



BARS Billerica Amateur Radio Society

NEWS FOR AND BY BARS MEMBERS

MAY 2024

BARS meetings are now “hybrid” – the meeting will be held at the Chelmsford Bible Church and available simultaneously on Zoom.

The safety and well-being of our membership is important to us. Those members who feel uncomfortable attending in person can continue to join us over Zoom.

--BARS Management.

A Message from the President By Doug Bruce, N1WRN

Greetings Fellow Members,

I hope everyone is doing well as we finally get some springtime temperatures in New England. As we get into Spring, it's time to start thinking about the “Super Bowl” of Ham radio, Field Day. This year, Field Day will be held on June 22 and 23 (“the 4th rainy weekend in June”, as most hams will tell you). This is ham radio's Open House, and a big day to promote the hobby.

BARS puts on a great Field Day event, so I heartily encourage all members to put the date on your calendar now. Field Day brings Club members together for good times and fellowship. That is what our great hobby is all about! We will be setting up as usual at 67 Alexander Road in Billerica.

I want to say a big thank you to the Town of Billerica for letting us use the garage for our set up. We will have a set up meeting that Friday night (time TBD), so if anyone can come and help out, it would be greatly appreciated!

Mark Nelson, (BARS Vice President) is the chairman of the event. He did a fantastic job the last two years and I expect this year to be even better! Come and join us and help make this year's Field Day a big success.

On another subject, I saw a post on Facebook the other day questioning the validity of FT8 as a mode of operation in ham radio. The person was discussing the poor HF conditions lately, stating that if these conditions continue “I will be forced to be a lazy FT8 guy!” This comment quickly caught my attention, as I am a big FT8 enthusiast.

To the contrary, FT8 is far from being a “lazy” mode! FT8 has come along as a vibrant and popular mode across the hobby. It enables those with modest stations and modest power to work hams around the globe. There is quite a bit of skill needed to operate FT8, especially if there is a pile up. You must be persistent if you want to make that elusive contact, just like a pile up in any other mode.

As I have said many times before, the main thing in our hobby is to have fun. If your idea of fun is FT8 rather than screaming into the mike on SSB to make contacts, then all the power to you! FT8 has given me the opportunity for some ATNO's that I otherwise would not have logged. FT8 remains a favorite mode of mine as we reach the peak of sunspot cycle 25.

The next mode I will learn will be CW and I am very excited to give that a try soon after I learn the code (not because I must but because I want to).

We will be having a great Guest Speaker at the May 1 Club Meeting that I'm sure you won't want to miss! Don Kane, WB2BEZ, will be speaking about Grounding and Safety In The Ham Shack. Everyone will benefit from this talk and if you pick up one pointer that will make your shack safer, the presentation will have been worth it.

This meeting will be a hybrid meeting, so feel free to join us at 7:00 PM at the Chelmsford Bible Church, 128 Gorham Street in Chelmsford or from the comfort of your home via ZOOM. I hope to see everyone one way or the other!

Finally, I hope everyone can get on the air as much as you can in the near future because the sunspot Cycle 25 has reached its maximum and will be at the max for a year or two, and then it will head back to the solar minimums by around 2030. Our Club motto is G.O.T.A. (Get on The Air!), so turn those rigs on and have some fun!

Until next time,

73,
Doug
N1WRN

Next BARS Zoom meeting: May 1 at 7:00 PM - “An Overview of Grounding and Bonding” Presenter: Donald W. Kane, WB2BEZ

I am pleased to announce that we will be having Donald Kane, WB2BEZ, as our Guest Speaker for the in person/Zoom Meeting at the Church on May 1, 2024 at 7:00 PM. Don will be presenting on Grounding and Safety In The Ham Shack, so you won't want to miss this talk! Here is Don's bio for inclusion in the May Newsletter.

Don has been a licensed ham for over 45 years (ARRL Life Member) and is a Registered Professional Engineer in the State of New York with over 40 years of engineering experience including: Product Safety Evaluation; Electric Utility Substation and Plant engineering; Design and Manufacture of Diesel powered generators, including controls and switchgear; rail transit rolling stock and infrastructure engineering and electrical construction and HVAC. This talk will present an overview of grounding and bonding, as applied to the typical amateur radio installation, with regard to power, lightning protection and RF (antenna) grounding.



