NET CONTROL TRAINING MANUAL

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PURPOSE OF THIS MANUAL

The purpose of this manual is to begin to identify a base set of information and procedures for use in amateur radio emergency and weather nets. The intent is to begin creating continuity in net operations. It will, hopefully, spur other writers into continuing the concept. This manual is not a definitive work.

Chapter One
NECESSARY BACKGROUND STUFF

COMMENTARY: WHY THIS MANUAL IS NECESSARY

It is an unfortunate fact that many served agencies and the general public judge our potential performance and relative value as a public service by what they hear via scanner during our weather nets and SET drills. Most of our weather nets and practice drills are poorly done. Public concensus is, all too often, that amateur radio operators are nothing more than glorified CB'rs. All too often, they are right. We simply do not project the "professionalism" that they rightfully expect. Then we wonder why they don't call us when something happens and why our frequencies are under attack. We must correct and promote our public image; or fade into history.

Served agencies often view Amateur Radio operators as nuisances instead of assistants. The reason is that we often don't pay enough attention to what the served agency really wants and needs. We tend to operate within our own perceptions of what we think they want or need. We don't seek a deep understanding of what their perceptions really are. The result is that the service we offer becomes greatly diminished in value to the served agency. We wind up offering and performing services convenient and effective for us . . . but not necessarily what they envisioned, really wanted or needed. This is not an easy issue to resolve.

Served agencies know that they need help with communications. A problem arises when we assume that they are aware of all the different modes of communications available to them from the amateur radio service. They are not aware! You should assume that they know nothing about communications beyond their telephone and pager. Most people aren't really aware that their cordless or cellular phone, wireless intercom, baby monitor, garage door opener and pager are really radio devices.

The idea that hams can serve them with packet, ATV, APRS/GPS, long range HF, CW and VHF/UHF simplex and repeater communications is simply too much technology for most agency personnel to comprehend. (How much study did it take for you to get your Extra ticket?) We have to gently educate them as to our capabilities and then carefully listen to them for clues to possible uses of various modes to help solve their communications problems. Hams are great talkers. The greater part of true and artful communication is listening.

WHAT IS AN EMERGENCY NET?

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 it's 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.

"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.

WHO SHOULD START AN EMERGENCY NET?

An emergency net is started only after a request for service has been submitted by a served agency. Such a request is usually routed through an appointed amateur radio Emergency Coordinator (EC) or one of his/her assistants. If it is known that there is an emergency situation developing, an EC could request that a "Standby" or "Resource" net be started in anticipation of a request for service from a served agency.

The proper way for the EC to start the emergency or standby net, is for him/her to contact a trained NCS operator to handle the task. The EC could start the net; but it is not recommended. The EC will, sooner or later, be required to interact with the leadership of served agencies. It is impossible to do this if the EC is also acting as NCS. An excellent rule of thumb is that the EC should never be NCS in any emergency or weather net.
Summary: Generally, an emergency net is started by an EC or AEC at the request of an authority outside the Amateur Radio Service. National Weather Service offices are the only authorized source for public weather watches and warnings. Standby nets are OK in any case. Memorandums Of Understanding should be in place to clarify activation processes.

DIFFERENT KINDS OF NETS

There are many different kinds of emergency nets. We will examine only a few of the more common nets here. The basics are all the same. Details of net activities will be examined throughout this manual.

NET FORMATS

There are two basic Net Formats. The first is the open or undirected net. The second is the directed net.

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.

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

SKYWARN/WEATHER NETS

Weather nets have their own set of start-up conditions.
One point must be made very clear right at the beginning: SKYWARN SPOTTERS AND SPOTTER NET CONTROL STATIONS ARE NEVER RESPONSIBLE FOR ISSUING WEATHER WATCHES, WARNINGS OR OTHER WEATHER RELATED ANNOUNCEMENTS TO THE PUBLIC, PUBLIC SERVICE AGENCIES, OR TO THE MEDIA. This is the responsibility of the NWS only.
National Weather Service offices request that amateur radio spotter nets be activated in several different ways. Some offices request spotter activation with announcements included in their Public Weather Watch or Warning broadcasts. Some offices prefer to use a group of radio or telephone "calling trees." Still others, (probably the vast majority), prefer a very simple, "automatic" system; whereby spotter activation is automatically triggered throughout a coverage area by an NWS announcement of a watch or warning anywhere in that coverage area. A combination of these methods, in whole or in part, is not uncommon at all.
Regardless of what system is used, a formal agreement, known as a Memorandum Of Understanding (MOU), should be in place between at least the District and the NWS. County level MOU's are very useful to cover special needs in fringe areas. This agreement should describe, in detail, exactly what the notification system will be; and the response activities that the amateurs radio spotters will perform at each level of the watch/warning . The MOU should be freely copied and distributed. All amateurs within the coverage area should be informed regarding the content of MOU's. It is absolutely essential that all Net Control operators be aware of, and fully familiar with, the Skywarn activation process for their area.

Note: Some NWS offices are very particular about the use of "SKYWARN" as a description of a weather net. It is recommended that the word "Skywarn" not be used in any standby net called by an EC or others. Once a request for activation has been formally received, or publicly broadcast by the NWS, it is usually understood that the word "Skywarn" is OK to use. This issue should be covered in the MOU.

If a request for a weather net is received from a local government authority instead of the NWS, (this is fairly rare), the request of the government authority supersedes NWS authority. The net normally transfers at this point, to come under RACES/FEMA authority. The NWS should be notified if this should occur. Spotter reports of significance would still be sent to the NWS. The NWS still retains the exclusive authority to issue all watches and warnings; but a local County Emergency Manager, for example, can override the NWS on a local level and sound warning sirens, etc. at his/her discretion.

A basic misunderstanding frequently occurs in new ARES/RACES groups. *You do not have to wait for a NWS public watch or warning statement to be issued before you start a weather net!* If the weather is presenting a local threat that is making a number of you nervous, start a standby weather net!! Don't call it a SKYWARN net. Don't issue any watches or warnings on your own. Just announce that a standby weather net is in progress . . . that you are beginning to track conditions.

