Newcomers and Elmers Net: Emergency Communications   KB4VKS Mike   9/28/14

Having your amateur radio license doesn't make you an effective emergency communicator any more than a driver's license makes a 16-17 year old a good driver.

Becoming an effective emergency communicator requires both training and experience. Training provides important knowledge of your environment in an emergency; Experience helps you use that knowledge and control your adrenalin. Training and experience are not exclusive. They compliment one another.

Additional Training Resources:
•KY ARES Online Training or ARRL Emergency Communications Courses
•FEMA IS-100, IS-200, IS-700 IS-800

Depending on your interest, or role with your served agencies, there is a lot of good training out there. Here's some we recommend.
•FEMA Independent Study Program (Make sure to look at the Course List. There is a lot of topics)
•Kentucky Injury Prevention and Research Center (Bioterrorism and pediatric awareness terrorism courses)
•Kentucky Emergency Management Training Calendar
•Purpose
•Attitude
•What is a Communications Emergency?
•We are NOT a rapid response team.
•Who runs the event?
•Who talks to the Media?
•How you can get involved?
•Communication Guidelines
•Getting the message through
•Record Keeping
•Message Handling
•Safety!
•Personal Preparation
•Operator Stress
•Debriefing
•Served Agency Comm Systems
•Nets
•Net Participant Guide
•Roles in a net
•Digital Nets
•Voice Nets
•Basic Training
•Practical Experience

- •ARES and RACES
- •Personal Equipment
- •Connectors and Your Equipment
- •Incident Command System (ICS)
- •Where we fit in ICS
- •Emergency Callouts

Purpose:
Emergency Communication, EmComm, is an opportunity to provide the public service community with trained Amateur Radio operators who will have a consistent level of expertise in Emergency Communication no matter where in the United States they live.

It is evident that there are areas in the U.S. that have few opportunities to train operators in disaster communication. This program will provide consistency in technical training where ever the person lives. The added benefit comes in that it will be easier to ensure the students understand the attitudes necessary to interface with the public service community in a manner which is beneficial to all.

There are many personality types in Amateur Radio, some of which lack the necessary knowledge to participate in a positive manner. These people simply need guidance and assistance to understand what the position of Amateur Radio is in public service.

The goal of this document is to provide consistently knowledgeable communication people who have a very positive, service oriented attitude.

Attitude:
Before you begin the technical material involved in learning about Emergency Communication (ECom) it is imperative that you understand your knowledge in ECom is not actually as important as your attitude, during emergencies.

Yes, technical ability will enable you to do a far better job of communicating. But your attitude will determine the success of the overall Amateur Radio effort. The person who brings a "know it all" or "Cowboy" attitude will only hamper relations with served agencies.

The people you will be serving - remember that word - are professionals that have seen far too many people more interested in impressing someone than in getting the job done. You will actually impress them far more by being as quiet as you can and doing your job well. Results, without interference of served agency people, will cement relations with your served agency.

Simply stated, ECom requires an explicit mental commitment to help others. Please read that again. A commitment to help others. To be effective in ECom you will be required to expend significant effort and time in training and practice. Many say "I did that before, so I don't need to practice". This is not true. It will take time a lot of time, if you are to be successful. If you are willing to spend that time, WELCOME!

Hams are patriotic, independent people and they are volunteers. The attitude among a few hams is that 'Volunteers don't have to take orders.' That's absolutely correct. We don't have to take orders. But if you are not ready to follow instructions, you may want to do something outside of ARES/RACES.

By the way…Do not adjust, play with or fiddle with any piece of equipment in use for an event, during that event, unless it is malfunctioning. Remember, and incident scene is not about radios and being a Ham, itâ€™s about the incident and YOU will either be part of the problem or part of the solution

What is a Communications Emergency?
The easiest way to think about a communications emergency is to begin by using the definitions used in the Incident Command System (ICS) (see the ICS Overview]. "We will define an incident as any planned or unplanned occurrence or event, regardless of cause, which requires action by emergency service personnel to prevent or minimize loss of life or damage to property and/or natural resources."

We can see that during a large scale event it would be possible to have enough information (traffic) flow that the emergency service communications could become overloaded to a level that it would fail to function as required by the incident.

•What defines a communications emergency?
When normal communications processes are inadequate to handle the information flow required to service an incident as defined in the ICS
•What role does Amateur Radio serve?
Our primary role is to support the emergency management community (responders, relief and recovery agencies) with communications during times of emergency and disaster when normal communications are unavailable or overwhelmed.

