



BARS Billerica Amateur Radio Society

NEWS FOR AND BY BARS MEMBERS

OCTOBER 2025

The October BARS general meeting will be in-person at the Chelmsford Bible Church and on Zoom (hybrid).

A Message from the President By Doug Bruce, N1WRN

Greetings, Fellow Members,

I hope everyone is enjoying this great Fall weather. This is a good time to get outside and check your antennas before the snow and ice of winter settles in and makes a mess of your antenna system. At my house, I use an endless loop of half-inch rope as a dumbwaiter and attach my antennas to it with 12-gauge stranded copper wire, so if there is damage I can just lower the antenna down, make the repairs and hoist the antenna back up into the tree in the dead of winter if need be. At the top of my 70-foot oak tree, I have about 15 feet of Romex wire wrapped around a 6-inch diameter upper trunk section of the tree. I attached a 6-inch carabiner to the Romex and fed the rope down through the carabiner to create the endless loop. At the bottom of the tree, I attached a boat rope cleat to tie off the endless loop so it will be secured to the tree when the antenna is raised to the top of the tree. I have had great luck so far with this set up.

About six months ago, the bare solid copper wire let go that attached the center insulator to the rope, and part of my antenna came down. I then lowered the antenna and used 12-gauge stranded wire to attach the center insulator of the antenna to the endless loop and so far I have had no other issues to deal with.

On another note, I want to remind everyone that Nearfest is right around the corner. The event will be held in New Boston New Hampshire on October 3 and 4 at the 4H Grounds in New

Boston NH. Here is the link to the website with further information: [Home - NEAR-Fest.com](http://Home-NEAR-Fest.com).

They have done a great job at the new site and it is easier to see everything at the new site than it was at Deerfield. The only thing missing is the Church Ladies and the best pancakes in the free world! Hope to see everyone there! You never know what you will find that you absolutely have to have for your ham shack. I enjoy meeting the hams as they walk around the grounds. You can learn a lot about ham radio during these conversations, so Nearfest is definitely worth the price of admission.

Recently, my Elmer and I built our own open wire line using coax cable. We used the RG8 coax and taped equal lengths of coax together. Next, we stripped back the shield and connected copper lugs on each end of the center conductors. Then we attached these lugs to my antenna outside with one lug connected to the antenna and the other cable attached to the ground and counterpoise. Inside the shack, we attached the two lugs to the 1:1 balun which is attached to the antenna tuner on the other side of the wall of my shack. This setup eliminates all noise as there is no shield to attract any common mode noise. This open wire line setup is very low loss, so all of your signal gets to the antenna to be radiated out.

Another tip I would like to offer our members is the faraday shielding tape that is to be used in the shack for RFI mitigation. The tape is about \$15.00 for the two inch roll 60 feet in length and is available on Amazon.com. I had an s5-s6 noise level in my shack, and after we taped about 10 feet of the feed line before the tuner, the noise level is now s0! I can hear so much more now, as the tape reduces the noise but not the signal. Give the tape a try on the cables in your shack. You won't be disappointed! The more cable you wrap in the shack, the lower your noise level will go!

Lastly, I want to remind everyone that we have Club Elections coming up at the November Club Meeting, so if you want to

self-nominate, or nominate someone for an elected position, be thinking about that from now until the election night.

Until Next Month,

73 and good DX,
Doug
N1WRN

Next BARS meeting: October 1 at 7:00 PM - "Nano VNA for Rookies"

Speaker: Barry Feierman, K3EUI

I am pleased to announce that our Guest Speaker for the October Club meeting will be Barry Feierman, K3EUI, and he will be giving a talk entitled "Nano VNA for Rookies" and its applications to ham radio. Barry has given numerous talks on this great device, so I am sure that you won't want to miss this presentation. Here is Barry's bio:

He was first licensed in 1958 (when he was 13 years old) as KN3EUI while living near Philadelphia. His first rig (in 1958) was a Gonset II "Communicator" 2m AM which put out 10 watts and had three xtals. DX for him was working NJ on 2m AM from West Philly.

He upgraded to Extra Class and loved CW at 25 wpm back when he was a teenager. He nearly killed himself once by touching some HV wires inside a Heathkit DX 100 HF transmitter, with which he worked DX on 15 meters AM back when solar cycle was TERRIFIC. For "prom night" in high school, he worked DX (with his date) on 20 m AM from a hilltop in Gladwyne PA at 2 am ... the police stopped by, wondering what we were doing!!

Now, fifty years later, he is active in ARES/RACES in Chester County, PA and in regional radio clubs. He was the former Station Manager at W3EOC in the Chester County Gov't bldg. He has been interested in sound card digital modes since the 1990's. He is one of the three net control ops and net manager for the PA NBEMS PEMA net on 3583.0 kHz Sunday at 7:30 am. The net has grown to over 60 check-ins.

He began the MidAtlantic NBEMS net in 2023 which meets every Sunday at 10 AM (Eastern) on 7068 kHz with the mode THOR22. The net participants practice EMCOMM traffic over the region within a few hundred miles of Philly.

He also enjoys giving PowerPoint talks to clubs around the country via Zoom. Topics that interest him

include antennas, antenna tuners, propagation, basic electronics, SDR's, Nano VNA, and sound cards.



We will announce the link to join the Zoom meeting before the meeting, but it will be posted to the BARS email list and should not be shared outside our Club. Are you on the email list? If not, please send an email to bars-subscribe@w1hh.org and then simply reply to the robot response from the server and you will be subscribed.

Observing our Zoom meeting requires only a web browser and headphones/speakers. You do not need a webcam or microphone unless you want to speak or be seen.

Before our meeting date, please go to <https://zoom.us/test> and see if it will function for you. If you have problems, we can try to assist – feel free to ask questions on the BARS email list.

I am looking forward to "seeing" many of you there on Wednesday, 10/1, at 1900.

Doug, N1WRN
President, Billerica Amateur Radio Society

A Fairwell Message

By Mark Nelson, KA1INE, Outgoing Vice President

It's been my extreme pleasure and honor to represent BARS over the last few years as the Vice President. I began my adventure into ham radio when I was 11 years old in middle school when I heard CW coming from the electronics lab. From that point on I couldn't get enough time listening in on the club Hallicrafter. In 1985 I passed the Novice test and became an official ham.

It's been a great ride over the years of packet radio, RTTY, 2M, HF, FT8 so I'm looking forward to spending more time on radio as I go into retirement soon. I'll be travelling between MA and Florida from now on so to be fair to the group I am

stepping down as Vice President. There are many talented members who would make a fine VP so I'm sure the role will be well represented. I've met a lot of good friends and enjoyed helping to make field day and monthly presentations happen. Thanks go out to all who have made our club successful and to Doug for all his support!

Thank you & 73!

