Garden School Amateur Radio Club Newsletter

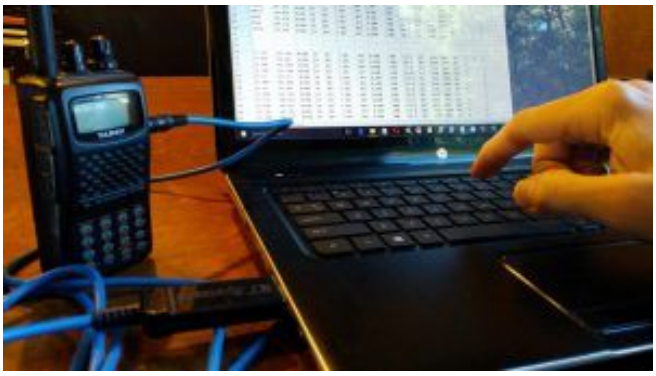
3rd Quarter - 2016-2017

Welcome to 2017 and our Garden School's new Amateur Radio Club! Our club was started this year with some generous donations from an alumnus and in conjunction with the Hall of Science Amateur Radio Club serving as our mentors.

Five Common Mistakes New Hams Make

Witte, Robert A. "Five Common Mistakes New Hams Make." Ham Radio School.com. Shack Talk, 05 Dec. 2016. Web. 16 Apr. 2017.

In this Shack Talk article, we'll take a look at some common mistakes new radio amateurs sometimes make. This short list comes from working with a gaggle of new hams over the years and trying to help them get started in ham radio.



1. Programming the radio incorrectly

The typical amateur radio is loaded with features. The capabilities of these radios are amazing but they add additional complexity to the radio. Typically, a new Technician is focused on getting a VHF or UHF radio programmed up for use on the local repeaters. Remember FOT (Frequency, Offset and Tone) all have to be set properly to access a repeater. See my article Hey, Why Can't I Access the Repeater? for more information on that topic.

Programming your transceiver can usually be done from the keypad, but using a spreadsheet-like software utility and USB cable makes loading a long list of channels much easier! You'll probably want to program your local repeaters and standard simplex frequencies for your area.

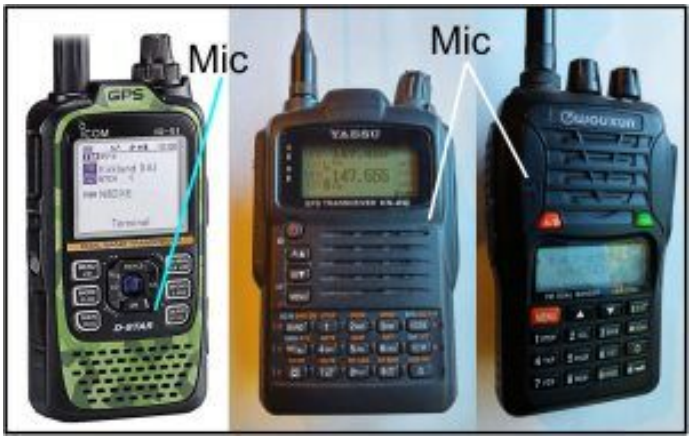
You'll probably want to load up the memory channels with a bunch of local repeater and simplex frequencies. The best way to do this is to use the software and programming cable for the radio. Sometimes these are included with the rig, sometimes they are optional and have to be purchased separately. If you can find someone in your area that has the same model of radio, ask them for their programming file. It can save a lot of time and effort.

2. Failing to speak clearly into the microphone

With most radios, you need to hold the microphone (or handheld radio) a few inches from your mouth. You need to speak clearly and aim your voice at the mike. Handheld radios usually have a little hole in the plastic where the microphone picks up the sound. Make sure you are talking at that hole, not some other place on the radio.

Be aware of where the tiny FET mic port is located on your HT and speak across that area with the radio a few inches from your mouth. Ask for audio reports and adjust your distance and voice volume accordingly.

