

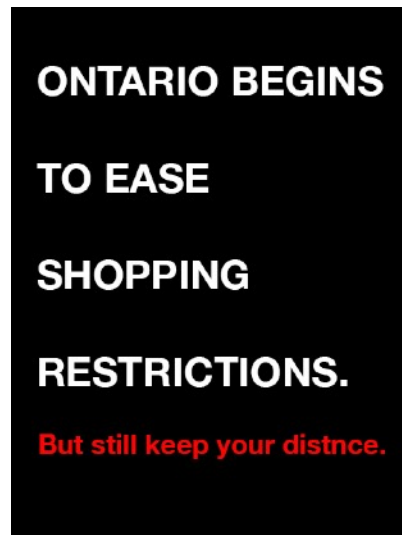
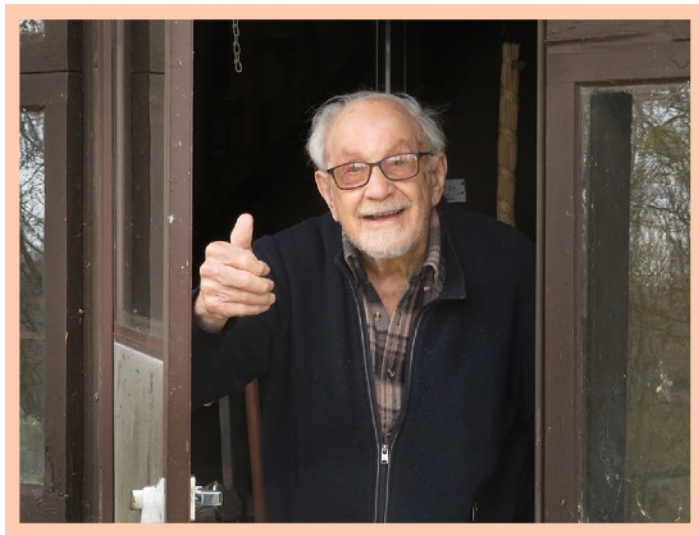
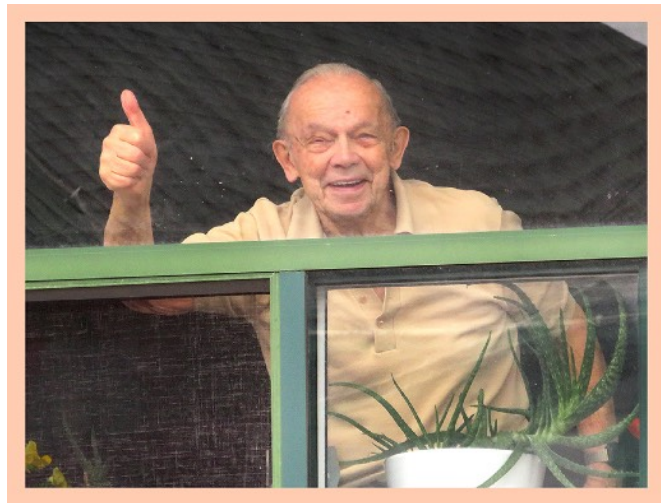
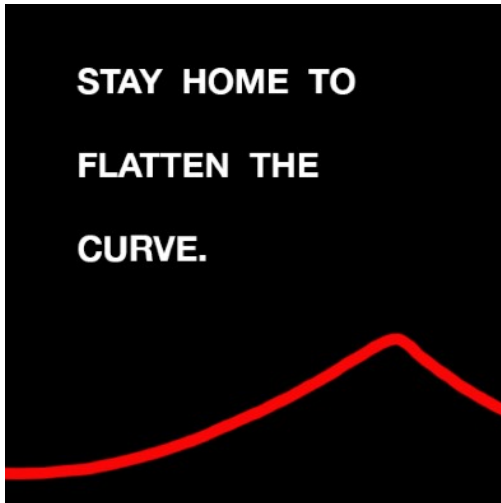


# Feedline

**Virtual club meeting to be held over the internet, Thursday, May 14th 7pm.**

***Watch for [webmaster\(at\)nparc.ca](mailto:webmaster@nparc.ca) email with instructions to link your device.***

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NPARC charter member's, Harry Borsato, VE3BSA, top, and Jim Thompson, VE3BCA, both in their mid 90's, wave to the camera from their respective homes, May 8th, 2020. Harry is monitoring VE3NRS in his second floor room in Niagara Gardens Retirement Manor in St. Catharines. Jim, lives on the Niagara Escarpment above Vineland and monitors VE3RAF. Jim is still an active member of the club and regularly drives to meeting from his home.

