November 2020

The Messonger 2.0

Volume 3

Blackstone Valley Amateur Radio Club's Quarterly Newsletter

W1DDD.org

The Great Outdoors

By RONALD R. BLAIS — KB1RYT

BVARC continued to navigate uncharted territory during the Covid 19 pandemic by conducting a pair of outdoor ham radio license test sessions on the grounds of Our Saviour's Parish, National Catholic Church, 500 Smithfield Road, North Smithfield.

Nine candidates were tested at the Aug. 8 session, with five passing the Technician test, three General and one Extra.

At the Oct. 10 session, also held at the church, eight candidates became Technicians and one Extra.

The next VE session is scheduled for Dec. 12 at the church.

The May 16 session was canceled because of the pandemic.

However, Bob Beaudet, W1YRC, hosted an exam session in his kitchen so the son of a friend could earn his Technician's license. Bob was assisted by Marc Caouette W1MCX, and Byron Kinniburgh, K1YCQ, in administering the test.

A Big Thank You to

our VE's who volunteer their time to keep the amateur radio membership growing.

Bob Jones WB1P
Ray Vilnit KC1HQB
Patty Vilnit W1AUT
Lee Smith K1LRS
Bruce Wood W1BRU
Mike Kenny K1ETA
Mickey Callahan K1WMC
Bob Beaudet W1YRC
Bill Lincourt KC1ANX

Our President's Farewell Message

Hi everyone.

This has been a rough year, but BVARC has weathered through it so far, which is better than most clubs in the country.

When COVID-19 hit, we postponed the February Club Meeting and I opened up a teleconference line for our club to use to keep the membership informed and active.

With the pandemic in full swing, the ARRL stepped in and promoted Field Day 2020 as a club competition of A, B, C, D, E and F stations submitting their individual scores under their own call sign and the club affiliation.

I know we had a few individuals who were very active this Field Day, and even though the bands didn't cooperate, the weather didn't cooperate, one thing was amateurs around the world proved they were ready to adapt to the situation of a global pandemic and kept right on doing what we do.

As restaurants were give the go ahead in stages to open up, some just couldn't make a go of it and shuttered their doors. Fortunately Asia Grille was able to open up for takeout, and is still going strong, even with the dining rooms closed off.

One thing that has boomed is the activity of amateurs getting on the air. With the pandemic, people with amateur radio licenses started getting more active to keep from going stir crazy due to work from home orders and mandated stat at home orders.

This fall I opened up a free Zoom account for the September meeting. It went well, 22 members showed up. The meeting went well. We discussed the upcoming elections and the old business of the change to the club bylaws pertaining to having to use only first class mail to notify members of very important club business that needs the majority of the membership to vote on.

Every member should have received their mailed notice of the election date and time, and the fact that not only will we be voting for club officers and the Board of Governors, but the change in wording of the bylaws to allow "notification of special votes and meetings via electronic service (ie: email, website, social media, etc) or first class mail.

I strongly urge the membership to vote for this change as using the US Mail costs the club in not only time but financially to give a printed copy of a notice or document to each and every member.

Also, this is an election year, not only for the country, but our club. Judson is heading up the nominations committee and any member can run for a club officer position or member of the Board of Governors. Remember this is your club, you have a say in how it runs. We have the majority of the officers and board running again, and Ken Trudel, N1RGK, has accepted nomination for president. I am not running for re-election due to health issues, but I still will be involved with the club and not disappearing, this is our club, yours and mine. I may miss a meeting, not by choice, but still planning on being at the meetings, and club events if we can do so safely in light of what is happening in the world today. Also I have a backlog of projects to keep me busy for a lot of long winter nights over the next several years.

Now with that being said, I would like to thank everyone who has served the club as either an officer or board member. These individuals have helped steer our club in the direction that we are at now, and directing our club to be around for years to come.

73 Matt NA1Q

Thank You Matt for Four Great Years!

I am sure I am speaking for the entire club in thanking Matt for his wonderful leadership! Our club has thrived and grown! As the former President, Matt will be an active member on the Board of Governors.

