



NEWS FOR AND BY BARS MEMBERS

BARS BillERICA Amateur Radio Society

OCTOBER 2022

BARS physical meetings are on hiatus until further notice.

The decision to resume in-person club meetings will be made entirely by the Board based on the outlook of the COVID-19 medical emergency.

Meanwhile, virtual club meetings using Zoom have proved an enjoyable substitute. Please ignore the section, below which gives directions and schedule for in-person meetings. It is hoped that we can resume in-person meetings by the new year.

The Board has decided to resume in-person Saturday morning breakfasts at Stelio's Restaurant. However, virtual breakfast meetings using Zoom will continue to provide an enjoyable substitute for those who wish to avoid physical presence.

The VE License Exam Sessions, have gone back to in-person exams – see the VE section near the end of the newsletter for details.

The safety and well-being of our membership is important to us.

--BARS Management.

Next BARS Zoom meeting: October 5 at 7:00 PM: "Radio in the Stratosphere" Presenter: Bob Finney of New England SciTech

The next BARS Zoom meeting on Wednesday, October 5 will feature Bob Phinney, K5TEC, President of Sci-Tech Amateur Radio Society (STARS). Join Bob Phinney, K5TEC, as he describes his STEM program at New England Sci-Tech in Natick.

Bob and his team just sponsored a highly successful ARISS Space Station contact at The BIG E multi-state fair in Springfield, MA on September 27. The event garnered much news and television coverage at the venue which attracts 1.5 million people during its 17-day run.



A dozen lucky students in Bob's program got to ask questions of International Space Station pilot Bob Hines, KI5RQT, via a ground station in Belgium.

Along with "Space Chat," NESci-Tech is conducting a 12-month educational space science program that includes:

- Amateur Radio License Course
- Model Rocketry workshops
- Air-Powered Rocketry
- Introduction to Basic Electronics
- Introduction to Arduinos Electronics
- Public Telescope Nights
- Morse Code Introduction
- Elementary Mathematics for Modeling Rocket Flight

Bob Phinney has a winning formula for engaging young people—and their parents—in an exciting program that has seen youths design payloads for high-altitude balloons and even NASA rockets! Come and hear how he does it.



BARS will announce the link to join the Zoom meeting before the meeting, but it will be posted to the BARS email list and should not be shared outside our Club. Are you on the email list? If not, please send an email to bars-subscribe@w1hh.org and then simply reply to the robot response from the server and you will be subscribed.

Observing our Zoom meeting requires only a web browser and headphones/speakers. You do not need a webcam or microphone unless you want to speak or be seen.

Before our meeting date, please go to <https://zoom.us/test> and see if it will function for you. If you have problems, we can try to assist – feel free to ask questions on the BARS email list.

We are looking forward to “seeing” many of you on Wednesday 10/5 here at 1900.

Billerica Amateur Radio Society

A Message From the Editor

from Marla Wallace, WA1GSF

Club elections are coming up. We elect a new slate of officers and the two Board of Directors members at our November meeting. All attending members whose dues are paid up are eligible to vote at the November meeting.

Additionally, if you wish to add your name to the list of candidates for any of the positions you must do so at the October meeting.

Finally, newsletter editor is an appointed position and I serve at the will of the Board. Unless the incoming board decides otherwise, I look forward to continuing as your editor.

Feature Article: Having Fun With The tr(uSDX) QRP Software Defined Radio By Scott Ginsburg, K1OA

I’ve enjoyed building QRP kit radios since my first kit build of the crystal controlled Rockmite 40 CW transceiver in 2012. I’ll never forget my first QSO with the Rockmite 40 just after finishing the assembly. I was running about 1W out and worked NN6T in AZ, I was hooked!

Since then I’ve built a number of QRP radios from kits but none of them supported SSB modes. I’ve been waiting for Hans Summers, G0UPL of QRP Labs to release the advertised QSX all-mode QRP transceiver kit but there have been no updates since 2020. While perusing QRZ.com a few months ago I came across the tr(uSDX) where people were singing its praises and using it on digital modes like FT8. That was enough to peak my interest so I investigated more into SDR QRP radios.

There are a number of multi-mode QRP SDR transceivers available, mostly coming from China. A search on Ali Express (www.aliexpress.com) for QRP Radios will yield a number of small radios, some QRP, some putting out more than 5W. The uSDX is an openly available SDR design based on modified QRP Labs QCX hardware and software developed by Guido, PE1NNZ. The uSDX can be ordered as a pre-built radio from various Chinese manufacturers for around \$130 however it has gotten a number of poor reviews and there is speculation that these radios are not following the spirit of the uSDX open design. Manuel, DL2MAN later joined PE1NNZ and together they came out with tr(uSDX) licensed under an agreement called Creative Commons Attribution-NoDerivatives 4.0 International License, stipulating that any product based on the licensed design will not incur any royalties or fees but should not be modified in any way. The tr(uSDX) is a 5-band (80-60-40-30-20) CW, LSB, USB, AM and FM SDR transceiver that can output up to 5 or 6W on 13.8V and fits in a 3.5 x 2.5 x 1.25 inch case making it one of, if not the smallest HF transceiver that supports voice modes, easily fitting into a shirt pocket.

