



May 2024 Newsletter

Seaway Valley Amateur Radio Club

The Seaway Valley Amateur Radio Club is a 'not for profit' organization incorporated in the Province of Ontario that promotes Amateur Radio and provides Auxiliary communication Services in Cornwall and surrounding area. The Club's mailing address is 4672 O'Keefe Road, St. Andrews West, ON. K0C 2A0.

The Seaway Valley Amateur Radio Club operates several repeaters in Cornwall and the surrounding area. For a detailed list of repeaters operated by the club please visit our website at SVARC.ca

Next Club Meeting

The next meeting will be a hybrid Zoom / in-person session; 7:00 PM, Thursday May 29, 2024.

Location: TBD

Guest Speaker – Dana Shtun (VE3DS)
- Dana writes the "Six Metres and Down..." column for TCA Magazine.

Club Breakfast (aka Coffee Klatch)

Saturday Breakfasts—Best Western, Cornwall every 2nd and 4th Saturday of each month, 8:30 A.M. will be held at the Best Western restaurant at 1515 Vincent Massey Drive.

Club Executive & Volunteer Positions

- **President:** John Grow (VE2EQL)
- **Vice-President:** Hunter Racine (VA3HWF)
- **Secretary:** Roger Bélanger (VA3GBV)
- **Treasurer:** Chris Lauzon (VA3CRR)
- **Technical Director:** Doug Pearson (VE3HTR)
- **Net Manager:** Earnest Vinson (VA3EWV)
- **ACS Coordinator:** Earle DePass (VE3IMP)
- **Newsletter:** Steve Harvey (VE3EZB)

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Upcoming Events



President's Musings

John – VE2EQL

Our last meeting started at Quinn's Inn, where we shared a meal before the meeting. We were 9 hams present and the meal prepared us for the meeting.

Our meeting had 22 members and a great presentation via Zoom on Digital modes. We met two new members, Marc VA3MHT and Mich (Michel) VE3JMS.

We now have to set our sights on the field day planning which Jason Racine is handling. Please plan to attend or to support our efforts.

For our next Presentation, we have Dana Shtun is our next speaker.

ve3dss@hotmail.com

<https://www.qrz.com/db/VE3DSS>

He has written articles in the TCA on 6 meters. He will be talking about the Magic Band, the equipment, the anten-

nas.

For Field Day, we can look at a Near Vertical Incident Antenna (NVIS). Published elsewhere in this newsletter are two articles that I wrote many years ago. These antennas are perfect for 80 meters within a 400-mile communication radius.

Health

Some of you may have heard by now that for the next few days, I will be a guest at the Ottawa Heart Institute. I should be released for our Monthly meeting, but it's out of my control right now.

Please remain healthy and safe.

John





Editor's Ramblings

Steve – VE3EZB

Field Day!

Since we have a number of new amateurs in our club, I thought I would try to explain the upcoming North American Field Day. Here we go.

Amateur radio enthusiasts across North America eagerly anticipate the arrival of Field Day, a vibrant event that combines technical prowess, camaraderie, community outreach and of course let's not forget about the food. Held annually on the fourth full weekend of June, this celebration of radio communication brings together more than 40,000 hams to showcase their skills, science, and service.

What Is Field Day?

Field Day is like ham radio's open house. Imagine more than 40,000 radio enthusiasts setting up temporary transmitting stations in public spaces—parks, parking lots, and even rooftops—to demonstrate the magic of ham radio. Here's what makes it special:

Public Service: Field Day serves as a powerful demonstration of how amateur radio can play a crucial role in emergency communication. When disaster strikes, we operators are step up to provide vital communication links.

Emergency Preparedness: Practice, practice, practice. In order for us to be ready to provide comms when a disaster strikes, we need to practice operating under less-than-optimal conditions. Whether it's setting up antennas, powering equipment with generators, or dealing with adverse weather, Field Day hones our skills so we have the ability to communicate when it matters most.

