

## CHAT - 03-04-21 Topic: Wk1 of 2 - Near Vertical Incidence Skywave-(NVIS) antenna

Speaker/Presenter: [Stan Broadway, N8BHL](#) Ohio Section Emergency Coordinator

View Video: <https://vimeo.com/519805579>

Download Video: <https://vimeo.com/user107547861/download/519805579/25173ff818>

Documents: <https://www.dropbox.com/sh/gfxzm0enoduokr0/AACs7rjHpjT2K38d-AH06pTBa?dl=0>

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**Past RATPAC Presentations:** Published Format- <http://tiny.cc/ratpac-list>

Menu Format- <http://tiny.cc/ratpac-ss>

### Text from Presentation Chat

- 19:12:49 From Jay KM4EP NC to Everyone: It was Harvey, in 2017
- 19:14:57 From Paul Tuttle to Everyone: I am using pop-up antenna wires up I 60-70 ft long up 10-12 ft AGL in 20M, 30M, 40M and 80M. The 20M/80M is a combo wire with a coil. I am attempting to get our each hour around the clock.
- 19:16:19 From Paul Tuttle to Everyone: Ice damage here recently destroyed many antenna wires. What can you put up in a hurry after a storm?
- 19:16:32 From Jim Price KO6GM CalOES to Everyone: During the Loma Prieta earthquake the county EOC in San Jose communicated with Santa Cruz over the hill with a NVIS antenna set on traffic cones.
- 19:17:15 From Jay KM4EP NC to Everyone: Wire antennas are not ideal if all the trees are blown down.
- 19:18:21 From Paul Tuttle to Everyone: I keep some 2x2 poles and wire, coax in a 5-gallon bucket. Take it out each week.
- 19:18:46 From Barry Porter, KB1PA, SFL to Everyone: you can use fishing poles o anything smi strut as masts without trees :)
- 19:19:02 From Barry Porter, KB1PA, SFL to Everyone: semi straight
- 19:19:12 From Oscar Resto KP4RF PR to Everyone: Correct
- 19:20:05 From Doug, Lynch, W4DBL, Port Orange, FL to Everyone: Just a comment, one of the continuing fights is someone wanting the antenna out of sight vs effective antennas. The backup for most now is an EFHW or Random Wire with a tuner. The hurricanes in FL will clear out most of the antennas if we get a good hit and these are quick to erect and easy to store.
- 19:20:28 From Paul Tuttle to Everyone: My proof of concept is weekly Winlink checkins to 4-5 nets on various freq. and bands (20, 30, 40, 80) so far.
- 19:21:26 From mike n2mn to Everyone: Check out ECARS net on 40m daytime to get a good feel for NVIS propagation - who can hear who - is interesting to observe
- 19:21:28 From Robert KD7WNV WA to Everyone: Your state QSO party (or those of adjoining states) presents a great opportunity to try out your NVIS configurations on 40 and 80 meters - a lot of hams on the air at various locations within NVIS range.
- 19:21:36 From Jim Price KO6GM CalOES to Everyone: I use a 135 ft. long wire along my fence line with a 135 ft. counter poise on the ground fed with a SG-230 coupler. It works fine for my Winlink RMS gateway.
- 19:22:13 From Jed N6JED - CA to Everyone: Question: What would be the best book for these antennas?

- 19:22:56 From Scott Ramirez to Everyone: Suspect on existing Inverted V Dipole would perform better for NVIS with the center lowered and the legs flattened.
- 19:23:27 From Paul Tuttle to Everyone: So far I am using resonant trimmed wires up 10-12 ft. Next I will try "random" length and tuner for multiple frequencies.
- 19:23:44 From Mike K6AMQ San Marcos to Everyone: Is there an algorithm or software program that does a good approximation for various frequencies, time of day, sun spots, etc., for using NVIS antennas.
- 19:24:14 From mike n2mn to Everyone: Yes that is true Scott Ramirez. Blue Elephant 8ft telescoping poles and get the center up to about 12-15ft
- 19:25:15 From Kev AH6QO HNL to Everyone: How much real estate does a 2259 take up?
- 19:25:45 From Paul KD7ISA OR to Everyone: For prediction I am just using Winlink and trial/error.
- 19:26:26 From Jim Price KO6GM CalOES to Everyone: We use this link:  
[http://www.sws.bom.gov.au/HF\\_Systems/6/6/1](http://www.sws.bom.gov.au/HF_Systems/6/6/1)
- 19:27:37 From Paul KD7ISA OR to Everyone: I use 70' x 40'. Big X with a line through middle.
- 19:29:03 From Steve KI0KY Colorado to Everyone: 60 meters is a good NVIS antenna, no contesting
- 19:29:04 From Paul KD7ISA OR to Everyone: I have gone 1350 miles on 20M; 8 mi, 148-941 miles on 40M.
- 19:30:12 From Steve KI0KY Colorado to Everyone: Near Vertical Incident Skywave Communication LTC David Fiedler MAJ Edward J Farmer is the NVIS bible
- 19:30:15 From mike n2mn to Everyone: <https://www.whitewolfsystems.com/wolf-tactical-nvis-fixed>
- 19:30:28 From Rick, KK6CTT CA to Everyone: If it is shielded, throw it on the ground and try it.
- 19:30:42 From John KG7WFQ WWA to Everyone: DX Engineering has a good inverted-V NVIS design in above attached file. I've made one and used with a folding tripod and 16' telescoping painters pole. Works great.
- 19:30:45 From Rob KA7ERV, Idaho3 to Everyone: Would you go over the east west orientation again please
- 19:31:24 From Rick, KK6CTT CA to Everyone: If it sort of works, then try raising it up at varying heights to get a better signal out.
- 19:31:51 From Steve KI0KY Colorado to Everyone: ON ground underground used by special forces to evade detection
- 19:31:53 From Steve KX4EF VA to Everyone: Check out NVIS: <https://static.dxengineering.com/pdf/WP-NVIS-Rev2.pdf>
- 19:31:55 From Dennis KI7CUS Oregon to Dan K7REX Idaho (Direct Message): DX Engineering has info on NVIS. "A Practical NVIS Antenna for Emergency or Temporary Communications". It is good information that can be downloaded.
- 19:31:57 From Mitch N0ISU Iowa to Everyone: painter poles or broom handles in 2 pickup stake pockets work great for emergency setup.
- 19:32:09 From Brian Daly WB7OML to Everyone: on the ground NVIS works well in areas such as the southwest US deserts
- 19:32:30 From Rick, KK6CTT CA to Everyone: As a military reconnaissance unit it was not uncommon to throw the wire out on the ground because it was fast and worked well with post fired claymore wire.
- 19:32:39 From Steve KI0KY Colorado to Everyone: 60 meters voce and digital on the same frequency no need to change

