

Amateur Radio Disaster Services

When all normal means of communications fail!

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Support Amateur Groups



Almost since the beginning of radio in 1899, when Marconi sent the first signal across the English channel, Amateur radio operators began their hobby of communicating by means of radio. First with spark-gap transmitters, then as the technology progressed so did the hobby. Being that many of the engineers and others involved in all aspects of this new technology held Amateur operators licenses, their work spilled over into Amateur radio community. Many of the early amateurs made contributions to the world of electronics and radio communications simply by doing what Amateurs have always done. Experimentation!



In 1902 the first amateur radio club; The Junior Wireless Club of New York City, was organized, and over the following years, radio clubs began to pop-up across the nation as more people were introduced to the world of Amateur radio.

Just think of what it was like, No television, broadcast radio, DVD's CD's and very few telephones. Living in a rural areas where neighbors might be 10 miles or more away, and going to town to shop was an all day event. The idea of communicating with someone fifty to one hundred miles away must have been very appealing. Even in those days when voice communications was still a dream and people talked by means of Morse code. Over the years between the first amateur radio call and World war II, the number of amateur operators grew to over 60,000 in the US alone.

In 1913, a severe windstorm knocked down power and telegraph lines in the Midwest, which brought about a blackout that lasted a few weeks. In those days, Amateur operators used batteries to power their equipment. Since they were among the few that had the ability to transmit, amateur stations handled routine and emergency traffic until power and normal communications were restored. This was the first documented case of emergency communications by amateurs in the United States. Due to the large population, and vastness of our country, we were the first country to use radio amateurs as a backup means of communications to serve the nation in case of disaster such as hurricanes, severe weather, tornado's or other emergency situations.

At the start of hostilities on December 7th, 1941 the U.S. had over 60,000 licenses

amateur radio operators. Among them approximately 25,000 served in the armed forces, and another 25,000 helped in the war industries or were enrolled as instructors in military schools. With a background in electronics, and creating their stations from scratch with hand turning coils and home designed and build antennas.

These people did not escape notice of the military as they realized that these men were an untapped resource that would become a vital part of the war effort. Those that were rejected by the draft due to age or disability were recruited as either civilian or military communications instructors. In this and other ways, our Amateur radio operators once again served their country in its time of need.

After World war II. FM voice communications became common-place and with all advancements in communications such as repeaters made their way to the Amateur radio service. The repeater introduced a new advantage to mobile and portable radios. By placing the repeater antenna several hundred feet in the air, and having a power output of 50 to 75 watts, they increased the 8 to 10mile clear range of a mobile to 40 miles or more.



Having the ability to communicate by voice from their automobiles and hand held radios over long distances, Amateur operators became the eyes of their local radio and television stations during severe weather. These advancements in the Amateur Radio Service did not escape the attention of the National weather Service.

In the 1970's the National weather Service recognized the ability of amateur operators to become their eyes in the field. So a program to recruit and train Amateurs in identification of severe weather. Before there was Doppler and NEXRAD radar, there were Amateur radio operators in the field serving as first line of warning of severe weather to protect lives in their communities.

In the years since that first use of Amateur radio in a emergency, a networks of volunteers has arose to answer the call to provide communication *when all normal means of communications fail!* These organizations are;



ARES (Amateur Radio Emergency Service) a volunteer group of Amateur radio operators sponsored by the ARRL ([American Radio relay League](#)).



MARS (Military Affiliate Radio System) In November, 1925, the (AARS) Army Amateur Radio System was initiated by a few dedicated pioneers in the United States Army Signal Corps led by Capt. Thomas C. Rives. His original intention was to enlist the talents of volunteer Amateur Radio operators as a source to train soldiers in the then new technology of radio as well as pursuing radio research and development to improve radio equipment used within the U.S. Army. His efforts were very successful, and today each service of the Armed Forces has its own MARS operations.