Regardless of whether a net is directed and formal or an informal standby net, *only one person should be responsible for reporting conditions to the NWS*. The NWS frowns on multiple, identical reports. Multiple reports make our efforts look totally disorganized.

Standby nets can be a very informal information gathering process that will help immensely if, and when, the NWS issues a watch or warning. If conditions really get nasty, formalize the net and notify the NWS that you have a net in progress; and why. The NWS should never complain about this activity; indeed, they should be grateful; and they have no right to complain. Your right to communicate and have nets for the benefit of the public is under FCC jurisdiction and authority . . . not NWS authority.
Standby nets are generally run under condition "Green". This is the lowest weather priority. Condition "Green" is also used during a thunderstorm Watch. When an official Watch is issued for a particular locale, nets covering a location experiencing adverse weather effects can go to condition "Yellow" and begin using the word "SKYWARN" as a descriptor. When an official Warning is issued, nets usually go to condition "Red."
Local NCS's may upgrade/downgrade a condition code on their own; in accordance with local conditions and for the safety awareness of their Spotters. NCS operators should be very careful to phrase an upgrade/downgrade statement to the net; so that it doesn't represent, or sound like, an official public Watch or Warning statement. A simple statement such as:"This net is now changing to condition Yellow alert and safety status.", will suffice. *The NWS does not have to activate their in-house amateur radio station just because you have started a stand-by weather net*. Ask them if they are going to activate it. If they say "No", thank them for the information and use the telephone for any further communications. Never underestimate or overlook the value of a working telephone.

The NWS recognizes that their radar has severe limitations and that with their current radar technology, they will never be able to see what is happening at the all important lower elevations between zero and 4000 feet for more than just a few miles.
Only a spotter can actually observe and report the effects of hail, wind velocity, gust fronts, funnel clouds, wall clouds, downburst activity, rotation, and tornadoes. The NWS radar can't actually see any of these things. Their radar can only indicate a relative location of conditions at higher elevations that are known to be conducive to these things occurring at lower elevations.

The spotter becomes increasingly more important to the NWS and the public as the distance from the radar site increases. Even at minimal radar take-off angles, at a distance of 40 to 100 miles, the radar image may be well above any, or most, significant ground effect storm activity. This is one major reason that a NCS must keep track of all spotter locations. Knowing a spotter's exact location helps the NWS know where to look for developing patterns.

ARES NETS

ARES (Amateur Radio Emergency Service) nets are held under auspices of the ARRL and in accordance with national and local MOU's between the ARRL, local ARRL organizations, and many served agencies. These nets usually serve agencies like the American Red Cross, Salvation Army, and other non-governmental agencies. They are widely used in Public Service Events. 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.

Net Control Stations for these nets are usually located at an agency command post. Field stations and operators can be required. Served agencies will usually want a communications link established to an even higher organizational level within their agency. This is especially true of the Red Cross. Be prepared to establish long distance communications in addition to local communications. Expect the necessity to establish communications liaisons with other agencies and a RACES EOC. ARES NCS operators should be RACES qualified and should be familiar with the Incident Command Structure (ICS).

RACES NETS

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

1. 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.
2. 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 now available on the Internet; from FEMA. You can take the test interactively on the Internet. Contact your EC or RO (FEMA Radio Officer) for further information. Your EC/RO will guide you through the simple RACES application process
3. 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. We will not debate this in this manual. The following is a direct quote from the part 97 FCC rules. We will let you decide.

Subpart E - Providing Emergency Communications 97.407

(c) A RACES station may only communicate with:

1. Another RACES station;
2. An amateur station registered with a civil defense organization;
3. A United States Government station authorized bythe responsible agency to communicate with RACES stations;
4. A station in a service regulated by the FCC whenever such communication is authorized by the FCC.

(**d)** An amateur station registered with a civil defense organization may only communicate with:

1. A RACES station licensed to another civil defense organization with which the amateur station is registered;
2. The following stations upon authorization of the responsible civil defense official for the organization with which the amateur station is registered:
    1. (i) A RACES station licensed to another civil defense organization;
    2. (ii) An amateur station registered with the same or another civil defense organization;
    3. (iii) A United States Government station authorized by the responsible agency to communicate with RACES stations; and
    4. (iv) A station in a service regulated by the FCC whenever such communication is authorized by the FCC.

(e) All communications transmitted in RACES must be specifically authorized by the civil defense organization for the area served. Only civil defense communications of the following types may be transmitted:

1. Messages concerning impending or actual conditions jeopardizing the public safety, or affecting the national defense or security during periods of local, regional, oar national civil emergencies;
2. Messages directly concerning the immediate safety of life of individuals, the immediate protection of property, maintenance of law and order, alleviation of human suffering and need, and the combating of armed attack or sabotage;
3. Messages directly concerning the accumulation and dissemination of public information or instructions to the civilian population essential to the activities of the civil defense organization or other authorized governmental or relief agencies; and

4. Communications for RACES training drills and tests necessary to ensure the establishment and maintenance of orderly and efficient operation of the RACES as ordered by the responsible civil defense organizations served. Such drills and tests may not exceed a total time of 1 hour per week. With the approval of the chief officer for emergency planning the applicable State, Commonwealth, District or territory, however, such tests and drills may be conducted for a period not to exceed 72 hours no more than twice in any calendar year."

If that doesn't confuse you, you are a lawyer.

4. These are always directed nets; requiring fairly tight net discipline.
5. The Net Control Station is nearly always located in a pre-designated Emergency Operations Center (EOC). If the EOC is ill equipped, put your NCS somewhere else. 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.

Note: (If an EOC is poorly equipped, the EC should work closely and creatively with the local Emergency Manager to solve this problem.)

6. RACES NCS operators and net participants should be familiar with the Incident Command System (ICS).
7. *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.
8. *A RACES training net is currently limited by law, to one hour of airtime per month*. A RACES training net may be called or initiated by the RO.