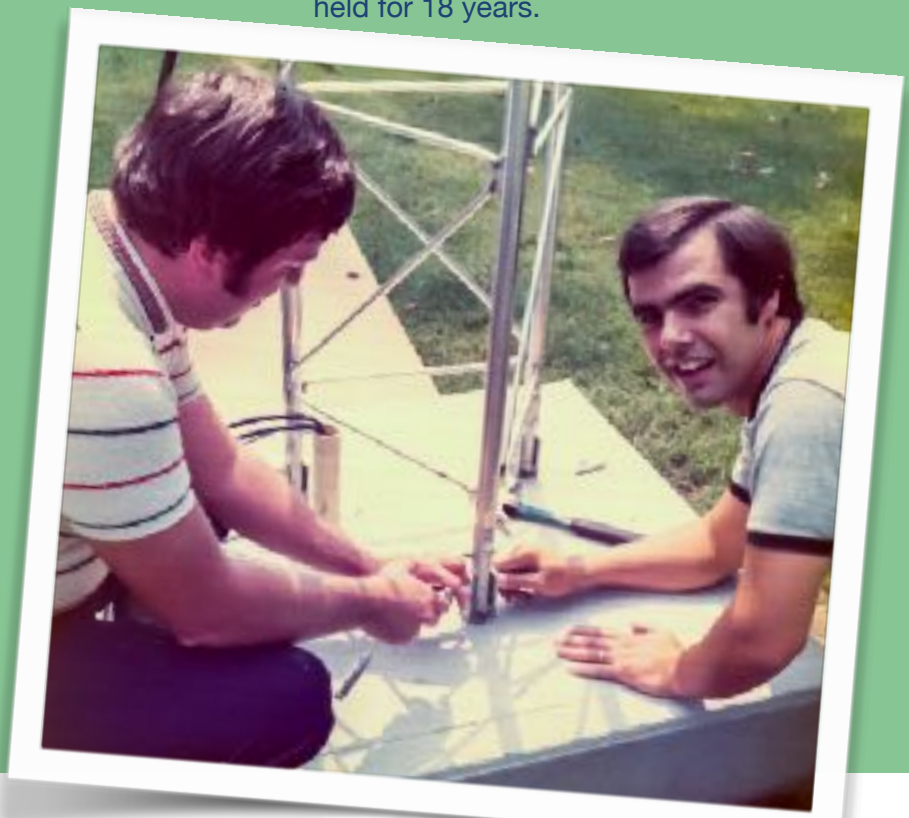
– Judson Mitsock

Snapshots

A Peek Through the BVARC Archives

How many Section Managers does it take to install a tower?

This photo offers a hint. Rick Fairweather, K1KY, left, and Bob Beaudet, W1YRC, lend their skill and strength in installing a tower in 1974 at the home of David Mania, K1MO, in Cumberland. Beaudet and Fairweather would go on to be ARRL secion managers, with Bob recently named recipient of the Knight Distinguished Service Award for his outstanding performance as Rhode Island section manager, a position he's held for 18 years.



DX Digest

From , Bob Beaudet — W1YRC

I shared this with some of you when it first was produced by Bob, KK6EK shortly after his scientific trip to Heard Island VK0EK.

It's especially well done and focuses on the island and its natural treasures rather than simply operating a radio and making contacts.

I know Bob KK6EK and picked him up at the D/FW airport when he was guest speaker to the Lone Star DX Association's luncheon at the Ham-Com Convention in 2000. No one else in LSDXA was sure to be able to recognize him in a crowd coming off his flight from Los Angeles, so I got the assignment.

Bob KK6EK is primarily a Marine Scientist, received his BS in Physics from California Institute of Technology and his MS and PhD in Physics from Columbia.

This video is about 45 minutes long and is quite enjoyable if you appreciate the natural facts about one of the most remote places on earth. 73

Simple Vehicle Parked NVIS Antenna

By MATT PENTTILA NA1Q

All heck has broken loose, RI EMA and MEMA have activated ARES to provide communications across Massachusetts and Rhode Island. You're sent out to do an assessment of the damage from the latest storm which was a hurricane with a tornado to boot. Problem is your VHF 2 Meter mobile can only get as far as Newport RI and Millbury MA. Hills and the fact every repeater tower was damaged in the storm, knocking out repeaters everywhere.

But there's hope. ARES has a net going on 3.945 LSB. You say no sweat, I have a 80 M hamstick on the truck, I'll check in with that. Problem is the Ionosphere and angle of takeoff shoot your signal 600 miles away rather than 60 miles back to the other ARES Net Controls and Temporary HQ.

What to do...simple. And all you need is a 3/8-24 vehicle antenna mount connected to your HF Radio in the vehicle, a few 3/8-24x1 or 1 1/4" bolts, couple of 3/8-24 nuts, a 3/8" crimp eye for 14/16 GA (Blue Sleve) or 10/12GA(Yellow), and some wire preferably Stranded THHN in either 10 to 16 gauge, preferably Orange or Yellow coating color, and some UV Resistant rope or siene twine.

First, figure out what the wire length should be for 1/4 wavelength on the frequency you're using. Cut this wire using the formula 235/F in MHz and round up to the next foot. (I use 235 vs 234 as it works and I don't have to splice wire to the end of the short antenna, just trim down) So 40 meters 7.0 MHz would be 33.54 feet, so make your wire 34 feet, you can fold it over on itself to shorten it, but you'll need to solder splice extra wire if it's too short.

Now strip the insulation at 1 end and crimp the eye on the wire. For added strength, cut off the plastic crimp band and solder the wire to the eye after crimping.

Remove the hamstick from your 3/8-24 antenna mount, slide a bolt through the eye on the end of the wire, and place 2 nuts on the bolt. Install the bolt into the 3/8-24 mount, tighten the lower nut down to lock the bolt in place on the mount. Then run the wire out 90 degrees from the vehicle, and tighten the top nut upward towards the eye to secure that end. Now take the rope and attach it to the other end of the wire. Raise the wire off the ground, tie off to low tree branches 4 to 8 feet off the ground.

