

Drumlins Amateur Radio Club, Ltd.

March 2019

Drumlins' Rumblings

Volume 9, Issue 3

THE PRESIDENTS CORNER

KD2DNO

Does Daylight Savings Time mean Spring has sprung? I'm hoping so.

Our March meeting this Wednesday will have a presentation on Citizen CPR and some basic First Aid tips.

Check our calendar online at www.drumlinsarc.us and Facebook for upcoming events. We are getting ready for our busy public service session. I'm hoping everyone will be able to participate in at least one of our activities. It helps keep you in touch with the local Amateur Radio community, and provides needed help to our community.

A reminder too that is part time for the yearly Club dues, if you haven't paid yet. We maintain 4 Repeaters in our area and your dues helps the club with keeping things running.

Please go to www.drumlinsarc.us and click on join and get caught up. If you've already paid, thank you for continuing to support local Ham radio.

We will need some help getting our new trailer fixed up so we'll be putting out a work date when the weather improves.

If anyone is interested in being the Lead Volunteer Tester, please do me an email at KD2DNO@GMAIL.COM. It appears we will be unable to offer testing at our Hamfest this year due to not have A Lead anymore. Russ Harris N2IZV is considering doing testing at local libraries down the road but can't help with Hamfest this year.

We are interested in helping any local groups that might need some radio communication help for local events such as parades or bike rides. They must be non - profit activities. Email me if you have any suggestions... KD2DNO@GMAIL.COM.

73, Bill KD2DNO



March! Hopefully the “In like a lion, out like a lamb,” will hold for us. So far the wind, snow, freezing weather of February has hit us even over into March. If this old fashion saying has any merit, we might be in good shape.

The ups and more downs of this “winter” we have experienced this year have been queer. A couple of BBC America news programs have hinted things may be amiss. One program was about the rising Indian Ocean off of India where live on the numerous small islands off shore of the mainland. The program showed the last islander resident who finally is leaving the island as the water now is a foot deep in his home. Being a fisherman, he was the last! Another program showed a scientific expedition gathering weather information on Greenland. It rained this winter in Greenland instead of totally all snow. In fact Greenland is experiencing more rain this past year than its entire history. That rain is melting the snow even faster on the ground. Another BBC America program in the Antarctic, a British science expedition is slowly moving its camp on movable ski platforms because a crevice has formed ready to break off the ice shelf-the biggest break off of the shelf the size of states of Maryland and New Jersey.

This past February was the wettest February recorded on the globe, ever! The NBC morning show showed how the southern Midwestern tornado belt is shifting further east and south to the areas of Tennessee and south through Georgia and Alabama. Lately, a tornado New Mexico in the winter! Biggest snow fall in Los Vegas! Most recently the “bomb cyclone” in the Midwest of a low pressure system with winds like a category one hurricane! It's almost like the latest auto sale of one our big dealerships-”What the ---- huge!, is going on!” Hi. You know who I mean.

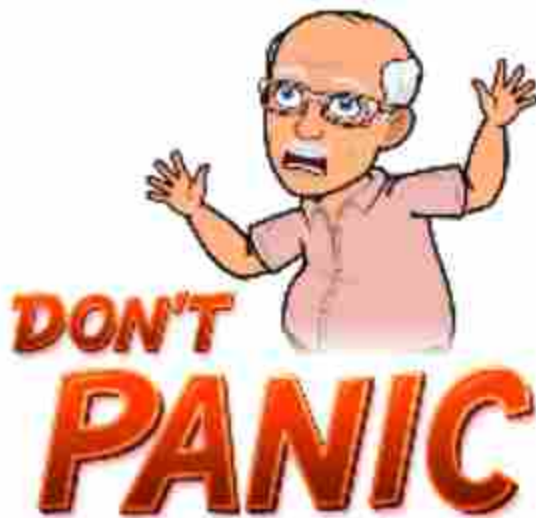


This looks like the unusual weather pattern is going to be the norm than the abnormal. We in New York State have been v-e-r-y fortunate. The nation's weather makes me thankful at least in New York Mother Nature has been kinder. But that does not mean we should become complacent. A reminder of George Bastedo's invitation to attend a Summer SKYWARN training April 30, Tuesday, 7:00PM at the Emergency Operations Center (EOC). Yes, that is the actual name of that big room on the second floor. Hi. Space is limited, so if you wish to attend contact Abby Wahl at either 315-946-5663 or her email awahl@co.wayne.ny.us.