We are NOT a rapid response team.
If you arrive at the scene of an emergency just as the sirens are quieting, keep your mouth shut and get out of the way! We do not provide first aid, transport victims, provide traffic control or any other function normally provided by public service agencies. We DO provide communication when public service systems are overloaded. Even the SKYWARN group (information available on the world wide web) does not activate until the National Weather Service has requested our help. As a group we will, in many cases, do more than "just" communicate. You as an ARES/RACES operator are free to do any work for the served agency that they request of you, so long as you are comfortable doing that work AND it does not hinder your ability to communicate.

Many operators think of ARES/RACES as a simple extension of the "talk time" in the hobby. This is not true. ARES and RACES are organizations that continually need more trained operators that are willing to learn to communicate rather than just talk.

It is not that the trained operators are willing to learn to communicate. It is that the trained operators have learned to communicate accurately, in a timely fashion, regardless of the obstacles in the event. Unlike general amateur radio activities, emergency operations happen in real-time. Things cannot be delayed. Emergency communicators are looking for specific stations to contact NOW to pass traffic. Teamwork, not competition between stations, is imperative.

Emergency communications involves both amateurs and non-amateurs alike. Emergency communicators must have the equipment, skill and knowledge to improvise additional communications capacity in very short order. In all of this, leadership, teamwork and initiative are key factors to success!

Who runs the event?
When you are working any event please understand that you are there to help the served agency with a communications shortfall. This, in and of itself, is embarrassing to some agencies. If you keep that fact in mind, you can eliminate confusion and problems by acknowledging that the served agency runs the event. Not just by your words, but by your actions.

The largest problem that Amateur Radio has is operators that go into an event and try to take over. Cowboy and "wanna-be" behavior WILL discourage the served agency from ever using Amateur Radio services again. In some cases it has resulted in the Amateur Radio operator involved being arrested and removed from the scene.

Most if not all Public Service agencies use some form of the Incident Command System (ICS) as the model for operations during an emergency. You will help your served agency and your ARES/RACES group if you understand how the ICS works (see the ICS summary, below).

Who talks to the Media?
Dealing with the media/public: During an emergency do NOT make any statement(s) to the media/public about the emergency! The Public Information Officer (PIO) for the agency being served will make ALL statements. You can discuss non-detailed information about Amateur Radio if you have time and they ask. Do NOT include mode, frequency or traffic-volume information, and above all, NEVER RELATE INJURY, FATALITY OR DAMAGE information to the media without explicit instructions from the primary served agency!

Should you encounter some very persistent media people, the following statement may help. Please check with your served agency before you use this statement.

"ARES is Amateur Radio Emergency Service. These are volunteer Amateur Radio communicators who are aiding local law enforcement, fire, EMS and other agencies with auxiliary or supplemental communications due to the current overload or difficulties due to high volume of traffic or other unusual conditions. We currently have (XX #) operators in places like the EOC, communications centers, red cross shelters and other places where additional communications are required."

How you can get involved?
Contact your local ARES/RACES group and volunteer. You can be of help to these organizations by training in the disciplines needed for appropriate communication. Training in Emergency Communications BEFORE you are needed will help you develop the skills necessary to be an effective ARES/RACES communicator.

During an event do your best to maintain a courteous, professional image. You may be working with several agencies including police, fire, first aid squads, National Guard, etc. Extend every possible courtesy to members of these groups. Make sure they know who you are, and what your communications capabilities are. But remember we are there primarily to provide communications, not to provide other support. However, we will, in many cases, do more than "just" communicate. You as an ARES/RACES operator are free to do any work for the served agency that they request of you, so long as you are comfortable doing that work AND it does not hinder your ability to communicate.

Communication Guidelines
Let's face it, there are hundreds of people that can talk the ears off of a brass monkey and when they finally finish you ask yourself "what did they actually say?".

Within Emergency Communication you will have TWO different levels of communication. The first is in passing traffic on behalf of a served agency. This is known as formal traffic. Under those conditions you pass traffic EXACTLY as written. You change nothing. In some instances you will not understand what the message means. That is fine. Your job is to get the message to the destination as quickly as possible, not to understand it.