Note: Participation in RACES operations can involve taking direct orders from public service agencies and governmental officials. If you are steadfast in your belief that you are a volunteer, and that volunteers don't have to take orders, the author suggests that you think long and hard before becoming involved with RACES. When you sign a RACES application, you are basically signing a contract with the government and agreeing to do what you are told, during a RACES controlled event.

Standby nets are one of the most often used and most useful tools available to the amateur radio community. They can be started in open or directed format. They can be started and run by anyone and offer an excellent opportunity for NCO trainees to become exposed to running an actual, "almost emergency" net. The standby net allows a monitoring, qualified NCO to get organized and get into the flow of the event, without having to actually run the net. It also gives the trainee an on-line coach to fall back on for advice. When the qualified NCO feels that it is necessary to take over the net because of escalating circumstances or the inability of the trainee to continue efficiently, the transfer is seamless.

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 and it's no place for a rookie. They are literally "collection point" or "staging area" nets where excess personnel, relief schedules, lists of equipment, lists of supplies, etc. are kept in some semblance of order. This is the "Supply Sergeant" of a big event. This is also the net that participants check into when they become available to work the event. The resource net control 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.

You need experience, outstanding organizational skills, a cool head, and several assistants to be an effective NCO for a major ICS agency net. While we should train for this position in the event that we could be called on, it is normally handled by a professional dispatcher . . . with the amateur NCS filling in the communications "holes".

The amateur radio participation level in big disasters, like hurricanes, may be large enough that it will require it's own Resource Net. These nets have extreme value in smoothing out the flow of communications, personnel, and equipment. They simplify the operation and drastically reduce the stress level for tactical and command NCO's.

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. Stress safety to your people.

Recovery operations are very dangerous. Everyone is excited, in a hurry, confused, and in an unnatural situation . . . a dangerous combination. It is very easy to step on a nail and become another casualty.

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), which will be addressed later in this document. 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 the guys who are really running the show..

Amateur Radio Public Service Corps, (ARPSC) 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.

This author firmly believes that all ARES/RACES organizations should hold their own weekly nets for the purpose of advancing the state of readiness for all personnel. This is a tremendous opportunity to address local organizational and educational issues and weaknesses. It is a waste of time to hold one of these nets and not do some training. Training should be no longer than 15 minutes in length. Short simulations of correct vs. incorrect communications and content can be very informative and a lot of fun.

The weekly rag-chew or club net is another excellent place to break in a NCO trainee. These nets can be run in nearly any fashion . . . open or directed. Most of the time, they are run as a directed net in a relaxed atmosphere. These are great training grounds for Net Control Operators.

IMPORTANT NOTE: ARES/RACES and Weather nets and activities *should not* be run as local club events; unless that "club" has been formed, separate and apart . . . as an *independent* ARES/RACES organization. The EC or RO *must* be the final leadership authority in such an organization. An elected local club official should never be in a position to challenge the authority or leadership of an EC/RO in an ARES/RACES emergency event, weather net or emergency test.

WHO SHOULD BE NET CONTROL?

An actual emergency requires an experienced and, possibly, certified operator in the position of Net Control Station. Unfortunately, there are few certification/training programs around.

There has been little, if any attempt, to standardize minimum levels of experience and knowledge for net control operators. Altogether too often, the NCS winds up being manned by whoever was available to be pushed into the hot seat when the stuff hit the fan. . . qualified, or not.

Your organization should establish what it believes are minimums in order to qualify an individual for the responsibilities of running an emergency net. This manual will give some guidance.

Not everyone is cut out to be a net control operator. Those who would not be considered good net leaders usually are not interested in becoming emergency net controllers. This is a fortunate natural phenomenon. Nothing can be tougher than to have to develop the diplomacy to tell someone who has tried their best, that they probably will never be qualified because something in their personality, physical condition or basic intelligence will forever keep them from being effective. This is not to say that the physically challenged, or handicapped, cannot be effective NCO's. Two of the finest emergency net controllers this author has ever heard, are legally blind.

Some of the characteristics that are desirable in a net control operator are:

- Good voice quality - with an air of authority; without sarcastic overtones or being overbearing.
- Sense of control and self-assuredness.
- Decisiveness and the maturity to make good judgment calls.
- Knowledge of band characteristics
- Knowledge of common equipment
- Good basic communications skills and fluent command of language
- Ability to absorb new terminologies quickly
- Knowledge of the ICS
- Physical condition that will tolerate high stress for extended periods of time
- A strong team player and organizer
- Good hearing capabilities
- Good ear-to-hand copying skills
- Good listening capabilities
- Decent (readable) penmanship
- Computer keyboard skills - touch typing
- Generally "professional" appearance
- Willingness to take and carry out direct orders
- A cast-iron stomach and constitution that can exist on hot dogs, cold smashed sandwiches, soda pop and coffee for days on end
- The ability to sleep in a rock quarry without bedding
- Has a spouse who doesn't care how much time is spent away from the family "playing radio"
- Consistently demonstrates above average operating technique
- Has general understanding of all MOU's with served agencies
- Constant concern for the safety of participants
- Good sense of humor

Unless you are fortunate enough to get the author as a Net Control Operator, you probably won't find too many people with all of the above listed characteristics. (Humor intended) The point is, that no two people naturally have identical skill sets or personality assets. Training must be devised and taught in order to enhance the effectiveness of everyone. The training does not have to be complex or sophisticated. . . just effective.

WHERE SHOULD NET CONTROL BE LOCATED?

This question will always be subject to local circumstances and resources. Some areas have beautiful facilities in their County EOC's and the amateurs are encouraged to use those facilities in nearly any way they choose. Some EOC's are marginally equipped and have restricted access. The best location for a NCS may not be at the EOC. In other areas, no such public facility exists and the amateurs must rely entirely on club stations or their own private stations. Whatever the case may be, the following guidelines should be followed.

