

The Net Control Station

The purpose of this training is to present basic information and procedures for use in amateur radio daily and emergency net operations, specifically for training those whom wish to become or are a Net Control Station. An effective net requires continuity in net operations.

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 organizes and controls all activities.

1. All directed nets are formal, have a set of rules or net directives and a directed net is one in which it is necessary to obtain permission from the NCS before transmitting to any participant in the net including to the NCS. According to the ARRL, all registered nets are formally directed nets, and all standard net procedures and protocols that are applicable to all normally used modes within the Section should be followed.

Directed nets are divided into two types: Scheduled and Emergency nets. Scheduled nets, like the Razorback Net, have fixed times, frequencies and format. Scheduled nets can also include ARES, RACES, Club and Traffic nets.

NET PREAMBLE

The NCS will read the preamble at the beginning of the net. It should tell you his or her call-sign and name. It will tell you the name of the net and its purpose and the procedure for checking into it and the preamble will state how you as a checked in station should operate within the net.

The NCS:

Formal (directed) nets will always have one station in control, and this station is known as the Net Control Station. You might think of the NCS operator as sort of a traffic cop, directing the orderly flow of net conduct and messages. Their skills are especially critical to the success of all traffic and emergency communication nets.

When Do You Need A NCS

All formal (directed) nets require a NCS. Formal nets are used to maintain order when a large number of stations are in the net, or when large volumes

of messages are being handled. The NCS operator decides who speaks and when, in which order messages are passed, and keeps a log of which messages went where and when, and a list of messages that have yet to be passed.

How Important Is a Well-Trained NCS Operator

Have you ever listened to or participated in a poorly run net? One where routine messages are passed on frequency, while emergency or priority messages wait in line? Or where the NCS operator “loses his cool” and alienates half the net’s members? Or nets where messages are not kept track of, are lost, changed, or misdirected? Or nets that sound like a Guinea Farm with anyone and everyone relaying or making comments whenever they feel like it?

Being a net control station is a position of responsibility and is not simply a matter of being on the net frequency to see how many check-ins you can get for the count. The value of the NCS operator’s skill is unquestionable. A well run net is one that meets the needs of the served agency and a poorly ran net can end Amateur Radio’s relationship with an agency altogether. Also, a well run net is one that meets the requirements of net procedures and protocols.

The NCS operator must be a good organizer, and know how to defuse tension and stress with an appropriate sense of humor. This person controls the flow of messages according to priority and keeps track of where messages come from and where they go. In Ham radio, operators in Traffic nets and Emergency nets capture, record, hold, and distribute information so that others may work more effectively. 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.

Transferable Skills

Some of the skills you use in everyday ham radio activities will be useful in your position as NCS operator.

A well-designed and maintained station is critical to success. You must choose the correct antenna, know how to get the best sound from your microphone, and all controls and supplies should be within easy reach.

You need to understand propagation so that you can choose the appropriate frequency as band conditions change. DX'ers learn how to pick weak signals out of the noise, and deal with crowded band conditions. Many of the skills used in contesting are applicable to controlling a net. Both activities involve dealing with many stations on the same frequency at the same time. The contester running a pile-up will try to contact as many stations as possible in the least amount of time. The mission of the NCS operator is to move as much traffic as possible in the least amount of time, accurately and effectively.

Learned Skills

A good NCS operator is trained, not born. Here are some skills you may need to learn to perform at your best when working as a team player to achieve the goals of any net.

- Effective leadership skills -- keeping the team on track and motivated by developing a confident, self-assured management style.
- Decisiveness -- the ability to make quick and appropriate decisions.
- Record keeping -- log sheets (writing, thinking and talking all at once.)
- Planning ahead -- net scripts, assignments, materials on-hand.
- Dealing with stress -- a burned-out operator is a danger to the net.
- Delegation -- knowing when and how to hand off some jobs and responsibilities.
- A working knowledge of the Incident Command System (ICS) and how we fit in.