Community Outreach: The public is invited to witness the fascinating world of ham radio. It's a chance for non-hams to learn about Amateur Radio. Curious passersby can ask questions, explore equipment, and even try their hand at transmitting.

Technical Skills: Field Day showcases our ability to operate under less than ideal circumstances. It's also a chance for us "old dogs" to Elmer the "new kids". Other than voice

modes, field day provides us an opportunity to showcase other modes such as the digital modes Packet, PSK-31, FT8, etc.).

How It Works

Dates: In 2024, Field Day takes place on June 22-23. The event kicks off at 1800 UTC on Saturday and continues until 2059 UTC on Sunday.

Contacting Stations: Participants aim to connect with as many stations as possible across different bands, including HF (160, 80, 40, 20, 15, and 10 meters) and VHF/UHF (50 MHz and above). They learn to operate efficiently even in challenging conditions.

Join the Fun!

If you want to witness the magic of Field Day, mark your calendar for the fourth weekend in June, and join the ranks of amateur radio operators celebrating Field Day. It's a time when waves connect communities, and radio becomes a bridge between people, knowledge, and resilience. The SVARC Field Day is currently in the planning stages. The organizers will provide club members the details once they have everything arranged.

'Til next time – Smile and Cruise.

73 – Steve – VE3EZB

For more information, visit the [ARRL Field Day website](#).

¹: [ARRL Field Day](#) ²: [2024 ARRL Field Day Packet](#) ³: [Radio Amateurs of Canada - Field Day 2024](#)