Harry a retired Beamsville Secondary School teacher and is convalescing after being hit by a car in a cross-walk near his home. Both men are known for being undeniably positive and continue to live very productive lives. Two great examples of living life to the fullest during the 2020 Coronavirus Global Pandemic. The Niagara Region Amateur Radio Club's inaugural meeting was Nov. 12, 1948. Both attended the first meeting and the 70th anniversary party on September 15, 2018.

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## NATIONAL 'STAY AT HOME' POLICY

### CHALLENGING TIMES TO RUN A CLUB

NPARC By-Laws have no clause to cover the circumstances that we are now enduring due to the **COVID-19 global pandemic**. We are not meeting nor are we conducting outside events. Some members have asked how the club will run. The simple answer is that, for now, there is nothing to be done except to stay at home, isolate and use your radios to stay in touch. There are daily "social" nets, QSO parties and the HF bands. Remember we are all in the same boat so reach out to others in our hobby.

All of the public events we participate in have been cancelled i.e. Ride for Roswell; Niagara Falls Canada Day, etc. However, **ARRL Field Day** will continue but under different rules.

There will be **no club elections** in June of this year. The existing executive will stay in place until restrictions on social gathering are lifted. When regular meetings are permitted you will be informed of the schedule. The first meeting will act as the Nominating meeting (usually May), the second will be Election night (usually June).

There are currently vacancies in the positions of President & Public Relations. If you want to self nominate for an executive position or want to find out what's involved get in touch with an executive member. Executive addresses are listed on [nparc \(dot\) ca](http://nparc(dot)ca) website.

Henry Jarzyna VA3OV Vice President

## HANDI-TALKI TESTING - Part 3

I missed the submission deadline for the Feedline last month, so before we go onto Part 3. Let's just re-iterate what we discovered in parts 1 and 2. Part 1, was based on testing the output of a BF-UV-5R HT connected to a 50 ohm dummy load, the HT output into the dummy load measured with an RF power meter. As suspected, there was a slight variance of output power with frequency across the 2 M band and a variation of output power between 2 M and 70 cm. These are inherent limitations within the design of the HT, and will obviously vary between manufacturers. There was, however, also a large variation of output power based on what battery pack was used, and the state of the charge of the battery pack. For the UV-5R, a fully charged extended life battery pack produced 5.5 watts output on 146.00 MHz, and the same radio and battery pack only produced 4.4 watts when the first low battery indication showed up. This should be no surprise, output varies with the square of the voltage  $P=V^2/R$ .

In Part 2 we tested the RF output and SWR again using the RF power meter and SWR meter when various antenna were attached to the HT. As suspected, there was some moderate variation between the various antenna, some performed better on 70 cm then on 2 m and vice versa, some had a relatively flat frequency curve, and others had a decided resonant peak.

In Part 3, we are going to look at the effect on radiated power for various antenna configurations. For this test, I am using an **IBQ 102 RF power meter**. It is a Chinese frequency counter that also measures RF field strength in db. Let me say that this is not a multi-thousand dollar instrument, you can buy it for less than \$80 cdn and it will only give an approximate indication. In the test cases here, I am using my UV-5R with a fully charged external pack and it is located approximately 2 M away from the RF power meter, so admittedly, the test is only going to measure near field radiation. The test frequency used is 146.00 on 2 M and 460.00 on 70 Cm.



The Antenna used are:

- 1 Stock BF-UV-5R supplied with the HT, to establish a base line- 4 ½ inches long
- 2 Nagoya NA-771, (original) 15 ¼ inches long
- 3 Nagoya NA-773 4 ¼ inches collapsed, 15 inches extended
- 4 Tactical FH-0506 18 ½ inches unfolded
- 5 AL-800 34 inches extended.



