

Why should I care?

There are many means of communications available to you in the everyday world including Cellular and Landline Telephones, SMS, Instant Messaging, Instagram, etc.

These require a certain amount of infrastructure (power, Internet, etc.) which may not always be available in a disaster. Radio and specifically Amateur (Ham) Radio provides that last means of contact, “*When all else fails*”.

For some, preparing for a grid-down scenario is all they want. For others, they find Ham Radio to be a collection of different hobbies. The question is what you do want to do?

When you get your license, you get a license to experiment! It’s like getting the keys to your first car.

Various activities are: Creating and building new Radio or antenna designs; “Fox” hunts; On-air contesting; Launching and tracking high-altitude balloons; Traveling to and transmitting from unusual or exotic locations; Piloting certain RC Airplanes; Talking to the International Space Station; Volunteering for your community; and even helping with Disaster Communications or participating in Search and Rescue.

What are the license levels?

No license is needed to receive transmissions (RX). Some RX is prohibited (listening to cell phones, etc.)

Technician – The Technician Class operator license can transmit on local amateur radio frequencies.

General – The General Class license can also transmit on amateur regional/worldwide frequencies.

Extra – The Amateur Extra Class operator license has extra privileges on the worldwide frequencies.

What is the cost of this?

The ten-year license will be \$35 (in 2022) and the testing fee can be from free to \$15. There are many free or low-cost study and practice materials (YouTube, Testing/Flash Card Apps, and PDF Study Guides). A current study book costs around \$25 and then can be passed on to someone else. Or you can take a live class, which will typically include a study book, refreshments, and a test session for \$30-60.

What level of time and effort do I need for this?

Since the Morse Code requirement is dropped, the time commitment to earn your Technician license has drastically reduced. You will likely need 16-20 hours of personal study over several weeks.

This can be easily achieved by taking a two-day live class (Hamclass.org does two concurrent Saturdays and other Radio groups will do a one weekend, Saturday/Sunday class). A one-day class is good for a refresher, but not good for a beginning student.

Find a study method that works for you. It’s best to not drag out studying as you will lose momentum.

How do I learn the material?

There are a few ways to learn what you need to know.

1. Taking a live or online class forces you to set aside time to learn the material. These classes offer a comfortable environment that provides interaction with experienced Hams and other students. The instructors take extra time with test sections that you may struggle with. Typically, these classes will provide a testing session at the end.
2. Watching a pre-recorded class on YouTube will allow you to view the material on your own schedule, at your own location, and at your own pace.
3. Purchase/borrow a current book or download a study guide. These go through all of the test pool questions. The study guides will provide help on difficult sections.
4. Use flashcards to study. The Android/iPhone app will let you do flashcards throughout the day. Just 2-4 session of 10-15 minutes a day is about right. Give yourself time in between study sessions so your brain will understand that this should be stored in longer term memory.
5. Practice taking the test. The Technicians test requires 74% correct (26 or more of 35 questions), so strive for a consistent 90% or greater on practice tests to easily pass the real test. The pool of test questions and answers are public, so all practice tests randomize actual test questions.

Study intensely for a few weeks and take the test. Don't drag it out. The primary goal is to pass the test. The secondary goal is to learn the material. After you pass the Technician test, upgrade your license quickly to General as most of the material overlaps. It is more difficult to upgrade after time passes and you have forgotten most of the material, as well as giving up your inertia and motivation.

How do I study the questions?

Use Technician Pool Questions 2022-2026, General 2019-2023, and Extra 2020-2024

Use the correct question pool. All questions are publicly available. Read the questions, **study the correct answers only** and ignore the incorrect ones. Simplify the math formulas or skip them altogether as you can pass these tests without memorizing them.

There is a lot of new terminology as well as safety and protocol information that needs to be learned, there are also three diagrams you will need to study.

The key to passing is to use flashcards to study ALL the questions, **then take practice tests** until you consistently get over 85% correct!

The two biggest problem I hear are:

1. I have test anxiety since I've not taken a test in 20 years – This is a 35-question multiple choice “quiz” where you can study the publicly available questions and correct answers. The pool of 423 possible questions is publicly available. If a young lady (9 years old) can do it, so can you.
2. I don't do math. How can I pass? – You can memorize the correct answers or you can skip all the math questions and still pass the Technician license “quiz”.

How do I take the test?

Find a convenient Volunteer Examination (VE) testing location and time. Since COVID, many clubs are offering on-line testing and some locations require pre-registration. Bring #2 pencils and \$15 cash for the test fee. You may bring a non-programmable calculator. Follow all of the VE instructions. Treat them well as they are volunteering their time for you. You will be required to have an FCC FRN number before taking the test. The VE team will give you instructions on how to get a FRN number. After passing you will be directed to the FCC website to pay the \$35 fee for your new 10-year license.