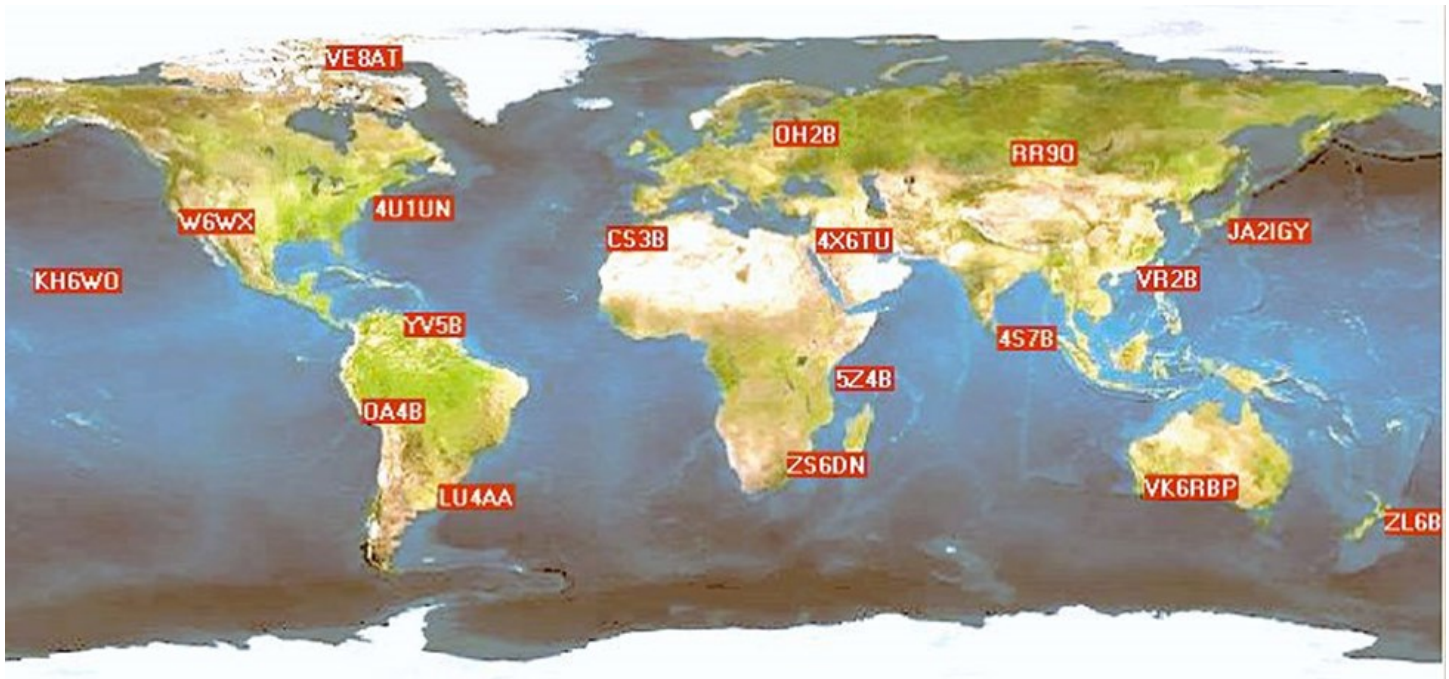
Geeks Corner

This months geek

Roger—VA3BGV

NCDXF¹/IARU² International Beacon Project

¹Northern California DX Foundation / ² International Amateur Radio Union



Quote from the Radio Society of Great Britain:

"How can you work out what parts of the world an HF band is open to and in only three minutes?

The answer is to listen to the International Beacon Project beacons, run by the Northern California DX Foundation (NCDXF).

The NCDXF, in cooperation with the International Amateur Radio Union (IARU), constructed and operates a worldwide network of high-frequency radio beacons on 14.100, 18.110, 21.150, 24.930, and 28.200 MHz.

The beacons are in USA (New York, California and Hawaii), Canada, New Zealand, Australia, Japan, Russia, Hong Kong, Sri Lanka, South Africa, Kenya, Israel, Finland, Madeira, Argentina, Peru and Venezuela, although some may be off the air at time due to maintenance/failure – you can find out the current state of play of all the beacons at any time by going to <http://www.ncdxf.org/beacon/beaconschedule.html>."

Here is how it works:

Each beacon transmits on each band once every three minutes, 24 hours a day.

A transmission consists of the callsign of the beacon sent at 22 words per minute followed by four one-second dashes.

The callsign and the first dash are sent at 100 watts. The remaining dashes are sent at 10 watts, 1 watt and 100 milliwatts.

At the end of each 10 second transmission, the beacon steps to the next higher band and the next beacon in the sequence begins transmitting.

If you click on the link: <http://www.ncdxf.org/beacon/beaconschedule.html>, you get the following web page:

Which beacon am I hearing right now?

Tables update every 10 seconds.

Frequency	Beacon	Location
14.100	VK6RBP	Australia
18.110	ZL6B	New Zealand
21.150	KH6RS	Hawaii
24.930	W6WX	California
28.200	VE8AT	Inuvik NT

Clock compensation:

- 1 +

14:00:55 UTC

Beacon	Frequency
4U1UN	silent
VE8AT	28.200
W6WX	24.930
KH6RS	21.150
ZL6B	18.110
VK6RBP	14.100
JA2IGY	silent
RR9O	silent
VR2B ⁴	silent
4S7B	silent
ZS6DN	silent
5Z4B ⁴	silent
4X6TU	silent
OH2B	silent
CS3B ⁴	silent
LU4AA	silent
OA4B	silent
YV5B	silent

What direction is the beacon?
How far away is the beacon?

This page has two key features:

The upper left bloc shows which station is transmitting on which frequency. This table updates every 10 seconds, as per the UTC clock at the bottom of the block.

For instance, VK6RBP is transmitting on 14.100MHz, ZL6B is transmitting on 18.110 MHz, etc. to VE8AT transmitting on 28.200 MHz. These 5 stations are also shown as shown on the blue square on the right.

In the next 10 seconds VK6RBP will be replaced by JA2IGY on 14.100 and will move to 18.110. as if the blue square, identifying the 5 transmitting stations, on the right moved down one line.