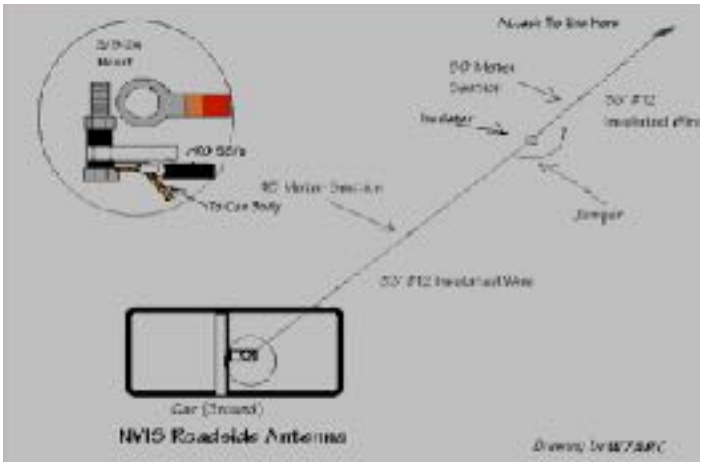
Adjust wire length by folding end over and twisting around wire antenna to adjust SWR.

You now have a simple HF NVIS antenna, some folks have cut the wire for 80m with a jumper to disconnect for 60m or 40m. Or you can attach 2 or 3 wires of different lengths and fan them out 15 degrees apart.

Best part is this deploys quick, rolls up and toss in a zip lock behind the seat for an emergency, or bring along an antenna launcher to get the wire higher in the trees for a long Vertical Wire Antenna using your vehicle as the other half of the antenna.

Not claiming I'm the first for this, but thjs website has the attched drawing of the antenna concept and design description at:

http://www.hamuniverse.com/k6sojnvis.html



A word from BVARC's new President

As we begin to look forward to a new year, I feel it appropriate to first look to the past and recognize our past President, Matt Penttila, NA1Q. Over the years Matt has been a hard working supporter for the club, our activities and to you its members. I wish to express my sincerest appreciation for a job very well done! Thank you Matt!

I wish to thank our Officers:

Vice President
Marc Caouette, W1MCX,
Treasure Bob Jones, WB1P,
Secretary Ray Vilnit, KC1HQB.

I wish to thank our Board Members:

Patty Vilnit, W1AUT,
Bob Beaudet, W1YRC,
Mickey Callahan, K1WMC,
Judson Mitsock, W1JMZ,
and our Trustee
Dave St. Onge, W1HW.

Their dedication to BVARC during this stressful time has further demonstrated their personal desire to see us through to better days. Thank you one and all!

An organization like ours only achieves through the hard work and dedication of its members. Committee chairpersons and committee members, volunteers, operators at events, setup and take down activities, cooking and cleaning, mentoring and many other activities all make BVARC a success and it's upon this record of success in the past that I hope we build upon making the future of BVARC all the more successful. Thank you to all who have contributed your time and energy in the past and I ask for your ongoing support to BVARC into the future.

If we all do just one thing, there won't be anything left to do but to have fun!

73, N1RGK
Ken Trudel
President, BVARC

ARRL'S PRESTIGIOUS

Knight Distinguished Service Award

Bob Beaudet, W1YRC, a charter member of the Blackstone Valley Amateur Radio Club, who has devoted decades toward the advancement of the club and the amateur radio community, has been named recipient of ARRL's prestigious Knight Distinguished Service Award, given to an ARRL section manager. Bob has been ARRL's Rhode Island section manager for 18 years.

The Knight award recognizes exceptionally notable contributions over an extended period of time by a section manager to his/her section, and beyond, along with exceptional contributions to the health and vitality of the ARRL and its field organization and whose actions are in the spirit of the unselfish contributions of JoeT. Knight, W5PDY.

In selecting Beaudet, a Cumberland resident, ARRL cited his active promotion of ARRL activities in his section, including visiting hundreds of Field Day operations; participating in many Volunteer Examiner test sessions; attending countless club meetings; staying active as a contester, DXer, and mentor, and serving as a model to other section managers. ARRL also said "Beaudet's leadership of the ARRL Rhode Island Section Field Organization has led to a strong working cadre of volunteers within his section."

Bob also serves on BVARC's Board of Governors.

Congratulations Bob!

From STEVE EWALD — WV1X
ARRL Supervisor, Field Organization Team

The ARRL Board of Directors established the **Knight Distinguished Service Award** to recognize exceptionally notable contributions by a Section Manager to the health and vitality of the League. The first such award was presented to Joe T. Knight, W5PDY, for whom the award was named, in recognition of his exemplary service not only as the ARRL Section New Mexico Section Manager for more than a quarter century but also for his willingness time and time again to share his knowledge and skills leadership by volunteering to help train and orient newly elected Section Managers from throughout the country at the invitation of the Field Services Department (now Radiosport and Field Services Department).
In recognition of the commitment to the ARRL Field Organization as exemplified by Joe T. Knight, W5PDY, the **Knight Distinguished Service Award** may be awarded from time to time to an ARRL Section Manager who has distinguished himself or herself.

THE NEW AND QUITE DIFFERENT DIGITAL MODES OF FT8 AND FT4

By BOB BEAUDET — W1YRC and JIM JOHNSON — K1GND

The new and different digital modes of FT 8 and FT4 are contained in Dr. Joe Taylor's program suite called WSJT or Weak Signal by Joe Taylor.

