

Net Control Operations



*Hayden Kaufman, N2HAY
Emergency Coordinator
Marion County (FL) ARES*



Marion County (FL) Amateur Radio Emergency Service

What's on Tap Today?

- ★ Nets
- ★ Why do I want to be Net Control?
- ★ Emergency Net Activation
- ★ What's Needed to be an NCS?
- ★ Scripted Nets (A Trip to the Web)
- ★ The Shift Change
- ★ The Status Check
- ★ Closing an Amateur Radio Net
- ★ Things You Need to Practice

What's A net, Anyway?

The word "net" is short for "network".

Networks can be defined as groups of equipment, individuals, and/or agencies acting together to increase efficiency and effectiveness through shared information and resources.

The word "network" can be further broken down into its two components.

"Net" implies a capture and holding effect.

"Work" implies that something productive is to be accomplished.

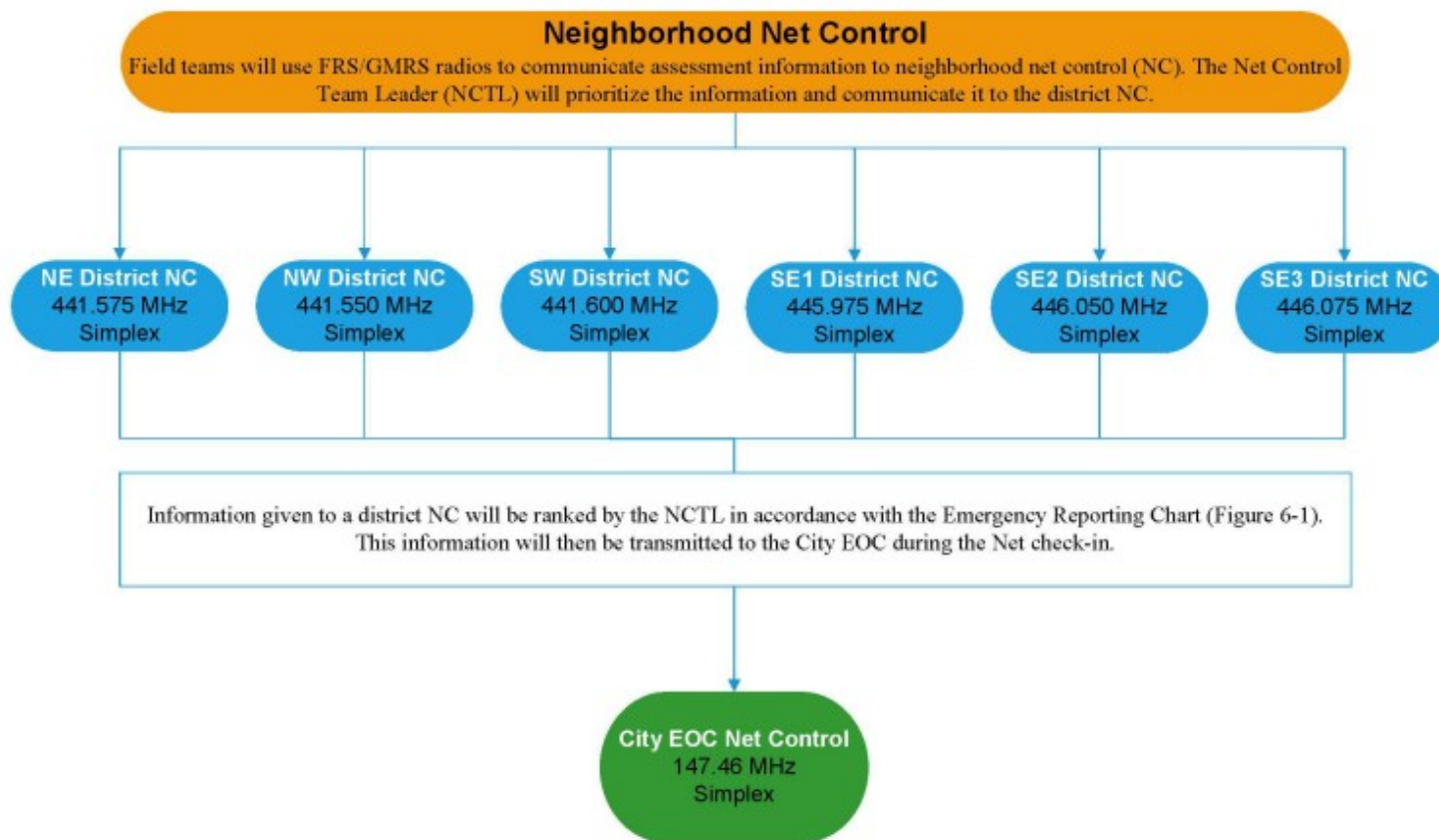


Figure 4-1. Source: City of Eugene Emergency Management, September 2021 – Radio Response Information Flowchart.

Therefore...

So....

Ham radio operators and nets in emergency a situation capture, record, hold, and distribute information so that others may work (produce results) more effectively.

Types of Nets

DIRECTED NETS

Formal (has a set of rules or net directives, and all communications must go through net control)

Controlled by NCS (controls the frequency with net related traffic only. The NCS will issue specific instructions on how he/she wants the net to run.)

Must obtain permission from the NCS before transmitting to other stations in the net.

Types of Nets (cont'd)

SCHEDULED NET

Most scheduled nets are directed.

- ARES, MERT/CERT, HECT, SkyWarn
- Club or Organization Net

Types of Nets (cont'd)

EMERGENCY NETS

"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.



Southern Peninsula Emergency Communications System (CA)

1989 Loma Prieta Earthquake

"I started the tape about 10 minutes after the main event. Seconds before I pushed record, we had a Mag 5x aftershock. If you listen closely, you can hear my neighbor's alarm sounding in the background. There were several more aftershocks that happened during the taping. One knocked my phone off the hook. You can hear the alert beeps. One aftershock interrupted the net due to net control having to leave the Sunnyvale Fire Station he was in. I pulled out my generator at dusk and we had the whole neighborhood at our house watching the news. We were without PG&E Power for 3 days after the event! The night of the quake around 11:00pm, I was called to open a Red Cross Shelter at the Senior Center in Mountain View. I checked people in all night, but in the morning the city condemned the building due to damage. We moved the shelter to the Rengstorff Park Recreation Center where I finished my shift."