Mark Nelson

KA1INE

Your Voice Matters: Supporting Amateur Radio Antenna Rights

By David Marcucci, KC1TLF, Interim Vice President

As amateur radio operators, we've all faced the frustration of antenna restrictions at some point. Whether it's an HOA covenant, a rental agreement, local ordinances, or practical limitations, these barriers prevent us from fully participating in our hobby and, more importantly, from serving our communities during emergencies. The ARRL is leading a crucial fight for our rights, and it benefits I to lend our support right now.

Did you know that since 1996, every American homeowner has had the legal right to install outdoor antennas for TV reception, satellite services, and internet access? Yet somehow, we licensed amateur radio operators – trained, tested, and federally licensed – are denied these same basic rights.

Even more frustrating: Americans can install flagpoles in their yards to display our flag, but in some cases, we can't use those same vertical structures as antennas for our radios. This inequity makes no sense and undermines our ability to fulfill our public service mission.

The ARRL has worked tirelessly with Congress to craft legislation that would finally give us equal rights. House Bill H.R. 1094 and Senate Bill S. 459 would extend the same antenna installation rights enjoyed by other Americans to amateur radio operators. These bills have bipartisan support, but they need momentum to move forward. This isn't about special privileges – it's about equal treatment under the law. We're asking for the same rights our neighbors already have, to put up non-permanent antennas on property we own or occupy.

The ARRL has made it incredibly easy for you to contact your representatives. Simply visit <https://send-a-letter.org/hoa/> and enter your call sign. Your personalized letters will be delivered directly to your Representative and both Senators urging them

to co-sponsor and support these important bills. Your individual voice matters. Your elected officials need to hear that this legislation is important to you and to amateur radio's continued ability to serve during emergencies and disasters.

As we push for these important rights, we must also acknowledge our neighbors' legitimate concerns about aesthetics, safety, and property values. The best way to support this legislation is to demonstrate that amateur radio operators are responsible stewards who install professional-looking, well-maintained antenna systems, follow all RF exposure guidelines and safety standards, work cooperatively with neighbors to address concerns, keep installations neat and minimize visual impact where possible, and maintain proper liability insurance. When we show that we're thoughtful neighbors who take safety and community harmony seriously, we strengthen the case that amateur radio operators deserve the same antenna rights as other homeowners.

Private land use restrictions are increasing across the country, threatening amateur radio's ability to serve during emergencies. The ARRL is fighting for reasonable accommodation that balances our operational needs with community standards. Take five minutes today to send your letters at <https://send-a-letter.org/hoa/>. You can read the full campaign details at: <https://www.arrl.org/current-legislation>.

This hobby has survived and thrived for over a century because amateur radio operators have always been willing to stand up for our rights and serve our communities. Let's continue that tradition by making our voices heard in Congress.

Written with editorial assistance from Claude AI.

From the Editor's Desk

By Marla Wallace, WA1GSF

I would like to devote this column to say thank you to all the club members who answered my request for help navigating the FCC license renewal process, which for me was also complicated by having to do a change of name as well. My license is up for renewal next February, so I have another month or so to wait until I can apply.

I was fortunate, in that I had saved my password to the old ULS system and could still read the FRN on my license. Both of these pieces of information were critical to establishing a CORES account and linking my current license record to it.

So a heartfelt *mahalo nui loa* to the following helpful hams: Bill Poulin, Steve Crook, Bruce Anderson, Juan Jimenez, Ken Caruso, and Andy Wallace.

Feature Article: IC-7300 Boot Camp Part 2

By Andy Wallace, KA1GTT

About five years later, I am still greatly enjoying my IC-7300. It has proven to be a reliable and very capable radio that I feel is one of the best bargains in ham radio today!

Early on, I recognized that the complexities of the settings and displays can be daunting for someone new to the game. In April, 2022, I wrote part 1 of my IC-7300 Boot Camp article. This will be part 2!

I encourage everyone to reread my original at:
[the April 2022 BARS Newsletter](#)

In this article I am going to highlight more useful features and options. Let's begin.

Checking and Updating Firmware

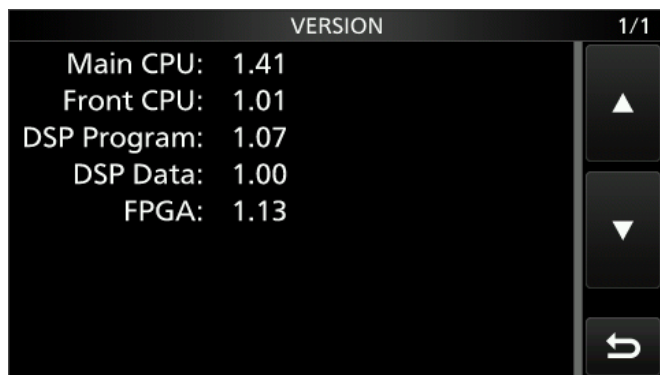
Because the 7300 is a modern software-defined radio, Icom has come out with firmware updates much like ones for our computers. These change menu settings and add features. They have not produced many of these but it is generally a good idea to have the latest in your radio.

Be sure to get these direct from Icom at:

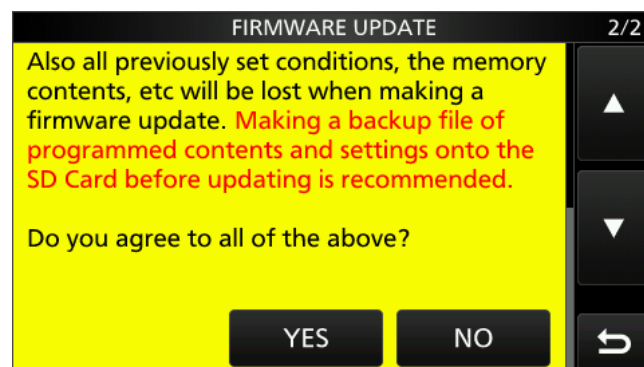
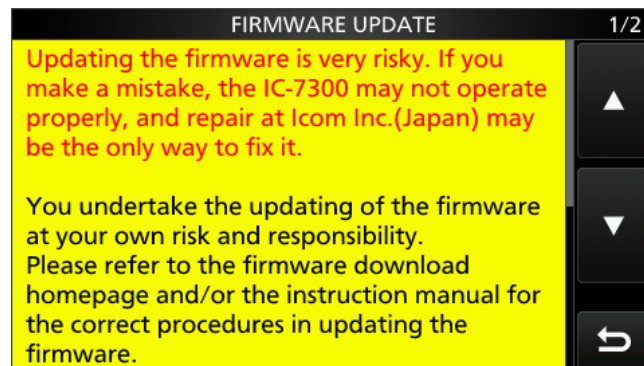
[IC-7300 | Firmware Download | Icom America.](#)

The file must be downloaded, unzipped, and placed in the root of the SD card you insert into the 7300.

To check your version: MENU > SET > OTHERS > INFORMATION. Here you can see the version installed in my 7300 is 1.41. The current at Icom is 1.42 and I'd like to update mine to that.