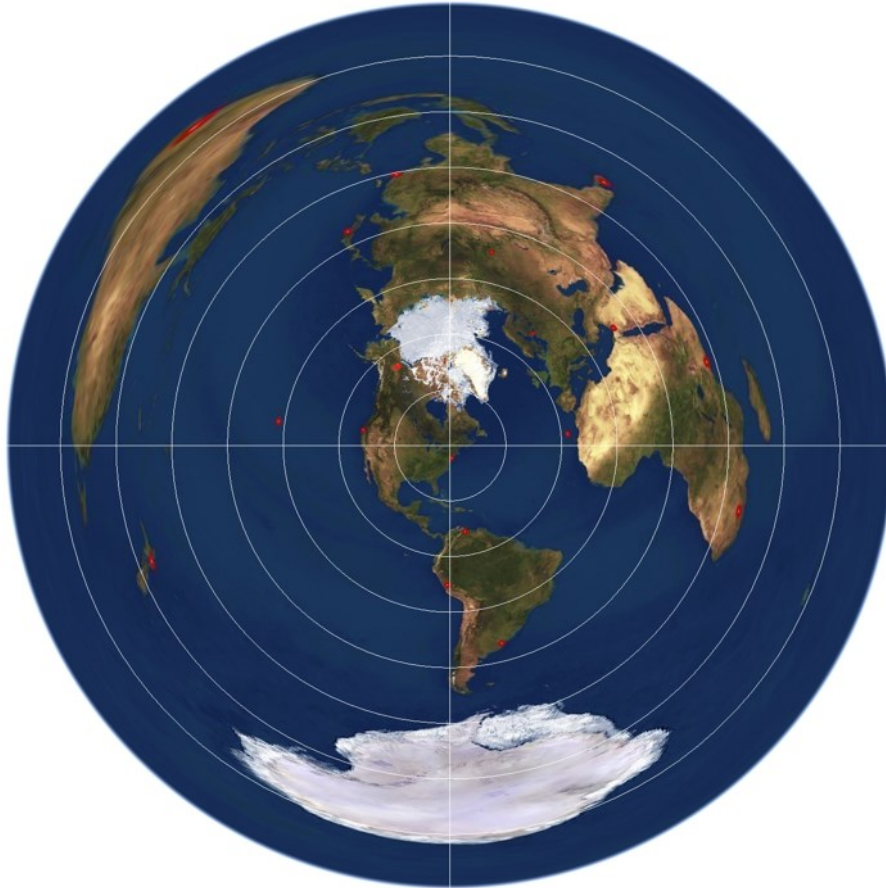
This process will keep going until all 18 beacons get to transmit and then the sequence starts again.

The lower left bloc has an interesting link:

What direction is the beacon?

How far away is the beacon?

If you click on this link, you will get the following [great circle](#) map:



If necessary, drag the world so the map is centered on your location.
Each ring is 2,500 km.

At first it may appear to be centered on Northern California.

If you wait a few seconds, it will recenter on your actual position.

If you look carefully on the actual map on your computer, you will see red dots showing the location of the beacons and therefore where to point your antenna (if you have a directional antenna).

The lower part of this page has a table showing the direction of the beacon from your location and the distance. This table also shows the predicted propagation to each beacon location with a color code legend at the bottom of the table.

Beacon	Beam Heading	Distance	Propagation
4U1UN	171°	482 km	
VE8AT	329°	4169 km	
W6WX	274°	3983 km	
KH6RS	280°	7744 km	
ZL6B	248°	14459 km	
VK6RBP	323°	18298 km	
JA2IGY	334°	10620 km	
RR9O	13°	8691 km	
VR2B	351°	12476 km	
4S7B	31°	13713 km	
ZS6DN	101°	13032 km	
5Z4B	75°	11788 km	
4X6TU	54°	8888 km	
OH2B	36°	6233 km	
CS3B	85°	5052 km	
LU4AA	166°	9009 km	
OA4B	183°	6357 km	
YV5B	168°	4053 km	

