Algonquin Amateur Radio Club

QRZ

The Newsletter for AARC members

September 2020 Issue

President's Corner

Welcome to the 2020-2021 Algonquin Amateur Radio Club as we continue to live through the 2020 COVID situation.

Because so many of our traditional activities are on hold, I would like the club to discuss things we would like to do this year in the context of virtual meetings and covid. A few examples -- I'm looking for more:

1) We can invite speakers from a national pool instead of New England because there is no requirement for the speaker to travel to Marlborough for a virtual meeting.

2) Club members could demonstrate their home shacks live during a meeting using screen sharing and/or cameras.

3) If the club is interested in a technical project, we could work on it together over the course of several meetings. Troubleshooting and try-out could be with the group.

4) The club could sponsor mini operating events where we work specific locals, a contest, or even each other, and compare results.

5) What new opportunities for recruiting amateur licensees or club members exist?

We should also plan for club activities in whatever post-covid world emerges. How will flea markets work? Should we maintain a partially virtual schedule or modify some of our traditional activities?

In these challenging time, our common interest in amateur radio provides opportunities for technical activities, public service, and social engagement. I hope to see or hear you at our September meeting. Information for joining the virtual meeting will be sent via email prior to the meeting.

73, de w1ku

September Meeting (Online)

The next AARC meeting will be held on September 10th at 7:30pm online. Information on joining this virtual meeting will be sent out in advance via email. See Presient's Corner for additional information.

Treasurer's Report

Income and Expenses since June 1, 2020

Income
Donations : $10

Expenses
Club Insurance : $200
Flea Market Bus : $385.50
Field Day : $155.82
Equipment : $191.24 (12V Deep-Cycle Battery)

AARC Sunday Night Net

Please join us every Sunday Night at 7pm on the 446.675 repeater (PL 88.5 / -5.0mhz Offset). The first net will be held on September 13th. You do not need to be a member of the club and all licensed amateur radio operators are welcome to check-in.

ARRL Contests

September 12-14 : September VHF Contest
More info

Algonquin Amateur Radio Club, P.O. Box 258, Marlboro, MA 01752

The Algonquin Amateur Radio Club holds meetings the second Thursday of each month at 7:30pm. There is no meeting in July and August. Meetings are held at the 1st Lt. Charles W. Whitcomb Middle School, 25 Union Ave, Marlboro, MA / Door #1. Anyone with an interest in Amateur Radio is welcome to attend.

The AARC operates the N1EM/R 446.675 PL 88.5 repeater in Marlboro. Access to the repeater is open to all licensed Amateur Radio operators. A controlled net is conducted on the N1EM repeater every Sunday evening at 7pm.

2020-21 Club Officers / Appointments

President	Mike Powell	W1KU
Vice President	Skip Youngberg	K1NKR
Secretary	Tim Ikeda	KA1OS
Treasurer	Ken Horton	KA1GFN
Activities	Joe Reynolds	KA1GDQ
Newsletter	Ken Horton	KA1GFN
Website	Sandor Toth	NB1N

Let's Try Something

The COVID quarantine has challenged everyone. Here at AARC, meetings are off for a while and intra-club communication now has increased importance.

Short of being able to meet face-to-face, we essentially have four means of communication: the Sunday night net, the website, the AARC List, and the newsletter. The Sunday night net is structured and pretty much addresses what the NCS has on his or her agenda. The website is, mostly, the club's advertisement of itself to the world. The AARC List is—or could be—an in—club chat line ("Hey, 6m is open," "I just worked the last one I need for DXCC," "Can someone assist me with this or that problem"). A club newsletter is something different. It forms a history of what the club is interested in, will be doing, and has done. Newsletter archives form the published record of the club.

But a newsletter isn't just "information push" from the club Board. Sure, we have a President's Column and we announce forthcoming meetings. Occasionally we even summarize previous meetings. As long as it fits in one page. One page? I think we've got more talent than that—and a plethora of interesting things going on in the club and in our shacks. And a need to communicate.

Other clubs recognize that a contentless one-pager is easy to ignore. I certainly do (ignore it, I mean). Content is king! It engenders excitement. It's full of information. Both of these contribute to the health of a club. And that's important in "these unique and trying times."

So join me. Let's beef up the newsletter together. Is there a contest coming up that you want to get some club activity going on? Write it up. Got Hints and Kinks? Pass them on. Do you have a specialized interest in some facet of this wonderfully multi-faceted hobby? Let your fellow members know about it. Send Ken your input for the next newsletter by or during the first week of each month for the following month's newsletter. Exceptions will be made for articles which this deadline is not possible, as well as for short articles which can be easily added if space permits. Articles can be emailed to newsletter@n1em.org.

de Skip, K1NKR

Source: CQ-DATV magazine

The Non-Imaginary "J"

I was talking with a member at a meeting last Fall and he commented that he doesn't join the AARC net because he only has an HT and can't hit the repeater. Well, short of dropping some cash at MyFavoriteCandyStore-dot-com for a high power rig or an amplifier, here's a possible solution.

A J2pole antenna will give you a bit more gain than an HT's rubber ducky. And it's easy to build. I made mine out of a piece of TV twin-lead and a left-over coax patch cable.