Details of this program suite may be found at https://physics.princeton.edu/pulsar/K1JT/index.html . For our purposes, we wish to concentrate on WSJT-X which is detailed at https://physics.princeton.edu/pulsar/K1JT/wsjtx.html .

During these days at the bottom of the valley between sunspot cycle 24 and 25, it's easy to understand how many fellow hams using SSB and even CW, who enjoy contacting stations far away, may become bored and disillusioned, thinking "This isn't what I became a ham for." Finding anyone to contact is not easy and sometimes not possible. Some pack it in and go looking for a good book to read or sit on some 2 meter repeater.

FT8 and FT4 provides stations to contact and keep you fully engaged, even at the bottom of the sunspot cycle. The program can actually hear and decode stations that your and my ears cannot hear at all. The PSK Reporter is an on-line information page that provides statistical data regarding on air activity.

At the time I was writing this, midday on Wednesday, not a weekend, PSK Reporter listed reports being made by 17,000 monitors all around the world. In total, over a two-hour period they monitored over 2.2 million FT8 and FT4 signals and 6,000 CW signals on all bands! Does that make it clear where the activity is now?

Like it or not, that's where thousands of our brethren are operating and making contacts with others.

Our Consortium served a valuable purpose for thirteen years, especially when bands are quiet, for us to gather and exchange information and knowledge about many different features of our beloved hobby. We all are painfully aware that gatherings of that sort are not permitted and frankly are dangerous to us all because of the possibility of spreading the Covid-19 virus. Some day soon, we hope, we'll be able to meet again and conduct our Consortium program.

Meanwhile, until we can, we (Bob and Jim) wrote independently about FT8 and FT4 to acquaint you with these modes. The goal was to somehow combine the two articles when we were finished. We each took a different approach and it baffled us when we tried to marry them. So, they will stand alone but together.

Jim's article is essentially a primer with basics to learn how to get on the air and be effective. Bob's article discusses a couple of the bad operating habits that the FT8 program lures us into without our knowledge or permission.

You would probably gain the most knowledge and understand better by reading each piece and then asking questions regarding what you don't understand or about which you want better detail. Either of us will be happy to help you.

Bob's article is titled "The FT8 and FT4 modes may not be teaching us good operating practices" and Jim's is "FT8 and FT4 An Operating Primer". You probably should read Jim's article first. In each, you'll probably find some things that you cannot understand. In fact, I can promise you that you shall. Keep notes and ask either of us to explain it for you.

The FT8 and FT4 modes may not be teaching us good operating practices

By BOB BEAUDET— W1YRC

While amazing for working weak stations even when no stations may be heard, the new FT8/4 operating modes might be allowing, even encouraging, operating practices which are highly discouraged under rules that one follows when using CW or SSB.

I've been fairly active using these two new digital modes since March, 2018. In fact, nearly all of the 23,000 contacts made since then have been using FT8 or FT4.

So, my basis for making these comments is rather well supported.

The WSJT program written by Joe Taylor K1JT and his team is likely the software used by most FT8/4 stations on the air at present. It's safe to assume that when they write a feature into the program, it is universally used throughout the world.

Joe Taylor, K1JT is an American astrophysicist and 1993 Nobel Prize recipient in Physics for his discovery along with Russell Alan Hulse of a "new type of pulsar, a discovery that has opened up new possibilities for the study of gravitation."

Unless the FT8 operator tells the program to do otherwise, when a user clicks on a station's call sign to initiate a calling sequence to him, the operator's transmit offset frequency will be changed to that of the station you are calling. In other words, your signal will be parked directly on top of the other station. Someone who was trained in CW or SSB protocol finds this disturbing, even annoying and there is no need for doing it.

It is totally unnecessary since the WSJT program directs it to search its entire operating spectrum, looking for someone calling, whereupon it will lock onto it automatically.

As I said, those properly trained in using CW or SSB will not do that unless instructed by the DX station to call on a different frequency. So again, there is no need or advantage by sitting on top of the other station's frequency. Doing that presents no advantage at all and will add QRM so that other stations might be unable to copy or "de-code" as they say in FT8 speak.

When more stations pile on, the transmit frequency becomes totally useless and the station must find a new frequency. Usually, this happens about every four or five contacts, every couple of minutes. This entire matter can be rather confusing because we all are on the same RF frequency, for example on 20 meters, FT8 is on 14.074 MHz. Everyone is on that frequency operating on upper sideband.

Why isn't it just a QRM disaster? If we did that on CW or SSB, it would simply be a QRM dogpile and no one could copy anything. The magic happens when many different stations operate on different offset audio frequencies on 14.074 USB. It actually is quite efficient.

We older operators learned in "good operating school" that you should never transmit directly on top of a DX station. This is especially true when dealing with a DXpedition. In that case, you NEVER EVER call them on their transmit frequency using any mode.

Normally, the DX station will call "CQ CQ listening up 5 to 10" or listening on a particular frequency. NEVER on top of the DX station. We DX chasers learn that at birth.

