

What to Do With Your Technician License



Get in the Game by Roving

Amateur radio offers dozens of activities to match your available time and personal interests. Here's a list of just a few of them. Pick your pleasure – or a few! – and get started.

Chase a Fox

Foxhunting, also known as *transmitter hunting*, *radio direction finding*, or *orienteering*, is a radio-based sport where it's your job to track down hidden transmitters. You can organize a foxhunt among your ham friends (one friend can be the fox, or you can buy an automatic fox like the Byonics Micro-Fox byonics.com/mf), or join in larger competitive events around the world. Email ardf@arrl.org for more information.

Get in the Game

The world of radiosport includes many contests on the VHF/UHF bands, where hams compete to see who can contact the most stations in a given amount of time (usually 24 to 48 hours). You can participate from a home station, or from the road in an activity known as *roving*. Check contestcalendar.com to find upcoming events.

HAMSPEAK

HF

High Frequency
Portion of the radio spectrum extending from 3 to 30 MHz, also called shortwave. Includes the 80 – 10 meter amateur bands.

UHF

Ultra High Frequency
Radio frequencies from 300 to 3,000 MHz.

VHF

Very High Frequency
Radio frequencies from 30 to 300 MHz.

FM

Frequency Modulation
The process of applying voice or data information to a radio frequency (RF) carrier by varying the carrier's frequency in a linear fashion, according to changes in the voice or data signal. It is highly resistant to interference from noise.

SSB

Single Sideband
A radio mode also known as "voice" or "phone."

Hit the Satellites

Talk through one of the many ham radio satellites with a 2-meter/70-centimeter dual-band radio, a dual-band antenna, and the help of apps like GoSatWatch, ProSat, and others. A satellite works like a flying FM repeater, relaying your signal hundreds of miles away. The action is often fast, furious and fun as hams try to make contact during a satellite's short window of availability (called a *pass*). The good news is, if you don't make it onto one pass, there's always another.

State Your Position

Connect a GPS receiver to your 2-meter FM transceiver and send your position coordinates and other information using the Automatic Packet Reporting System (APRS). It's a terrific tool for public service, and many FM transceivers have GPS and APRS capability built in. You can also add APRS to an FM transceiver with a GPS receiver and a tracker (also known as a *Terminal Node Controller* [TNC]) — see byonics.com/tinytrak4.

Use Your HF Privileges

Technicians have CW (Morse code) privileges on the 80, 40, and 15-meter bands — learn the code and hone your skills on the air. Techs also have SSB (single sideband) voice and digital privileges on the 10-meter band — despite solar conditions making this band a bit lackluster, string up a simple wire antenna and give 10 a listen once in a while. You never know what you might find!



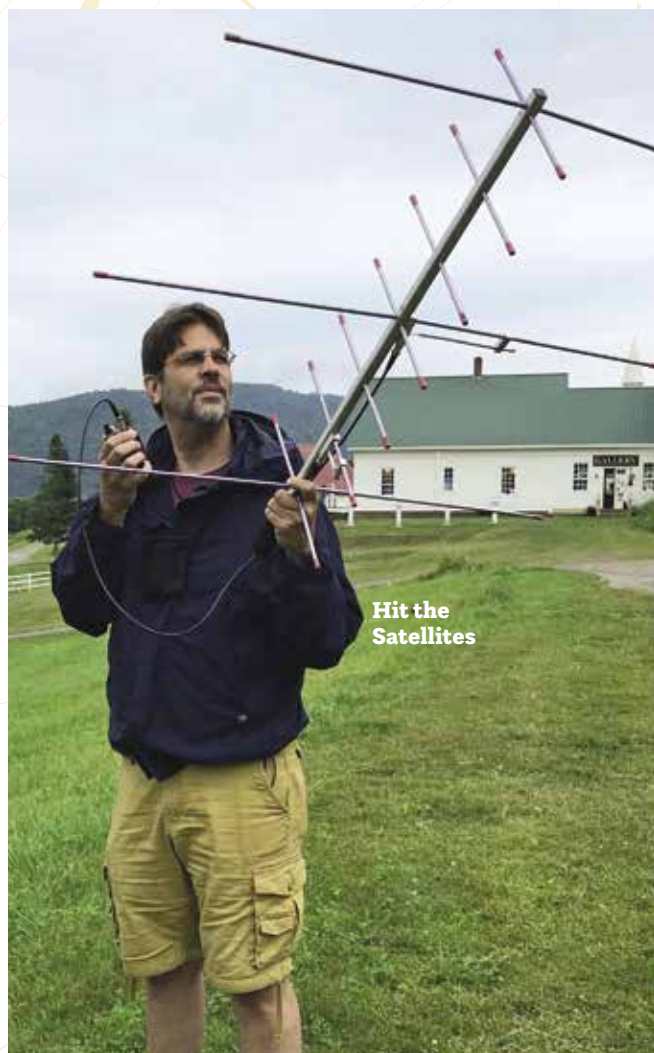
Use Your HF Privileges

Tap Into a Phenomenon

If you have a radio with capability for the 6-meter band, you have a window into a genuine mystery called *sporadic E*, a type of radio wave propagation that appears suddenly and without warning, and allows for long-distance communication over hundreds, or even thousands, of miles. No one really knows what causes sporadic E, but we do know that the occurrences (called *openings*) are usually in spring and early summer, and sometimes in December and January. Sporadic E sometimes shows up on the 2-meter band, but it's famous for occurring on 6, giving 6 meters the nickname, "the Magic Band."

Take a Hike

Hit the trail and bring a handheld or portable radio — a directional antenna can add to the fun. Head to a high-elevation area and see who you can contact. Bring a friend with a radio of their own, split up and use the radios to keep in touch on your adventures.



Hit the Satellites

The Right Antenna for the Job

For hikes and other outdoor activities, the so-called rubber duck antenna that came with your handheld transceiver will let you communicate over several miles, depending on the surrounding terrain. If you want greater range in all directions, consider a larger antenna, such as the ground-plane design described on page 16.

For radiosporting on VHF and UHF, including foxhunting, you'll want a directional antenna, such as a Yagi. Directional antennas focus your signal like a flashlight beam, maximizing your power and bringing in weak signals you wouldn't otherwise hear.

Satellite communication is best with directional antennas. Satellites are hundreds and even thousands of miles away, so you'll need a dual-band (VHF/UHF) directional antenna to concentrate your power.

On the HF frequencies, wire antennas such as the multiband dipole antenna described on page 19, are good choices. There are directional antennas for HF frequencies as well, but they are large and expensive. If you're not ready for that, a wire antenna will do just fine.