We 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.

I am looking forward to “seeing” many of you on Wednesday 5/1 here at 1900.

Doug, N1WRN
President, Billerica Amateur Radio Society

From the Editor's Desk By Marla Wallace, WA1GSF

I hope some of you had the opportunity to see the total solar eclipse in April. I decided to not try to fight the traffic to get into the zone of totality, so I picked a destination I knew well: Center Harbor, NH. At that QTH, the eclipse was only 97.5%, but that was still about 5% better than around here.

Monday morning, my brother Andy, KA1GTT, and I headed north at 9:00AM, arriving in Center Harbor just after 11:00, which was just about thirty minutes later than it usually takes. (There was an accident just before the Hookset tolls, which had been cleared by the time we got there, but it had traffic backed up.)

After a search, we located the area that the town had designated for its “eclipse party” and proceeded to set up under a gazebo. The eclipse started around 2:15PM. I was still fussing with my equipment (a small-aperture reflector telescope with a front-mounted solar filter mounted on a camera tripod and a DSLR camera attached), so the first time I acquired the sun was around 2:30. I almost immediately lost it again. Aiming the telescope was a very finicky process, as the set-up provided about 45X magnification. At that power, I had to be within one degree of the sun to see anything at all.

I spent the next ninety minutes chasing the sun and trying to get the camera in focus. I collected about ten mis-framed or blurry images. I was very frustrated!

But at 3:33PM, I managed to get this image:



According to the information provided by the NASA site, the maximum eclipse in Center Harbor occurred at 3:30, so I missed the shot by about three minutes. But this was still a narrower crescent than I would have seen in Chelmsford.

We packed up at 4:00 and were on the road back home by 4:15PM. We hit a five-minute delay where rte. 89 merged with rte. 93 in Concord, but the delay was almost unnoticeable. I guess we beat the traffic from the folks who went to Vermont by a large margin.

We were home at 6:00, after a 200+ mile drive. I consider the trip a success, even though I didn't photograph totality: an acquaintance went to rural Vermont to see the total eclipse and didn't get home until 5:00AM the next morning!

Why discuss an eclipse in a radio club newsletter? Because the prediction was that during the time when the sun was eclipsed, the ionosphere would rise, like it does at night. Did anybody try monitoring one or more of the HF bands to see if the eclipse had any effect on HF propagation?

After chasing this year's eclipse, I'm thinking of going to Iceland to see the total eclipse that will happen there in August of 2026. I've got two years to learn how to do a better job of tracking the sun...

Feature Article: "Consider Using Digital Voice Modes"

By Dave Marcucci, KC1TLF

In March I celebrated my six-month anniversary of "getting my ticket" after testing with BARS in the fall. One of the reasons I was interested in ham radio was because of how computer technology, sometimes long forgotten in the high-tech world, had found a new life in amateur radio.

One of those technologies is digital radio, which converts human voice to low-bandwidth digital audio data. Think of the early days

of MP3s and Apple iPods. This technology is still emerging in amateur radio and its use is alive and well in New England.

Digital radio technologies vary in their use and strategy. Likely, some of you have already used digital radio whether you were aware of it or not. Early examples of this tech in ham radio in wide use include Echolink (<http://echolink.org/>) and AllStar (<https://www.allstarlink.org/>). These technologies typically are used to record analog radio transmissions, convert them to data, send that data over the internet, then revert it to analog audio and re-transmit it over the air. In Massachusetts, the Minuteman Repeater Association (<https://www.mmra.org/>) uses this technology in conjunction with their repeater network to expand access to remote internet radio nodes or computer clients.

One of the downsides of this type of use is that audio can still experience degradation because it still involves analog signal transmissions, so the operator's voice is encoded along with any regular static or signal deviation that we all experience in our regular radio QSOs.