The 146.00 HZ results are as follows, db gain over stock antenna:

Antennae	2	3	4	5	
Db over stock		3.0	1.5	1.5	5

The 460 MHz results are as follows, again db gain measured over stock antenna:

Antenna	2	3	4	5	
Db over stock		3.5	3.4	4.5	6.0

So, what is the take away ? First, all the antenna seem to have a higher gain when operated on 70 cm compared to 2 M. Second, except for the tactical, the results would suggest that the gain is a function of the length of the antenna. This may also help explain why all the antenna have a greater gain on 70 cm as compared to 2 M. The big winner, is, of course, the AL-800 but remember, this is a 34 inch long antenna, it’s rigid metal, not flexible, and that’s a lot of load to put on the SMA mount most HT ‘s use. What do I use?

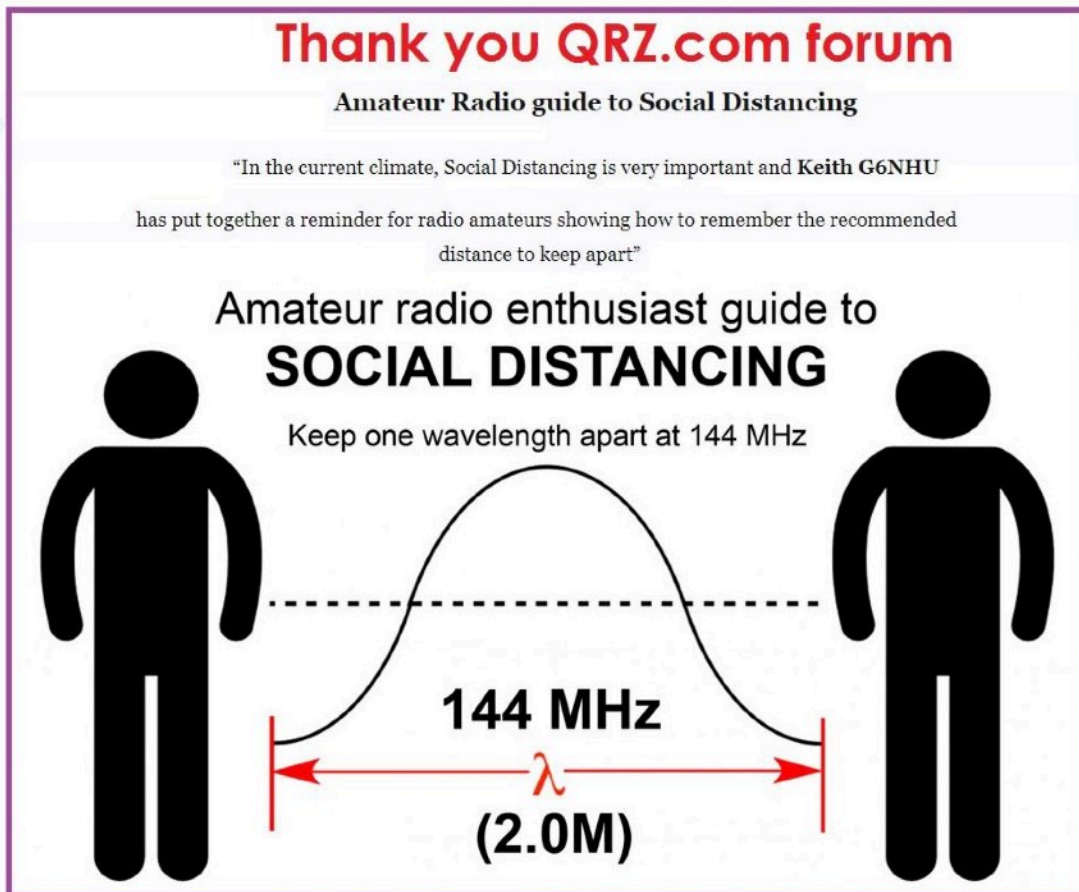
Well, I still keep the NA 771 on my radio, it's flexible, and does provide reasonable gain, but I do keep the AL-800 in the go kit just in case I have to operate simplex from some remote location.

I have to say I am somewhat disappointed in the Tactical, many hams have reported very good results both when the antenna is folded and when it is unfolded. I may have got a clone instead of an original, I would be interested to hear how others have made out using this antenna. I think VE3BMX has the 48 inch (unfolded) version and he is very happy with the results.

