



NEWS FOR AND BY BARS MEMBERS

BARS BillERICA Amateur Radio Society

AUGUST 2021

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

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 in the fall.

The Board has decided to resume in-person Saturday morning breakfasts at Stellio'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, but the Board feels that enough members have been fully vaccinated. Feel free to continue to wear a mask if you wish.

--BARS Management.

From the President's Desk

from the President of BARS, Doug Bruce

Greetings Fellow Members,

As we approach the mid-point of Summer 2021, here are three goals that I wish to accomplish before the end of 2021. Having

goals as a ham radio operator enables one to grow and develop in the hobby. There is no one specified ham career path, per se, just the pace you want to set and the things you want to do with your ham experience. Everyone's "ham radio career path" is very different. There is no right and wrong path for hams. The only requirement is to have fun on the bands, meet people, and make contacts, no matter what the mode or format.

First, I am going to study for and pass my Extra Class Exam later this year. I just need to put in some quality study hours and I feel reasonably confident that I can pass the test. Getting my Extra Class license seemed so distant at the first B.A.R.S. breakfast that I attended in December 2019. I had always thought that being a ham radio operator was well beyond my skill set. Little did I know that 10 year olds have taken and passed the Extra Class Exam, and little did I know that a year and a half later, I would be a budding General Class Licensee!

Second, I want to learn CW by the end of 2021. The more I read about and learn about CW, the more I want to learn it. My Grandfather was a radio operator on one of the New York Boats in the 1920's and he could send and receive CW at 50-60 WPM, which I find remarkable! I am sad that I never really got to know him (he passed away in 1966 when I was 5 years old) and he would have been very proud of my ham radio journey thus far. I can feel a real connection to him as I get further involved in this great hobby. I am very much looking forward to taking the CW course that Henry Christle WA1VAB. Henry is offering the course for all levels of CW operator, from the beginner (like myself) to the expert level. The thought of making contacts on CW with low power around the world really appeals to me! I hope it appeals to a lot of my fellow members as well, as CW makes a comeback in our Club this Fall in a big way with these Zoom courses that Henry is teaching.

Thirdly, I want to get my WAS (Worked All States) award, my WAC (Worked All Continents) Award, along with my DXCC Award from the ARRL. These awards are attainable for all hams, regardless of what you have for equipment and antennas. Obviously the better the antenna and the better the rig, the better chance you have to get these awards in a relatively short space of time (or whatever time frame suits your fancy!). These awards fit

nicely into a set of goals for the ham radio operator. I recently qualified for my WAC Award by working a station near Sydney, Australia, 10,068 miles away from my modest shack here in Reading, MA! I have 47 states confirmed towards my WAS, and I have 49 confirmed countries (mostly FT8 contacts) as I work to my DXCC Award.

In closing, the most important goal of our hobby I sto have fun and make friends and contacts all over the world! The sky is the limit and setting some goals can make the hobby a lot more enjoyable!

Until next month,
73,
Doug, N1WRN

Next BARS Zoom meeting: August 4 at 7:00 PM

“To Be Announced”

Presenter: Not Known at time of Publication

Our August will be have a program, as usual, but as of this date, your editor has not yet been informed of either the speaker or the topic. So keep checking the club's web page for a possible announcement. I'm sure this will be an enjoyable talk, anyway, even if you might have to find out the topic when you log into Zoom on Wednesday night. -- ed



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 8/4 here at 1900.

Doug, N1WRN
President, Billerica Amateur Radio Society

A Message From the Editor

from Marla Wallace, WA1GSF

Since early June, your editor has been working on an instrument that will tell him where to point a small telescope or camera to view or photograph the night sky. The project uses the same model of Raspberry Pi Pico microcontroller as was used in the automatic keyer project I wrote up for the June, 2021, issue. But it also uses a two-line LCD display and a GPS receiver, so it's been a learning experience to use new devices and new I/O protocols.

Further, whereas the keyer was implemented in only a couple of hundred lines of code, this project needs over 3000 lines (not including a data file which added another 3000), much of it doing calculations involving spherical trigonometry. And the Pico is well capable of the task.

After a month or so of coding and debugging, the end is in sight – I could stop now, but I'm considering some changes to make the controls more responsive. It's been a fun project and I have learned a lot more about coding for the Pico than I did doing the keyer.

So I figured it was time to transfer the hardware design from a solderless breadboard like the one that I used in the keyer article to a circuit board. Serendipitously, I was able to find a source for printed circuit boards with the same hole pattern and pattern of interconnections as the breadboard, which made it a snap to lay out the parts.

