



NEWS FOR AND BY BARS MEMBERS

# BARS Billerica Amateur Radio Society

FEBRUARY, 2020

## From the President's Desk

from the President of BARS, Andy Wallace, KA1GTT

### HOMINID BIPED WANTED.

Breathing preferred. Must like long walks on the beach, quiet times...and being BARS President.



As most of you know, I would like to step down from my role as President this coming November. Many would say that I have done a good job at it. Being President is not a permanent job, nor is stepping down necessarily so. I feel like Rip Van Winkle. I was in BARS back in 1981 or 1982 then dropped out until K1TW convinced me to rejoin several years ago. Some of the faces I knew are still here. But I feel like I missed a huge deal of excitement and happenings all those years I was gone. In November, I'll remain on the Board as Past President, to help out. I don't intend to exit the Club or ignore my friends. I just need a break. And I am hoping to free up time so I can work on feature articles for our Newsletter, and powerpoint slides for a presentation or two.

I do not know who my replacement will be, but I hope he or she steps in with enthusiasm. We should someday take count of the number of BARS members who have served as Officers repeatedly. I bet it's a lot. Our next President should perhaps be someone who has never filled that role. New blood, new energy, new ideas. Over the next months you will read and hear about the attributes which our Board feels will make a good President.

I hope you got a chuckle out of the picture shown here, but it is true: the best Presidential quality is being a "normal" ham. We all have different likes and dislikes in this hobby but I think anyone can look at leading a Club for a year or more and realize that aiming for the center of the bell curve will make the bulk of the membership very happy. So don't feel that you need a superpower to do the job. BARS needs someone who can attend most monthly club and Board meetings. Someone who can keep their finger on the pulse of the Club and adjust direction from time to time. Someone who can be a cheerleader for the hobby, and a friend to our friends here.

If reading this got you wondering about being our President, please get in touch with me at [ka1gtt@arrl.net](mailto:ka1gtt@arrl.net) and I will be happy to talk to you about things I have done in the role. We'll need a leader in eight months. "Whether you think you can, or you think you can't - you're right" -Henry Ford

Andy, KA1GTT,  
President, BARS

**Next BARS meeting:**  
**Wednesday, February 5, at 7:00 PM**  
**"Recap of ARRL Board Meeting"**

Mike Raisbeck, K1TWF

Mike will speak about the recent ARRL board meeting and his new position as ARRL First Vice President.

## A Message From the Editor

from Marla Wallace, WA1GSF

What is a “normal” ham? Are they someone who gets a phone call from a friend at two o’clock in the morning on a workday saying that a new DXpedition just came on the air and hops out of bed to go work it? Are they somebody who takes the overnight shift on 20m CW during Field Day? Are they someone whose car is decked out as a mobile communication post to coordinate for a road race? Do they have a “go bag” with rig, antenna and power source in case of disaster? Are they an Elmer, mentoring those new to the hobby? A volunteer examiner? Do they build their own gear? Experiment with new antenna designs or new digital modes? Act as net control? Rag-chew with their buddies? Maintain a repeater? Pioneer newly-allocated bands? Serve as a club officer?

Hams are all these things and more. And, yes, some of us write for or edit newsletters. Be normal.

## Feature Article: Cushcraft MA-160V 160M Vertical

By Scott Ginsburg, K1OA

The 160 meter band presents a lot of challenges, not the least of which is putting up an effective antenna. I have been using the Cushcraft MA-160V vertical to chase DX since 2006 with some success. The MA-160V is a compromise antenna at 36 feet tall, but at 12 pounds and requiring a small ground radial footprint compared to a much bigger vertical it is a decent choice for someone without a large backyard and tall trees. The MA-160V retails for around \$300.



*Figure 1 – Fully Assembled MA-160V in the Author’s Backyard*

The resonator of the antenna consists of 11 aluminum tube sections that attach together using worm clamps. About 2/3 of the way up is a loading coil which comes pre-wound and a capacitance hat which uses eight 48” rods and a circular bracket that attaches to the aluminum tubing. The top 3 resonator sections are referred to as the stinger and its overall length can be adjusted to change the resonance of the antenna.



*Figure 2 - Top of MA-160V Showing Loading Coil and Capacitance Hat*

Three guy clamps are attached to the resonator about 20 feet from the bottom. The antenna comes with 100 feet of Danscord D30 rope which gets cut into 3 pieces for guying. Three lightweight guy anchors are supplied that are placed 15 feet from the antenna. I ended up replacing the anchors with longer and beefier metal stakes that I had from an old army surplus mast after an encounter with some deer one winter that caused an anchor to come loose resulting in damage to some of the resonator tubes. I also upgraded the guy rope to 5/16” Dacron rope.

At the base of the antenna is a fiberglass insulator tube which separates the resonator from a 12” base section of aluminum tubing that holds the ground radial ring. The conductor of the coaxial feed line attaches to the resonator while the coax braid attaches to the ground radial ring. For my installation I dug a 4 foot hole and sunk a 5 foot pipe into it and filled the hole with concrete. The pipe inner diameter is slightly larger than the 12” base section (1 3/8”) so that the base slips into the pipe but only goes as far as the bolt that attaches the insulator. After the antenna is assembled it can be raised by having one person walk it up while a second person keeps a foot on the base section to ensure it doesn’t move around. Once it is in a vertical position it can be lifted by both people onto the pipe and then guyed. I have successfully used this method every year during the fall when it gets erected. The antenna is taken down in the spring as the 160M band can be very noisy in the summer, and it presents a lawn mowing hazard.



