

ARES/RACES Net Participant Guide for Barry County

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Provisional Version

The purpose of this document is to provide information on how to participate in ARES/RACES emergency and public-service nets (it does not deal with regularly-scheduled nets which are usually less formal). The objective is to achieve the highest possible degree of efficiency and accuracy. Such a net should be a professional-quality communications system. Remember that all of your transmissions are being overheard.

1. Net protocols and procedures

a. Legal requirements

Identification with your FCC-issued call sign and operation only on frequencies permitted by the users license class are the two primary legal requirements. Your call sign must be given “at the end of each communication and at least once every ten minutes during a communication.” Note that a “communication” can be a set of transmissions and receptions with another station or stations, not a single transmission. The easiest way to comply with ID requirements during an event is to identify with your call sign as you complete each exchange (assuming that none lasts more than ten minutes). This tells the NCS (net control station) that you consider the exchange completed without your having to use extra words, and it fulfills all FCC ID requirements.

b. Control operator and third party

Sometimes communication between two agencies is more efficient and accurate if the hams get out of the loop and permit the served agencies to communicate with one another directly (third-party operation). It is fully legal for either or both hams simply to hand their microphones to the relevant individuals. A licensed ham must supervise each third party and insure legal station operation at all times, so stay within reach of the transceiver.

c. Tactical calls

Tactical calls are used to identify a location or a function during an event independent of which ham is serving in that position at the moment. This is an important concept. Using tactical calls permits NCS (or anyone else, with NCS permission) to contact a location without knowing the FCC call of that operator. It also virtually eliminates confusion at shift changes and when a person takes a break from operating. It greatly reduces the amount of information that the NCS operator must keep in mind and it helps immensely when hams with unfamiliar calls are participating.

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

NCS will assign the tactical calls as each assignment is made. It will normally be some unique identifier that indicates the location or function. Some examples are:

NET	for net control
PENNOCK	for Pennock Hospital
CHECK POINT 1	for the first check point in a public service event
AID 3	for the third aid station on a route

Proper use of tactical calls and call signs can best be demonstrated by an example. Suppose that you are at aid station three and you want to contact NCS. You say "AID 3." (Say "AID 3, emergency" if you have emergency traffic.) Notice how you have conveyed all necessary information without unneeded words or time. It wastes both to say, “Net Control, this is AID 3.” Any call you make is inherently to NCS unless you have permission to “go direct” to another station. If you have traffic for another location, then you say "AID 3, 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 AID 3 for traffic." This gives permission for direct contact.

Notice that there have been no FCC call signs used; none have yet been required. They will be given by both operators when the interchange of information is completed. Note also that tactical calls will normally not be needed during the contact unless a separate location is mentioned in the message.

To complete the call from AID 3, after the message/traffic is complete you say "AID 3, (your call)." This fulfills your identification requirements and tells NCS that you believe the call to be complete.

d. Participating in a net

Prepare yourself. Are your batteries charged? Do you have your best antenna for the frequency/repeater and

operating conditions? Do you have pencil, paper, and other items you think you will need?

Check in only if you are going to be available for assignment by NCS. Do not check in with "in and out" or "for the count." Either join the net or just listen.

Listen first. Whether you are there at the start of a net or you join one in progress, listen a bit before you check in. The protocol being used is normally obvious immediately. NCS will ask for needed information.

Do not editorialize. "This is Fred in the north east corner of Woodland Township where it is raining, but it was sunny five minutes ago; just checking in" is unnecessary and most unwelcome. This ties up the net and conveys no useful information. To check in, just give your call; add your name and other information only when requested.

Follow NCS Instructions. The NCS operator has dictatorial powers (as far as the net is concerned) and will ask for whatever is needed.

Use standard international phonetics if phonetics are needed. Don't make up your own and don't use any unless they are needed for clarity or accuracy. Do not use cw abbreviations or Q-signals in phone traffic handling.