When you receive a message from a served agency, read it. If there is any part you cannot read, ask for clarification before accepting the message. You can't accurately transcribe what you cannot read. When you transcribe a message from a served agency, MAKE NO CHANGES! It does not matter if you do not understand the technical meaning. It DOES matter that you pass traffic exactly as written.

Let's revisit the last sentence. PASS TRAFFIC EXACTLY AS WRITTEN!
If you are the author, make your corrections before you are ready to send.
If ANYONE else initiated the message, MAKE NO CHANGES!

The second type of communication is where YOU originate the message, it is not written and where a written response is not required. This is commonly known as informal traffic. In that situation you control what the text of the message will be. Therefore phrasing is up to you.

Plan your communications at least as well as you plan what you say when you know you will be quoted. When ever reasonable, write down what you will say before you say it.

In Emergency communication it is important to say as little as possible, yet convey all of the meaning. How can we do this?

• Brevity and Clarity

The standing "rule of thumb" is - if you can leave a word out without changing the meaning, leave it out. If a description of an item will not add to the understanding of the subject of the message, leave it out. Another item to remember, do NOT use contractions within your messages. Words like "don't" and "isn't" are far too easy to confuse. Add to that the stress and confusion during an emergency and they WILL create problems.

• Slow Down!

Hams, in general, tend to handle communications as quickly as they can. This does NOT produce the maximum throughput during a net. While this may seem counterintuitive, it has been proven again and again that a three or four second break between transmissions will actually result in information being passed more quickly. If this seems strange to you, take the time to listen to Police, Sheriff's Office or Fire dispatch. They are able to convey large amounts of information very quickly because they maintain a slow, measured pace.

In addition, the three or four second break between transmissions ensures priority and emergency traffic can gain access to the net without requiring the largest signal on that frequency.

•Do not editorialize

Actually, hours can be lost by people inserting their opinion on unrelated subjects. What someone thinks about a ball game or the weather is irrelevant unless weather or the ball game is the subject being discussed.

•Listen

The first requirement for communication is the ability to listen. But, you say, I can tell someone what is required without listening. Not really.

Communication is the - two way - exchange of thoughts, ideas or information. Two way. That requires listening. An old timer once told me "A ham has two ears and one mouth. Therefore he should listen twice as much as he talks". Makes sense. Communication will be acknowledged.

Standard ITU Phonetics

While it may take less effort to speak into a microphone and listen than to operate CW, it does take some care to quickly and accurately convey exact information. Speak distinctly at all times. If information is to be written, pace your speech accordingly. For critical information, or under noisy conditions, spell words with standard ITU phonetics. ITU phonetics were chosen so that each word sounds completely different from all others. A list of ITU phonetics is available in the ARRL handbook and the ARRL logbooks. A compressed copy follows.

Getting the message through:

To improve communications you need to improve the difference between the signal and the noise levels (signal to noise ratio) to achieve reliable communications. For our purposes here, noise is defined as any impediment to transmission or reception of information (messages). What form can this "noise" take? Some of the more common ones are:

•Static and background noise on the air
•Equipment or voice sounds around you
•Inappropriate amount of light
•"Loose cannon" tempers
•Improper transmission speed
•Improperly formatted messages

What can you do to maximize message throughput? Here are some of the more common ways to handle impediments.

Slow Down! Hams, in general, tend to handle communications as quickly as they can. This does NOT produce the maximum throughput during a net. While this may seem counterintuitive, it has been proven again and again that a three or four second break between transmissions will actually result in information being passed more quickly.

•Static and background noise on the air
1.ensure you have the proper antenna for the job.
An NVIS will work very well for 40 and 75 meter SSB when your communications range is up to about three hundred miles where a vertical will not. Conversely, a vertical will work quite well for VHF/UHF.
2.Choose the best band for the job
VHF/UHF are very good for short distances (less than 50 miles) but are useless for distances over one hundred miles. The antennas are quite small.
HF propagation differs by band. What distance do you wish to cover? Antennas are quite large.
3.Make sure your equipment is grounded.
•Equipment or voice sounds around you
1.Use a headset to minimize noise you will hear from the area you are in.
2.Use a noise canceling microphone to minimize transmitted noise.
3.When ever possible, locate your station away from the source of noise.
•Inappropriate amount of light
Many people do not think of light as a potential problem. Think what happens when you have too much light when you try to read a computer screen or too little light when you try to read printed information.
1.Stay out of direct sunlight if at all possible.
2.Try not to be in shade while having to look directly into the sunshine.
3.ensure there will be sufficient light for you to work at night.
•"Loose cannon" tempers
These are very hard to deal with. Your best bet is to ask assistance from your supervisor. A team working calmly toward a common goal will frequently defuse the situation.
•Improper transmission speed
1.Practice sending at the appropriate rate where the other party can copy. That means you shouldn't ramble off the message text at high speed, but pace yourself to the same speed that the other party is copying (about 15 WPM). That translates to about one word every four