RACES (Radio Amateur Communications Emergency Service), an organization created in 1952 by the D.O.D. (Department of defense) primarily to serve in civil defense emergencies. RACES provides essential communications and warning links to supplement State and local government assets during emergencies. today, RACES is over-seen by **F.E.M.A.**, the (Federal Emergency Management Agency)



Skywarn (NWS Weather Service Spotters) was founded in 1971 by the National weather service to train Amateurs to spot and report severe weather to the NWS. Skywarn volunteers are not Storm Chasers as might be seen on television shows on the Discovery Channel or TLC. These Amateur operators volunteer their time to gain certification as a Storm spotter by the NWS, and perform their primary duties to watch the skies in their area and report potentially severe such as growing thunderstorms, or tornadic weather conditions to the National Weather Service.



ARDS (Amateur Radio Disaster Services) operators that work with their Local OEM (Office of Emergency Management), and American Red Cross to provide communications during and after a disaster.

Over the past 90 plus years, Amateur radio operators have assisted their communities and country in during many disaster. Providing reliable communications to disaster relief organizations at a moments notice. Below is a very short list of events Amateur radio operators have provided operators and equipment during, and in the aftermath of Disasters. To list all of the times Amateurs have volunteered their time and equipment to provide communications would fill a book. So here are only a few of those times.

1961 Hurricane Betsy in Louisiana "Category 3"

1979 Hurricane Frederic "Category 3"

1985 Hurricane Elena "Category 3"

1989 Hurricane Hugo in South Carolina "Category 5"

1989 Hurricane Hugo in Southeast Louisiana "Category 3"

1989 Loma Prieta, California earthquake

1991 The wildland-urban Oakland/Berkeley fire

1992 Hurricane Andrew in Florida in

1993 Mississippi and Missouri River floods

1993 Southern California fires

1994 Northridge, Los Angeles earthquake

1995 Hurricane Opal "Category 3"

1995 floods of the Carmel and Salinas Rivers

1998 Support the Hurricane Mitch flood relief effort in Central America.

1999 Relief support and, Hurricane Floyd

2001 New York Terrorist attack on the Twin towers

Preparing For Disasters

In many areas of our country, cities, counties, and states are inviting amateur radio operators to volunteer their services in normal times in order to prepare for disasters. One of these cities is Martinez, California where the Chief of Police is also the Disaster Preparedness Director, (Boyd, 1991). The City Council decided to get a 30-foot motor coach and equip it as a mobile-command vehicle, called Control II. It is equipped with amateur TV, HF, VHF, SSB, and packet.

A county in Missouri has a highly active organization of ARES and RACES amateurs. The amateurs are organized much like a volunteer fire services. They provide a mobile command post for communications support for floods, blizzards, search and rescue , hazardous chemical accidents and tornado spotting for the National Weather Service.

What can you do to help?

Around our country, there are many groups that are attempting to raise funds to equip trailers and vans with the equipment they will need the next time a disaster strikes. But they might not be ready when they are needed without your support. If you wish to support your local Amateur radio group, contact your local Red Cross to find out the contact information for the Amateur radio group in your area. Radio amateurs provided the initial communications between the county **E.O.C.** (Emergency Operations Center) **State O.E.M** (Office of Emergency Management), hospitals, Red Cross chapters, shelters, mass care and damage assessment units in the field.and local law enforcement.

However, there are a few important things you need to know before donating to any organization.

1. You should only contribute to organizations which hold a current 501c3 non-profit status with the IRS.
2. Ask where and how the money is being used. Ask for a list of the equipment they are planning to purchase. Ask for a list of the equipment they are planning to purchase. Ask for a list of the equipment they are planning to purchase.

working with their any of these organizations..

3. Ask where and for what your donation will be used for. All legitimate groups have a short and long term plans for the monies they raise, and the equipment they are planning to purchase.
4. One of the best ways is to get you Amateur license and join your local group. remember, money helps purchase equipment, but all of the radios in the world will do no good if there is no one to operate them when a disaster strikes.

The one point I hope you understand after reading this article is that without your help by donating or volunteering, is the day may come when a life saving message will need to be transmitted, and there will be no one there to send it. And it could be the live of someone you love.

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Other Amateur radio informational resources on the Internet.

History of Amateur Radio	Amateur Radio History	SKYWARN
Becoming an Amateur	MARS 1951 Article	MARS History
FEMA - R.A.C.E.S.	Amateur Radio Service	NASA ARC
Ham Radio's Influence	What is Amateur Radio?	FCC Amateur Service

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