1. Net control should always be located at a station that has a strong, commanding signal. The same is true of choosing a repeater to use. A NCS that can't be heard is worthless. If you have taken temporary control of a net that is just beginning, do not transfer NCS duties to a weak or marginal station. If faced with a choice of a weak station manned by an experienced NCO or a strong station manned by an inexperienced NCO . . . go with the strong station and try to get an experienced operator to a strong station.

2. The NCS should have the capabilities to communicate with served agencies. This could be by telephone, radio, liaison station, courier, CB, pony express, or whatever. Get your links set up as quickly as possible.

3. If at all possible, the NCS should have alternative, back-up power and a back-up rig.

4. During short-term, violent events, an alternate NCS should be either pre-arranged or set up immediately to run parallel recording operations during the net. If the primary NCS should experience failure, the secondary would automatically assume net duties.

It is the duty of the EC and the Emergency Net Manager to see that the best of resources is utilized for the NCS. If neither of these individuals is available, either the scheduled NCO or assuming NCO should see to it.
Ideally, your organization should have an Emergency Net Manager and a roster/schedule of qualified NC stations and operators; with alternates. This system helps assure that a NCS and NCO are always scheduled for a specified period of time.

Chapter Two
THINGS YOU NEED TO KNOW HOW TO HANDLE

BEING IN CHARGE

Some people are not comfortable being in charge, and others seek out opportunities to be in charge. Some are natural leaders and others have to learn leadership skills.

Net Control Operators are perceived as leaders. Assuming a leadership role means that you are also expected to assume responsibility. When you are accepted as a leader, you are given a certain amount of Authority by those who have accepted you. Use the given Authority wisely and accept full Responsibility for your actions and Trust is built. The greater the level of Trust that is earned, the more Authority and Responsibility you are granted. The longer you produce positive results within this balanced framework, the more you earn Respect.

Seeking a position, accepting the Authority, using it to build up some kind of false personal image or power base, and wiggling wildly to avoid Responsibility for your actions and all the while expecting respectful adoration, is a fool's game. The fool will be quickly found out, scorned and run out of leadership and fellowship by those he presumes to lead.

Be sure you want to lead for the right reasons.
There is nothing grand or glamorous about being a Net Control Operator. It takes work to acquire the skills that make you appear professional. It's the kind of work that can wind up being a lot of challenging and rewarding fun, if . . . you know what you are doing.

CHOOSING THE NET FORMAT

There is little that can be said about making a decision regarding what net format to use. You have to decide. Nothing is chiseled in stone. You can change the net format from open to directed at any time you think it is necessary. An open net is much harder to control; because of it's very nature. When you think you are losing control or desire more control over the net, change the format to directed.

DETERMINING NET SIZE

One of the other items you must make a decision about in starting an emergency net is the size of the net you are going to need. It's a judgment call all the way. It can change very quickly. If you think you are only going to need a half dozen operators, start with a half dozen but leave the door open for more if you need them. If it is a fairly major event that is likely to grow, don't hesitate to activate the calling tree and wake up the world. They can always go back to bed. A Weather net demands all the people you can get.

Don't keep ninety hams hanging in the resource arena when all you need is twenty. Give them a status report, thank them and release them. Some will hang around anyway. There will nearly always be more volunteers lurking and listening to net proceedings.

USING TACTICAL CALL SIGNS

Try to minimize your use of tactical call signs. If you are in an ICS controlled event, the use of "Resource", "Tactical", "Command", "Main","Control","Shelter One", etc. is easy for everyone to remember. To assign everyone a tactical call sign is very confusing. Hams suddenly forget what and how to ID. The use of call suffixes is highly recommended. It is quick and familiar. If a ham forgets to use his assigned tactical call, just gently remind him by leading. If he calls in using KX8ABC after you assigned him "Shelter One", just "Roger, Shelter One" from you will be reminder enough.

NET DISCIPLINE

The level of net discipline is yours to set. You have to decide how tightly you want the rules followed. Describe exactly what you want in your net instructions. Most of the time, the net participants will sense just how much urgency there is by how you are reacting. If you push up the pace and become more clipped or terse in your responses, they will follow your lead. If you are laid-back and relaxed, they will follow. When you can, change the pace and have a little fun!
You are going to have the usual Bozo in your net. Count on it! Look forward to it! It's a challenge to your skills! Lead your Bozo back into proper procedure by example and gentle reminder. Conducting on-the-job training is part of your job. A good, non-sarcastic sense of humor is invaluable. If you did a good job on your net instructions, you can always repeat an applicable part of the net instructions as a general reminder to the entire net. Do not address that reading of the instructions directly at Bozo. Avoid direct confrontation with anyone.

NEVER dress anyone down on the air for a rules infraction. If the problem persists, find a way to get Bozo off the air. Have him come in and log or be a courier for you . . . as a special favor. The rest of the net will be rolling in the aisles.

You are going to be in charge of a frequency. Your first duty is to be sure that frequency is used in accordance with FCC Rules. Proper ID at the ten minute mark can be difficult to remember in the heated activity of a net but you and your participants have to do it. If you can grab 30 seconds, hold a round-table ID session or an ID roll call in which they answer you with their call sign. They will look forward to it and stay on frequency.

HANDLING REQUESTS TO "GO DIRECT"

These requests can be a very valuable tool. They can save a lot of valuable air time. They can also seriously disrupt the flow and control of a net when abused. Cover what you expect these requests to consist of in your net instructions. A good, quick response to one of these requests is simply: "Make your call."

NET INSTRUCTIONS - USING AND CREATING

When you go to a directed format, you should be prepared to give net instructions, or directives. Be specific. Practice writing exactly what information you want passed in your net and how you want it passed. Listen to other net controllers and pick up little goodies that they do. Net instructions are very important to you and to the participants. They give the net a defined purpose, content and method of operation. Again, nothing is chiseled in stone. Net instructions can, will, and should change with the intensity and duration of the net. Don't change a lot of little pieces of the net instructions. Inform participants that you are giving an updated set of net instructions and give entire set again.

