



BARS Billerica Amateur Radio Society

NEWS FOR AND BY BARS MEMBERS

MARCH 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 Spring unfolds in front of us (except in Northern New England!)

How is everyone doing with any ham radio goals and aspirations that you wish to accomplish in 2024? Do you want to get that new rig? Do you want to get a better antenna up in the air so you can work more DX? Do you want to get started on that project that you have been waiting to start? There is no better time than the present to get started on your goals and aspirations!

I have two goals that I wanted to accomplish in 2024. One was get my Extra Class license and the other one was to learn and get proficient at Morse Code. Goals take work and dedication to accomplish, even in our great hobby. I feel once you set your mind to something that you can accomplish it, no matter how difficult it may be.

I never thought in a million years that I would ever get my Extra Class license. I felt that the Extra Class license was for seasoned hams with years and years of experience, and an extensive electrical and electronics background! How wrong I was in that

assumption! With a dedicated study routine and a desire to succeed, I went in to take my Extra Class license exam at the Church in Chelmsford. I had spent 8 or 9 hours studying for the test, hoping that my efforts would pay off. I took Practice Test after Practice Test, and my scores steadily improved, from a 29 on the first one, (you need 37 correct answers out of 50 questions to pass the Extra test) to 44 on the last one that I took on the day of the exam.

After the 44, I decided to put all of my study materials down and not look at anything until I took the exam. I sat in my chair at the Church and said to myself, “I am going to pass this test with flying colors!” I then had my obligatory oatmeal raisin cookies (5 in all!) that Peter, N1ALO’s wife made for us, and I waited at my seat to get started.

I logged into the test website and proceeded to start answering questions. Due to my study routine, the answers started jumping out at me! I went through all the questions and at the end I went back and checked my answers and made sure that I had answered all of the questions. I did not change any answers. (Never change an answer on a multiple-choice test. I learned that the hard way in college.)

I then submitted my test answers online for the VE’s to grade. It was the longest 5 minutes of my life as I awaited my score. After the five minutes went by, I saw a big green box appear on my iPad that said “Congratulations, you passed! 47 out of 50 correct!” I had attained what I had thought of as unattainable. My test score was higher than any Practice Test score that I had achieved. I was on Cloud Nine!

I was also on Cloud Nine when I heard that a father and son (the son was 11 years old) had also passed the Extra Test that night. The 11-year-old is the future of our great hobby for sure. His Dad was beaming with pride as they left the exam room.

Now that I am an Amateur Extra, I want to become a VE, and administer exams to up and coming hams in the hobby, as a way of giving back to those that helped me along the way to my Amateur Extra license.

I now have one more goal this year and that is to learn Morse Code. I am sure that with effort and practice, I will be able to attain that goal as well.

Here's to everyone in the Club attaining their goals and aspirations in the hobby in 2024. As I always say, we are a G.O.T.A. Club. Get out there on the air and have fun with the greatest hobby in the world!

Until next time,

73,
Doug
N1WRN

Next BARS Zoom meeting: April 3 at 7:00 PM - "Test Equipment for Hams Explained"

Presenter: Douglas Bruce Millar, K6JEY

We are pleased to announce that Douglas Bruce Millar, (I'm not kidding!) K6JEY, will be our Guest Speaker via Zoom and he will give a presentation entitled "Test Equipment for Hams, including Vector Network Analyzers (VNAs) Explained"

Doug got his novice ticket in 1957. He has always liked VHF and up. He has EME stations on 2m, 70cm and 23cm. He also has microwave stations on 10, 24, 47 and 79GHz with a station for 140GHz half completed.

Doug enjoys HF DXing and especially boat anchors and HF AM. He usually checks in to the AMI West Coast net on Wednesdays at 8PM, on 3870KHz. The picture below is of Doug's usual operating position. He normally uses the R4 C and the Ranger with the KPA500 amp for AM.



Please join us on April 3, 2024, live at the Church, or via Zoom for a presentation that I believe will be informative and relevant to our membership.



