



NET CONTROLLER STANDARD OPERATING PROCEDURES

FORSYTH COUNTY, NC AMATEUR RADIO EMERGENCY SERVICES

This SOP provides ARES Net Control Operators with a set of standardized procedures for ARES net operations.

Forsyth County Amateur Radio Emergency Services Net Controller Standard Operating Procedures

TABLE OF CONTENTS

TABLE OF CONTENTS	i
TABLE OF REVISIONS	iv
I. PURPOSE	1
II. BREVITY	1
III. PRIORITIES FOR COMMUNICATIONS	1
IV. PERSONAL PROTECTED INFORMATION (PPI)	1
V. PHONETIC ALPHABET	2
VI. PRONUNCIATION OF FIGURES	2
VII. GENERAL NCS PROCEDURES	2
VIII. DIRECTED NET PROCEDURES.....	3
IX. COMMON PROWORDS	3
X. NET OPERATIONS.....	7
A. CALLING AND ANSWERING PROCEDURES	7
1. Single Call	7
2. Multiple Call.....	8
3. Answering.....	8
4. Checking Into a Net.....	8
5. Relaying Check-Ins/Calls	9
6. Net Roster	9
7. Net Calls.....	10
8. Don't answer too many stations at once.	10
B. HANDLING MESSAGE TRAFFIC.....	10
C. DO NOT ANSWER TRANSMISSIONS	10
D. RADIO CHECKS	11
E. DELEGATING AND ASSUMING CONTROL	12
F. BRIEF THE OPERATOR THAT RELIEVES YOU	12
G. ARRIVE FOR YOUR ASSIGNMENT AHEAD OF TIME.....	12
H. CHANGING NET FREQUENCY (HF NETS).....	13
XI. NET CONTROL STATION (NCS)	13
A. TYPES OF NET CONTROL STATIONS	14
1. Net Control Station (NCS) Duties.....	14
2. Alternate Net Control Station (ANCS) Duties.....	14
3. Selection of Net Control Stations	14

Forsyth County Amateur Radio Emergency Services Net Controller Standard Operating Procedures

B.	TOOLS OF THE NCS	14
1.	Speaking Ability	14
2.	Computer with Internet Connection	14
3.	Reference Materials	14
C.	PREPARING TO SERVE AS NCS	15
D.	NO NCS AT NET TIME	15
E.	ESTABLISHING A NET	15
1.	Directed Net - Scheduled	15
2.	Limited Net Calls	15
3.	Maintaining a Net Log	16
F.	SPECIAL SITUATIONS	16
1.	Priority Traffic During Check-In	16
2.	Stations Partially Heard.....	16
3.	General Net Call.....	16
G.	DIRECT NET BUSINESS	16
1.	Handle Traffic According To its Precedence.....	17
2.	Procedure For Directing Message Traffic	17
3.	Procedure For Routing Traffic To An Alternate Frequency	17
4.	Administrative and Informal Traffic	17
5.	“Dead Air”	18
XII.	TACTICAL NET OPERATIONS, PUBLIC SERVICE EVENTS	18
A.	BACKGROUND.....	18
B.	OTHER TACTICAL OPERATIONS.....	18
C.	MISSION	18
D.	PLANNING AND TEAMWORK	19
E.	TACTICAL vs. FCC CALL SIGN USE	19
F.	"BEST AMATEUR PRACTICES"	19
G.	TACTICAL NET PRACTICES, EVENT EXAMPLE.....	19
H.	EXAMPLE EVENT STATION ASSIGNMENTS	19
I.	CONFIRMATION	20
J.	DOCUMENTATION	20
K.	TACTICAL DISPATCHING, ON AND OFF NET FREQUENCY	20
1.	On Net Frequency	20
2.	The Exchange	20
3.	Multiple Station Calling - On Net Frequency.....	21

Forsyth County Amateur Radio Emergency Services Net Controller Standard Operating Procedures

4.	Off Net Frequency.....	21
5.	Returning To Net, Job Completed.....	21
6.	Reporting Back To Net, Job Not Completed.....	21
7.	Reporting Back to Net With Additional Requests.....	22
L.	STATIONS REQUESTING TO BE EXCUSED	22
1.	Excusing From the Net.....	22
2.	Temporary Excusing	22
M.	NCS EXCUSING STATIONS.....	23
1.	Excusing Stations Individually.....	23
N.	AUTHORITY FOR CLOSING STATIONS	23
O.	IDENTIFICATION PROCEDURES	23
P.	REPEATER DELAYS.....	24
Q.	TRANSMISSION SPEED, VOICING RULES	24
R.	WRITTEN TRAFFIC vs. VERBAL TRAFFIC	25
S.	PLANNING, PREPARATION, AND EXECUTION CHECKLIST	25
XIII.	APPENDIX 1 PROWORDS.....	28
XIV.	APPENDIX 1 ARES NET SCRIPT	30
XV.	APPENDIX 2 SPECIAL EVENT NET SCRIPTS	32

Forsyth County Amateur Radio Emergency Services Net Controller Standard Operating Procedures

I. PURPOSE

To document standardizes Net Control Operator procedures for all ARES net operations. The purpose of these SOP's is to enhance the professionalism of our operations by ensuring communications are crisp and brief in nature. ARES members will follow the NCS operators lead in communications. The NCS operators set the standard and tone of the net.

II. BREVITY

Keeping transmissions as short as possible helps to keep the frequency clear which makes communications more efficient and permits more stations to participate. Extraneous language should be eliminated to the greatest extent possible. Use the briefest statement that enables the message to be completed. I.E. NCS does not need to say "Net control would like to recognize the following stations..." (See NCS Check In Procedures Below)

The use of full phonetic call signs is NOT required once the station has checked into the net nor is it necessary for the NCS to use full phonetic call sign after the initial call sign statement at the beginning of the net. Only full phonetic should be used for the FIRST call sign statement. I.E. At the beginning of the net the NCS states "This is Whiskey Sierra 4 Foxtrot Uniform calling the". Follow on call sign statements should be done using alphanumeric identification. I.E. This is W S 4 F C with the". Published Net Scripts will have an underline (WS4FC) when full phonetics should be used. If a station is having issues understanding the call sign then full phonetics should be used until that station copies the call sign correctly.

While we want to always be polite this is an EMCOMM NET and we should always strive to operate it as we would during emergency situations. Constantly saying "Please", "We would like to thank the following stations for checking in...", "Net Control would like to recognize the following stations...", etc. all add unnecessary wording and time and should be eliminated.

III. PRIORITIES FOR COMMUNICATIONS

Critical communications have competing priorities including accuracy, security, speed and efficiency among others. It is important as NCS operators that we keep these priorities in mind when conducting net operations.

The highest priority is *ACCURACY*. What is transmitted must be *ACCURATE*. If the traffic (message) is not accurately relayed and delivered, the other priorities are meaningless.

Speed is the next priority to take into account. We should strive to ensure that traffic (messages) is handled with as much *SPEED* as possible and according to their indicated precedence while maintaining *ACCURACY*.

IV. PERSONAL PROTECTED INFORMATION (PPI)

We must remember that our frequencies ARE monitored by non-amateur individuals such as news media and the general public. Remember that anything that is said on the air can and will rapidly become public information. It is imperative that the NCS ensure that PPI is not transmitted or relayed on the net. It is

Forsyth County Amateur Radio Emergency Services Net Controller Standard Operating Procedures

the NCS responsibility to remind stations, if necessary, about PPI should they start to provide that type of information over the air.

PPI includes the following:

- A) Full Name
- B) Date of Birth
- C) Address
- D) Phone Number (when included with A, B or C above)
- E) Medical Information
- F) Social Security Number
- G) Driver's License Number

PPI should be transmitted via secure methods such as Cellular, Landline, Fax, and certain station to station digital modes only.

V. PHONETIC ALPHABET

The use of standard phonetics for the pronunciation of letters in call signs and text aids accuracy and efficiency.

The following is the **only** phonetic alphabet to be used in ARES:

Phonetic Alphabet

A ALPHA	J JULIET	S SIERRA
B BRAVO	K KILO	T TANGO
C CHARLIE	L LIMA	U UNIFORM
D DELTA	M MIKE	V VICTOR
E ECHO	N NOVEMBER	W WHISKEY
F FOXTROT	O OSCAR	X X-RAY
G GOLF	P PAPA	Y YANKEE
H HOTEL	Q QUEBEC (Pronounced KEH- BECK)	Z ZULU
I INDIA	R ROMEO	

VI. PRONUNCIATION OF FIGURES

The clear pronunciation of numerals is also essential to professional-grade voice radio communications.

1 WUN	6 SIX
2 TOO	7 SEV-EN
3 TREE *	8 AIT
4 FOW-ER *	9 NIN-ER *
5 FIFE *	0 ZE-RO

* Note the non-standard pronunciations for intelligibility on radio.

VII. GENERAL NCS PROCEDURES

- A) NCS shall use the most recent script for the net being conducted.
- B) NCS should identify the net by name and the NCS call sign

Forsyth County Amateur Radio Emergency Services Net Controller Standard Operating Procedures

- a) Once every 10 minutes during the weekly ARES net.
- b) Once every 20-30 minutes during the event or emergency nets.

- C) NCS should NOT deviate from the approved script. Deviation normally results in extraneous words being added.