• END PART ONE

NTS/MPG

CHAPTER 4 - NET OPERATIONS and CHAPTER 5 - NCS

“PART TWO Net Control Training” **NTS-MPG Manual (MS Word View)**

The materials we will be covering this evening are excerpts from the ARRL NTS/MPG. This information is being presented for all to understand the importance of always using the proper procedures and protocols during

regular NTS, NTS affiliate and emergency nets. The only thing I have changed in the wording is the use of the word COMMAND which I changed to instruction/s.

NET FORMAT:

A net format, or schedule of operation, is established for the net to insure the orderly flow of intended business, and to help stations participating on a regular basis to know the order of business to be expected. The format of the net is, a matter determined by the Net Manager and documented for the NCS stations. For instance, on the RBN, Randy has allowed his NCS to either take or not take a pre-net check in list, this is a part of the nets format. However, this does not mean that he allows his NCS to not follow ARRL/NTS affiliate procedures and protocols since his net is an NTS affiliate.

NET CONTROL STATION:

The net control station calls the net at the scheduled time and frequency, checks in all stations, lists all traffic and other business for the net, assigns stations to receive traffic, instructs stations when and where to pass traffic, controls all transmissions on net frequency, maintains a list of all participating stations and their whereabouts, and checks stations out of the net. The net control will arbitrate the net's adaptation to unusual circumstances which might arise during all net operations.

Traffic handling and net operating are enjoyable activities and the uses of niceties are frequently used to sustain a pleasant atmosphere. We all hear some of our friends on most of the nets we participate in, so, when the net control has called for check ins and you are checking into the net I personally see nothing wrong with saying hello to that friend, but do not say more than a simple hello. On the other side of this coin if you hear someone on the net and you have not been recognized by the NCS do not say anything.

DIRECTED NET:

A "directed" net is one in which all communications are directed by a net control.

CALL FOR SPECIFIC INFORMATION OR ASSISTANCE:

This is a SPECIFIC CALL with multiple responders possible. The call is typically used when the NCS needs information to expedite the net. Stations

wishing to spontaneously relay a station not heard by the NCS should transmit their call-sign wait to be recognized, and then inform the NCS of the relay. A series of “helpful” relay transmissions without NCS permission can lead quickly to net disorder.

NCS IN CONTROL:

Give clear and concise instructions in the expected manner. The NCS gives instructions and maintains control at all times. If some degree of disorder or confusion on the net develops, the NCS should stop the action and ask questions, direct particular stations to transmit, restate questions, or otherwise insert your influence in such a way as to settle things down and get on with business in an orderly fashion. However, we should all always remember that mistakes are made, and in the true amateur radio spirit, they are fixed in a pleasant way.

AVOIDING SPONTANEOUS COMMENTS, CRITICISM:

Stations making transmissions without the permission of the NCS should be ignored by the NCS if at all possible. Such transmissions are considered very poor practice. Without such direction a net may quickly fall into disorder.

Under the procedures and protocol of any net operating in the NTS or one of its affiliate nets, stations persisting in making such transmissions will likely be excused by the NCS, or informed that their activity constitutes interference to the net. Guidance from an experienced station or the NM may be offered with the appropriate tact and diplomacy---with NCS permission. The NCS may tactfully advise stations regarding conduct or procedures.

The guidelines in this chapter, although primarily for message traffic nets, may be applied to other nets where station’s business is listed and instructions issued to accomplish the net mission.

NET CONTROL STATION DUTIES:

The NCS makes the net “happen”, directing all activities and managing the sequence of traffic dispatching to achieve an efficient and orderly net to accomplish the mission. The NCS is a manager, supervisor, tutor and mentor, and facilitator. The NCS, becomes the individual the net stations expect to take care of the business of controlling what they do... a task that is respected and understood.

LEVEL OF TRAINING, NET STATIONS:

Newcomers can be helped along, and others can be taught new techniques as needed, preferably off net. The NCS is perhaps in the best position to provide feedback to the Net Manager concerning the need for training and tutoring. Such observations should be passed along, and the situation of a struggling net should be dealt with. Corrective action at this level is key to the success of all NTS and affiliates in maintaining an efficient net.