And now I'm faced with a problem: on most days, my hands are not steady enough to solder! So I have to “pick my battles” and work on the assembling whenever I have a half-hour or so with minimal shaking. Fortunately, the circuitry does not involve a lot of parts or interconnections – probably less than 500 solder joints to make. In three weeks, I should be done with what used to be a weekend project for me.

So consider this a cautionary tale. If you like to build your own gear, consider your family's medical history. I have “intentional tremors”, which is almost impossible to treat. My father, W1HH, did also. Like Parkinson's Disease, the condition comes on as you get older and gets worse with age, so there are a long list of things I want to build that I will never get to -- I expect that eventually I will have to completely give up on soldering. Home brewing was what got me into ham radio 55 years ago and it's going to be sad to have to stop doing it.

Feature Article: What is a Ham?

By Paul Graveline, K1YUB

When people ask me what is a ham operator, I realize that they do not know anything about Ham Radio. So I came up with the following:

At one time when you told someone that you are a ham radio operator most of the people understood what you were talking about. Unfortunately that is not true today. So when someone asks you: "What is a ham radio operator?" you might give the following brief description. Sort of like an "elevator speech" used by entrepreneurs.

"Ham radio operators are licensed by the United States government to transmit radio signals after successfully passing a test. These signals can be regular voice messages, modern digital transmission methods and even television pictures. They are sent using familiar technologies similar to AM and FM radio stations, through ham radio satellites or even bounced off the moon. Ham radio operators are legendary for their emergency communication contributions."

Be sure to add anything which you think might be of particular interest to your listener. If it is someone who works in technology, you might continue by saying, "You might be interested to know that hams have been instrumental in the advance of communications applications for over 100 years."

I am sure this can be improved on. However, remember it has to use language they understand and be very short to keep their attention.

Paul Graveline, K1YUB
K1YUB@arrl.net

Welcome to the Third BARS CW Corner

By Tom Walsh, K1TW

The USA-CA Award: County Hunting on CW

I said I'd introduce you this month to one of the perfect activities for CW operators, namely, County Hunting. CQ magazine offers the USA County Award (USA CA) for anyone confirming 500, 1000, 1500 counties and every 500 more all the way to all 3077 US counties! There is a spotting network too at <https://ch.w6rk.com/>. Listen in on 14056.5 kHz to get the hang of things. It is especially busy now during the summer months with people vacationing.



But beware, the County Hunter Net (CHN) has a strict net procedure to adhere to:

1. Mobile Station sign on: Sends CHN CHN several times and then his County and State (e.g., Middlesex MA)
2. Mobile Station: Sends QRZ:
3. You: Send your call once
4. Mobile station: sends your call once and an RST to you
5. You: Repeat the received RST (once) and send your RST back (once)
6. Mobile Station: sends QRZ for next caller

Here are some links to more detail:

https://cq-amateur-radio.com/cq_awards/cq_usa_ca_awards/cq_usa_ca_awards.html
and
<http://marac.org/>

More about CQ Magazine Awards:

https://cq-amateur-radio.com/cq_awards/index_cq_awards.html

I will explain even more about county hunting in a future column (or email now at k1tw@arrl.org for more

CW help for BARS members is coming

Over the past 2-3 months, several BARS members expressed interest in learning cw. Most recently, at the July 7 BARS club meeting another member made his interest known.

Several other BARS members since the July7 meeting also let me know. It's clear, we have a substantial number of members interested in learning or improving their cw.

There are several folks already available to help people with cw. Including: Henry WA1VAB, Andy KA1GTT, Tom, K1TW, and Bruce Blain, K1BG.

First Steps – CW Help is Coming

I reached out to the President of the Nashoba Valley ARC (NVARC), Bruce Blaine K1BG. K1BG is also the Eastern Massachusetts ARRL Affiliated Club Coordinator (ACC), and he has spoken at BARS meetings.

I approached Bruce with an idea that we set up a zoom call for people interested in learning cw. By doing so, we can better understand how best to help you all. Bruce and I are asking you to contact us if you are in any of these categories:

1. People with zero CW experience and wish to know more;
2. Those who have CW experience but want to improve;
3. Those who can help us mentor or teach others on gaining CW proficiency;
4. People who want to promote CW operation.

Part of our goal is introducing CW newcomers to this incredible world of CW on the spectrum that lies on the lower part of the HF bands and throughout the world above 50 MHz.

