BARS Billerica Amateur Radio Society

NEWS FOR AND BY BARS MEMBERS

JULY 2020

From the President's Desk

from the President of BARS, Andy Wallace, KA1GTT

Years back, operating on the 50-54 MHz six meter band required some pretty specialized equipment. Someone pretty entrenched with HF below 30 MHz had to go hunting for receivers that covered that high, and a transmitter might have meant home brewing something from scratch. Manufacturers eventually came out with add-on units called transverters. These were devices which converted the transmit frequency from one HF band up to the 6m frequency, and also converted the receive frequency back down to HF. Clunky.

(Speaking of which, in the 1990s my dad (W1HH) somehow acquired a Collins KWM-2 transceiver along with the 62S-1 transverter. The transverter was very rare and must have been a real standout to a Collins collector. I don't know the full back-story of where he got the station or whether he was selling it for someone else but he did eventually sell all of it. I found a QSL from the guy he sold the 62S-1 to and on a whim (20 years later) I emailed him and the guy said he later resold it too.)

Eventually companies like Heath, Drake and Swan came out with single-band 6m rigs, moving from archaic amplitude modulation (AM) mode to single-sideband (SSB). During the days when we actually had sunspots simple low-powered rigs could work 6m across the country and beyond. But it seemed to take a very long time before modern, solid-state rigs included 6m as an included band. Perhaps some reader could fill me in on what transceiver you had that included 6. My foray into 6 did not start until I bought my IC-7300 a year ago and even though my antenna is a 40m doublet that I cannot rotate I have been having a ball when 6 is active. By the way, there are locals who do 6M AM on 50.400 still – with vintage and even modern rigs – and the 7300 will do 6m AM just fine, 25W carrier.

Your President tries hard not to rant but if you will indulge me I will stand on a small soapbox. You have heard me say repeatedly that people should just get ON the air. I am really happy to hear about anyone enjoying ham radio in some fashion and we are so lucky to have a hobby that can be enjoyed with so many modes, so much neat, high-performing gear, and so much spectrum available to us. Perhaps my journey into the modern age with the IC-7300 took me, somewhat kicking and screaming, away from the old-school more "manual" type of rig to an SDR-in-a-box and opened my eyes to how things like a spectrum scope and waterfall can make ham radio so much easier and FUN. But one thing I have not done yet is hook a computer to that Icom. It is in the works. Not in time for Field Day but that's another story.

But my minor rant today is that those of you who have fallen head over heels with the digital mode of FT8, especially on 6m, are perhaps letting your comrades down in ONLY operating that mode on that band. Yes, FT8 can work when the propagation is tough sledding for other modes. But if FT8 is active to Europe perhaps consider making some contacts afterward using steam powered modes like CW and SSB.

I subscribe to email alerts at DXMaps for sporadic-E openings on six. I don't always run to the rig afterwards but I did have some excitement working Mexico for the first time – on 6m CW. And recently I heard VO1FOG on the tip of Newfoundland on 50.140 with 1.2kW. He was loud for me but the propagation (and my doublet) was such that I could barely hear the New England stations calling him. And sadly, he didn't hear my 100W either.

But if you had been operating FT8 and later switched to a mode that I can do, could we have made contact?

So that is my minor gripe watching the enjoyment of FT8 spreading around the clubs. I am inside, practicing my violin lesson, while all my friends are outside playing baseball! 😊 Flip the mode to CW or SSB (or AM) and call CQ a few times before you shut down the rig. CW seems to congregate 10 or 20 kHz below 50.100, and SSB seems to be between 50.1-50.2.

Here is a database of 6m beacons, which can be worth listening for to see if the band is open:

https://www.keele.ac.uk/depts/por/50.htm

And here is the Reverse Beacon Network reception of these:
http://www.reversebeacon.net/dxsd1/dxsd1.php?f=13

Here's where to sign up for DXMaps alerts:
https://www.dxmaps.com/spots/warnings.php

Hope to work you on FT8 eventually, but let's keep 6 alive in ALL the modes!

Andy, KA1GTT
President, BARS

PS: Bonus points if you recognized the 6m antenna on the button. It's a HiPar 6m Saturn - made in Massachusetts back in the day!

Next BARS Zoom meeting: Wednesday June 3 at 7:00 PM

"Stories from the Shop Part 2 – Repairing Antique Broadcast-band Receivers".
by David Kruh WB2HTO.

