

# How to get started studying for the Amateur Radio License

## What is Amateur Radio?

Amateur radio is the most powerful communications service available to private citizens anywhere on Earth. Amateur Radio is a recognized national asset, providing trained operators, technical specialists, and disaster response communications in times of need. Amateur Radio Operators are licensed to operate in various bands (groups of non-military frequencies) capable of communicating within your local area or county across the world. Some specific bands allow you to talk with astronauts on the international space station. Amateur Radio Operators may find interest in the technology used to communicate worldwide, the science behind propagation, or basic electronics and soldering, while others like competitive events such as [Parks On The Air \(POTA\)](#) or [Summit On The Air \(SOTA\)](#) and award programs. A group of Amateur Radio Operators participates in DXpedition, also known as Fox and Hound competitions. These competitors search for hidden transmitters mixing software, hardware, and techniques to find them. Some Amateur Radio Operators become licensed so they can support emergency response efforts through established groups such as [Amateur Radio Emergency Service® \(ARES\)](#), [Radio Amateur Civil Emergency Service \(RACES\)](#), and [Army Military Auxiliary Radio System \(MARS\)](#). Whatever the reason for becoming an Amateur Radio Operator, “Ham Radio Operators” have kept radio communications alive, establishing communities of well-represented and dedicated people from all over the globe sharing the same passion. Ham Radios can be large stations with equipment worth

tens of thousands of dollars, mobile units in vehicles, dismantled units, or handhelds for adventures.

Often I am asked, What is a Ham Radio Operator? Is that the older people using old radios? Followed by comments like my grandfather had a CB radio. Ham Radio Operators' ages range from six years of age to more than one hundred years old. I am sure the older people they are referring to are Ham Radio Operators, but it is much more than that. Those same older people are genuinely passionate about Ham Radio, and it's certainly more than a hobby for them. Ham Radio Operators love to train and mentor newcomers to learn together how to become better amateurs together. These mentors are called Elmers, but you will have to read the Ham Radio Technician License manual to understand where this name comes from. Ham Radio and Citizen's Band (CB) Radio occupy only one band on the frequency spectrum with 40 channels capable of reaching nearly 10 miles and intended for business and private use. CB Radio does not require a license to operate and is not regulated by the Federal Communications Commission (FCC). Using Ham Radio bands is a privilege, and as such, it is regulated to maintain the integrity of services that can reach around the globe without repeaters. Ham Radio bands, along with other bands, are used during emergencies.

### **What are the exams?**

There are currently three levels of exams. Technician, General, Extra License examinations. It is necessary to take the prior exam level before taking the higher level.

The good news is that you could take all of them for the price of one if you prepare, take

and pass all three on the same day. Each level of examination provides you with access to transmit on more frequencies as you progress through the levels.

Although limited, we like to stress that you do have access to HF between 28.30 and 28.5 (10 meters) with your Technician Class License.



The above image is an example of the Technician License band privilege on HF. There are more frequencies above 10 meters that are also part of the plan such as 2 meters (144 MHz) and 70 Cm 446 MHz). These are the frequencies where you will find most repeaters operate.

### How to study/ prepare?

There are two schools of thought when preparing for each of the exams.

1. You can study and memorize the question pool made of about 400 questions for an exam with 35 questions. Then you can become more familiar with the concepts after you pass.
2. Use videos and books to understand the concepts and then take practice exams to prepare. Once you are consistently scoring 90% on the practice exams you are ready.

### Practice Exams

There are several free websites with test pools that will provide feedback after taking the pre-test.

<https://hamstudy.org/tech2022>

<https://www.qrz.com/hamtest/>

<https://hamexam.org/>

All of these practice tests are free of charge. There are other paid websites but conducting self-study is enough to pass the test.