seconds. As you speak, imagine that you're writing the word in your mind. After a while, you'll get the hang of talking 15 WPM. If you do this right, you'll never get a request to repeat a section.

2.When asking for part or all of the message to be repeated, get into the habit of saying "Say Again" instead of "Repeat". Repeat is used in the military to fire another salvo of artillery.

•Improperly formatted messages

Please see the section on Message Handling for formatting information

Record Keeping:

Before we go into the details of message handling it is helpful to understand record keeping. While most people find record keeping distasteful it does serve a necessary purpose during ARES/RACES events. If a served agency person comes over and asks when thus-and-such was handled, how will you answer? If you keep accurate logs of everything your location does the answer is easy. Look in your log and give them the information they requested. But, you say, what if it is not in my log? Easy, call the location that has the correct log and get the required information.

Safety!

The following are your priorities - in this order - when it comes to safety. 1.You

I think each of us has heard the saying something to the effect - watch out for number one, or no one else will. Be it a training exercise or an actual emergency your safety is up to you. It is your primary concern. If at any time you are asked to handle an assignment that, for any reason, you are uncomfortable with, decline it. If your concern is with safety, please let your group leader know why you declined.

2.Your Team

Your second priority is the safety of your team. There can easily be assignments, such as ATV, where the person with the camera will be very engrossed with insuring the picture is the best possible and may not notice unsafe conditions. You as the second person there will then need to be very careful about the safety of your team.

3.Your Mission

Your mission becomes important only after your safety and the safety of your team. During that mission if the safety of anyone becomes an issue, speak up and if necessary leave.

Remember, an incident scene is not about radios and being a Ham, it's about the incident and YOU will either be part of the problem or part of the solution. Keep your eyes open and do your best to anticipate unsafe conditions before they happen.

Personal Preparation:

In preparing ourselves to assist our served agencies in times of emergency, many people take a somewhat myopic view of that preparation. We look toward the equipment and some training. There is one other consideration we must make. Are we physically ready?

For a lot of us, the equipment is a major contributor in the fun of Amateur Radio. To those that are not as technical as we would like to be, it is still a lot of fun to get new equipment (a.k.a. toys) and learn to use it properly. Equipment is but one third of the equation.

Training ourselves, not just to be able to operate the equipment, but to handle messages expeditiously and with minimal impact to our surroundings is also a challenge.

The item that many overlook is the physical conditioning that we really need to be able to handle the stress of emergency operations. Does that imply that each of us must be ready to run a marathon? Hardly. There are a few simple guidelines we need to follow to be better prepared to physically support ARES operation.

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Eat properly - this means eat the foods that will help keep us healthy. â—¦Minimum "junk" food. The "Mickey D" three basic food groups of sugar, salt and grease do not help our health. â—¦Appropriate amounts of protein, vegetables and complex carbohydrates (this varies with the individual).
â—¦Drink a LOT of water. Most of us forget that the recommended minimum amount of water is 4oz. every hour (not coffee, not soda pop, etc). Very few people consume that much.
â—¦Moderate amount of alcohol (or none, if you prefer).

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Get enough rest, Regularly! - Some people think that four hours of sleep will suffice. Most of us do better with six minimum and the really intelligent understand that seven and one half to eight is better yet.The other half of that equation is *regularly*. That means virtually every night. The occasional night with minimum sleep is not a problem, as long as it is occasional.

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Exercise - Get regular exercise, appropriate in duration and type. Appropriate for someone twenty-five is probably not correct for some one sixty. A good source of reasonable exercise for all of us is to walk for at least thirty minutes each day.

Many will whine that there is "not enough time". If you are planning on being dead in six months or a year, I agree. Go for it. For the rest of us, take the time. Plan on a slow, steady, evolutionary change in how you make yourself ready to support the life style you have chosen. If you are physically active, properly rested and have eaten properly, you are better prepared for the stress of emergency operation.