One important caveat- I would suggest that you do not operate the radio with any of the collapsible antenna collapsed, it's maybe ok for reception, but it does not work well with transmission, with the AL-800, even though it is about 15 inches collapsed, the RF output is about 1 db less than the stock BF antennae, and my previous tests show that, with the NA-773 collapsed, the resulting SWR is very high, ie: greater than 3.

As before, something to think about, your individual results may vary.

Glenn Holden VE3NDW



## RICK VE3MM - EXPERIMENTING WITH ADLAM-PLUTO SDR

A lot of hams are using the Adlam-Pluto sdr from Analog Devices for the TX and RX device on the QO100 satellite. <https://amsat-uk.org/2019/02/10/qatar-oscar-100-web-receiver-now-live/> Unfortunately, QO-100, is a geostationary satellite that is centred over the mid-east African continent and has a footprint over most of Europe, and Africa and some of Brazil. Nothing on our side.

It is a small inexpensive (\$200C) sdr that is meant for experimentation. I bought one last week from Digikey for fun. It has RX and TX capability from 70 Mhz to 6 Ghz. This is the first time I have played up in the microwave frequencies with a transmitting capable device.

Here are some pictures of my Pluto sdr hooked up to a coupler measuring a 2.4 Ghz yagi's return loss on 2.4 Ghz using a spectrum analyzer program from an Italian ham called Satsagen. I hope to make my first 2.4 Ghz QSO soon.



## LOCAL VHF NETS

NPARC Net, Wednesdays, 20:00, VE3NRS, 147.240 +107.2 Hz Tone – always looking for check ins and net controllers. Niagara ARES Net, Mondays, 20:00, VE3RAF, 145.190 -107.2 Hz Tone. Trans Canada IRLP Net, Wednesdays, 11:00, VE3WCD, 147.310+, 107.2 Tone, IRLP 9013.

**Niagara Round Robin Social Net**  
**VE3RAF 145.190 - 107.2** *YOUR HOST*  
**9am: Mon. Wed., & Fri.** *JACK*  
**9pm: Tues., Thurs., Sat., & Sun.** *VE3ZPW*

## APRIL'S SPORADIC-E OPENING.

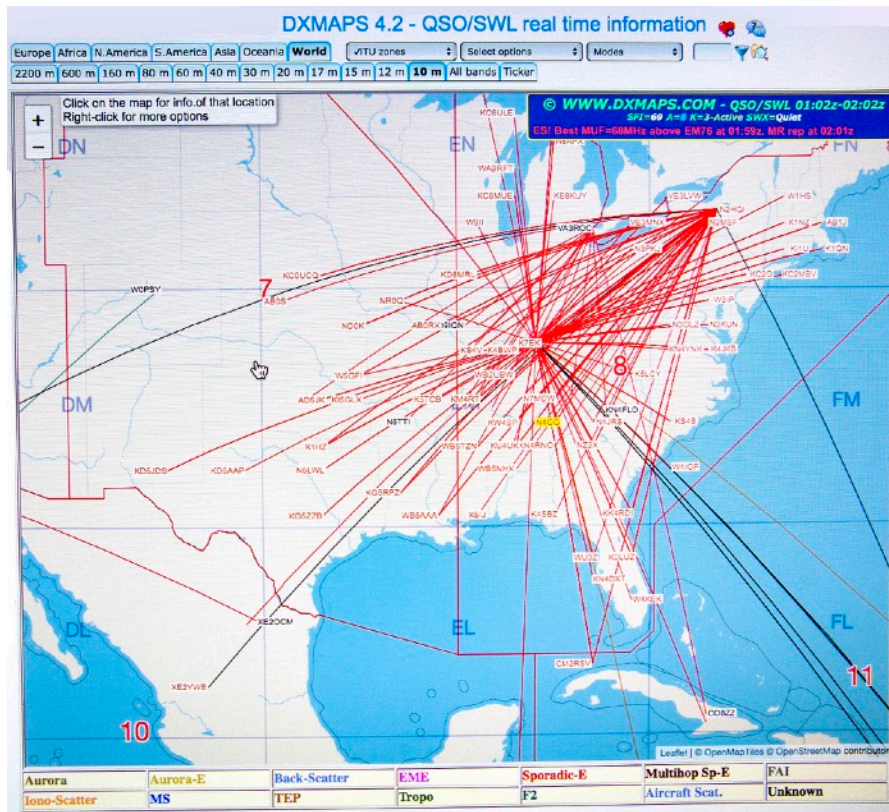
Several emails I received contained huge smiles from local hams. By that I mean they were very happy to find 6 and 10 meters wide open during a Sporadic-E event in the middle of April.