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, comply with the request immediately and without question. This is one circumstance where you do not notify the NCS of a change in your status. Such a situation probably would occur only if there is a possibility of triggering an explosion with an RF signal.

Be patient with the NCS. NCS operators are under high stress. Questions and requests should be clear and crisp; but as the operator begins to tire, he/she may tend to become rather terse. Typically, a whole lot is going on at NCS that the field operators don't know about. If the NCS comes back to your query with "standby," then please be patient. You know that you have been heard and the operator will get to you as soon as possible.

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 and be part of a team, then please do not participate in ARES/RACES or emergency operations.

d. Leaving a net

You are expected to be on the net frequency at all times unless you are a liaison station (see below) or you are leaving the net. You may 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 call sign, your tactical ID 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, identify with your call sign, tactical ID, and the phrase "location CLOSED per (name of person - served-agency identification)."

2. You need a break or must leave early and there is no relief operator.

After being acknowledged by NCS, say "I will be away from the radio for (number of minutes)" and then give your tactical ID and your call sign.

3. You have turned the location over to another operator.

You would not normally need to tell NCS that you are leaving. However if there are specific instructions from NCS then follow those instructions. Be sure to notify NCS, however, if you are permanently leaving the scene because a record is generally kept of all participants to insure that everyone is accounted for at the end of an exercise or event.

e. Don't over-identify

A common cause of low efficiency in a net is excessive identification. Those who use their call sign in every transmission can cause serious problems by adding unnecessary delays in responding to rapidly-changing events.

If you end each exchange (not each individual transmission) with your call sign, then everyone will know that you are finished (or at least that you think you are finished!), and you will fulfill all FCC identification requirements.

f. Write it down

Formal written communication using the ARRL Radiogram format will often be required, especially for emergencies or exercises. Learn the proper procedures for originating and receiving such messages.

The easiest way to minimize words during a net is to plan each transmission by writing down everything you want to say before you key the microphone.

2. Roles in a net

a. NCS

The NCS is in charge of the net while it is in session. He/she is responsible for controlling who uses the frequency and when traffic is passed. This needs to be balanced with the fact that net participants are volunteers. NCS must have a reliable signal, if possible. It should be strong and clear with good audio characteristics. NCS must keep track of which resources are on the net and where they are located. NCS is also responsible for knowing what traffic each person is capable of dealing with (sending HF traffic to a Technician-class ham will not be useful).

In medium and large operations, a backup NCS and a separate person to log are needed. Keep a written record of the incident and all traffic passed. This does not mean a word-for-word transcript of every transmission; it does mean a written record of the essential facts communicated.

Make all instructions clear and concise, using as few words as practical.

Use tactical call signs. If participants do not follow your lead, recognize only those using tactical calls (except, of course, for emergency traffic). A polite reminder of proper procedures should help repeat offenders.

b. NCS backup

There are two types of NCS backup. The first is located near the primary NCS and acts as relief for it as needed. The second type is a station at a different location which maintains a duplicate log of everything happening at the event and is available should there be a failure at the primary NCS. Whenever there are enough people working an event, an offsite backup NCS should be maintained. This station must be operating with the knowledge and consent of the NCS station and should be known to the entire net.

c. Logger

Someone to generate an operational log for the entire event is very important to its smooth operation. Such assistance frees the NCS from inefficiency and unproductive distractions.

d. Site communicator

Site communicators have the responsibility of listening to everything that happens on the net and maintaining contact with the served agency personnel at the assigned sites. They need to send and receive formal traffic as applicable, to maintain a log of activity at their locations, and to be responsive to the needs of the served agencies. The person/agency you are assigned to is in charge. You can refuse to do something you believe is illegal or hazardous to your health, but you must comply with other instructions.

e. General communicator

General communicators should report to the NCS promptly as they become available for an assignment. Answer promptly when called by NCS, use tactical call signs, and follow the established net protocol.

f. Liaison station

Liaison stations provide the communication link between nets. They will generally be limited to two nets because more than that is too confusing. Liaison stations will need to have at least two radios, each with its own antenna. The antennas must be separated sufficiently not to interfere with or severely desensitize each other.

g. Listener

The most helpful listener, during an emergency, is one that listens and stays quiet! Just listening is fine, but don't call NCS unless you are available for an assignment. If more operators are needed the need will be transmitted on the net. If you are available, this is the time to respond.