To update the firmware: MENU > SET > SD CARD > FIRMWARE UPDATE. This will bring up screens asking you to agree to the firmware update. Just like a PC update, you must be careful when doing this and make sure the 7300 is not powered off in the process!



When ready, touch YES. The file screen opens for you to select the firmware version. Select the 1.42 file on the SD card and touch and HOLD YES for one second. The update process will begin.

Depending on what version is already installed, you may see a feature where it will back up the existing firmware in case something goes wrong – this is a good idea.

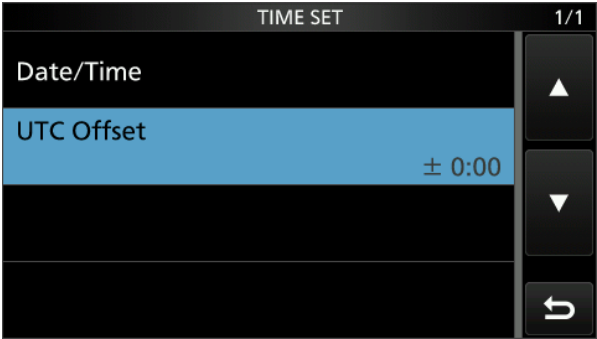
The firmware update may take a minute or two, and the 7300 will restart. That's it – enjoy the new features added! Be sure to download the newest copy of the 7300 manual from Icom. Usually the firmware URL has a "what's new" showing the instructions for the new features.

Setting the Date and Time

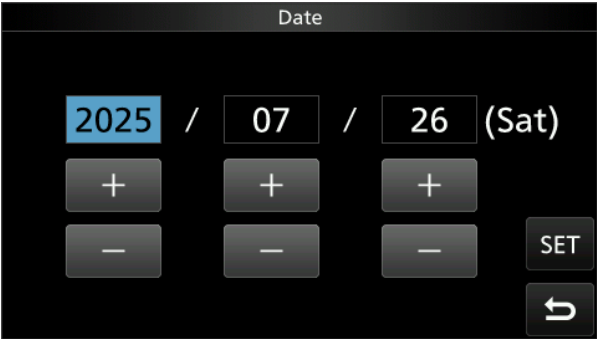
The 7300 has an unfortunate flaw in that the coin cell backup battery soldered inside the rig does not last. (I do not know if newest versions solved that and/or made it socketed and replaceable.) Setting the time is important especially if you like to take screen captures from the display. But it's also handy to see the time while using the rig.

To set: MENU > SET > TIME SET

It is important to set the time, date, and UTC offset for your time zone.



One feature I was surprised to find was that you can adjust values rapidly by using the main tuning knob!

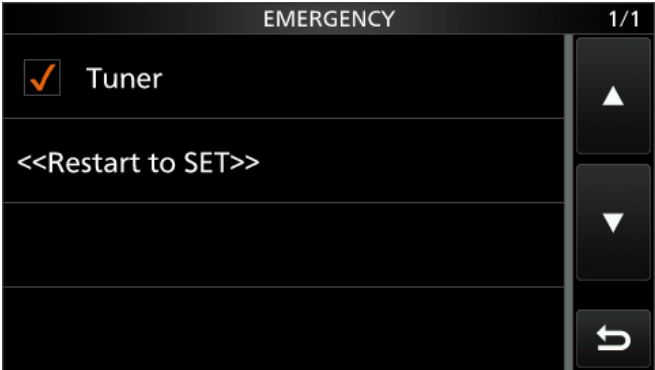


Emergency Antenna Tuning Mode

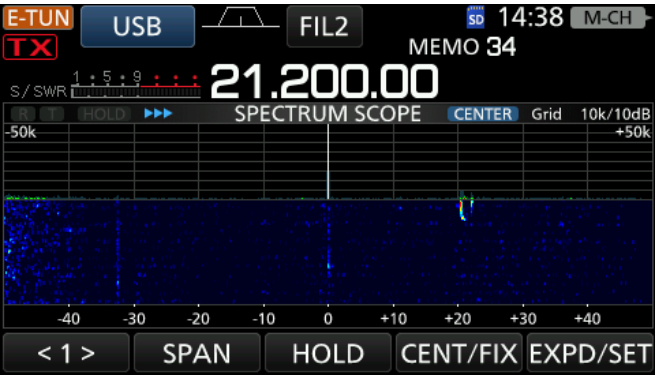
Few of us have antennas that work well on all bands. A compromised antenna can show a high S.W.R. on certain frequencies and modern rigs complain when that happens. The 7300 has an internal automatic antenna tuner which can handle mismatch of 3:1. In other words if the rig needs a 50-ohm antenna the tuner can adjust for something showing as low as 16 ohms or as high as 150 ohms.

Icom added the capability to handle a higher mismatch. They’ve called this Emergency Mode. Output power is reduced to 50W, and the tuner can try to adjust for poor antennas better. You need to access this setting and restart the radio.

Press MENU > SET > OTHERS > EMERGENCY > TUNER > OK.



After you restart the radio, the upper left display shows E-TUN to let you know the status.



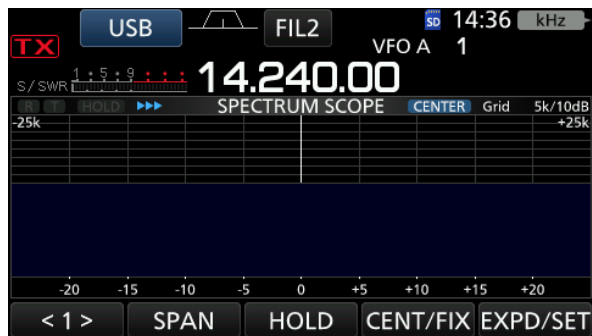
Display Type A and B

There is some customization available in the main display. If you read my first article, you know you can customize how to show the waterfall and bandscope. The A and B settings are not very exciting, but the option is there.

Press MENU > SET > DISPLAY > DISPLAY TYPE. A has a darker theme and B has a light blue theme. In the DISPLAY setting you can also change the frequency font from squared to round.

Here’s A.





And here's B.



Onboard Radioteletype Decode

Radioteletype is a mode going back many decades. Many hams still enjoy it. Originally it required a fair amount of hardware including a noisy, oily teletypewriter/printer. Now you can run RTTY with just a rig cabled to the computer. Unlike CW, most humans can't decode the dual tones used in RTTY. The 7300, however, includes a built in RTTY decoder!

One of the best ways to try this is to listen for the ARRL digital bulletins, sent twice a day weekdays (6PM and 9PM Eastern Daylight time). See the schedule at:

<https://www.arrl.org/digital-transmissions>

What you will listen for is the Baudot bulletin. Note that the order of transmissions changes by the day.

To begin, set the 7300 to RTTY mode. Cover your ears as this will change to a rather harsh filter. You then need to find the RTTY signal, which will be a pair of warbling tones.

To decode RTTY, press MENU > DECODE. Then you tune in the RTTY signal so the tones can be translated into letters and numbers.

