



BARS Billerica Amateur Radio Society

NEWS FOR AND BY BARS MEMBERS

APRIL 2025

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'd like to talk about goals that you can set for yourself on your ham radio journey. When I first started out, I thought it was a big deal that I could hit the Billerica, MA repeater with my Beofeng HT. I would go into my kitchen, open the window and put my cookie sheet out on our porch roof, set the mag mount dual band antenna on it and run 14 feet of coax back into the island and presto! I was on the air as a ham radio operator, fresh from passing my Technician Class test at the Chelmsford Bible Church.

My big accomplishment with that set up was getting the timing down so that I could make my first check-in on the W1HH Net of the Billerica Amateur Radio Society on a Wednesday night! I was determined to be a “regular” on the Net with the hopes of someday being a Net Control Station. Little did I know that I would become the Net Manager of this great net. It has led to many great conversations with many great operators over the years.

Next, it was time to expand my horizons. I began studying for my General Class license, starting my studies with the objective of getting my feet wet in the world of HF communications. My first Elmer, Peter, N1ALO, of Dracut, would tell me how Europe would come bombing in every night on 40 meters!

I would say to myself, how could this be? The only thing standing between Peter's 100-watt radio and the nations across the pond was a tuned length of 12-gauge wire! I went to the Church again and took and passed my General test. I was now, in my mind, a “real ham radio operator”, with the ability to make contacts around the globe.

My first HF station was a Yaesu FT891 and an OCF 40-meter dipole that I hung off the stairs of our deck, about 20 feet off the ground at the highest point. I spent many happy hours with that set up. My first HF contact was in Maryland, and I thought I had made a contact as far away as the moon! I was in seventh heaven at this point with my oh so modest station.

I then purchased a Yaesu FTDX 3000 to improve my range, and OM2VL, Laszlo, in Slovakia, was my first “Across the Pond” contact. It totally amazed me that my station could make a contact 4085 miles away as the crow flies. My fascination with radio waves had continued.

Next, it was time to set up my new station across the room from my corner station. I then set up a desk with the help of my Elmer down the street. He provided the guidance and patience to get my station to look like and perform like a real radio station that I could be proud of. He showed me the ropes of setting up my station the right way! Then he told me to stop messing around and get my Extra Class ticket. This would enable me to work the “real” DX of the ham bands in the Extra portions of the band.

Then, I got addicted to the FT8 digital mode and I now have worked 180 countries around the world. I had never dreamed that I would be able to work many little-known countries and DX entities around the world.

In closing, your goals and objectives can stop at any point in the above-mentioned evolution. Pick out your own niche in this great hobby. Some hams are perfectly happy being a Technician while others are never satisfied with their journey, always wanting more out of the hobby. The most important part is that

you have fun and that you get on the air – which is our club motto!

Until next time,

73,
Doug
N1WRN

Next BARS meeting: April 2 at 7:00 PM - “The DXpedition Doctor”

Speaker: Arnold Shatz, N6HC

I am pleased to announce that our Guest Speaker for the April 2, 2025 Club meeting will be Arnold Shatz, N6HC, and he will give a presentation entitled "The DXpedition Doctor" which will cover the behind the scenes work that Arnold did for the members of multiple DXpeditions around the world. This involved making sure that each member of the team remained healthy and to ensure that all of their needs were met during the DXpedition in order to ensure it's success. Here is Arnold's bio:

I was first licensed as KN3ANU at the age of 13 in Philadelphia, Pennsylvania and quickly upgraded to a General Class ticket. I received an Official Relay Station (ORS) appointment from the ARRL and enjoyed handling CW traffic and participating in CD contests. Amateur radio was put on hold while I attended Temple University and earned a B.S. in Biology and a M.D. degree. Post medical school training followed at the University of California, San Francisco and service in the United States Public Health Service (Department of the Navy-Lieutenant Commander), Indian Health Service on the Navajo and Hopi reservations.

I moved to Southern California in 1976 and started a solo private urology practice. In 1977 I upgraded to Extra Class as N6HC. I retired from full time urology practice in 2001 and continued to work as a part-time locum tenens physician until 2011 and volunteered at the Orange Free clinic until 2015. I am a Fellow of the American College of Surgeons and a long time member of the California and Orange County Medical Associations, a diplomate of the American Board of Urology and a member of the American Urological Association, Western Section of the AUA and the California Urological Association. I was a member of the clinical faculty of Loma Linda University School of Medicine. I am an active member of CERT (Community Emergency Response Team) both in my immediate community of Tustin, California and Costa Mesa, California.