I suspect the addition of “tr” to the uSDX makes it a “true uSDX” radio, but that is just my assumption. DL2MAN and PE1NNX have authorized a single vendor based in China to offer the radio in both kit and assembled form. After looking at a few YouTube videos on the tr(uSDX) and doing some reading I decided to pull the trigger! To save a few bucks and add to the enjoyment of the project, I went with the kit form, which can be seen here offered at \$89US: aliexpress.com.

It comes with two PCBs, a main board (with pre-programmed firmware) and an RF Board, some connectors, an OLED display, bandswitch relays, switches, a microphone and speaker, 3 power transistors, and a dozen or so toroids with magnet wire to wind them. The boards come pre-populated with SMD parts. For an additional \$20 the approved vendor will sell you a custom 3-D

printed plastic case in a number of different colors along with plastic tuning knob.

After plunking down my \$112 including shipping, I waited about 3 weeks for the kit to arrive from China. It was well packed in a small cardboard carton with an air cushion inside and the parts neatly packed inside a small plastic case. This was not going to get damaged on the way. The fragile OLED and tiny speaker were also in their own plastic case.

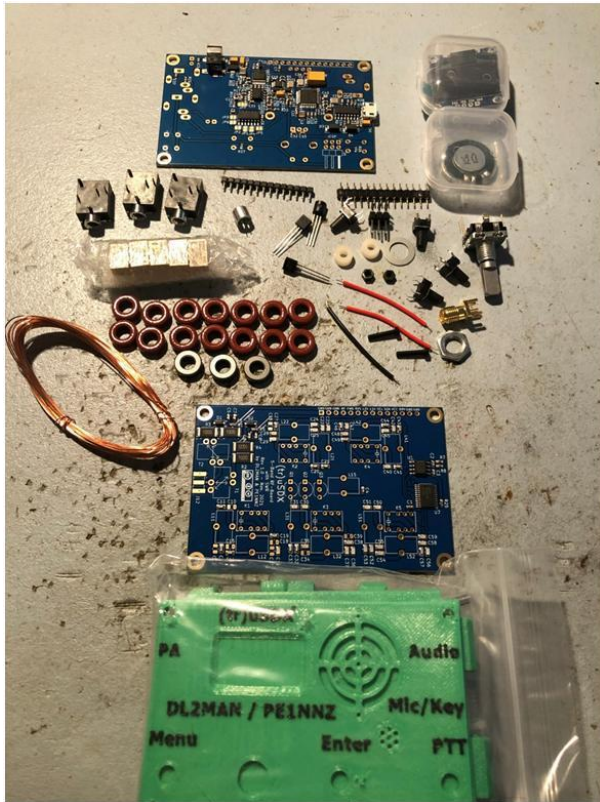


Figure 1 – tr(uSDX) Parts

There are no supplied assembly instructions for the kit however you'll find more than a few YouTube videos that take you through the process, including one by DL2MAN. He also has an excellent website, <http://dl2man.de>, with schematics and a set of forums for general info and troubleshooting help. There is a very active user community on the forums. After watching a few of the videos I decided it was time to warm up my soldering iron and get to work!

The videos start off with assembling parts on the main board. The trickiest part on the main board is the OLED display. It must be mounted so that it sits flush with the adjacent connectors and not too high so that the plastic case cover isn't seated properly. The videos describe using cut up pin headers as spacers, but the vendor supplied a set of machine screws and spacers that worked perfectly. The next trickiest part was the 14-pin header that connects the two boards. This needed to be aligned with the edge of the board so that when the two boards were sandwiched together they would properly fit in the case.



Figure 2 - Completed Main Board

With the completed main board put aside it was time to work on the RF board. The bulk of the work on that board was soldering the bandswitch relays and winding and soldering the 12 toroids, two of which were transformers with dual windings.



Figure 3 - Completed RF Board

With all parts mounted on both boards it was time to attach them together via the 14-pin interconnect header and fit the boards inside the 3-D printed case. The case came as 4 sides with top and bottom pieces, designed to be held in place by 8 M3 machine screws, 4 on the top and 4 on the bottom. The case did not come pre-tapped for the M3 screws and I did not want to try and do that myself for fear of damaging the case and requiring another one to be shipped from China, so instead I did some measurements and decided to try #2 machine screws with bolts. I checked my junk box but found nothing close to what I needed so I ordered a set of bolts, nuts and washers from Bolt Depot (<http://www.botldepot.com>). This worked out well and with a set of 4 rubber feet from my junk box I now had a fully assembled radio, no drilling or tapping required.



