

## What is Amateur (“Ham”) Radio?

It's the most fun you can have with a radio. It's a way to talk to people around the world, or even orbiting the world; to send e-mail without a direct internet connection; and to keep in touch with friends while you're driving around town. But it's also a very important communications system. When cell phones don't work, regular phones don't work, or the Internet doesn't work, ham radio works. When other systems are down or overloaded, ham radio still gets the message through. Ham radio is a “hobby” – that's the fun part that gets most people interested and keeps them on the air. But it's also a “service” - a vital service that has saved lives again and again when regular communication systems have failed.



Ham radio is the world's greatest hobby that can save lives. It's a hobby that instantly turns into a life saving service whenever there's a disaster or large-scale emergency. On September 11<sup>th</sup> 2001 ham radio helped keep New York City agencies in touch with each other after their command center was destroyed. When hurricanes like Katrina, Rita, and Wilma or tornadoes or floods knock out other communications, ham radio provides vital life-and-death capabilities. But 99% of the time, hams do what they do because it's just plain fun.

This unique mix of fun, public service and convenience is the distinguishing characteristic of Amateur Radio. Although hams get involved in the hobby for many reasons, they all have in common a basic knowledge of radio technology, regulations, and operating principles. They demonstrate this by passing an examination for a license to operate on radio frequencies known as the "Amateur Bands." These bands are reserved by the Federal Communications Commission (FCC) for use by hams in segments from just above the AM broadcast band all the way up into extremely high microwave frequencies.

## Who's the Typical Ham?



Amateur Radio operators come from all walks of life – movie stars, missionaries, doctors, students, politicians, truck drivers and just plain folks. They are all ages, sexes, income levels, and nationalities. But whether they prefer Morse code on an old brass telegraph key, voice communication on a hand-held radio, or computer messages transmitted through satellites, they all have an interest in what's happening in the world and they use radio to reach out.

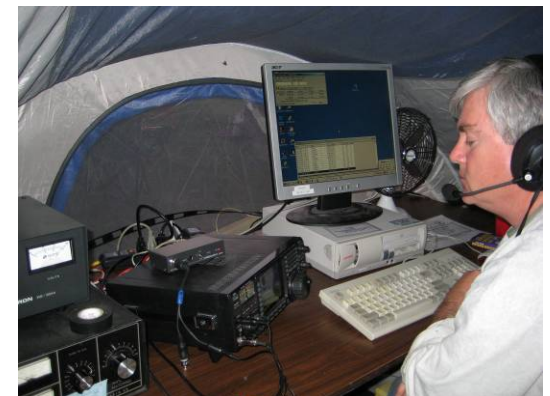
## What's the Appeal of Ham Radio?

Some hams are attracted by the ability to communicate across the country, around the globe, even with astronauts on space

missions. Others build and experiment with electronics.



Computer hobbyists enjoy experimenting in wireless digital communications. Those with a competitive streak enjoy "DX contests," where the goal is to see how many stations in distant locations they can contact. Some like the convenience of a technology that gives them portable communication. Others use it to open the door to new friendships over the air or through participation in one of more than 2000 Amateur Radio clubs throughout the country.



**Nashoba Valley Amateur Radio Club**  
**[www.n1nc.org](http://www.n1nc.org)**

## What Are the Amateur Radio Bands?

Look at the dial on an old AM radio and you'll see frequencies marked from 535 to 1605 kilohertz. That's the AM commercial radio band. Imagine that band extended out many thousands of kilohertz and you'll have some idea of how much additional radio spectrum is available for amateur, government, and commercial radio bands. It is here you'll find aircraft, ship, fire, and police communication as well as the so-called "shortwave" stations, which are worldwide commercial and government broadcast stations from the U.S. and overseas. Amateurs are allocated 26 bands (specific groups of frequencies) from 1.8 Megahertz (just above the broadcast radio frequencies), all the way up to 275 Gigahertz! Depending on which band hams use they can talk across town, around the world, or out to satellites in space. Hams can even bounce signals off the moon!

## Do Hams Still Use Morse Code?

Yes, but they don't have to. Although the FCC eliminated the licensing requirement for Morse Code in 2007, many hams enjoy communicating in "CW" and will continue to do so for a long time. Hams have many ways to use their radios, from Morse, voice, and radioteletype to television, data, and digital voice. Each Radio Amateur is free to select the modes that are fun for them.

## What do Amateur Radio Operators Do During and After Disasters?

Amateur Radio operators set up and operate organized communication networks locally for governmental and emergency officials, as well as non-commercial communication for private citizens affected by the disaster. Amateur Radio operators are most likely to be active after disasters that

damage regular lines of communications due to power outages and destruction of telephone, cellular, and other infrastructure-dependent systems.

Amateur Radio is recognized as a resource by national relief organizations. Local Emergency Management Directors can organize Amateurs under the Radio Amateur Civil Emergency Service (RACES). Amateur Radio operators are also organized through the Amateur Radio Emergency Service (ARES), which is coordinated through the American Radio Relay League, and Skywarn, which supports the National Weather Service. Amateur Radio operators also support relief organizations such as the Red Cross and Salvation Army.

## Where Can I Learn More

Talk to a member of a local Amateur Radio club!

The Nashoba Valley Amateur Radio Club meets the 3<sup>rd</sup> Thursday of the month (September through June) at the Pepperell Community Center. The Center is at the junction (rotary) of Routes 111 and 113 in Pepperell, MA. Meetings are a mix of technical presentations, socializing, and hams helping hams. We also hold a "Tech Night" the 2<sup>nd</sup> Thursday of the month to discuss technical subjects, test, repair, and build projects.

For more information see:

[www.arrl.org](http://www.arrl.org) The American Radio Relay League  
[www.n1nc.org](http://www.n1nc.org) The Nashoba Valley Amateur Radio Club.

*Much of this text is from the American Radio Relay League, the national association for amateur radio.*

Photo credits: NVARC members W1ESR, KD1LE, and KD1SM

## Amateur Radio: Hobby of a Lifetime and a Public Service



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Amateur Radio Club**

[www.n1nc.org](http://www.n1nc.org)  
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