- D) Use Full Phonetic call sign at the beginning of the net and alphanumeric call signs from that point forward.

- E) When calling for check-ins the NCS will call for a specific call sign group. "Stations Hotel through November (H-N) over."

- F) When acknowledging a station checking in state: "Checked In stations call sign, this is W S 4 F C. Roger. Out". Example: Stations W4ABC and WA4DEF are checking into the net.

Stations checking in:

"This is" (unkey) Whiskey Four Alpha Bravo Charlie, Harlan, over."

"This is" (unkey) Whiskey Alpha Four Delta Echo Foxtrot, Jim, over."

NCS Response: "W 4 A B C and W A 4 D E F, roger, out."

NCS will then move to the next check-in group.

- G) When calling stations during the net use alphanumeric call signs. Example: NCS needs to speak with W4ABC during the Net. NCS Call: "W 4 A B C this is W S 4 F C, over"

- H) When a station lists traffic for the net, the NCS shall acknowledge the traffic listing at the same time the station check-in is acknowledged. Example: W4ABC is listing one routine message for NA4DD.

Station Checking In

"This is" (Temporarily unkey) "Whiskey Four Alpha Bravo Charlie, Harlan, One Routine for November Alpha 4 Delta Delta, over."

NCS Response: "W 4 A B C with 1 routine for N A 4 D D, roger, out."

VIII. DIRECTED NET PROCEDURES

A directed net is one in which any station must have permission of the NCS to contact another station. All ARES related nets are directed nets. Regularly scheduled nets have scripts that include the statement "This is a Directed Net...". For emergency nets being rapidly established by a NCS without specific pre-written scrip shall make the initial statement "**This is Whiskey Sierra 4 Foxtrot Charlie, this is a DIRECTED NET over.**" Then proceed with the name of the net and check in process.

IX. COMMON PROWORDS

Effective, efficient and brief communications are a tenant of ARES operations. The use of prowords helps us be brief and yet clear in our meaning.

Forsyth County Amateur Radio Emergency Services

Net Controller Standard Operating Procedures

A) OVER and OUT

The most common prowords are "OVER" and "OUT".

Every ARES voice transmission must end with either "OVER" or "OUT" but, never both.

OVER means, "I have finished my transmission, go ahead and transmit." It indicates to the other station that a reply is expected and necessary. NOTE: We do not say "go ahead" as an invitation to transmit.

OUT means, "I have concluded my transmission, no reply is expected." When a station says OUT, that is the end of the exchange. The other station should say nothing. If the other station has more to say, he must re-establish contact using proper net procedures by calling the NCS and asking to contact the other station. Unless the context makes it clear that the communications are concluded, the station who started the contact should usually be the one to say OUT. The initial calling station may but is not required to call the NCS and advise that the traffic is complete. It is important that the NCS monitor the traffic being passed so that they are aware when the initiating station states OUT as the conclusion of their traffic.

B) ROGER

The prowords "ROGER" means "I have received the information transmitted by you" without indicating approval or disapproval, agreement or disagreement.

Many operators use ROGER to mean, "yes." This is not an accurate use of ROGER.

Additionally some operators may use other phrases for the same purpose as ROGER. These include, "That's a good copy," "That's a Charlie Copy," "Copy that," "Charlie, Charlie," among others. These are not proper prowords and should not be used in ARES operations.

Not all amateur operators are familiar with or use amateur Q-signals. The use of Q-signals is discouraged in ARES operations for this reason.

C) BREAK

The prowords BREAK is used in message handling and is not to be used to conclude transmissions between stations, to enter a net or to interrupt communications.

D) CORRECT / WRONG

The prowords CORRECT means "what you transmitted is correct." The opposite is WRONG.

E) CORRECTION

When an operator making a transmission makes an error and needs to make a correction, the proword CORRECTION is used. The operator will then repeat the last phrase that was correct and then state the corrected phrase that follows. NOTE that I SAY AGAIN is not the correct proword for this purpose.

F) DISREGARD THIS TRANSMISSION

When an operator decides in the middle of a transmission that it should be cancelled, the proword DISREGARD THIS TRANSMISSION will be used.

Forsyth County Amateur Radio Emergency Services

Net Controller Standard Operating Procedures

G) DO NOT ANSWER

DO NOT ANSWER is used in sending a message to one or more stations who are not to reply or acknowledge receipt. This is normally used by the NCS when making a general statement to the net during ARES operations. Example: **NCS** : “DO NOT ANSWER, Shelter 1, 3, 7 contact Net Control via landline, Net Control WS4FC, out.”

H) FIGURES

The proword FIGURES means numerals or numbers, or mixed group beginning with a numeral, follows. FIGURES is not used in conjunction with the prowords TIME, GROUPS, NUMBER or CALL SIGN. FIGURES is used to distinguish the numerical form or a numeral from textual form, (i.e., to distinguish “2” from “two”) and is not necessary when a number is not to be transcribed.

For example, FIGURES is not needed in these situations:

“Change frequency to 146 decimal 640”

I) I SPELL

I SPELL means one of more letters, or a mixed group beginning with a letter, will follow, sent phonetically. When used with a pronounceable letter group, say it, then spell it, then say it again.

Example: “Tanks, I SPELL TANGO ALPHA NOVEMBER KILO SIERRA, Tanks”

J) NEGATIVE / AFFIRMATIVE

NEGATIVE means “no.” The opposite AFFIRMATIVE means “yes.”

K) NO PLAY

During an exercise should actual “real world” traffic (message) need to be passed the proword NO PLAY will be used to indicate that the traffic (message) is not a part of the exercise. The NO PLAY traffic (message) will be given priority over exercise traffic.

L) PRIORITY, PRIORITY, PRIORITY

If a station has higher precedence traffic than the communications being conducted, that station can interrupt the communications by stating the precedence of his/her traffic three times; e.g., “PRIORITY, PRIORITY, PRIORITY.” The NCS, having heard the interruption will seize control of the net and stop the communications so the higher precedence traffic can be passed.

The station with higher precedence traffic should use some judgement before interrupting. If it appears the on-going communications may be concluded promptly, waiting until it is finished may be more efficient for all concerned.

M) SAY AGAIN

The proword SAY AGAIN is used to request a repetition of the something that was transmitted. The word “repeat” is not used in ARES operations. The proword I SAY AGAIN means I am about to restate something I have already transmitted.

Forsyth County Amateur Radio Emergency Services Net Controller Standard Operating Procedures

N) SEND YOUR MESSAGE

SEND YOUR MESSAGE is used in response to an offer to send a message. OVER (as an invitation to transmit) can also be used instead, but may seem ambiguous. SEND YOUR MESSAGE is less ambiguous.

O) SILENCE, SILENCE, SILENCE

Anytime an NCS needs to silence the net, he/she will state the proword SILENCE three times. All stations will immediately stop transmitting and remain silent until the NCS announces "SILENCE LIFTED." When commanded, radio silence is critical. Absolute obedience is required.

P) THIS IS

THIS IS means, "The current transmission is from the station whose call sign follows." This proword can be omitted after communications are established.

Q) THIS IS A DIRECTED NET

This proword, when spoken by the net control, means that until further notice the net is directed. This means that all stations need permission of the net control to call other stations.

R) UNKNOWN STATION

UNKNOWN STATION means, "The identity of the station I am attempting to contact is not known to me." This proword is used to reply to a station whose call sign was not heard or was only partially heard.

For example

"UNKNOWN STATION, THIS IS WS4FC, SAY AGAIN, OVER."

Note that this is more efficient than saying, "There is a weak station attempting to check in and I can't quite make out the call sign..."

S) USE FULL CALL SIGNS

USE FULL CALL SIGNS means, until further notice, use complete call signs. This may be used when tactical call signs are being confused or for any reason the NCS determines full call signs are to be used.

T) USE TACTICAL CALL / TACTICAL CALL SIGNS

Tactical Call Signs are used during events and emergency operations. Examples of Tactical Call Signs are: "Rest Stop 1", "Shelter 3", "Staging Area", "SAG 4."

USE TACTICAL CALL means all stations are to use TACTICAL CALL SIGNS as outlined in paragraph X. TACTICAL NET OPERATIONS / PUBLIC SERVICE EVENTS in this manual.

U) WAIT and WAIT OUT

The proword WAIT is used when a pause is required and will last for only a few seconds. WAIT should not be over-used; you may simply pause a second or two without stating it. WAIT

Forsyth County Amateur Radio Emergency Services

Net Controller Standard Operating Procedures

OUT is used when the pause requires more time; i.e., someone might wonder what happened to your signal. The time period associated with the use of WAIT OUT should be as short as possible so net operations are not delayed.

Although the proword WAIT OUT ends with "OUT," the communication between the two stations is not yet complete. Therefore, no other station will transmit during this pause unless they have higher precedence traffic than that which is being handled. If too much time passes, the NCS can assert control by saying:

"THIS IS [NCS call sign] OUT."

V) WILCO

The proword WILCO is a contraction of the phrase "will comply." It is used in response to a request or tasking and means that you understand the tasking and agree to accomplish the task. Because it implies that you understand the request, it is never used with the proword ROGER as that would be redundant.

W) WORDS TWICE

The proword WORDS TWICE is used when communication is difficult. It means transmit each phrase twice. If sent by the NCS to all stations, it indicates that all stations are to transmit each phrase twice.

Example:

"This is my first training session; this is my first training session, OVER."