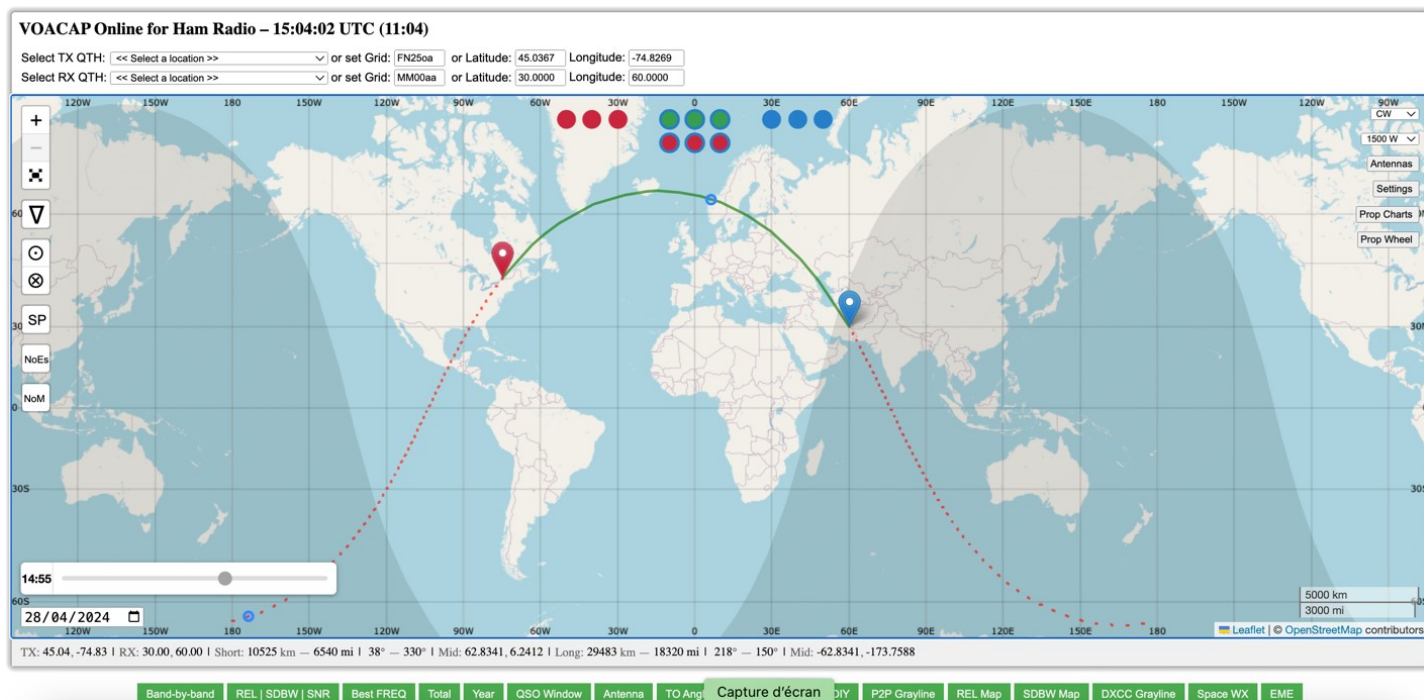
Propagation forecasts are like weather forecasts. They only give an indication of what might happen. Despite the forecast, you may or may not be able to hear the beacon on any given day. Hover over the propagation color bars for predicted [Signal strength](#), [Reliability](#), [SNR](#), and [MUFday](#). Click color bars for a detailed propagation forecast for the path from the beacon to your location. A grey forecast indicates a weak signal but a greater than 10% chance of a surprise opening. LP indicates that the long path signal is expected to be stronger than the short path signal.

Click a callsign for a [world map showing the signal and path reliability](#) to various parts of the world right now.

Propagation forecasts [courtesy of OH6BG](#).

Signal strength color code:

Now for the last page to be shown here, click on any of the propagation little colored square and you will see the following page.



Now this page is really busy but contains a lot of useful information:

The red marker is your location (my QTH in this case)

The blue marker is an arbitrary location that you can drag anywhere on the map.

The map itself also shows the night and day transitions at the time you open the page.

The red and blue dots at the top allow you to find sunrise, sunset and local midnight at your QTH and at the blue marker. And similarly for the RED and blue dots in the middle for the mid-point of the transmission path.