The 7300 has a special twin-peak filter to assist with this. Push the MULTI knob, then select TPF. This opens a small waterfall display with highlights looking for the two tones. You'll know you have it tuned successfully when the screen fills with non-gibberish! RTTY alternates with warbling tones. The peak filter looks a little like the Golden Gate Bridge. You want to center the two tones in the peaks. If you tune your 7300 exactly to 3.599.09 MHz like I have done, it will probably work the first time for you.

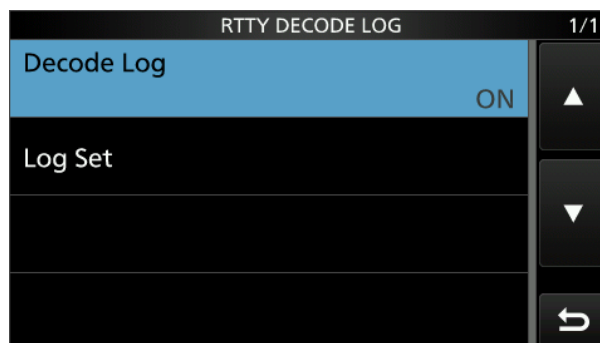


Above you can see the twin peak filter nicely centered.



Here I've successfully captured (with a few errors as I was fiddling) the DX bulletin! This was exciting for my first time doing this.

You can also save the decodes to a log file in .txt on the SD card. To set that up, press MENU > DECODE > 1 > LOG.



Select ON > EXIT. This begins the log capture. To end that, repeat the process and select OFF. You can view the log with MENU > DECODE > 1 > LOG VIEW. This is a .txt file that can be copied from the SD card to a PC, etc.

60m Operations (and 630m and 2200m Listening)

Many people are unaware that we have privileges in a new(er) 5 MHz band for CW and SSB/DATA. This band has propagation similar to 80m and 40m, as you’d expect. In 2025 it seems that a lot of radios don’t make it easy to operate 60m – it’s not as simple as pressing the band up and down buttons!

The IC-7300 can receive and transmit on 60M but you will want to add those channels into memories to make it easier. See the list of channels (5x CW and 5x SSB/DATA) in section 3-12 of the IC-7300 manual.

See section 9-3 for how to load memory channels. Here is what I have set up in my 7300. Note: hams may also use two bands located on longwave (frequencies below the 535-1700 kHz AM Broadcast Band). These are at 135 and 472 kHz. The IC-7300 can’t transmit there but it can receive. A while ago, I received WA1HUD’s CW transmissions on 472 kHz – he was retransmitting old Navy CW traffic.

MEMORY			3/26
9	5.373.000	CW	▲
★	60M CW 4		
10	5.405.000	CW	▼
★	60M CW 5		
11	0.135.700	CW	↺
★	2200 M		
12	0.472.000	CW	↻
★	630M		

Automatic Gain Control

Ever watch late night TV and notice the sound level of the movie is low but the commercials blast you out of bed? Early radios were like that. You had to adjust the volume control (if the radio even had one) to compensate between strong and weak stations.

Later sets incorporated automatic gain control which fed the audio level back into the previous stages to even out the volume. We’re so used to that we probably don’t even think about it anymore.

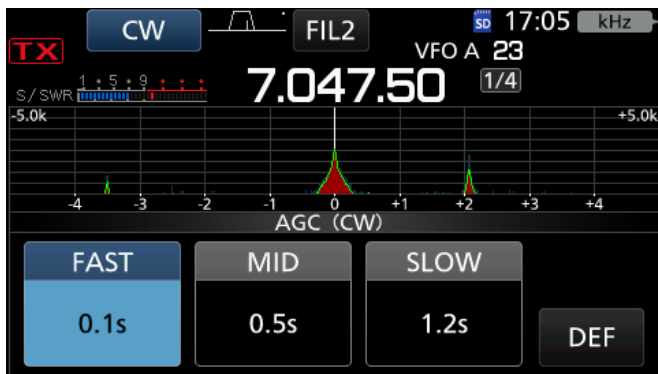
The IC-7300 has an AGC setting screen. In a nutshell, it changes how rapidly you can hear one station after another stops transmitting. If you are in a CW contest, you might want fast AVC so the receiver ramps right up to hear the next station. In a slow conversation, it’s pleasant to have a slow AGC so that you’re not jolted by noise between words or transmissions.

To adjust this, press FUNCTION > AGC > (FAST/MID/SLOW). You can adjust the time values by pressing FUNCTION then pressing and holding AGC for one second. Here are the screens.

MEMORY			1/26
1	5.330.500	USB	▲
★	60M SSB 1		
2	5.346.500	USB	▼
★	60M SSB 2		
3	5.357.000	USB	↺
★	60M SSB 3		
4	5.371.500	USB	↻
★	60M SSB 4		

MEMORY			2/26
5	5.403.500	USB	▲
★	60M SSB 5		
6	5.332.000	CW	▼
★	60M CW 1		
7	5.348.000	CW	↺
★	60M CW 2		
8	5.358.500	CW	↻
★	60M CW 3		

FUNCTION				
P.AMP/ ATT OFF	AGC MID	NOTCH OFF	NB OFF	NR OFF
IP+ OFF	BKIN OFF	COMP	1/4 ON	MONI
				↻



RF Gain

Similarly, you can adjust how sensitive the receiver is with the RF (radio frequency) gain control. Transceivers made since the 1970s are generally plenty sensitive. This extra gain not only makes stations easier to hear, but also band noise, static and lightning, and RFI.

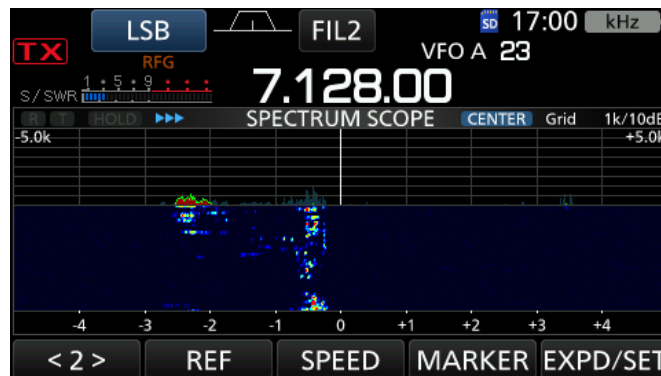
Bob Sherwood of Sherwood Engineering talks about this a lot. He recommends that you tune away from a station into an empty frequency. If you are hearing band noise, and it is moving your S meter, this is wasted gain that makes listening unpleasant. Turn your RF gain down slightly, so that the receiver sounds quieter. When stations are then tuned in, you can still hear them well but in between CW letters or SSB syllables there will be less noise.

The IC-7300 by default has a combination RF Gain and Squelch knob. At 12:00 (centered), the receiver is at maximum RF gain and minimum squelch. (Squelch is basically a hard stop between hearing a transmission and not – think of your old police scanner.) Turn the knob counterclockwise to adjust RFG and clockwise to adjust squelch.