I have been an ARRL member for more than 60 years and I am a member of the league's Legacy Circle and Maxim Society. I serve as a Volunteer Examiner and a Field QSL card checker for both ARRL and CQ awards. I am a

member of the Southern California DX club (Vice-President-2009), Northern California DX Foundation, Southern California Contest Club and Orange County Amateur Radio Club. I am also a member of the Chiltern DX Association (UK) and the Medical Amateur Radio Council, Ltd. (MARCO). I was elected to membership in the A-1 operators club and I have earned many operating awards including WAS (6 bands, SSB, CW, RTTY), DXCC #1 Honor Roll, DXCC (9 bands, SSB, CW, RTTY), WAZ (CW & SSB), WAC, WPX (SSB & CW), and VUCC. I am an active contester and have earned numerous awards for participation in both domestic and DX competitions. I have operated from many places around the continental United States as well as Hawaii, Alaska, Mexico, Samoa and Prince Edward Island. I was named the DXer of the Year (2012) and awarded the first Meritorious Service award (2018) by the Southern California DX Club.

I have been a team member of fourteen major DXpeditions: K7C-Kure atoll (2005), 3B7C- St. Brandon Island (2007), TX5C- Clipperton Island (2008), K4M-Midway Island (2009), T31A- Kanton atoll, Central Kiribati (2011), T32C- Christmas Island, Eastern Kiribati (2011), NH8S-Swains Island (2012), T33A-Banaba (2013), FT5ZM-Amsterdam Island (2014), TX3X-Chesterfield Island (2015), the ill-fated 3Y0Z-Bouvet Island (2018), KH1/KH7Z- Baker Island (2018), VP6D-Ducie Island (2018) and VP6R-Pitcairn Island (2019) DXpeditions.



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@w1lh.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 there on Wednesday, 4/2, at 1900.

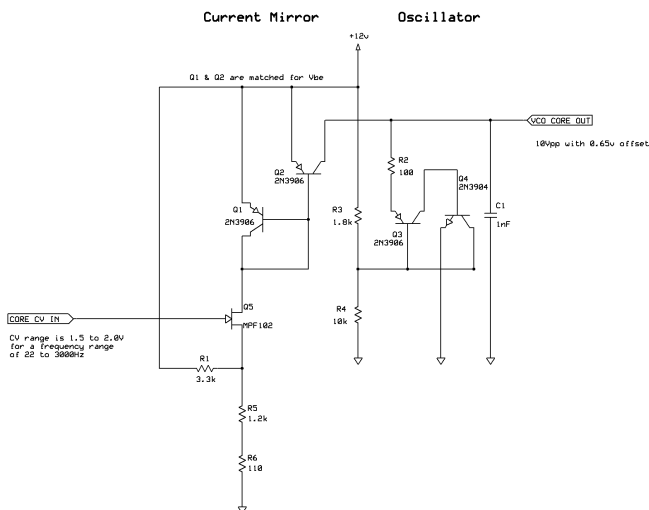
Doug, N1WRN
President, Billerica Amateur Radio Society

From the Editor’s Desk

By Marla Wallace, WA1GSF

My beacon project is on hold at the moment. The final amplifier stage I had designed turns out to be very sensitive to SWR – it will go into oscillation at the drop of a hat, according to the SPICE model. A variation on the design was stable but only produced about 3db of gain. The struggle continues...

And then I got distracted by this circuit:



This is to be the heart of a voltage controlled oscillator for an old-school analog music synthesizer. The whole VCO has a bunch of op-amps both before and after this sawtooth generator, so that the input and output are scaled to the requirements. The circuit generates a nice-looking sawtooth wave of 10v amplitude whose frequency is proportional to the input voltage (which ranges from 0 to 10v). There is also some circuitry which turns the sawtooth into a square wave and into a pulse wave whose duty cycle is proportional to another control voltage.

Musically, the VCO covers a frequency range corresponding to below the lowest note on a piano (C at 27.5Hz) to the highest F (at approximately 2800Hz). The amplitude of the sawtooth doesn’t change with frequency, which was an important consideration.

This circuit has a practical limitation: the oscillator frequency is quite dependent on the power supply voltage. I suspect that I

should replace the voltage divider R1, R6 and R6 with a three-terminal 5v regulator and a different voltage divider to generate the 2.42v the source of Q1 requires. (There are other similar voltage dividers in the op-amp circuits surrounding the “VCO Core” – these need to be derived from a regulated source, too.