**John Sluymer, VE3EJ**, reported.

*“Tuesday (April 14th) was a busy day for me but I did get a chance to “play” a little 6 meters between other activities.. The band was very good to the South and South West, opening up well into South America. I worked into LU, CE, HC, TI, TG9 as well as contacting several Southern US stations in the 4 and 5 call areas. I did not tune any lower frequencies but I understand that both 10 and 12 meters were productive well into the night with good propagation to the South and West.. Let’s hope that this is a sign of good things to come.”*

And I heard **Rick Barron, VA3WU**, created quite a 10 meter pileup the evening of April 14th. Logging 58 QSO’s across the USA and into the Caribbean, Central and some South America on 28.417MHz.

Your editor, **VA3ONO**, enjoyed the opening briefly on 10 meters using a PAR 40, 20, 15 & 10 end-fed, 100 watts and a FT-857D. Beginning about 9pm on Thursday evening I had to search for a spot on 10 meter phone to make a contact. Hams across the States were holding the frequencies and engaging in excited QSO’s about the opening. The attached map shows a web of Sporadic-E activity for 10 meters on April 14th.



## VE7TIL FINDS LONG-LOST US MILITARY SATELLITE

Scott Tilley, VE7TIL, got interested in a communications satellite he thought might still be alive. [LES-5](#), built by the Massachusetts Institute of Technology's Lincoln Laboratory, was launched in 1967. Tilley was inspired by another amateur who in 2016 had found LES-1, an earlier satellite built by the same lab. What was intriguing to him about LES-5 was that if it was still working, it might be the oldest functioning satellite still in geostationary orbit. By scouring the Internet, he found a paper describing the radio frequency that LES-5, an experimental military UHF communications satellite, should be operating on if it was still alive. So he decided to have a look in his spare time. Then came the COVID-19 pandemic. Like many of us, suddenly Tilley had time on his hands. He used it to look for LES-5, and on March 24, he hit the ham radio equivalent of pay dirt and thinks the bird may still respond to command and control signals from earth.

(with files from National Public Radio in the USA)



## OVER 2 ME - Feedline Editor Denis VA3ONO

To me one of the outstanding events each year in Amateur Radio is the ARRL Field Day weekend. If conditions permit HF bands come alive from 2pm Saturday until 4:59pm Sunday. Actually I've never been on the air at the club location but came very close several times. I pretend I'm busy taking photos, moving coax, shifting gas cans. I would arrive during setup and sometimes on Sunday during tear-down. For three years I delivered the Saturday evening meal from the caterers to the site. As a new ham I only remember Woodend Conservation Area and Ball's Falls Conservation Area, both beautiful country settings, as field day locations. They were both large park sites with trees for antennas and clearings for tents, trailers and vertical antennas. Last year NPARC moved to an area I know as Douglstown just off the QEW at Netherby Rd. A large prefab building used by the Black Creek Community Association provided us shelter and a place to gather for a break or a meal. On my last trip there last fall I noticed a brand new housing development just across the street on Baker Rd. Due to the COVID-19 the building has been closed and will likely not be available for field day 2020 use. Standby for information from the Field Day coordinator, Stephen, VA3FLF, who has ideas for keeping everybody safe while still able to enjoy the annual field day ritual.

The NPARC executive have announced a virtual May general meeting on May 14th. I hope members take of advance of this unique opportunity. I found it easy to log on by just following the instructions sent to my email inbox. Hope to 'see' you on camera during the meeting.

**And finally here is a local island that's just waiting to be activated this summer.**



I.O.T.A. location available.  
Small island in Thorld South.  
Generous size with large shade tree