Figure 4 - Fully Assembled tr(uSDX) Mounted in the Case

The next step was to apply power, calibrate it using my main HF radio as a test receiver, and start taking some measurements. Using 8 AA rechargeable batteries and connected to a 20W dummy load with my trusty MFJ QRP SWR/Power meter in-line, I proceeded to key down on each band and measure output power. The good news was I was seeing between 4-5W on 40 and 20m and about 1/2W on 60m. The bad news though was no power out on 80m or 30m. After touching up the solder joints on the 80 and 30 relays and low pass filter toroids, those bands came to life. With about 12V I was seeing the following output power:

80m	5W
60m	1/2W
40m	4W
30m	5W
20m	4W

I don't care much about 60m since I don't have an antenna for that band, but at some point I can go hopefully just back and adjust the 60m inductor spacing to improve that performance.

The radio has a built-in SWR bridge, but I was not able to get that to work despite following the advice given on the support forum. There are comments saying the design needs to be tweaked and SMD caps and resistors changed out to improve the circuit so for now I'm living without an SWR reading. I have plenty of other ways to get an SWR measurement with external equipment.

Using an RF signal generator and step attenuator I measured the receiver sensitivity down to around -116 dBm on all bands but 30m which was around -113 dBm. A -116 dBm signal is between S1 and S2 on the S meter scale. This is plenty sensitive for a QRP radio, especially if you operate it from home given that the HF noise floor these days typically starts around S3 or higher in most residential neighborhoods.

My next set of measurements was to look at the output of the transmitter to see if it meets the FCC spurious suppression requirements, using my TinySA (<https://www.tinysa.org/wiki/>) pocket spectrum analyzer and step attenuator. FCC regulations require any spurious emissions to be at least 43 dB below the fundamental frequency output power. My tr(uSDX) meets or exceeds those requirements.

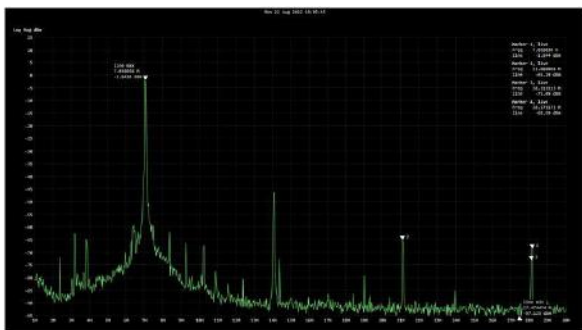


Figure 5 - Harmonic Output on 40m

Figure 5 shows the TinySA measurement with a fundamental frequency in the 40m (7 MHz) band, a second harmonic at 14 MHz measuring -46 dBm, a third harmonic at 21 MHz measuring -65 dBm and a fourth harmonic at 28 MHz measuring -68 dBm. With the radio assembled and tested using a dummy load, it was time to hook it up to an antenna and have some operating fun! I connected my 40m rotary dipole and tuned to the phone portion of the band. Signals were coming in very strong and I landed on a QSO in progress between a couple of nearby hams in MA. I waited for them to finish and then called one of them and he came right back to me. I was using the internal microphone on the radio and I got good audio reports. Very cool! Over the course of the next few days I managed to work Australia (VK) on SSB on 40m and 20m, as well as Europe and Central America, all with 4W output. On CW I worked VK, Europe and a number of North American stations, all using 80, 40, 30 and 20m.

After a while holding the radio to my mouth and pressing the PTT button on the front panel got old so it was time to explore connecting an external microphone. There were posts in the tr(uSDX) General forum from hams wiring up speaker mics designed for VHF/UHF handheld radios like the Baofeng. These are dual plug mics with audio on the 2.5mm plug and mic/PTT on the 3.5 mm plug. My Anytone DMR handheld external speaker mic fit the bill but I didn't want to butcher it by cutting off the plugs and soldering on two 3.5mm plugs so I opted to build a cable based on a wiring diagram provided by someone on the tr(uSDX) forums, with the 2.5/3.5mm jacks on one side and 3.5mm plugs on the other. I was missing the 2.5mm jack but a quick eBay purchase solved that problem.



Figure 6 - External Speaker/Mic Wired Up

The next thing to tackle was getting on the digital modes. I decided to use my Microsoft Surface 3 tablet as it would be perfect for a remote operation. The limitations with the Surface are that it only has a single USB port and no external mic jack. If I wanted to use the built in computer control CAT interface on the radio and operate FT8 I would need a USB sound card dongle to get the external mic input and a USB hub to simultaneously connect the sound card and CAT interface. The radio's CAT interface comes in over micro USB, which is also the firmware updating interface, and I didn't have the cable, so a quick

purchase on Amazon brought me one of those and an inexpensive sound card dongle.

After installing a driver on my computer to work with the micro USB interface, and with new cables in hand, I installed WSJT-X, the suite of software provided by K1JT. I fired up FT8, and verified I could get the CAT interface to work, which is based on a Kenwood CAT protocol. Rather than going with a USB hub I chose to forego using CAT control as WSJT-X doesn't require it, and instead use my single USB port for the sound card dongle. I configured WSJT-X in VOX mode so that when the software went into transmit mode the audio output from the computer would key the tr(uSDX) transmitter which supports VOX. I verified using the internal speaker on the computer that FT8 tones were in fact being generated on transmit, and proceeded to hook up the cabling using a set of 3.5mm audio patch cables. Starting with just the radio audio output to dongle mic input I immediately started seeing traces on the FT8 waterfall display and callsign decodes.

