

## Amateur Radio Net Formats

An Amateur Radio Net, or simply Ham net, is an “on-the-air” gathering of Amateur Radio operators. The word “net” is short for “network”. Networks can be defined as groups of equipment, individuals, and/or agencies acting together to increase efficiency and effectiveness through shared information and resources. The word “network” can be further broken down into its two components. “Net” implies a capture and holding effect. “Work” implies that something productive is to be accomplished. Ham radio operators and nets in emergency situations capture, record, hold, and distribute information so that others may work (produce results) more effectively.

The purpose of any net is to provide a means for orderly communication within a group of stations. In a directed net, a net control station (NCS) organizes and controls all activity. Directed nets are the best format when there are a large number of member stations. Nets are either directed (formal) or undirected (informal or open).

### Directed Nets

A directed net is formal, has a set of rules or net directives, all communications must go through net control. It controls the frequency with net related traffic only, and has a specified person in charge, the Net Control Station (NCS). The NCS will issue specific instructions on how he/she wants the net to run.

A directed net is one in which it is necessary to obtain permission from the NCS before transmitting to other stations in the net.

### Scheduled Nets

Directed nets are divided into two types: Scheduled and Emergency nets. Scheduled nets have fixed times, frequencies and format. Scheduled nets include ARES, RACES, Club, Traffic and ARPSC nets.

### ARES NETS

Amateur Radio Emergency Services (ARES) nets are open to any licensed amateur radio operator. They may be originated by club or public service events. They may also serve agencies like the Red Cross, Salvation Army or any other non-governmental agency.

### RACES NETS

Radio Amateur Civil Emergency Service (RACES) nets have specific requirements for initiation and discussion can be found in the Emergency Nets section. Weekly RACES training nets may be scheduled or initiated by the RO. Scheduled RACES nets may be used to conduct monthly Emergency Operations Center (EOC) Nets.

### CLUB NETS

The club net is another excellent place to break in an NCO trainee. Most of the time, they are run as a directed net in a relaxed atmosphere. These are great training grounds for Net Control Operators. They may be informational, training or just fellowship. Many clubs make check-ins to the club net part of participation requirements.

### APRSC NETS

Amateur Radio Public Service Corps (APRSC) nets can be held at the ARRL Section, District, and Local levels. These are information nets. Participants are informed of ARRL policies, news, events, and appointments. These nets represent an excellent training opportunity and should be held weekly. These are always directed nets.

## TRAFFIC NETS

Traffic Net handles formal written messages in a specified format. The nets operated by the National Traffic System (NTS) are an excellent example of traffic nets.

### Emergency Nets

The second type of directed or formal net is Emergency net. "Emergency" may be defined as an accident or other crisis where people and/or property are in distress. Emergencies are nearly always recognized and declared by agencies or authorities outside of the Amateur Radio Service. Amateur Radio operators and net control stations do not have independent authority to declare an emergency.

An Emergency Net is a group of stations who provide communication to one or more served agencies or to the general public in an emergency. Emergency nets may have different purposes and a given emergency may require one or more of these types of net. During a small operation, all functions may be combined into one net. SkyWarn and RACES are examples of emergency nets. Tactical, Command, Resource and Information nets are types of emergency functions used during an Emergency Net.

### SkyWarn NETS

It is absolutely essential that all Net Control Operators be aware of and fully familiar with the SkyWarn activation process for their area and be fully trained by attending the NWS or Emergency Management training sessions for summer and winter weather. Weather reports on severe weather nets are limited to critical severe weather observations unless specifically requested by the net control operator. The procedure for alerting the Weather Net and a list of what to report and how to report using the Time, Event, Location (T E L) method.

SkyWarn nets are usually run under the ARES flag. They are nearly always directed nets, with varying degrees of net discipline, held on local repeaters, FM simplex, and HF frequencies. The level of formality is set by the NCS. ARES NCS operators should be RACES qualified and should be familiar with the Incident Command Structure (ICS).

### RACES NETS

Radio Amateur Civil Emergency Service (RACES) nets are a bit different.

They are federally sponsored by FEMA and can only be activated by a governmental official. This appointed or elected official can be at a local, state, or federal level. It is usually a County Emergency Manager, Sheriff or the State Police.

A RACES net, under current law, can only have RACES membership. An operator must be RACES qualified in order to participate. To become qualified, an operator must take a simple, short course of instruction available from FEMA. The text for the course and the open book test are available on the internet from FEMA.

As a general rule of thumb during a RACES net you cannot communicate with a non-RACES station. This is a topic of considerable debate. Some individuals and groups claim an interpretation of the rules that allows communication with non-RACES stations. This is predicated on permission being granted by a government official for such communications. (See Part 97 subpart E: Providing Emergency Communications)

These are always directed nets requiring fairly tight net discipline.

The NCS is nearly always located in a pre-designated Emergency Operations Center. Expect to deal with a number of agencies and manage communications liaisons with most of them. NCS operators will normally be reporting directly to the EC/RO.

RACES NCS operators and net participants should be familiar with the Incident Command System (ICS).

Participants in RACES activities are covered by their State's Disability/Workman's Compensation Structure. Recent changes in Federal law also gives participants increased, but limited, liability protection against the possibility of being sued for actions they might take as emergency volunteers.

A RACES training net is currently limited by law, to a minimum of one hour of airtime per month. A RACES training net may be called or initiated by the RO.

## RESOURCE NETS

Big events are most often run using the Incident Command System. The ICS uses a different form of a standby net. It is called a Resource Net. These nets are always directed. The Resource Net Control Station makes assignments, gives instructions, and directs the flow of available resources. The Resource NCS receives requests for transportation, equipment, supplies and personnel from a front-line Tactical Net, the Command Net, and outside served agencies. A resource net may be needed to acquire volunteers and hand assignments. Resource nets accept check-ins from arriving volunteers who are then directed to contact an appropriate station or to proceed to a specific location.

## TACTICAL NETS

Tactical nets are used for real-time coordination of activities related to the emergency. This is a fast moving often less formal operation. Tactical nets are used after an event has occurred or during and after a lengthy event. They are found on the "front lines" of response, disaster assessment, recovery and Search and Rescue operations. There may be several of these nets running at the same time; on different frequencies and from widespread locations... all reporting to a "master" Tactical NCS at the EOC.

## Command NETS

Command nets are encountered in all large disasters or emergencies. This is a communications net established to keep the top "executive board" of emergency officials informed. They are also used by fire departments and police agencies during smaller, local events. They are run in accordance with the ICS. It would be rare for amateurs to be involved directly in one of these nets, but fairly common for amateur nets and sub-nets to be reporting certain information to a command net. For now, just be aware that they exist and that they are guys who are really running the show.

## INFORMATION NETS

An Information Net is usually an open net used to collect or share information on a developing situation without overly restricting the use of the frequency by others. The operation of an information net also serves as notice to all stations that a more formal net may be activated any moment if conditions warrant. A good example is a SkyWarn weather net activated during a severe storm watch.

## Undirected Nets

The informal or undirected net is the last example of net format. An open net can be held in the midst of other normal frequency traffic. It is very informal; net participants may converse directly and there may or may not be a specified net control operator (station). If a net control is selected from the group, that NCS can set the level of formality with informal net guidelines.