With spring hopefully coming down the road, also, remember your volunteer communications events. Please, keep track of your events time, date, and time you volunteered. You know I have been keeping track of this for my yearly stats and supposed reporting to my ARES Section Manager (SM). Unfortunately, I just found out he hasn't been doing anything with these monthly reports. I was looking at a QST magazine and I looked at the page with the ARES section reports. Western New York, our section (WNY), was not even mention in the report. So I went back to several other QSTs and found the same thing. Going to the ARRL website looking up the ARES monthly reporting, only two monthly reports were on file for the past year! The record was not great for another years as well. I sent an email off to the SM and never got a reply back. Well I am still interested in the stats regardless, so please, continue to do so and I will for my own interest.

I had a little chat with my Ontario County counterpart at a SIARC meeting and he said he has never sent in a report. Guess he is the smarter one. Hi.

The TelNet link for the “packet-teers” is still down as I type. K2JJT, Bob, is having a heck of a time with computers that run the system. So at present KB2KBY-1 is not accessible for rogering the Sunday WARECS messages. If you read the DARC club Google emails, I said the electronic gods must be hitting the TelNet as well. Hi. A couple of weeks ago, I was on the Ontario County RACES net without with some problems but going to our net on the 685 repeater it was a disaster. It is the first time none of the 2m rigs worked in the shack at the same time. N2IZV and W2EVU, Rus and Walt, had to take over as NCS and ANCS respectively to make the drill net successful. If it was not for KB2NCI, Tom, in Brownsville hearing me on the repeater input, I wouldn't haven't been heard or confirm my getting the message. This the worst the electronic gods hit me all at once! It took me the week to get things back on line. This equipment is all in one room! You would think something would work. Hi. It is a lesson for me, I have to do more revamping of the shack and rigs to prevent this happening again.



THIS IS A REMINDER, anyone that operate 2-meters in the club should at least become familiar and/or refresh their knowledge with a RACES net SOP and procedures once or twice a year.

Check into the Tuesday 7:00PM Drumlins net on the 745 repeater. The nets help keep the club equipment and antennas monitored and it can also serve as a check on your own shack's reliability before we may be needed to help the public. As I mentioned earlier, we have been lucky with Mother Nature. BUT, I mean that to be a big BUT, for you like me to get off our butt and be ready. Don't get caught "with your pants down" like I did. That is no joke!

See you next month.

88 & 73, Dave KB2KBY



EVERY TUESDAY 7PM.DARC NET on 146.745 (pl 71.9) repeater. Friendly rag chew and weather reporting.

EVERY SUNDAY 8:35 pm. WAREC RACES NET 146.685

EVERY SUNDAY 8pm SIARC NET 145.450

Sat Mar 23 3pm-430pm. Martial Arts Studio, Cannery Row Plaza, Newark NYHam Radio for 21st Century, especially for kids age 10 and up. Learn about antennas and Ham Radio. Contact Stu, KC2KJO via email at. Hamhobby4kids@yahoo.com.

Sat April 27. HAMFEST 8am. Palmyra VFW. Contact Rich at Tinker@rochester.rr.com

Tue April 39 at 7PM.SKYWARN Weather Training Can Abby at 315-946-5663 to register

Sat May 11. Spring Fling dinner at Flarhetys Restaurant in Macedon. For info contact Rich at Tinker@rochester.rr.com

Wed May 15. 1pm Work day at EMO

Sat June 8 Tour de Cure bike event. Contact RARA at Rochesterham.org and click on Public Service to register

Sat-Sun June 22-23.Amateur Radio Field Days. See Amateur Radio operators in action. 8am Sat-noon Sunday. Location to be announced

Tue July 23., State Ginna drill 8am. Contact Dave at kb2kby@rochester.rr.com

Sat Aug 17. Drumlins Picnic Free to all members and their family's. Palmyra VFW 4 pm. Contact Rich at Tinker@rochester.rr.com

Tue Aug 20. Federal GINNA Drill 8 am. Must have attended previous drill to participate Contact Dave at kb2kby@rochester.rr.com

Sat Aug 24. ROC the Ride for MS. Contact Rochesterham.org at select Public Service to register

Repeaters

Repeater Report March 2019

Club Machines

146.685- (echolink,Allstar,Autopatch) (Sodus)Had to update the macro for the hamfest date.. thanks to Rick and Tom Kb2NCI for noticing this ..I totally forgot about this... Upgraded modem (docsis 3.1) at my residence improved throughput --- 65mps to 110mps -better stable connection

146.745- (Fusion,Echolink, allstar,Autopatch) (Newark) Had an issue where the file system failed on the allstar system- We upgraded it to a pi system with the latest hamvoip version... The pi is running on the UPS as it has been learned that the microSD cards have been getting messed up due to sudden power outages.. need to find a couple more small UPS systems. Updated the hamfest macro via minicom.. Need to fix the temp reporting .. Thanks to Russ for reboots!!!

444.750- (Dstar,Wires-X,allstar)(Sodus)Had to re-image a version of allstar for this node aswell..