Whatever your instructions are, **WRITE THEM DOWN!** You need to be able to refer to them for updates, as a personal reminder as to what you last told them to do, and for repeats of instructions as needed.

NET INSTRUCTIONS IN WEATHER NETS

Net instructions are *extremely* important in weather nets. You must be very firm and specific about what you want reported. If you don't, you will get "sunshine, flash-to-boom, and dewdrop" reports that don't mean anything to anyone. If you don't explain at the outset, that this is a thunderstorm watch ... we expect clouds, rain, thunder and lightning . . . and those things are not reportable unless rain accumulation reaches flash flood danger or lightning strikes a person or property . . . they will drive you nuts with weather drivel. If an inexperienced spotter reports these things, thank them and simply read that part of your instructions again. Start your reading with something like: "The net is reminded ....." They will get the idea sooner or later.

Net instructions for weather nets should contain strong discouragement of storm chasing. It is a very dangerous practice for professionals. It is potentially deadly for the average spotter; who believes he is above average. Spotting and Driving do not share a common meaning. The author is about to the point that he will refuse to recognize a spotter who is deliberately chasing. It makes for an impossible safety program for the NCS when he doesn't know exactly where everyone is. Part of the job of the NCS is to keep spotters out of harm's way. This is impossible when eight or ten hot-dog, stupid spotters are driving willy-nilly into the active center of a storm. Park them and keep them parked . . . or refuse to use them. They too, may get the idea sooner or later.

SAMPLE WEATHER NET INSTRUCTIONS

This is not something you should copy and use directly. It is only a sampling of content possibilities.

"This is KB8ABC, and I will be acting as net control for the duration of the weather event that is current in our coverage area. This will be a directed net. All communications are to be addressed through net control. The NWS has issued a Severe thunderstorm watch for the following counties _____ , _____, _____. At this time we are condition green.(yellow, red). Your check-in instructions are as follows:

1. **When checking into the net, please give your call sign, name, location, mobile or stationary status, direction of travel if mobile and how long you will be available.**
2. **If you must leave the net for any reason, please notify net control "I will now take check-ins for this weather net."**

AFTER CHECK-IN

Attention all net stations!! This is KB8ABC, net control .... please stand by for net instructions."

"The instructions for this net are as follows: This is a Severe Thunderstorm Watch. We expect rain, thunder and lightning, wind and low cloud formations. The following items are the only reports that net control wishes to hear from Spotters; please use only the suffix of your call when calling net control:

1. **Report all hail . . . regardless of size.**
2. **Report only winds measured or estimated to be over 50 MPH.**
3. **Do not report lightning unless it hits a person, building, electric services or causes damage resulting in blocked roadways.**
4. **Rainfall is NOT to be reported unless accumulations threaten flash flooding.**
5. **Wall Clouds with confirmed rotation are to be reported.**
6. **Funnel clouds are to be reported.**
7. **Tornadoes are to be reported.**
8. **Thunder is not important and is not to be reported.**
9. **If you are stationary, do not move without notifying net control; unless you are in imminent danger.**
10. **If you are mobile, do not engage in Storm Chasing. Mobiles that must remain moving will please report their location to net control every 15 minutes.**
11. **Do not go mobile unless it is to go to your pre-assigned stationary viewing area.**
12. **If you are in a convertible, please do not observe from inside your vehicle. Seek a shelter from which you can observe safely.**
13. **All reports should follow the TEL (Time, Effect, and Location) reporting procedure.**
14. **Priority and Emergency transmissions must meet standard definitions and will be handled immediately by Net Control.**
15. **Consider your own safety at all times.**
16. **Only your direct observations are reportable. Commercial radio or TV weather reports, radar descriptions, or police and fire department transmissions that you hear on scanners, are not reportable on this net.**

"This concludes net instructions at this time. I will repeat the net instructions from time-to-time. Please listen carefully to the net. Instructions can change quickly with events. This is KB8ABC, standing by for Spotter reports."

Time permitting, you can take more check-ins to the net. Each time you take in a new group of Spotters, you should repeat the net instructions.

The above is only an example. Tear it apart. Modify it. Put it back together. Embellish it. The important thing is that you practice writing examples like it; so that you get used to thinking ahead about what you want from the net participants. The better your instructions are, the smoother the net will run, the more professional it will appear to the world, and the more control you will have

NET ANNOUNCEMENTS

Good NCO's use net announcements regularly. Net announcements do not have anything to do with Net Instructions. They are merely a way of keeping the net participants informed of events and operational changes. Net announcements keep them reminded, interested, awake, and on frequency.

Some of the things you can put into your announcements are:

! Safety reminders
! Frequencies of Sub-Nets and Liaison Stations
! Current events regarding the emergency. Be careful not to air exact locations of casualty occurrences or the known names of casualties.
! Short term weather forecasts
! Encouragement and praise to the poor guys standing in the rain, etc.
! Shift Schedules
! Eating Schedules and Food Source Locations
! Short break relief rotations
! Locations of restrooms available
! Travel/transportation hazards
! Safe/Approved travel route
! Termination/Activation of emergency sub-activities
! Humorous happenings
! Equipment/battery check
! ID sessions
! Relays of personal messages from family to participant

Boredom sets in with a vengeance in many nets, and in a relative short time. Use your net announcements to keep it interesting. If your people don't have anything to listen to on the net, they will wander off frequency looking for something of interest or shut their radios off to conserve power.

THE UNTRAINED OBSERVER

The untrained observer can be a lot of fun. He/she will test your patience, communications skills and teaching abilities to the max. The untrained observer will, most commonly, be found somewhere in a weather net. They really don't know that they are supposed to know exactly where they are, what they are seeing, what they are supposed to report, how to report it, how a net works, that the rubber duck on their HT is really just a dummy load on a stick, or that their spare battery pack needs to be charged once in a while whether it gets used or not.

Be gentle with them. Teach them by prefacing all questions and comments with something like, "KZ8ABC, thanks for your input . . . on this net we usually . . . OK?", and proceed to teach them without them knowing it. If things are going hot and heavy in the net, tell the station to stand by and go back to him when you get a little break. If you are clever and have the time, you can entertain and re-educate the entire net regarding proper operating procedures; without hurting the newbie.