Another example, which got its start in commercial radio and has more recently expanded into amateur radio, includes technology where the operator's voice is encoded by the transceiver itself and transmitted as data to all other transceivers before being decoded for playback. Multiple technologies use this method. Two of the major ones you may have heard of include DMR or Digital Mobile Radio (<https://www.dmrassociation.org/>), initially created by the European Telecommunications Standards Institute (ETSI) for use on non-public radio networks, and System Fusion (<http://systemfusion.yaesu.com/>), created by Yaesu specifically for amateur radio use.

I won't go into the technical details and differences between DMR and System Fusion, rather, I'll explain how they are alike. Both technologies require transceivers with special computer chips to convert your voice into data (think of it like recording directly from the microphone) and then the process adds additional information, such as your call sign, name, location, and transmission target, to be transmitted over the air to another similar transceiver, typically through computer networked repeaters or hotspots. Because the initial recording source is digitized prior to radio transmission, compared to after analog transmission in the previous examples, all operators can experience crisp and clear audio with the additional benefit of seeing information about who is transmitting. This means that operators can transmit specifically to a group of individuals or even a single individual using the same frequency as others without "hearing" others' transmissions.

Imagine near-infinite CTCSS tones and no "stepping on" others. What is the downside? Because the transmission over the air is always digital (think one's and zero's) and not analog, you either receive the data in all its near-flawless, low-bandwidth audio brilliance or you receive nothing. There is typically no in-between. It either works or it doesn't, which can be frustrating.

Locally NEDECN, or the New England Digital Emergency Communications Network (<https://nedecn.org/>), maintains linked

DMR repeaters across all New England states and New York with a robust region-based set of "Talkgroups" and digital nets. It also bridges into a network of repeaters in Canada and the BrandMeister network (<https://brandmeister.network/>), a global DMR network provider.

For System Fusion users, UFB New England (<https://ufbnewengland.com/>) maintains a network of linked repeaters through Maine and New Hampshire. For other New England states, several independent repeaters can be utilized to access the global System Fusion network.

Repeaters are typically listed on Repeaterbook.com and identifiable based on their listed "modes": DMR, Fusion, etc.

Hopefully, I've sparked your interest in this exciting mode of operation without going into too much of the gory technical details. If so, you can obtain combo analog and digital handheld transceivers for under \$100 online to experience it. Personally, my primary mode is DMR, but I encourage you to see what type of repeaters may be local to you. If you want to learn more, have questions, or would like pointers to additional resources feel free to reach out. If you already use DMR, you can typically find me monitoring NH and MA statewide "talk groups". Jump in and say hello.

73,
Dave, KC1TLF

Announcements

New England QSO Party - 2024

The New England QSO Party on May 4th and 5th is a great time to check out antenna systems and offers a moderately paced opportunity to work new states and countries. You'll find a wide variety of participants, from newcomers to experienced contesters, all interested in making contacts with New England stations.

Our goal is to get every one of the 68 counties in New England on the air so we hope you will encourage your friends to join in the fun! Even if you can only join us for a couple of hours, we'd appreciate it! Will you be QRV? Let us know with a message to info@neqp.org

The New England QSO Party is 20 hours long overall, in two sections with a civilized break for sleep on Saturday night. It runs from 4 pm Saturday until 1 am Sunday, then 9 am Sunday until 8 pm Sunday. Operate on CW, SSB and/or digital modes on 80-40-20-15-10 meters. For each QSO you'll give your callsign, a signal report and your state/county. Top scorers can earn a plaque and everyone who sends in a log with at least 25 QSOs will be sent a certificate. The goal is to work stations anywhere in the world - and their goal is to work New England stations, so you'll be very popular!

Last year we received logs from 784 stations from around the country and world. There were 808 stations from New England on the air!

The full rules are here -> <http://neqp.org/rules/>

Results from the 2023 NEQP were posted a couple of weeks ago - <https://neqp.org/2023-new-england-qso-party/>

Please get on and make some QSOs even if you don't want to send in a log. Thanks!

73 Tom/K1KI

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

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

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 through the process. An Elmer could have Zoom on their cell phone and show a new ham how their shack was set up. 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 in 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

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 the way online exams are run.

