

BARS Billerica Amateur Radio Society

NEWS FOR AND BY BARS MEMBERS

OCTOBER 2023

On the recommendation of the Board, and subject to a vote of the membership at the October meeting, BARS meetings will become "hybrid" – the meeting will be held at the Chelmsford Bible Church and available simultaneously on Zoom.

We intended to resume in-person club meetings with the November meeting, with the plan to continue to also allow members to attend virtually using Zoom.

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

--BARS Management.

A Message from the President

By Doug Bruce, N1WRN

Greetings Fellow Members,

I hope everyone is doing well as we head into the Fall-Winter DX season. The airwaves on HF are really heating up these days, so hopefully everyone has made the necessary repairs and improvements to their outdoor antenna systems. This is a good time to get outside and make sure all of the connections and feedlines are in good shape to withstand another New England winter. From what I see in The Old Farmer's Almanac, this winter could be exceptionally snowy here in New England.

As we head into October, I want to remind everyone about NearFest, the biggest and best ham radio get together in the Northeast held semi-annually in Deerfield New Hampshire. The next edition is October 13 and 14, which is just around the corner.

I first started attending NearFest with my Elmer a couple of years ago, and it now has a permanent place on my calendar every year.

There is something for everyone at NearFest, from the best pancakes in the US, to great flea market tables, and most importantly, renewing and making new acquaintances in the ham radio community.

Many times, these friendships last a lifetime and make the hobby worthwhile. My favorite memories in my short ham journey thus far are the talks with fellow hams who share the same interests and pursuits that I do in the hobby. Everyone at NearFest has a story, and the more you make the effort to talk and strike up conversations, the more you will learn about the hobby.

On a different note, the Club will be resuming in person meetings for our meeting on Wednesday November 1, 2023. We will be making this meeting a hybrid meeting, with Zoom also available at the Church for those who cannot attend. I am looking forward to seeing everyone in person and renewing acquaintances in person. We will be holding a vote at the October Club meeting on October 4 regarding approval of in person meetings, as is required by the Club Constitution.

Also, as we approach Club Elections in November, I would like everyone in the Club to consider service in an elected capacity as an officer or e member of the Board of Directors. The time needed is minimal, and any time you can give will keep our Club relevant and vibrant going forward. We have a great membership now and we can keep it that way in the future. Please email me at douglas.bruce1@comcast.net if you want to nominate yourself or someone else to be on the ballot for our November elections.

Finally, I want to encourage everyone in the Club to get on the air! We are a G.O.T.A. Club, so get out there on the air and have some fun and experience what our great hobby has to offer. As we head to DX season and an increase in sunspot activity occurs, now is a great time to get on and make some great contacts to pad your DXCC and WAS stats!

Until next month,

73, Doug N1WRN

Next BARS Meeting: October 4 at 7:00 PM - Program: "ARRL Outreach"

Presenter: Sierra G Harrop, W5DX

I am pleased to announce that our Guest Speaker for the October Club meeting on October 4, 2023, will be Sierra G Harrop, the Public Relations and Outreach Manager for the ARRL.

"Needless to say, I love my job! I get to come to work each morning and work to advance this hobby that has been a part of my entire life. I lead the teams that produce the weekly ARRL Letter, a member benefit e-newsletter that covers news of the week in amateur radio. I also curate ARRL News, the news feed that is aggregated out on thousands of sites across the ham radio space. Also in my department is ARRL's social media team. You can engage with your National Association on Facebook, Threads, Instagram, Twitter, LinkedIn and (coming soon) TikTok. It is a tremendous honor to get to serve amateur radio full time!

"I was first licensed as KD5IUT in 1999 at the age of 15. I changed call signs to WX5USA in 2006, when I was employed as a storm chaser for a TV station in Oklahoma. I upgraded to General in 2013 and Extra in 2020. In July of 2020, I filed for my dad's old call sign, W5DX. If there's one call I liked more than my vanity, it was his

"Both my parents were hams. My dad, Paul, was W5DX from 1996 until he passed in 2019 and had been WB5NDN before that. My mom, Carolyn, was KB5IDV until she passed away in 2008. My younger brother, Seth, is KK4MYZ. I grew up with a tower next to my swing set, and a ham shack down the hall from my bedroom. I've never known a world without amateur radio being a significant part of my life.