Next I connected the dongle audio output to the radio mic input and adjusted the audio output to 30. I turned on VOX mode on the radio but immediately the radio went into transmit mode even though WSJT-X was not sending any tones. I switched to the computer audio output port but same thing. Hmm, what was going on. A quick review of the forums revealed that some computers supply enough voltage on the Tip section of the TRS/TRSS port even with the volume set at 0 to trigger the PTT on the radio, so I quickly made up a new 3.5mm to 3.5mm patch cable with only Ring and Sleeve connected. Voila, no more undesired keying!

With the hardware in place and audio levels adjusted, I started monitoring the waterfall on 7074 kHz and tried making a couple of calls. My first contact was with KK4JS in SC. I made a few more contacts and called it a night. The next night I downloaded HamScope 1.56 and made a few PSK31 contacts on 20m. The digital modes were working great! At some point I will also try RTTY using HamScope.



Figure 7 - Running FT8

Some of the radio's additional features are:

- Variable bandwidth filtering down to 50 Hz
- Variable tuning rate down to 10 Hz
- Dual VFOs with split mode
- RIT
- AGC
- Receive attenuator
- S Meter
- CW Decoder
- CW Full Break-in
- CW Keyer

A new version of tr(uSDX) just became available which supports 80-40-20-15-10m called the Classic version.

The heart of the tr(uSDX) is the Atmel ATmega328P micro controller with built-in Analog to Digital (ADC) support. ADC resolution is 10 bits so this radio won't have the same receiver performance as the Icom 7300 (14 bit) or 7610 (16 bit) for example. I've made about 50 contacts with the tr(uSDX) so far and it's been a lot of fun to operate. There are some shortcomings such as mushy SSB audio with filter bandwidth <3 kHz, and a few random birdies on 20m, which may be fixed in future firmware updates but all in all it packs a lot of capabilities into a pocket sized multi-mode HF direct sampling SDR transceiver that for around \$100, the price and size can't be beat!

Feature Article: My First Contest By Tim Carter, KC1RET

My First Contest or, How I learned not to build an antenna the day before a contest.

I should have known it would be about the wire... my earliest radio memories involve a wire hanging from a tree connected to a crystal radio set on my parents farm in Michigan. But I'm getting ahead of myself.

I'm a new ham, licensed in May of this year. I've been 'ham adjacent' since my teen years; I even passed the written part of the Novice exam back in the 70s but could not quite muster the CW component. Fast forward a few decades of working in tech and I find myself with some free time and a bucket list item to scratch off. After getting my ticket I put together a 40+20m fan dipole, hanging it from a tree at about 10ft above ground; ran some AMR400 through a window, plugged it into my TS-2000 and I was off the races (Well, not RACES, just the regular kind)!

I was eager to make up for lost time by trying everything! I jumped in with both feet and by August I had almost 3,000 contacts; WAS and almost DXCC (both digital). I was ready to try a contest. Generally, I find my interest tends to the higher bits of the spectrum so the Sept. VHF contest seemed the obvious choice.

My TS-2000 can manage most all the bands in the contest but the only VHF antenna I had was a 2m J-pole I soldered it up at the beginning of the summer – not exactly contest grade. It was about this time that I saw a Craigslist ad for ‘free scrap antennas’. The ad was placed by the son of an SK who was into VHF. I came away with a 5 ½ element (½ of one of the directors was missing) 2m yagi, some mast, and a few random pieces of another 2m yagi. That’s the 2m band sorted.

I’ve read quite a lot about the ‘magic band’ so I decided I would build a 6m antenna as well. After abandoning the idea of building it from aluminum stock (damn, that stuff is expensive), I found a design for a 3element yagi made from wire & PVC pipe. Now, mind you, it is the day before the contest when I decided to build this thing. (spoiler alert – not a great idea).

I run off to the ‘home improvement’ store and grab 3 x 10ft of ½ PVC and a roll of 14g wire. Then to the ‘dollar store’ for a few cutting boards. I mounted the pipes on a scrap piece of PVC hand rail using pieces of the cutting boards to stabilize them on the boom. Next cutting the wire to length; reflector, director and a simple dipole driven element. I first taped up the driven element and checked it with my nanoVNA – looking good! I then added the reflector – still gravy. And here is where it all goes wrong dear reader... Finally, I added the director – SWR goes through the roof!

I tried trimming the driven element – no joy. I posted questions to the club’s email list (lots of great help BTW!) where I learned that element spacing was critical when using a simple dipole driven element and the director placement on the boom was likely off. It’s now well past dinner time on the day before the contest and I’m not relishing the idea of working outside in the dark. I make an executive decision and choose to go with a 2element 6m beam. ;-)

Contest day dawns, bright and cheerful. I fire up the rig and start chalking up the 2m FT8 contacts. When I ‘run the table’ of all available stations, I switch to 6m. I hit the rig’s tuner button and it immediately gives up. I check the coax, all good. I look out the window and see that the antenna (the mast of which is zip tied to my deck railing) is still up. So I break out the nanoVNA, yup, SWR is in the stratosphere. What the heck happened over night? As I’m pondering this, I’m staring out the window at the antenna when I notice that there are wires just hanging down freely from the driven element. Turns out cheap electrical tape is not a great way to secure wire antenna elements to a PVC pipe. After some judicious application of zip ties, I’m back in business!

