

ARES RACES



NET CONTROL



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WHAT WILL WE COVER

- The history of ARES and RACES
 - Types of Nets
- The Net Control Operator
- Questions and Answers



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TWO TYPES OF AMATEUR RADIO EMERGENCY OPERATION

- **ARES**

Amateur Radio Emergency Service

- **RACES**

Radio Amateur Civil Emergency Service



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ARES HISTORY

- ARES and its predecessor
Amateur Radio Emergency Corps
Responding to disasters since the 1930's
- ARES is Community Service and Disaster
Response
- ARES is activated – Anytime its Needed
 - ARES passes Most types of Traffic



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RACES HISTORY

- During WWII, Amateur Radio was Shut Down.
- Government and Military needed the Frequency's
- The War Emergency Radio Service was created
 - It took Six Months to create
 - Time was lost.



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RACES CREATION

- In 1952 w/input from ARRL & Army Office of Civil Defense

The Radio Amateur Civil Emergency Service was created

- U.S. can use it to Silence non RACES HAM's during War Powers Act Declaration
 - Despite 4 Wars the WPA was never used
 - RACES uses the National Incident Management System



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WHEN IS ARES ACTIVATED



ARES is Activated Before, During and After an Emergency

ARES can be Activated for Public Service Events such as Parades, Charity Events, Training and Meetings as needed

ARES can be used anytime special communication is needed



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WHO CAN ARES TALK TO

- Any Amateur Station



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WHEN IS RACES ACTIVATED

- Activated by Local, County, State and Federal Gov.
- RACES almost NEVER starts before an Emergency starts.
 - Is active only during a Declared Emergency
- Can remain active only if a Government Agency needs Communications Support
- RACES is normally shut down immediately after the emergency



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WHO CAN RACES TALK TO

- Other Amateur RACES Stations
- RACES Licensed Government Stations (250)
- Certain other stations Registered with CD
 - Certain Gov Agency's with Special Permission
 - Certain other FCC authorized stations



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RACES EXCEPTIONS

- NO RESTRICTIONS FOR
 - Life Safety Issues
 - Protection of Property
 - Station in Distress
- Assisting a station in Distress



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RACES RESTRICTIONS

- RACES drills and tests can't exceed a total time of one hour per week without special permission.
- The drill time limits were implemented in 1976 because, among other things, local government land mobile communications operators were using the amateur service improperly.



THE PURPOSE OF A NET

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).



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DIRECTED NETS

A directed net is a formal net, has a set of rules or net directives, all communication 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 (TARC Net, BARS Net, CERT Net, etc.)

Traffic (Eagle Net, etc.)

(WCF ARRL ARES Net, WCF Section Information Net, etc.)



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WHERE DO I LEARN NCO

The club net is another excellent place to break in a 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, but many do not.



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LEARN TO HANDLE TRAFFIC

A 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.

In this area, the Eagle Net is convened daily at 8:30 PM on the NI4CE Repeater System for this purpose.



EMERGENCY NETS

The second type of directed or formal net is an 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.



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COMBINED EMERGENCY NETS

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.



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SKYWARN NETS

- 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 familiar with the Incident Command System (ICS).



RACES NETS

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

They are federally sponsored by FEMA and can only be activated by a government official. This appointed or elected official can be at the local, state or federal level. It is usually a county emergency manager, sheriff or the state police.



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RACES NETS

- A RACES net, under current law, can only have RACES membership. An operator must be RACES qualified in order to participate.
- As a general rule of thumb during a RACES net you can not communicate with a non-races station. This is a topic of considerable debate. Some individuals and groups clam an interpretation of the rules that allows communication with non-RACES stations.



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RACES NETS

- These are always directed nets requiring tight net discipline
- The Net Control Station is nearly always located in a pre-designated Emergency Operations Center (EOC). 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).



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RACES NETS

- 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 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 maximum of one hour of airtime per month. A RACES Training Net may be called or initiated by the RO



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RACES RESOURCE NET

- Big events usually under RACES, 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.



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- A resource net may be needed to acquire volunteers and handle 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.



RACES 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.



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RACES 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 Incident Command System (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



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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 at any moment if conditions warrant. A good example is a SkyWarn weather net activated during a severe storm watch.



INFORMAL NETS

- The informal or undirected net is the last example of a 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.
- If a net control is selected from the group, that NCS can set the level of formality with informal net guidelines.



THE NET CONTROL OPERATOR

The Net Control Station (NCS) runs the net. This person controls the flow of messages according to priority and keeps track of where messages come from and where they go.

The NCS also keeps a current list of which stations are where, their assignments and what capabilities they have. In a busy situation, the NCS may have one or more assistants to help with record keeping.