Here is the test-taking method I used:

1. First answer all the questions you immediately know and skip any that you have to think about. Make sure you fill the correct ovals corresponding to the question!
2. Then answer all the questions that you have to think about, but you are confident in your answer. Again, make sure you fill in the correct ovals!
3. Now count how many you have answered. If it's more than 26 answers on the Technicians test, then you probably have passed. The pressure is off now.
4. Now try to answer the remaining questions, answering the easier ones first. If you get stuck on a question, then eliminate the two worst answers and guess (50/50 chance). It's better to narrow the choices and then guess on those questions, than leave them blank.

When you hand in your test, and are informed that you passed the Technicians test, why not take the General test at that time for no extra charge? There are lots of hams that skipped Technician and gain nationwide or worldwide frequency privileges.

Now what do I do?

You will be able to transmit using your assigned call sign when your name shows up in the online FCC database. (This is one of the questions in the test pool!)

Visit KC HamLink - <http://www.kchamlink.org/> and learn how take your first steps as a new Ham. Watch the Ham 101 series. Herb does a great job to cover the basics.

If you are in the Kansas City Metro then there are dozens of radio clubs and organizations. If you want to volunteer then there are service clubs that use Ham Radio to support the community. If you are interested in Emergency Communications then find a local [SATERN](#), [ARES](#), or [RACES](#) group.

Remember that radio clubs have different focus and “personalities”, so find one (or several) that fit you. Most will participate in “Field Day”. This is an opportunity for you to learn about and operate thousands of dollars of equipment in a safe environment with skilled ham operators to help you make contacts.

There are a number of excellent channels on YouTube. Ham Radio Crash Course and Ham Radio 2.0 are very big channels with large Discord communities. Since I like communications in the field, I really like the OH8STN Ham Radio and Radio Prepper channels.

Find a local Ham Radio mentor to help you. These are called “Elmers”.

Resources

1. Live Classes
 - a. Hamclass (Kansas City metro) - <http://hamclass.org>
 - b. Find a class - <http://www.arrl.org/find-an-amateur-radio-license-class>
 - c. Check your local Ham club
2. Pre-Recorded Classes
 - a. Hoshnasi's Ham Radio Crash Course -
<https://www.youtube.com/watch?v=lsnwwWPvqc&list=PL1KAjn5rGhiw1MSxjF8wRCxPCY-A9rggF>
 - b. Ham Radio 2.0 Getting your Ham Radio License -
https://www.youtube.com/playlist?list=PLs_Ab58w9LI-RyWc4QyfXeXouS4POCvw0
 - c. David Casler - <http://dcasler.com/ham-radio/training/> (new videos not behind paywall)
3. Study Books
 - a. HamRadioSchool.com - <https://paratusradio.com/shop/ham-radio-school-technician-license-course-2022-2026/> (best for visual and non-technical people)
 - b. Gordon West/W5YI - <https://www.amazon.com/2022-2026-Technician-Class-WB6NOA-Gordon/dp/0945053010>
 - c. ARRL - <https://www.amazon.com/ARRL-Ham-Radio-License-Manual/dp/1625951566>
4. Study Guides/Helps/Flashcards
 - a. No-Nonsense Study Guides - <https://www.kb6nu.com/study-guides/>
 - b. Hamclass - <http://hamclass.org/study.html>
 - i. 1st link - All Technician Class test questions with only correct answer
 - ii. 2nd link - The workbook that Hamclass provides in their class
 - iii. 3rd link - Hamclass supplemental handout
 - c. AD7FO License Guides - <https://ad7fo.com/training.html>
 - d. Web based - <https://hamstudy.org/tech2022> (click on study)
5. Practice Tests (use the flashcard or study correct answers option)
 - a. Web based - <https://www.grz.com/hamtest> (create account to track progress)
 - b. Web based - <https://hamstudy.org/tech2022> (create account to track practice progress)
 - c. Android App – Ham Test Prep (check if this is 2022-2026)
<https://play.google.com/store/apps/details?id=com.iversoft.hip&hl=en>
 - d. iPhone/iPad Apps – Ham Radio Exam (check if this is 2022-2026)
<https://itunes.apple.com/us/developer/roy-watson/id581033712>
6. Testing locations
 - a. <https://hamstudy.org/sessions> - Both online and in-person
 - b. <http://www.arrl.org/find-an-amateur-radio-license-exam-session>
7. General Information and clubs
 - a. Larry's List (Kansas City Ham News email list) - <http://www.larryslist.info>
 - b. Ham radio clubs -
http://www.dxzone.com/catalog/Ham_Radio/Clubs/North_America/USA/
 - c. <http://www.larryslist.info/radio-organizations.html> (KC, Regional, and Nationwide)