

Basic Net Operations and Is This for Me?

I hope that this evening's material on Net Control Stations will arouse your interest in becoming a NCS. Even if you do not choose to become an NCS, please check into your local and Section nets as often as you can. The more hams who become a NCS and the more that check in our nets, the more effective our nets become and serve to advance the art of emergency communications and that of Amateur Radio even more.

You might ask why should I, as a ham operator, participate in nets or become a Net Control Station? Well, I have several answers to that question.

Amateur Radio is supposed to be about communications. Nets are an important way to communicate to other amateur's information on many different aspects of Amateur Radio. The use of an NTS net is obvious; the purpose of an Information Net can be to keep hams up to date with the latest bulletins from your club or the ARRL. It also serves to inform hams about coming special events such as hamfests, community service events, DX contests and its fun. Our Arkansas Section Traffic Emergency Net serves, in part, the function of a Section-wide "Elmer."

Checking in to a net, and better yet, operating as a Net Control Station, will seriously improve your skills as an operator. The concentration necessary and the coordination of operation of your radio, together with recording information on paper or maybe a computer will enhance your operating techniques at any time.

Probably the most important reason to participate in nets is the same one that got you into Amateur Radio in the first place -- it's fun!

Why We Have Nets

During an emergency communication situation, a high volume of disorganized messages can quickly turn an overloaded communication system into a disaster of its own. To prevent this from happening, Amateur radio operators use a "network" or "net" to organize the flow of messages. The mission of the net is to move as much traffic accurately and effectively as possible in the least amount of time. Nets can be either formal or informal as needs dictate and normally the NCS will decide this. Nets can be in voice, CW, or digital modes depending on the situation.

Anatomy of Net Operations

The Net Manager ensures that there is a NCS and

enough operators for each shift, and monitors net and band conditions to see if changes in frequency are needed. If more than one net is operating, a Net Manager may be responsible for a group of nets. The Net Manager coordinates the various nets and their NCS's to ensure a smooth flow of traffic within and between nets. He or she may assign various human and equipment resources to meet the needs of each net.

Net Managers may be appointed to be responsible for a regularly scheduled net, or may be temporarily appointed to manage one or more ad hoc nets created for a particular disaster.

A Net Control Station (NCS) directs the minute-by-minute operation of the net. The NCS controls the flow of messages according to priority, and keeps track of where messages come from and where they go, and any that have yet to be sent. He or she also keeps a current list of which stations are where, their assignments, and their capabilities. In a busy situation, the NCS may have one or more assistants to help with record keeping.

Liaison Stations handle messages that need to be passed from one net to another. The NCS or Net Manager may assign one or more stations to act as "liaisons" between two specific nets. These stations can monitor one or both nets, depending on resources. It is easier to monitor only one net at a time. This can be accomplished by having one station in each net assigned as the liaison to the other, or by having a single liaison station check into both nets on a regular schedule. In the event that an "emergency"

precedence message needs to be passed to another net when the liaison is not monitoring that net, any net member can be assigned to jump to the other net and pass the message.

Net Types

Open (Informal) Nets

During an open emergency net, there is minimal central control by a Net Control Station (NCS), if indeed there is a NCS at all. Stations call one another directly to pass messages. Unnecessary chatter is usually kept to a minimum. Open nets are often used during the period leading up to a potential emergency situation and as an operation winds down, or in smaller nets with only a few stations participating.

Directed (Formal) Nets

A directed emergency net is created whenever large numbers of stations are participating, or where the volume of traffic cannot be dealt with on a first-come first-served basis. In a communication emergency of any size, it is usually best to operate a directed net.

In a directed net, the NCS controls all net operations. Check-ins may not "break into" (interrupt) the net or transmit unless specifically instructed to do so by the NCS unless they have an emergency message. The NCS will determine who uses the frequency and which traffic will be passed first. Casual conversation is strongly discouraged and tactical call signs will probably be used.

Net Missions

Each net has a specific mission, or set of missions. In a smaller emergency, all the communication needs may be met by one net. In a larger emergency, multiple nets may be created to handle different needs. Here are some examples:

Traffic net -- Handles formatted written messages between served agency locations or between other nets.

Resource Net -- This is the net hams arriving on scene would check into to receive assignments, or to be reassigned as needs change. A resource net may also be used to locate needed equipment, or operators with specific skills. Several different resource nets may be used in large-scale events. One might be used for collecting new volunteers over a wide area, and other local nets could be used for initial assignments. If required due to geography or high net activity, a third net could handle on-going logistical support needs.

Tactical Nets -- The tactical net(s) handle the real meat of on-site emergency communication. Their mission may be handling communications for the served agency, weather monitoring and reporting, river gauging, or a variety of other tasks that do not require a formal written message.

Health and Welfare (H&W) Nets -- These nets usually handle messages between concerned friends and family, and persons in the disaster area. Most H&W nets will be on HF bands, but local VHF or UHF "feeder" nets may be needed within in a disaster area.