**Figure 3 - Base of MA-160V Showing Radial Attachment and Coaxial Choke**

The antenna comes with 400 feet of ground radial wire. The instructions say to cut 3 radials of length 20-50 feet long depending on the available space, and add additional 15-40 foot radials until a 1:1 SWR is obtained at the desired frequency. My approach has been to use 16 radials each 1/8 wavelength long (65 feet) at 1.8 MHz. This gives me a 2:1 SWR at the bottom of the band. I use an antenna tuner in the shack to obtain a 1:1 match across the band. The antenna specifications imply the antenna can be tuned for any 40 kHz band segment so it is very narrow. I also coiled 5 turns of the RG-213/U feed line using a diameter of 12" at the antenna feed point for a simple current choke.

Using about 600W output I've been able to work 131 countries with the MA-160V, including Japan (JA), Chagos Islands (VQ9) in the Indian Ocean and a handful of remote islands in the Pacific such as Tokelau (ZK3). There is no doubt this is a compromise antenna for a number of reasons. First, being such a small antenna the capture area and efficiency are very low. I read an Internet post suggesting that it is only about 10% efficient. Second, being a vertical it is more likely to pick up man-made noise so it is not a great receive antenna. The first issue is hard to overcome, but for the second issue, adding a separate low noise receive antenna for 160M might be in order. My current noise mitigation technique involves turning off receive preamps on my receiver, and cranking back the RF gain as much as I can withstand. I also dial in some DSP noise reduction, as much as possible without attenuating the signal itself.

I have so far worked only 2 new countries on FT8 with the antenna but I'm hopeful that as more DX stations start using FT8, this will improve my chances at working new countries with the MA-160V.

## Member Profile: Niece Haynes, KA1ULN

By Paul Graveline K1YUB

You might say that Niece Haynes, KA1ULN, is an "accidental ham". While attending a Boston Computer Society meeting in conjunction with her job as a software engineer for a Boston health organization in 1987, she accidentally kicked an HT on the floor.

The owner introduced her to ham radio and she became hooked. Her Elmer was N1HM (SK) through whom she became fascinated with CW. In fact, after passing her Novice and taking her Tech she had already passed the 20 wpm code requirement! Eventually she went on to earn an Extra.

Today she is especially active on CW and builds hand keys. She also instructs Girl Scouts in the art of sending and receiving CW. In addition to building her keys, she builds most of her own antennas of which she has five or six at her Andover QTH.

She also runs numerous HF radios including the Icom 7610, and Elecraft KX3 which she uses during her Parks on the Air quest. Additionally she has an Anytone 878UV DMR HT covering 2 and 70cm.

Niece is very active on YL Nets and contributes to the YLRL serving as their District 1 Chairperson. Lately, she is hooked on Ve'ing (volunteer Examiner) at Dayton/Xenia. It is proven when a YL VE is at the test site the YL taking the test passes because she feels more comfortable. She says that she is very well known on YL net worldwide and can be found womaning YLRL booths at various ham gatherings like Xenia, Deerfield and Boxboro.

KA1ULN has some unmet ham achievements. One of them is to make contacts via satellite and she is still pursuing her DXCC but still needs 20 countries.

So thanks to brief fortuitous encounter with an HT many years ago, our "accidental ham" has enjoyed many years of operating on the ham bands.

Checkout her blog [KA1ULN.BLOGSPOT.COM](http://KA1ULN.BLOGSPOT.COM)

## Strays

This is some nice publicity for Amateur Radio. You can listen to an edited clip of the show via Jim's (K1IR) archive link at the bottom of the EMA ARRL article.

<https://ema.arrl.org/2020/01/15/local-amateurs-featured-on-wbz-late-night-talk-show/>

If you're among the people who have been using the online renewal form to pay your yearly dues, our online form is currently down while we make some changes. In the meantime,

we ask that you either pay cash or check either in person or by mail to:

Billerica Amateur Radio Society  
PO Box 832  
Nutting Lake, MA 01865

You can pay online using any of the online payment systems by sending \$15 to [BARS.DUES@outlook.com](mailto:BARS.DUES@outlook.com). Please be sure to include your name and call sign with the payment.

de Kayla, W2IRY

If you are into antique electronics this is a show you should be going to. LOTS of cool stuff there. It is best to get there early and pay the \$10 as things fly off the tables. If you want to sell you HAVE to be a member. I signed up after the last show for 10 years. Oh and bring more cash than you think you need :-)

### NEVEE III:

The Biggest and Best Vintage Electronics Show on the entire East Coast, is just around the corner. The show is on March 1 and runs from 8:00 am to 1:00 pm at The Event Center in the Courtyard Marriott, 2200 Southwood Drive (Rte. 3 Exit 8), Nashua, NH.