I'm very happy to announce that our next virtual speaker will be David Kruh, WB2HTO, with his talk entitled Stories from the Shop, Part Two. David enjoys repairing antique radios – ones using vacuum tubes – and has learned a lot about how they function and also about why they were designed and produced the way they were. I have enjoyed David's blog posts immensely and he does a great job connecting the dots between the cutting-edge electrical engineering work of today and the heritage that came before.

Working on antique radios takes a special kind of detective skill. Often the circuits are simple. Five-tube radios were common. But in producing consumer electronics, manufacturers had to cut costs which can leave today's hobbyist scratching his or her head as to why performance or safety could be at risk. Dave has a great slide deck prepared with illustrations of what he has encountered and will explain the logic behind the original design and the way to get these antique sets playing safely again. Remember, there is real radio theory inside a broadcast-band radio. He will field questions after each section of his presentation as well.

This should be a fascinating talk! He was only able to get through two subjects last speaking engagement, so this time he will finish up with "Philco and the State of the Art" and "A Bad Reputation – the Story of the 6X5 Rectifier".

I 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 next Wednesday.

Andy, KA1GTT
President, Billerica Amateur Radio Society

A Message From the Editor

from Marla Wallace, WA1GSF

I spend a lot of time on the web, looking up random stuff. For example, this morning I was wondering what the average temperature of the surface of the moon was (about -25 degrees F).

Occasionally, I look up ham-related information. So I've decided to share interesting tidbits from the web that I think BARS members might want to explore. These will go into our "Strays" column. Look for "Found on the Web". I don't promise to have stuff every month, but there are two links in this edition.

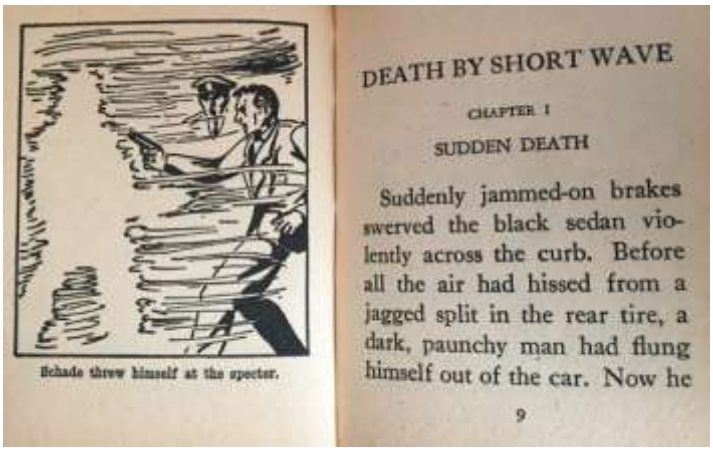
Book Review: Death by Shortwave

By Andy Wallace, KA1GTT

I found a little book on ebay recently. It is DEATH BY SHORT WAVE (A G-Man Story) by Dick Adair and published in 1938. About 400 pages long it seems to predate our modern paperback size. It's 4.5x3.5x1.5" thick. These were apparently part of the genre called Big Little Books.

http://www.biglittlebooks.com/learning.html

I have seen these at flea markets and antique stores but of course I zeroed in on this one based on the title. It is written in a style to appear to the young adult, full of hard-boiled detective terms and there are line illustrations throughout. This shot:


Schade threw himself at the specter.

DEATH BY SHORT WAVE

CHAPTER I

SUDDEN DEATH

Suddenly jammed-on brakes swerved the black sedan violently across the curb. Before all the air had hissed from a jagged split in the rear tire, a dark, paunchy man had flung himself out of the car. Now he

9

pretty much sums up both the quality and aim of the writing. One of the first characters mentioned is a secretary who seems to not have any speaking role and her main talent is to swoon with fright.

The story involves a G Man (slang for a U.S. Government agent, especially FBI) hunting down a bunch of crooks who have invented a way to make people and things invisible – using Short Wave! Men, guns, and whole travel trailers can disappear with this power. The protagonist, Dave Schade, eventually foils their plans by using a "palpable" powder which, when thrown in the air, makes the invisible men reappear so Dave can mow them down with his gat – see?