A complete list of approved prowords is contained in [Attachment 1](#) of this Manual.

X. NET OPERATIONS

Our nets function very efficiently because of the compliance of the net participants with the net procedures that have been developed in this manual and the ARES Member Manual. ARES Nets operate differently from other nets such as National Traffic Net, rag-chew nets and even SkyWarn nets. Differences are driven by factors such as numbers of stations checking in, type of message traffic handled, geographic area covered and other, local considerations.

When checking into a net, members should carefully follow any specific instructions given by the Net Control Station (NCS) at the opening of the net.

A. CALLING AND ANSWERING PROCEDURES

1. Single Call

A single call is one station calling another station to initiate communications.
Example of a single call using full procedure:

"W4ABC, THIS IS WA4DEF, OVER."

Once a station is checked into the net, he/she may contact the NCS after hearing the proword OUT. To contact the NCS he/she would simply say, "THIS IS [alphanumeric call sign] OVER." **NCS RESPONSE: [alphanumeric call sign], Net Control, over"**

Forsyth County Amateur Radio Emergency Services Net Controller Standard Operating Procedures

2. Multiple Call

A multiple call is one in which a single station calls a number of specified stations. An NCS uses a multiple call to acknowledge several stations checking into the net at once.

Example:

"W4ABC, WA4DEF and KM4CCC, THIS IS WS4FC, ROGER, OUT."

3. Answering

When the NCS calls a single station, that station must answer promptly.

When the NCS calls a groups of stations, those stations should carefully answer in the order called, provided, however, that, if one station does not answer, the next station in sequence should answer after waiting a few seconds.

Example:

NCS: "W4ABC, NA4DD, KM4CCC THIS IS WS4FC, CHANGE FREQUENCY TO 146 DECIMAL 640, OVER."

W4ABC: "THIS IS W 4 A B C, ROGER, OUT."

NA4DD: "THIS IS N A 4 D D, ROGER, OUT."

KM4CCC: "THIS IS K M 4 C C C, ROGER, OUT."

When the NCS make a collective, or a limited collective call, stations answering should expect there might be others answering, too. To avoid simultaneous transmissions ("doubling"), each station answering should start to answer, then pause, un-key the transmitter and listen carefully before continuing. If another station is heard, the station pausing must not complete his answer but should start over, after the other station finishes.

Example using Tactical Call Signs:

NCS: "Rest Stop 1, SAG 3, SAG 5 THIS IS NET CONTROL, CHANGE FREQUENCY TO 146 DECIMAL 640, OVER."

REST STOP 1: "THIS IS REST STOP 1, W 1 H R C, ROGER, OUT."

SAG 3: "THIS IS SAG 3, N A 4 D D, ROGER, OUT."

SAG 5: "THIS IS SAG 5, K M 4 C C C, ROGER, OUT."

4. Checking Into a Net

When stations check into a net, they are answering the collective call made by the NCS. Here are some examples of possible answers to that call.

"THIS IS (unkey and listen) W4ABC (phonetics), OVER"
(No messages listed means no messages to send).

"THIS IS (unkey and listen) NA4DD (phonetics), ONE ROUTINE, OVER."

"THIS IS (unkey and listen) WA4DEF (phonetics), ONE PRIORITY, ONE ROUTINE, OVER."

"THIS IS (unkey and listen) KM4CCC (phonetics), REQUEST INFORMAL W4ABC, OVER."

"THIS IS unkey and listen) W4ZZZ (phonetics), OUT AFTER FORMAL, OVER."

Forsyth County Amateur Radio Emergency Services

Net Controller Standard Operating Procedures

The NCS shall ROGER all checked in stations using alphanumeric call signs. Example:

NCS: **“W4ABC, NA4DD WITH ONE ROUTINE, WA4DEF WITH ONE PRIORITY AND ONE ROUTINE, KM4CCC WITH INFORMAL FOR W4ABC and W4ZZZ OUT AFTER FORMAL, ROGER, OUT”**

IMPORTANT: The **only** time a station may transmit out of turn is to list priority traffic. We must always maintain net order and discipline.

5. Relaying Check-Ins/Calls

During the establishment of net and other times, it often occurs that a station hears someone attempting to call whom the NCS and/or Alternate Net Control Station (ANCS) do not acknowledge. This happens in simplex and HF operations. Primary responsibility for RELAYS is with the ANCS. If neither the NCS nor ANCS hears a station calling, there is a specific procedure for relaying such stations into the net. First, to relay someone else, a station (the “relaying station”) must already be part of the net. No business, including relays, may be conducted by any station not already checked into the net. Also, a relaying station may not call out of turn.

A RELAY can be mentioned as part of the relaying station's check-in procedure. But, the relaying station must wait until the proper time to check-in.

Example of a relay during check-in:

NCS: **“. . . STATIONS HOTEL THROUGH NOVEMBER, OVER.”**
(*WA4DEF not heard by NCS or ANCS*)

W4ABC: **“THIS IS (unkey and listen) W4ABC (phonetics), RELAY, OVER.”**
(*W4ABC did hear WA4DEF trying to check-in*)

NCS: **“W4ABC THIS IS WS4FC, ROGER, SEND YOUR RELAY, OVER.”**

W4ABC: **“THIS IS W4ABC, I RELAY, WA4DEF (phonetics), OVER.”**

NCS: **“W4ABC THIS IS WS4FC, ROGER WA4DEF, OUT.”**

A station already checked into the net with a station to RELAY must first gain the permission from NCS before doing so. No station should make an unidentified or unauthorized transmission for any purpose, including RELAYS.

Example of an offer to RELAY:
“THIS IS W4ABC, RELAY, OVER.”

6. Net Roster

The NCS operator shall maintain an accurate Net Roster of stations checked in and those that have checked in then out. The Net Roster shall, if a change in NCS operator be passed to the relieving NCS or ANCS expeditiously via hand delivery if in same facility, email or digital transmission if both stations are capable. Assigned ANCS should maintain a Net Roster in case they have to take over the net.

Forsyth County Amateur Radio Emergency Services

Net Controller Standard Operating Procedures

7. Net Calls

After the NCS has completed his limited collective calls to the net and built the net roster, he/she will make a general net call to capture any additional stations for the net roster. It is at this point that a station who missed his/her turn to check-in may answer.

Example:

"THIS IS [Net Name] [NCS call sign] additional stations for the net OVER."

8. Don't answer too many stations at once.

This is a hint for a net control stations. If two or more stations call you at the same time and you miss or garble some of the call signs, just answer the stations that you copied. When done with all of them, ask if there are any other stations? This is faster and simpler than trying to call stations with fragments of their call signs, such as "the station ending in XZ", particularly if it was really W4XYC! (This often happens during net check-ins.)

B. HANDLING MESSAGE TRAFFIC

Once the NCS has a complete roster, he/she should start directing the stations that have listed traffic to send it. (It is also within the discretion of the NCS to allow traffic to be passed before the roster is completed. This would normally be done for IMMEDIATE traffic).

Messages listed with the precedence of IMMEDIATE should be handled first then PRIORITY, and lastly, ROUTINE messages. INFORMAL traffic may be handled after all precedence traffic has been passed or at the end of the net (training during weekly nets). This will enable stations requesting to close

If there are multiple IMMEDIATE or PRIORITY messages being sent between different stations, those stations may be sent to other frequencies to pass the traffic so that messages can be passed simultaneously. If necessary, they can be passed on the net frequency.

Stations involved in sending and receiving messages must listen carefully to the NCS instructions so that messages can be passed as efficiently as possible. During HF operations, other stations on the net are encouraged to listen carefully and copy messages if they can. In that way, they may be able to assist with relays and repetitions of messages, should propagation suddenly change.

C. DO NOT ANSWER TRANSMISSIONS

Normally, if the NCS makes a collective call to the net to send a message, the entire net roster would be expected to answer, in order, that each station was ready to receive the message. Then, after the message is sent, the entire net roster would be expected to receipt (ROGER) for the message, again in order, indicating complete reception of it.

This procedure is very reliable and practicable in smaller nets of fewer than 10 to 15 stations. However, with larger nets having 20 or more stations checked in, that can be extremely time-consuming.

DO NOT ANSWER is a proword which means what it says. It is for use when making a transmission (or sending a message) when no reply is required or expected. It is especially useful when sending a message to many stations at once.

Forsyth County Amateur Radio Emergency Services Net Controller Standard Operating Procedures

Example:

"[Called stations call signs] **THIS IS** [NCS call sign] **DO NOT ANSWER MESSAGE ...** [sends message] ..., **OUT.**"

If warranted, he/she can then call the net and ask, "**THIS IS** [NCS call sign] **DOES ANY STATION REQUIRE A RETRANSMISSION? OVER.**" Any station requiring a repetition can then call the NCS and make his/her request.

D. RADIO CHECKS

A station requesting a signal report will use the proword RADIO CHECK. This is normally done during simplex or HF operations.

Example:

"**W4ABC THIS IS WS4FC, RADIO CHECK OVER.**"

Radio checks should not be given unless requested, and should not be requested excessively.

For HF or Simplex operations, the NCS might decide to conduct a radio check with some or all of the stations on the net to determine whether propagation has changed to the extent that a frequency change would be required. Alternatively, particularly on HF, the NCS might request radio checks after assuming control of a net. The NCS would announce the radio check as shown above. Then, NCS would call each station one at a time. In each case, the station called shall respond with a signal strength and readability report as shown below.