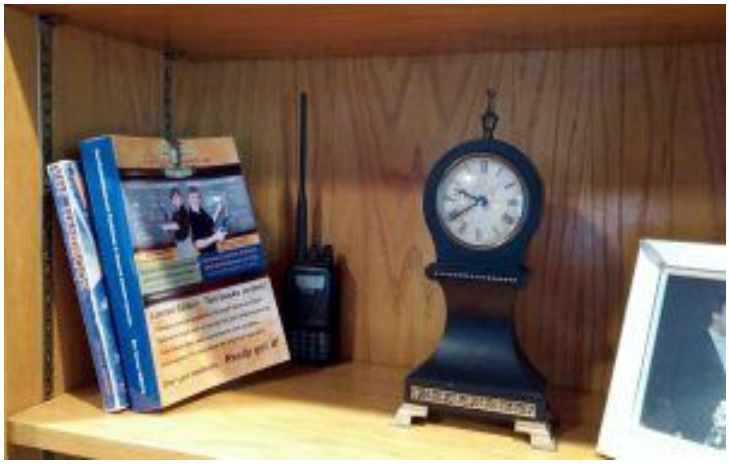
Some radios are more sensitive than others when it comes to audio level. And it is possible to have too much audio, so ask other hams for a signal report. Ask specifically about your audio level…loud enough, too loud? For most of us, that's the only way we are going to find out how we sound.



3. Expecting magic from an HT

Handheld transceivers (HTs) are awesome! They pack so much radio into such a small device: typically 2m/70cm transmit, wideband receive, memories, scanning, CTCSS, DTMF, built-in battery and rubber duck antenna. No doubt an HT is handy, but it is a "pipsqueak" of a radio…5 watts output power and a compromised antenna. By itself, such a radio is limited in range to a few miles depending on local terrain. They really shine when operating through a repeater or from a high elevation.

Maybe it's because we are all used to good cell phone coverage that we expect the same thing from our handheld radios. A key difference is that Verizon, AT&T and Sprint have tons of cellphone towers spread across the region which provide that good coverage. Ham radio has quite a few repeaters available to us but not densely spaced. So don't expect the HT to hit every repeater in your state…it won't.



What to do? Be aware of the repeaters that provide the best coverage for where you are located and use them. Upgrade the antenna on your HT. If you are operating inside a car, use an external antenna on the roof. For additional tips, see my FM VHF Operating Guide.

4. Not listening enough

Hemingway said "I have learned a great deal from listening carefully. Most people never listen." This is true in ham radio. Dial around on the bands and listen to what's going on. Try to figure out who the best radio operators are and follow their example. You can learn a lot about operating procedures just by listening.

On VHF/UHF, find some of your local nets and listen in. (Just do an internet search for "ham radio" "net" "your city name".) Nets are a scheduled on the air meeting with a wide variety of purposes, everything from public service to technical discussions. You don't have to check into the net, just give it a listen and see what you can learn.

5. Not getting on the air.

I kept this one for last but it is the most important one on the list.

Get on the air! Don't wait, do it now. The longer you delay the less likely you are to become engaged with the ham community in your area.

Some new hams get their license, buy a radio, stuff it into the closet and never get on the air. Big mistake. One reason is that they got into ham radio for use in case of a major calamity. "When the stuff hits the fan, I'll get the radio out." Of course, that will be too late…you'll be sitting there reading the manual trying to figure out how to contact someone. You really need to get familiar with the radio well before a disaster happens.

Another reason new hams don't get on the air is that its overwhelming. Where do I start? Who do I talk to? Good questions. You might start by talking with a local ham you know. Ask them to get on a quiet simplex frequency and just chat with you. I've done this for new folks…its just a safe way to get some air time.

One challenge we have is that many repeaters are pretty darn quiet. It is common to not have anyone listening and not much chatter on a repeater. For example, my UHF repeater sometimes sits there all day long without anyone talking on it. So if you just get on the repeater and say your call sign, you might not get a reply. Don't take it personally.

What can you do? Well, listen a lot. Put your radio on scan and try to find frequencies that have activity. Find out when the local nets are scheduled and listen then. When you feel comfortable, go ahead and check into the net. When you do find a repeater or simplex frequency that seems active, go ahead and make a call. Don't be afraid to say "This is KF0XYZ looking for a signal report. Anyone around?" You are more likely to get a response if you make a specific request.
For some additional ideas on getting started, see I Got My License, Now What?