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.

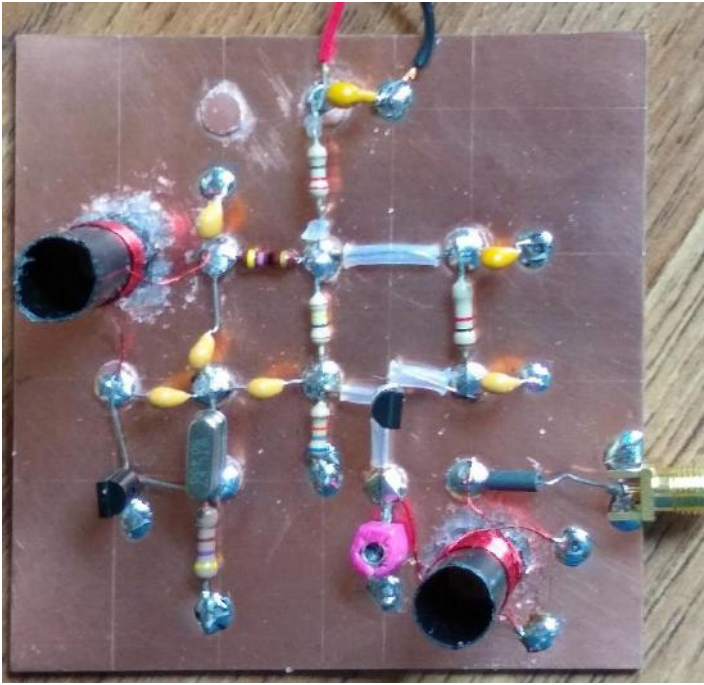
Before our meeting date, please go to <https://zoom.us/test> and see if it will function for you. If you have problems, we can try to assist – feel free to ask questions on the BARS email list.

I am looking forward to "seeing" many of you on Wednesday 4/3 here at 1900.

Doug, N1WRN
President, Billerica Amateur Radio Society

From the Editor's Desk By Marla Wallace, WA1GSF

Last month, I printed two diagrams of my current project – a 6m crystal oscillator module that will be the signal source for an AM rig I'm making. I have gotten the oscillator / buffer stage constructed and debugged (though when this photo was taken, the 78L09 voltage regulator was still in transit, so I'd powered the board from a 9v battery). Here's what it looks like:



This is what Manhattan-style construction looks like. Everything is laid out on a rectangular grid using “islands” when connections between components need to be made (other than to ground). You can see an unused “island” near the top of the picture that will be wired up when the regulator arrives. The board is three inches square, and the “islands” are a bit under a quarter inch in diameter.

I had never done Manhattan-style construction before. I’m impressed with how nice it looks. Almost as good as a PC board and a lot easier to home-brew. But you’d better be certain about the circuit configuration because this style doesn’t lend itself to breadboarding. You can change a part value easily enough, but changing where it connects is going to make a mess and adding more parts is just about impossible.

The only thing I had to do during debug was adjust the number of turns in L1 and T1. (I had mis-calculated the required turns count by about a factor of 2!) Once L1 was resonant at 50.4 MHz, the oscillator took off. The buffer stage output seems lower than it should when driving a 50-ohm resistive load, so I may need to re-work T1 to improve the coupling between the windings. Also, having taken half the turns off the primary, the ratio of Z_{pri} to Z_{sec} is no longer 9:1 as designed, which probably isn’t helping.

I’ve been retired for a decade now, almost. It’s fun to play engineer again.

Announcements

BARS has a KENWOOD TS 930S station available for loan.



This loan is intended to help get a new ham on HF. (New Technicians can operate on 10 Meters.)

It comes with a Loudspeaker, key, and microphone, and with help to get an antenna up. Contact W1LUS@hotmail.com if you are interested in borrowing this station for a while.

--de Bruce, W1LUS

The Spring NEAR-Fest XXXV Dates Have Changed

Please note this is an updated announcement. Please disregard any other notices you may have read.

