

Learning Unit 6Basic Communication Skills
ARECC**Objective:**

This evenings training introduces communication skills that are specific to emergency communications operations, and helps you understand differences from normal Amateur Radio operations.

Information:

As Ares/Races emergency communicators we must do our best to get every message to its intended recipient, quickly, accurately, and with a minimum of fuss. A number of factors can affect your ability to do this, including your own operating skills, the communication method used, a variety of noise problems, the skills of the receiving party, the cooperation of others, and adequate resources.

Why Are Emergency Communication Techniques Different?

Life and death communications are not part of our daily experience. Most of what we say and do each day does not have the potential to severely impact the lives and property of hundreds or thousands of people. In an emergency, any given message can have huge and often unintended consequences. An unclear message or one that is modified, delayed, mis-delivered, or never delivered at all can have disastrous results.

Listening

Listening is at least 50% of all communications.

Discipline yourself to focus on your job and "tune out" distractions. If your attention drifts at the wrong time, you could miss a critical message.

Listening also means avoiding all unnecessary transmissions. A wise person once said, "A man has two ears and one mouth. Therefore he should listen twice as much as he talks." While you are asking, "when will the cots arrive?" for the fourth time that hour, someone else with a life and death emergency might be prevented from calling for help.

Sometimes the job of listening is complicated by noise. You could be operating from a noisy location, the signal might be weak, or other stations may be causing interference. In each of these cases, it helps to have headphones to minimize local noise and help you concentrate on the radio signal. Digital Signal Processing (DSP) filters and other technologies may also help to reduce radio noise and interference.

Microphone Techniques

Even something as simple as using your microphone correctly can make a big difference in intelligibility. For optimum performance, hold the mic close to your cheek, and just off to the side of your mouth. Talk across, rather

than into, the microphone. This will reduce breath noises and "popping" sounds that can mask your speech.

We should always speak in a normal, clear, calm voice.

Raising your voice or shouting can result in over-modulation and distortion, and will not increase volume at the receiving end. Speak at a normal pace; rushing your words can result in slurred and unintelligible speech.

Pronounce words carefully, making sure to enunciate each syllable and sound.

Radios should be adjusted so that a normal voice within 2 inches of the mic element will produce full modulation. If your microphone gain is set so high that you can achieve full modulation with the mic in your lap, it will also pick up extraneous background noise that can mask or garble your voice.

"Voice operated transmission" (VOX) is not recommended for emergency communication. It is too easy for background noise and off-air operator comments to be accidentally transmitted, resulting in embarrassment or a disrupted net. Use a hand or foot switch instead.

When using a repeater, be sure to leave a little extra time between pressing the push-to-talk switch and speaking. A variety of delays can occur within a system, including CTCSS decode time, and transmitter rise time. Some

repeaters also have a short "kerchunk" timer to prevent brief key-ups and noise from keying the transmitter. It also gives time for some handhelds to come out of the "power-saver" mode. Leaving extra time is also necessary on any system of linked repeaters, to allow time for all the links to begin transmitting. These techniques will ensure that your entire message is transmitted, avoiding time-wasting repeats for lost first words.

Lastly, we should always pause a little longer than usual between transmissions any time there is a possibility that other stations may have emergency traffic to pass from time to time. A count of "one, one thousand" is usually sufficient.

Brevity & Clarity

All on the air communications should consist of only the information necessary to get the message across clearly and accurately. Extraneous information can distract the recipient and lead to misinterpretation and confusion. If you are the message's author and can leave a word out without changing the meaning of a message, leave it out. If the description of an item will not add to the understanding of the subject of the message, leave it out. Also we should never use contractions within our messages. Words like "don't" and "isn't" are easily

confused. If someone else has drafted the message, work with the author to make it more concise.

Make your transmissions sound crisp and professional, like the police and fire radio dispatchers and the air traffic controllers. Do not editorialize, or engage in chitchat. An emergency net is no place for "Hi Larry, long time no hear," "Hey, you know that rig you were telling me about last month...." or any other non-essential conversation.

Be sure to say exactly what you mean. Use specific words to ensure that your precise meaning is conveyed. Do not say, "that place we were talking about," when "Richards School" is what you mean. Using non-specific language can lead to misunderstandings and confusion.

Communicate *one complete subject* at a time. Mixing different subjects into one message can cause misunderstandings and confusion. If you are sending a list of additional food supplies needed, keep it separate from a message asking for more sand bags. Chances are that the two requests will have to be forwarded to different locations, and if combined one request could be lost.

Plain Language

As hams, we use a great deal of "jargon" (technical slang) and specialized terminology in our daily conversations. Most of us understand each other when we do, and if we

do not on occasion it usually makes little difference. In an emergency, however, the results can be much different. A misunderstood message could cost someone's life.

Not everyone involved in an emergency communication situation will understand our slang and technical jargon. Even terms used by hams vary from one region to another, and non-hams will have no knowledge of most of our terminology. Hams assisting from another region might understand certain jargon very differently from local hams.

