



NEWS FOR AND BY BARS MEMBERS

BARS Billerica Amateur Radio Society

DECEMBER 2020

BARS physical meetings are on hiatus until further notice.

The decision to resume in-person club meetings and breakfasts at Stelio's 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 and breakfast meetings using Zoom have proved an enjoyable substitute. Please ignore the sections, below which give directions and schedule for in-person meetings.

VE License Exams will soon be virtual – see the VE section near the end of the newsletter for details.

--BARS Management.

From the President's Desk

from the President of BARS, Doug Bruce, KC1MJK

Season's Greetings Everyone,

First of all, I would like to thank all of the members of B.A.R.S. for their support and trust in me to make me the next President of this Club. My intention is to make sure the Club maintains it's current pace, as well as exploring new ideas for exploring all aspects of this great hobby.

I began my ham radio journey, oddly enough, at a BADX (Boston Area DX'ers) meeting on December 6, 2019. I had found a couple of older shortwave radios in my office and I was moved to plug them in and try them out. It had been many years since I had dabbled in shortwave listening, but finding those radios rekindled my interest in radio.

I then looked up SWL Clubs in the Boston Area, and BADX came up in Google. I then looked into it and decided to attend a meeting.

I went to my first meeting on December 6, 2019 with the thought of just finding out what an SWL Club had to offer. I had no idea what to expect.

At the meeting, there was a decent amount of talk about shortwave DX and other SWL topics, but most of the talk morphed into ham radio discussions.

It turned out that most of the Club members were active ham radio operators. I had dabbled in CB radio back in the 1970's, and I had heard of ham radio, but I had dismissed it back in the 70's as a hobby for those electrically and technically inclined. Boy was I wrong about that!

During the meeting, a lot of the guys encouraged me to look further into becoming a ham radio operator and they invited me to a Club Breakfast the next day at Stelio's Restaurant in Billerica, MA.

Again, I went to the breakfast at Stelio's with the idea of just finding out what ham radio was and to see if it was a hobby that I would be interested in. By the end of the breakfast I was very interested, and on the way home from the breakfast, I was on my way to Ham Radio Outlet in Salem, NH to purchase the Ham Radio License Manual to begin my studies for my Technician Class Ham Radio License! It all happened so fast!

My next step in the hobby was to take the Technician Class Exam on Thursday December 12, 2019 (the 118th anniversary of Marconi's first Trans Atlantic transmission of the letter S . . . in Morse Code [Faking the waves | Higher education | The Guardian](#)) at the Chelmsford Bible Church in Chelmsford, MA. To my surprise I passed with 32 correct answers out of 35 and I was now a ham radio operator!

I then purchased a Beofeng UV-5 and Peter N1ALO gave me a mag mount antenna and I secured the use of one of my wife's steel cookie sheets and I was in business! I would put the mag

mount antenna on the cookie sheet and place it on my porch roof outside my kitchen window, and off I went into the 2 meter world on the Billerica Repeater!!!

I then built a 2 meter j pole antenna with Peter, (he let me sand the copper!), all the while learning about the hobby during our many Saturday afternoon visits at his house in Dracut, MA.

Then, it was time to study for my General Class Ticket which I passed on March 12, 2020 with 31 correct out of 35 questions, and with the aid of Peter's wife's cinnamon raisin cookies during the exam!

Enough about me. The real story here is the Billerica Amateur Radio Society. This Club has a nice mix of young and old which makes for an interesting perspective on ham radio issues.

I look forward to bringing my enthusiasm to the Club, and with the help of our great Members, we will continue to make this an interesting, informative, and relevant Club for years to come!

Please feel free to reach out to me anytime with any issues or concerns, or if you just want to rag chew on the Billerica Repeater for a while, which is one of my favorite activities!

73,
Doug
KC1MJK

Next BARS Zoom meeting: December 2 at 7:00 PM: "ARRL Update" with Phil Temples, K9HI

The program for the December 2, 2020, will be "ARRL Update: Latest News About the ARRL and Its Board of Directors" featuring Phil Temples, K9HI, Assistant Section Director of the Eastern Massachusetts Section of the ARRL.



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 12/2 here at 1900.

Doug, KC1MJK
President, Billerica Amateur Radio Society

A Message From the Editor from Marla Wallace, WA1GSF

Welcome to the December 2020 issue of the BARS newsletter. This month begins my second year as editor of this publication. I can't believe I've been doing this for a year already.

During my tenure, I've seen some really interesting articles, covering many aspects of amateur radio – several construction articles ranging from antennas to calculator kits, a nice tour of the Marconi wireless site on Cape Cod, contest operation and even one on the possible fire danger of surge-protected power strips. In this issue, we have an article on how to pack your station when you need to “commute” between two sites.

As I begin my second year, I am gratified to see that BARS is a dynamic organization and that our newsletter reflects that.

Club News: On-line VE Exams

We are planning to start doing online exams starting December 10. We would love to have BARS members in our first online exam session. If you are interested in participating in this first session contact Bruce at W1LUS@hotmail.com to register for this online exam session.