USE CUSTOMARY PRACTICES:

The NCS job is a leadership role, and stations checked into or stations waiting to be checked in will readily respond to good leadership and operate as a supportive team to accomplish the nets mission. Participating in an efficient, snappy net is enjoyed by all.

MAINTAIN CONTROL OF THE NET:

Always try to use consistent and customary grammar for all calls, acknowledging, dispatching, and excusing, etc. Deal with stations according to the type request or instructions issued. Stations will get the message that they are expected to operate with standard practices.

Stations should reply with their call and wait for it to be repeated by the NCS before continuing. The NCS may ignore those who do not first seek such recognition. In other words, there should be no question left in the minds of the operators about what the NCS expects them to do, or which station is expected to transmit.

THINK AHEAD:

Plan ahead and give clear and concise instructions.

DEALING WITH IMPROPER CONDUCT OR TECHNIQUES:

Ignore calls from those who interrupt transactions or violate SPECIFIC CALLS.

If a station persists in interrupting, service it, even if out of order, and put the matter to rest. A brief explanation at excusing time or after the net can turn a confrontation into a friendly bit of help gratefully received. The offender and other net stations will not appreciate a contest of wills on the net.

As a last resort, any station may be excused from the net at any time.

Technically, if you excuse an offending station from the net, and it persists

in interrupting, it may be guilty of intentional interference. Most stations will get the message if excused and not cross that line.

Try to keep the matter from getting to this level. Throughout the years discipline on NTS and its affiliate nets has been taught by politely ignoring the undesired behavior and acknowledging the correct procedure. A kind word of explanation will often settle things also. Mentors and separate training off net or by landline or email is helpful.

As NCS you are the only station in the net directly communicating with each station with solicitations and instructions and are, therefore, both the example and the tutor. The overwhelming majority of amateurs are eager to learn to do these things well. They learn from both technique and demeanor. The more they learn, the more fun they have... and the greater the feeling of accomplishment.

SECTION TYPICAL FORMATS:

Section and Local nets use a wide variety of formats depending upon the net purposes and coverage areas. Some NTS affiliated nets also serve as emergency nets for the local covered area. Many training nets at Section and local levels are also NTS affiliated. The Section and Local nets of the NTS are the roots of the system.

END PART TWO

To be USEFUL, you MUST be READY.

To be READY, you MUST be TRAINED.

To be TRAINED, you MUST plan and practice ahead of time.

END PART FOUR

START PART five

NCS AND Net operations training

**RADIO PROCEDURES DURING NORMAL OPERATING
CONDITIONS**

CALLING AND COMMUNICATING TECHNIQUES

The secret to working quickly and efficiently in daily and emergency nets is to use standard procedures, protocols and instructions. It doesn't take much examination to see that standards and guidelines must be established and then utilized.

For example, we all know that before we key our mic's, we gather our thoughts about what we are going to say. Many people have a tendency to talk and/or repeat too much. Say what you need to say without unnecessary repeats and keep in mind that you must strive to get your message through the first time.

In general, there are five parts to Communications. The more serious or complex the situation, the more important these procedures become. The information we will be covering this evening **MUST** be practiced until it becomes second nature.

Practicing proper day-to-day radio procedures both on and off net operations will make emergency radio procedures automatic and reduces confusion. Another way of saying this is that the secret to working quickly and efficiently in an emergency is to use common approved radio communication procedures and guidelines and practice, practice, practice every time you get on the air. Evaluate your present operating methods and try to polish each element so your participation in radio communications is professional and worthwhile.

Listening

You have all heard Dale and I say before that listening is at least 50% of all communications. What about the other 50%? Could it be discipline, knowledge and practicing every day operating procedures that prepares you for emergency operations? Is following proper net procedures and protocols at all times necessary as a learning tool for emergency communications? Is following the procedures set out in a nets preamble necessary to prevent confusion or interference to the net? Is listening necessary before you key your mic on your favorite group Ragchew frequency? It is my belief that every one of these questions should be examined by every amateur operator that is involved or ever will be involved in emergency communications!!! As I said earlier, the more serious or complex the situation, the more important procedures, protocols and following instructions become. Discipline **MUST** be practiced until it becomes second nature. Practicing proper day-to-day

radio procedures both on and off net operations will make emergency radio procedures automatic and reduces confusion.

