

# ECom Communication Guide

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## Communication Guidelines

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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?". 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. 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 can not be delayed. Emergency communicators are looking for specific stations to contact NOW to pass traffic. Teamwork, not competition between stations or groups, is imperative.

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.

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?

### 1. Brevity and Clarity

Each message should consist only of the information necessary to convey the meaning clearly and accurately. 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.

### 2. Slow Down!

Hams, in general, tend to handle communications as quickly as they can. This does NOT produce the maximum thrupt 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 insures priority and emergency traffic can gain access to the net without requiring the largest signal on that frequency.

### 3. Do not editorialize

Literally 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.

### 4. 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 olde timer once told me "A ham has two ears and one mouth. Therefore he should listen twice as much as he talks", and remember, communication will be acknowledged.

### 5. Plain Language

Refrain from using technical slang (jargon) in your messages. Not everyone understands those terms and it could easily cause misunderstanding. Remember, "Q" signals are for CW and "10 Codes" are for 11 meters.

### 6. 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.

A - alfa (AL-fa)	B - bravo (BRAH-voh)
C - charlie (CHAR-lee)	D - delta (DELL-tah)
E - echo (ECK-oh)	F - foxtrot (FOKS-trot)
G - golf (GOLF)	H - hotel (HOH-tell)
I - india (IN-dee-ah)	J - juliet (JU-lee-ett)
K - kilo (KEY-loh)	L - lima (LEE-mah)
M - mike (MIKE)	N - november (no-VEM-ber)
O - oscar (OSS-cahr)	P - papa (PAH-PAH)
Q - quebec (kay-BECK)	R - romeo (ROW-me-oh)
S - sierra (SEE-air-rah)	T - tango (TANG-go)
U - uniform (YOU-ni-form)	V - victor (VIK-tor)
W - whiskey (WISS-key)	X - x-ray (ECKS-ray)
Y - yankee (YANG-key)	Z - zulu (ZOO-loo)

### 7. Numbers

are pronounced as individuals. The number 60 is pronounced six zero, not sixty. The number 509 is pronounced five zero nine, not five hundred nine and NOT five oh nine.

### 8. Formal written traffic

Insure you have asked all questions necessary to have obtained the following:

1. Who is requesting what and from whom?
  - A. What is the requesters full name/title/agency & location?
  - B. What is the recipients full name/title/agency & location?

2. What are they requesting and how many do they want/need?
  - A. Is it a list or single item?
    1. If it's a list, do all items come from the same place?
      - a. If multiple sources then multiple messages.
  - B. Is the subject the transportation of an item, or the acquisition of that item, or both?
3. Where will it come from (not always the same as the location of the person receiving the request)?
4. Where will it go to (not always the same as the location of the person requesting the item(s))?
5. When is it needed?
  - A. Time/date as applicable

## Nets

- **Definitions:**

- **NET:**  
Short for Communications Network - established to handle information for an event or incident.
- **CONTROLLED NET:**  
A means of insuring orderly use of limited frequency resources to conduct communications for a scheduled event or during an emergency. All traffic is authorized by the Net Control Station and non-event conversations are discouraged.
- **NET CONTROL STATION (NCS):**  
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 to manage emergencies.

- **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 event 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. Other names for the Tactical net are: Operations (ICS name) or Event Net when the staffing and operations are on one frequency.
- **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. These nets may be operated on the same frequency as the Tactical net but will usually switch to another frequency once the operation is up and running. The ICS name for the resource net is Logistics and it can also be referred to as the Staffing net.
- **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 insure 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**

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 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 Tactical Call Examples**

**NET** - for net control

**FIRE-BASE-1** - for the first fire base established or the fire base in a particular region

**CHECK-POINT-1** - for the first check point in a public service event

**CP** - for the event command post

**AID-3** - for the third aid station on a route

- **Proper use of tactical calls**

- **Initiating a call** - (Tactical in)

If you were at aid station three during a directed net and wanted to contact Net Control you would say "NET, AID3" or, in crisper nets, simply "AID3". If you had emergency traffic you would say "AID3, emergency traffic" or for priority traffic "AID3, priority traffic". Notice how you have conveyed all information necessary without using any unnecessary words or taking any unnecessary time.

If you had traffic for another location, such as check point five, you would say "AID3, traffic for CHECK POINT 5". This tells NCS everything needed to handle the traffic. NCS will then call check point 5 with "CHECK POINT 5, call AID3 for traffic", if there is no other traffic holding. Notice that there have been no FCC

issued calls used. At this point none are necessary.

- **Traffic during a call**

Tactical calls will normally not be used in the contact unless a separate location is mentioned in the message.

- **Completing a call** - (Callsign out)

To complete the call from AID3, after the message/traffic is complete you would say "(your call), AID3". This fulfills your identification requirements and tells NCS that you believe the call to be complete. If the Net Control Station believes the exchange to be complete, and the member station has not identified, then the NCS should say, (completing this example) "AID3, do you have further traffic?" At that point AID3 should either finish with the traffic or identify and clear.

The above is the same for all participants under virtually all traffic examples.

- **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?
- **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 thrupt 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 unkey followed by the call may work on a few nets, but causes delays and potential problems on most. (Local net option)
- Do not check your friends or family in to a net, unless they are in the room and able to answer were they called by NCS.
- 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.
- If you are concerned with what you can and can not say during a net, please review the "Who

talks to the media" portion of the Colorado ARES ECom basic training material.

- 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.

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**

- **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 if this is a regular shift change. However if there are specific instructions from NCS then follow those instructions.

- **Don't over identify**

There is normally nothing that will expend more time, needlessly, than over identification. Someone that uses their FCC issued call in every transmission is usually a person that is unsure of themselves or, worse yet, someone that is more interested in having their call known to everyone at the event. In the latter situation, help them find work elsewhere. The FCC tells us that you need only identify at ten minute intervals during a conversation (NOT during a net unless you talk for more than ten minutes) and during your last transmission.

**End each exchange with your call, that tells everyone that you are of the opinion the exchange is complete and you fulfill all FCC requirements.**

- **Write it down**

The easiest way to minimize what you say during a net is to write down everything before you key the microphone. Since very few of us like to write lengthy notes, this will promote brevity. An excellent place to keep this information is in your location log. This serves two purposes: 1) You have a complete log of everything that came from your location 2) It will become very brief.

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