--de Bruce, W1LUS

Feature Article: One Radio, Two Shacks By Jon Turner, AC1EV

One Radio, Two Shacks is the original title for this article. I just as easily could have named it Two Shacks, One Radio. Is there a difference? I think there is, but it is subtle. I can afford to have an antenna setup at each location but duplicating the radio and amplifier is more expensive. As discussed below, there are good reasons to operate locally from each QTH. In any event the point of the article is to describe how I transport the interior of my shack from one QTH to another.

As a new ham I focused on building a shack in my primary QTH in MA. I also wanted to be able to operate from our second home in NH. My solution was to put some effort into putting up a good antenna there and I would just bring my "rig" up to NH when we went there. I could have set up remote access from the NH QTH to my MA QTH, but there was something about the property that made me want to have an antenna up there.

Advantages of Operating From Two Locations

The MA QTH is in Tewksbury, MA a typical suburban town and has all the RF noise present in that kind of environment. In addition to that, the terrain was flat, so my antenna height above my roof was the same as above the ground for quite a distance from the house.

The NH QTH offered many advantages. The first was there were many tall trees over 80 feet high. Another advantage was the house was on top of a hill about 85 feet above the surrounding terrain. The RF environment in the rural forest setting was noticeably quieter. If I installed an antenna high in one of the trees on top of the hill, it would form the basis of a good shack. I ended up installing an 8010 EFHW antenna from MyAntennas.com which worked great.

I wrote an article about putting up one of those antennas, which you can view [here](#). This [second article](#) discusses the topography of the NH QTH and how well the antenna worked in the 2019 CQ World-Wide DX SSB Contest

A disadvantage to operating remotely was that power and internet at the NH QTH was not reliable and I could anticipate losing connectivity multiple times a year. I think this is a good case for wanting to operate locally from both locations. A few hundred dollars for the antenna installation was an amount I could handle that would not eat into the Ham budget for the primary station in MA. Duplicating the major components of that station would cost around \$4500 which may happen someday, but until then, I will transport them between shacks.

Moving the Components Between Shacks

Here is what my MA shack looks like:



What Needs to Travel

Icom 7300, Elecraft KPA500 amp and KAT500 Tuner are the core components that need to travel.

When I arrive sat the NH QTH this is what the shack there looks like.



The NH QTH

In addition to the radio gear I bring my laptop



And a Computer, Of Course!

I packed all the gear required to setup the NH Shack in these two toolboxes. Pelican cases would be great, but these were around \$60.00 at Home Depot. They are watertight and the bottom one has wheels.



The Carrying Cases

Let's unpack the smaller one on the top first.



Case #1

Inside is the IC-7300, Heil Pro 7 and Bencher CW Key

The big toolbox is full and quite heavy.



Case #2

The box from the Pro7 headset holds the loose cables and fits in the toolbox perfectly.



Cables Are Stowed in the Headphone Box



The Tuner

The KAT500 Tuner is unwrapped. You can see below how well the toolboxes fit the components.

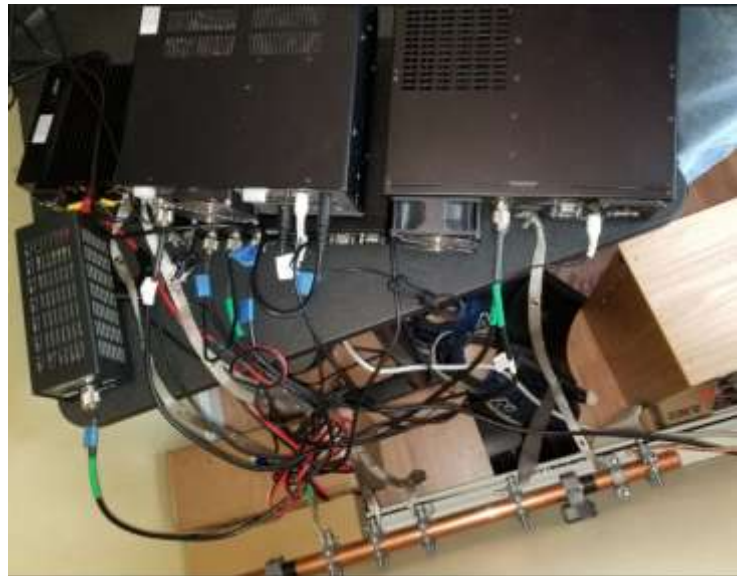


A Perfect Fit!

Dummy Load and KPA500 amp on the bottom of the large toolbox.



*Here are all the components laid out.
Key cords and cables are labeled.*



Assembled and Wired Up

All the components are connected. I put in a piece of copper pipe to be a buss for a common ground. The wire on the right side of it connects to the house ground outside, which is also connected to the antenna grounds. The radio is noticeably quiet.



The shack is ready.



Up and Running!

For a hyper lapse video of the shack setup, click the link below:
<https://youtu.be/kntCMtFUo5E>.