I can't show you the action of this control in an article but here's a screenshot of the RF Gain being backed off from maximum at 12:00. The 7300 warns you that your rig is now less sensitive by flagging RFG in orange on the display top left (above the S meter).

Noise levels change from band to band so don't forget to readjust RFG when moving around.

Try adjusting the RFG when you are listening to some strong SSB stations having a conversation. It's just nicer!



Doctor Strangescope, Or How I Learned to Stop Worrying and Love the Fixed Band Scope Display

As you can see from most of my screen captures, I favor the CENTER mode for the bandscope display. (See my April 2022 article Part 1.) I decided to experiment with the FIXED scope and I have come to the conclusion that it DOES have its uses. See section 5-3 of the manual.

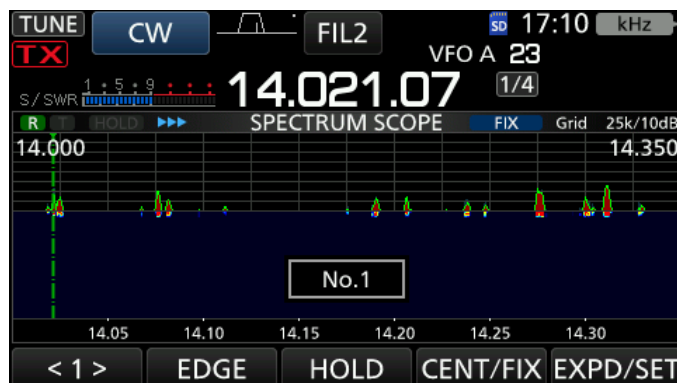
You can see the difference by pressing MENU > SCOPE > CENT/FIX. In the fixed mode, you can touch EDGE to toggle the amount of spectrum shown on the screen.

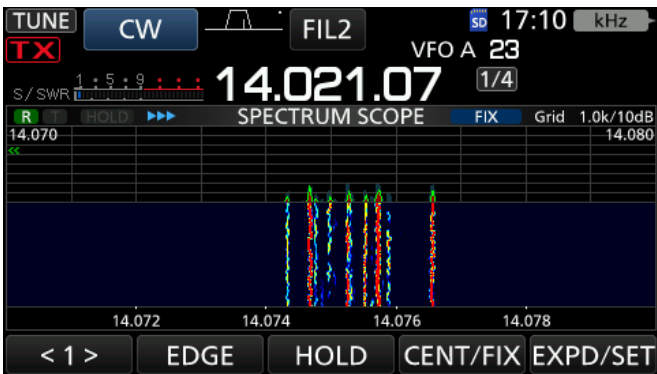
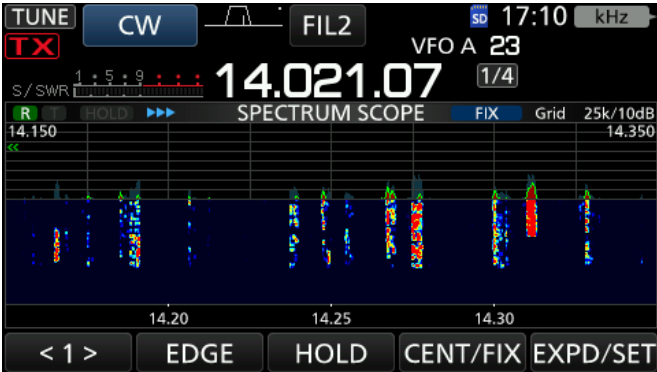
I see lots of radio pictures and videos where someone has fixed mode enabled and they're showing the whole band – hundreds of kHz. I don't think that's useful unless you are wondering if propagation is open and just want to see all of the band, looking for any signal to pop up.

Icom gives you four settings for the fixed bands for each ham band. Touching EDGE toggles setting 1, 2, 3, and 4.

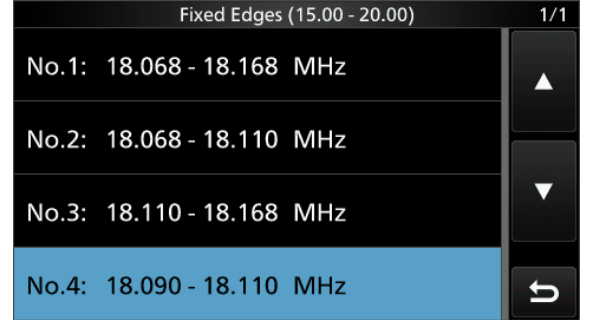
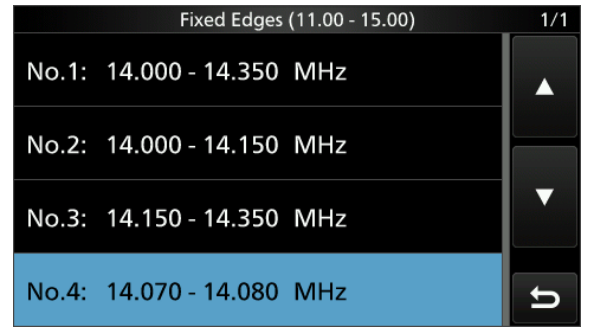
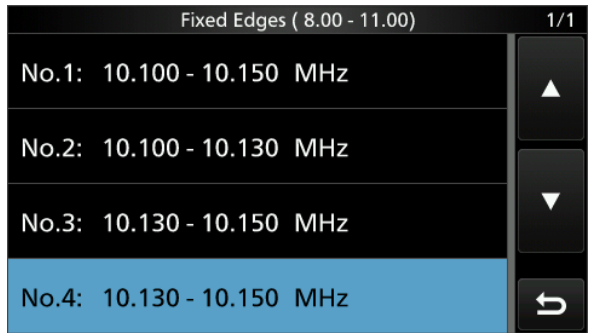
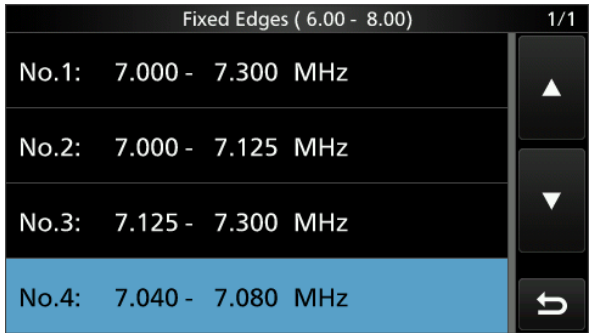
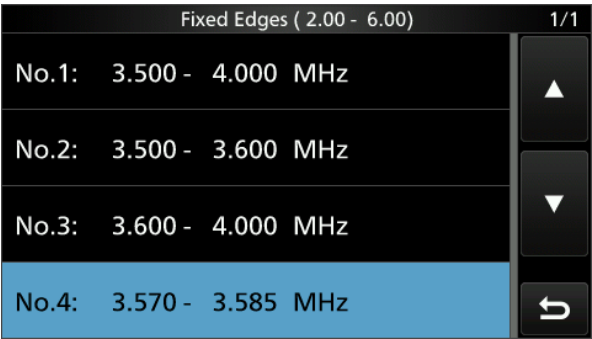
To adjust these, you need to press MENU > SCOPE > touch EXPD/SET for 1 second, then select FIXED EDGES. See section 5-7 of the manual.