Now I had high hopes of the illustrations or at least the text telling me what kind of short wave equipment the criminals used, or how it was adjusted, or better yet a full schematic to be shown! Alas, not so. The closest thing to anything technical the author talks about is that the waves they use are "diathermal."

https://en.wikipedia.org/wiki/Diathermy

Note especially this entry:

"Short wave diathermy operations use the ISM band frequencies of 13.56, 27.12, and 40.68 megahertz. Most commercial machines operate at a frequency of 27.12 MHz, a wavelength of approximately 11 meters."

I had heard of hams converting 13.5 MHz diathermy equipment into 20m transmitters back in the day. Oh well, Death By Short Wave did nothing to educate me about radio technology, but that plus a beer made for an enjoyable read on the porch. This cute little book will sit on my radio bookshelf and I am sure visitors will think that it is really swell when they feast their peepers on such a thing.

Feature Article: Ham Radio Teaches Self Reliance

By Henry Christle, Sr., WA1VAB

[True story, told in first person.] One cold night (12F, Feb 28, 2015, 21:20 Z), a fun family evening, our son and family are preparing to leave for the night, we are saying farewells, and son speaks "I smell burning plastic…"

At first I only smell old pizza, but my son insists, and I get a faint whiff, and bolt up to the stairs to the spare bedroom which has been converted into the WA1VAB ham shack

The smell is strong now, there's smoke, and flame. Swiftly I disconnect the burning item, toss it in the bathtub, douse the flame with water… Then, from downstairs, I heard, "Henry, we smell it down here, too." We rush to the living room. There's the same smell, a similar burning item. Amazing coincidence? Hardly!

My son and I ran around collecting 7 more of these half melted, smoking electronics. You know what the devices are by now. The name is another misuse of the English language: "Surge Protector". They don't protect, they destroy, and make some folks plenty of bucks.

The photo below shows the innards of one of the failed units. Note where the smoke was let out:

Do they look like surge protectors to you? I had 8 fail in 10 minutes. Glad I was home!

With the immediate danger averted, I got my trusty volt meter and found that all circuits were a steady 117 VAC, no power fuses blown. I powered up the major appliances and checked again. No apparent immediate threat.

Local governments have moved Police, Fire and Light and Water under the town dispatcher umbrella. On a cold Saturday night, the dispatcher becomes a god and repeated the familiar chant, "…the homeowner needs to call his electrician in the morning…" The emergency was past, with high confidence we all went to bed.

At 9 AM Monday I visited the Light Department GM, and showed him my 8 burned "protectors". At 10 AM two Light trucks arrived and found the neutral "ground" at the pole was floating variably and replaced the 65-year-old line from the pole to house. All houses were on my street were built in '64, and I learned a dozen neighbors' utility wires were replaced after their freezer motors failed etc. The Light Department paid me for the damaged property. When I showed the Fire Chief the bag of burned vinyl I was not surprised when he said all three house fires in my town were caused by these devices last year.

At the hardware store I wanted to replace these surge protectors with straight terminal strips; they had pallets of surge protectors, but not a single straight terminal strip.

People who use current/voltage AC regulators know you must not daisy chain them, the marketing will say you might over load them, but now I think it's because they will self destruct with self-oscillation surges. In my case the surges were huge, and overloaded the surge protectors, but was not reflected in the measured 117 VAC line.

Sfowler.com
http://www.sfowler.com/investigations/Surge%20Protectors.htm
investigates protectors fires.

My advice is to immediately remove surge protectors, the manufactures claims are nothing but clever language to deny safety issues and blame users for over loading or misuse. I hope I've convinced you to search the internet for "surge protector house fires".

I should be ashamed of myself for using a cheapo "come on device" to eliminate surges.

[At the heart of a surge protector is a component called a MOV (Metallic Oxide Varistor), a solid-state device whose resistance varies inversely with the voltage across it. As the voltage applied to it increases, the MOV's resistance decreases. To a high voltage, a MOV looks essentially like a short circuit. When wired across the AC line, it protects against transient overvoltage. The key word is transient – it is supposed to protect against a spike lasting a few milliseconds, such as what would be induced on the power line from a nearby lightning strike. However, a **continuous** overvoltage will exceed the MOV's ability to dissipate power, resulting in Henry's little adventure. – ed.]

Feature Article: The Handiest Dang Thing

By Andy Wallace, KA1GTT

Have any of you found a product which surprised you by how useful it is in the ham shack?