Thanks for reading another Shack Talk article. I hope to work you on the ham bands soon.

73, Bob KØNR

Garden School Amateur Radio Club

Technician Course Complete with 9 New Licenses

On April 5th, in conjunction with the Hall of Science ARC, we finished our first Technician's Class and Test. The class encompassed 6 members from Garden School (5 students and 1 teacher) and 5 members from outside Garden. The results from the test were very positive with all members of Garden School passing the test with 9 total passing the test from the entire class.

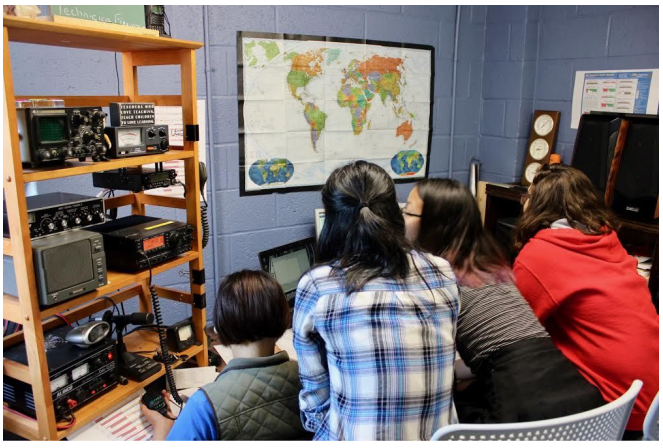
The FCC Technician License exam covered basic regulations, operating practices and electronics theory, with a focus on VHF and UHF applications. With a Technician Class license, these students will have all ham radio privileges above 30 MHz. These privileges include the very popular 2-meter band. Many Technician licensees enjoy using small (2 meter) hand-held radios to stay in touch with other hams in their area and with Garden School getting ready to put up a repeater in conjunction with the Hall of Science ARC, these privileges give them more options. Technicians may operate FM voice, digital packet (computers), television, single-sideband voice and several other interesting modes. They can even make international radio contacts via satellites, using relatively simple station equipment. Technician licensees now also have additional privileges on certain HF frequencies. Technicians may also operate on the 80, 40 and 15 meter bands using CW, and on the 10 meter band using CW, voice and digital modes.

We are very proud of our students and what they have accomplished. We are planning on offering the General License exam in the coming months. With this license, a new world of High Frequencies will open up to them.

School Club Roundup

In February, the Garden School Amateur Radio club participate in the National ARRL School Club Roundup. The objective was to exchange QSO information with club stations that are part of an elementary, middle, high school or college. Non-school clubs and individuals are encouraged to participate.

Sponsored by the ARRL and the Long Island Mobile Amateur Radio Club (LIMARC), the purpose of the Roundup is to foster contacts with and among school radio club around the nation. Below are our results from the round-up We are very proud of their accomplishment.



K2GSG's Contest Summary Report for ARRL-SCR

Total Contacts = 24 Total Points = 912
Operating Period: 2017/02/13 20:07 - 2017/02/16 21:34

Total Contacts by State \ Prov:

State	Total	%	State	Total	%
FL	5	21	NY	4	17
AL	2	8	IN	2	8
MN	2	8	NE	2	8
OH	2	8	AZ	1	4
NJ	1	4			

Total = 9

Total Contacts by Country:

Country	Total	%
USA	21	88
Finland	1	4
Guantanamo Bay	1	4
Italy	1	4

Total = 4

Field Day - June 2017

On the weekend of June 24th and 25th, the Garden School ARC with join with the Hall of Science ARC to participate in the ARRL's annual Field Day. Field Day is the single most popular on-the-air event held annually in the US and Canada. On the fourth weekend of June of each year, more than 40,000 radio amateurs gather with their clubs, groups or simply with friends to operate from remote locations.

Field Day is a

- picnic,
- a campout,
- practice for emergencies,
- an informal contest and,
- most of all, FUN!

It is a time where many aspects of Amateur Radio come together to highlight our many roles. It is an excellent opportunity to demonstrate Amateur Radio to the organizations that Amateur Radio might serve in an emergency, as well as the general public. The contest part is simply to contact as many other stations as possible and to learn to operate our radio gear in abnormal situations and less than optimal conditions.

