

# Amateur Radio Operator's Public Service Guide

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## SUMMARY

The purpose of this paper is to help prepare amateur radio operators who have little or no experience in performing radio communications as part of a public service event. After reviewing this information, the radio operator will have a better understanding of what to expect and how they should prepare for public service.

Public and private organizations that are sponsoring an event in a community may request that the local Ham Radio Club ask club members to provide communications for the organization. This communications can be in the form of setting up a Net Control station that communicates with aid stations, rest stops, traffic stations, and information stations in order to pass needed information.

When there is a large number of people who have registered as participants in the event, maintaining the accountability of each registered participant is important. Some event coordinators may require that the participants on a course wear a bib with a number that is unique to the specific participant. This helps maintain accountability. At the end of the event, each participant must be accounted for by their bib number. Events that typically use bib numbers are Marathons and Bicycle Races.

## Organization Representative and Ham Radio Coordinator

The Organization sponsoring the event must have an individual who coordinates directly with the Ham Radio Club representative. If the Organization's coordinator is a ham radio operator, this makes the process much easier by having the coordinator working directly with the ham radio volunteers.

The request for volunteers made to the Ham Radio Club from the Organization is usually a brief verbal statement that radio operators are needed for an event being held on a certain date, or dates. The request is usually passed at a club meeting or over a radio net. Unless the ham has had prior experience with this specific event, the new volunteer may not fully understand their commitment. To aid the volunteers, an event assignments and instructions handout sheet is needed to help them understand their individual functions.

An event assignments and instructions handout would cover such topics as:

1. Introduction - Event description, resources needed, volunteer specific requirements.
2. Assignments - Provides the location of each volunteer by name, and the dates/times they are needed at that location.

3. Course Description - Map of the route to be taken with locations of start-finish, rest stops, aid stations, check points, etc.
4. Event Details - Event start and end times.
5. Repeater Operation - Repeater frequencies assigned for coverage of the event. Use of tactical calls. The type of net control being used during these events.
6. Medical Situations - How to handle various medical situations.
7. Additional Support Available - What additional support is being provided during the event.
8. Weather and Road Condition - How to report changes in the weather and changes in road conditions during the event.
9. Mobile Operators - Ham radio operators assigned to patrolling the roads during the event need to be aware changing traffic condition and report these changes.
10. Fixed Location Operators - Ham radio operators assigned to fixed locations during the event may need additional supplies at rest stops or aid stations. Report local traffic problems that could affect the event.
11. Mile Reimbursement - If offered by the event, how to document and get reimbursement.
12. Volunteer Identification/Sign-In - Some events provide identifying t-shirts, lanyards-tag credentials and sign-in requirements. Sign-in can be done in writing before proceed to your assigned location or over the radio with the Net Control Station.
13. Updates/Revisions/Questions - As the event nears, you are responsible for watching for any incoming emails that provide last minute changes in instructions or assignments. The ham radio event coordinator should provide their contact information before and during the event. When in doubt, ask questions.

### **Communication Plan**

Prior to the event, the Organization Representative or Ham Radio Representative should have either driven the event area, or a communication terrain mapping software to determine best repeater coverage. As a result of this repeater coverage, a Comm Plan should be written and provided to you. The Comm Plan will list all of the repeaters to be used during the event as well as the repeater offset and any tone requirement. Repeaters may be listed as a Primary or Backup. Different areas of the event may have different Primary or Backup listings.

The Net Control Station should have the ability to access all primary or backup repeater frequencies being used during the event. Net Control may also direct a change in the repeater frequency that you are using if your signal is not full quieting.

The Comm Plan will also list the callsigns of all radio operators, their task and location. Keep this list close by during the event.

