

Alternate Methods of Communication

Waller County ARES training material used with permission from Christine Smith, N5CAS.

There will be times when some form of communication other than Amateur Radio might be more appropriate. Remember that your job is to communicate. Here are some possible situations:

- The need to communicate with non-ham volunteers or emergency management personnel.
- The transmission of sensitive or lengthy information.
- Communication with the public.
- The Amateur Radio equipment has failed or is not available.
- Interference is blocking use of Amateur Radio frequencies

Legal Thoughts

Regarding Licenses:

1. Some radio services require licenses, and others do not. In a true emergency as defined by the FCC, this may not be a problem. FCC rules gives anyone permission to use "any means necessary" to communicate in order to protect life and property -- but only when no other normal means of communication is possible. Don't assume that this means you can just modify your radio and call for help on the local police frequency the next time you see a car crash on the highway. If you are in a position to save someone's life or property, be sure you are ready to defend your actions - and possibly lose - before your transmission.
2. Other services, such as GMRS, require a license that is relatively easy to obtain. If you plan to use licensed radios, you need to obtain a licenses well before any emergency and keep it current. If you own a radio, but no license, a judge could claim pre-meditation if you use it and disturb licensed users.

Regarding Modified Ham Radios:

While it may be easy to modify many VHF and UHF Amateur radios for operation in nearby public service and business bands, but it is not legal to do so. Radios in those bands must be "Type Accepted" by the FCC for the purpose, and Amateur radios are not. If you plan to use other radio frequencies discussed in this unit, it is better to purchase the proper radio. However, if the need arises and your ham radio is all you have, the FCC will probably not prosecute you for using it - if the use falls within their strict rules for emergencies.

Other Radio Services:

General Mobile Radio Service (GMRS):

GMRS is a high power (50 watt), personal-use UHF FM radio. Each station license covers only the licensee and their immediate family, but stations of different licenses are permitted to talk to one another. 462.675 MHz is designated by the FCC as an emergency and traveler's information channel, and is monitored by REACT in many cities. Seven GMRS channels are shared with the Family Radio Service, but communication between GMRS licensees and FRS users is not

permitted except in an emergency. Previously, businesses could license GMRS systems to communicate with employees. This use of GMRS is grandfathered for pre-existing licensees only.

Family Radio Service (FRS):

The Family Radio Service uses inexpensive, half-watt, UHF FM radios on 14 channels. Range can be up to two miles. These are becoming quite popular with the public, and could be a good means of communication with stranded or isolated persons a short distance away. REACT recommends the use of FRS channel 1 for emergency and calling use, but the FCC has declined to make this official. Voice-scrambling is permitted on FRS, and is available in a few models. This might make it useful for short-range transmission of sensitive information.

Citizen's Band (CB):

27 MHz AM CB radio is familiar to almost everyone. A lot of the general public still have CB radios in their vehicles, especially truckers. Since disaster relief supplies often arrive by truck, being able to communicate with and direct an incoming truck on channel 19 could be quite useful. In addition, the longer range of CB makes it useful for receiving calls for assistance on emergency channel 9 from more distant stranded or isolated persons.

Multiple Use Radio Service (MURS):

This is a relatively new radio service, intended primarily for business users, but it can be used for any legal purpose under current rules. There are five MURS channels in the VHF business band. No license is required, and transmitters are limited to two watts output. This service is perfect for establishing short-range communication with non-licensed personnel at an incident scene, command post, or within an EOC.

Public Safety Radio:

Despite the earlier warning, there are instances where the use of police and fire radio frequencies is possible. The agency itself might allow and train you for such use, or an individual officer may ask you to use his radio to call for help when he cannot. Keep your transmissions short and to the point. Do not tie up the channel with long explanations, and cease transmitting if they tell you to.

Cellular Phones:

In a widespread disaster situation, these phone systems can quickly become overloaded. In smaller emergencies, they may still be usable. If a message is too sensitive to send via any two-way radio, try your cell phone. Cellular phone transmissions, especially digital, are considerably more secure. In addition, it is possible to send data or fax transmissions over the cellular network at slow speeds.

Non-Radio Communication

Landlines:

Do not forget the most obvious means of communication. If they are still functioning, use the telephone and fax whenever the message might be too sensitive for radio. Fax is also useful for sending long lists, and where accuracy is critical. Do not tie up a radio frequency sending a long list of supplies if a fax is available.

Couriers:

For many, many years, runners have carried messages from place to place. When we are asked to deliver a message with contents that are sensitive or very lengthy, and fax and phone lines are out of service, hand delivery might be the best choice. Acting as a courier does not eliminate the use of radio, since couriers need to be dispatched from place to place.

Here are some links to web sites with information regarding some of the radio services we discussed tonight:

- Multiple Use Radio Service (MURS) rules <http://www.provide.net/~prsg/murshome.htm>
- Family Radio Service rules <http://www.provide.net/~prsg/frs-home.htm>
- General Mobile Radio Service (GMRS) rules <http://www.provide.net/~prsg/part95ae.htm>
- Citizen's Band (CB) rules www.reactintl.org/rules-cb.htm
- For a detailed discussion of the FCC Rules on Amateur Radio emergency communication, please see the ARRL *FCC Rule Book*, Chapter 5.