

How do I?



**American
Red Cross**



Community Emergency Response Team (CERT)

An occasional series

This week Giving back via Emergency Communications:
How to get started

Long time readers of this space will see many articles on radios, antennas, as well as other tips and tricks for operating have been posted.

See <https://www.radioclub-carc.com/resources/> for more articles.

Amateur Radio is a licensed service. Many amateur radio operators “give back”: by using their license privileges for public service, typically through one of the many emergency radio communications services.

Amateur Radio and emergencies have been together since before the *Titanic* sank in April, 1912. One of the reasons amateurs have licenses is claimed interference by mariners and the US Navy from amateur operators. Initially Amateur Radio licensing was controlled by the Navy.

Most disasters are local. Boots on the ground relief generally covers a pretty small area. Even large scale disasters such as the Great Chicago Fire of 1877, the Johnstown Flood of 1899, The 1900 Galveston Hurricane, The San Francisco Earthquake in 1906, Hurricanes Diane, Agnes, Katrina, even the events of 9/11 in 2001 did not require a physical “boots on the ground” presence outside the devastated zone.

Royal Kramer, W3ZIF recalls participating as a teenager with his local radio club to provide VHF radio services in the aftermath of Hurricane Diane in 1955. To listen to his tales, it was “come as you are” radio and none of them had much of an idea how to best do what needed to be done. Starting around 1970, radio communication, both in the public emergency management sector and in the amateur service, became more formal. In the public sector, radio communications became more modern and more widespread. This aided innovations borrowed from the military such as helicopter transport of trauma patients, Paramedics with formal, almost Licensed Nurse-Practitioner level skills, far above ordinary first-aid training. County emergency communications centers and the 911 system were established. Mutual

aid among fire companies became more formal. A far cry from the days when volunteer fire fighters used to occasionally have brawls to determine which company put the fire out, while too often the building they were trying to save burned to the ground.

Amateur Radio operators were recognized as a vital adjunct to the professionals when communications failed. These were infrequent events. The Civil Defense battalions my grandfather participated in post WWII were defunct. There was no need for many agencies to maintain equipment and devote manpower to be ready for rare events. Which is a better return on the dollar? Being prepared for the everyday fire, car crash or occasional basement pumping, or having people sitting around, without the skills for day-to-day operations but ready when “all else fails?” As a character in Collins & LaPierre’s *The Fifth Horseman* says: “Every year I go to Washington, DC and genuflect on the altar of nuclear holocaust so I can get the money I need to buy generators for when the power goes out”.

But sometime in the 1980s, the amateurs began to be pushed aside. Professionals Only - please. The terrible events of September 11, 2001 changed that and Hurricane Katrina reinforced the idea that there were not enough professionals and the amateurs would be needed.

So, this sounds interesting. How do I start? Just get a “\$30 hand held radio” and head to the scene?

Nope. Absolutely not.. Being an emergency communicator requires course work, discipline, hours of training and drills and a commitment to be there when needed. Most county emergency managers have agreements with one, sometimes more, local clubs to provide services. The clubs may get access to free meeting rooms at the county emergency operations center for not only training but their monthly meetings. They may get permission, and the county may even pay the fees to co-locate amateur repeaters on the same towers as the county communications antennas. They may be allowed to use the county emergency operations center to operate in the ARRL Field Day in June. But in exchange, when the county calls, they need to provide people. These drills often occur on weekdays. Some on weekends. There is a time commitment. They may last 12 or 24 hours for a large scale drill practicing for “the big one”.

Ok....I get that, but I have a radio, that’s all I need, right?

No, absolutely not. Step one is to find your local organization and learn their requirements.

The most basic organizations, depending on your interests and abilities, are:

Community Emergency Response Team (CERT).

CERT teams went mainstream as a result of 9/11 and Katrina. FEMA, the Federal Emergency Management Agency, was bitterly criticized for its response to Hurricane Katrina. FEMA was designed to *manage* disasters. Contrary to the beliefs of victims, politicians and the media, FEMA is designed to help with pre-disaster planning and providing money to state and local government post-disaster. FEMA does not, and was never deigned to, pluck people off rooftops. FEMA was helpful in determining a civilian had to be able to fend for themselves

for 48 hours after a disaster. They have since doubled that.

CERT teams are local. When forming their first teams in 2003, my township wanted one team in every housing development.

A CERT team is 10 people. The organization chart is similar to a special forces A-Team.

- The CERT Leader/Incident Commander. Not to be confused with the next entry.
- The Team Leader who seems to act as a non-commissioned officer and is also the communicator.
- The Safety Officer makes sure everyone is properly equipped and checks the scene for changing hazards.
- There is a two person fire suppression team.
- A two person search and rescue and extraction team.
- There is a two person medical triage team.
- And, a two person medical treatment team.