The event center features free onsite parking, breakfast and lunch for purchase at The Bistro at the Marriott, and lower cost food and snacks options in the hall outside during the show. This is a family event, and with one \$10 adult admission, spouse and children under 18 are free from 8am to 11am. The event is free for everyone after 11 am.

There will be hourly raffles of antique radios and vintage electronics as well as a silent auction and advice from experts on various subjects related to vintage electronics.

The show is guaranteed to run Rain or Shine (or sleet or snow). The New England Vintage Electronics Club has never cancelled a show and never will. Yes, the shows are that good! For more information visit [nevee.org](http://nevee.org).

de Jim, N1HTS

For those who have not yet heard, the Northeast HamXposition (formerly Boxboro) has a new location and date this year! Mark your calendars. Check out this post for more info: [https://ema.arrl.org/2020/01/23/2020-northeast-hamxposition-new-venue-and-new-date/?fbclid=IwAR18m\\_QaAtFagI7LqwkIgbzvwed\\_eMQoUeLAM81-pLF49JEI7y7rB1sLBTZw](https://ema.arrl.org/2020/01/23/2020-northeast-hamxposition-new-venue-and-new-date/?fbclid=IwAR18m_QaAtFagI7LqwkIgbzvwed_eMQoUeLAM81-pLF49JEI7y7rB1sLBTZw)

de Kayla, W2IRY

## BARS February 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
February 8-9	CQ WW RTTY WPX Contest
February 8-10	YLRL YL-OM Contest
February 10-14	ARRL School Club Roundup
<b>February 15-16</b>	<b>ARRL DX CW Contest **</b>
February 21-23	CQ 160-Meter Contest, SSB
Feb. 29 – Mar. 1	South Carolina QSO Party
March 1-2	North Carolina QSO Party
<b>March 7-8</b>	<b>ARRL Inter. DX Contest, SSB **</b>
March 14-15	Oklahoma QSO Party

### \*\* 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>

## Secretary's Reports

from Scott Ginsburg, K1OA, Secretary

There was no BARS General Meeting on January 8, 2020, as it was our holiday party.

### BARS Board of Directors Meeting, January 20, 2020

Members present were: KA1GTT, W2IRY, W1LUS, WA1VAB, K1TWF, K1OA

1. KA1GTT, Andy, noted that KC1FTJ, John has sent 30 BARS welcome postcards so far.
2. A proposal was discussed to modify the Wednesday night 2M net call up script to prioritize mobile or portable stations first. The Board voted to make no changes to the script or net procedures at this time.
3. A discussion of how best to handle on-line membership dues payments led to the following decisions:
  - a. An Employee Identifier Number (EIN) will be obtained for tax purposes.
  - b. Tax exempt 501(c)(3) status will be explored.
  - c. The current PayPal on-line payment method will be suspended due to tax issues and a new method will be investigated.

## BARS Membership

Bruce, W1LUS, our BARS Treasurer reports that as of January 2020 we have 97 total members.

## 2020 BARS Member Dues

The BARS Board has changed the policy on member dues. A \$15 annual BARS membership now runs from January 1 and expires on December 31<sup>st</sup>. Any renewal or new membership made after September 1 will be valid until December 31 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

from Bruce Anderson, W1LUS, Treasurer

February 2020 Treasurers Report

Reminder: 2020 Dues were due starting January first. So far 36 members have renewed for 2020.

Through mid January we had Four members renew their membership for \$60 income. Expenses were \$70 for the one year renewal of the club Post Office box and PayPal fees were \$2.96. We now have \$268.62 in the Bank, \$542.66 in our PayPal account for a total of \$811.28

## 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 (except on 1st Wednesday of 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

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)

At the January 9<sup>th</sup> BARS VE exam session, no one came to be tested.

The VE's at the session were W1GFF, Gary (Team Leader); N1ALO, Peter Norden; KB1KDS, Antonio Ramos and K1ED, Rob Wood.

We did have one person who called at 6pm and said although he had intended to come he did not feel he was ready. We spent a few minutes going over a few questions from [hamtestonline.com](#) - he was not ready. He will try next month.

Next session is scheduled for Thursday Feb. 13, 2020.

Gary Frascarelli, W1GFF

## 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

3/4: Bruce Blain, K1BG, on his role as ARRL EMA Affiliated Club Coordinator

4/1: Ken Caruso, WO1N, on BARS Field Day 2020 Planning

5/5: David Kruh, WB2HTO, on repairing vintage tube radios

## Subscribe to the BARS Mailing List

To subscribe to the BARS email list, send a blank email to [bars-subscribe@w1hh.org](mailto: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](mailto:bars@w1hh.org)

## BARS Leadership Team

President: Andy Wallace, KA1GTT

Vice President: Kayla Creamer, W2IRY

Treasurer: Bruce Anderson, W1LUS

Secretary: Scott Ginsburg, K1OA

Net Coordinator: Chris Lobdell, KC1IUK

Newsletter Editor: Marla Wallace, WA1GSF

BoD: Mike Raisbeck, K1TWF

BoD: Henry Christle, WA1VAB

Ex Officio: Tom Walsh, K1TW