



Topic 13: Amateur Radio Service Support to Public Safety Communications¹

To this point in our Tech Topics series, our discussions of public safety communications have focused primarily on interoperability and various methods and technologies for public safety organizations to communicate with one another. In times of emergency when normal public safety communications are not available, there are alternative systems that may be used for this purpose. Current FCC rules state that amateur stations and operators are allowed to assist and support public safety communications in times of emergency. This topic addresses the voluntary services provided by amateur operators, amateur service organizations and the relationships between amateur service organizations and public safety jurisdictions. Information about amateur services is also briefly described in the Public Safety and Homeland Security Bureau's Amateur Radio Services web page.²

Amateur radio (also known as 'ham radio') services are regulated under Part 97 of the FCC rules.³ Amateur radio operators are licensed users who operate radio communications as a hobby or a voluntary service running within amateur radio frequencies allocated by the FCC⁴. To acquire an amateur radio license, individuals are required to pass a licensing exam that proves the individual possesses the operational and technical qualifications required to properly perform the duties of an amateur service licensee [47 CFR 97.503]. Currently, individuals may qualify for three classes of operator license: Technician, General and Amateur Extra.

When normal communications systems are not available, amateur stations may make transmissions necessary to provide essential communication needs in connection with the immediate safety of human life and immediate protection of property [47 CFR 97.403]. This provision of emergency communications is regulated by Part 97, Subpart E of the FCC's rules. One advantage for amateur radio operators in public emergency communications is the wide range of available frequencies [47CFR 97.407].⁵

One service within the amateur radio services that uses amateur stations during periods of emergencies is known as the Radio Amateur Civil Emergency Service, or RACES.⁶ To transmit in RACES, an amateur station must be certified and registered by a civil defense organization or an FCC-licensed RACES station. RACES is administered by the Federal Emergency Management Agency (FEMA) and acts as a communications group of the government. Registered members of RACES are authorized to respond when a civil defense organization requests amateur radio assistance. Typically these activities occur during periods of local, regional or national civil emergencies such as hurricanes, earthquakes, floods or wildfires. RACES stations may only communicate with specified stations [47CFR 97.407(c), (d)].

It is important to recognize that the amateur radio stations participating in RACES are certified by their local civil defense organizations for this specific purpose. The operators are a valuable resource that provides emergency communication capabilities to their community. Civil defense organizations establish their own training and certification standards. Some localities – for example, Arlington County, Virginia⁷ - have more stringent training and certification standards than others. The key component of the RACES program is the direct and recognized affiliation between the amateur radio operators and local authorities since RACES may provide a critical alternative communications link for local officials. For example, RACES operators serve the county by passing critical emergency information from county officials with the County Emergency Response Team (CERT) to RACES operators at other locations.

Although RACES stations operate in conjunction with a federal, state, tribal or local jurisdiction, there are other options for amateur radio operators in emergency communications to include the Amateur Radio Emergency Service (ARES). Together with the National Traffic System (NTS), these services are broad programs of the American Radio Relay League (ARRL) which is a national association of radio amateur operators. ARES members are licensed amateur radio operators who volunteer to provide emergency communications services to public safety and public service organizations. Most individual ARES units are organized within a city, county or state and usually operate autonomously. The ARRL describes the ARES programs as follows: ⁸

"The Amateur Radio Emergency Service (ARES) consists of licensed amateurs who have voluntarily registered their qualifications and equipment for communications duty in the public service when disaster strikes. Every licensed amateur, regardless of membership in ARRL or any other local or national organization, is eligible for membership in ARES. The only qualification, other than possession of an Amateur Radio license, is a sincere desire to serve. Because ARES is an amateur service, only amateurs are eligible for membership. The possession of emergency-powered equipment is desirable, but is not a requirement for membership."

Frequently, individuals interested in providing emergency communications are registered in both ARES and RACES. Dual registration allows continuity of operations if normal amateur operations might otherwise be prohibited.

RACES and ARES are collaborative services although they exist as separate volunteer entities. The ARRL encourages dual enrollment and cooperative efforts between both groups whenever possible. Both organizations remain a vital resource for the public safety community in times of crisis.

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² See <http://www.fcc.gov/pshs/services/amateur.html>.

³ See http://www.access.gpo.gov/nara/cfr/waisidx_07/47cfr97_07.html.

⁴ See FCC Part 97, Subpart D, Section 97.301 of the Commission's rules, 47 C.F.R. Â§ 97.301.

⁵ See the ARRL band plan at <http://www.arrl.org/FandES/field/regulations/bands.html>.

⁶ See FCC Part 97, Subpart E, Section 97.407 and <http://www.usraces.org/>.

⁷ See the Arlington County RACES web site <http://www.w4ava.org>.

⁸ See <http://www.arrl.org/FandES/field/pscm/sec1-ch1.html>