Fun Suggestion: Find someone in your club or organization who was a Radio Telephone Operator (RTO) in an artillery outfit. Have them tell you how the military taught them to handle an untrained forward observer. Take some of those ideas and work them into the beginning or end of your next DF Fox Hunt. Mixed with a few scavenger hunting techniques that have nothing to do with radio, it can be a real brain teaser and it's a great equalizer between the guys with Doppler and the guys with the coffee cans and garbage can covers.

THE IRATE/UPSET PARTICIPANT

This is one of the toughest things you are going to face. If handled incorrectly, it can cause net participants to "take sides" and erode the morale and effectiveness of your net. People get their feelings hurt over nothing, especially when they are tired and under unusual, stressful circumstances. Your first reaction may well be to retaliate in an upset manner. This will blow the net. **Here is a formula to cure the problem:**

1. **Slow up. Don't respond instantly**. Take a deep breath.

2. **Do a quick personality review of your assailant.**

DO THE NEXT THREE STEPS ALL IN ONE STATEMENT.

3. **Acknowledge the problem.** Give in to the "Problem". Whether they are right or wrong! This acknowledges that there is a problem and that you are recognizing that fact. It also throws them off balance. They are not expecting this. Once you agree that there is a problem, the "fight" is gone.

4. **Empathize with them!** Whether you understand or not, tell them that you can understand how they can feel that way and that under the same circumstances, you would probably feel the same way.

5. **Ask them for a quick and simple suggestion for a solution.**

6. **Listen intently!** This is where they will reveal the real problem. Everything they have said up to now may have been a loud smokescreen. Somewhere in their suggestion, they will tell you what they really want from you.

7. If their suggestion/solution is something reasonable, tell them that you will try to put it into play. If it is not, make a counter-suggestion that will satisfy the real problem that they have revealed to you.

8. If the problem cannot be resolved quickly and reasonably, quietly send someone to replace this individual and relieve him from his post. If there are no posts involved in the operation, give up ... let him win . . . politely explain that the net must continue, thank the person for his services, and tell him he doesn't have to stick around. You tried to solve the problem reasonably and he refused. He wins the fight and you won the battle. The rest of the net will respect what you did and morale will remain intact.

WHAT CALL GETS YOUR ATTENTION FIRST?

"Emergency" calls have the highest priority of all calls you may receive. "Priority" calls have the second highest. Whenever you hear a call on the net that begins with the words "Priority" or "Emergency", you must stop the net cold in it's tracks and give your undivided attention to that call. No routine transmissions are allowed until you announce that normal net activity is to resume. Say something like: "Please hold all routine traffic until emergency traffic is cleared." The "Emergency" call is the only call that is authorized to interrupt the handling of a "Priority" call. If by some weird circumstance you should ever be involved in handling a Priority call and you should receive an incoming Emergency call, tell the Priority call to stand by and handle the Emergency call immediately. Then go back and finish up with the Priority call.

Here is the difference:
"Emergency" calls mean that if the call is not answered immediately, there is a definite, severe and "RIGHT NOW" condition or hazard that *will* result in death or serious injury to a person or people.

"Priority" calls mean that if the call is not answered quickly, a possible and probable hazard or condition exists, or is developing, that *could, might, or may* result in loss of life, injury to people, or severe damage to property.

WHAT IS A LIAISON STATION AND HOW DO YOU USE THEM?

Liaison stations are very important in many nets, especially large-scale nets or those spread over a wide area. They are invaluable in a net that is serving several different agencies. As NCS, you can create Liaison Stations "on the fly" as you need them.

What a liaison station does, is act as an answering service and garbage filter for the main NCS and a served agency. It monitors what is happening on a sub-net that is serving a particular agency on a frequency separate from the NCS. The liaison station may act as a semi-silent net control for the group of hams doing the work at that agency. He handles a lot of the usual goofy questions for the group and makes sure they have what they need. The workers know that he is their contact man. In most cases, he also monitors the Main NCS Net. When important stuff comes through from either side, the liaison station passes it to the other party. This entire process is designed to lighten the load on the main NCS. Instead of constant and confusing chatter from 30 to 100 hams, the NCS is dealing with 5 or 6 liaison stations. The use of various tone-encoding schemes by the main NCS can significantly reduce the chatter for the liaison stations as well.

Situations are encountered, particularly in weather nets, where the distance from one area to another is too great for effective direct communications and repeater linking is either not possible or inadequate. In this case, a liaison station may be used to relay only specific information between the two sites. This requires two transceivers, sometimes on different bands, outstanding antennas and, possibly, amplifiers. The operator must have outstanding operating skills and be very well trained. A simpler method is often used. The liaison station may just monitor repeater activity and report the appropriate information to the second site by way of telephone. Because of their fascination with radio, hams often overlook the value of a working telephone.

WHAT IS A SUB-NET AND WHEN IS ONE NEEDED?

A net can rapidly expand into too many functions for one NCS to handle. The worst and busiest time for a NCS is usually right at the beginning of an event. When the action begins to get out of hand, you should consider setting up a Sub-Net to handle some of the traffic.

When you put out the call for a volunteer to act as a Sub-Net NCS, be prepared to give that operator specific net instructions. This way, he knows exactly what you want him to handle.

One of the first sub-nets you should consider is a Resource net. This net will handle the check-ins/outs, equipment list, duty assignments, shift relief, and transportation problems for you. When you get a call from an agency requesting two hams with HT's and extra batteries, you call the Resource NCS and he will handle it. He will report to you when they have been dispatched and when they arrive.

When you receive a call for five teams of five individuals each to help with damage assessment, call the Resource net NCS and have him set up a Tactical Net. The Resource net gets the people, equipment and transportation and has those people report to the new Tactical NCS. Tactical NCS will report only priority messages to you. If he needs additional people or equipment, he calls the Resource net.