"I spent a 20 year career as a TV storyteller, and now I work full time to grow amateur radio! I started January 16, 2023 as the Public Relations and Outreach Manager for ARRL. It is a tremendous honor for me to be a part of this organization. I have lofty goals for my work for our league. I want to increase public understanding and appreciation of ham radio to levels never before seen. You can help me by telling your friends about the hobby, the importance of the Amateur Radio Service and by being a member of ARRL, if you're not already. We need to convert the hundreds of thousands of amateur license holders into hams. Let's share our passion for this amazing avocation and grow it together!"



BARS 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.

We are looking forward to "seeing" many of you on Wednesday 10/4 here at 1900.

Doug, N1WRN

From the Editor's Desk

By Marla Wallace, WA1GSF

Well, we've gotten through summer. The Autumnal equinox arrived along with the rain from the 15th named Atlantic tropical cyclone. The weather has been in the news since spring. I hope everyone's station has survived high winds and lightning. Now would be a good time to ensure that you're ready for ice and snow.

For the first time in many years, I must worry about such things. I have an antenna up in the air in the back yard. With the onset of winter, I might finally start to pump some RF into it. Andy, KA1GTT and John, KC1FTJ and I are trying to arrange a mutually agreeable time and frequency to start keeping a schedule on one of the HF bands. Maybe doing that regularly will help me overcome my mic shyness. I'm also going to try to make the BARS net on Wednesday nights more often.

It's been years – decades, actually – since I was an active ham and I find that the hobby has changed almost beyond recognition for me. I've got a lot of catching up to do.

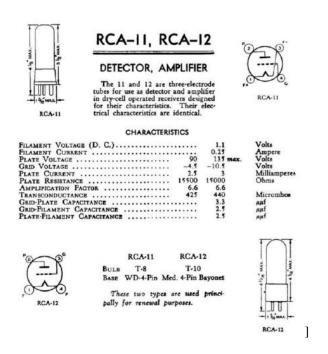
Feature Article: Phoenix Radio, Part 2

By Andy Wallace, KA1GTT

In last month's BARS Newsletter, I said I found an early-1920s RCA Radiola III-A receiver hulk for cheap. My intent is to disassemble the radio, then put it back together and get it working. But the zinger here is I want to modify it so it covers the 80m ham band rather than the AM broadcast band! A "phoenix radio" returning from the ashes.

The main issue with the Radiola III and III-A is that they take some of the rarest and most fragile early radio tubes: the WD11 triode. This is the curse of many radio collectors. Later 20s sets used the

much more common 01-A tube (and variants 201A, 301A etc) which were produced into the 1930s. A working WD11 in ebay pricing tends toward the \$75-100 range and the III-A takes four of them! Two for the detector and first audio amplifier stage, and two for the push-pull amplifier stage to drive a speaker. The set was designed for the WD11 tubes which used a 1.1V filament.



Several articles have been written about substitutes for the WD11. People have adapted other large tubes like the 864 and 1A5 eight pin "octal" into the radio sockets. You can buy the adapters brand new, made in the People's Republic of China, right on ebay. However an 8" tube and adapter hanging out of the set is ugly.

Part of the problem is not only is the WD-11 a rare tube but they used a base with a pin structure that was immediately abandoned. It has three small pins, and one large (for the plate connection).



This prevents plugging in something common like the (\$25 or cheaper) 01-A. However when WD11s went obsolete in the 20s companies did make adapters available and I am lucky enough to have a couple. The bottom pins have the 3+1 pattern of the WD11, and the top has a socket for the 2+2 01-A.

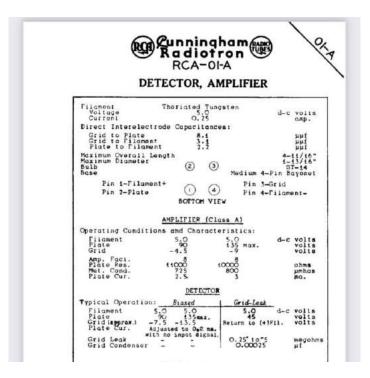




From the WD11 datasheet, the best substitute would be another tube with a 1.1 or thereabouts filament. The set was designed for this: there is a control called a rheostat which adjusts the filament voltage that is supplied to the tubes. Unlike a potentiometer, a rheostat is wound with nichrome wire and can take more current. The wet or dry cell that powered the Radiola III-A supplied a higher voltage to the tubes than 1.1V. You turned the rheostat to power on the radio and adjusted the level so that the tube lit and performed well. Some power was dropped through the rheostat and as the battery aged, you compensated by turning up the control.