Operator Stress:
Emergency communications is a very challenging assignment. There's a lot of need being placed on people in a short amount of time. For this reason, stress can build upon the operators. As these demands wear down the individual's capacity for tolerance, flexibility and creativity, the person shows signs of stress. People show it as varying levels of irritability and emotional

outbursts, which affects the ability to work well with others. The best time to deal with stress is before it presents itself. Learn coping mechanisms before responding to an event.

Some of those mechanisms are:

1.Focus on teamwork, strategy and results, rather than on worry and concern.
2.Learn tolerance and patience during times of heightened demand and activity.
3.Understand that we are human and there are limits to our performance, both individually and corporately.
4.Learning the impact that diet, beverages and exercise can have on relieving stress and increase the capacity for dealing with it.
5.Learn to get rest and take breaks as necessary for you. What works for someone else may not work for you.

ARES/RACES Debriefing
Within the Amateur Radio Emergency Service there are many "opportunities" to experience situations that we would not normally encounter. Some of these experiences, especially during training and public service events, can be very enjoyable and rewarding. Some, such as during floods, major fires, tornados and events like September 11, 2001 in New York City are far less than enjoyable, but can still be very rewarding. In both environments we need to debrief ourselves to accomplish several objectives. During all events we need to assess our effectiveness and determine how we can improve. This serves to help focus our training in areas that need the most work and ensures we compliment ourselves on the areas done well. During/after stressful events it is very important that we continually monitor our own stress levels and those of the people we are working with. In doing this we maximize the effectiveness of our unit and identify jobs that need people rotated out of before stress levels become critical.

To adequately handle this discussion the subject has been divided into three portions:

1.Tactical Debriefing - needed in all events
2.Emotional Debriefing - needed in stressful events
3.Family Briefing - needs to be covered before major events

Tactical Debriefing:

Most of us view tactical debriefing as something done as an after thought or something we do to get it out of the way. If you instead look at debriefing as a learning tool that will improve your effectiveness and that of your unit, it will serve you well.

One approach to debriefing is to answer the following questions in as much detail as is reasonable:

1.What was our mission/goal - exactly what were we there to accomplish?

2.For the communication, did we have a clear definition of who we were to communicate with and what the likely traffic would be?

3.Did we accomplish our mission/goal?

4.What did we do correctly (list everything)?

5.What did we do that was beyond expectations? â—¦If nothing was beyond expectations, why not? â—¾Were the expectations unreasonably high?

â—¾Did we not have enthusiastic participants?

â—¾Were we lazy

6.What items did not meet expectations?

â—¦How can we improve on those items?

7.What specific training items do we now have a need for?

8.Other than the training items, what else needs improvement?

9.Were there any "surprises" and why did they surprise us?

It is very important that every ARES operator in the event have input to the debriefing. The reasons are simple. First, many times one persons comment sparks yet another thought from someone else. Second, no one can observe everything that happens, you need everyone's observations to be complete.

If you are unable to attend the formal debriefing or if the incident is multiple day and you wish to capture your input a sample online debriefing input form has been created. Contact your EC or DEC to see about implementing this process.

Emotional Debriefing:

The American Red Cross has some thoughts on stress induced during disasters that are included here for your information.

Police psychologists talk a lot about "critical incidents," but what exactly is one? A critical incident is an occurrence that is one or more of the following: (a) Sudden and unexpected (b) perceived as life-threatening (c) overwhelming (d) disrupted sense of control (e) disrupted basic assumptions and beliefs (f) resulted in physical and/ or emotional loss

Physical reactions to critical incidents can include: (a) headaches (b) exhaustion (c) sleep disturbances (d) appetite disruptions (e) "nervous stomach"

Behavioral reactions to critical incidents can include: (a) hyperactivity (b) being easily startled (c) withdrawing or isolating oneself (d) periodic underactivity

Psychological reactions to critical incidents can include: (a) anger (b) self-blame (c) fear (d) anxiety ea) depression (f) over sensitivity (g) emotional numbness (h) having a heightened sense of danger (i) flashbacks (j) preoccupation with the incident (k) feeling that these emotions are "wimpy"

To minimize the effects of event related stress we need to provide emotional debriefings. These debriefings must be an organized, open discussion that takes place after a serious and emotionally taxing event. Its purpose is to provide a forum in which emergency workers can release their stress. This is not an investigation or an interrogation, nor is it a tactical debriefing. Rather, it is an open, constructive means by which emergency workers can openly express their emotions. When appropriate, trained professionals may take part. They can offer concrete suggestions for ways of overcoming the stress related to the incident.