Many years ago, I was looking for a way to take radio notes without using paper and pen/pencil. On Amazon, I stumbled across the Boogie Board. This is an LCD tablet which uses a stylus to write on its surface. The one I chose is the WT12093

model – which seems to be no longer produced. Advertised as 8.5" diagonal, the display is 5" x 7" and the screen is black with the writing showing in a sort of turquoise green.

I use this thing ALL THE TIME in the shack! I take notes about who's order is next in nets, log contacts for transfer later, doodle, write down details for a QSO, subjects to rag-chew next round etc. – you get the idea.

The clever thing about this LCD tablet is that it is instantly ERASABLE by pressing the button at the top. The included stylus is best for drawing but in a pinch you can use your finger or another writing instrument (though I would not recommend that). It's not fine like a pencil or pen, more like a felt tip marker. But in a bright room it has plenty of contrast. There's even a slide switch to erase-protect what you've wrote and storage space for the stylus.

The model I chose was also rated highly because the coin cell battery accessed by a door in the back was replaceable. If you search Amazon for "lcd writing tablet" you will find many models which have batteries which are soldered in. True, the erasures and writing take very little power but if I was looking for a replacement I would consider one with removable battery first.

As this model is no longer made you might check out these newer models by BoogieBoard:

https://www.amazon.com/dp/B010HWCEAO/ref=emc_b_5_i
Boogie Board Blue Jot 8.5 - $22

And

https://www.amazon.com/dp/B07D7WLDMV/ref=emc_b_5_i
Boogie Board Blackboard Letter 8.5 x 11 $37

The latter supposedly lets you spot-erase sections like a pencil eraser.

And it should be obvious that there are knock-offs which do about the same thing for similar or lower prices. To me, this device has really been convenient to have at the ready near my rig. I can make loads of temporary notes without worrying if a pen has enough ink to last the QSO or digging around for scrap paper.

Strays

Found on the Web

Here are a few interesting things I came across while surfing the interwebs since our last issue:

For BARS members who are antique radio enthusiasts, this site: http://www.atwaterkentradio.com
has a ton of information about one of the earliest and most popular of the early manufacturers of broadcast band radio receivers, Atwater Kent. Some really nice pictures!

Wikipedia has a very nice article on the history of ham radio. A must read for anybody who wants to know how our hobby came into being. See:
http://en.m.wikipedia.org/wiki/History_of_amateur_radio

Back before vacuum tubes, shortwave transmitters mostly used spark. But that technology was unsuited for voice communication (could not be modulated) and because of the pulse-train-like nature of the RF, the signal was very broad-band. So a few clever engineers searched for a better way and came up with a high frequency alternator. One such was the Alexanderson alternator. See the story of this fascinating piece of technology (and be sure to chase the links to other designs, too) on Wikipedia.

[As an aside: Do you know where the term "wiki" comes from? It's a Hawaiian word meaning "quick" – a 'wikipedia' is a 'quick and dirty encyclopedia'.]

de Marla Wallace, WA1GSF

The BARS regular Saturday morning breakfast has been suspended due to the COVD19 emergency, so we are now trying a Saturday morning ZOOM gathering. Details are announced in the BARS mailing list.

de Bruce Anderson, W1LUS

Secretary's Reports

from Scott Ginsburg, K1OA, Secretary

The BARS General Meeting, June 3. 2020, was virtual.

President Andy Wallace, KA1GTT called the Zoom virtual meeting to order at 7:25 PM after a Zoom technical issue was resolved.

David Kruh, WB2HTO gave a talk entitled "Stories from the Shop" on some of the interesting things he's encountered while restoring antique radios.

After the talk, KA1GTT invited each meeting participant to say a few words.

There were 32 attendees.

KA1GTT closed the meeting at 8:45 PM.

BARS Board of Directors Meeting, June 12, 2020

Board Members present were: KA1GTT, W2IRY, W1LUS, WA1VAB, K1TWF, K1TW, K1OA.

1. The Board discussed the success and wide participation of the Zoom meetings so far and the possibilities for how to continue using Zoom for the long term.
2. A couple of educational ideas were discussed, one for holding CW classes on 2m and another for holding Zoom based tech nights covering various technical and operating topics of interest to club members.

BARS Membership

Bruce, W1LUS, our BARS Treasurer reports that as of May, 2020 we had 110 total members. The following 53 members were paid up as of that time.