I spend the remainder of the contest running back-and-forth to the deck to employ the Armstrong antenna rotor (patent pending). I learned that a lot of folks would ask if I could contact them on another band – seems obvious now but I wasn’t aware that was a thing. I could only do 2 and 6, but that was good enough for most.

I’d never worked 2m SSB, or anything on 6 so those were all great new experiences for me. I’d worked at the club’s Field Day exercise so I was quite comfortable with the pace of phone contacts during contests. What I did learn that if you’re running only 100w and have small, low antennas you have to have a great deal of patience, and persistence, particularly on VHF. There were plenty of times that I could clearly hear a station but they were not hearing me. Also, to try those stations again later. They may have had their beam (2 x 11element 2m stack fer crying out loud) pointed away from me at the time and now are in a more favorable orientation.

I also had some great Qs with hams that are quite close by, one of which is less than a mile as the crow flies. Great to meet them! All-in-all, I think I did OK for my first contest. 72 Qs over the course of about 8hrs operating time. N1MM says my score is 1360. I have no idea if that is embarrassing, or stellar (I’m thinking more likely the former). I had a great time and I’m looking forward to my next contest!

Stay tuned for my next episode where I learn about dupes and NILs. ;-(

Here are some photos of my antenna ‘farm’ and ‘shack’.





Welcome to the Sixteenth BARS CW and More Corner

By Tom Walsh, K1TW

Last time I talked about the summer doldrums and how to beat this. This month I will talk about why October may just be the most fun radio month of the year!

October has the Best propagation (in my opinion)

As we transition from summer to fall, we experience some of the most amazing propagation of the year. On or around, September 21 and for the next 4-6 weeks throughout October there is equal daylight and night in both the Northern and Southern Hemisphere.

The impact on propagation is almost magic. The bands propagate around the world in both hemispheres equally well. This is a great time to work ham stations south of the equator, especially Australia and New Zealand and the South Pacific. Much the same can be said for the Spring equinox period too but for some reason fall just seems a little more special to me.

October/November/February/March have the Best Contests (in my opinion)

This sweet spot on the propagation calendar isn't lost on the sponsors of the major worldwide DX Contests (i.e., CQ and ARRL). The biggest contests occur in October/November (CQWW, ARRL Sweepstakes, etc.) and again in February/March (ARRL DX, CQ WPX, etc.).

These are four very special months that you really shouldn't miss each year in your ham radio operations.

October closes the book on another great BARS year

October is the end of the BARS annual season too. The new officers who ran for election last November are closing out their activities and preparing to hand over the reigns to a new group of enthusiastic club leaders.

So how did this year's group do? You be the judge but we held many interesting monthly meetings with great presenters and topics. We were able to get a great Field Day thanks to Mark KAINE and Keven Fallon KB1KTR and so many others who pulled off our first post Covid Field Day.

And Marla puts together the most amazing newsletter each month. So many articles on operating, activities, antennas, equipment, and everything amateur radio.

But wait there is more: There are, of course, the monthly VE sessions under the guidance of Bruce W1LUS and Gary W1GFF.

Thanks also to the club's officers Gary W1GFF, Mike K1TWF, Marla WA1GSF, Bruce W1LUS, and Board members Bill WZ1L, Don W1DM, and Tom K1TW.

Doug N1WRN and Chris KC1IUK do a fabulous job each week with the BARS net on Wednesday's at 8 PM.

Then there is the gang that has breakfast every Saturday at Stellio's.

I apologize that I may have missed all the other great support from so many members

And so, with this Newsletter column I too say goodbye.

With this month, I will be leaving the BARS Board. I have been helping advise the Board as the most recent outgoing President which included helping to plan a number of this year's programs and speakers plus writing my regular CW Corner. The CW corner has also morphed a bit into some general topics like antennas.

Prior to this year, I have served as either BARS President or BARS Vice President for many of the past 10 years.

Then on December 30, I also will step down as the ARRL Eastern Massachusetts (EMA) Section Manager, a role I filled for 8 years (4 2-year terms).

My successor as the ARRL EMA section manager is Jon N1LZ from Cape Cod. I am really happy to be passing this important ARRL role on to a very capable active amateur radio operator.

Although I DX and contest frequently, I also find great joy in the simpler parts of the hobby too - like QRP, simple antennas, and especially CW. But I love the excitement of the big DX contests too. The hobby has so much to offer depending on your interests.

Please consider writing a newsletter article about your favorite activities in amateur radio. We will all learn something valuable if you do.

November sees new Club Leadership

BARS needs member engagement to survive going forward. I understand those who have served the club in previous years needing a break.

To our newer members, please consider engaging more in the coming year to keep our club thriving.