~ de Eric N6OIM

<http://n6oim.com/loma/loma1.mp3>

<http://n6oim.com/loma/loma2.mp3>

Types of Nets (again)

More On EMERGENCY NETS

An Emergency Net is a group of stations who provide communication to one or more served agencies or to the general public in an emergency.

Emergency nets may have different purposes and a given emergency may require one or more of these types of net. During a small operation, all functions may be combined into one net.

SkyWarn and ARES are examples of emergency nets. Tactical, Command, Resource and Information nets are types of emergency functions used during an Emergency Net.

Why do I want to be Net Control?

The Tri-County ARES Taskbook states that any member wishing to attain level 2 or 3 certification is required to act as NCS at least once per year, and is suggested to act as NCS once per quarter (where feasible.)

As a rule, any NCS station for a weekly scheduled net is responsible for bringing up a net in the event of an emergency during their NCS "on-duty" week.

Why Me?

Being NCO for a Club net or any other regularly scheduled non-EMCOMM net gives you practice from the “other side of the mic” and helps foster a respect for the rules of a directed net.

Running informal nets such as roundtables helps with the general movement of conversation and gives a sense of order to what can very easily become chaos.

Traits of A good NCO

Does anyone remember the Boy Scout Law?

THE SCOUT LAW

A Scout is...

TRUSTWORTHY	OBEDIENT
LOYAL	CHEERFUL
HELPFUL	THRIFTY
FRIENDLY	BRAVE
COURTEOUS	CLEAN
KIND	REVERENT



WHAT IT TAKES!

Well, a good NCO is...

A good communicator with consistent skills and fluent command of our language

Someone with good voice quality

Someone with good hearing capabilities

Someone with good listening capabilities

Someone with good ear-to-hand copying skills

Someone who understands what SERVICE means

Someone who has good knowledge of the Incident Command System

Someone who is willing to take and carry out direct orders

A strong team player

Self-assured but not overbearing

Decisive, with the maturity to make good judgment calls

More of What It Takes!