I decided to set mine up so that 1 was the entire band, 2 was the CW portion, 3 was the SSB portion, and 4 (if I ever set up to operate it) the FT8 portion. Note there is a size limit for Fixed (I think it was 1 MHz), so you can't see all of 10m and 6m at once.





To save you the effort, here is how I set up all the ham bands from 160m to 6m.



Fixed Edges (20.00 - 22.00)		1/1
No.1: 21.000 - 21.450 MHz		▲
No.2: 21.000 - 21.200 MHz		
No.3: 21.200 - 21.450 MHz		▼
No.4: 21.070 - 21.085 MHz		↺

Fixed Edges (22.00 - 26.00)		1/1
No.1: 24.890 - 24.990 MHz		▲
No.2: 24.890 - 24.930 MHz		
No.3: 24.930 - 24.990 MHz		▼
No.4: 24.910 - 24.925 MHz		↺

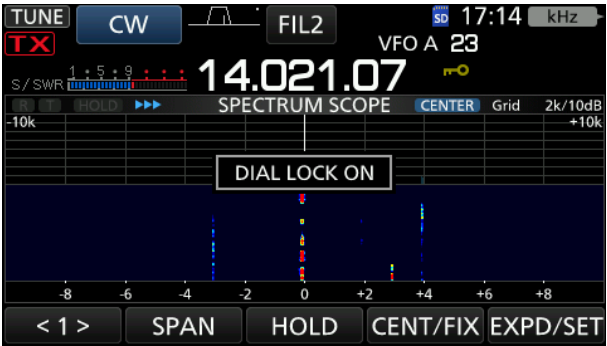
Fixed Edges (26.00 - 30.00)		1/1
No.1: 28.000 - 29.000 MHz		▲
No.2: 28.000 - 28.300 MHz		
No.3: 28.300 - 28.500 MHz		▼
No.4: 28.070 - 28.130 MHz		↺

Fixed Edges (45.00 - 60.00)		1/1
No.1: 50.000 - 51.000 MHz		▲
No.2: 50.000 - 50.100 MHz		
No.3: 50.100 - 50.200 MHz		▼
No.4: 50.290 - 50.320 MHz		↺

Dial Lock

This is a very simple function. Why would you want to lock the main tuning dial? Well let's say you're trying to get some rare DX or are calling out on Field Day or another contest. You reach for your phone to silence the 3rd funny cat video text from your mother that day, and you bump the knob! Albania is gone!

To lock the dial, press and hold SPEECH/(key icon) for one second. The display alerts you DIAL LOCK IS ON and then a key icon appears next to the frequency display.



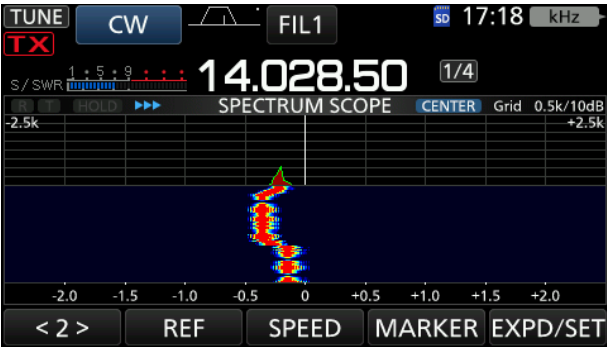
To cancel the dial lock function, press and hold SPEECH for one second again.

CW Auto-Tune

This 7300 feature sounds confusing because the rig has an automatic antenna tuner. However, it has nothing to do with that. CW autotune is an aid to correctly tuning in a station to match your transmit frequency. CW generally uses narrower filters and being off frequency means you can't hear them, and they can't hear you.

Your transmit frequency is based on the sidetone (the audio tone played when you are sending Morse code), which is adjustable. What autotune does is automatically center the sending station correctly in the passband.

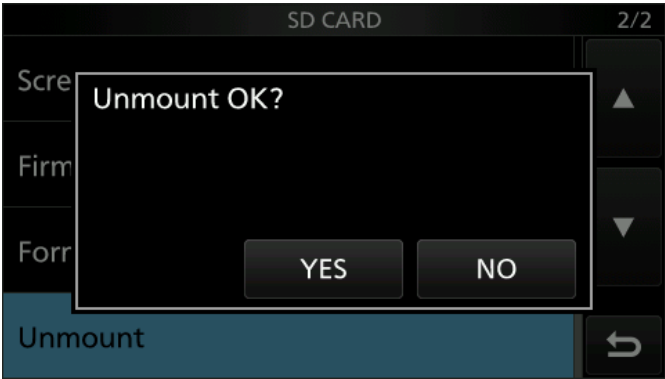
To use it, press the AUTO TUNE button (not the TUNER button!). It is hard to show the effect in my article but in these screen captures you can see that I am not correctly centered over the received signal and autotune takes over and moves my receive frequency to match.



SD Card Unmount

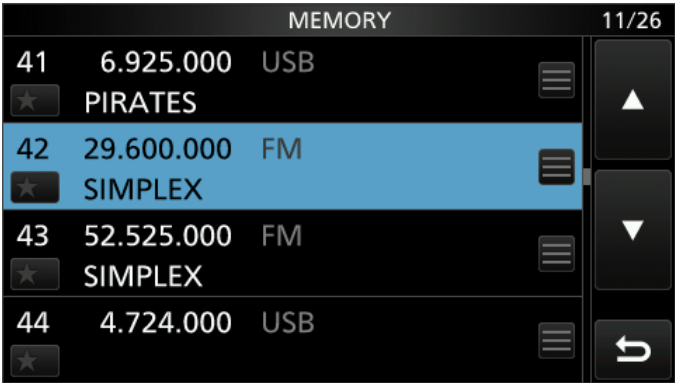
Nothing worse than being surprised by corrupted files on a memory stick. Like with a PC, there’s etiquette when you want to eject the SD card inserted in your 7300.

Press MENU > SET > SD CARD > UNMOUNT. Then push-click and eject the card.



6m and 10m Repeater Fun

The IC-7300 has FM mode, as well as a SPLIT function (transmit and receive frequencies can be different) and also PL/CTCSS tones which allow you to activate repeaters like with your 2m/70cm rig. You can also operate FM simplex (transmit and receive on the same frequency – no split). This can be a fun way to enjoy HF with less noise/static crashes. Here are the two recommended FM simplex frequencies for 10m and 6m.