Are we ready for 2023!

73,
Tom K1TW
k1tw@arrl.net

Strays

Becoming an ARRL member or is your membership up for renewal?

One of the benefits of being an ARRL Affiliated Club is a commission for recruiting new ARRL members and securing timely ARRL member renewals.

Each new ARRL member earns the club a \$15.00 commission. New members are defined as never having been a member or a

returning member that has not been a member for two years. Each renewal earns the club a \$5.00 commission. There is no limit to the amount a club can earn in this program.

Multiyear memberships earn only one commission. Life, Family, International, Blind, and Student memberships are not eligible for a commission. The member will not be eligible to receive a gift or incentive if the club collects a commission on the membership.

Currently at least 82 BARS members are also ARRL members. If we all renewed through the club we could potentially receive \$410 per year from the ARRL.

If you are interested in renewing your ARRL membership through the club fill out the following form [ARRL Affiliated Club Membership Application \(pdf\)](#). Then forward it to W1LUS@hotmail.com

A picture is worth 5000 characters at 20 wpm

I would think this is a ham plate! Seen at Goody Cole's BBQ in Brentwood NH.



--de Andy Wallace, KA1GTT

Hello potential Baystate Marathon volunteers.

Amateur Radio operators have been asked once again to support the Baystate Marathon and Half Marathon. This year the event is on Sunday, October 16th.

Our operational time period is from approximately 0700 until event completion (estimated 1400). Our assistance has been requested by Lowell Office of Emergency Management and Lowell Fire Department. The communications team will be employing Amateur Radio to provide this communications asset.

Amateur Radio will be used for the Accountability net. The purpose of this net is to coordinate with a race public information booth the status of runners who are unable to complete the race for any issue to any one is seeking this information.

Race info may be found at <http://baystatemarathon.com>. Course map is found at <https://www.baystatemarathon.com/course-map-description>

Please contact me if you can assist or would like more information.

Please share with others that may be interested. This is a pretty laid back event and suitable for first time public event participation.

--de Terry Stader, KA8SCP

Is your Email address on the FCC site up to date?

§ 97.23 Mailing and email addresses.

Each license grant must show the grantee's correct name, mailing address, and email address. The email address must be an address where the grantee can receive electronic correspondence. Revocation of the station license or suspension of the operator license may result when correspondence from the FCC is returned as undeliverable because the grantee failed to provide the correct email address.

[85 FR 85533, Dec. 29, 2020]

I recommend that you log on to the your FCC Registration at <https://apps.fcc.gov/coresWeb/updateRegistrationPre.do> to make sure that your email address is up to date. Also in the future should you change your home address or your email address be sure to remember to update it on the FCC site.

[The \$35 FCC application fee applies to new, renewal, rule waiver, and modification applications that request a new vanity call sign. The fee will be per application.]

Administrative updates, such as a change of name, mailing or email address, and modification applications to upgrade an amateur radio licensee's operator class or to request a sequentially issued call sign, are exempt from fees. – ed.]

--de Bruce, W1LUS

Free Gear for New Hams

QRZ.com has instituted a "jumpstart" program. The new QRZ Jumpstart Program was developed by Gigaparts and QRZ.com and it is designed to give a free dual band HT radio to newly licensed Hams.

<https://forums.qrz.com/index.php?threads/free-radio-for-new-hams-with-the-qrz-jumpstart-program.829070/>

--de Larry Krainson, W1AST

Upgrading Your License? Here's a Resource

If you are thinking of upgrading your license using one of the Online exam sites. I recommend that you take some free practice exams on HamStudy.org. I recommend it because the software used to generate practice exams on HamStudy.org is the same software that is used to create exams for online tests. By doing that when you take an online upgrade exam the test question format will be familiar. With HamStudy.org practice tests you should use the keyboard to select the answer, A,B,C, or D and not your mouse as that is way online exams are run.

--de Bruce Anderson, W1LUS

Making ZOOM available to Elmers

In this time of social distancing we have been using Zoom for our monthly club meetings. I have been thinking that Elmers could also be using Zoom to coach new hams instead of actually going to visit with them. Elmers could perhaps help with programming a new radio with the new ham sharing their computer screen and the Elmer helping to walk them thru the process. An Elmer could have Zoom on their cell phone and show a new ham how their shack was setup. Use your imagination and see how you might use this tool. If you would like to use Zoom for this, contact Bruce, W1LUS@hotmail.com, with a date and a time and a meeting will be setup for you. You may also contact Bruce if you would like training on using Zoom to Elmer someone.

