

Hot Tips

Good info for the new ham, and old stuff to refresh your memory



Setting up a remote station

Along with many others, you're interested in setting up an amateur station when traveling far outside of cell phone coverage and out of the reach of most repeaters. Your goal is typically the ability to reach a loved one, another ham, or help, in a moment of need. But yours is a special circumstance, because while it's *possible* to communicate by amateur radio on just about any band and by almost any mode, many setups are more *practical* than others.

Non-amateur solutions

Satellite phone has proven to be a reliable communication method away from civilization, but its subscription, phone rental, and setup costs are quite prohibitive to the average person. Some day satellite technology will bring us inexpensive internet from the sky, but until then, amateur radio is about all we have.

License upgrade

Since we're focused now on an amateur radio solution, you basically have two options: VHF repeaters or skywave over HF. In order to reach a distant repeater, you might need to use a directional antenna, like a Yagi, but assuming you aren't able to reach one at all, HF communication is your remaining option.

On HF frequencies, you can communicate by CW (Morse code) or some other mode. If you're not into CW, and you have a Technician class license, you'll need to upgrade to General in order to use other modes, such as SSB (single sideband). **Keep in mind that the distant person you communicate with also needs to hold a General class license.**

Required equipment

You're going to need an HF transceiver, one that allows two-way communication on at least the 80-, 40-, and 20-meter bands, which most

do. You'll also need a tuner, to make sure you're getting the greatest available signal out of your antenna. Many modern transceivers have tuners built into them. Finally, you'll need a power supply, but assuming AC power is either less-than-abundant or non-existent, you can rely on battery power for your needs.

Spares are also a good idea, as in, coax, connectors, antennas, and maybe everything.

Your antenna

Your HF antenna will be your key. I recommend using a fan or other multi-band dipole, instead of a vertical or beam (Yagi) antenna. The dipole is easy to install, and will help with nearby (within 400 miles) communication, while the others are designed for distant contacts, due to their low takeoff angles. Mount your dipole less than $\frac{1}{4}$ -wavelength above ground, to produce an NVIS effect.

Power

Last, but most importantly, your supply of energy will be your greatest radio station need. Go ahead and bring your hefty generator, but that should be your backup, not primary, electrical energy source, because you probably won't have an infinite fuel supply out there.

At an outpost like yours, a solar panel can be worth its weight in gold. The goal of using solar should be to use the energy supplied by your batteries, then rely on your panels to continually charge them through an MPPT-type charge controller. Your batteries should be *deep-cycle*, and provide enough Ah (amp-hours) to supply all your electrical needs when your radio is on. Then, you'll need to complement that with solar panels that can supply enough power to completely recharge all your batteries in one day.

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