Yet, the WSJT program parks you directly on top of the other station. Selecting the "Hold Tx Freq" feature on the program is strongly recommended to avoid deliberately interfering. By using that feature, you may, and should, select a clear frequency on the waterfall display before making any calls.

Then click that hold box and then click on the station you wish to call. You will transmit where you selected and will receive the DX station where you selected the DX station.

A grand "fait-pas" naturally takes place following someone calling/working you and then calling CQ on top of you. The caller isn't being stupid, necessarily. He's simply clicking his mouse and allowing the program control what he is doing.

So, following your exchange of reports and RR73, the calling station's sequencer automatically moves to calling CQ and unless he moves his offset to a new frequency, he's sitting right on top of you and providing you with plenty of QRM. I find this very annoying. In my opinion, this is a serious shortcoming of the program when it is used to chase DX or even ordinary contacts. Not every FT8 user graduated from "good operating school". Many don't even realize that what they are doing will result in plenty of QRM. Some may not realize what they're causing and don't see any problems, at least until someone comes along and calmly explains it to him.

A different issue exists in that some DX stations do not seem to want anyone to ever work them more than once. Of course, it's entirely understandable with DXpeditions. Every minute sitting on that rock or island costs dollars, possibly MANY dollars. In order to maximize the number of unique callsigns worked during their very limited time at the location, they must insist that we only make one contact per band or mode. That's what the sponsors expect.

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you and I are not rare DX. We're ordinary stations and making repeat contacts over a period of time is unavoidable. It's comparable to the "catch and release" fishermen who might catch the same fish more than once. It's called sport.

Just this morning, I called a VK station who responded QSO B4. I apologized. Out of curiosity, I checked my log and found that I had indeed worked this VK station as he said, but it was last June, four months ago.

The logging programs that many of us have will tell us immediately if we previously made contact with the call just entered. Well OK, that was in June. Conditions are different today. We might have a different antenna or run higher/lower power now. Maybe we moved to a new location. Band conditions change just about every day, sometimes drastically.

Am I expected to memorize the 23,000 stations that I have contacted so that I never work any of them again? Once I work someone, I am never to contact that station again? That's simply crazy. A while ago, I called a station in Iceland who was rather irate that I dared to call him again. Checking my log, I saw that I had indeed worked him before, but it was a year ago and again the year before that.

What's wrong with doing that? Good Grief! After finding that I had worked him previously, I wrote him an e mail note and expressed how sorry I was for working him twice and told him that I wrote a note to myself on my operating desk to never ever call that station again. How completely silly!

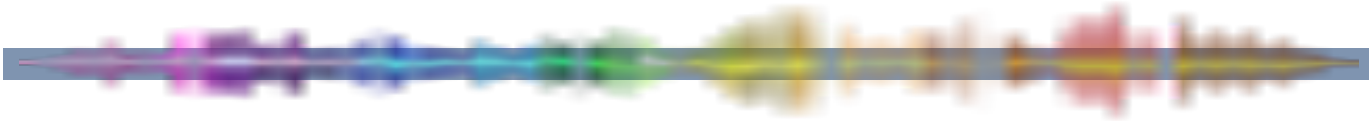
I totally agree that we should not work the same station more than once during the same operating session on one band. There's no point to doing that. But, I occasionally have someone call me again on FT8 after having a perfectly good and (I thought) confirmed contact only a few minutes before. I think it's strange but I'll work him again. It makes him happy and it takes only a few seconds. That's fine.

Maybe he needed an insurance contact because the previous one was questionable on his end. In FT8, possibly, he didn't decode my RR73 that I sent because of interference or my weak signal (No, that can't be) and wanted to make sure we had a good contact in the log. If we both use Logbook of The World, the contact will not match and confirm unless both contacts were legitimately made with RRR or RR73 both ways.

In my 67 years (and counting) years of very happy hamming, I have never found folks who are upset over contacting them more than once.

What has happened? Have we become so digitized that we must follow the rules and behavior dictated by the computer program, rather than common sense?

If so, that is very sad indeed.



A Primer for The New FT8 Operator

By JIM JOHNSON — K1GND

Among all DX operators the cardinal rule is "LISTEN LISTEN." In the case of FT-8/4, the rule is "LOOK LOOK".

Take time to look at the waterfall to see where the activity is happening (and not) on the upper sideband of your operating frequency.

Because using these modes requires precise timing, be certain that your computer clock is set accurately to the closest fraction of a second. This is very important. If your computer clock is off by a few seconds, you will not be able to decode and receive any signals.

Check to see you are set for SPLIT operation otherwise it will be impossible for the DX station to decode your signal among the many calling his frequency.

The WSJT program selects "split" automatically. DXpeditions frequently use a tool contained in the WSJT program called the Fox & Hound. If you are required to use the FOX AND HOUND mode by the DX station, be sure that you follow the rules for using that mode. Using it the first time is usually terrifying for most hams, but try not to let it frighten you. Once you have made a few contacts, you'll be an expert.

Select a clear spot on the waterfall in the WIDE graph setting (2.4 to 3.0 KHz) to set your transmit frequency and call the DX station from there.