224.900- (Allstar) (Newark)Upgraded the allstar to new version, was having issue with getting into the tune menu to adjust the audio level... Help from Mike KA2NDW we adjusted audio and is connected to Stanley, and Syracuse 220 machines including repeaters into Long Island... Ben working nicely!! Much activity!!!

Affiliated Machines

443.250- (Dstar,DMR,Allstar,YSF,Autopatch)-- (Newark)- Updated Allstar to a Pi3 from a desktop-using hamvoip v1.5- need to look into adding fail2ban... Go to work with Steve ka1cnf to install this .. Need polyphaser added to tx antenna... Steve has been working it with 5 watts,,,

927.2125- (Newark) its been working well.. I bought a GE mobile radio on ebay to use it...

NOTES:

- 1). If winter weather requires cancelation of a meeting, the afternoon of the meeting we will make announcements via Facebook, Twitter and our Drumlins website. We will also make intermittent announcements on 146.685 and possibly on 146.745.
- 2). The Board has decided to meet only every other month unless there is a need to conduct business. We will not have A December Board meeting, and starting in January the Board will meet every other month on the Monday of the week preceeding the Club Wednesday meeting. Contact any member of the Board for more information or if you have business the Board needs to consider.
- 3). Starting probably with the February club meeting, we will be meeting at the EMO but on the second floor in the large Command Center room (where the Radio Shack is located). There will be construction requiring the County to use the first floor meeting room for offices for about one year. The downstairs door will be unlocked until 8pm. If you come late (after 8pm)you may not be able to get in the building.
- 4) The Radio Shack has been reorganized with new shelving and our new amplifier, Auto tuner and power supply. Remember, anyone removing any equipment for any reason must sign it out and sign back in using the clipboard on the storage cabinet.

The following article is re-printed courtesy of ARRL.

Using a Drone for Antenna Installation at TI5W



New antenna installation tactics help this Costa Rican station outperform its previous setup.

Kam Sirageldin, N3KS

Located at an elevation of 2,000 feet above sea level on the side of a volcano in the northern reaches of the province of Alajuela, the TI5W station is blessed with great terrain characteristics that help out tremendously on the 160 – 40 meter bands. Currently, TI5W holds the world DX records for all Multioperator categories in the ARRL International DX CW contests, and also regional records in CQ World Wide contests. After using a drone to install a full-sized loop antenna, this station had even more success on 160 meters.

Choosing Drones

For the TI5W multi-multi effort in the 2012 ARRL International DX CW Contest, we hung a 10-meter Yagi from a tree branch, roped a two-element 15-meter Yagi to the side of the tower, and relied on a log periodic on top of an 80-foot tower for everything else. Krassy, K1LZ, also designed a full-size loop with a 75 Ω matching section feeding at an upper corner to provide vertical polarization, which he hung 75 feet into the trees with the antenna sloped to the ground. We had no noticeable radio frequency interference

(RFI) in the shack, so we kept the Krassy 160-meter loop for several years, once using a crossbow to restring it.

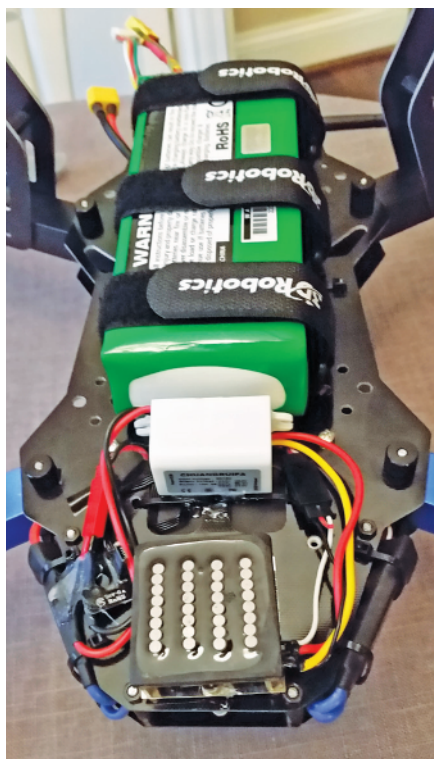
Two years ago, I decided to install an even higher loop antenna for

160 meters based on the success of the low 160-meter loop. For supports for the loop, we used a 170-foot and a 140-foot tree, effectively doubling the height of the 160-meter antenna.

However, because of the inaccuracy of a crossbow, the landing of the bolt could not be predicted to be in a safe, cleared area. So, I decided to replicate the drone installation that I had successfully used for antenna drops at my N3KS home station in Maryland.

The Model 3DR X8+ drone was well suited for an amateur lift, carry, and drop application because its open-source operating code is written around the Arduino processor. Even better, the code was written so certain I/O functions could be modified by changing parameters in the setup software — hence no actual new code needs to be written and compiled. The drone is capable of lifting about 1 kilogram of external weight and could stay aloft for about 15 minutes with that load.

