

# I Got My License! Now What?

7 min read

It seems that when people are studying for their ham radio Technician license exam, they understandably get very focused on learning the material and passing the FCC exam. Suddenly, the Volunteer Examiner tells them “you passed” and the thrill of success bursts forth!

This is sometimes followed by the question: *I got my license, now what?*

The most general answer to this question is “find something you are interested in doing and do it.” For many new hams, this is easy— they just need to think about what got them interested in ham radio and follow that path. But other folks have this basic idea that they “want to do ham radio” but may not be sure how to actually get started. This article is to give you some ideas on what to do, assuming you have a Tech license and some basic 2m or 70 cm radio equipment.



Portable operating at Field Day as part of an ARES group.

If you haven't already connected up with some local radio hams, give that a try. Having someone to talk to about various ham radio activities can really help. If you have a radio club in the area, be sure to connect up with them and attend a meeting.

Here are some ideas for radio activity to help get you started (in no particular order):

## **Public Service**

Often people get interested in amateur radio to provide a service to the community. There are many opportunities to get involved in helping out with events such as walkathons, marathons, bike races, etc. Communications support may be provided by a ham radio club or, more likely, the local [Amateur Radio Emergency Service](#) (ARES) group. The [Radio Amateur Civil Emergency Service](#) (RACES) is another public service organization, normally associated with a governmental agency such as the county sheriffs department. Sometimes ARES and RACES are combined into one group. The ARRL has a [web page](#) that compares the two organizations.

Most ARES and RACES groups have some kind of “registration database” for you to sign up. However, it usually works best to reach out and find the local hams that are in charge of these groups and let them

know you are interested. Find out when they hold their meetings and on-the-air nets and join in. Make yourself visible and available.

## Emergency Communications



Often I hear new hams say they are interested in emergency communications or as the ARRL says *When All Else Fails*. They've heard about or experienced landline and mobile phones getting overloaded during blizzards, hurricanes and wildfires and want to have alternative communications. The [prepper community](#) refers to this as [SHTF](#).

Being prepared for emergencies boils down to two basic questions: 1) what are the conditions that you are preparing for? 2) who do you want to communicate with? Most likely, you need to be ready for a power outage of some duration, which implies the use of battery backup or a gasoline generator to power your radio equipment. Who you want to communicate with varies from just your immediate family over short distances to being able to contact other hams much further away. Thinking through the answers to these two questions will get you started on creating the desired communication capability.

## Find A VHF/UHF Repeater

A ham shack in your hand.

Another way to connect with the local amateur radio community is via VHF/UHF repeaters. These things are the *utility mode* for communicating locally.



## Develop Your Home Station

Many hams start out with a VHF/UHF handheld transceiver (HT), which gets them on the air quickly. This really is a *ham shack in your hand*, which is useful for many activities. By itself, the HT has limited range, so many hams are interested in extending its range. One thing you can do is attached an external antenna to the HT to give it greater radio coverage . This will increase your simplex range and allow you to hit more distant repeaters. Another thing to consider is establishing a VHF/UHF home base station which provides more output power to increase coverage.

## Single Sideband on VHF

While the majority of VHF operating is using FM, there is a whole 'nuther world out there in the *weak-signal* operating modes. We call this "weak signal" since we are often pulling signals out of the noise to make a contact. Signal Sideband (SSB) is the preferred voice mode when signals are weak since FM performs poorly when the signal level drops. You'll also find quite a bit of Morse Code CW (Continuous Wave) communication used since it is even better than SSB when the signals are weak.



Stu WØSTU operates SSB from a mountaintop using his portable VHF station.

To play with SSB, you need an all-mode transceiver that operates on VHF such as the Yaesu [FT-857D](#) or [FT-817ND](#). You'll also need to get a suitable antenna, one that is horizontally polarized and probably a yagi antenna with gain.