The concept behind these debriefings is to encourage free expression of thoughts, fears, and concerns in a supportive group environment without losing status among one's peers. In fact, debriefings are much more successful and the feedback more positive when peer support personnel are more active. The debriefing process allows individuals to gain insight and reframe the event in a different perspective. As short-term initial intervention, it often aids in preventing some of the long-term cumulative effects caused by traumatic incidents.

All debriefings must be confidential and provide an opportunity for educating emergency service workers on stress responses, as well as letting those involved know that they are not alone in their thoughts and feelings.

Family Briefing:
One item that few of us remember is that our family will be affected by our experiences during emergencies. The easiest way to minimize adverse effects on our families is to ensure they understand before the event that we will need their help and understanding after major traumatical events we may be called upon to work.

A good source for information they can easily understand is the American Red Cross. They have extensive amounts of helpful information you can get. The most important information for your family is included here.

Served Agency Communication Systems:
Each served agency will have its own - unique - communication system. It is in the best interests of both served agency(ies) and ARES/RACES group to discuss and understand what your local served agency uses. While you discuss the communications they use, ask what - if any - requirements they may have for Amateur Radio operators to operate the served agency system and what unique knowledge these operators will need.

Nets:
Definitions:
•CONTROLLED NET: A means of insuring orderly use of limited frequency resources to conduct communications for a scheduled event or during an emergency.
•NET CONTROL STATION:The person charged with control of information flow on the frequency used by a controlled net.

Please take a moment to study the NCS definition. During an emergency the NCS does NOT control the event! NCS is there simply to control information flow. The Incident Command System (ICS) provides a coordinated system of command, communications, organization and accountability in managing emergency events.

Net Types:

•Open (Informal) Nets: During an open net most any type of traffic or communication is permitted. Conversations (rag-chews) are permitted provided they break every so often to allow incident related traffic to flow.
•Directed Nets: A Directed Net is created when there are a large number of stations needing to use the frequency or the volume of traffic cannot be dealt with on a first-come first-served basis. The NCS will determine who uses the frequency and what traffic will be passed first.
•Tactical: Tactical nets are the primary coordination nets for the event. They will be a directed net, using tactical calls, normally restricted to traffic for the event ONLY.
NCS has absolute control over this net.
•Resource: The resource net is to acquire volunteers for the event and make work assignments for the event. They will be a directed net using FCC issued calls, normally restricted to traffic pertaining to the event. All traffic goes through the NCS.
•Traffic: Traffic nets are for the passing of formal, normally written, traffic. They are directed nets, using FCC issued calls. Traffic may be passed on the net frequency or sent off to another frequency at the option of the NCS. Casual conversations may be allowed at NCS discretion.
•ICS Nets: During an emergency a large percentage of our served agencies use the Incident Command System as a model for their operations. When this system is used by your served agency you will need to understand what term in ICS corresponds to what term in ARES/RACES.

An ARES/RACES - Tactical - net is an ICS - OPERATIONS - net, and an ARES/RACES - Resource - net is an ICS - LOGISTICS - net.

Please understand that the name you use for any given net IS a local option. The same holds true for tactical identifiers. Use the name for your nets and locations that convey the most information to the largest number of people at your event.

Net Participant Guide:
Net protocols.
Legal:
Legal requirements within nets are those of identification and operation on frequencies within the Amateur Radio Bands. The FCC tell us that you MUST identify at ten minute intervals during a conversation and in your last transmission. During periods of heavy activity in event nets it is easy to forget when you last identified.

The easiest way to ensure you comply with FCC identification requirements during an event net is to identify with your FCC issued call as you complete an exchange. This serves two functions:

1) Tells NCS you consider the exchange to be complete without having to use extra words (saves time) 2) Fulfills all FCC identification requirements.

Customary:
Customary protocols will normally be used in long standing, non emergency nets. They may include such practices as identifying with the FCC call of both stations on each transmission, giving the FCC call of the next person to talk or many other variations.

Please listen to the net before joining. Customary protocols will easily stand out.