Microphone Techniques

Even something as simple as using our microphone correctly can make a big difference in our daily and emergency operations. We should always speak in a normal, clear, calm voice to prevent unintelligible speech. Our radios should be adjusted so that a normal voice within 2 inches of the mic element will produce full modulation. "*Voice operated transmission*" (VOX) *is not recommended for emergency communication.* It is too easy for background noise and off-air operator comments to be accidentally transmitted, resulting in embarrassment or a disrupted net. Use a hand or foot switch instead.

Brevity & Clarity

All daily and net operations on the air communications should consist of only the information necessary to get the message across clearly and accurately. Extraneous information can distract most people and even lead to misinterpretation and or confusion. On traffic or emergency nets there is no place for non-essential comments, conversation or not following proper net instructions.

Plain Language

A misunderstood message could cost someone's life. Not everyone involved in an emergency communication situation will understand our slang and technical jargon. For this reason, all messages and communications during an emergency should be in plain language.

Phonetics

Certain words in a message may not be immediately understood. This might be the case with an unusual place name, such as an unusual last name, like "Smyth." The best way to be sure it is understood correctly is to spell it using the ITU standard phonetics. Many hams like to make up their own cute phonetics, especially as a memory aid for call signs, and often with humorous results. Unfortunately, this practice has no place in traffic or emergency nets. We need to be sure that what we say is always interpreted exactly as intended.

GUIDELINES

- Always determine that the net frequency is free before transmitting.
- Comply immediately with the instructions of NCS.
- Do not transmit without the permission of NCS.

The old adage that practice makes perfect is never more true.

- Be willing to learn proper daily and net operations.
- Accept constructive criticism politely.
- Train with the trained you can find. This person will be able to show you subtle techniques.
- Monitor different frequencies and nets and learn from examples.

Always keep in mind, “Someone’s Life may depend on your following net procedures, protocols, instructions and accuracy of communicating.”

To be USEFUL, you MUST be READY.

To be READY, you MUST be TRAINED.

To be TRAINED, you MUST plan AHEAD and practice.

END PART FIVE

Start part six

The Right Stuff

Do you have what it takes to be a good NCS operator? Here is a short list of basic pre-requisites:

- A clear speaking voice. Someone who talks as though they have a mouthful of marbles won’t do.
- The ability to handle mental and physical stress for long periods. Information and demands will be coming at you from all directions all at once, sometimes for hours on end. Can you handle it without losing your composure, or your voice?
- The ability to listen and comprehend in an often noisy and chaotic environment. Can you tune out all the distractions and focus only on the job at hand?
- Good hearing. If you have a hearing loss that makes it tough to understand human voices, being a NCS of a voice net is not the job for you. Hams with limited hearing problems may elect to act as NCS for a digital mode net, according to one’s abilities.
- The ability to write legibly what you hear, as you receive it.

- The NCS needs a working knowledge of the Incident Command System.
- The NCS that is going to be serving during emergencies and or disasters should complete the ARECC level one and two courses to be familiar with all ARES/RACES Plans, procedures and protocols.
- The NCS should complete the NIMS IC-100, IC-200, IC-700 and IC-800a courses to be familiar with working in the ICS.
- A competent NCS must be decisive and have the maturity to make good judgment calls. The NCS needs a strong and self-assured management style and to know how to defuse tension and stress with an appropriate sense of humor. The NCS has constant concern for the safety of all net participants.

CHARACTERISTICS

Some additional characteristics that are desirable in a net control station are:

- (1.) Good voice quality for clarity, without sarcastic overtones or being overbearing.
- (2.) Knowledge of band characteristics.
- (3.) A strong team player and organizer.
- (4.) Willingness to take and carry out direct orders.
- (5.) Consistently demonstrates above average operating techniques.
- (6.) Has general understanding of all MOU's with all served agencies.