- 19:33:16 From Barry Porter, KB1PA, SFL to Everyone:  
[https://www.etsy.com/shop/QuirkyQRPHamRadios?ref=nla\\_listing\\_details](https://www.etsy.com/shop/QuirkyQRPHamRadios?ref=nla_listing_details)
- 19:35:06 From mike n2mn to Everyone: Correction Green Elephant - makes nice end poles 8ft long  
<https://www.amazon.com/Green-Elephant-Telescoping-Tarp-Poles/dp/B072K1B91Q>
- 19:35:45 From Steve KI0KY Colorado to Everyone: Can I speak I can not raise hand????
- 19:36:03 From Brian Daly WB7OML to Everyone: also, here is a paper on buried antennas  
[https://nvlpubs.nist.gov/nistpubs/jres/65d/jresv65dn1p89\\_a1b.pdf](https://nvlpubs.nist.gov/nistpubs/jres/65d/jresv65dn1p89_a1b.pdf)
- 19:40:07 From Paul KD7ISA OR to Everyone: Benefit of Icom 7300: set radio to a voice LSB frequency. Winlink will change freq (USB-D) for sending out msg. Then radio switches back to voice.
- 19:42:49 From Brian Daly WB7OML to Everyone: <https://region6armymars.org/downloads/NVIS-Antenna-Theory-and-Design.pdf>
- 19:44:40 From Mike, K7MYU to Dan K7REX Idaho (Direct Message): Dan my software does not show anything but one row of icons and there is no raised hand. I have a question. Mike
- 19:44:57 From Rick, KK6CTT CA to Everyone: GRA-50 military antenna.
- 19:45:10 From Doug, Lynch, W4DBL, Port Orange, FL to Everyone: Lots of the EFHW antennas use a 49:1 Balun
- 19:46:41 From Mike, K7MYU to Dan K7REX Idaho (Direct Message): Many years of field work and a major problem is that putting the antenna up and down results in kinking the antenna wire. How do you solve that problem?
- 19:48:10 From Paul KD7ISA OR to Everyone: Best two rules from the older hams: 1. Just put up wire.  
2. If you don't like your reception, move over some.
- 19:48:14 From Jim B.- N2JLF to Everyone: Have to run. Thanks for all the info. 73
- 19:48:19 From Brian Daly WB7OML to Everyone: <https://link.springer.com/article/10.1007/s11235-017-0287-2>
- 19:48:28 From mike n2mn to Everyone: US Army use whip antenna on hmmwv - bend back in the opposite direction of desired predominate direction. does well, similar concept to those WWII vehicles
- 19:49:26 From Brian Daly WB7OML to Everyone: Icom sells a commercial version of the army nviz mobile - a bit pricy however
- 19:50:01 From Brian Daly WB7OML to Everyone: [https://cq-amateur-radio.com/dayton\\_new\\_products/2014\\_dayton\\_new\\_products/antennas/2014\\_icom\\_Antennas.html](https://cq-amateur-radio.com/dayton_new_products/2014_dayton_new_products/antennas/2014_icom_Antennas.html)
- 19:50:19 From Jim, W2KFV, SM, NLI to Everyone: Nice job Stan. Very good presentation.
- 19:51:28 From Brian Daly WB7OML to Everyone: make that Icom sold it - now discontinued
- 19:54:07 From Marty AF5T SDG to Everyone: Excellent presentation

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