### Books

The ARRL Ham Radio License Manual

The ARRL General Class License Manual

The ARRL Extra Class License Manual

### Video

The ARRL has a playlist of videos on Youtube presented by Dave Casler

[https://www.youtube.com/playlist?list=PLuaplzKwhZN\\_30dcgsDbGU3J7C8BAYJcG](https://www.youtube.com/playlist?list=PLuaplzKwhZN_30dcgsDbGU3J7C8BAYJcG)

Ultimately, The Military Amateur Radio Community is here to assist you in your Radio Operator journey. Feel free to ask questions and interact with the members of this community. There are many knowledgeable members who are willing to help you be successful before, during, and after you become licensed.

Many digital communities already exist on Facebook, such as [Military Amateur Radio](#) and [Youtube Military HF Channel](#),

**Is the exam in person or on-line?**

Thankfully you can now take the examination at a VE Center, or you can take it from the convenience of your home.

### In-Person

To find VE Centers near you, visit this link <http://www.arrl.org/find-an-amateur-radio-license-exam-session>

### On-Line

The online session typically uses a Zoon session to connect you with three VE Volunteers. Payment can be done through a Paypal link sent right before the exam. It's a good idea to read the exam session instructions, there are things that you could or could not have during the exam session. For instance, on my first exam, I was not able to use a calculator (to include the computer's calculator), but on the second exam, I could not have a piece of paper, and instead, I was allowed to use the computer's calculator. To find online VE exam sessions visit this link <https://hamstudy.org/sessions>

### **How much is the cost of the exam session?**

The cost of the exam session is typical \$15. The Military Amateur Radio Community has begun accepting donations to assist military members in paying for their Technician Class Amateur Radio License. It is possible that if you are close to the passing score, the VE might provide you another opportunity to retest minutes after. If you are successful in your first attempt, you are allowed to take the next level of examination as part of the initial payment for the exam session.

### **How long will it take to receive my call sign?**

After successfully passing the Technician Class examination, you will be awarded your unique call sign. When you test online this could take hours or days. When you test in person, this process could take about a month.

### Why become an Amateur Radio Operator?

Amateur Radio is for you if you are a military member and you work with or around radios. Regardless of your current level of

proficiency, learning about the concepts inside Amateur Radio will dramatically improve, and will certainly enhance your skills as a radio operator. There are many aspects to this



hobby. As you embark on your journey, you will discover your favorite area. Some Hams enjoy basic electronic concepts, antenna building, contesting, Parks on the Air, Summits on the Air, DXing (long distance), fox hunting, operating via satellites, HF, VHF, and UHF. If you work with RT-1523 (SINCGARS), PRC-150, PRC-160, PRC-117F, PRC-117G, JBCP, STT, or HCLOS, you are already dipping your toes in the Amateur Radio realm.

- Participation with emergency communications and preparedness with government agencies such as the Federal Emergency Management Agency (FEMA) and the Department of Homeland Security DHS.
- Learn available equipment and how to operate it
- Build and repair electronic equipment, electrical principles, components, and antennas

- Become licensed on different radio bands with various applications and radio waves
- Learn the proper etiquette, procedures, safety, and FCC rules for using Ham radios
- Become part of the volunteer force for local emergency preparedness groups such as Amateur Radio Emergency Service® (ARES), Radio Amateur Civil Emergency Service (RACES), and Army Military Auxiliary Radio System (MARS).
- Participate in DOD, MARS, and International radio competitions
- [Amateur Radio-Public Safety Communications Drill Video](#)
- [Army Military Auxiliary Radio Service \(MARS\) Video](#)
- As a Signal Soldier, you have been around radios for a while. Becoming a Ham Operator will only improve your skills as a Signal Soldier on Very High Frequency (VHF), Ultra High Frequency (UHF), and most importantly on High Frequency (HF).
- Empower your units with available beyond line of sight capabilities through efficiency and proficiency
- Passing the Technician License will give you ten promotion points.
- Passing the General License will give you ten promotion points.
- [Did I mention that you will get promotion points?](#)