Let's say that the Resource NCS is now feeling that he is about to loose control. Transportation is getting to be a major bottleneck for him. He can check with you, (you have now become the Command, or Main, NCS), and tell you that he wants to start his own Sub-Net to handle transportation. You say to go ahead. He then gets a volunteer to be NCS for the new Transportation net. The Transportation NCS will report directly to the Resource net NCS. When the Transportation net is all set up, the Resource NCS informs the Main NCS. Main NCS puts out a general announcement that there is now a Transportation Net. Now, if anyone, anywhere in your network, needs transportation, they call the Transportation NCS.

YOU DIDN'T KNOW YOU KNEW - The ICS lights go on!

If you understand the Sub-Net process, you now understand the basics of the Incident Command System! There is no mystery about the ICS. The only difference between what was just described and the ICS is that the ICS has automatic overload prevention. The ICS has a defined chain of command and authority, and is designed to automatically split big and growing tasks into smaller, specialized tasks before the whole thing gets too big for any one person or group to control. It uses something called a "span of control" to trigger the automatic split. As soon as a leader is faced with more than 5 to 7 people or agencies reporting to him, the system splits; and some of those people or agencies begin reporting to someone else with the authority to handle their problems. Police and Fire Departments are heavy users of the ICS. The Red Cross has it's own version of the ICS.

Hams get confused when they are suddenly told by a served agency authority to begin reporting to what appears to be another agency or division of an agency. Just do it! The ICS has split and you have a new boss. No big deal. Just inform your own NCS of what is going on (he probably already knows) and keep doing what you have been doing.

HOW LONG SHOULD YOU STAY ON DUTY AS NCS?

Take frequent breaks during your tour as NCS. If you begin to wonder if you should take a break, you need one. Turn it to one of your assistants for a while. The net won't fall apart. Experienced NCO's will tell you that a two hour stretch is just about maximum without a break. A four hour shift is considered maximum. A six hour shift is considered to be the beginning of a self-destruct sequence. It is a very stressful position to be in. You will start running on adrenaline and caffeine and not even know it. Be sure you eat regularly and take in plenty of fluids. If your blood sugar or electrolytes get out of balance you will get the "dingies" and become short tempered and/or silly.

Chapter Three
THINGS THAT YOU NEED TO PRACTICE

Copying call signs

One of the greatest fears for a new trainee to overcome is that of copying that flurry of check-ins at the beginning of a net. Ear-to-hand coordination is difficult to master for some people. As NCO, you can ask for a slow pace and lots of space between check-ins.

Studying for your Morse Code Exams will help a great deal. It's all Ear-to-hand coordination.

Another way to practice is to listen to all the nets that you can. Copy the call signs as best you can as they come in to the net control. Don't worry about getting all of them. Get what you can. Just keep going. If you have access to an HF receiver, some of the hottest, fastest, nastiest check-ins that you will ever hear are on the various traders nets. When you can copy ten or fifteen call signs out of a "Big Guns" check-in in 15 seconds, you are almost a master! The first time you hear one, it's guaranteed to blow your mind!

Another source of practice is to tune into a contest on the weekends. Listen to how an experienced contester handles a pile-up. He will copy as many stations as he can get down out of a burst of calls that fly at him, he will the say "I've got a group" and then quickly list, verify and work those calls in order. If he missed one, so what? They will try again and he will likely get them on the next burst of calls. Copy right along with him. Get all you can. The noise and multiple signals all jammed up together will make it difficult at first but not impossible. It will make it a piece of cake to pick out both sides of a double or triple when you go back to that nice clean FM signal on the repeater.

Writing it down

When you are NCS, you are always writing something down. You are taking an NTS message, writing your next announcement, making notes, logging net activities, taking check-ins/outs, making lists, etc.

While you are listening to any net, practice taking notes of what is going on. Your own brand of shorthand will emerge. This will help you immensely when it comes time for you to take on your first NCS assignment.

Some prefer to do their notations on a computer. That is OK. But . . . you should always plan and train for a worst-case scenario. What if you don't have power for the computer? How good are your ear-to-hand skills? Running a pencil at twenty words per minute is a whole lot different from typing at fifty words a minute. The personal shorthand will change.

Practice listening.

Sounds kinda dumb? Bad signals abound in amateur radio. Even on FM repeaters, the rubber duck signal and fringe area propagation noise is abundant. You need to train your hearing to sort out the message from the noise. Try detuning your 2 meter rig by moving 5 hz off frequency and listen to the traffic on your favorite repeater. Try to make sense out of that "bad" signal. You can do it!

Sit and listen for periods of time to any conversation on HF during a distant weather disturbance. After a while, with concentration, you hear right through the noise like it isn't even there. With some practice, you can turn this new- found ability on and off at will; and with more practice it becomes automatic. You can suddenly hear those marginal stations on the repeater. Your ears only get part of what is said . . . your brain will fill in the blanks.

Practice running nets.

Run the local rag chew net, ARPSC net, weather standby net, the ARES/RACES net, and every other net you can weasel your way into running. It's all good practice. If a NCS training program is working well in your area, there should never be a need to beg for a net control for any net. If it's working right, you will have to stand in line to run a net.

Tape-record any net that you run. This is one of the best ways to actually test your developing skills. You will be your own worst critic. Keep the recordings for a few months. By comparing your performance of a few months ago with what you are doing now, you can really see how you are progressing and . . . they will become great sources of entertainment and teaching tools for you in the future.

Practice passing NTS messages

A net control operator must be able to pass NTS format messages! The Radiogram form should be a "picture" in your mind. The ability to take, pass and initiate NTS messages should be as automatic and natural as eating. Pass them on your local rag-chew nets. Pass or initiate messages everywhere; until it is second nature. Send your mother an "I love you". Dig out your address book! Send your friends messages across the country! It doesn't matter how much of a pest you think you are. Do it until you have it down cold!