The tables below are appropriate responses to radio check requests.

Table 1A Signal Strength Description

LOUD: Your signal is very strong

GOOD: Your signal strength is good

WEAK: Your signal strength is weak

VERY WEAK: Your signal strength is very weak

FADING: Your signal strength fades to such an extent that continuous reception cannot be relied upon

Table 1B Readability Description

CLEAR: Your signal has excellent quality

READABLE: Your signal quality is satisfactory

BARELY READABLE: Your signal is almost unreadable

UNREADABLE: Your signal quality is so bad that I cannot understand you

DISTORTED: Your signal is distorted or is suffering bad distortion

WITH INTERFERENCE: Your signal has interference (could be man-made or natural)

INTERMITTENT: Your signal is intermittent

Note that other adjectives, such as "FAIR" and "MEDIUM" are not proper descriptions and will not be used on ARES Nets.

A simple reply of "**ROGER, OVER**" means the signal is LOUD and CLEAR.

Example of a single radio check:

NCS: "**W4ABC THIS IS** [NCS call sign], **RADIO CHECK, OVER.**"

(NCS calls W4ABC for a radio check)

W4ABC: "**THIS IS W4ABC, ROGER, OVER.**"

Forsyth County Amateur Radio Emergency Services

Net Controller Standard Operating Procedures

NCS: **"WEAK WITH INTERFERENCE, OUT."**

E. DELEGATING AND ASSUMING CONTROL

In the event that a net control station needs to leave the net, he/she needs to delegate net control to another station. The simplest way to do that is to simply appoint someone to serve as NCS.

Example (When the WS4FC call is NOT in use):

NCS: **"WA4ABC (phonetics) THIS IS [NCS call sign] ASSUME CONTROL, OVER."**

(NCS directs WA4ABC to take control of the net)

WA4ABC: **"THIS IS WA4ABC (phonetics), WILCO, OUT."**

(WA4ABC acknowledges NCS direction)

WA4ABC: **"[Net Designator] THIS IS WA4ABC (phonetics) ASSUMING CONTROL, OUT."**

(WA4ABC is now NCS)

Example (When WS4FC call is in use for the NCS):

NCS: **"WA4ABC (phonetics) THIS IS [NCS call sign] ASSUME CONTROL, OVER."**

(NCS directs WA4ABC to take control of the net)

WA4ABC: **"THIS IS WA4ABC (phonetics), WILCO, OUT."**

(WA4ABC acknowledges NCS direction and will now use the WS4FC call sign for the remainder of the net.)

NOTE: This is why all NCS on the net should maintain a Net Roster even though they may not be the assigned NCS.

F. BRIEF THE OPERATOR THAT RELIEVES YOU

If another operator has your assignment after you, don't depart before briefing them. If your relief is late and you must leave your station, at the very least leave a written list of what that operator needs to know to do the job. If possible, write down the information they'll need during lulls in activity. If they do arrive on time, go over the list with them in person. You would want the same thing if you were coming onto a shift.

Examples of the kind of information your relief will need include:

1. The frequencies being used
2. The tactical call signs in use and where the stations are located
3. Who is at each location; their name and call sign.
4. If a telephone is available; what is its location and phone number.
5. The names of the officials or others you are serving; how you find them and recognize them.
6. Any pending activity, i.e. messages you have sent and replies you expect; also, who gets the reply?
7. What is your station's purpose?
8. What's going on in general? What changes are expected?
9. Where is the restroom, water, food, etc.
10. Any other radio, power, or antenna details.

G. ARRIVE FOR YOUR ASSIGNMENT AHEAD OF TIME

Arrive at your assigned operating point 10 to 20 minutes before your shift starts so that you can get set up and be briefed by the start of your shift. The operator you are relieving would like to

Forsyth County Amateur Radio Emergency Services

Net Controller Standard Operating Procedures

leave at the end of his shift also. If the operator you are relieving doesn't have written information for you, you can use the same list we just discussed (with any additions you need) to guide your questions.

H. CHANGING NET FREQUENCY (HF NETS)

Due to changes in HF radio propagation, it is inevitable that the net operating frequency will need to be changed in long-duration events. Generally, the net frequency will need to be increased between dawn and noon, and decreased after sunset. The NCS is responsible for recognizing when a change is necessary and for directing that change before propagation is lost. All stations must follow the directions to change frequency or be left out of the net. The NCS must determine the method of communicating the change of frequency to all stations in the net. The NCS may decide to do this using a DO NOT ANSWER message or one which requires a receipt.

Example of a change of frequency instruction requiring a receipt:

NCS: “[Net Designator] **THIS IS [NCS call sign] CHANGE FREQUENCY TO [frequency] NOW, OVER.**”

(NCS directs all members of the net to change frequency)

W4ABC: “**W4ABC, WILCO, OUT.**”

(W4ABC Acknowledges and move to new Frequency)

W4CDE: “**W4CDE, WILCO, OUT.**”

(W4CDE Acknowledges and move to new Frequency)

Example of a change frequency instruction using DO NOT ANSWER:

NCS: “[Net Designator] **THIS IS [NCS call sign] DO NOT ANSWER, CHANGE FREQUENCY TO [frequency] NOW, OVER.**” *(NCS directs all members of the net to change frequency)*

ANCS (If Assigned): “[Net Designator] **THIS IS [NCS call sign] DO NOT ANSWER, CHANGE FREQUENCY TO [frequency] NOW, OVER.**”

(Each ANCS should echo the direction of the NCS and then move to specified frequency)

In either case, the NCS should leave a station to guard the original frequency and notify anyone who calls there of the frequency change. Also, the NCS should consider reconstituting the net on the new frequency, creating a fresh net roster -- or, in the alternative, conducting a continuity check (RADIO CHECK) – to determine which stations are audible, given the propagation characteristics of the new frequency.

XI. NET CONTROL STATION (NCS)

A Net Control Station (NCS) is a station designated to control traffic flow and enforce Net discipline. The tempo of any traffic net arises from the precision and timing of its NCS operator combined with his ability to communicate under all conditions. Net Control procedures must be executed with precision and clarity to ensure that all net stations will interpret the NCS's instructions as intended.

Because the passage of information by voice is slower than other modes, it is important that Net Control Stations use standard procedures and minimal airtime to maximize net efficiency. NCS must set an example of how the net members are to conduct themselves. Most will follow the example of the NCS.

Just as traffic handlers must minimize excess words to speed throughput, NCS's must also minimize excess words and transmissions in conducting a net.

Forsyth County Amateur Radio Emergency Services Net Controller Standard Operating Procedures

BE CLEAR BE BRIEF BE CONCISE

A. TYPES OF NET CONTROL STATIONS

There are two (2) types of Net Control Stations; Net Control Station (NCS) and Alternate NCS or ANCS. Not every net will have an ANCS assigned. Normally this will be done for ARES HF nets however it may be done on an as needed basis on other bands.

1. Net Control Station (NCS) Duties
 - i. Establishes the net and closes the net;
 - ii. Directs Net activities, such as passing traffic, to maintain optimum efficiency;
 - iii. Chooses net frequency (HF / Simplex), maintains circuit discipline and frequency accuracy;
 - iv. Maintains a net log and records participation in the net and movement of messages;
 - v. Appoints Alternate Net Control Stations (ANCS) if needed;
 - vi. Determines whether and when to conduct network radio checks;
 - vii. Determines when procedural changes need to occur to enhance communications;

2. Alternate Net Control Station (ANCS) Duties
 - i. Assists the NCS to maintain optimum efficiency;
 - ii. Assumes NCS duties in event that the NCS develops station problems;
 - iii. Assumes NCS duties for a portion of the net, as directed or as needed;
 - iv. Serves as a resource for the NCS; echoes transmissions of the NCS if, and only if, directed to do so by the NCS;
 - v. Maintains a duplicate net log.

3. Selection of Net Control Stations

Net Control Stations will be assigned by the ARES Emergency Coordinator (EC) or designee.

B. TOOLS OF THE NCS

1. Speaking Ability

Words spoken in a slow, controlled manner, with moderate voice tone, will usually minimize requests for repetition. A Net Controller must also project the sound of control and authority. Other operators on the net will emulate the manner of speaking of the NCS in speed, cadence, and brevity.

2. Computer with Internet Connection

Internet access at the NCS operating position is very desirable particularly during ECOMM and special event operations. This will enable the NCS to monitor stations equipped with APRS radios and smart phones as well as monitor weather.

3. Reference Materials

The NCS should have immediate access to an accurate clock, and reference materials as needed.

Forsyth County Amateur Radio Emergency Services

Net Controller Standard Operating Procedures

The NCS and ANCS might have the following (depending upon the level of the net) available in a notebook or binder for their use during the conduct of a net:

- Net Scripts (Weekly Training, Special Event, ECOMM, etc);
- Contact List (Officials and Net Control Stations);
- Map (Net area, Region, State, etc.);
- Applicable Operations Memos;
- Other Served Agency Information.

C. PREPARING TO SERVE AS NCS

The NCS can use the period of 15 minutes before net time to contact an ANCS if needed, get the log ready, start filling in the log, check APRS if used, for HF operations - check the propagation websites to make some judgments about which alternate net frequency to use, etc.. If an alternate frequency is to be used, the NCS should assign an ANCS to monitor that frequency. If propagation makes it necessary to change from the usual net frequency, the NCS should announce the change in frequency and assign an ANCS to monitor the vacated (usual) frequency to notify late stations of the change.