Above the map, the two top lines show the Maidenhead grid and Lat., Long. of my QTH and the Maidenhead grid and Lat. Long. of the blue marker.

Below the map there is a lot of information: From left to right:

Lat., Long. of the TX station (My QTH) and Lat., Long. of the RX station (blue marker).

The short path distance to the blue marker in km. and mi.

The direction to point your antenna to the blue marker and the direction of the blue marker toward your QTH.

The Lat. Long. of the mid-point of the transmission path (little blue circle).

The long path to the blue marker, going the other way around the earth. (But why would you do that?)

The direction to point your antenna to the blue marker and the direction of the blue marker toward your QTH for the long path.

The mid-point of the long path.

I will leave the reader to play with the other buttons. *If we still have readers at this point!*

In summary this is a very interesting site where you can explore in a few minutes the propagation from everywhere in the world on 20 to 10 meter bands.

Play with it, it is fun and very informative on the propagation between you and any point on the earth at that moment and frequency.

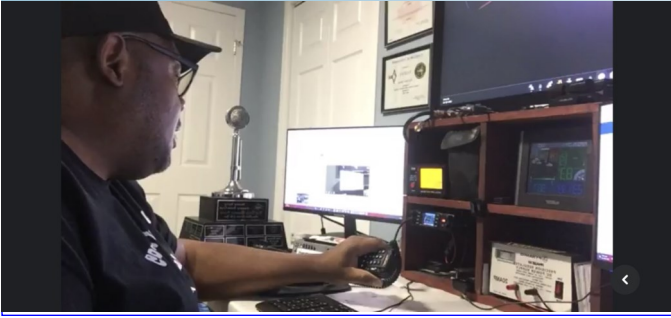


ACS Report

Earle – VE3IMP

...too busy ... nothing to see here!





Net Manager's Report

Earnest – VA3EWV

This is Earnest Vinson - VA3EWV – Net Manager for the Seaway Valley Amateur Radio Club.

I have been waiting for Summer 2024 since Fall of 2023 (laugh out loud), and this is the time of year that most folks want to be outside enjoying the fun and sun with family and friends.

My current dilemma is that we have 8 repeaters across three sites, so we will only complete the main check-in on the following repeaters:

VE3SVC – 147.180 where we will take any announcements and regular chat from our members.

VE3PGC – 443.650 where we will take any announcements, regular chat from members who weren't able to check in on VE3SVC.

VA3FHA – 147.030 where we will simply state “No Traffic” to move it along and end the net here.

Once the net has officially closed with VA3FHA, if you'd care to stick around and test out your equipment against the five repeaters listed below, please be my guest.

VA3SDG – 444.450 – Fusion Capable

VE3VSW – 442.200 – Fusion Capable

VA3SDG – 145.570 – Fusion Capable

VE3SVC – 224.180

VA3EDG – 442.100 - DMR Ch 9 - Slot 2

Have a great summer!





Build Yourself an NVIS Antenna

John – VE2EQL

Build Yourself an NVIS

If you want to talk to the guy in the next county on HF of course.

We have all experimented with antennas. At one time or other we played with dipoles, verticals, quads, yagis, and variations of Wire antennas. All for the desire of a low-angle signal, which will help us snag DX stations. There have been numerous articles and books on antennas, making us very familiar with the above antenna names. But have you ever heard of the Australian “ District Antenna,” or the Russian “ Zenith Radiation,” or what our military calls NVIS (Near Vertical Incidence Skywave)?

This antenna has been around since World War II. The reason most hams have not heard about it is their desire to work far away stations . When it comes to local communications. VHF/UH F is more common . But there are many cases where the range of VHF is limited and reliable communications are needed on HF.

In many population centers. there is the desire of many hams to communicate within a 100- to 300-mile radius.

In those cases, the known popular antennas might not provide a reliable link. Our military had the same problems and they found that producing a high angle

subject to fading. With a high angle, the surrounding terrain is not an issue.