BASIC TECHNIQUES

Successful Net Control Stations should employ the following 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 or fast paced Traffic net.
- For efficiency, note on your net worksheet as many calls as you can before you acknowledge any. Acknowledge all stations heard by call. Yield the frequency to any station reporting in with emergency traffic. Clear emergency traffic then priority messages and finally those with routine messages.
- Pair stations to pass traffic on another frequency whenever possible.
- Be as concise as possible. Use the fewest words that will completely say what you mean. This will minimize the need for repeating instructions and messages.
- Take frequent breaks. Turn over the net to your backup at least every two hours and rest. Do not listen to the net, rest!

- Control your voice. Be as calm as possible. Remember to speak with confidence and authority. A weak or indecisive demeanor undermines your effectiveness as NCS and consequently the productivity of the net.

NET CONTROL STATION HINTS

- If a net is a scheduled net, start on time!
- Use a script (preamble, net instructions) when possible. This promotes efficient operation.
- Be friendly, yet in control. Speak slowly and clearly with an even tone. Speak with confidence even if you are inwardly nervous.
- Ask specific questions and give specific instructions. This reduces the need for repeats and prevents confusion.
- Have pencil/paper ready and write down all calls.
- Know how to use your microphone. Articulate, do not slur, and do speak close to your mike but talk across it not into it.
- Frequently identify the name and purpose of the net.
- Do not be afraid to ask for assistance if you need it.
- 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.
- Do not think on the air. If you need a moment to consider what is needed next, say something like standby and un-key your microphone. This adds a professional touch.
- Transmit only facts.
- Avoid becoming the source for general information about the event.
- Use Standard ITU phonetics.
- For voice nets, use plain English. “Q” signals are for CW.
- If the net has been quiet for more than 10 minutes, check on operator status. This keeps the net running more smoothly and insures that you know about equipment failures and missing operators as soon as possible.

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.
- Cute phonetics.
- Identifying every time you key or unkey the mic.

- Using “10” codes, Q signals on phone or anything other than plain language.
- Speaking without planning your message in advance.
- Talking just to pass the time.

Learning and Practicing Your Skills:

It takes practice and patience to learn the skills of a NCS in a way that they will be ingrained and useful in a real emergency and continued practice is necessary to maintain these skills once learned.

Net control skills can be learned and honed through classroom sessions, tabletop exercises, and regularly scheduled training nets. Actual emergency conditions can be simulated with periodic drills and simulations such as the annual Simulated Emergency Tests (SET), and public service events such as road races. A real emergency is not the time to learn or practice new skills, unless there is no other option. A poorly trained or inexperienced NCS operator can do as much harm as good.

END PART SIX

START PART SEVEN

STATION LOCATION

Net control should always be located at a station that has a strong, commanding signal. A NCS that can not 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.

The NCS should have the capabilities to communicate with served agencies. This could be by telephone, radio, liaison station, courier, CB, or whatever. If at all possible, the NCS should have alternative, back-up power and a back-up rig. 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 and be up to date on all previous net exchanges.

PREPARATION

The Net Control Station is the key to the efficiency of all nets. His/her performance also determines the image the net presents to it's members. Therefore, it is important that all NCS operators strive to perform their duties in a careful and considerate manner. The following suggestions will help you obtain your goal.

- Be prepared. Begin the net with the proper logs, forms, pens, pencils and operating aids on hand.
- Ask a family member to answer telephone calls or if you are home alone, you may want to take the phone off the hook.
- Turn down the volume on scanners, other radios, and electronic equipment.
- Make sure your antenna system allows you to radiate the best signal you can.
- Accuracy transcends speed. If you find yourself making errors, please slow down. You must be understood in addition to being heard.

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, to be trained and support all standard and emergency net procedures and protocols . 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 then trust will be earned. The longer you produce positive results within this balanced framework, the more you earn respect. However on the other side of the coin the story is different.

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 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.

CONTINGENCY PLANS

“Those who fail to plan, plan to fail.”