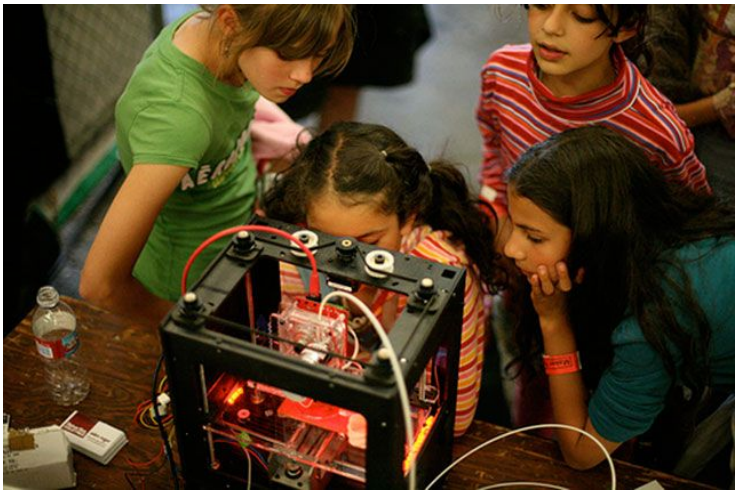
This year Field Day will be held in the outdoor basketball court at Garden School. To help generate excitement about Amateur Radio and science in general we will also be hosting an unofficial mini-Maker Faire.

This day will be a family-friendly festival of invention, creativity and resourcefulness, and a celebration of the maker movement. Part science fair, part county fair, and part something entirely new, people come to Maker Faire to show what they have made and to share what they have learned.

We are still working on what will be available but we will have

- a Soldering Station,
- 3D Printer Demonstration,
- Lego Building Station,
- Lego Mindstorm demonstration,
- and more.

We will be sending out more on this towards the end of the school year and will be looking for volunteers to help out. Please let us know if you have any ideas or would like to help.



Scholarship Opportunities

There are many opportunities for students who are Licensed Amateur Radio Operators out there to help with college tuition. Below is a list just some of these opportunities that are available to students in our area. Most do require that the student is a Licensed Operator. We are offering a class in February to help students get those licenses. If you are interested please contact Mr Hale at kd2lpm@jrhaleteacher.me.

- Androscoggin Amateur Radio Club Scholarship- $1,000
- The ARRL General Fund Scholarship- $2,000
- The Ernest L. Baulch, W2TX, and Marcia E. Baulch, WA2AKJ, Scholarship- $3,500
- The Richard W. Bendicksen, N7ZL, Memorial Scholarship- $2,000
- The Henry Broughton, K2AE, Memorial Scholarship- $1,000
- The L. B. Cebik, W4RNL, and Jean Cebik, N4TZP, Memorial Scholarship- $1,000
- The Dayton Amateur Radio Association Scholarship- $1,000
- The Alfred E. Friend, Jr., W4CF Memorial Scholarship- $5,000
- The Ted, W4VHF, and Itice, K4LVV, Goldthorpe Scholarship- $500
- The K2TEO Martin J. Green, Sr. Memorial Scholarship- $1,000
- The Dan Huettl, WZ7U, Memorial Scholarship- $1,000
- The Dr. James L. Lawson Memorial Scholarship- $500
- The Scholarship of the Morris Radio Club of New Jersey- $1,000
- The Victor Poor, W5SMM, Memorial Scholarship- $2,500
- The Don Riebhoff Memorial Scholarship- $1,000
- The Bill, W2ONV, and Ann Salerno Memorial Scholarship- $1,000
- The Carole J. Streeter, KB9JBR, Scholarship- $1,000
- The Robert D., W8ST, and Donna J., W9DJS, Streeter Scholarship- $1,000
- The Alan G. Thorpe, K1TMW, Memorial Scholarship Fund- $1,000
- The W1FDR Scholarship- $1,000
- The Betty Weatherford, KQ6RE, Memorial Scholarship- $1,000
- The William C. Winscott, N6CHA, Memorial Scholarship- $2,500
- The YASME Foundation Scholarship- $3,000
- Yankee Clipper Contest Club Youth Scholarship- $1,200

Our Contacts - Worldwide, USA & Canada