--de Bruce Anderson, W1LUS

Secretary's Reports

from Marla Wallace, WA1GSF, Secretary

BARS General Meeting in April

- Because of the inclement weather, the April meeting was only virtual.
- Doug called meeting to order at 7:05PM.
- The program started at 7:20PM and was recorded.
- It ended at 8:30PM.
- There were 23 participants at the Zoom conference.
- The meeting was adjourned at 8:40PM.
-

There was no BARS Board of Directors Meeting in April

BARS Membership

Our current combined membership is 126, with 21 that haven't renewed their membership for 2024. Please check your email and your "Junk email" to see if you have a renewal invoice from PayPal.

Anyone with a question about their renewal status can email me at W1LUS@hotmail.com to get your current membership status.

from Bruce Anderson, W1LUS, Treasurer

2024 BARS Member Dues

A \$15 annual BARS membership begins on January 1st and expires on December 31st. Any renewal or new membership made after September 1st will be valid until December 31st of the following 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 May 2024

Dues for 2024 are now due. Dues for 2024 will remain at \$15. 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

In April we had income of \$45 from 3 new / renewals, Our expenses were Zoom \$16.99 and PayPal \$3.03. We now have \$1326.17 in the bank and \$1215.53 in our PayPal account for a total of \$2541.70.

Bruce Anderson
WILUS

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 Doug Bruce, N1WRN.

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

Club meetings are held in person (weather permitting) and via Zoom. A link will be sent via the BARS email reflector to all currently paid-up members who might wish to attend via Zoom.

Club meetings are held on the first Wednesday of the month at 7 PM Eastern time.

VE Sessions

Our VE sessions are 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 \(map\)](#)

VE Session Report for April 2024

We had four people show up for the April 11th VE exam session. We created two new Technicians, KC1UPE and KC1UPM; one new General, KC1UPN; and one Extra upgrade. Be sure to greet them if you hear them on the air.

Our next exam session will be on May 9th at 7:00 PM at the Chelmsford Bible Church.

Thanks to Gary, W1GFF, Peter, N1ALO, Bammi, K1JBD, and Bill, W1ZL, for helping run this exam session.

While walk-ins are still welcome it speeds the process up if you pre-register for your BARS VE exam session at <https://HamStudy.org>.

--de Bruce Anderson, WILUS

BARS Does breakfast every Saturday.

On Saturday mornings around 8:30AM, we have a virtual Zoom breakfast session (a link was provided in email some time ago).

We also meet in-person weekly at 8:15AM for a casual, social breakfast at Stelio’s restaurant in Billerica. [Stelio’s Family Restaurant, Billerica, MA](#)

Future Meetings

The June meeting will be on 6/5 and will be hybrid – in person AND via Zoom.

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

May Get-on-the-Air Suggestions from Scott Ginsburg, K1OA

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

May is when we start to get serious about watching 6 meters for Sporadic E openings. Check out this free ebook download from K5ND that is an excellent primer on 6m DXing: <https://k5nd.net/magic-band-revealed-ebook-download/>. May is also the time for the New England QSO Party. This is a fun event and an opportunity for New Englanders to be on the business end of a pileup as others around the country try to put us in their log!

Here are the popular suggestions for this month:

<u>Date</u>	<u>Event</u>
May 4-5	10-10 International Spring Contest, CW http://www.ten-ten.org/index.php/activity/2013-07-22-20-26-48/qso-party-rules
May 4-5	New England QSO Party ** https://neqp.contesting.com/neqpsubmitlog.php
May 25-26	CQ WW WPX Contest, CW https://www.cqwp.com/rules.htm

** Top recommendation 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>

BARS Leadership Team

OFFICERS:

President: Doug Bruce, N1WRN
Vice President: Mark Nelson, KA1INE
Treasurer: Bruce Anderson, W1LUS
Secretary: Marla Wallace, WA1GSF
BoD: Bill Poulin, WZ1L
BoD: Steve Wedge, W1ES/4
Ex Officio: Gary Frascarelli, W1GFF

VOLUNTEERS:

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