A good NCO also needs to be...

Physically able to tolerate high stress for extended periods

Constantly concerned for the safety of participants

A good organizer

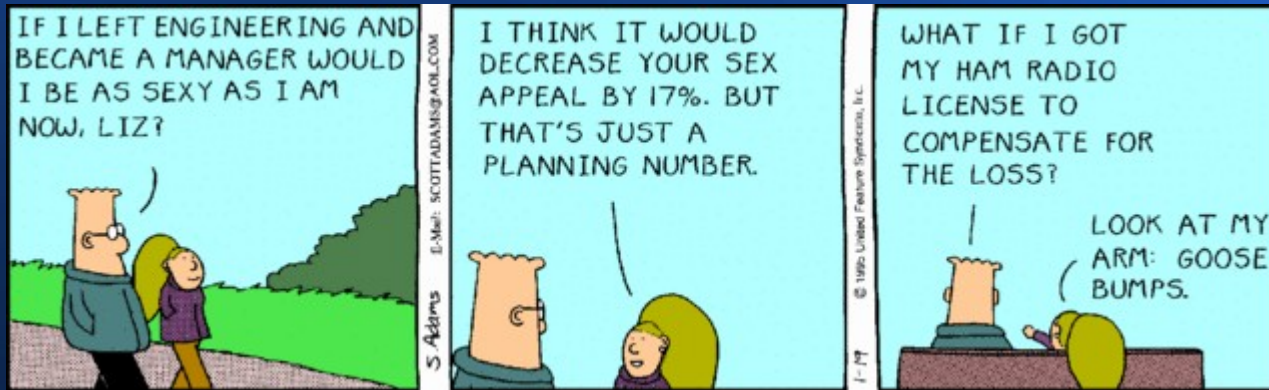
Able to absorb new terminologies quickly

Generally neat of appearance

Someone who consistently demonstrates above average operating techniques

LAUGH!

- HAVE A GOOD SENSE OF HUMOR!



Served Agencies



American
Red Cross



APCO
International®

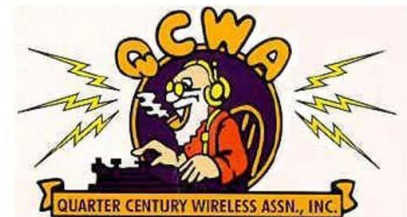
citizen★*corps*
UNITING COMMUNITIES
PREPARING THE NATION



National
VOAD



Salvation
Army
Team
Emergency
Radio
Network



Long Nets - The Shift Change

- Responsibilities of Incoming NCO
 - Arrive 10 - 15 minutes prior to assigned shift
 - Review standard net procedures and job aids
 - Verify supplies you will need and make arrangements for replenishment if necessary
 - Observe message handling procedures being used and note any questions
 - Review all logs for an overview of current status

THE Shift CHange (cont.)

- Responsibilities of Outgoing NCO
 - Show incoming NCO where key documents are located
 - Mobilization/Demobilization Log
 - Event Log
 - Net Control Message Logs

THE Shift CHange (cont.)

- Responsibilities of Outgoing NCO (cont.)
 - Brief incoming NCO on the current operation
 - Review nature of activity in field
 - Identify messages which are awaiting action/reply

THE Shift CHange (cont.)

- Responsibilities of Outgoing NCO (cont.)
 - Verify incoming NCO understands the message handling procedures in use
 - Advise incoming NCO of any problems or unusual activity which has occurred on your shift and how they were dealt with
 - Introduce incoming NCO to the local manager, if one is present

VI. THE Shift Change (cont.)

- Responsibilities of Incoming and Outgoing NCOs
 - When both satisfied that they are ready to change control
 - Contact Command Net and advise of call sign of incoming NCO and status of outgoing NCO
 - Outgoing NCO should contact Resource Net to advise of status and destination

THE STATUS CHECK

All operators must be accounted for on a regular basis, approximately every fifteen minutes to half an hour when possible.

- Announce you will be performing a status roll call.
- Perform the roll call and record status of each operator.
- Contact Command Net with short status of net and a report that all operators are accounted for.

Net Announcements... A Good Idea!

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. (HIPAA)

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

Announcing... Announcements!