First Name	Last Name	CALL	ARRL
Bruce	Anderson	W1LUS	Y
Jwahar	Bammi	K1JBD	Y
Erin	Bournival	K1ENB	Y
Douglas	Bruce	KC1MJK	Y
Mark	Callahan	KC1KBC	
Ken	Caruso	WO1N	Y
Erving	Chamberlin	N1ECC	Y
Henry	Christle	WA1VAB	Y
Kayla	Creamer	W2IRY	Y
Michael	Creech	KD1VY	Y
Josph	Curran	W1MGB	Y
Guy	DeMartinis	AC1BJ	Y
Jim	Evans	N1HTS	Y
Kevin	Fallon	KB1KTR	Y
John	Fisher	KC1FTJ	Y
Al	Franca	KC1LLW	Y
Gary	Frascarelli	W1GFF	Y
Robert	Galante	WA1PWZ	Y
Scott	Ginsburg	K1OA	Y
Dale	Goad	KB1BEE	Y
Paul	Graveline	K1YUB	Y
Tom	Gray	K1THG	
Niece	Haynes	KA1ULN	Y
Sidney	Johnston	AB1NZ	Y
Chris	Lobdell	KC1IUK	Y
Doug	MacAloney	KC1IOK	Y
Brenton	MacAloney	KC1KOV	N
Leandra	MacLennan	AF1R	Y
Benjamin	Martin	W1BPM	Y
Donald	Melanson	W1DM	Y
Matthew	Murphy	KC1KHN	
Peter	Norden	N1ALO	Y
Kenneth	Olson	W7LSG	Y
James	Osborn	KB1SEQ	Y
Paul	Pellegrini	K1VK	Y
Charlie	Pestia	W1CEP	
Bruce	Pigott	KC1US	
Art Pizer	Pizer	NF1A	Y
Don	Price	KB5VP	Y
Mike	Raisbeck	K1TWF	Y
Bob	Ravenstein	W1FDR	Y
Kyle	Rogers	KC1IHN	Y
Steven	Schultz	AC1EX	Y
Paul	Simpson	N1CLN	Y
Peter	Skrypczac	W1SEF	
Robert	Sparkes	KC1KVY	Y
Mark	Sullivan	KC1FYU	Y
Daniel	Trainor	WA1QZX	Y
Jonathan	Turner	AC1EV	Y
Andy	Wallace	KA1GTT	Y
Marla	Wallace	WA1GSF	Y
Tom	Walsh	K1TW	Y
Christopher	Wood	KC1GHR	Y

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 31st. 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 for July, 2020

from Bruce Anderson, W1LUS, Treasurer

Reminder 2020 Dues were due starting January first.

So far 57 members have renewed for 2020.

Bars now has a Zoom license at $15.93 per month.

Through mid June we had one renewal for $15 income. PayPal expenses were $.74 We now have $423.72 in the Bank and $497.10 in our PayPal account for a total of $920.82

Our current membership is 105.

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

Note: because we will be holding our virtual General Meeting, there will not be a net on July 1st.

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

NOTE: Physical Club meetings are replaced by video Zoom meetings until the COVID19 Emergency has passed.

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

NOTE: VE sessions are suspended until the COVID19 Emergency has passed.

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)

Club Breakfast every Saturday

NOTE: The Club Breakfast is suspended until the COVID19 Emergency has passed.

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

NOTE: Club meetings are suspended until the COVID19 Emergency has passed. The 7/1 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 July 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
July 1	**RAC Canada Day Contest**** https://wp.rac.ca/rac-canada-day-contest-rules-2020/
July 1-7	**13 Colonies Special Event**** http://www.13colonies.us/
July 11-12	**IARU HF World Championship**** http://www.arrl.org/iaru-hf-world-championship
July 18-19	North American QSO Party, RTTY http://www.ncjweb.com/NAQP-Rules.pdf
July 18-19	**CQ Worldwide VHF Contest**** https://www.cqww-vhf.com/
July 25-26	**RSGB IOTA Contest**** https://www.rsgbcc.org/hf/rules/2020/riota.shtml
July 26	**ARS Flight of the Bumblebees**** http://www.arsqrp.blogspot.com/ and also http://arsqrp.blogspot.com/2017/07/announcing-ars-2017-fobb.html
August 1-2	10-10 Int. Summer Contest, SSB https://www.ten-ten.org/index.php/activity/2013-07-22-20-26-48/qso-party-rules
August 1-2	**North American QSO Party, CW**** http://www.ncjweb.com/NAQP-Rules.pdf

**** 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: 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