The 6m band is known as *The Magic Band* because it can suddenly come alive with signals bouncing off sporadic-e clouds in the ionosphere. On most days, 6 meters acts like any other VHF band with mostly local propagation. But when the sporadic-e hits (very common in the summer months), you can talk across North America. When the normal sunspot cycle is strong, we can also get F2 propagation, which allows contacts to be made into Europe, South America and Asia.

## Space Contacts

Another great use of the 2m and 70 cm bands is to contact outer space. The International Space Station (ISS) has a ham radio station on board and most of the astronauts have their amateur radio license. The primary use of this station is for contacts with schools as part of NASA education outreach mission. However, the astronauts sometimes decide to make contacts on their own time. It really depends on the interests of the astronaut and a few of them have really gotten into making random ham radio contacts. Also, very often there is a packet radio station transmitting from the ISS such that you can "digipeat" through the station to contact other hams on earth. It is even a fun exercise to see if you can successfully track the ISS and then hear the packet station transmitting. The ISS is in *low earth orbit* (LEO), so it is usually overhead for only 10 minutes or so, depending on the pass.



Bob operating OSCAR as PJ4/KØNR on the island of Bonaire.

Another type of space operation is using OSCAR ([Orbiting Satellite Carrying Amateur Radio](#)) satellites, which are basically repeaters in the sky. These satellites are also in LEO so you repeat through them to contact other hams while you both have the satellite within range. Some of these satellites use FM, so you can work through them using just a dualband (2m/70cm) HT and a small yagi antenna. It does take a bit of study and practice to track the satellites, figure out the right frequency, point the antenna and adjust for doppler shift. But that is what makes it a fun learning experience and radio challenge.

### Summits On The Air

The [Summits On The Air](#) (SOTA) program is a great combination of hiking and portable ham radio operating. The basic idea of SOTA is to operate from a designated list of summits or to work other radio operators when they activate the summits. The designated summits are assigned scoring points based on elevation with scoring systems for both *activators* (radio operators on a summit) and *chasers* (radio operators working someone on a summit).



Bob KØNR operates 2m FM using an HT and small Yagi antenna from Aspen Ridge in Colorado.

A basic VHF SOTA station is a handheld FM transceiver with a ½-wave telescoping antenna. The standard rubber duck on a handheld transceiver (HT) is generally a poor radiator so using a ½-wave antenna is a huge improvement. Just stuff the HT and antenna in a backpack along with the usual hiking essentials and head for the summit.



## Packet Radio and APRS

Some new hams are interested in digital communications via amateur radio. This is a great way to blend computer technology and radio communications. There are many ways to do this but packet radio is one of the most common on the VHF/UHF bands. Simply put, packet radio uses relatively slow speed modem tones (1200 or 9600 baud) fed into an FM transceiver using a Terminal Node Controller (TNC). The transmissions are in “packet form” using the AX.25 protocol, which is handled by the TNC. Think of it as “SMS text messaging before there was text messaging.”



APRS track of WGØAT as he ascends a SOTA peak.

One of the most common usages of AX.25 packet is the [Automatic Packet Reporting System](#) (APRS). APRS is quite versatile but the most common use is position reporting, with a robust set of internet-based mapping tools to plot the position of a particular ham radio stations. For example, the figure to the right shows the track of Steve WG0AT as he ascended a SOTA mountaintop in Colorado.

## Work the High Frequency Bands

I've mostly given examples of VHF/UHF operating, but a Technician license does give you some useful operating privileges on the High Frequency (HF) bands. In particular, Techs have voice privileges on 10 meters (28.3 to 28.5 MHz). When the sunspots are active, 10m is an awesome worldwide DX band. You literally can talk around the world. To do this, you'll need a transceiver capable of SSB on the 10m band and a suitable antenna. The antenna does not have to be exotic — a simple dipole or 1/4-wave vertical can do well.

If you get hooked on the fun of HF DX, then you'll want to start working on your General Class License. But that is a topic for another day.

-- Bob KØNR