Dear Friends of NEAR-Fest:

Our Spring 2024 hamfest, NEAR-Fest XXXV, will be held on Thursday April 25th and Friday April 26th, 2024. There will be no hamfest activity on Saturday due to an unfortunate scheduling conflict with the Deerfield Fairgrounds. We had originally announced that the event would take place only on Friday but due to popular demand and the cooperation of the Deerfield Fair Association we are pleased to announce this new full two-day schedule.

Our 2024 Fall NEAR-Fest XXXVI is scheduled for October 11th and 12th and will be the same as always for the past eighteen years, (i.e.: on Friday and Saturday).

The gates will open on Thursday morning at 7:00 AM for **prepaid ticket holders only** so you might want to buy your tickets online

well in advance starting February 1st, 2024, on our Web site, <https://www.near-fest.com>, or in March at the Ham Radio Outlet store in Salem NH and at Ross Hochstrasser's Clock Shop in Whitman MA and get your favorite spot. NEAR-Fest XXXV will end at 3:00 PM on Friday.

Prepaid ticket holders will line up and enter via Gate C as we did in the Fall. They must have **all** of their needed tickets and inside parking passes or they will be sent to Gate F. This includes all Campers, RVs, tenters, who must also have their overnight camping passes as there will be NO tickets or passes sold at Gate C. Anyone needing to buy tickets or parking passes will go to Gate F and will be admitted starting at 8:00AM. Once the line has entered at Gate C it will close and all others entering the grounds will have to proceed to Gate F.

For this event only admission per person is \$10.00 whether you buy your ticket online or in advance or at the gate. Overnight parking and tent passes are \$15.00 regardless of whether you plug into an electric outlet or not. Campers, RVs and overnight stayers will go directly into the Fairgrounds as we will not be using the campgrounds this time. The cost of the pass for RVs, Campers, Motorhomes, etc, is \$30.00. All vehicles that remain in the Fairgrounds overnight (after 9:00 PM) will require an overnight parking pass in addition to an inside parking pass for Friday.

Everyone over 21 will need an admission ticket except unlicensed spouses, active-duty military, full-time students (with ID) and other valid pass holders.

If you buy something big and heavy in the flea market one of our volunteer staff members will be glad to transport it and you to your vehicle at no charge as we have been doing for many years. As always inside parking for disabled persons is free of charge and they may use a single person "mobility device" as well. NEAR-Fest reserves the right to limit the use of golf carts and "other power-driven mobility devices" due to safety concerns and potential liability issues.

Please visit our Web site, www.near-fest.com, or our Facebook page, NearFest NH for any further updates. We apologize for any inconvenience that this modified version of NEAR-Fest may have caused but it is only for this time. We appreciate your indulgence and understanding.

See you at Deerfield!
73, MisterMike, WIRC

Technician in a Day Study Course

Classroom Session: Saturday, April 20, 2024, 8:00 AM to 5:00 PM
Sponsored by: Cape Ann Amateur Radio Association Gloucester, MA.

Our Technician in a Day Session is a study course. The course allows you to become licensed by the Federal Communications Commission as an Amateur Radio Operator.

You should first obtain a copy of the ARRL Technician Class License Manual. You may purchase this book at Ham Radio Outlet or any other amateur radio related store.

You should read the book. The information contained therein will allow you to answer questions on a 35-question test for obtaining your Technician License.

There are videos on Youtube.com at W4EEY that explain the theory and cover the questions to enhance your knowledge. You may also take practice exams at <https://HamStudy.org> for comprehension.

1. You should apply and obtain an FCC Registration Number at:
<https://apps.fcc.gov/coresWeb/publicHome.do>
2. You will be charged a small fee for this course, \$40.00. (Normally, \$15.00* for the examination, \$15.00 for study materials and \$10.00 for snacks and drinks which will be provided for the session.)
*For minors under 18 years, the test fee is \$5.00
3. The Tech In a Day Session will be almost a full day session (8 am to 5pm)
 - a. The first study session begins at 9:00am for 45 minutes and you will be given a 15 minute break before the next session begins at 10 am.
 - b. Three study sessions will be held before a lunch break (approximately 11:45am-1:00pm)
 - c. There will be three more study sessions in the afternoon to run to 3:45 pm.
 - d. Testing will begin approximately at 4:00 pm.