Anyway, I’m learning how to use SPICE and amusing myself.

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.

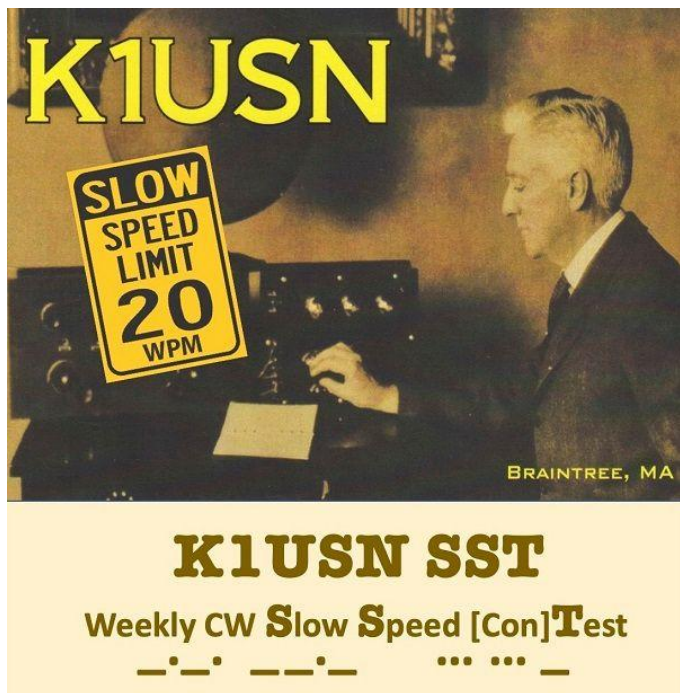
Currently at least 82 BARS members are also ARRL members. If we all renewed through the club, we could potentially receive \$410 per year from the ARRL.

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

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

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

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

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

March 5th General Meeting Minutes

Doug called us to order at 7:03PM. We spent a few minutes introducing ourselves and then there were a few announcements:

- BARS will participate in Parks on the Air, probably on the weekend before Memorial Day.
- Dave, KC1TLF is now webmaster. W1HH.org being improved.
- Mark is looking for Field Day volunteers. We hope to hold it at the same QTH as on the previous few years.

The program began at 7:18. (I could hardly hear the speaker – his audio level was very low!) The program ended at 8:10.

There were 16 participants on zoom and several at the Church. We adjourned at 8:11.

March BARS Board of Directors Meeting

There was no Board of Directors meeting in March.

BARS Membership

Our current combined membership is 157. There are thirteen members that haven't renewed for 2025.

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

from Bruce Anderson, WILUS, Treasurer

2025 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 March 2025

Dues for 2025 are now due. Dues for 2025 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,
- or with cash or check by mailing \$15 to Billerica ARS, 16 Regis Road, Tewksbury, MA 01876

In March we had eight new/renewals, for \$120 income. Our expenses were Zoom \$16.99, PayPal \$5.95. We now have \$661.71 in the bank and \$1911.12 in our PayPal account for a total of \$2572.83.

Bruce Anderson
WILUS

BARS Does breakfast every Saturday.

On Saturday mornings at 8:15AM, we meet for a casual, social breakfast at Stelio's restaurant in Billerica.

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

Photo Feature: From the Mailbag

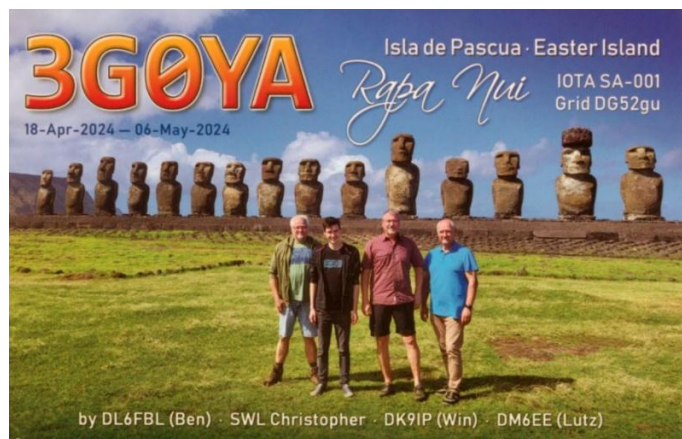
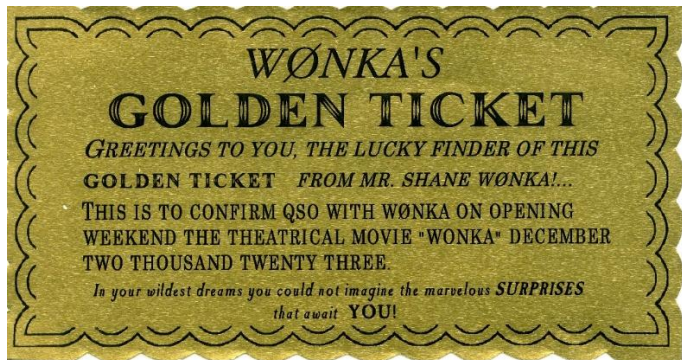
Sending QSL cards can get expensive. Domestic US mail rates are \$0.56 for a postcard (standard format of QSL cards), \$0.73 for First Class (if you put your cards in envelopes), and a whopping \$1.65 for international destinations. Add to that the cost of the self-addressed, stamped envelope (SASE) that many hams request for a return card and it could easily cost over three