D. NO NCS AT NET TIME

If a scheduled net does not start by 5 minutes after the scheduled net time, or if an emergency makes a net necessary at an unscheduled time, any NCS may step forward to start a net, as soon as possible.

Example: *[No net started at 5 minutes past the scheduled time]*

W4ABC: **"THIS IS WHISKEY 4 ALPHA BRAVO CHARLIE, IS THERE A NET CONTROL STATION ON FREQUENCY FOR THE [NET NAME], OVER."**

(Pause – If there is an NCS, he/she should answer – If No Answer)

W4ABC: **"THIS IS WHISKEY SIERRA 4 FOXTROT CHARLIE"**

(W4ABC assumes the NCS role and starts the net using the WS4FC call sign.)

E. ESTABLISHING A NET

1. Directed Net - Scheduled

The procedure necessary to establish a scheduled net is to simply call follow the written scrip at the designated day and time.

Example:

"Calling all radio amateurs. This is WS4FC (phonetics) calling the Forsyth County ARES Net..."

2. Limited Net Calls

In most cases there will be written scrip that will include Limited Net Calls such as "STATIONS HOTEL THROUGH NOVEMBER (A-G), OVER."

During special events and/or emergency situations when no written scripts are available and where there are a large number of stations anticipated to check in, the NCS should consider using Limited Net Calls.

Forsyth County Amateur Radio Emergency Services

Net Controller Standard Operating Procedures

3. Maintaining a Net Log

The NCS must maintain a net log or roster of the stations that have checked-in and note when stations leave. Note must also be made of stations listing traffic and sending or receiving traffic. The NCS should also log any other significant occurrences during the net, such as interference, propagation difficulties, etc..

F. SPECIAL SITUATIONS

1. Priority Traffic During Check-In

The question arises whether initial check-ins should be interrupted to pass priority traffic. This is a discretionary judgment for the NCS. If the traffic is known to be priority and a station that can take such traffic is already checked in, NCS may choose to interrupt check-ins to allow the traffic to be passed promptly. Often, though, even priority traffic is not so time sensitive that a few minutes will matter and it may be that a more capable station for passing the traffic has yet to check-in. The NCS makes the decision about what traffic is passed when.

2. Stations Partially Heard

When check-ins are occurring, sometimes stations are not heard clearly or completely. The NCS should simply acknowledge the stations that are heard and then repeat the call. The partially heard station will call again. This process will eventually capture all of the stations wishing to check in.

Alternatively, the NCS can acknowledge the stations that were heard and then ask, "Are there any RELAYS? OVER." Excess wording such as "There were several dual transmissions..." or "you got walked on..." add nothing and should be avoided. Also, if a weak signal is partially heard, the proper proword to call it is, "**UNKNOWN STATION, THIS IS WS4FC, SAY AGAIN, OVER.**"

Calling, "Weak station, THIS IS ..." does nothing. The station probably does not realize he/she is "weak." Use the proper proword.

3. General Net Call

Once all of the limited calls have been completed, NCS should make a general net call to capture any additional stations, which may be waiting to check in. General net calls should be made periodically during the net and after any periods when messages were being passed to check-in any additional stations that have been waiting.

Example:

"[*Net Designator*] (*phonetics*) **THIS IS** [*NCS call sign*] (*phonetics*) **additional stations for the net, OVER.**"

G. DIRECT NET BUSINESS

Once the net is established and all stations are checked-in and have listed their traffic, the next order of business should be to pass the traffic.

Forsyth County Amateur Radio Emergency Services

Net Controller Standard Operating Procedures

1. Handle Traffic According To its Precedence

The order in which traffic is to be handled is: Operational Immediate (O), Priority (P), Routine (R). While traffic is being passed, the NCS should, if able, copy the traffic in case he or she can assist with the passing of the traffic. The NCS should also stay alert for any traffic, which does not conform to ARES standards, and for any stations that may attempt to break in with higher precedence traffic. Traffic listed for a station on the net should be sent directly to that station. Traffic listed for other stations outside the local net should be passed to a station that can relay or deliver it, or the station listing it may hold the traffic.

2. Procedure For Directing Message Traffic

When traffic is listed and the NCS is aware of a potential taker of it, the NCS will, at an appropriate time, direct the sender to call the taker and send the traffic. The process for doing so should be substantially like this:

“WA4AAA call NB4BBB and SEND one ROUTINE, OUT.”

At times one location may have several pieces of traffic addressed to it. When this occurs the NCS may direct the sender to pass these consecutively to the same taker, if doing so will not take too much time. However, whether to do so is in the discretion of the NCS. In any case, the limit should be three (3) or fewer pieces at a time.

Consecutive messages should be avoided if the messages are particularly long or time consuming, especially if the net is otherwise busy. The NCS needs to make net calls occasionally to allow other stations into and out of the net. The NCS must maintain a balance of getting messages passed and permitting opportunities for stations to contact the NCS. In such cases, use of an alternative frequency should be considered.

3. Procedure For Routing Traffic To An Alternate Frequency

In a major event causing lots of traffic, it may become desirable to move stations off of the net frequency to pass traffic. The NCS must decide whether to do so. In making that decision, the NCS should consider other local repeaters or simplex (VHF/UHF) or HF if necessary, and send stations to either the two stations involved in passing the traffic to that frequency.

In either event, the decision should be made decisively with minimum discussion. The process for doing so would sound substantially like this:

“WA4AAA call NB4BBB move to [frequency] and SEND one [precedence]. Advise when you return to this frequency. OUT.”

NOTE: precedence could be ROUTINE/ PRIORITY/etc.. In such an event, the NCS should also assign an ANCS to go to the alternate frequency to assist, if needed.

4. Administrative and Informal Traffic

After formal traffic has been passed, other “informal traffic” may be allowed. The NCS must be careful to maintain net discipline at this time. All ARES transmissions must relate to ARES business. Chitchat and non-ARES communications should move to frequencies not currently being used by ARES and must be interrupted by the NCS. To interrupt, the NCS need only say, **“THIS IS [NCS call sign] OUT.”**

The stations so interrupted should understand their communication is terminated.

Forsyth County Amateur Radio Emergency Services

Net Controller Standard Operating Procedures

Some types of informal communications, however, are permitted, e.g., to discuss ARES business or technical data, as well as checks pertaining to ARES operations. NCSs must remain alert to interrupt informal communications which slip into improper subject areas, last too long, or which need to stop to permit higher precedence traffic to be passed. The NCS should simply say, "**THIS IS [NCS call sign] OUT.**"

The stations hearing this should realize that the frequency is no longer theirs.

5. "Dead Air"

NCS's should not feel anxious about "dead air" where nothing is being said. A quiet frequency that is available for immediate handling of traffic is a desirable thing. Also, silence is the ideal in transmissions security (TRANSEC). A listener who is trolling around during emergencies or other events might tune right over our frequency without realizing it, if the frequency is silent at the time. This may keep information that needs to be limited from the public domain during times of emergency operations. Therefore, maintaining a clear frequency is legitimate net business.

XII. TACTICAL NET OPERATIONS, PUBLIC SERVICE EVENTS

A. BACKGROUND

Amateur radio has a long standing tradition of providing support in events where the official sponsoring organization cannot provide all the communications required for adequate public safety. Competent service rendered by amateurs has proven valuable, and often essential, to public safety in these events by providing rapid alerting of officials when people need help. The FCC protects amateur radio from incursion by commercial and government interests by limiting our support to the public safety issues and those not related to "regular business affairs" of any party.

B. OTHER TACTICAL OPERATIONS

For the purpose of this manual tactical net operating is connected to public service events, although tactical nets can be run for any purpose. There are many other types of amateur nets that can be run in tactical fashion. Administrative nets for coordinating activities during disasters, social nets, swap nets, technical nets, etc. All such nets may be run in the same pattern as the formal traffic nets, but abbreviated or custom syntax may be substituted.

Experienced net operators will appreciate the basic structure of the "directed net" in all such activities. The role of the NCS is to help conduct the operation in an orderly fashion.

C. MISSION

The amateur mission in public service events is accomplished by providing communications for officials responsible for the event and public safety. As amateurs, we are not responsible for that safety. We facilitate the mission of officials who are, and can help by providing communications in depth over the full geographical area of the event.

Our mission is to communicate, not administrate, for the responsible officials. We are the telephone or FAX service between officials. Our job is to pass their information and emergency requests back and forth with speed and accuracy.

Forsyth County Amateur Radio Emergency Services Net Controller Standard Operating Procedures

D. PLANNING AND TEAMWORK

Working together to provide communications for this type event requires the support of planners, operators and equipment support people. Your ideas on how to do an effective job are valuable and most welcome during planning and operation. Thorough planning with the officials prior to the event is essential to effective operation and full and proper use of the amateur resources. The ARES EC or designee will coordinate with the event officials during planning and operations. When this kind of service is well planned with the officials, and well conducted by the operators, it provides a very rewarding opportunity to serve the public with our skills. If we operate effectively we set an example for other amateurs and other officials we might someday serve. Outsiders listening to our communications will judge Amateur Radio and our club or group based on what they hear.