When calling the DX, SEND A REPORT not your grid, along with your call (e.g. K1GND FN41ft). This will reduce the number of exchanges. Remember the DX is normally not looking to accumulate grid squares only

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calls. (Some VHF contests actually do look for grid squares) This will also shorten the length of time to complete the QSO. Check the “skip grid box” or click the NEXT button under “Generate Std Msgs” for the TX2 message . Typical FT-8 QSO would be no longer than 75 seconds and much shorter time for FT-4.

Like Bob, W1YRC, I have been using FT-8/4 for several years and in all of the contacts I have made, I have not run into a single contact that asked for my grid locator. (Jim is not a VHF contester) In fact, DX Expeditions might not respond to a call with a grid. The exception might be some of the VHF contests that expressly look for the grid square. Check the rules for the contest in which you are taking part. All contest schedules and rules may be found at https://www.contestcalendar.com/ .

Next, if you do not plan to wait for a reply, don’t call the DX. Much of this especially pertains to a DXpedition. Plain DX stations, not on a special operation, are a lot more casual and less demanding.

However, using proper technique is important as well. Remember, the DXpedition station is working from a list of stations that his program has decoded and when it is, it will be added to the list, but not on TOP of the list. There may be several others in front of you, but you are on the list. Don’t quit and tune away.

When the DX finally gets to your call (possible after a couple minutes) and determines that you are not there to respond, the DX operator has wasted valuable time, not to mention that you missed working a new one.

To make the QSOs smoother and faster, particularly during the DX EXPEDITION but whenever you are chasing DX, the “RRR” and the “73” lines should be combined as “RR73”.

The WSJT program “sees” the entire spectrum occupied from a 200 hz offset up to 2.5 khz of audio offset on your upper sideband, so there’s no need to sit on top of the DX, you may call him at the other end of the offset window and his program will see you just as well as if your sitting on his frequency.

Do not feel offended when the contacted station does not respond with a “73”, following your RR73 at the end of the contact. But you must see RR73 or RRR. By repeatedly sending your “73”, waiting for his/her 73, you are just wasting time. The DX station is already working the next station. This courtesy is fine for regular contacts, but in DXpedition contacts, it just wastes time and bandwidth. Particularly in a DXpedition, their time on the island, rock or whatever is VERY limited and their goal is to contact everyone who calls and needs them for what we call an ATNO, an all time new one.

The DXpedition likely costs a sinful amount of money, sometimes millions of dollars. They should not waste any time at all. Like contest operators, they are very mindful of their Q rate, how many QSOs they are logging per minute. We, back home in our comfortable and cozy shack, have all the time in the world. We’ll call for hours if necessary to make that one contact. It doesn’t cost us any more, except for a little electricity.

Final thoughts, and this applies to DX and non-DX calls, when answering a CQ and making the contact on FT8/4 – DO NOT START CALLING CQ ON HIS FREQUENCY. Again, pick a clear spot on the waterfall and call CQ from that spot.

The WSJT program is written in such a way that when you click on a particular call sign, your receive offset and your transmit both go to the same offset frequency that the other station is using. That is a problem because after the contact, the program scrolls your transmit message down to TX6, the CQ of your call message. Your radio will start sending right on top of the last station that you just worked. DON’T do that! In CW or SSB operating protocol, doing that represents a terribly rude practice. You **DON’T DO IT**. You would be labeled as a “LID” which is not a good thing. But, the WSJT does it automatically, **UNLESS you check the box that states “Hold TX Freq”**. You should always do that and set yourself up on a clear spot with no one else using it as described above.

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HOMEBREW and gadgets

From the Workbench of Matt NA1Q

I have to say that I do not take credit for the idea, I do have to thank Mickey Callahan, K1WMC, for building one of these and letting me use it at Field Day back in 2019, and as they say, “Necessity is the father of invention” or in my case, construction. I decided after Field Day 2020 I would be stringing up wire antennas and operating either mobile/portable, QRP or QRO. I also revisited an old concept for an antenna I used a couple of times that worked well, so toss that in the mix.

Now I'm hearing "what are you building now?"

Seriously, I have been asked that over the last several weeks from either co-workers or friends and family.

So first, necessity. Need to get a rope over a tall tree to hold the wire antenna up.

I have used the 2" socket from my tool box, surf rod with lead weights, bow and arrow, crossbow, both a sling shot and the David vs Goliath traditional sling, and the water bottle methods. They'll work, but not as cool and less lethal than the pneumatic antenna launcher.

There are plenty of articles on how to construct one, so I won't go into too much detail on construction, but precautions. First, use Schedule 40 PVC and make sure the PVC cement has 24 hours to cure before pressure testing. I waited 6 hours and at 40 psi, the end of the launcher with the air pressure gauge and the air fitting blew off, injuring my hand for a couple weeks. It could have been worse, but I did put myself semi out of the line of damage. Remember 50 psi across a 2" pipe cap puts approximately 200 pounds of force across the diameter of the cap. Picture an overinflated Balloon pressing on a needle or pin.