## Pre-Event Preparation

Several days prior to the event, you should review the following recommendations in order to make your participation more enjoyable:

1. Review the manual for all of the radios that you will be using during the event. This includes the common steps associated with setting up Memory Channels, Selecting a Memory Channel Number, inputting a new frequency, changing from VFO Mode to Memory Mode, Power Level Changes, Keyboard Lock, Volume Control, Squelch Control, Selecting/Setting Offset and Tone, Changing a Battery (handheld), Set Time Out Timer for 3 minutes (TOT will prevent the repeater from temporarily shutting down due to extended repeater transmit.) Create a "cheat sheet" of notes on programming or purchase a commercially available quick guide for your radio. NOTE: For Yaesu radios, there is a WIRES feature that transmits a tone to access the internet of an amateur node station when the PPT button is pressed. If this feature is turned on while transmitting through a voice repeater, there is a blanking of any audio for the first few seconds of transmissions. This results in not only a annoying tone being sent, but also the message not being fully received. Turn this WIRES feature OFF.

2. Review the Comm Plan and program your radios for Primary and Back Up repeaters being used for all areas of the event, not just your assigned area.

3. Improving communication-For handheld radios operating from a fixed position, consider purchasing a J-Pole external antenna (MFJ-1730) to replace the antenna that comes with the handheld. If operating a handheld while walking/biking, consider upgrading the stock antenna that comes with the handheld radio. Since mobile radios provide higher power and better coverage, they are the preferred means of communication from either a fixed or mobile assignment.

4. The following is a checklist of items that you should consider:

- Spare radios and batteries
- Foods, snack and drinks to cover the time you are on station and beyond
- Vehicle has enough fuel
- Adequate clothing for weather including rain/snow
- Sun screen and hat
- Writing utensils and paper for taking notes
- Course map, communications plan, event instructions

- Table, chairs and tent
- Radio headset for high noise areas
- Bright Safety Vest
- Watch or battery powered clock

5. If this is the first time you are volunteering with a particular event, let the Organization Representative or Ham Radio Representative know that you would like to be paired with someone with prior experience. This will give you the opportunity to learn and ask questions.

### **During The Event**

At times there could be a significant amount of radio traffic being passed during the event. Your station will primarily be communicating with Net Control. Occasionally you will need to communicate with other stations. In an open net, you can call other stations directly without having to get permission from Net Control.

Here are some important points to remember:

Net Control will be logging radio communications with all stations they are talking to. Think of what you are going to say before you say it. Speak slowly and clearly especially when giving bib numbers. Numbers should be given a single digit at a time. Ex.- Bib number 228 would be given as "two-two-eight" not "two hundred twenty eight". Clock time reporting should also be given as single digits. Ex.- 10:33AM would be given as "at time one-zero-three-three" not ten thirty three.

Since Net Control usually operate as an open net, stations need to be listening at all times for calls from other stations and from Net Control. Stations will be using the "tactical" call assigned to them in accordance with the Comm Plan. For example, the first rest stop's tactical call would be "Rest Stop One". Identify with your official call sign periodically as required by the FCC rules.

When operating with multiple repeater coverage, Net Control may ask you to standby after you call them. This is because they are already talking to a station on another repeater. Net Control will get back you when they are able. It is helpful when calling Net Control and other stations to identify the repeater you are using by its decimal frequency ending numbers. - e.g., "Net Control this is Rest Stop 1 on eight-eight for 146.88 repeater"

Occasionally the primary repeater may go out of service or malfunction. Switch over to the backup repeater if this happens. If all else fails, you may be able to reach a nearby station on simplex by using the reverse pair of one of the repeaters -i.e., transmitting on the repeater output frequency and listening on the repeater input frequency.

There have been times when a microphone on a mobile radio either sticks, or someone is sitting on the push-to-talk button. This open mic creates a problem by taking the repeater out of service. Net Control will attempt to correct this problem by placing an "All Stations" call to have everyone check their equipment. You should always monitor your radio for "All Stations" calls and correct this problem if you think that your radio is the problem. If the problem is not corrected by the radio operator, Net Control may take action to remove the offending radio operator from the event.

Contact Net Control for any unusual circumstances that occur at your location. For example: needing additional supplies provided by the event organizer, volunteer personnel not showing up, request for medical assistance, health and welfare check on a particular bib number. During any event, never give out the name of a person needing medical assistance or for a health and welfare check over the radio.

The event coordinator may require that all ham radio volunteers be at their assigned station at a specified time and check-in with Net Control. Once your assigned task has been completed, contact Net Control to request permission to leave and check-out. Do not go to another station or assignment unless prior arrangements have been made with the event organizer and approved by Net Control.