BACKUP or ALTERNATE NCS

The function of a back up or alternate NCS is just that, back up the NCS. As stations check into the net record their call and name. Try to keep a running

account of the net operation. Mark off the stations that check out or those that might be asked to move to another frequency. He is ready at a moment's notice to take over should something cause the main NCS to go off the air or need a break.

Whenever possible, an offsite backup or alternate NCS should be maintained. Equipment can fail even during less demanding operations. Here are some basic dos and do not's for a backup or alternate NCS.

- Remember that although you are in control of the net, you are not "God". Treat members with respect and accept suggestions from the experienced members.
- If you are taking over an existing net, try to run it much as the previous NCS did.
- Always follow a script. Write your own if necessary but stick to the purpose and procedures set forth for the net.
- Handle messages in order of precedence: Emergency, Priority, and Welfare.
- Speak clearly and in a normal tone of voice. Use good mic technique.
- Make all instructions clear and concise using as few words as possible.
- Keep notes as you go along. Do not let your log fall behind.
- Write down which operators are at which locations. When one leaves or is replaced, update your notes throughout the entire net so you will be ready and able to take over the net.
- Ask stations to pass messages off the main net frequency whenever possible.

HANDOVERS

During the course of every event that runs more than two hours, you will need to turn over operation of one or more locations in the net to a relief operator. As NCS it is in the best interest of the net and your sanity to do likewise with the net. To facilitate this change at least every two hours, the new operator will need:

- List or note of outstanding messages to/from the location.
- Log of traffic to/from locations.
- Status of open queries.
- Local and remote contacts for the location. (Served agency and others as needed)
- Any other information the outgoing operator feels necessary.
- Whenever possible both operators should handle the location for at least ten minutes to foster a smooth transition.

END PART SEVEN

START PART EIGHT

DISCIPLINE

The level of net discipline is yours to set. 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.

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.

NET MEMBERS

In order for any communications circuit to operate efficiently, it is necessary to maintain a measure of discipline. This is the job of the NCS. At all times the NCS is the boss of the net. His requests and all standard net procedures should be complied with immediately unless one has reason to believe they are incorrect. One should never transmit unless invited to by the NCS. Of similar importance are the following rules that are applicable to all voice nets:

NET GUIDELINES

- Avoid unnecessary transmissions and phrases. Keep all transmissions short, concise and to the point.
- Always determine that the net frequency is free before transmitting.
- Be prepared to move to alternate frequencies to clear traffic.
- Use the correct message forms and procedures.

- Comply immediately with the instructions of NCS.
- Use the correct ITU phonetic alphabet.
- Never leave the net without first notifying NCS.
- Do not transmit without the permission of NCS.

EXPECTATIONS

You can reasonably expect trained net members to:

- Report to the NCS promptly as they become available.
- Ask clearance from NCS before using the frequency.
- Answer promptly when called by NCS.
- Use tactical call signs when necessary.
- Follow established net protocol.

Expectations aside, you must keep in mind that you are dealing with volunteers. You cannot order their compliance, you can only ask for their cooperation. Probably the best way to enlist the cooperation of the net is to explain what you are doing in a calm and straightforward manner. This may involve supplying a small amount of real time training. The one thing you must never do is criticize someone on the air. It is better to lead by example; it produces better results.

PREAMBLE

Many groups open and close their nets with a standard script. The text of the script lets listeners know the purpose and format of the net. Using a standard script also ensures that the net will be run in a similar format each time it operates, regardless of who is acting as the NCS.

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 trained experienced net controllers and pick up little things that they do. Net instructions are very important to you and to the participants. 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 are extremely important in all Traffic, Skywarn, ARES/RACES, Section and Emergency nets. You must be very firm and specific about what you want reported. If you do not, you will get things that do not mean anything to anyone.

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.
- Encouragement and praise to the poor guys working in other than normal conditions.
- Travel/transportation hazards.
- Safe/Approved travel route.
- 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 do not 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.

ORDER OF CALLS

“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 its 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 and or property.

“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.