Just like the Civil Defense battalions of the 1950s, the CERT team is a Swiss Army knife of aid. Find you, extract you, treat you, all the while putting out the fire. Just reading the FEMA description, it is clear you need a lot of medical training and specialized training. It is also clear that, like a special forces A team, the team is designed to *manage* civilian volunteers. If there is an earthquake, the professional EMT may not be able to get to work, but could certainly assist the CERT team triage and treatment elements. The CERT team is clearly a light fast reaction force. It is not designed for heavy duty rescue or an extended deployment. That is a niche the disbanded Civil Defense battalions performed well. The battalions were a civilian version of US Army light and heavy engineer battalions and had the manpower and equipment needed for a long mission. As I recall, the CD light battalions had small dozers up to about a Caterpillar D-4 and cranes up to 10 ton or so. The heavy battalions had dozers up to a Cat D8 and cranes up to 50 tons.

CERT training will be a mix of individual study and formal training. Training often begins with a 6 or 9 week course covering team operation, basic fire-fighting and first aid, search and rescue, etc. Advanced training is available for those seeking to become more specialized or move into higher leadership levels. CERTs are organized at the county level. Think of the county as a battalion, the township as a company and each team or cluster of teams makes up the squads and platoons.

Wow, that sounds like a lot of work. I just want to use my radio to help. What else can I do?

Your local radio club may be affiliated with ARES or RACES.

- ARES is the ARRL sponsored **A**mateur **R**adio **E**mergency **S**ervices. Volunteers must have an amateur radio license and be able to deploy for extended periods to provide radio communications. Your family must be able to cope with you being gone. You may have PTSD when you come home.
- RACES - the **R**adio **A**mateur **C**ivil **E**mergency **S**ervice is operated by FEMA and the FCC. It is much like ARES except that you must be certified by a civil defense agency, and when needed, local, county or state government will activate RACES. There will be frequent drills and exercises.

Both ARES and RACES are built around the National Incident Management System, NIMS. NIMS provides a template for operations and standard forms and procedures. To prevent errors, many of the ARES and RACES communications use digital modes found in the FLDIGI suite to transmit reports. The FLMSG utility has the standard ICS [Incident Communications System] forms. ICS training courses are required to operate as part of ARES and RACES and many CERT teams.

OK, so I found a local group, and became CERT/ARES/RACES qualified. What else can I do?

Congrats! Have you thought about assisting your local **Red Cross**? The Red Cross and amateur radio have an off again-on again relationship. In 2013 they stopped using amateur radio as part of their response arsenal. In 2017 it was back. The ARRL and Red Cross have a memorandum of understanding that the Red Cross will accept ARRL trained, licensed operators as volunteers and lays out the guidelines and expectations for both. The Red Cross, perhaps because of their off again relationship, tends to use its own forms. FLMSG has those templates built in as well. Red Cross training is above and beyond any CERT, ARES, RACES or ICS training you have previously completed.

But I just want to help...I don't want a lot of training.

You are pretty much out of luck. One thing you can do is participate in the Mennonet. The Mennonet is the amateur radio portion of the MennoNet.com which is a Mennonite reflector used by the church for all kinds of activities. The amateur radio net meets Tuesday at 8:30 p.m. local EST on 75 meters, typically at 3.947 MHz following the Virginia Fone Net. Some Mennonet members are in both groups. The Mennonet is used as an information relay. Because of the nature of HF, it is not used to facilitate on-scene communications. Instead it is used to provide updates on activities of the Mennonite Central Relief Committee. Typical reports may be: 15 carpenters are needed in Durango, CO to assist in building new homes for flood victims. Or we need 50 people in Biloxi, MS to help clean up debris after flooding.

The Mennonet Amateur Radio Service has an active Facebook page. Mennonites, Anabapists and Christians are all welcome.

What equipment do I need?

Before you buy anything, check with your local CERT Team or ARES/RACES group. Many CERT teams were promoting General Mobile Radio Service (GMRS) radios as they felt they were capable enough for on-scene communication, could reach the next level headquarters

via repeaters, were simple to use and required only a \$35 license. I believe a well-equipped team has a communicator able to use amateur radio for outside the scene communications.

You will need familiarity with computers, especially the FLDIGI and VARA software packages and Winlink.

This sounds like a lot of work!

Yes, yes it is. But it can be very rewarding and even fun. You will put in a lot of hard work, but meet some interesting people and perhaps have stories to tell your grandchildren.

More information:

| Organization or Topic | Resource |
|---|---|
| RACES | http://www.usraces.org |
| ARES | http://arrl.org/ares/ |
| CERT | https://fema.gov/emergency-managers/individuals-communities/preparedness-activities-webinars/community-emergency-response-team |
| Emergency Management Institute National Incident Management System (NIMS) | https://training.fema.gov/nims/ |
| General preparedness | https://ready.gov/ |
| American Red Cross | https://www.redcross.org/take-a-class/disaster-training/ |
| FLDIGI application suite | http://www.w1hkj.com/ |
| FLDIGI Download | https://sourceforge.net/projects/fldigi/ |
| VARA16 EA5HVK | https://rosmodem.wordpress.com/ |
| Downloads Winlink | https://downloads.winlink.org/VARA%20Products/ |
| Winlink Winlink Global Radio Email | https://winlink.org/ |
| ICS courses Emergency Management Institute National Incident Management System (NIMS) | https://training.fema.gov/nims/ |

Catch 'ya on the air!