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But look at the datasheet of the 01-A tube.

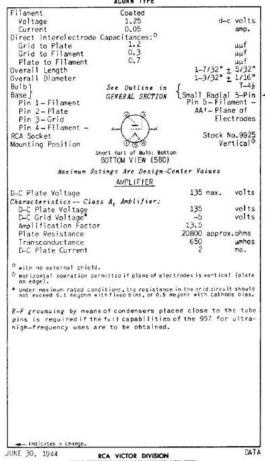


That tube requires 5V on the filaments, not 1.1. When RCA advised people to adapt 01-As to their Radiolas, they also had them change the rheostat or put an additional one in circuit to control the higher voltage tube correctly. So adapting a 1-volt 1A5 or 1Q5 portable radio tube to the Radiola in 2023 would be simpler. But what's the fun in that?

Among tubes in my hoard are some interesting tubes developed just before and during WWII. They are tiny, the size of an acorn. In fact, they are called acorn tubes! I have some diode (2-), triode (3-), and pentode (5-element) ones. The WD11 is a triode, with the filament doing double duty as the cathode as well. This is called a directly-heated cathode. Enter the type 957 acorn tube.



DETECTOR, AMPLIFIER, OSCILLATOR



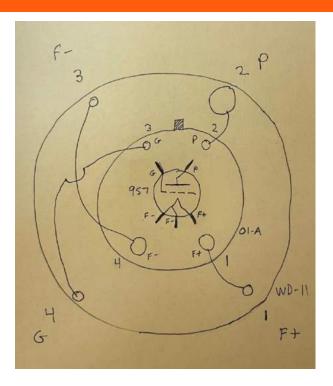


This looked to me like a fine candidate for the Phoenix Radio. The 957 has a 1.2V filament and is a directly heated triode. All right, how can I test it in the radio before committing? Well it turns out I also have a nice, working Radiola III. This is the model with only the detector and single audio stage – it only uses two tubes. So I could test the 957 in this, and only make two adapters.



That's a real WD11, twenty years older than its little brother. Quite a difference in size! Also note that the pins come out radially. Acorns with more elements have more pins in the pattern and sometimes additional ones out the top or bottom axis. They were designed for VHF and UHF work which is why they are small. They did make sockets for them – they are ceramic rings with clips which grab the pins as the acorn tube is pressed down. Expensive, not easy to find, and I didn't want to use them!

So people make adapters by using blown WD11s and sacrificing the tube for the base. Because I already had two 1920s adapters, all I had to do is make an adapter to go from the 957 acorn tube with its pins out the side and the 01A base with pins underneath. For such experiments I laid in a small supply of 01-A style bases (again made overseas and common on eBay!). When I compared all three datasheets, I found that the 957 and the 01-A base was a marriage made in heaven. The pins lined up perfectly and connections could be straight up. I then checked the 01-A to WD11 adapter from the 20s and found out how the connections transpose through the adapter. The diagram below shows the 957 overlaid on the 01-A and WD11 connections.



To make the adapter, I grabbed some scrap wire and four alligator clips. Wiring it up, here's what it looks like.



Using alligator clips also allows me to swap out different tubes if I decide to try another kind. Here's the acorn in the adapter. So to use this in the Radiola for testing, you simply assemble the pieces.





And finally, here's what the adaptation looks like in my working Radiola III!



Guess what? The 957s work great! The detector, running off 22V plate voltage, performs well. The audio amplifier, working with 45V or 67V, is loud enough to drive a speaker. So it appears my idea of making acorn tubes work as a substitute is viable. Voltages and currents may need to be fine tuned, but Part 3 of the Phoenix Radio will appear soon. Likely, that article will show the teardown and cleaning of the components to prepare for reassembly.

I hope members are enjoying this story. If you've used 1920s radios – let me know!

Strays

Support for Baystate Marathon Needed

This year's Baystate Marathon and Half-Marathon race is scheduled for Sunday October 15, 2023. [Terry says that as of 9/23 they needed four more volunteers to help handle communications for the event. – ed]

Amateur Radio operators have been asked once again to support the Baystate Marathon and Half Marathon. This year the event is on Sunday, October 15th. Our operational time period is from approximately 0700 until event completion (estimated 1400). Our assistance has been requested by the Lowell Office of Emergency Management and Lowell Fire Department. The communications team will be employing Amateur Radio to provide this communications asset.