E. TACTICAL vs. FCC CALL SIGN USE

Tactical call signs are generally used for efficiency while working public service events or emergency communication nets. During a directed net, you will be called by your tactical call sign, not your FCC amateur radio call sign. You should use the tactical call sign to identify your transmissions, and you should call other stations by their tactical call sign. However, you must also comply with FCC regulations and identify properly with your FCC call sign. Remember, part 97 requires that "Each amateur station . . . must transmit its assigned call sign . . . at the end of each communication, and at least every ten minutes during a communication . . ." That means our FCC call sign. To comply, simply add your FCC call sign to your last transmission in a series.

F. "BEST AMATEUR PRACTICES"

Participating operators should be familiar with "best amateur practices" reviewed in the following sections. The examples have been tailored to this type event, relative to those used in formal nets, in order to simplify them for tactical operations. These operating practices are presented as a guide and not intended to make our operations so formalized as to interfere with the friendly atmosphere characteristic of our service. Calm and confident operators can pass the typical information in these events without every word being scripted in advance. Using these practices will help maintain control and order and help assure that essential information gets through.

Perhaps a good way to demonstrate the tactical net is to present the operation in the setting of a typical public service event. The following section does that, showing basic syntax that may be used by the NCS and stations. Later sections deal with the questions of verbal versus written traffic and planning for such events, etc. Call signs shown are intended to be generic for example purposes only and not related to the holders of those call signs in any way.

G. TACTICAL NET PRACTICES, EVENT EXAMPLE

For the following examples and procedures, assume a public service event is to be held with a large public participation, such as a walk-a-thon. The officials have provided medical stations along the course with medical staffs to assist the public with problems. Amateurs are stationed at each medical station and at a key location where contact is maintained with public safety officials and the event officials (a fixed location in this example, but often event officials move about and require a shadow operator to follow along to maintain contact).

H. EXAMPLE EVENT STATION ASSIGNMENTS

The amateur stations are to use two meter portable or mobile equipment, a local repeater, and tactical call signs:

Forsyth County Amateur Radio Emergency Services

Net Controller Standard Operating Procedures

MED1: (The station at the public safety and event command post.)

SAG1, SAG2, SAG3, REST1, REST2: The stations on the course.

NCS: The net control station.

The NCS is at a central location free of the responsibility of serving anyone but the net business. The NCS is able to communicate with the stations directly on simplex as well as through the repeater system in use. Additional "home" stations may be used for simplex relay where the geography demands. A second operator at the NCS station is often helpful to handle off air jobs. Although simplex operation is possible here, and conserves spectrum use, the choice is yours based upon many other considerations such as HT and home station coverage, etc. A net station with a public safety agency mobile or field command post is an important provision for expediting emergency calls to public safety organizations. A home station standing by to make telephone calls to public safety agencies is also a wise precaution. This station may also back up the NCS and help relay when needed. Both are often used, the field command post usually being primary since they are usually in direct contact with police and fire resources on the course as well as with dispatch centers. Any number of variations of this format is possible. Each event will present a different configuration problem to be matched with communications providers. A rehearsal with a roving communicator to test the course for difficult communications areas is advisable.

I. CONFIRMATION

The station delivering the message should originate a priority message back to the official or station originating the request with information that an emergency response is in route, if possible, or at least that notification has been made. The station on scene should make note to check for such a response within a reasonable time, although it is difficult in some events to get feedback from busy public safety officials regarding the dispatch of the emergency response. As amateurs, however, we can inform the station on scene that the call was passed to those officials.

J. DOCUMENTATION

The station delivering an emergency message to public safety officials should do so in writing when possible. This may be done after the first verbal transmission to expedite the call (submit the written follow-up marked "handled"). All emergency calls should be logged by the sending station, receiving station, and NCS. Emergency message info should be held for the medical supervisor and/or event officials to be presented on demand. It is often necessary for those officials to report all the circumstances and response information for liability reasons and others.

K. TACTICAL DISPATCHING, ON AND OFF NET FREQUENCY

This dispatching is very similar to that used on formal traffic nets. Note that the first station addressed in the dispatch command acknowledges or calls first. The receiving station initiates the frequency check and calls the transmitting station off frequency. This understanding avoids confusing simultaneous transmissions possible on repeaters.

1. On Net Frequency

SAG 4: "NET CONTROL SAG 4, TRAFFIC FOR REST 2 OVER"

NCS: "SAG 4, CONTACT YOUR STATION OVER"

2. The Exchange

SAG 4: "REST 2 SAG 4...OVER"

REST 2: "REST 2 OVER"

Forsyth County Amateur Radio Emergency Services

Net Controller Standard Operating Procedures

SAG 4: (Conducts their traffic with REST 2 – Upon completion states) “SAG 4, N4ABC, OUT”

REST 2: “REST 2, KM4CCC, OUT”

NCS: “Net Control, WS4FC, OUT”

(Note: The NCS does not initially sign as they are considered part of the conversation. Once all stations have completed their traffic, the NCS then signs to clear the frequency for other stations.)

3. Multiple Station Calling - On Net Frequency

NCS: “SAG 1, SAG 3, REST 2”; and so on (Stations acknowledge in order called)

SAG 1: “SAG 1”

SAG 3: “SAG 3”

REST 2: “REST 2”

NCS: (Conducts their traffic then states “Over”)

SAG 1: “SAG 1 (comment or proword as appropriate) W4AAA, OUT”

SAG 3: “SAG 3, KK4BBB, OUT”

REST 2: “REST 2, NI4DDD, OUT”

NCS: “Net Control WS4FC, OUT”

4. Off Net Frequency

There are times when due to the volume of traffic, tempo of operations or privacy concerns that traffic may have to be passed on a frequency other than the formal net operations frequency. Having an alternate frequency for this purpose should always be in the event planning.

SAG 3: “SAG 3 traffic with MED 1, over”

NCS: “SAG 3, MED 1 switch to (frequency) for our traffic. Report when back, WS4FC, OUT”

SAG 3: “SAG 3 switching, W4XX, OUT”

MED 1: “MED 1 switching, N4EDF, OUT”

Off frequency the receiving station checks the frequency is clear, calls the sending station, and, after the traffic is passed, both stations sign their full amateur call signs before returning to net.

SAG 3: “SAG 3 on frequency, W4XX, OUT”

MED 1: “MED 1 on frequency, N4EDF, OUT”

NCS: “SAG 3, MED 1 roger, WS4FC, OUT”

5. Returning To Net, Job Completed

Stations returning to net after a successful exchange after being sent off frequency by the NCS, following any net transactions:

SAG 3: “SAG 3 on frequency, W4XX, OUT”

NCS: “SAG 3, roger, WS4FC, OUT”

MED 1: “MED 1 on frequency, N4EDF, OUT”

NCS: “MED 1, roger, WS4FC, OUT”

6. Reporting Back To Net, Job Not Completed

Stations returning after failure to make contact or complete their exchange, following any net transactions:

Forsyth County Amateur Radio Emergency Services Net Controller Standard Operating Procedures

SAG 3: "SAG 3 BACK, NO CONTACT, OVER"
NCS: "SAG 3 ROGER STAND-BY"
MED 1: "MED 1 BACK, NO CONTACT, OVER"
NCS: "MED 1 ROGER"; or

The NCS may immediately dispatch the business on the net

NCS: "MED 1 ROGER, CONTACT SAG 3, OVER"

(NOTE: The NCS may ask for advice, assign an alternative frequency, or arrange a relay for the communications – particularly for simplex and HF operations.)

Often missed contact is due to repeaters that are, or become, busy. It is helpful for the NCS to be able to monitor repeaters before delegating stations to alternate frequencies. If the dispatch was to a simplex frequency the transmitting station should notify the NCS that the calling receiving station could not be heard. Relays may then be quickly arranged, possibly through a "home" station.

7. Reporting Back to Net With Additional Requests

If returning stations have additional business with the net, they check back in as in:

REST1: "REST 1 BACK WITH (state type of traffic, immediate, priority, routine, administrative) TRAFFIC (state receiving station(s) unless NCS), OVER"
NCS: "REST 1 PASS YOUR TRAFFIC, OVER"

Stations pass traffic and identify as above in the section on Tactical Dispatching, On and Off Net Frequency, On Net Frequency, The Exchange.

L. STATIONS REQUESTING TO BE EXCUSED

It is expected that all stations checked into the net will remain on the net monitoring the NCS unless specifically excused.

1. Excusing From the Net

SAG 3: "SAG 3, OVER"
NCS: "SAG 3, OVER"

SAG 3: "REQUEST TO BE EXCUSED, OVER"

NCS: (Using SAG 3's FCC CALL SIGN) "W4XX [THANKS 73] YOU ARE EXCUSED, NET CONTROL WS4FC, OUT"

SAG 3: W4XX (Although optional, the use of the tactical call sign when signing out associates that call sign with the amateur licensee for monitoring purposes. If stations use their full call signs at the conclusion of net transactions the ID rules can be met throughout the net. The tactical call sign use then is little different than the use of suffixes in directed traffic nets.)