Tactical Calls - when and how to use them
Tactical calls are used to identify a location during an event regardless of who is operating. This is an important concept. The tactical call allows you to contact a location without knowing the FCC call of the operator there. It also virtually eliminates confusion at shift changes and when a person takes a break from operating. Think about that. Do you answer a call from the sound of a persons voice or from the identified location. Obviously from the identified location.

Tactical Calls
Tactical calls should be used for all Emergency nets once there are more than three participants and most public service nets if there is more than minimal traffic.

Net control will assign the tactical call as each location is opened. It will normally be some unique identifier that indicates which location or function this is. Some examples are:

Participating in a net
-
Enjoy yourself - Amateur Radio public service is fun!

-
Prepare your self. Are your batteries charged? Are you on your best antenna for the frequency/repeater you will be on? Do you have pencil paper and other items you think you will need?

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Listen. If you are there at the start of a net or join one in progress, LISTEN for several minutes before you check in. NCS will announce/ask-for what they want.

-
Check into the net in the mode being used by the net. This should go without saying but we still see people who cannot follow directions.

-
Follow NCS Instructions. NCS will ask for specific people/categories-of-people as they are needed. Follow instructions!

- Slow Down! Hams, in general, tend to handle communications as quickly as they can. This does NOT produce the maximum throughput during a net. While this may seem counterintuitive, it has been proven again and again that a three or four second break between transmissions will actually result in information being passed more quickly.

- Do not editorialize. "This is Phred in the North East portion of the county at 9300 feet where it is snowing, but it was sunny five minutes ago when I came in from feeding the birds, geese and hamsters, but its cold right now and it looks like it could rain in the next day or so - just checking in....." is unnecessary AND unwanted. This ties up the net and does nothing to add usable information. Check in with your CALL. Add name and other information as requested by NCS.

Plan your transmission. If you have more information than just your Name/Call then jot it down. You can, if necessary, just read your note. **** This promotes clear concise communication.

Check in ONLY if you are going to be part of the net. Do NOT check in as "in & out" or "for the count". You are joining the net or you should only listen.

Checking in with "This is" then a pause or un-key followed by the call may work on a few nets, but causes delays and potential problems on most. (Local net option)

Unless your transmission is longer than ten minutes, you need only identify at the end of the transmission/exchange of information.

Let NCS know when you leave or if you need to leave early. Do not go into details of why you need to leave.

During an event, if the authorities ask you to move; do so immediately and without comment, then notify the NCS of your change in status as soon as you can.

If an on-scene authority requests that you shut your radio off, or that you not transmit, do what they ask immediately and without question. This is one circumstance where you do not notify the NCS of a change in your status. This deserves a little explanation. This would normally occur only if there is a presence of explosives or explosive chemicals or vapors, and there is the possibility that a spark producing electronic device is present which might be triggered by an RF Signal.

Be patient with the NCS. An NCS operator is under high stress. His questions and requests should be clear and crisp; but as he/she begins to tire, there may be a tendency to become

rather terse. Typically, there is a whole lot going on at an NCS that the field operators never know about.

Leaving a net
You will leave a net for one of three reasons:

1.The location is closing: If NCS has given you directions to close the location, simply identify with your FCC issued call, the location tactical call and the word "CLOSED". The NCS will tell you if anything else is needed. If you are closing the location on orders of the served agency, you will identify with your FCC issued call, location tactical call and the phrase "location CLOSED per (name of person - served agency identification)".
2.You need a break and there is no relief operator Tell NCS that "I will be away from the radio for (number of minutes)" and end with "Tactical id, (your call)".
3.You have turned the location over to another operator
You will normally not need to tell NCS that you are leaving. However if there are specific instructions from NCS then follow those instructions.

Roles in a Net:
NCS â—¦The NCS is in charge of the net while the net is in session. He/She is responsible for controlling who uses the frequency and when they pass traffic. This needs to be balanced with the fact you will be dealing with volunteers.
â—¦Slow Down! The pace of the net is controlled by the NCS. If you leave three or four seconds between transmissions, you will actually pass more traffic in less time.
â—¦Net Control shall have a commanding signal, i.e. clear, crisp signal with good audio characteristics.
â—¦NCS must keep track of which resources are on the net and who has cleared the channel. NCS is also responsible for knowing what traffic each person is capable of dealing with (sending HF traffic to a Tech. will not work).
â—¦In medium and large operations you need to have a backup NCS and a person to log.
â—¦Keep a written record of the incident and all traffic passed. This does not mean a copy of all formal traffic. Simply an overview of the message.
â—¦Make ALL instructions clear and concise, using as few words as possible.
â—¦Use tactical call signs. If participants do not follow your lead, only recognize those using tactical calls (obviously all bets are off if it is emergency traffic).
â—¦Different nets handle different traffic. Should someone try to pass traffic that should be on another net, refer them to the correct net.

