



DEXTER SOUTHFIELD

20 Newton St., Brookline, MA 02445

**Clay Center Amateur Radio Club (CC-ARC)**



## **FAQ INFORMATION FOR PARENTS**

### ➤ **HOW DOES AMATEUR RADIO HELP MY CHILD'S EDUCATION?**

Many children become interested in electronics-related sciences at an early age, particularly with all the “gadgets” they have access to these days. Radio electronics can be enjoyed outside the classroom as a “hobby” that can last a lifetime. Helping children learn amateur radio basics at an early age can help instill a lasting positive attitude toward science and math and keep their interest in later years when peer pressure and competing activities sometimes displace their science interests. Many older generation radio operators often talk about getting their ham radio license around age 12 or 13 and enjoying the hobby on and off for many years. Students applying for college may mention amateur radio on their applications as a way to set themselves apart from the average student. For students interested in studying engineering, computer science, or communications, amateur radio is a valuable asset. Amateur Radio is a blend of science, technology, engineering, and math, the basis of a true “STEM” subject.

### ➤ **WHAT IS THE AMATEUR RADIO SERVICE?**

Congress originally began regulating radio communications in 1912, soon after the invention of radio. The “Amateur Radio Service” was then created to fill a need for a pool of experts who could provide backup emergency communications in times of need, advance the science of radio and increase technical knowledge, and enhance international good will through long-distance communications. These are still the main purposes of the service today. Regulation is provided through the Federal Communications Commission (FCC). For more information: <http://www.arrl.org/what-is-ham-radio>.

### ➤ **WHAT CAN MY CHILD DO WITH AMATEUR RADIO?**

The service has three levels of amateur radio operators, Technician Class, General Class, and Extra Class, open to any U.S. citizen of any age. Those who become radio Technicians may operate radios on certain local radio bands through area VHF and UHF repeaters, including one here at the Clay Center, and may also operate on some limited bands that offer long distance communications. Other aspects of the hobby open to Technicians include slow-scan TV, satellite communications, Morse code, digital communications through computers and Internet relays (EchoLink), and Earth-Moon-Earth (EME) communications – bouncing signals off the moon. Many of our Technicians study for the next level and become General class operators. This allows them privileges on many more radio bands that can reach around the world. Some students have even gone for the highest level – Amateur Extra. For more information about youth involvement in ham radio visit <http://www.arrl.org/youth>.

### ➤ **WHAT IS THE “RADIO EXAM” MY CHILD MAY TAKE?**

Students may prepare for the entry level exam which is offered quarterly at the Clay Center and monthly in many locations in the Boston area, including Brookline, Cambridge, Natick, and Canton. The exam consists of 35 questions, all multiple choice, in subject areas including electricity, electronics, wave propagation, antennas and radios, proper use and etiquette, electrical safety, radio regulations, and emergency planning. Students study a pool of about 300 questions. A passing grade of 26 out of 35

questions is all that is needed to get a Technician Class license. To take the exam one must show an ID and pay \$15 at most exam session locations, but it is free for Dexter Southfield students and campers at exam sessions hosted at the Clay Center. For information visit <http://www.arrl.org/getting-your-technician-license>.

➤ **HOW DOES MY CHILD PRACTICE FOR THE TECHNICIAN EXAM?**

Students are encouraged to do some outside studying of their own. One way is to use the handouts from the course for review and to use the study files we provide to students on a USB stick. Another way is to visit the ARRL Exam Review site: <http://arrlexamreview.appspot.com>. One favorite site is QRZ <http://www.qrz.com/hamtest/>. You have to register once, but there are no obligations or personal details needed other than a login name and an e-mail address. (Note: If they ask for a call sign, make up a login name.) There are also several good websites and iPhone or Droid “apps” to help students study.

➤ **WHAT DOES MY CHILD BRING TO THE EXAM SITE?**

Information for student candidates is listed on the Clay Center club’s web site at [www.cc-arc.org](http://www.cc-arc.org). Be sure to have the adequate photo ID or equivalent, such as a school ID, or a legal guardian may present a photo ID. Be sure to have your child’s SS number which will be converted to an FRN number much like what the DMV does for your driver’s license number. Want to create an FRN number ahead of the exam? Go to the FCC’s Registration System (CORES), <https://apps.fcc.gov/coresWeb/publicHome.do> and click Register.