Wikipedia says "The J-pole antenna, more properly known as the J antenna, was first invented by Hans Beggerow in 1909 for use in Zeppelin airships. Trailed behind the airship, it consisted of a single element, one half wavelength long radiator with a quarter wave parallel feedline tuning stub. This concept evolved to the J configuration by 1936 attaining the name J Antenna by 1943. When the radiating half-wave section is mounted horizontally, at right-angles to the quarter-wave matching stub, the variation is typically called a 'Zepp' antenna."
https://en.wikipedia.org/wiki/J-pole_antenna

I got the inspiration for my J2pole from a 1994 QST article. You can find it at :
https://www.arrl.org/files/file/Public%20Service/TrainingModules/jpole-dual-band.pdf

The project is simple enough that Bruce, K1BG, and I used building J2poles as a training exercise for some

newly-licensed Girl Scouts. WB6IQN also has a good article at :
https://www.qsl.net/sterling/Activities/20170301_J-Pole_Build/Emergency_antennas.pdf

Dimensions. For our purposes, you could make a J3pole cut specifically for 70cm. But remember harmonic relationships: a 2m J3pole works FB on 70cm and gives you two band coverage.

K4ABT has a convenient J3pole calculator at :
http://www.hamuniverse.com/jpole.html

M0UKD has another at :
https://m0ukd.com/calculators/slim-jim-and-j-pole-calculator/

One thing to keep in mind. Cut the twin lead a little long and then trim it for best SWR. I didn't and ended up with a great antenna for 149 MHz! Lesson learned: you can re-cut wire shorter but you can't re-cut it longer.

That leaves the connector. First, what does your HT use? Can you use a more conventional connector with an adapter? Otherwise, sacrifice a patch cable with the connector you need. Other-otherwise, get the soldering gun and new or used parts back out and start from scratch.

The nice thing about making a J3pole out of twin lead is that you can just stuff it in your back pocket when you're out and about HT-ing, or hiking, or EMCOMing. If you need more gain, it's conveniently available and can be hung from a tree branch or something. Just tie a couple of meters of string to the point where you've soldered the top of the twin lead together.

Remember the first law of antennas: Any antenna is better than no antenna at all (and certainly better than a rubber ducky).

de Skip, K1NKR

Field Day

Field Day this year was was held at Crow Island as we were not able to operate from the EOC as we normally would due to the current situation with COVID-19. There were several members that also operated from home.

Those attending Field Day on Crow Island were Mike W1KU, Joe KA1GDQ, Ron N1CNG, Ken KA1GFN, Deb N1NVJ, Skip K1KNR, Jim K1UUM, and Jon KY1K.

We were the only Class 3A station in the EMA section.

A total of 174 QSOs were logged on a mix of 80, 40, 20, 15, 10, and 6 meters. Operators were Joe KA1GDQ, Mike W1KU, and Ron N1CNG. Two of the stations were operating on SSB only. The third station was operated by Mike W1KU on SSB as well as FT8 and FT4. There were two operators that stayed overnight.

Others attending assisted with setup, teardown, and food delivery.

de Ken KA1GFN & Mike W1KU

Crow Island is an active airfield which is the home of Crow Island Aviators.
Photo by Skip K1KNR


Joe KA1GDQ holding mast while guy wires are attached.
Photo by Skip K1KNR

Beam up on the mast, but missed one step. Failed to connect the coax.
Photo by Skip K1KNR

Mike W1KU operating SSB as well as FT8 and FT4.
Photo by Ken KA1GFN

The 20m beam is up with coax connected.
Photo by Skip K1KNR

Ron Lahti N1CNG operating SSB.
Photo by Ken KA1GFN

Setup of antennas and tents is complete.
Photo by Skip K1KNR

Summer project from Michael, W1KU:

APRS Interface

I would like to start using the club newsletter as a forum for discussing and archiving radio projects that might interest other members or inspire new ideas. Below is a short example from me.

One of my radio projects this summer is finally getting my low-cost low-complexity APRS igate station on the air. Automatic Packet Reporting System (APRS) uses 1200 bps packet on 144.390 MHz to transmit positions, messages, and situational information such as weather and repeater information. My goal is to gate radio (RF) APRS traffic from my local area to the APRS internet service (APRS-IS) and vice versa. I also would like to use APRS to send telemetry from my home (e.g., temperature and battery status) during internet outages. As long as another station repeats my packets or gates them to the internet, I can receive the telemetry even if my home is offline.

The major components of this station are a UV-5R HT (under $30), a Raspberry Pi ($15 for a Zero-W and SD card), "Direwolf" software, a USB soundcard ($10), and a homebrew audio interface to the radio. My audio interface is two isolation transformers and a coupling capacitor. I avoid the complexity of potentiometers and amplifiers by leveraging the HT audio-gain and software-based soundcard input/output gain controls. While there are commercially available audio interfaces for the UV-5R, they do not support push-to-talk (PTT) control. PTT control is superior to vox to control transmit, particularly on a low-end HT. Adding PTT control to an isolation-transformer based audio interface requires only an opto-isolator and a resistor, so it surprises me that this capability was omitted from the commercial products. The photo shows my partially-assembled interface with the PTT circuitry in the middle.

If you are interested in trying APRS, you can start with just a smart phone, an HT, and acoustic coupling (i.e., hold the speaker up the microphone and press PTT by hand when transmitting).

73, de w1ku