Strays

Found on the Web

I came across a novel design for an oscillator this month in Wikipedia: https://en.wikipedia.org/wiki/Vackář_oscillator.

This oscillator is similar to a Colpitts or Clapp oscillator but is alleged to be more stable over its tunable frequency range. It sounds to me like it could be a good choice for an old-school VFO design. In the example circuit, C_0 and L_1 resonate at about 2 MHz; it would not be hard to move the oscillator to either 160 or 80 meters and make C_0 a parallel combination of a fixed and variable capacitor.

--de Marla Wallace, WA1GSF

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, WILUS@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, WILUS

Weekly Sunday Night CW Slow Speed Contest

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. This is also included in the Get-On-The-Air column, below.



-- de Tom Walsh, K1TW

Secretary's Reports

from Scott Ginsburg, K1OA, Secretary

The BARS General Meeting, November 4, 2020

Outgoing President Andy Wallace, KA1GTT called the Zoom virtual meeting to order at 7:04PM.

A motion was made and seconded to accept the proposed slate of BARS officers for 2021. A vote was held and passed.

Our incoming president Doug, KC1MJK, said a few words about some of the things he would like to pursue in the coming year, including working with the 1200 club to improve 147.12 repeater performance and promoting virtual tours of member's stations. Bruce, W1LUS noted that on-line VE testing will likely commence in December.

Doug, KC1MJK presented an ARRL Elmer Award to Peter, N1ALO for his outstanding mentoring efforts provided to Doug. Peter spent many Saturdays with Doug helping him build and erect antennas, setting up his station, and providing much new ham guidance.

There were two newly licensed hams at the meeting, Eric, KC1OAC and George, KC1OBY.

Joe Carcia, NJ1Q of the ARRL gave a virtual tour of the League's W1AW station. Joe gave an excellent overview of the W1AW equipment line up and how it is used to broadcast bulletins and code practice.

There were 33 attendees. KA1GTT closed the meeting at 9:20 PM.

The BARS Board of Directors Meeting November 19-Nov-2020

Board Members present: KC1MJK, W2IRY, W1LUS, WA1VAB, K1TWF, K1OA, KA1GTT

Several ideas were discussed for future meeting content.

Bruce, W1LUS offered to provide remote elmering via Zoom for any member interested.

Doug, KC1MJK will reach out to Doug, N1LHP to inquire about the current status of the 147.12 repeater repairs.

BARS Membership

Bruce, W1LUS, our BARS Treasurer reports that as of 12/1/2020, we had 102 members. To date 39% of 2020 members have renewed for 2021

2021 BARS Member Dues

The BARS Board has changed the policy on 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 November 2020

from Bruce Anderson, W1LUS, Treasurer

For November, our expenses were Zoom \$15.93 and PayPal fee of \$4.44. We had 6 new/renewals in October for \$90. We now have \$331.57 in the Bank and \$817.47 in our PayPal account for a total of \$1149.04

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 Andy, KA1GTT

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**).

Repeater info:
147.12 MHz
+600 kHz (normal) offset
Encode CTCSS 103.5 Hz

Club Meetings

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 \(map\)](#)

VE Sessions

We are planning to start doing online exams starting December 10. We would love to have BARS members in our first online exam session. If you are interested in participating in this first session contact Bruce at W1LUS@hotmail.com to register for this online exam session.

Eventually, we hope to resume holding VE sessions as before, 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 \(map\)](#)

November 2020 VE Session Report

On November 14 we had our fourth VE Exam using social distancing guidelines. It turned out to be a good day to hold an outdoor exam as mother nature provided a not so cold, sunny day, for November, for our outdoor exam. This was our last planned outdoor exam until warmer days return (Spring Summer?)

In the November exam session there was one upgrade to Extra, Brent KC1KOV and one new Technician Scott KC1OFE. If you should hear either of them on the air be sure to say hello.

Thanks to Scott, K1OA, Andreas KC1NTL and Gary, W1GFF for their help in running the session.

Bruce Anderson, W1LUS

Club Breakfast every Saturday

On Saturday mornings around 8:15AM, we also meet weekly for a casual, social breakfast at Stelio's restaurant. [Stelio's Family Restaurant, Billerica, MA](#) (map)

Future Meetings

The 1/6 meeting will be held 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

BARS November Suggestions - Get-on-the-air Events

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
Dec 4-6	ARRL 160 meter Contest http://www.arrl.org/160-meter
Dec 7, 14, 21, 28	K1USN Slow Speed Test ** http://www.k1usn.com/sst.html
Dec 12-13	ARRL 10 meter Contest ** https://www.arrl.org/10-meter
Dec 12-13	Straight Key Century Club (SKCC) Weekend Sprintathon https://www.skccgroup.com/operating_activities/weekend_sprintathon/
Dec 20	ARRL Rookie Roundup, CW http://www.arrl.org/rookie-roundup
Dec 20-21	Run For the Bacon QRP Contest http://qrptest.com/pigrun/

** 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, KC1MJK
 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

Copyright © 2020 by the Billerica Amateur Radio Society (BARS).