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NCS backup
There are two types of NCS backups. The first is located in the same room/area as the NCS and acts as relief for the NCS at regular intervals. The second type is a person that maintains a duplicate log of everything happening at the event and is available should there be a failure at the primary NCS location. Whenever there are enough people working an event, an offsite

backup NCS should be maintained. This person must be operating with the knowledge and consent of the NCS station and should be known to the entire net.

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Loggers
People to handle the keeping of an operational log for the event are a very important to the smooth operation of the event. These people free the NCS from having to split their time/effort down to a level that is neither efficient nor productive. Every net will be enhanced by a good logger.

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Site communicators
Site communicators have the responsibility of listening to everything that happens on the net and maintaining contact with the served agency people at the site. They need to produce formal traffic as applicable, maintain a log of activity at their location and be responsive to the needs of their served agency people.

It will be far easier to handle all of the tasks at the location if there are at least two people there (this presumes an emergency situation).
•General communicators â—¦Report to the NCS promptly as they become available.
â—¦Ask clearance from NCS before using the frequency.
â—¦Answer PROMPTLY when called by NCS.
â—¦Use tactical call signs.
â—¦Follow established net protocol.

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Listeners - LISTEN!
The most helpful listener, during an emergency, is one that listens and stays quiet! NCS does not care that you are there listening unless he asks for assistance from listeners. Normally there will be enough people working the net to handle anything NCS needs.

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Liaison Stations â—¦Liaison stations provide the communication link between two nets. They will generally be limited to two nets so they can maintain good communications between the nets.
â—¦Liaison stations will need to have at least two radios, each with their own antenna. These antennas must be separated sufficiently to NOT interfere with the other radio when the operator transmits on either frequency
â—¦Liaison stations will be appointed by NCS or the staffing officer, usually from trained operators.

FM Simplex

3.Equip yourself â—¦Get a NOAA Weather Radio with digital SAME alert. Program it with the FIPS code for your area.

â—¦Put together a quick deployment bag (A.K.A. GoBag) with your spare radio equipment, antennas, coax, clipboard, pens, IDs, etc. Place your checklist of last minute items (fresh batteries, water, etc) into the bag as well.

â—¦Put together a 72 hour pack, useful for both field deployment and emergency evacuation.

3.Equip yourself
4.Learn about Emergency Communications Procedures
5.Learn about Emergency Communications Equipment
6.Existing programs at the local level.

Practical Experience:
When you go out on a real emergency there are several things you need to understand. The first four listed relate to expectations and attitude while the remainder deal with specific actions that your group will need to handle.

•Expect confusion. When we respond to a field assignment, our served agencies are getting their response organized and are often being pulled in a number of directions. Expect that some people won't know why you're there, what it is that you are supposed to do, and whom you're doing it for.

•Be flexible. Because of the confusion, we must always remain flexible and convey to those we are serving that we are here to help. Sometimes our function is clearly defined and understood, other times it isn't. Remaining flexible reduces your stress level and proves to our served agencies that you are a team player.

•Know your audience. We contrast arriving to a field assignment as either Rambo or an attorney. Neither is good, don't over dress, try to look the part that's required. Outfit yourself as is appropriate for the situation. For example, don't arrive to assist the base camp of a wildfire in short pants and a tank top, you might be asked to leave because your clothing choices could put you in danger. Stop for a moment, consider your assignment and who you will be assisting, and make appropriate clothing and appearance choices. Don't arrive like you just crawled out from beneath a rock, always look clean and well kept.

•Be aware of your first impressions. Some of us are shy, some are outgoing. Some are demure, others are outspoken. Know how others perceive you and adjust your character as needed for the situation. If you are a shy and quite individual, know that you might have to be bold to find the official or area you have been assigned to assist. If you are typically loud and outspoken, look around you, you might need to tone it down a little. If you are assigned to a Police/Fire dispatch center, loud talking and bold action are not going to be appreciated by the dispatchers who are assisting citizens with emergency needs.