END PART EIGHT

START PART NINE

THE CHALLENGE

You are going to have the usual B0ZO/LID in your net. Count on it! Look forward to it! It’s a challenge to your skills! Lead your B0ZO/LID back into proper procedure by example and a

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 B0ZO/LID. 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 B0ZO/LID 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.

THE IRATE PARTICIPANT

This is one of the toughest problems an NCS will face. If handled incorrectly, it can polarize net participants. Morale will erode and the effectiveness of your net will suffer. People can get their feelings hurt over very little, especially when they are tired and in unusually stressful circumstances. Your first reactions need to be:

- Slow up. Do not respond instantly. Take a deep breath.
- Perform a quick review of what you know about the troubled person.
- Acknowledge the problem. Give in to the “Problem” whether the subject is right or wrong! Once you agree that there is a problem, the fight is gone.
- Empathize with them! Tell them that you can understand how they can feel.
- Ask them to suggest a simple yet reasonable solution. Listen intently! This is the point where they will reveal the real problem. Somewhere in their suggestion, they will tell you what they really want from you.
- If their suggestion/solution is 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.
- 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, and let him win, politely explain that the net must continue, thank the person for his services, and tell him he does not 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.

INTERFERENCE

Most people that interfere with net operations are individuals who think the only way to get recognition is to behave improperly. The best way to handle them is to ignore them. When they can evoke no response at all, they tend to

leave. Let them leave without comment. If you comment in any way, these people will persist.

For more protracted cases, plan on having alternate frequencies announced at the pre-event briefing. Should the interference become intolerable, move to an alternate frequency. When you move to another frequency, do so under a pre-announced set of conditions at the briefing and without saying anything on the primary frequency. Another successful method involves the use of your local fox hunters to track down the offending station. This will need to be a coordinated effort that is not announced on the net frequency.

RELAY STATIONS

While not a regular net position, a Relay Station is one that passes messages between two stations on the net that cannot hear each other. Relay stations are generally designated by the NCS on an “as needed” basis.

Relay stations are most often found on HF nets since propagation and interference vary from one location to the next.

Practice

The old adage that practice makes perfect is never more true. The shortcut to being a good NCS is Practice, Practice, Practice.

- Be willing to learn.
- Accept constructive criticism politely.
- Contact your District Emergency Coordinator to volunteer your NCS services.
- Contact the person in charge of your local traffic net to volunteer.
- Contact your local Amateur Radio club to see if they have a net. If so, volunteer for NCS duties.
- Look for the group that handles public service events in your local area. This group may not necessarily be the ARES group.
- Train with the best NCS you can find. This person will be able to show you subtle techniques.
- Work as NCS as often as you can.
- Monitor other nets and learn from other’s examples.

COPYING CALL SIGNS

One of the greatest fears for a new NCS 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.

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. Do not 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 is on 75 and 40 meter 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 is 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 then 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.

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.

LISTENING

Practice listening. Sounds kind of 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. 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 is not even there. With some practice, you can turn this newfound ability on and off at will; and with more practice it becomes automatic. You can suddenly hear those marginal stations.

PASSING NTS MESSAGES

A net control operator must be completely familiar with and 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 nets. Pass or initiate messages everywhere until it is second nature. 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 and then practice to maintain your skill level.

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 have not heard from in years.

END PART NINE

REVIEW

Part TEN

Net Control Operator To Be or Not To Be

Being a Net Control Operator during an emergency is a complex task. It is not as simple as taking callsigns and names as in the case of an informal or non-emergency net. There are many skills that cannot be taught, and a competent Net Control Operator must have.

Some of the characteristics of a good Net Control operator are:

- Good voice quality.
- Self-confidence but not an intolerable attitude.
- Knows how to take and give orders.
- Ability to deal both mentally and physically with high stress for extended periods of time.
- A sense of humor.
- Good penmanship.
- Above average operating techniques.
- Knows how to be organized.
- Knowledge of emergency communications protocol and served agencies.
- A concern for the safety of all volunteers.
- Good listening skills.
- The ability to be flexible.
- Is able to show a good appearance for amateur radio.