Locations of restrooms available

Travel/transportation hazards and safe travel routes

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.

Hello? HELLO?! Where Are You?

- What to do if an operator fails to respond to the status check
 - Call station again
 - If no response, move on to other operators and come back at end of roll call and make two attempts to contact the operator
 - If no contact, immediately notify Command Net and provide the call sign, current assignment, and last known location (and destination if mobile)
 - ***If station is known high-risk or possibly endangered, be sure to inform Command Net.***

Closing Time...

- Announce net will be closing
- Contact operators with continuing assignments, advise of new net frequency, check operators out
- Advise remaining operators of procedures to be used upon release
- Conduct closing roll call
- Announce net is closed
- Contact Command Net
- Return all net-related paperwork or file reports online

PRACTICE, practice, practice!

- Copying Call Signs
 - Ear-to-hand coordination difficult to master
 - Ask for slow pace and space between check-ins
 - Listen how testers/DXers handle pile-ups
- Writing it Down
 - NCO is always writing something down
 - Practice taking notes listening to a net
 - Plan and train for worst case scenario

Things You Need to Practice (cont.)

Practice Listening

- Train your hearing to sort out the messages from the noise

- Try to make sense out of that “bad” signal

- Listen to any conversation on HF during distant weather disturbances

Practice Running Nets

- Run local rag chew net, ARES/RACES net, Skywarn net, club net, etc.

- Tape record any net you run – you will be your own worst critic

THAT GUY... UGH.

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.

Oy, THIS GUY...

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.

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.

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.

Oh, yeah... Prowords!

Voice Net Prowords:

- OVER – I have finished talking, your turn (good for simplex)
- ROGER – Message understood
- COPY THAT – See Roger
- STANDING BY – I am awaiting further transmissions
- OUT – This communication is concluded
- WILCO – I understand and will comply
- OFF the AIR – Self explanatory
- BREAK – I have further communication or I want to talk

Message Handling Prowords – for repeating traffic:

- WORD AFTER “Say again word after...”
- WORD BEFORE “Say again word before...”
- BETWEEN “Say again between...and...”
- ALL AFTER “Say again all after...”
- ALL BEFORE “Say again all before...”

Field NCS Kit

Clipboard

Note pad

ICS Forms and Logs

Pens

Pencils

Box paper clips

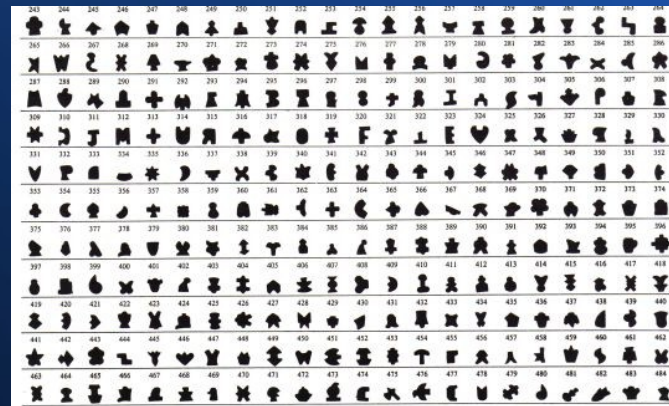
Stapler

Time and Date Stamp (if desired)

A Cute Little Trick

Personal Identifier (if desired)

It's been my experience that a personal identifier, such as a stamp, symbol or personalized punch can make a difference in a paperwork shuffle.



Railroad conductors have a unique punch assigned to them so that documents can be identified later on if an audit is required.

Giving Credit Where Credit is Due

Even though we're finished with the formal training, there is one point that I would like to make to each and every one of you.

We're ALL volunteers. We're ALL giving of ourselves to assist others.

Be sure to thank your operators, whether it be for their check-ins, their reports, or just for being part of your net. Do it as you close a net, do it as they secure, heck, you can even send a Radiogram or a note via Winlink or e-mail. Just THANK them.

Thank you for attending, and paying attention. Now, let's see what you learned!

Special thanks to K8AMR, KE4QDM, KC8WSK and KD8AMR from Idaho ARES/RACES for compiling content and their indirect guidance and inspiration to prepare and present this course.