

Learn About High-Tech Wireless Communications

The New England Division Amateur Radio Convention in Boxboro, MA - September 8th (9 am – 5 pm) & 9th (9 am – 1 pm)



Get On The Air Ham Radio Station You Can Try

Amateur Radio, wireless communications, and try out some really cool technology! Our exposition will include many videos and hands-on activities. Here are just some of the activities you'll be experiencing.

Ham Radio lets you communicate anywhere in the world. We will have a radio station using Software Defined Radios that you can use to talk directly to Ham Radio Operators in Europe, all across the U.S., and around the world. Don't miss this exciting opportunity to talk with and learn about people in faraway places.

Join us to learn about



Card from a Contact with a Ham in South Africa



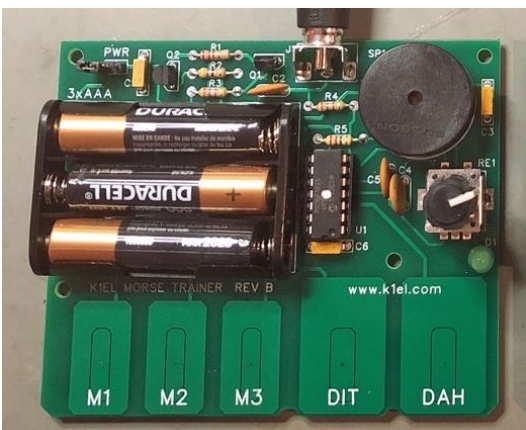
At the Edge of Space – An Image from a Ham Radio High-Altitude Balloon

the edge of space to learn about the atmosphere and to perform experiments. You'll see a High-Altitude Balloon (HAB) which carries a Ham Radio and see an amazing video of its flight. Our HABS are launched as part of STEM learning projects with local schools.

Ham Radio Operators use satellites, high-altitude balloons, and even the International Space Station to communicate through space and back. See and try out the high-tech gear that is used by Hams for space communications and use the on-site ground station to make a contact through a satellite in



space! Hams also launch weather balloons carrying radio transmitters to



Morse Code Tutor Kit you can build at the show

Hams are licensed to experiment with radio transmitters, computers, and communications. They build their own gear and use computers and the Internet along with radios to create new applications for communications. Raspberry Pi and Arduino computers are often used by Hams to experiment with new ways to communicate with wireless technology. We'll have several Raspberry Pi and homemade electronic circuits on display and you can play with to see how Makers experiment using Ham Radio. Do you like to build things? We will have a kit building activity as part of the exposition. For a small cost (\$18), you can purchase a kit and build it using our equipment with help from our mentors. The kit is a Morse Code Touch keyer and practice oscillator. You can even use it to try out Morse Code when your kit is finished!



Portable Station on Bora Bora Island



Emergency Ham Go Kit



Code fun! If you build the Morse Tutor Kit, you can use it as part this activity!

You might be wondering how to get started in Ham Radio? It's easy to get a license to get on the air with your own transmitter and communicate with other Hams. The Nashua



Class Graduate with her Ham License

Ham Radio isn't just used at home. Hams also build stations which are portable and mobile. Portable radios, backpacking antennas, solar power, and batteries make it possible for Hams to take their stations to really interesting places including the tops of mountains, parks, islands and other faraway places. You'll see and learn about the antennas and gear Hams use to setup a radio station almost anywhere.

Ham Radio exists, in part to provide emergency communications. Major storms or other disasters can destroy or disable normal communications systems such as cell towers and the Internet. When disasters happen, Hams are prepared to set up emergency communications using their radio equipment to help emergency responders provide aid until regular communications can be restored. You'll see and have a chance to try out a Ham Radio emergency "Go Kit" and learn more about how Hams can help in emergencies.



Ham Radio on Mt. Washington

Have you done Geocaching? Hams do the same thing using radio direction finding (they call it Fox Hunting). We'll show you how this works and show you how to go about locating a hidden radio transmitter using a hand-held portable radio and a directional antenna.

Morse code was one of the earliest and simplest forms of communication with a radio. Come over to the Morse Code station and learn a bit about the "dits" and the "dahs" so you can key the alphabet and maybe even your name and a simple message. Try your hand, literally, at a little Morse



Area Radio Society teaches license classes to help you get your license - you can find more information about Amateur Radio License Classes at www.n1fd.org/amateur-radio-license-class/.

Please bring your friends and family, but most importantly we want you to have fun AND learn with us!! Regular admission to the show is \$15 - full time students get in for free! We can also host groups of students from area schools. Please contact us for more information or to schedule a visit for your school.

Contact Information and Directions:

Fred Kemmerer (AB1OC): ab1oc@arrrl.net, 603.413.5400

Dave Merchant (K1DLM): k1dlm@arrrl.net, 508.769.7493

Web: www.borxboro.org and www.n1fd.org/youth-display