Not all of us have what it takes to be a net control operator. Being able to coordinate several stations and at the same time working in a busy environment is quite a juggling act. The ability to do several tasks well and at the same time, and prioritize them, is a quality that few have. You will not be handed a script like informal nets have, so you better be able to work on the fly and improvise. People in the field are looking to the net control operator for strength and calmness and you should be able to convey this during your communications. All radio communications should be brief and to the point. It is not a time for excess words or rag-chewing but this does not mean that you must rush when you speak. Speaking plainly and SLOWLY goes a long way towards being an effective operator. There is

also a great deal of logging and note taking by a net control station. Entries must be clear and noted with dates, times, names, callsigns and other pertinent information.

If you are asked a specific question, you must know where to go to find the correct answer. Never leave any question unanswered. If you cannot answer a question within ten minutes, inform the operator who asked it that you are aware that their question hasn't been answered and you are still pursuing a proper reply. If a request for, say supplies, is made make sure the logistic support is put to task until the request is fulfilled. In this way you are supporting the guys in the trenches. Never leave them hanging. Calling for clarification to any message sent is also important. Never be afraid to ask an operator to repeat their information. You are the end of the communications line, so get it right. Do not over use phonetics. They are to be used only when what is being said might be better understood if spelled out and only the important words. If an operator checks in and uses phonetics to give his callsign, do not repeat their call-sign using phonetics, that only wastes time. A net control operator must have the patience to work with a group of people whose skill levels will greatly vary. There may be times when you will have to pause to explain something to a new operator that most of us would take for granted. Being a net control station means being both a teacher and a student. This does not mean talking down to a new volunteer, but rather being a friend who has more experience. Make sure when you relieve any volunteer from their assignment that you make a special effort to thank them for their support. A few encouraging words keep volunteers coming back.

You are responsible for setting a pattern and protocol that all other radio operators will follow, so make sure it is a sound one. Always be in control because if you are not your net operations will quickly crumble into chaos and confusion. Keep all your operators in line and following proper procedures. Never allow an operator to break protocol. If you do, others will follow and you will lose control of your net. If one does, just carefully rein them back in by reminding them that they have to use proper net protocol, then let it drop. If they continue to breach protocol you might have to use stronger language and tell them that they must be acknowledged by net control and all communications must flow through you unless you give a station the authority to go direct for one series of communications. Try not to make an issue of it, just state what needs to be said and no more. It is also

important to know that we are all volunteers, so handle your field operators with kid gloves and do not criticize an operator over the air.

You must also know what your limitations are and take breaks often. This will help lower your frustration level. When you take a break, detach yourself mentally from the communications duty. Read a magazine, take a short nap, eat, take a short walk for some fresh air or use the bathroom. Put the net control operations out of your mind for a while. This way when you return to your duties you will have renewed energy. Remaining cool is a valuable characteristic. Another thing to keep in mind is that you must ID and also explain on the air the purpose of the net you are operating so people who might be monitoring or just turning on their radios will remain silent and let you and the net do their job. Always be aware that others are listening such as the media and concerned citizens. So watch what you say. Never throw in any personal opinions into your communications no matter how frustrated you may become. The agencies we serve are also listening to see how we fulfill their communications needs. Always remain a professional both on and off the air. You cannot be expected to be perfect, but do not get flustered. Remain calm and do your best to recover from any mental or verbal mistakes. You must be able to pass or receive information without emotions overwhelming you. If you should become stressed, it will be revealed in your voice. Your voice's pitch will raise and you will probably talk a bit faster. People monitoring will notice. Try to avoid this by taking those frequent breaks.

If you have listened to an actual emergency net, you will always be able to tell who is the net control operator because they have a commanding voice and on-the-air presence. The job is not for all of us and to tell you the truth, I hate it, but it is a necessary assignment that needs to be filled by competent radio operators. If you feel that you would be a good net control operator candidate, talk to your communications group and see if training is available. This usually takes the form of being a net control operator during tests and drills and one-on-one training. After this they may place you in the position as a relief net control operator. This way they will see if you can "take the heat".