dollars to send a single card! (DXpeditions will often request a donation well beyond the cost of postage to receive a direct QSL card)

What's a frugal ham to do? There are a few options:

- Electronic QSL cards, or eQSL. Typically delivered via email and may, or may not, include an image of a proper QSL card. I'll cover these in a future column.
- Domestic QSL managers for DX stations & DXpeditions. These are individuals in the US that are handling QSL requests for foreign stations and DXpeditions. They send and receive cards on behalf of those stations via the US mail therefore bypassing the expense and delay of international mail. QSL managers are usually specified on the QRZ.com page for the DX station.
- Outbound QSL bureau. This is basically a mail-forwarding service for QSL cards. The basic principle is that you send all your DX cards to a single location. They sort them by destination country and then forward them in bulk, along with cards from other hams, to the Inbound QSL bureau for that country. Typically, the bureaus are run by the national amateur radio society in each country. For the US, it is the ARRL (you must be a member of ARRL to use the outbound bureau). There is a small fee associated with the service, \$2.00 for 10 cards, \$3.00 for 20 or \$0.75 per ounce above that. There are a few downsides: not every country has an inbound bureau to receive the bulk cards, and there is a delay in delivering the cards. The ARRL bureau sends out cards quarterly. There is also a delay once the cards reach the destination country that can be quite long – I've received cards via the bureau for contacts I made 18 months ago. The return cards from the DX stations usually follow the same path, but in reverse. As you can imagine, the
- round-trip time can be many months, or even years long. Cards coming from DX countries are handled by the Incoming QSL bureau. In the US these are run by volunteers and there is no cost other than postage to deliver the cards to you. You do not need to be an ARRL member to receive cards in this way. There is a separate group for each of the call areas. The cards are sorted by callsign and then delivered by US mail. Incoming cards to the US 1 call area are handled by members of the Yankee Clipper Contest Club (YCCC). If they receive cards for you they will reach out to you to arrange delivery. The vast majority of the cards I have received were handled in this way.

And now for this month's cards...



What interesting/meaningful cards have you received? Send a scan of them to k1dc.radio@gmail.com (who instigated this new column), or directly to me (see the masthead for my email address), and we'll share them with the group. Extra credit if they have a story to go with them!

April Get-on-the-Air Suggestions from Marla Wallace (for the moment)

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 suggestions for this month:

| <u>Date (UTC)</u> | <u>Event</u> |
|-------------------|--------------|
|-------------------|--------------|

[I didn't see any significant event in the WA7BNM database for the month of April. But I don't get on the air hardly at all, so I'm really not the right person to be doing this column. Would someone volunteer to do the G.O.T.A column please? – ed.]

**** 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=current&week=current>

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 about 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 7:00 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 March 2025

We had three people show up for the March 13 VE exam session. Results were two new Technicians, Deirdre KC1WLE, and Michael KC1WLO, and one Extra upgrade. Be sure to say hello if you hear any of them on the air.

Our next exam session will be on April 10 at 7:00 PM at the Chelmsford Bible Church. Thanks to Gary W1GFF, Shawn N1CVO, Peter N1ALO, and Bill W1ZL for their help conducting 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 HamStudy.org.

--de Bruce Anderson, W1LUS

Future Meetings

The next BARS General Meeting will be held at the Chelmsford Bible Church on May 7th at 7:00 PM. A Zoom link will be sent in the club email feed prior to the meeting for those who would prefer not to attend in person.

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 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