Actually, you probably won't get any negative comments. Non-hams think these messages are pretty neat. It really is, if you stop and think about it. How would you like to get a phone call from a complete stranger with a "happy birthday" message from somebody you haven't heard from in years? By WHAT?. . . by ham radio? I can send a FREE reply? Instant ego trip. Guess what they are going to talk about all day! Guess what they might check out for a hobby!

Practice writing Net Instructions

We have already covered the importance of doing this.

Just for instructional fun....

ODE TO A TOUR OF DUTY AS NCS - THE FIRST 15 MINUTES

By R. Bruce Winchell - N8UT

Reproduce freely

Your EC just woke you up in the middle of your favorite TV sporting event. He wants you to start an emergency net from your shack. He is at the EOC. There is a ruptured gas main in a heavily populated part of town. Other than the location, he didn't give you any more information. You head for the shack, turn on the 2 meter rig, and grab a clipboard. Your training kicks in. You begin asking yourself questions and writing down the answers.

OK, broken gas main . . . police, fire, gas company, and EM involved . . . possible evacuation . . . possible need to open shelter . . . transportation possibly needed . . . likelihood of handicapped people in the area . . . danger of asphyxiation . . . might go all night

1. What kind of net should I start?
! Open?
! Directed?
2. How many people am I likely to need?
3. How long do I estimate the event will last?
4. Do I need to hold some people in reserve for a shift change?
5. What agencies are likely to be involved?
A. Do we have special liaison people for these agencies?
6. Do I have any operators who live in the effected area?
7. Which way is the wind blowing?
8. What will be the safest route into the area?

Don't have enough information. EC said he will call back with more. Better find out what I have available right now. Pick up the mike and announce that there is an emergency situation developing. Use Open format standby net. Take check-ins. Ask two operators to go to other local repeaters and recruit people for the upcoming net. Check-ins begin coming in. Tell everyone to prepare for participation assignments. Recruit someone to come to your shack to do logging and phone calls for you.

EC calls back. Says to prepare for an all-niter. You are going to need relief shifts. Evacuation will take place. Need to activate Red Cross shelter at high school. Red Cross has been notified. Wants voice and packet for shelter. Requests 5 operators to report to staging area to do head counts on city buses being used for evacuation. Needs 2 RACES members to man 2 meter and packet stations at EOC ASAP.

Back on the air. Formalize the net. Request 2 RACES volunteers for a 4 hour shift at EOC . . . one has to be able to run packet. Recruit 2 more RACES volunteers to pick up the portable packet station stored at the clubhouse and dispatch them to the high school shelter. Recruit 5 volunteers to handle head counts and assign one of them as team leader to compile the reports. Send them into the area from the North.

Ask for volunteer RACES qualified base station close to the staging area to liaison traffic from the staging area volunteers to the Red Cross shelter on simplex so that HT's can be run on low power to conserve batteries.. Ask liaison station to relay only compiled totals to NCS.

Request a qualified NCS volunteer to set up a resource net and two shift reliefs on secondary repeater. Instruct all remaining individuals not yet assigned to a task to check-in on the resource net. 8 minutes ... not bad ...smooth as silk. Call EC and give progress report.

Can't reach EC.

8 minutes, 15 seconds: Logging volunteer shows up. . . slightly drunk.

8 minutes, 30 seconds: Your wife informs you that the toilet is plugged and she can't find the handle to the plumber's plunger. You smile. It's taped to the tower . . . holding your new wire antenna.

9 minutes: Your 6 year old tells you that there is a big fire in a warehouse across town . . . he thinks it's where you work . . . it's on TV . . . and a half mile upwind from the gas leak.

9 minutes 30 seconds: Over in the corner, under a big stack of radio catalogs, the weather alert receiver begins to screech ..... it's tornado season.

9 minutes 50 seconds: The phone rings, your assistant drops it, hiccups loudly, and then hands it to you . . . it's the EC. The telephone receiver is broken but you manage to understand that the EC now wants you to set up a Skywarn sub-net and send out the Amateur TV guys to the warehouse fire. You tell the EC, "No Problem"

10 minutes 30 seconds: Hang up the broken phone and call the resource net for manpower to fill the new requests. Resource NCS says "No Problem".

11 minutes: Resource net calls back. One of the available ATV guys is on his way to the shelter as the packet operator and the other one is your hiccup afflicted logging assistant. The other ATV team is out of town on an experimental, underwater, dual satellite linked ATV Dxpedition near Easter Island . . . bunch of retired guys with too much money. You console the frustrated Resource NCS and tell him to work it out.
12 minutes 10 seconds: You call the EC and tell him there will be a bit of a delay but there is "No Problem".
12 minutes 40 seconds: You have your wife start pouring strong coffee into your assistant. Maybe he will function a little better as a wide-awake drunk?
13 minutes 5 seconds: Your pager goes off with a message from your boss telling you not to bother reporting for work in the morning.
13 minutes 8 seconds: Console wife about income loss by giving her a hug and saying, "No Problem", while patting her on the rump and trying not to lose focus.
13 minutes 20 seconds: The computer printer connected to your packet station begins spitting out paper. The packet station at the EOC is still programmed to your station from the last test you did. Fast and frantic search begins . . . and ends. The right software for it is in your briefcase . . . at work . . . where the fire is . . .
13 minutes 35 seconds: The liaison station calls on the radio to report that one of your staging area volunteers has just gone into labor . . . her water broke and ruined her shoes; and he wants to know if it is OK to let her go to the hospital.
13 minutes 55 seconds: The 16 year old kid, who took the test 10 times to get his Tech license, calls in a "priority" message on his HT, with a half-dead battery, on the rubber duck, from 15 miles out of town, to report that the wind just blew over the outhouse with grandma inside. Grandma got confused after she rolled out of the outhouse and fell in the pit. After 8 more broken transmissions, you find out that grandma is OK . . . "but she *smells* !!! . . . *sumthin'* **awful!**"
Welcome to the first 15 minutes of an emergency net from inside a net control station.
Out on the resource net, there is much grumbling about going to bed . . .***because nothing is happening!!***