Guidelines for ARES/RACES Event Communications in Barry County

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1. Your function is communication! You must constantly monitor your assigned frequency. Do not allow yourself to become distracted by trying to 'help' individuals performing other functions.
2. This is a professional-quality communications system. Only transmit necessary information. Keep transmissions brief and to the point. Do not repeat portions of your transmission unless requested. Do not offer information gleaned from radio traffic on other frequencies. Do not join the net unless you are a part of the event. Remember that all of our transmissions are being overheard.
3. This is a directed net (think of it as a benevolent dictatorship!). Individual units may contact each other only with the permission of the NCS (net control station).
4. Tactical call signs, names, or FCC call signs may be used for identification within the net, depending on circumstances. FCC call signs are to be used at the end of your transmission to indicate that you have no further traffic for the net or to acknowledge receipt of the message. This satisfies identification requirements of the FCC.
5. Beware of a "stuck microphone." If you haven't heard any radio traffic for a while, check to see that your push-to-talk isn't stuck on.
6. The person you are assigned to is in charge. You can refuse to do something you believe illegal or hazardous to your health, but you must comply with other instructions.
7. When your assigned individual asks you to send some message to NCS, transmit that message exactly; do not leave anything out and do not add to it or try to explain it. You are part of a communication link, not an interpreter. The event coordinator will understand the terminology used, but perhaps not your "clarification." In some cases all messages will be written, probably in standard ARRL Radiogram form.
8. In general, either the 2 m repeater with the best coverage for the event or 147.42 MHz simplex will be used for routine operational transmissions. A "special" 2 m simplex frequency may be used to report confidential information in some cases (told to you at the staging area, if applicable). The "special" frequency is generally used to report information that needing either the immediate attention of the command post or protection from scanner users. Please keep any such special frequencies "secret"!!!
9. NCS may call you periodically (typically every 15-30 minutes) to check on your status and approximate location if there has not been recent communication with you. You are expected to be on the net frequency at all times except when excused by NCS for some reason.
10. NCS will monitor all assigned frequencies.
11. Report to NCS upon completing your assignment.
12. Transmission formats:
 - A. Format for transmissions **to** NCS:
 - Team**> Unit 1. (Use your assigned tactical call.)
 - NCS**> Go ahead unit 1. (Wait at least a couple of minutes for an acknowledgment before trying again.)
 - Team**> (Give your entire message without repeating.) AA8AA (End with your call sign.)
 - NCS**> Roger unit 1. AA8BB (NCS gives its call sign at least every ten minutes.)
 - B. Format for transmissions **from** NCS:
 - NCS**> Unit 1.
 - Team**> Unit 1.
 - NCS**> (Transmit message or question.)
 - Team**> (Answer.) AA8AA (Your call sign.)
 - NCS**> Roger unit 1. AA8BB (NCS call sign.)

ARES/RACES ASSIGNMENT

FOR: (name) _____ (call sign) _____

YOUR TACTICAL NAME: _____ YOUR 'PERSON': _____

YOUR ASSIGNMENT: _____

ROUTINE FREQ: _____ SPECIAL FREQ: _____ BACKUP REPEATER: _____

REPORT (by radio):

1. Departure from Staging Area + 'Person' + Task Assignment.
2. Arrival at Task Area.
3. Confidential information using the special frequency.
4. Departure from Task Area.
5. Arrival back at Staging Area.

NOTES: