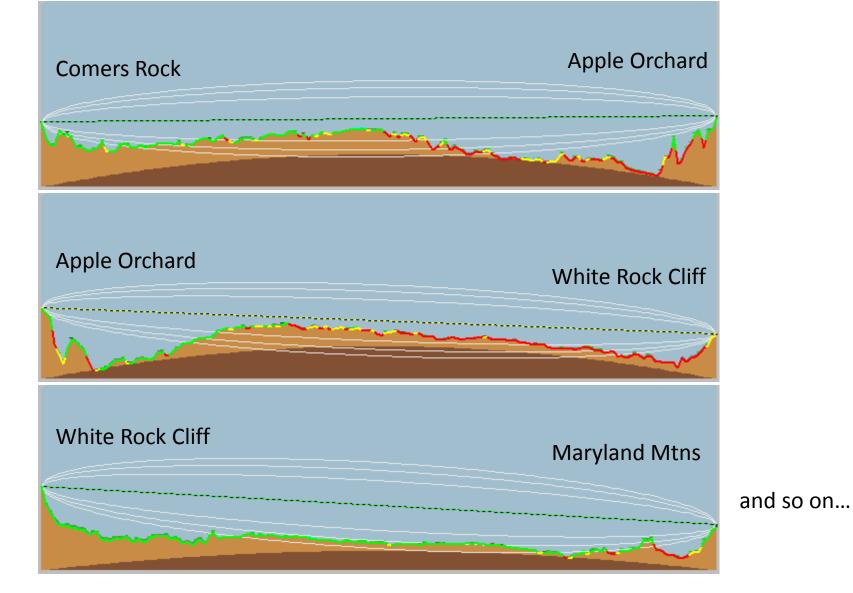




Links from GA to MD



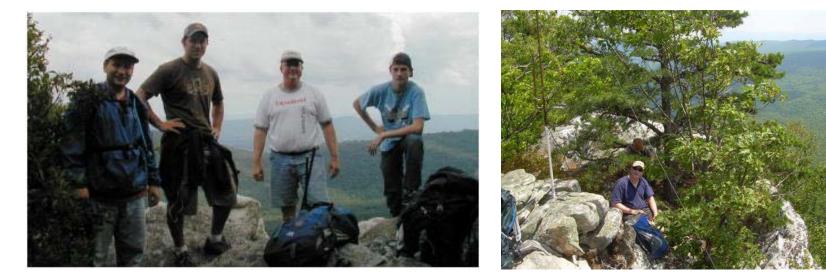
Links from GA to MD cont.



White Rock Cliff 2009-2010

2009 – Me, my son, and two hiking friends at the Cliff looking East

2010 – Eric and I Cliffside



The View from White Rock Cliffs



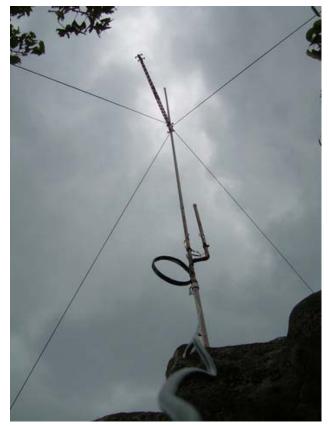
You should here 144.390 from up here!

White Rock Cliffs - Weather

Clear one minute...



...stormy the next.



More pics from 2010.

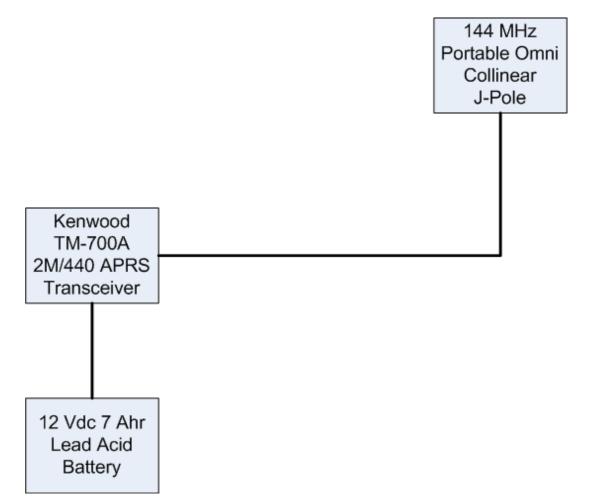
Eric and John under cliff-side tree...



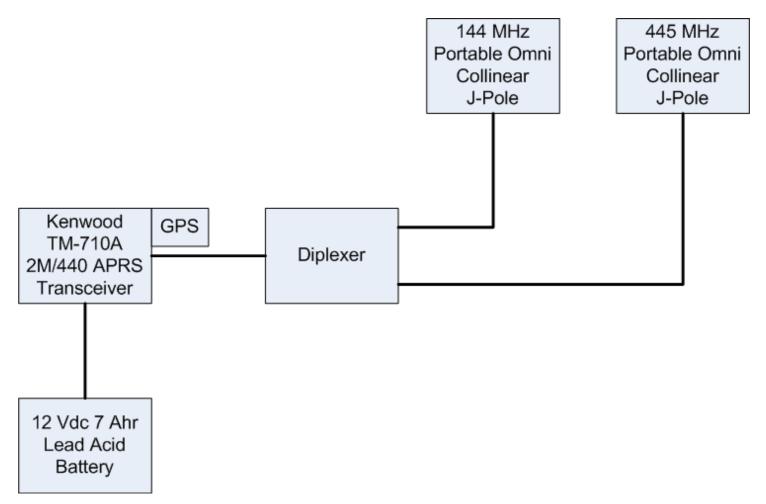
Team hiding from the rain and lightning in stone 'bunker.'



NOVA ATGP Ham Gear 2009/10 Single Line Drawing

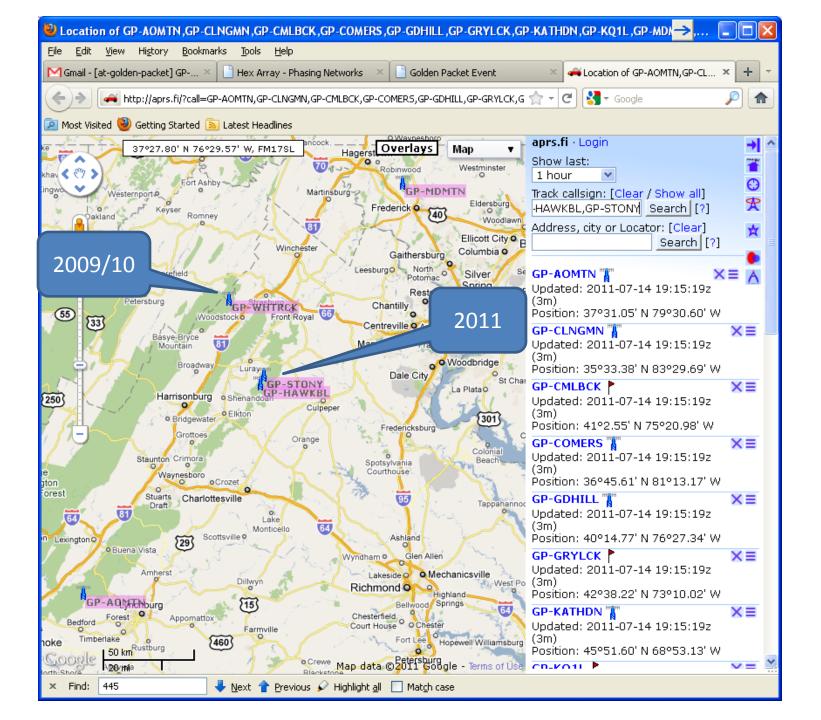


NOVA ATGP Ham Gear 2011 Single Line Drawing

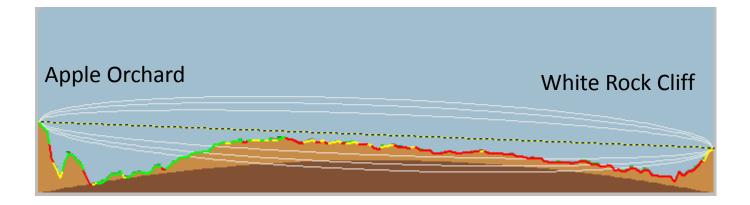


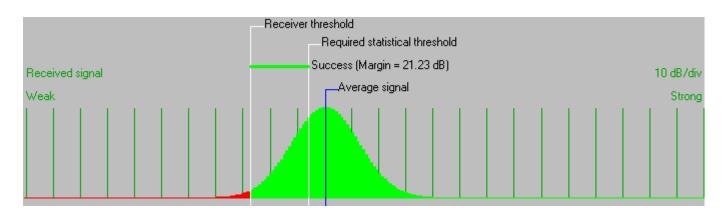
Alternate NOVA Station Locations

- Eric suggests Hawksbill or Stony Man peaks instead of White Rock Cliff
 - Closer
 - More inline with the AT
 - Shorter Hike
 - Hawksbill has a shelter available
 - Because we want to do something different!
- Can the RF links be made north and south?
 Let's see using Radio Mobile...



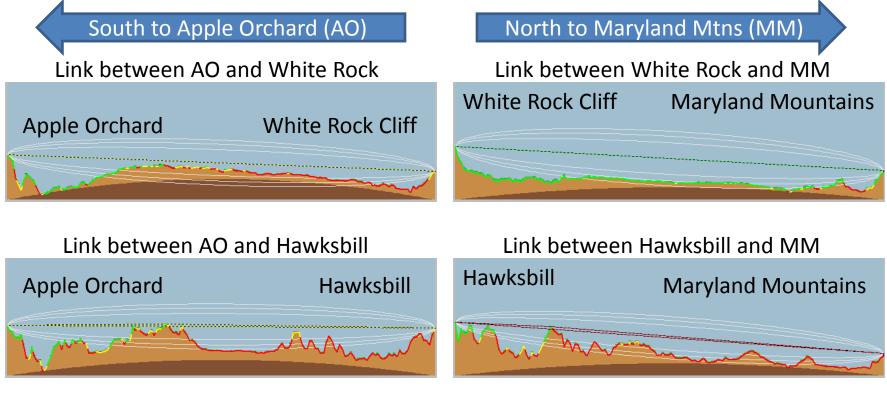
White Rock-South Analysis

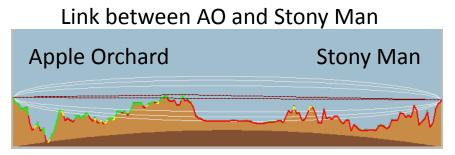


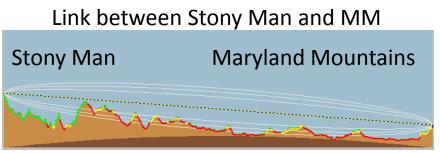


70% Probability the Packet will make it through + 21.23 dB

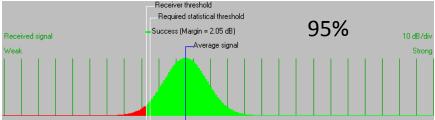
Terrain from NOVA

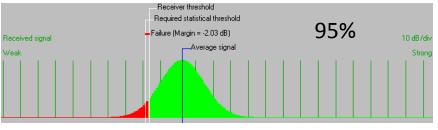






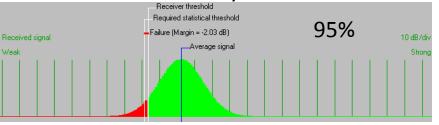
Link Probabilities from NOVA North to Maryland Mtns (MM) South to Apple Orchard (AO) Link between AO and White Rock Link between White Rock and MM Receiver threshold Required statistical threshold Required statistical threshold 70% 70% Success (Margin = 21.23 dB) Success (Margin = 10.34 dB) 10 dB/div 10 dB/di Received signal Received signal Average signal Average signal Weak Weak Link between AO and Hawksbill Link between Hawksbill and MM





Link between AO and Stony Man

Link between Stony Man and MM



ATGP 2011 Schedule

- When: Sunday July 24
- Information: <u>http://www.aprs.org/at-golden-packet.html</u>
- 0800-1100 Setup on Peaks
- 1100-1200 Station Checkouts
- 1200-1300 Golden Packet Attempts from Both Ends
 - using HOP7-7,HOP7-7
- 1300-1400 Digipeater Site to Site Messages
- 1400-1500 All other TRAIL hikers
- 1500-1600 Any other APRS or Packet Stations in Range
- 1600 Tear down and go home

How you can help

- Listen and record APRS packets received at your home on 144.340 for the entire event.
 This is extremely helpful
- See if you can hit us on 445.925 MHz Voice
- Eric may setup for SOTA so you can work him too for SOTA Chaser Points