How to experiment with NVIS

There are many ways an antenna can be made to work in an NVIS mode. The easiest is to run a wire fed with a tuner a few feet from the ground. In most cases, a high -angle skywave will be produced Stations nearby will be able to communicate.

Another approach is to take your HF mobile antenna and place it in a horizontal position parallel to the ground.

You could experiment with the distance between the ground and horizontal antenna. A distance of 3 to 9 feet will work.

When experimenting with NVIS. 80, 40, and 30 meters seem to work best. I tried frequencies between 3.5 and 30 MHz. The factors of working frequencies below the MUF (Maximum Usable Frequency) play a very important role. Power levels of QRP to 100 watts have been used.

Building a simple NVIS antenna

A very simple NVIS antenna can be built. for fixed or portable use. (Please refer to Fig. 1) The basic NVIS antenna is nothing more than two crossed dipoles mounted anywhere from 10 to 20 feet high. The legs of the dipole are sloped and secured to the ground. The crossed dipoles

are fed with 50-ohm coax. A tuner, manual or automatic, is required.

A fixed NVIS antenna can be a wooden pole, PVC pipe. or metal mast. The lengths of the wire elements can be anywhere from 20 to 40 feet.

For a portable NVIS antenna, a mast could be made from 1.5” diameter PVC tubing mating with PVC couplers. A piece of coax fed through the mast then feeds the cross fed dipoles.

Please make sure that safety concerns are taken into consideration. You do not want anyone to run into the sloping wires, which will be a few feet off the ground. This type of antenna has been made commercially by Telex. It is called the NVIS Antenna, with a model number of AS-2259/1990.

References

NVIS Communications, by David Firdler and Edward Farmer.
“NVIS Antennas,” by Edward Partner AA6ZM, QST Magazine, January 1995.
US Field Manual 24 -18 , "Single Channel Communications Techniques." Has a section on NVIS antennas.

Net sources

NVIS Antenna Information (excellent Web site for NVIS systems): [www.tactical-link.com].
Construction of an NV IS Antenna, by Dr. Carl O. Jelinek: [www.qsl.net/vcars/carl/nvis.htm].
NVIS community at onclst.com: [www.onelist.com/community/nvis].

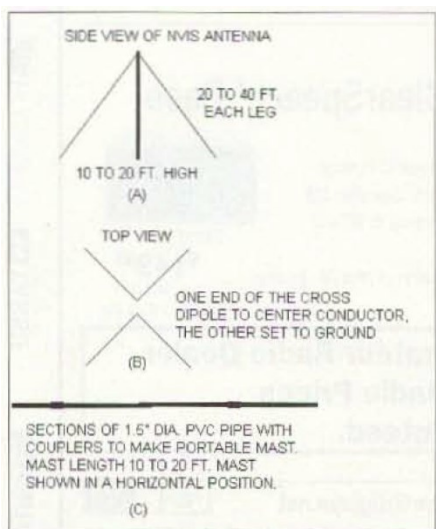


Fig. 1. NVIS antenna details.

skywave provided a reliable link, less



A Easy to Set-up Portable HF Antenna from Uncle Sam

John – VE2EQL

An Easy to Set-up Portable HF Antenna from Uncle Sam

Hams have been looking for two very important things when operating portable HF. One a usable, transportable power source, and a very easy to install antenna that covers all the HF bands. Some operating locations do not have tall trees or other structures from which to hang a dipole or long wire. In keeping with the KISS principle, if you have a need it was probably done before, so look at what other people have done about this. Looking at some catalogs of Hygain-Telex, Fair Radio Sales, I noticed the answer to my questions. Our Armed Forces, are great users of radios, both HF, VHF, UHF. They have antennas for every situation, and then some. One antenna stands out, is easy to use, set-up, fairly portable, and handles up to 1 KW and is affordable via the surplus marketplace. The AS-2259 man-pack antenna. This antenna is manufactured by Telex, and has the model number of 1990.