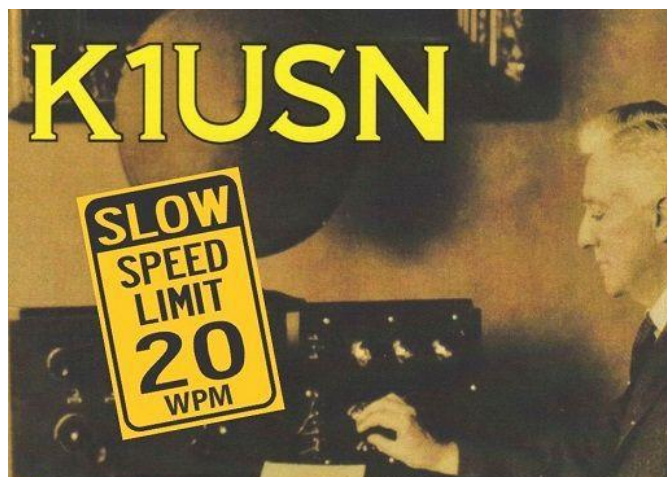
--de Bruce Anderson, W1LUS

Friday and Sunday Night CW Slow Speed Contest

Every Friday and Sunday night, there is a weekly slow-speed CW contest run by the local K1USN guys. This is a good way to polish up your CW skills. See <http://www.k1usn.com/sst.html> for details. Currently, the schedule is:

Fridays 20:00-21:00 UTC (3-4pm EST) and

Mondays 00:00-01:00 UTC (7-8pm EST Sunday).



-- de Tom Walsh, K1TW

Secretary's Reports

from Marla Wallace, WA1GSF, Secretary

BARS General Meeting

Gary, W1GFF, called the meeting to order at 7:00.

After calling for volunteers to be candidates at the November election, the following slate of officers was proposed:

- For President: Doug Bruce, N1WRN
- For Vice President: Mark Nelson, KA1INE
- For Treasurer: Bruce Anderson, W1LUS*
- For Secretary: Marla Wallace, WA1GSF*
- For BOD: Don Melanson, W1DM*
- For BOD: Bill Poulin, WZ1L*
- Ex Officio: Gary Frascarelli, W1GFF**

* Candidate for re-election

** As past President, this position fills automatically.

At 7:30, Andy Stewart, WA1OIQ, began his presentation "Linux in Your Shack" which ran until 8:35. *[Your editor was amazed at the number of useful software applications he has collected (or written) to aid the ham.]*

We adjourned at 8:50. There were 26 attendees.

BARS Board of Directors Meeting – September 8, 2022, 6PM

The BOD meeting was held (via Zoom) just before the start of the September general meeting, as this was the first date everybody could get together.

In attendance: Tom, K1TW; Gary, W1GFF; Bill, WZ1L; Bruce, W1LUS; Marla, WA1GSF; Don, W1DM and Mike, K1TWF.

We determined the speakers for the October and November meetings. Beyond November, the choice of speaker will be up to the board elected at the November meeting. The speakers chosen were:

- For October, Bob Finney of New England SciTech
- For November, Bob Heil, K9EID of Heil Sound

The BOD polled the current officers to see which, if any would stand for re-election. President and Vice President candidates were not found among the Board members.

We then discussed resuming in-person meetings, but decided to leave that to the incoming officers. A suggestion was made that we continue using Zoom for now but perhaps also have a quarterly face-to-face "social".

The BOD Meeting adjourned at 6:30

BARS Membership

Our current combined membership is 121. To date 15 members have paid for 2023 membership. 28 members from 2021 that had not yet renewed their membership were dropped from the membership rolls. Anyone with a question about their renewal status can email me at W1LUS@hotmail.com to get your current status.

[Reminder: if you have not paid your 2022 dues before the November meeting, you cannot vote for club officers.]

2022 BARS Member Dues

A \$15 annual BARS membership now runs from January 1st and expires on December 31st. Any renewal or new membership made after September 1 will be valid until December 31st of the next year. Memberships allow us to

- Pay our bills;
- maintain our great web page;
- fund field day;
- and bring the membership a great variety of informative meetings and speakers.

Treasurers Report for October 2022

from Bruce Anderson, W1LUS, Treasurer

We are now accepting new/renewal dues. BARS annual dues run from January 1 to December 31. Starting September first any new/renewal payments are good for the rest of the current year and for 2023. Dues will remain at \$15.

In September we had 16 new/renewals for an income of \$240. Our expenses were Zoom \$15.93 and PayPal \$16.05. We now have \$668.44 in the Bank and \$1125.51 in our PayPal account for a total of \$1793.95.

Dues can be paid several ways:

- Via bank to bank transfer with Zelle, Venmo, PayPal, etc. by sending \$15 to bars.dues@outlook.com.
- With credit card by using the Join/Renewal membership form on the W1HH.org website.
- With cash or check by mailing \$15 to Billerica ARS, 16 Regis Road, Tewksbury, MA 01876

BARS Needs You!!!

We are looking for a few good hams to act as net control on the regularly scheduled Wednesday night nets! All it takes is one night a month; if you are interested contact Doug, N1WRN.

Also, the club needs volunteers for light tasks of ~ 1 hour a month. Are you able to pitch in? Contact Tom Walsh, K1TW.