2. Temporary Excusing

SAG3: "SAG 3, OVER"
NCS: "SAG 3, OVER"

SAG3: "SAG 3 REQUEST TO LEAVE THE NET FOR (...) MINUTES OVER"
NCS: "MED 4 YOU ARE EXCUSED, NET CONTROL WS4FC, OUT"

Forsyth County Amateur Radio Emergency Services

Net Controller Standard Operating Procedures

SAG3: "SAG 3, W4XX, OUT"

W4XX would return with "NO TRAFFIC", or sometimes simply "W4XX SAG 3 BACK" to check back in implying no traffic, or would add "WITH TRAFFIC" if returning with additional business for the net.

M. NCS EXCUSING STATIONS

In public service events it is typical that the event officials will be consulted prior to excusing stations covering sites or tasks for the event. Other station serving at home or for strictly amateur radio purposes may be excused by the amateur incident commander. See the next section. When net business is concluded the NCS will call the stations remaining in the net and excuse them individually. In service situations typical of these events, it is better to be sure each station is checked out at the proper time than to assume that all operators will hear the net close.

1. Excusing Stations Individually

SAG 3: "REQUEST TO BE EXCUSED, OVER"

NCS: "SAG 3 THANK YOU 73 YOU ARE EXCUSED"

SAG 3: [SAG 3] 73 W3XX (Although optional, the use of the tactical call sign when signing out associates that call sign with the amateur licensee for monitoring purposes. If stations use their full call signs at the conclusion of net transactions the ID rules can be met throughout the net. The tactical call sign use then is little different than the use of suffixes in directed traffic nets.)

N. AUTHORITY FOR CLOSING STATIONS

Stations participating in the event should secure permission from the event officials before closing operations. This is normally done, or coordinated, by the net control station, and each station in the net is excused as the officials approve.

O. IDENTIFICATION PROCEDURES

The FCC rules for station identification are as follows (in applicable part as amended):

97.119 Station Identification.

(a) Each amateur station, except a space station or telecommand station, must transmit its assigned call sign on its transmitting channel at the end of each communication, and at least every 10 minutes during a communication, for the purpose of clearly making the source of the transmissions from the station known to those receiving the transmissions. No station may transmit unidentified communications or signals, or transmit as the station call sign, any call sign not authorized to the station.

Note that a "communication" in the rule means an exchange, or series of exchanges, between stations, and not each single transmission. When stations address the NCS with their tactical call sign, or the NCS calls stations with tactical call signs, these administrative exchanges set up a transaction between two stations. Stations ID with their full call signs at the end of those transactions on net or off frequency. (There is no need to use tactical calls off net.) This applies to words between stations, passing of formal traffic, etc. The syntax shown here is typical of that used on the "directed" traffic net specifically to provide for this ID arrangement. Stations use their full call sign when first checking into the net. Tactical call signs may be used thereafter for asking permission to transmit, or by the NCS to address stations. The tactical call signs in the examples are usually used for clarity and to help the net control keep an accurate record of requests and stations based on function. A roll call at intervals for ID purposes is not required if ID is done as shown. The net control should identify within the 10 minute limits, and should state the purpose of the net, pausing for additional check-ins as often as possible.

Forsyth County Amateur Radio Emergency Services

Net Controller Standard Operating Procedures

Avoid over-identification which wastes net time. You do not have to periodically identify if you are in a net and make no transmissions. Identify with full call sign when you check in, when you exchange traffic or words during the net or off frequency, and when you check out. It is customary that the tactical call sign and the station's call sign both be given in the transaction ending ID on the net to associate the two clearly.

Example:

NCS: "REST 2 CALL SAG 1, OVER" (dispatching pending business)

REST 2: "SAG 1 REST 2, OVER"

SAG 1: "SAG 1, OVER"

REST 2: "NEED MORE WATER AT THIS LOCATION PLEASE HAVE THE TRUCK STOP HERE NEXT, OVER"

SAG 1: "ROGER SAG 1, W2XX, OUT"

REST 2: "THANKS REST 2 W1XX, OUT"

NCS: "NET CONTROL, WS4FC OUT"

Obviously the NCS set up the communications using the tactical calls; therefore it is not mandatory to use both calls to meet the legal ID requirement. The amateur call sign should be last in the sequence if both are used.

P. REPEATER DELAYS

Remember that there may be a delay in repeater transmitter response time. Operate your push-to-talk switch and then PAUSE a second or two to allow the repeater to activate before talking. Failure to do so will cause the first part of your transmission to be cut off. The use of "this is... (pause with PTT release)... (call sign)..." by net stations may be used to avoid "doubling" with other stations, again keeping the delay in mind for both parts.

Q. TRANSMISSION SPEED, VOICING RULES

When sending a message or listing traffic, remember that the station on the other end trying to write it down is probably not a shorthand expert. Send slowly and clearly...it takes less time to do it right the first time than having to repeat. Experienced traffic handlers say a portion of text, pause while spelling it to themselves, and then continue as they visualize the receiving station has finished writing.

NOTE: Public safety dispatchers infrequently use phonetics or spelling for much of the traffic passed, but they do use phonetics or spelling for critical groups such as letters in tag numbers. For street names, etc., remember that even though they may have a computer aided dispatching computer system backing them up to catch errors, amateurs should strive to get incident addresses passed accurately.

Letter spelling may be used for critical words. Phonetics are not that often required on FM voice operations, but their use for abbreviations, initials, mixed groups, and proper names, etc., will prevent common mistakes. Use the appropriate introductory words for initials, figures, mixed groups, amateur calls, etc. In other words, using the proven techniques of traffic handling can and will help maintain the accuracy needed and avoid the errors of speech perception.

No matter how urgent the message, or how excited the operator might be, if the receiving station has to write down the request, it will get written only as fast as he can write it. If he is rushed, he may get it wrong, or not be able to read it a few minutes later. Contrary to the emotions of the moment, the fact is that the more urgent the message, the more slowly and carefully the message should be sent.

Forsyth County Amateur Radio Emergency Services Net Controller Standard Operating Procedures

SOMEONE'S LIFE MAY DEPEND ON YOUR ACCURACY IN COMMUNICATING

R. WRITTEN TRAFFIC vs. VERBAL TRAFFIC

This is a controversial subject. There are those who insist that written traffic has no place in tactical event net operations---that verbal communicating is perfectly satisfactory in all cases, and that written messages are for those "traffic handlers" among us. There are others who argue that ALL third party traffic must be written out.

Perhaps the best approach is to accept that a mix of the two is probably wise. These events can present situations where all forms of communicating are appropriate at different times. An important part of deciding which to use might consider the number of hands your message must pass through to get to the delivery point, and how busy the addressee's are likely to be. In many cases the message should be written out for the official's benefit, and in other cases for the benefit of the handling amateurs. In the latter case, for example, a complex message for an event coordinator might best be written out and passed to the shadow operator formally for verbal delivery when the official has a moment to listen. The opposite might be true for a message to a public safety official.

Giving the Police or Fire officials written incident message forms (ICS 213) will be well received. Many of these can be written out from verbal transmission, but some may be more complex. In such cases, the skills of the "traffic handler" are prerequisite for getting a complex message passed and delivered accurately.

Permitting officials to talk over your radio is the opposite extreme, and can be very helpful. Using verbal communications to direct logistics for participating amateurs is the norm.

Generally speaking, verbal communications often suffice when the officials are listening to our radios, or are standing next to our operators. When they are busy or distracted, common sense dictates when a written note would be the right way to pass information to them. The transmission on the air could be either verbal or written traffic. It is generally accepted that amateurs supporting such events are not, simply by participating, responsible for running or supervising the event itself. Certainly amateurs should not engage in yelling at each other demanding that event matters be resolved. The officials should interact among themselves to resolve event issues, using us as communicators to gather information and issue commands. We should coach them in the methods of creating clear messages and requests, and should make them aware of the limits of our service, the lack of radio privacy, and appropriate message content. Often we must translate the hurried request ourselves into a verbal or formal message that makes sense. The station interfacing with the official should be careful doing any such translating. "We communicate. We do not administrate." At least we avoid the latter unless we wish to take full responsibility and accept liability for our decisions and communications. What you do off the air is your business, but you still represent the amateur community. What you do on the air is subject to regulation and exposed to wide listening. Amateur Radio generally is present to help assure the safe conduct of these events. We serve the participating public.

S. PLANNING, PREPARATION, AND EXECUTION CHECKLIST

Proper planning and preparation for these type events cannot be overemphasized. The following checklist may contain a few items that could be helpful:

- 1) Meet with the event and public safety officials well in advance of the event. Help them to understand what amateur radio can do for them, what it is not permitted to do, and how to structure their plans to allow for the effective use of your resources. These officials will probably have to make extensive plans for their own people, and you want to have your part in the operations well known in those plans.