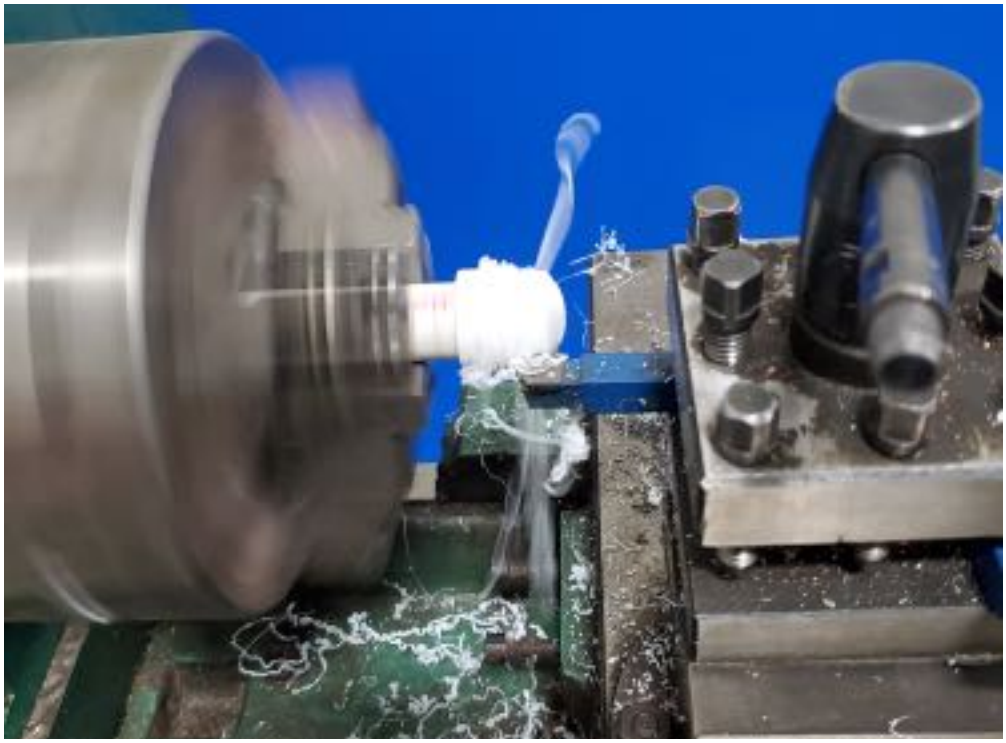
Now for projectiles. I built my launcher with a 2" oval tank and a 1" PVC valve and pipe for the barrel. Now anyone knowing about projectiles and barrels, you want a projectile weighing around 3 to 4 ounces, and close to the diameter of the bore of the pipe yet still have enough clearance as to not jam part way up the pipe when the air is rapidly discharged. You also need a point to attach a line to the projectile too.

I found 1/2" schedule 40 PVC pipe caps have an outside diameter of 1.125" approximately, and a 1" Shedule 40 PVC pipe has an inside diameter of 1.00"

So for the solution, I went to the old Grizzly metal lathe in the shop, and chucked a short piece of 1/2" PVC Schedule 40 pipe in the chuck, pressed the PVC cap on and made a pass on the lathe, taking the caps from 1.125" Outside Diameter down to 0.955" diameter, leaving me 0.045" of play between the barrel and the projectile.

After turning, I attached a screw eye in one of the caps, filled the short stub of 1/2" pipe with between 12 and 18 1/4-20 steel nuts, and glued it all together. Total weights vary between 3.1 and 4.5 ounces.

Attached an old saltwater surf spinning reel with some really old (circa 1990) 30 lb monofilament fishing line, and a couple hose clamps. The projectile attached to the line and 55 PSI gives me clamps. The projectile attached to the line and 55 PSI gives me enough height to clear a 45' to 50' tree, and a 500' roll of yellow UV resistant Siene line used by surveyors can be purchased for under $10, and the strength of the line is around 50 to 75 lbs. roughly, enough to pull up a sime wire dipole antenna.



Recommended Cleaning Guidelines for Icom Radios and Accessories

In response to the coronavirus (COVID-19) pandemic, Icom is providing recommended cleaning guidelines for Icom radios and accessories.

Cleaning

1 Turn off the radio to avoid heat generation or a malfunction.

2 Apply over-the-counter isopropyl alcohol, with a concentration of 70% to 80% diluted with water, on a soft, dry cloth and gently wipe down the surfaces of the product.

3 a. Do not apply or spray the solution directly on the product, or soak it in the solution.

4 b. Avoid wiping the antenna or the transparent acrylic plate of the display as much as possible since rubbing alcohol can damage resin parts.

5 Make sure that the product batteries are sufficiently dry before using or charging them.

Do not use bleach or detergents, even if diluted. It may cause damage or deterioration.

IMPORTANT

1 We recommend disinfecting your hands before and after using the product.

2 We do not guarai compatibility with all rubbing alcohols. We recommend that you first try it on an inconspicuous part c the product.

3 Carefully read the precautions for rubbi alcohol before using

4 In the unlikely ev that the product is damaged, or malfunctions due to rubbing alcohol, tl cost of repairs or replacement of parts may be borne by the customer.

Regular Care (Dirt Removal)

Wipe the product off with a soft, dry cloth. If it is extremely dirty, wipe it with a soft cloth moistened with water. Never use detergent or organic solvents (thinner, benzine, and so on). It may cause damage, paint peeling, or deterioration.