Wednesday Night Net

Join us on the Westford 146.955 Repeater for the weekly BARS net each Wednesday at 8:00 PM (**except on the first Wednesday of the month which is club meeting night**). *Note: Thanks to the Westford Police Amateur Radio Team (PART) for their generous act of making their repeater available to us.*

Repeater info:
WB1GOF
146.955 MHz
-600 kHz (normal) offset
Encode CTCSS 74.4 Hz

Reminder: “kerchunking” the repeater is not only impolite, it’s illegal. It constitutes an unidentified transmission. If you need to check that you’re making the repeater, say something like “This is <your call> standing by on the frequency.” Thanks for your courtesy.

Club Meetings

Because of the continuing COVID health crisis, in-person club meetings are on hiatus. Club meetings are being held “virtually” using Zoom. We hope to resume in-person meetings in the fall.

Club meetings are held on the first Wednesday of the month.

VE Sessions

Our VE sessions are again being held in-person at the Chelmsford Bible Church. Pre-registration for our in-person exams is suggested. Contact w1lus@hotmail.com for registration information.

VE sessions are held every month on the 2nd Thursday at 7:00 PM at Chelmsford Bible Church, 128 Gorham St., Chelmsford MA. Park in back and enter by rear door. [Chelmsford Bible Church Hall, 128 Gorham St, Rear Door, Chelmsford MA 01824-3220 \(map\)](#)

September 8, 2022 VE Session Report

On September 8, we had two people show up for their exams. One got a General upgrade.

Our next Exam session will be on October 13 at 7:00 PM.

Thanks to Peter N1ALO, Gary W1GFF, and Bill W1ZL for their help in running the session.

--de Bruce Anderson, W1LUS

Club Breakfast every Saturday

On Saturday mornings around 8:30AM, have a virtual Zoom breakfast session (link provided in email if you subscribe).

We also meet in-person weekly at 8:15AM for a casual, social breakfast at Stelio’s restaurant.

[Stelio’s Family Restaurant, Billerica, MA](#)

Future Meetings

The 11/2 meeting will be held via Zoom. Election of Officers will be held at this meeting.

Subscribe to the BARS Mailing List

To subscribe to the BARS email list, send a blank email to bars-subscribe@w1hh.org and watch for an automated reply. Note that bars-subscribe is all one word.

Reply to that message from the list server and you are then subscribed.

To post to the list, address your email to bars@w1hh.org

September Get-on-the-Air Suggestions from Scott Ginsburg, K10A

BARS is a “get-on-the-air” (GOTA) club. We encourage members to participate in the varied events on HF and VHF.

October is the beginning of the major contest season. The next 6 months will bring us the CQ World Wide (CQWW) SSB and CW, and ARRL DX SSB and CW contests, the 4 most active worldwide contests. These are great opportunities to hone your contesting skills and/or chase new DX entities, lots of fun!

Here are the popular suggestions for this month:

<u>Date</u>	<u>Event</u>
Oct 1-2	Oceania DX Contest, Phone http://www.oceaniadxcontest.com/
Oct 1-2	California QSO Party http://www.cqp.org/Rules.html
Oct 22-23	Stew Perry Topband (160m) Challenge http://www.kkn.net/stew/
Oct 29-30	CQ Worldwide DX Contest, SSB ** http://www.cqww.com/rules.htm

**** Top recommendations for this month**

Recurring Events – visit webpage for exact times and dates:

K1USN Slow Speed Test - Every Friday 20:00 UTC / Every Monday 00:00 UTC <http://www.k1usn.com/sst.html>

Straight Key Century Club (SKCC) Weekend Sprintathon – the Saturday following the 6th of every month at 1200 UTC
http://www.skccgroup.com/operating_activities/weekend_sprintathon

Details on each contest above and more events can be found every week on the WA7BNM contest calendar at:
<https://www.contestcalendar.com/weeklycont.php?mode=custom&week=current>

Parting Shots

By Eric L. Johnson, KC1OAV

MLB's PitchCom now allows catchers to signal the next pitch via wireless radio technology. Amateur Radio mastered this over a hundred years ago, and it is bi-directional. Imagine this interchange in a recent at-bat, using HAM's time-proven CW prosigns and abbreviations:

Catcher sends	Pitcher replies
-----	-----
FB - Fast ball	RR - OK, I can pitch that
HI - High & inside	RR
KN - Knuckleball	AGN - Try again; I can't pitch that
OP - Offspeed pitch	RR
SLD - Slider down	RR
OM - Outside middle	AGN - Too risky
BTU - Heater	BTW - By the way
AGN - wha?	IKSUDK - I know something you don't know
AGN?	UBT - You've been traded
..	

BARS Leadership Team

OFFICERS:

President: Gary Frascarelli, W1GFF
 Vice President: Mike Raisbeck, K1TWF
 Treasurer: Bruce Anderson, W1LUS
 Secretary: Marla Wallace, WA1GSF
 BoD: Don Melanson, W1DM
 BoD: Bill Poulin, WZ1L
 Ex Officio: Tom Walsh, K1TW

VOLUNTEERS:

Net Coordinator: Doug Bruce, N1WRN
 Newsletter Editor: Marla Wallace, WA1GSF
 New Member Outreach: John Fisher, KC1FTJ
 Field Day Chair: Mark Nelson, KA1INE