For the repeaters, see section 4-29 in the manual. You’ll need to brush up on how to program memories, use FM and split mode, and enable CTCSS tones. I have heard 10m repeaters from W4-land when the band was open. Here are some shots from Repeaterbook of examples on 10m and 6m. Try Marlborough first, very easy to hit,

≡ FN42HO ⚙ ⚡ 🔍

20 Miles South West FM

W1MRA / Marlborough

29.68000 -0.1 MHz 131.8 Hz

≡ FN42HO ⚙ ⚡ 🔍

11.7 Miles West FM

N1MNX / Pepperell

53.89000 -1.0 MHz 100 Hz

20 Miles South West FM

W1BRI / Marlborough

53.81000 -1.0 MHz 71.9 Hz

21.8 Miles West FM

WB1EWS / Fitchburg

53.83000 -1.0 MHz 71.9 Hz

22.5 Miles South FM

W1FRS / Framingham

53.27000 -1.0 MHz 71.9 Hz

22.6 Miles East FM

N1UEC / Danvers

53.85000 -1.0 MHz 71.9 Hz

27.2 Miles West FM

WC1MA / Princeton, Mt Wachus...

53.31000 -1.0 MHz 71.9 Hz

33.2 Miles South East FM

AE1TH / Braintree

53.39000 -1.0 MHz 71.9 Hz

External Speaker

This is not about menu settings or receive and transmit adjustments but I’d like to end here with a recommendation that can really boost your enjoyment of the IC-7300. Try using an external speaker. The internal speaker in the 7300 sounds very good but you may notice a big improvement by connecting an external 4- to 8-ohm speaker. Icom’s SP-38

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speaker is styled and sized to match the IC-7300. It's a \$150+ splurge that most people won't stomach after paying \$1000 for the radio. However, I got mine shortly afterwards and have thoroughly enjoyed having a front facing speaker when operating my IC-7300.



You could try any 4- or 8-ohm computer or stereo speaker with the rig. Just be aware that a high-fidelity speaker will emphasize high pitched noise and tones more than a communications speaker.

The End

Well as you can see, I have put a huge amount of time into composing this long overdue IC-7300 Boot Camp Part 2 article! I truly hope that you have enjoyed it and discovered at least a couple of features worth exploring that you never knew about.

I'm happy to help with 7300 questions. Email me at ka1gtt@arrl.net

Andy Wallace
KA1GTT

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.

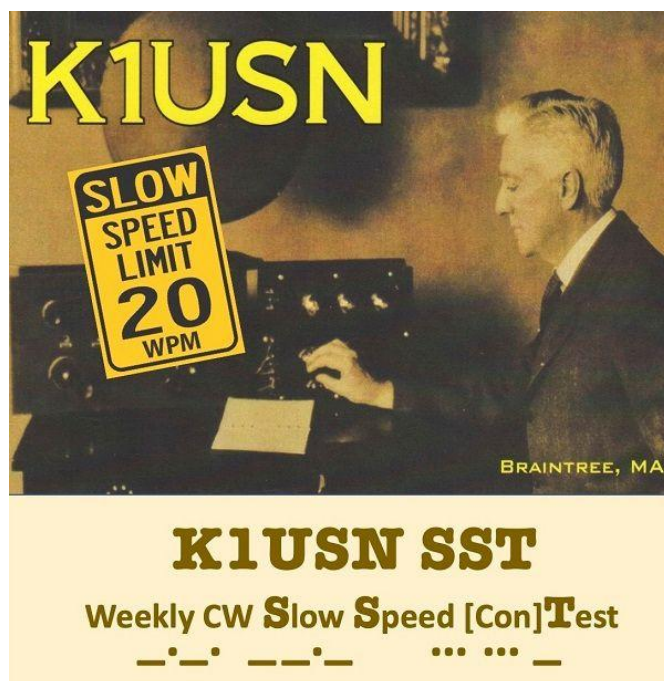
At least 82 BARS members are also ARRL members. If we all renewed through the club, we could potentially receive \$410 per year from the ARRL.

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

Another recurring event:

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

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

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

BARS Membership

Our current combined membership is 143. There are eleven members that haven’t renewed for 2025.

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

from Bruce Anderson, W1LUS, Treasurer

Treasurers Report for October 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 September, we had four new/renewals for \$120 income. Our expenses were Zoom \$18.05, and PayPal \$4.04. We now have \$891.84 in the bank and \$919.26 in our PayPal account for a total of \$1811.10.

Bruce Anderson, W1LUS

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](#)

October Get-on-the-Air Suggestions from Andy Wallace, KA1GTT

KA1GTT Andy Wallace here. I am offering my input for this month's Get on the Air column. These are contests which can be on HF or VHF/UHF, and may be SSB (voice), CW (Morse code) or digital (FT8 etc) modes. If you are a beginner, contests can still be a lot of fun. Most of the time the rules expect you to submit electronic logs of your activity, but I know hams who simply want to exchange QSLs for confirmation.

Contests can be frantic - rapid exchanges (what info the stations pass back and forth) and careful rules of engagement. But others are more casual. It always helps to tune in stations and listen to the exchange, and get a feel for the methods.

One of the best resources for finding out what contests are upcoming is the WA7BNM website and his 8 day contest calendar at:

<https://www.contestcalendar.com/weeklycont.php>

This gives a snapshot of the next 8 days and you can instantly see what contests are longer term (like across weekends) and thus more popular.

The 12-month calendar is excellent for getting a snapshot of an entire month in advance. Surprisingly, I find it has more contests listed than the "Perpetual" site view. The 12 month is what I used to compile this month's hot contests.

<https://www.contestcalendar.com/contestcal.php>

Of note: contests are listed in UTC (Coordinated Universal Time or Greenwich Mean Time or Zulu) day and date. This is the time going through the 0 degree meridian (Greenwich, U.K.). If you are new to hamming you need to know hams historically use UTC to align with hams around the world in a way that being on the air at a certain time is simple. We're in Eastern Daylight Time right now, so that means UTC is 4 hours ahead of us. 0000Z being midnight Zulu/UTC/GMT translates to 8:00 PM EDT. So taking for example the 10-10 contest below, the start of the contest is 00:01UTC May 3 (Saturday). Subtract four hours and you better have your rig ready at 8:01PM EDT Friday evening. Get it? And for Eastern Standard Time we'd be 5 hours behind.

Here is KA1GTT's list of top contests for October 2025 - and please remember these are best-guesses on my part.