Amateur Radio will be used for running the Accountability Net. The purpose of this net is to coordinate with a race public information booth the status of runners who are unable to complete the race for any issue to anyone is seeking this information.

Race info may be found at http://baystatemarathon.com. Course map is found at https://www.baystatemarathon.com/course-map-description.

Please contact me if you can assist or would like more information.

Please share with others that may be interested. This is a pretty laid-back event and suitable for first time public event participation.

Terry-KA8SCP, ka8scp@wb1gof.org

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 potentiality 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

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

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 (4-5pm EDT) and Mondays 00:00-01:00 UTC (8-9pm EDT Sunday).



-- de Tom Walsh, K1TW

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

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 in using Zoom to Elmer someone.

--de Bruce Anderson, W1LUS

Secretary's Reports

from Marla Wallace, WA1GSF, Secretary

BARS General Meeting – September 6

Doug called us to order at 7:00. There was no club business and the program began at 7:10. It wrapped up at 8:50 and we adjourned at 9:00. There were 18 attendees.

BARS Board of Directors Meeting for September

The board of directors met on September 26th.

Doug called us to order at 7:00. Attending were Doug, N1WRN; Mark, KA1INE; Marla, WA1GSF; Bruce, W1LUS; Bill, WZ1L and Gary, W1GFF.

There were three items of club business discussed:

- Don, W1DM, has resigned from Board. We determined that this was not an issue, as Gart, acting ex officio would fill the slot for October, as specified in the club constitution, and since elections would be held at the November meeting, the vacancy would only be for a month, anyway.
- Resuming in-person plus zoom ("hybrid") meetings in November, subject to approval of the membership at the October meeting.
- The club will be sponsoring projects kit building and/or constructing antennas. It was suggested that a dipole antenna kit be made available with a discount for anyone who passed their general exam at our VE session. Details to be worked out.

We adjourned at 7:40.

BARS Membership

Our current combined membership is 130. 23 members from 2022 have not yet renewed their membership.

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

Anyone with a question about their renewal status can email me at <u>W1LUS@hotmail.com</u> to get your current status.

from Bruce Anderson, W1LUS, Treasurer

2024 BARS Member Dues

A \$15 annual BARS membership now runs from January 1^{st} and expires on December 31^{st} . Any renewal or new membership made after September 1 will be valid until December 31^{st} 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 October 2023

We are now accepting renewals for 2024. For 2024, dues 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 September we had \$60 income from four new/renewals, \$5 from one ARRL membership renewal and a \$60 donation from N1WRN. Our expenses were Zoom \$16.99, PayPal \$5.83 and a treasurer's record book \$15.93. We now have \$1104.76 in the Bank and \$482.11 in our PayPal account for a total of \$1586.87.

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 being held via Zoom until further notice. A link will be sent via the BARS email reflector to all currently paid up members.

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 wllus@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 September

We had four people show up for the September VE exam session. One person upgraded to General, one new General and two new Technicians.

Our next exam session will be at the Chelmsford Bible Church on October 12 at 7:00 PM. You may now pre-register for BARS VE exams at https://HamStudy.org.

Thanks to Gary W1GFF, Peter N1ALO and Bill W1ZL for their help in running the session.

--de Bruce Anderson, W1LUS

Club 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 meet in-person weekly at 8:15AM for a casual, social breakfast at Stelio's restaurant.

Stelio's Family Restaurant, Billerica, MA

Future Meetings

The 10/4 meeting will be held "virtually" via Zoom. The 11/1 meeting will include the election of officers for 2024.

Subscribe to the BARS Mailing List

To subscribe to the BARS email list, send a blank email to <u>bars-subscribe@w1hh.org</u> 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

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.

Here are the popular suggestions for this month:

Date	Event
Oct 7-8	Oceania DX Contest, Phone
	https://www.oceaniadxcontest.com
Oct 7-8	California QSO Party
	https://www.cqp.org/Rules.html
Oct 14-15	Oceania DX Contest, CW
	https://www.oceaniadxcontest.com
Oct 28-29	CQ Worldwide DX Contest, SSB **
	https://www.cgww.com/rules.htm

** 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

BARS Leadership Team

OFFICERS:

President: Doug Bruce, N1WRN Vice President: Mark Nelson, KA1INE Treasurer: Bruce Anderson, W1LUS Secretary: Marla Wallace, WA1GSF BoD: Don Melanson, W1DM

BoD: Bill Poulin, WZ1L

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