We needed a device that could be energized to act as a magnet and then be de-magnetized remotely from the drone controller. Nicadrone in Nicaragua makes an electro-permanent magnet (EPM), which can be directly



A drone with an EPM installed (the EPM is the square piece at the bottom of the photo).



A drone controller with a twist knob potentiometer at the upper left that controls the EPM (similar to a camera gimbal control).



A mounting plate for an EPM, which is visible at the very front of the drone.

interfaced to the PWM I/O signals of the X8+ drone. (A technical application note on the details of the interface is available on the *QST* in Depth web page.)

An EPM requires an initial jolt of current to enable it to grab like a very powerful magnet, but then only needs a small trickle current to keep the magnetism energized (i.e. holding onto the other piece of ferrous metal) and then can be commanded with another jolt to de-magnetize. I managed to change the parameters of the X8+ PWM I/O at the drone camera gimbal interface, so that the drone controller could command three different PWM rates using the controller gimbal control: one PWM rate for grabbing the external piece of metal that would be attached to the line, another rate for holding while the drone flew to the appropriate spot, dragging the line under it, and yet another for dropping the weight/line.

This would enable me to fly the drone precisely over the exact tree branches and drop the weight/line exactly where it needed to be.

Lessons Learned

From experience, I found that you should use a line that is light enough not to drag the drone down, but heavy enough not to blow sideways in the wind. The X8+ has eight propellers, four of which are mounted on the bottom of the drone, and it is very easy for the line to tangle in one of the propellers and bring everything crashing down. I also learned the weight that is attached to the EPM needs to be about 0.4 kilograms. It's got to fall through tree branches and leaves, dragging a line behind it. There is more friction than one might suppose.

The planned day of the mission came and I had three people to help me. The wind and rain were not cooperative. After a few hours of waiting, two people decided to call it a day, leaving me and Luis, my 14-year-old neighbor, as the remaining crew members. We were actually hoping for a bit of rain, but no wind, because we were worried about the reaction that the drone buzz would elicit from the killer bees in the area. Once the wind eased up and the rain

slowed, Luis and I started the operation, keeping our own voices low and hoping that the drone noise would cause the bees to attack the drone and not us. Fortunately, everything went very smoothly, and the new full-size 160-meter loop was high in the trees.

The antenna has been a joy to use, resulting in great multiplier numbers for us on 160 meters, and in its broad-side direction, it outperforms a co-located beverage antenna and is essentially equivalent (in one direction) to an eight-circle RX array.

Kamal Sirageldin, N3KS, has been a ham since 1975, and received an electrical engineering degree from Johns Hopkins University in 1982. He later formed his own company that provided GPS tracking and messaging services to government and commercial clients, and retired after selling the company in 2011. His interests include DXing and contesting, and he now spends most of his time in Costa Rica. Kamal can be reached at kamal.sirag@gmail.com.



Amateur Radio Club Contacts

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Genesee Valley Amateur Radio Association	
Bill Boyd, N3DSP	n3dsp@lafireline.net

Drumlins Leaders 2019

President	Bill Tegtmeyer, KD2DNO	315-744-0434
Vice President	Rich Hamill, KC2TNJ	315-986-8589
Secretary	Nila DeLeo-Ellwanger	315-310-1717
Treasurer	Walter Dutcher II, W2WBD	585-224-5581
Program	Jay Hamill, KC2TCM	315-210-8078
RACES/ARES	Dave Taylor, KB2KBY	315-597-4293
3yr Director	Lew Ellwanger, WE2LEW	315-587-3509
2yr Director	Al Cook K2MPE	315-398-0936
1yr Director	Russell Harris W2IPT	585-738-0321
Repeater Chair	Jeff Jensen, N2MKT	315-879-1588
PIO/Membership	Lew Ellwanger, WE2LEW	315-587-3509
Newsletter	Lew Ellwanger, WE2LEW	315-587-3509
Club Trustees	Jeff Jensen, N2MKT	315-879-1588
	Sabrina Hamill, WD2STK	315-210-8078
Website	Rich Hamill, KC2TNJ	315-986-8589
	Justin Toramino, W2IPT	



OFFICIAL
SKYWARN
Storm Spotter



A US National Weather Service and Amateur Radio Volunteer Program



Club Address:
Walter Dutcher W2WDB
144 Berg Rd.
Ontario, NY 14519
Email: drumlinsarc@gmail.com



WAYNE COUNTY RACES

VHF NET

TIME-FREQUENCIES

SUNDAY EVENING 8:35PM

PRIMARY:

146.685 (PL 71.9)

WA2EMO REPEATER

Secondary

146.745 (PL 71.9)

WA2AAZ REPEATER

Voice and Digital

FLDIGI MT63-2KL