Next Steps – CW Help is Coming

I expect this plan, with enough interest and support, will evolve into something more than a one-time zoom call. Bruce (K1BG) and I (K1TW) have some details to work out. But we have agreed to move ahead with an early zoom call.

Bruce will be presenting similar ideas and a call for participation at the Nashoba Valley Club. Our clubs already have a lot in common and regularly share ideas on speakers, etc. We are seeking BARS and NVARC cooperation in the best spirit of ham radio to help achieve our goals.

BARS Board member, Henry Christle, WA1VAB, is another person we will be engaging with. Henry has a deep interest in promoting cw. Henry often writes interesting articles for the BARS newsletter with many featuring his interest in CW.

Are you interested in a CW Zoom Call?

If you contact us, we will be sure you get the zoom meeting notice. Please send an email to both of us:

[Bruce K1BG, k1bg@arrl.net](mailto:k1bg@arrl.net)

[Tom K1TW, k1tw@arrl.org](mailto:k1tw@arrl.org)

Enjoy the world of CW... until next month.

73,
Tom K1TW

Strays

Help Wanted

Hi, this is Chris Lobdell, KC1IUK, head of the Wednesday Night 2 Meter NET.

I am looking for some more volunteers to do the NET. It's been a while since either Doug, N1WRN, or myself has hosted it.

Please consider helping out once and a while. It's easy, there's a script that you follow and it only takes around 30 minutes of your time. If you're interested, you can just email me at crlobdell1@gmail.com or else let either Doug or myself know during the NET.

Thanks for helping out!

--de Chris KC1IUK

Tech-In-A-Day at the New England ARRL Convention

Tech-In-A-Day will be offered again at the New England ARRL Convention in Marlborough, MA on Saturday, September 11, 2021 from 8:00 to 5:00 pm.

Prospective students should buy the ARRL Technician Class License Manual from either Ham Radio Outlet in Salem, NH or the ARRL direct.

Plan:

1. Please read the book.
2. There is a Technician Class online at <https://www.youtube.com/w4eey>
3. There is an App on your computer or phone online called hamstudy.org which you can use the "Study Mode" option to review the question pool for Technician Sections T1-T7.

Also I would suggest studying until you can score 85% or better across the board.

You may sign up for the Tech-In-A-Day class by sending an email to techinaday@caara.net

Cost of the course is \$20.00. That includes \$15.00 Test Fee and \$5.00 for materials and snacks.

--de Bill Poulin, WZ1L
(978) 504-9112

Found on the web

Signal strength is sometimes a subjective thing. In a contest, everybody's signal is 5/9 or 5/9/9, but in reality (and in normal QSOs), that won't be the case.

Most receivers have some kind of display for showing signal strength. The granddaddy of them is the venerable S-Meter, which has a scale showing "S-Units" from zero to nine and decibels above that (usually to a maximum of 20, hence the sometimes heard "you are 20 over 9 here" report).

You might think an S-Meter is just a gimmick included by the manufacturer to show relative power. Actually, there is a standard for what the meter should be reading as “S-9” and how much stronger an “S-9” signal is from “S-8”. Read all about it at [S meter - Wikipedia](#).

--de Marla Wallace, WA1GSF

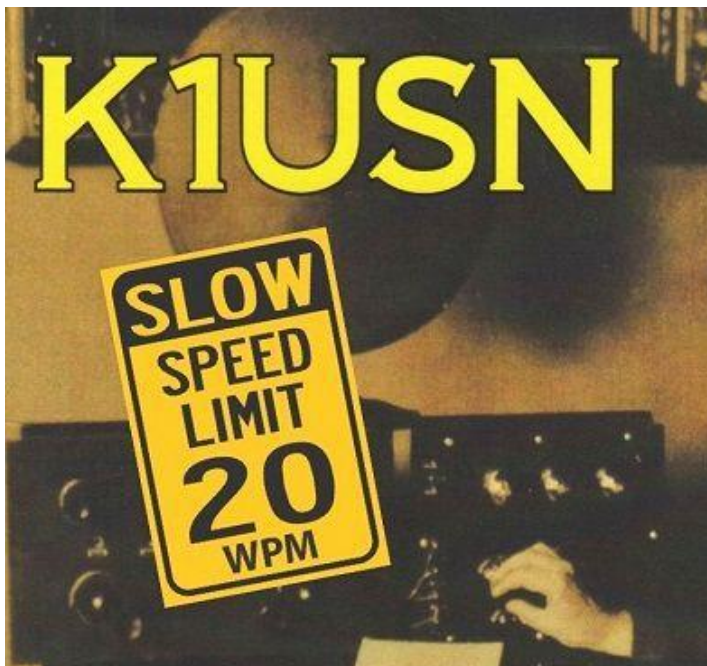
Upgrading Your License? Here's a Resource

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

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 4-5 PM EDT Friday and 8-9 PM EDT Sunday. – ed.]