For these reasons, all messages and communications during an emergency should be in plain language. "Q" signals (except in CW communication), 10 codes, and similar jargon should be avoided. The one exception to this is the list of standard "pro-words" used in Amateur traffic nets, such as "clear," "say again all after" and so on. Avoid words or phrases that carry strong emotions. Most emergency situations are emotionally charged already, and you do not need to add to the problem. For instance, instead of saying, "horrific damage and people torn to bits," you might say "significant physical damage and serious personal injuries."

END PART ONE

PART TWO

Phonetics

Certain words in a message may not be immediately understood. This might be the case with an unusual place name, such as an unusual last name, like "Smyth." The best way to be sure it is understood correctly is to spell it. The trouble is, if you just spell the word using letters, it might still be misunderstood, since many letters sound alike at the other end of a radio circuit. "Z" and "C" are two good examples. For that reason, radio communicators often use "phonetics." These are specific words that begin with the letter being sent. For instance, "ARRL" might be spoken as "alpha romeo romeo lima."

To reduce requests to repeat words, use phonetics anytime a word has an unusual or difficult spelling, or may be easily misunderstood. Do not spell common words unless the receiving station asks you to. In some cases, they may ask for the phonetic spelling of a common word to clear up confusion over what has been received. Standard practice is to first say the word, say "I spell," and then spell the word phonetically. This lets the receiving station know you are about to spell the word he just heard.

Several different phonetic alphabets are in common use, but most hams and public safety agencies use the ITU Phonetic Alphabet. Many hams like to make up their own

cute phonetics, especially as a memory aid for call signs, and often with humorous results. Unfortunately, this practice has no place in emergency communication. In poor conditions, unusual phonetic words might also be misunderstood. We need to be sure that what we say is always interpreted exactly as intended; this is why most professional communicators use standardized phonetics.

ITU Phonetic Alphabet

A - Alfa	B - bravo
C - Charlie	D - delta
E - echo	F - foxtrot
G - golf	H - hotel
I - India	J - Juliet
K - kilo	L - lima
M - mike	N - November
O - Oscar	P - papa
Q - Quebec	R - romeo
S - sierra	T - tango
U - uniform	V - victor
W - whiskey	X - x-ray
Y - Yankee	Z - Zulu

Pro-words

Pro-words, called "pro-signs" when sent in Morse code or digital modes, are procedural terms with specific meanings. They are used to save time and ensure that everyone understands precisely what is being said. Some pro-words are used in general communication, others while sending and receiving formal messages.

Voice	Meaning and function
Clear	End of contact.

Over	Used to let a specific station know to respond.
Go ahead	Used to indicate that any station may respond.
Out	Leaving the air, will not be listening.
Stand by	A temporary interruption of the contact.
Roger	Indicates that a transmission has been received correctly and in full.

Tactical Call Signs

Tactical call signs can identify the station's location or its purpose during an event, regardless of who is operating the station. The tactical call sign allows you to contact a station without knowing the FCC call sign of the operator on duty. It virtually eliminates confusion at shift changes or at stations with multiple operators. Tactical call signs should be used for all emergency nets and public service events if there are more than just a few participants. If one does not already exist, the NCS may assign the tactical call sign as each location is "opened." Tactical call signs will usually provide some information about the location or its purpose. It is often helpful if the tactical call signs have a meaning that matches the way in which the served agency identifies the location or function. Some examples are:

- "Net" - for net control station
- "Little Rock EOC" - for the city's Emergency Operations Center
- "Firebase 1" - for the first fire base established, or a

primary fire base

- "Checkpoint 1" - for the first check point in a public service event
- "Canyon Shelter" - for the Red Cross shelter at Canyon School
- "Repair 1" - for the roving repair vehicle at a bike-a-thon
- "Mercy" - for Mercy Hospital

Note that no FCC call signs have been used so. None are necessary when you are calling another station.

Station Identification

In addition to satisfying the FCC's rules, proper station identification is essential to promoting the efficient operation of a net. The FCC requires that you identify at ten-minute intervals during a conversation and at the end of your last transmission. During periods of heavy activity in tactical nets it is easy to forget when you last identified, but if you identify at the end of each transmission, you will waste valuable time. What to do?

The easiest way to be sure you fulfill FCC station identification requirements during a net is to give your FCC call sign as you complete each *exchange*. Most exchanges will be far shorter than ten minutes. This serves two important functions:

1) It tells the NCS that you consider the exchange complete (and saves time and extra words)

2) It fulfills all FCC identification requirements.

For this method to work properly, the NCS must allow each station the opportunity to identify at the close of an exchange.

Habits to Avoid

- Thinking aloud on the air: "Ahhh, let me see. Hmm. Well, you know, if..."
- On-air arguments or criticism
- Rambling commentaries
- Shouting into your microphone
- "Cute" phonetics
- Identifying every time you key or un-key the mic
- Using "10" codes, Q-signals on phone, or anything other than "plain language"
- Speaking without planning your message in advance
- Talking just to pass the time.

Review:

Clear, concise communications save time, and reduce misunderstandings. Avoid any non-essential transmissions. Use tactical call signs to call other stations, and give your FCC call sign only at the end of the complete exchange, or every ten minutes during longer

exchanges. Plain language is more easily understood by a wider range of people than most codes and jargon.

END PART TWO