➤ **WHAT IF MY CHILD DOES NOT PASS?**

Students who just miss the passing grade can immediately retest at no cost with a different version of the exam. Sometimes they squeak by. Or, some students may want to study for another week or so and take the exam again at a different exam site.

➤ **AFTER THE EXAM, WHAT NEXT?**

Students will want to get their own radios so they can get on the air right away. The best starter radios are called HTs (Handheld Transmitters) that are portable and have added features like multi-band, keypads, and lighter weight. Popular brands are Yaesu, Icom, and Kenwood. A good beginner radio is the TDXone TD-Q8A for \$60. Popular in our club is the Yaesu FT-60R, a nice dual-bander for \$150. Older students who will soon have their driver’s license often consider a mobile radio and mag-mount antenna for the car. Ask us for a handout on the latest models or go to <http://www.cc-arc.org/resources/>.

➤ **SPECIAL EVENTS FOR LICENSED AMATEURS:**

There are many opportunities for licensed hams to get together and share their hobby. The club radio room on the top floor of the Clay Center is open on most Tuesday evenings in the fall, winter, spring, and summer seasons, and the room opens at other times during the year for special events such as the “school clubs round-up” and similar on-air contests. With adult supervision youth amateurs can help at walk-a-thons and other public service events where amateur communications are needed. Every year there is a big Ham convention in Boxboro, which has many educational workshops, exhibitors and vendors, and a huge flea market. Every spring in June the Clay Center is a host site for a 24-hour contest called “Field Day” where hams all across North America try to make as many “contacts” as possible while operating under “field conditions” simulating emergency conditions. In addition to these events, the club often hosts activities for members that include educational lectures, “fox” hunts (hidden transmitters), youth “radio nets,” SkyWarn Training sessions, and educational field trips.

➤ **LEADERSHIP OPPORTUNITIES FOR YOUTH:**

There are many positions of leadership in the CC-ARC, including officer roles such as President, VP, Secretary, Treasurer, Educational Advisor, and Technical Advisor. Non-officer positions include Science Advisor, Ham Shack Supervisor, Net Control Coordinator, Club Events Coordinator, Field Day Coordinator, QSL Coordinator, Fox Hunt Coordinators, Outreach Coordinators, and Members-at-Large. Some of the more technical positions have been held by teachers or older students with college-level physics background, but many positions have been held by 4th through 9th graders, and the past six presidents have all been high school students.

➤ **CLUB LEADERSHIP:**

The current president of the CC-ARC is Kevork Atinizian, a Dexter-Southfield student. Past youth presidents have included Sam Lapidès (Dexter), Brigitte Berman (Southfield), Alex Dills (Newton South), Nick Weber (Dexter), Forrest Gasdia (Wellesley High), and Ted Reimann (Dexter/Brooks). Other recent club leaders include Dexter-Southfield students Ananya Mangal, Nick Veo, Yunona Uritski, Matthew Mueller, Will Elwood, Noah Myers, Andy Myers, and Rishi Bhagat, as well as a number of students from other schools. Adult overseers include Mr. Phinney and Mr. Reimann at the Clay Center.

➤ **MISSION STATEMENT:**

Through its club activities and/or radio communications, the Clay Center Amateur Radio Club (CC-ARC) shall:

- strive to introduce school students, summer campers, and their families to radio electronics, the art of radio communications, the importance of the Amateur Radio Service, and the rules of the Federal Communications Commission (FCC).
- strive to spark student/camper interest in electronics, physics, astronomy, and other sciences through club activities and the use of the Amateur Radio Service.
- provide an educational forum for advancing student/camper skills in the communications and technical phases of Amateur Radio use.
- strive to promote and enhance good will within the local community and the global (international) community.
- encourage students to pursue interests in radio electronics related to astronomy, radio astronomy, and space-based communications.



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