You will be administered an examination of 35 questions of which you must score at least 26 out of 35 or better to pass.

Upon successful completion of your examination, you will be handed a Certificate of Successful Completion of Examination (CSCE Form).

Your exam results will be forwarded to the American Radio Relay League in Newington, CT for processing to the Federal Communications Commission. When your license has been processed, you will receive an email from the FCC requesting the \$35.00 Application Fee.

Please use a computer to make this payment – tablets and cellphones will not work!

Upon receipt of your payment to the FCC, you will receive an email with instructions on how to download a copy of your new license.

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 March

I missed the March meeting, and nobody filled in for me, so I have no minutes to report.

There was no BARS Board of Directors Meeting in March

BARS Membership

Our current combined membership is 123.

We are now accepting renewals for 2024. For 2024, dues will remain at \$15.

On March 24 an invoice reminder was sent to the 21 that haven't renewed their membership for 2024. If you have any question about your renewal status please first check your "Junk email inbox" for the 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 April 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 March, we had income of \$120 from 8 new/ renewals. Our expenses were Zoom \$16.99 and PayPal \$7.00. We now have \$1326.17 in the bank and \$1190.55 in our PayPal account for a total of \$2516.72.

Bruce Anderson
W1LUS

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 now held in person and via Zoom. A link will be sent via the BARS email reflector to all currently paid-up members who might wish to continue to use Zoom.

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

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](https://www.chelmsfordbiblechurch.org/hall) ([map](#))

VE Session Report for March, 2024

We had fourteen people show up for the March 14th exam session. We created eight new Technicians: KC1UKD, KC1UKE, KC1UKF, KC1UKG, KC1UKO, KC1UKP, KC1UKQ, and KC1UKX. We also had one new General, KC1UMJ, and one General upgrade. We had four upgrades to Extra. Be sure to greet them if you hear them on the air.

Our next exam session will be on April 11 at 7:00 PM at the Chelmsford Bible Church.

Thanks to Gary, W1GFF; Peter, N1ALO; and Bill, W1ZL, for helping run this exam session. While walk-ins are still welcome you may pre-register for BARS VE exams at <https://HamStudy.org>.

--de Bruce Anderson, W1LUS

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 May meeting will be on 5/1 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

April 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.

If you're a serious DXer you won't want to miss two recently announced DXpeditions to rare DX locations:

- The first is Jarvis Island located in the Pacific about 1300 nautical miles south of Hawaii, planned for the beginning of August this year. Jarvis is part of the Palmyra and Jarvis DXCC entity (KH5) and is #18 on the Clublog most wanted list with the last major operation taking place 8 years ago. The callsign will be N5J and the plan is to operate with RIBs (Radio in a Box). Because of this the operation will not count for IOTA.
- The second is Glorioso Island (FT/G) located in the Indian Ocean near Madagascar, planned for May 24 to June 19 of this year. This will be a 1-man operation by FH4VVK who will also be there for a work assignment and the callsign will be FT4GL. Glorioso was last activated 15 years ago and is #7 on the Clublog most wanted list.

Here are the popular suggestions for this month:

Date	Event
Apr 6-7	RSGB FT4 International Activity Day https://www.rsgbcc.org/hf/rules/2024/rallband_ft4.shtml
Apr 8	Solar Eclipse QSO Party https://hamsci.org/seqp-rules
Apr 21	ARRL Rookie Roundup, SSB ** http://www.arrl.org/rookie-roundup
Apr 27-28	10-10 Int. Spring Contest, Digital http://www.ten-ten.org/index.php/activity/2013-07-22-20-26-48/qso-party-rules

** 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