** From The Icom-Japan Website*

Across THE Spectrum

BVARC Christmas Party

canceled because of pandemic.

OUTDOOR HAM RADIO LICENSE EXAM SESSION

scheduled for Saturday, Dec. 12 at 9 a.m. on the grounds of Our Saviour's Parish, National Catholic Church, 500 Smithfield Road, North Smithfield.

Preregistration and pre-completed 605 form preferred.

Fee $15.

Registration via email: bgjones49@verizon.net

Drive Through Elections

o ELECTIONS

By RONALD R. BLAIS — KB1RYT

The BVARC leadership team for the next year was chosen at an outdoor election Saturday, Nov. 7, at Our Saviour's Parish, National Catholic Church, 500 Smithfield Road, North Smithfield.

Ken Trudel, N1RGK, was elected new club president, replacing Matt Penttila, NA1Q, who did not seek re-election. Re-elected officers include Marc Caouette, W1MCX, vice president; Bob Jones, WB1P, treasurer, and Ray Vilnit, KC1HQB, secretary.

Re-elected to the board of governors are Patty Vilnit, W1AUT; Judson Mitsock, W1JMZ; Mickey Callahan, K1WMC, and Bob Beaudet, W1YRC.

Also, the bylaw change permitting Email notifications was passed unanimously.

RI ARES Conducts NVIS Exercise

By TERI DIIORIO — W1PUP

On Sunday, Sept. 13, the Rhode Island Amateur Radio Emergency Service (RI ARES) held our first Near Vertical Incidence Skyware Propagation (NVIS) exercise across the state on the 40 and 80-meter bands using NVIS antennas. With our state's terrain, there are limitations to 2-meter line of sight connections and NVIS can provide a valuable solution for emergency communications. The exercise included voice and data.

Prior to the exercise, we had initial training for sending and receiving information over the air with FLdigi messages and Winlink (email) software from Jim Spencer, WD4NFT, with the Tucker ,GA, ARES Group. These programs are crucial in providing critical messages, shelter lists, logistics orders, family location forms etc. for organizations such as the Red Cross, emergency management agencies, and other disaster response groups.

In the planning phase, we needed to determine locations, teams and frequencies. Jeremy Taylor, , K1JST, the District Emergency Coordinator for Kent County, created a Google survey form to find out who was participating, helping with set-up, take down, manning the Comms, and logs. The ICS 201 Incident Radio Communication Plan was prepared by Sean McGrath, W1SMM, Emergency Coordinator for Providence County, and approved by Paul Silverzweig, W1PJS, the Section Emergency Coordinator, and we all filed out a ICS 309 COMM Log. Some of us had never done this before so it definitely proved to be a eye-opening learning experience.

With Covid 19 social distancing guidelines in effect, we handled this as a mixture of field locations with small groups and with some operators working from their homes, all on emergency power, from generators to batteries to solar panels.

The exercise spanned just over three hours with over an hour for set-up, front and back, using the 2-meterm NB1RI repeater network for coordination. Starting with 80- meter voice, then data on WinLink, first testing with Net Control (W1PJS-Portsmouth) on 80-meter by voice, then next attempting data through Winlink with a simple email first, then adding an attachment.

Here are a couple examples of the equipment configurations used

Monastery:

Sean brought his 18 ft RV and we setup under the awning. The radio was an Icom IC7300 running at 100 watts. Set up was a Buddipole Antenna, feed point was at 18 feet as center fed 80 meter dipole with the ends at 10 feet.

We worked 80 meters with voice on SSB and Digital using Winlink.

Later we reconfigured the antenna for 40 meters by shorting the overall length.

We were not as successful on 40 meter digital with Winlink but we did make voice SSB contacts but not as clearly as on 80 meters.

The 2-meter VHF radio with roll up J-pole antenna for the NB1RI repeater network.

Two lithium iron phosphate batteries and 200 watts of solar panels for power source and a HP laptop for digital connections.

Portsmouth in Glen Park:

Paul set up a popup enclosed tent with an old Yaesu FT-757gx 100w HF radio, connected to a signallink soundcard interface and a laptop. The antenna was a home brew NVIS consisting of a Twin lead folded dipole, and 5 wires laid on the ground, fed with coax... the antenna was mounted on three 20 - foot aluminum army surplus masts, one center and one at each end.

The 2-meter radio was a Kenwood radio from my emergency comms go kit, with a home brew roll up J-pole antenna to use for coordination with the other stations. Everything was run from a 40 Amp/Hour lithium ferrous phosphate battery.

All the NVIS antennas worked very well especially on 80 meters that day. Now we need to get a little more practice with the data systems.

The locations were spread across the state:

- *Exeter-W Greenwich HS Jeremy Taylor- K1JST*
- *Cumberland Monaster Sean McGrath- W1SMM*
- *Portsmouth in Glen Park Paul Silverzweig- W1PJS*
- *Lincoln At Shack John McManus-N1ZO*
- *Newport at Shack Mike Cullin-K1NPT*
- *Westerly at Shack Jim Creamer- KB1MAO*
- *N Providence at Shack Steve Arnold- AA1PQ*