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NCO PREREQUISITES

- Clear Speaking Voice
- Ability to handle stress for long periods
- Ability to listen and comprehend in a noisy and chaotic environment
 - Good hearing
 - Ability to write legibly
- Working knowledge of the ICS



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NCO PREREQUISITES

- Ability to be decisive
- Ability to make good judgement calls
- A Strong self-assured management style
- Do you have what it takes to become a good NCS?



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ADDITIONAL CHARACTERISTICS

- Good Voice Quality
- Knowledge of band characteristics
 - Knowledge of common equipment
- Ability to absorb new terminology quickly
 - A strong team player



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- Generally professional appearance
- Willingness to take and carry out direct orders
- Consistently demonstrates above average operating technique
- Has a general understanding of MOU's (Memorandum's of Understanding) with served agencies



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PERSONALITY TRAITS



- Be the boss but don't be bossy
 - Be punctual
 - Know your territory
- Take extra care to keep your antennas in good shape
 - Keep a log of every net session
- Don't hamstring the net by waiting to move the traffic



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COMMUNICATION SKILLS

Communication is affected by numerous factors including personal operating skills, method of communication, noise or interference, skills of net participants and adequate resources

- Listening
- Microphone Technique
- Brevity and Clarity
- Plain Language
- Phonetics



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BASIC TECHNIQUES

- When asking for reports or soliciting traffic, listen carefully. It is easy to miss critical information when operating under the stress of an emergency
- For efficiency note on your net worksheet as many calls as you can before you acknowledge any. Acknowledge all stations heard by call and then yield the frequency to any station reporting in with emergency traffic. Clear emergency traffic then priority messages and finally those with routine messages



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Basic techniques

- Pair stations to pass traffic to another frequency whenever possible
 - Be as concise as possible.
 - Take frequent breaks
- Control your voice, be as calm as possible. Speak with confidence and authority.



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NCS HINTS

- If a net is a scheduled net, start on time.
- Use a script (preamble, net instructions) when possible
- Ask specific questions, give specific instructions
 - Be friendly, yet in control
- Have a pencil/paper handy and write down all calls



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NCS HINTS

- Read your radio's owners manual and know your radio before an emergency
 - Know how to use your microphone
 - When there is a double, listen to see if you can identify either station by call sign
- During check-ins, recognize participants by name when possible to boost morale
- Frequently identify the name and purpose of the net.
- Don't be afraid to ask for assistance if you need it



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NCS HINTS

- If the net is an emergency operation, tell listeners where to go for other nets
- You will make mistakes, acknowledging them will earn the respect and support of the net members
- Don't think on the air, if you need a moment to consider what is needed, say something like "standby" and un-key the microphone
- Keep transmissions as short as possible



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NCS HINTS

- Transmit only facts
- Avoid becoming the source for general information about the event
 - Use standard ITU phonetics
 - For voice nets, use plain English
- If the net has been quiet for more than 10 minutes, check on operator status



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TACTICAL CALL SIGNS

- Tactical call signs can identify the station's location or its purpose during an event, regardless of who is operating the station. The tactical call sign allows you to contact a station without knowing the call sign of the operator.
- Tactical call signs should be utilized for all emergency nets and public service events if there are more than a few participants.



- When the station operator may change or during public service events, use tactical call signs on the net and enforce this rule with other members of the net. Use of tactical call signs is perfectly legal as long as the FCC ID requirements are met, i.e. ID'ing every 10 minutes when using the channel.



HABITS TO AVOID

- Thinking aloud on the air: “Ahhh, let me see. Hmmm. Well, you know, if ...”
 - On air arguments or criticism
 - Rambling commentaries
 - Shouting into your microphone



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- “Cute” Phonetics
- Identifying every time you key or un-key the mic
- Using “10” codes, Q signals or anything other than “plain language”
- Speaking without planning your message in advance



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RECORDS

- Every NCS should have a format to be used during any net they direct. In most cases there needs to be at least two documents: an activity log and a message log. If there are any messages or instructions to or from the NCS then these also should be kept.



- Logs should be maintained until the conclusion of the exercise or the After Event Debriefing. Following that, an incident summary or net report should be prepared and submitted to the official in charge of the event.
- The NCS should maintain the original logs in their files for one year.



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PRACTICE USING RADIO

- ARES UHF Net Thursday at 7:30 pm
- 444.225 MHz with 146.2 Hertz Tone
 - All are Welcome
 - Hear ARES Announcements
- Get use to No Pressure Net Operation



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YOU HAVE QUESTIONS?



- HILLSBOROUGHARES.ORG
- aresdb.org



- WWW.WEATHER.GOV/TBW/SKYWARN



- [FEMA TRAINING.FEMA.GOV/NIMS/](http://TRAINING.FEMA.GOV/NIMS/)



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QUESTIONS ASK NOW



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