1. Collegiate QSO Party
<https://collegiateqsoparty.com>
 0000Z, Oct 4 to 2359Z, Oct 5, 2025
 Exchange: Individual: State / Province / DX Entity + RS(T)
 Comments: interesting idea for a contest - promote colleges! Maybe your Alma Mater will be on?
2. California QSO Party
<https://www.cqp.org/Rules.html>
 1600Z, Oct 4 to 2200Z, Oct 5, 2025
 Exchange: non-CA: Serial No. + (state / VE province or territory / DX)
3. QRP ARCI Fall QSO Party
<http://qrparci.org/contest/fall-qso-party>
 0000Z-2359Z, Oct 11, 2025
 Exchange: non-ARCI: RST + (state / province / country) + power out
 Comments: QRP means low power. This contest could be fun to try. Most transceivers will let you turn the power down to 5W even if they are normally 100W capable. An interesting point about the contest is if you DO have a QRP radio, and can really reduce power, the multipliers are huge: Power Mult: >5W=x1, 1-5W=x7, 250mW-1W=x10, 55-250mW=15x, <55mW=20x
4. Nevada QSO Party
<http://nvqso.com/contest-rules/>
 300Z, Oct 11 to 2100Z, Oct 12, 2025
 Exchange: non-NV: RS(T) + (ARRL-RAC section / "DX")
5. Arizona QSO Party
<https://www.azqp.org/>
 1500Z, Oct 11 to 0500Z, Oct 12, 2025
 Exchange: non-AZ: RS(T) + (state / province / country)
6. Pennsylvania QSO Party
<http://paqso.org/pa-qso-party-rules.html>
 1600Z, Oct 11 to 0400Z, Oct 12 and 1300Z-2200Z, Oct 12, 2025
 Exchange: non-PA: Serial No. + ARRL/RAC Section
7. South Dakota QSO Party
<http://www.sdqso.org/>
 1800Z, Oct 11 to 1800Z, Oct 12, 2025
 Exchange: non-SD: RS(T) + (state / province / country)
8. New York QSO Party
<https://www.nyqp.org/>
 1400Z, Oct 18 to 0200Z, Oct 19, 2025
 Exchange: non-NY: RS(T) + (state / province / "DX")
9. Stew Perry Topband Challenge
<https://www.kkn.net/stew/>
 500Z, Oct 18 to 1500Z, Oct 19, 2025
 Exchange: 4-Character grid square
 Comments: this is a 160m (1.8-2.0 MHz) only, CW (Morse Code) only contest. If you have either of those things as your favorite, check it out!
10. Illinois QSO Party
<https://w9awe.org/ilqp/>
 1700Z, Oct 19 to 0100Z, Oct 20, 2025
 Exchange: non-IL: RS(T) + (state/province/country)
11. ARRL School Club Roundup
<http://www.arrl.org/school-club-roundup>
 1300Z, Oct 20 to 2359Z, Oct 24, 2025
 Exchange: RS(T) + Class (I / C / S) + (state / province / country)
 Comments: This is a 5-day event. If you know a young person, have them sit in and operate with other schoolkids!
12. CQ Worldwide DX Contest, SSB **
<https://www.cqww.com/rules.htm>
 0000Z, Oct 25 to 2359Z, Oct 26, 2025
 Exchange: RS + CQ Zone No. (Massachusetts / NH is Zone 5)
 See: <https://cqww.com/resources.htm>

Comments: this is a BIG ONE. It's worldwide, sideband only, and from start to finish you'll hear stations all over the bands. Many of us check off new DX countries like crazy on a contest like this.

13. Classic Exchange, CW

<http://www.classicexchange.org/>

1300Z, Mar 30 to 0700Z, Mar 31 and

1300Z, Apr 1 to 0700Z, Apr 2, 2025

Exchange: Name + RST + (state / province / country) + rcvr / xmtr manuf / model

Comments: the Classic Exchange contests (there is a voice one also) promote the use of older ham gear. See the rules at

https://www.classicexchange.org/announcements/CX_Rules.pdf

for more info and especially suggested frequencies. You don't need to be using an old rig to operate! But if you do have a vintage vacuum tube receiver or transmitter, this is the contest for you. It's been ages since I used my Drake 2-C receiver and 2-NT transmitter on the air. I think I will check out the operating status of these and get on for this! At the very least, listening to CW on old rigs can be very interesting.

** Top recommendation for this month

Reminder: details on each of these contests 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>

Final comment: Wow, CA, NV, AZ, PA, SD, NY, and IL QSO parties all this month. And the CQWW SSB is the big attraction! If you get on and enjoy operating one of these events, please send an email to the BARS email reflector, bars@w1hh.org.

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 September 2025

We had three people show up for the September 11 VE exam session. Results were two new Technicians: Michael, KC1YHT, and Kartic, KC1YHU. Plus one new General: Ronald, KC1YHV. Be sure to say hello if you hear then on the air. Our next exam session will be on October 9 at 7:00 PM at the Chelmsford Bible Church. Thanks to Gary, W1GFF, Shawn, N1CVO, 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 via Zoom and at the Chelmsford Bible Church on November 5th at 7:00 PM. The November meeting will include the election of officers for 2026. For those who prefer, a Zoom link will be sent in the club email feed prior to the meeting.

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

Photo Feature: From the Mailbag

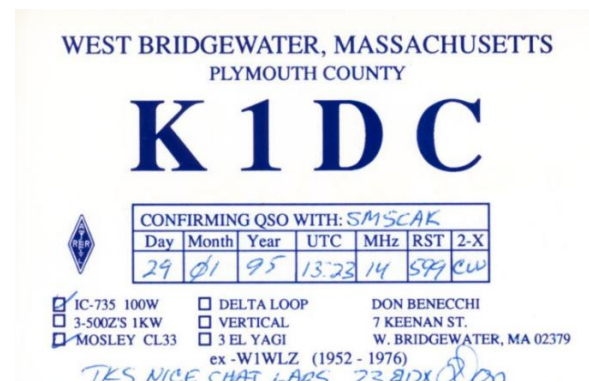
Most of us had 'elmers' to get us going in this thing of ours. I had two, my Dad and the father of my best friend in school William Borgman/K8CJQ. My Dad was not a ham, but he did serve as an airborne radio operator in the Air Force during the Korean war. His gift of a crystal radio set when I was 7 started me on the technology path that I follow to this day.

I spent many an hour in 'Bill' Borgman's shack. He was an avid DX'er with Collins and Heathkit gear that was simply a wonder to teenage me. It is where I learned to solder, the sound of RTTY on a Model 33 and what this thing called Field Day was all about. I also had my first direct exposure to 220v in his shack – an experience I do NOT recommend. Bill is a SK now. I host his original website at <https://k8cjg.org>.

When I got my ticket and started receiving cards I thought it would be nice to have one of his. I was able to find a few examples which I am proud to own.

Although not an 'elmer' I do share a legacy with the previous holder of my vanity call, K1DC. Donald Benecchi held this call from ~1976 until his death in 2020.

Don was an avid DX'er, contester, and active in clubs near his home in W. Bridgewater. I've held the call now for close to two years and I still get the occasional "Thx Don" in contest exchanges. It's a nice reminder of how much we owe to those that came before us. I also proud to have a few of his cards in my collection.





Show Me Your Cards! I would like to highlight cards from our club members. Sendme a scan of your card, or just mail one to me, Or, bring one to the next club meeting and I'll collect them. Thanks!

As always, if you have received any interesting cards, animal included or not, please send them along to k1dc.radio@gmail.com and I'll share them with the group!

73, Tim/K1DC

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