(Please refer to Picture 1)

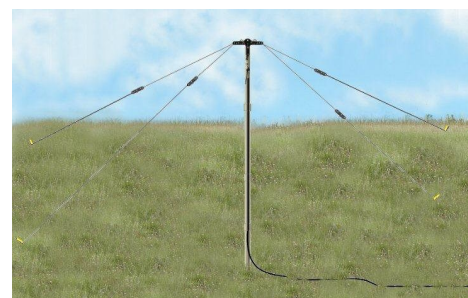
Operation and Use

The Telex / Hygain product literature, calls it the Near Vertical Incidence Sky-wave Antenna. In amateur terms, this is a high angle antenna, perfect for local communications within 400 miles. The antenna has a 15-foot mast section, which serves as the antenna coaxial line. The antenna has 4 wires, 2 on ground, and 2 on the center conductor. The wires are terminated to plastic insulators going to rope sup-

ports, then ground pegs to secure the antenna structure. The antenna was made to be set up by 2 persons in less than 5 minutes. One person will have no trouble setting this antenna in a few minutes. It is recommended that he un-rolls the wire antenna, spread the 4 wires equally, then secure his pegs into the ground. Now you can assemble the mast section, by inserting each coaxial pipe into the bottom of the next. When the mast is complete, recheck each wire, and supporting rope. Eliminate slack, by tightening the length of the supporting rope or move the ground peg.

This antenna was designed to be used with the PRC-47 man-pack transceiver that covers 2 to 12 MHz. The antenna mast was mounted right on the radio, with an adapter. For use by us non-military personnel, we have just one problem with this antenna. The coaxial pipes, which make up the mast sections, have no easy way of attaching our coax cable. The military and Hygain / Telex have a few ways, they have two types of mounting ground bases (the model 1994 and the model 1995 which has it own 4:1 transformer and only handles 50 watts). These mounting bases are hard to find on the surplus market and very expensive if bought directly from Telex / Hygain. Please don't get me wrong, Telex military products are excellent, well designed, and will last a lifetime. It's just that us Amateurs don't have the same deep pockets as our Governments have with our hard-earned tax dollars. Depending on the end-user, the coax mounting can be done with two alliga-

tor clips, ground to ground, center conductor to center conductor. Just be careful not to short the two together, or have the center conductor touch the ground. Other mounting schemes can be done, one possible method by this author was to make another coaxial pipe section with a cooper tube center, insulating the center tubing, then mount a circular flange.



Picture 1— Editor's note—the original picture was not included so the editor substituted this similar picture instead.

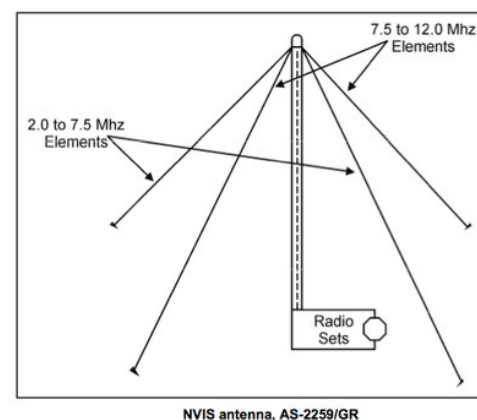


Figure 1—AS-2259 AE

SVARC Calendar

Wednesday, May 29th. SVARC Meeting – Location TBD—Guest Speaker will be Dana Shtun (VE3DS) - Dana writes the “Six Meters and Down...” column for TCA Magazine.

Saturday, June 8th. Coffee Klatch – Best Western restaurant at 1515 Vincent Massey Drive.

Friday, June 21st. Drop off / Set up of Field Day Equipment – Location TBD

Saturday, June 22nd. Field Day – Location TBD

Saturday, June 22nd. Coffee Klatch – Field Day Location

Sunday, June 23rd. Field Day – Location TBD

Wednesday, June 26th. SVARC Meeting – St Andrews Church Hall, 17298 County Rd 18, St Andrews West, ON .

July & Aug—Summer Break