-- de Tom Walsh, K1TW

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

Secretary's Reports

from Scott Ginsburg, K1OA, Secretary

BARS General Meeting July 07, 2021

President Doug Bruce, N1WRN called the Zoom virtual meeting to order at 7:08 PM.

Fred Kemmerer, AB1OC gave a talk entitled Programs Helping Hams and Young People to Develop New Skills and Get on the Air.

A vote was held via Zoom poll to authorize spending up to \$150 from the club treasury for WBZ special event expenses. The vote passed. It is anticipated that these funds would be recouped from incoming QSL donations.

W1GFF, Gary, announced the first in person VE sessions would be held in July. N1WRN announced the first Stelio's breakfast would also be in July.

There were 34 attendees. N1WRN closed the meeting at 8:50 PM.

BARS Board of Directors Meeting, July, 2021

There was no BoD meeting for the month of July. – ed.

BARS Membership

Bruce, W1LUS, our BARS Treasurer reports that as of 7/1/2021, we had 97 members. To date 15 members from 2020 that have not renewed their membership for 2021.

2021 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 August 2021

from Bruce Anderson, W1LUS, Treasurer

In July our expenses were Zoom \$15.93, and a PayPal fee of \$1.48. We had three new/renewals for an income of \$45 and a donation of \$6. I transferred \$450 from PayPal to the bank account to balance

Dues for 2021 are due and remain at \$15 for 2021.

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, PO BOX 832, Nutting Lake, MA 01856

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 Chris, KC1IUK. 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 Billerica 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: We are now using the Westford Repeater, due to system difficulties with the Billerica Repeater. Thanks to the Westford Police Amateur Radio Team (PART) for their generous act of making their repeater available to us.*

Repeater info:

WB1GOF

146.995 MHz

-600 kHz (normal) offset

Encode CTCSS 74.4 Hz

Club Meetings

Because of the COVID health crisis, in-person club meetings are in 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 at 7:00PM 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](#)

VE Sessions

Our VE sessions are again being held in-person at the Chelmsford Bible Church. Pre-registration for our in-person exams will be required. 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 \(map\)](#)

July 2021 VE Session

On July 8 we restarted our in-person VE exams at the Chelmsford Bible Church. We had seven people show up for their exams. Three passed their Technician exam, three upgraded to General and one Extra upgrade. Our next in-person exam session will at the church on August 12 at 7:00 PM.

Thanks to Andreas KC1NTL, Alan KD1D, Bill WZ1L, Gary W1GFF and Eugene W3UA for their help in running the session.

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 8:00AM for a casual, social breakfast at Stelio’s restaurant.

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

Future Meetings

The 9/1 meeting will be held either via Zoom or in person at the Chelmsford Bible Church; the decision as to which has not yet been announced. [Chelmsford Bible Church Hall, 128 Gorham St, Rear Door, Chelmsford MA 01824-3220 \(map\)](#)

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

August Get-on-the-Air Suggestions

BARS is a “get-on-the-air” (GOTA) club. We encourage members to participate in the varied events on HF and VHF. Here are some popular suggestions for this month:

Date	Event
Aug 7-8	10-10 International Summer Contest, SSB ** https://www.ten-ten.org/index.php/activity/2013-07-22-20-26-48/qso-party-rules
Aug 7-8	SKCC Weekend Sprintathon http://www.skccgroup.com/operating_activities/weekend_sprintathon/
Aug 14-15	Worked All Europe (WAE) DX Contest, CW https://www.darc.de/der-club/referate/conteste/wae-dx-contest/en/
Aug 28-30	Hawaii QSO Party ** http://www.hawaiiqsoparty.org/

** Top Recommendations for this month

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

President: Doug Bruce, N1WRN

Vice President: Kayla Creamer, W2IRY

Treasurer: Bruce Anderson, W1LUS

Secretary: Scott Ginsburg, K1OA

Net Coordinator: Chris Lobdell, KC1IUK

Newsletter Editor: Marla Wallace, WA1GSF

New Member Outreach: John Fisher, KC1FTJ

BoD: Mike Raisbeck, K1TWF

BoD: Henry Christle, WA1VAB

Ex Officio: Andy Wallace, KA1GTT