Forsyth County Amateur Radio Emergency Services Net Controller Standard Operating Procedures

- 2) Investigate the liability questions for amateurs exposed to risk in the event. Consider the liabilities that might extend to the operators and the event organizers resulting from communications problems.
- 3) Document the course, positions and responsibilities of officials, public safety provisions, and strategies required to perform the event. Document exactly to whom each type emergency or regular message is to be sent, and where those parties will be at all times, fixed or roving. Stay in close touch with the planners until event time. Adapt to last minute changes.
- 4) Use the official plans and course information to create a manning and radio operations plan.
- 5) Plan for sustaining communications with officials who are able to answer questions arising during the event.
- 6) Review the radio environment. Drive the course (for a day event, drive daytime in the higher solar noise; for a weekday event, drive a weekday in the higher commercial noise environment). Check the availability of your favorite hilltop to facilitate communications on the weekday or weekend as appropriate. Check if rain or snow might be a path problem. Check coverage for the type radios you will specify to be used during the event. Check out the intermod. Check out local desensing caused by close stations. Two 2 meter stations cannot usually operate at full capability closer than a few hundred feet or more depending on power levels. Some HT's are notoriously bad in this regard. Evaluate what equipment and antennas to specify for the operators. You may discover problems you never thought possible. The day of the event is no time for surprises.
- 7) Plan for backing up the primary radio coverage and net control. Assign an alternate net control. Look at direct simplex paths between all stations, if possible, to cover for loss of repeaters, NCS, or home stations. Consider using home stations for relay or phone calls, alternate repeaters (with permission), and other bands for backup. Check out your choices and make sure they work.
- 8) Solicit your required manpower. Be sure to allow plenty of time so that fellow amateurs may adjust or reserve their time for the event. Line up extra manpower to cover for last minute cancellations and no-shows. Plan for any required training. Help newcomers learn and gain confidence in what they will do during the event (or team them up with veteran operators).
- 9) Document and distribute the operation plan. Include maps and other aids to present the entire event situation as best you can. It is better to share all the info than to limit info to specific jobs. Include info on what, where, when, how... and how long. List needed equipment, antennas, personal supplies, clothing, food, fixed-portable-mobile-power requirements, etc., that exist for each operator or job. Specify the name, location, and time for meeting with officials for each assignment. Arrange for parking as required.
- 10) Meet with the officials and review your final plans with them before the event. Things have a way of changing without you learning about them. This is the time to make final adjustments. The officials will be encouraged to know that your part of the event is ready to go.
- 11) Arrange for media coverage and publicity if appropriate. Invite your ARES, RACES and NTS operators to participate, of course.
- 12) Arrange for the repeater(s) control operator(s) to be available to respond to equipment or other problems during the event.
- 13) Practice with your operators, as required, to prepare for the event. Help them check out their equipment to be certain it will do the job.
- 14) Run the event. Have experienced stations monitor and possibly record the operation for later review. Keep good NCS records and log emergency traffic.

Forsyth County Amateur Radio Emergency Services Net Controller Standard Operating Procedures

15) When the event is over, review the event with fellow participants. Get their assessment of the amateur radio and the official's performance.

16) Review the event with the served officials. Document improvements to be included in future events.

17) Share the experience information with other groups, ARES leadership, and prospective "customers". Report the activity to the SEC and SM for the monthly review of Section public service.

18) Follow up on media and other coverage of the amateur effort. Stories about amateur radio activity usually require consultant support.

Forsyth County Amateur Radio Emergency Services Net Controller Standard Operating Procedures

XIII. APPENDIX 1 PROWORDS

FULL LISTING OF ARES PROWORDS

ACKNOWLEDGE (ACK)	Addressee must send acknowledgement
AFFIRMATIVE	Yes
ALL AFTER	The part of the message I reference is everything after . . .
ALL BEFORE	The part of the message I reference is everything before . . .
ANSWER AFTER	Station called, when answering, answer after [call sign]
ASSUME CONTROL	Take control of the net until further notice
BREAK	Indicates the separations between the heading and the text and between the text and the end procedure.
CALL SIGN	The group that follows is a call sign
CORRECT	You are correct.
CORRECTION	a) An error has been made in this transmission. The transmission will continue with the last word correctly transmitted. b) An error has been made. The corrected version is . . . c) In response to your request for verification, the following is the corrected version. . .
DISREGARD THIS TRANSMISSION OUT	This transmission is in error. Disregard it
DO NOT ANSWER	Stations called are not to answer the call, receipt for the message, or make any transmission in response to this Transmission
FIGURES	Numerals, or a mixed group beginning with a numeral follow(s) . . .
FROM	The following is the originator of this message
I AM ASSUMING CONTROL	I am in control of this net until further notice
IMMEDIATE	The precedence is IMMEDIATE.
INFO	The following are INFO addressees INFO
I READ BACK . . .	This is my response to your READ BACK instruction . . .
I SAY AGAIN	I am repeating what I said . . .
I SPELL	The following are phonetic letters to spell the previous word or letter(s) beginning a group.
I VERIFY . . .	The following is my response to your request to VERIFY . . .
MESSAGE	A message that requires recording is about to follow
MINIMIZE	Reduce traffic and net activity to minimum.
MORE TO FOLLOW	The transmitting station has more messages for the receiving station
NEGATIVE	No
NO PLAY	During an exercise, "NO PLAY" indicates a message that is real, not part of the exercise.
NOTHING HEARD	No reply to my call was heard.
NUMBER	Station serial number of message.
OUT	End of transmission, no reply is expected.
OVER	End of my transmission. Go ahead with yours. Transmit.
PRIORITY	Precedence if PRIORITY. May be spoken 3 times to interrupt lower precedence traffic.
READ BACK	Repeat this entire transmission back to me exactly as you received it.
RELAY	Station called, transmit this message to all addressees unless fewer are specified.
RELAY TO . . .	Transmit this message to the station(s) following . . .
RELAY THROUGH	Relay your message through . . .
ROGER	I received your transmission satisfactorily.
ROUTINE	Precedence is ROUTINE.

Forsyth County Amateur Radio Emergency Services Net Controller Standard Operating Procedures

SAY AGAIN (. . .)	Repeat your last transmission. Repeat the portion of your transmission indicated.
SEND YOUR [MESSAGE]	I am ready to receive your [message].
SILENCE (THREE TIMES)	Cease transmitting until SILENCE IS LIFTED
SILENCE IS LIFTED	Normal communications may continue
SPEAK SLOWER	Reduce the speed of your transmission
THIS IS	The station transmitting is . . .
THIS IS A DIRECTED NET	Until further notice, this net is directed
THIS IS A FREE NET	Until further notice, the net is free
THROUGH ME	Relay your message through this station
TIME	The following is the date-time group of this message
TO	The following are the action addressees of this message
-- TO --	The part of the message to which I refer is from ___ TO ___.
UNKNOWN STATION	The ID of the station I am attempting to contact is unknown.
USE TACTICAL CALL SIGNS	Until further notice, use tactical call signs
USE FULL CALL SIGNS	Until further notice, use full call signs
VERIFY	Addressee requests you check with originator and send a corrected version
WAIT	I must pause a few seconds
WAIT OUT	I must pause more than a few seconds.
WILCO	I have received your instruction, understand it and will comply. (Not used with ROGER)
WORD AFTER	I refer to the word immediately following ___
WORD BEFORE	I refer to the word immediately before ___
WORDS TWICE	Due to poor conditions, send each phrase or code group twice.
WRONG	Your last transmission was wrong. The correct version is ____.

REMAINDER OF PAGE INTENTIONALLY LEFT BLANK

Forsyth County Amateur Radio Emergency Services Net Controller Standard Operating Procedures

XIV. APPENDIX 1 ARES NET SCRIPT

(REVISED 6/2/2017)

FORSYTH COUNTY ARES / RACES

NET CALL PROCEDURE

(Net to begin promptly at 8:30 p.m. local time each

_____evening.

) “Calling all radio amateurs.” This is WS4FC calling the Forsyth County ARES Net. My name is _____ and I am located _____. This is a directed net, and serves as the Amateur Radio Emergency Services net for Forsyth County, NC. All radio amateurs are invited to check in and participate in this net, and stations having emergency or priority traffic should break at any time.

(ALLOW REPEATER TO DROP)

This net meets every _____ evening at 8:30 p.m. on the K4GW repeater, frequency 147.315 MHz. In the event of a real or simulated failure of this repeater, net operations will shift to one of our backup W4NC repeaters, primary 147.470 Mhz or 146.640 MHz or secondary 444.275 MHz. The offset is positive for the K4GW repeater and negative for W4NC repeaters. All repeaters use a 100 Hz PL tone and serve the Winston Salem / Forsyth County area. In the event all repeaters should fail, net operations will shift to 146.520 MHz simplex.

All stations checking into the net should check in alphabetically according to the first letter in the suffix of your call sign. State THIS IS and temporarily unkey, then state your call sign using standard phonetics, followed by your name and any listings of announcements or traffic for the net.

(ALLOW REPEATER TO DROP)

Are there any ARES, ARRL representatives or county RACES stations for the Forsyth County ARES Net over.

Stations on Echolink over.

Mobile or portable stations over.

Fixed stations Alpha through Golf (A-G) over.

Stations Hotel through November (H-N) over.

This is WS4FC with the Forsyth County ARES Net, stations Oscar through Tango (O-T) over.

Stations Uniform through Zulu (U-Z) over.

Forsyth County Amateur Radio Emergency Services Net Controller Standard Operating Procedures

(BE SURE TO ACKNOWLEDGE CHECK-INS BY GROUP)

(Acknowledge each call sign in a group using alphanumeric call signs: I.E. "W 1 H R C, W A 4 N O T, roger. Out." Then move to next group.)

Additional stations for the Forsyth County ARES net Alpha through Zulu (A-Z) over.

(At this time handle any announcements or traffic for the net. Ask if there are any inquiries pertaining to the announcements.)

At this time we will hold our weekly ARES meeting. Will the Forsyth County EC or a representative call net control WS4FC.

[After ARES meeting, ask for any additional check-ins Alpha – Zulu. Once the meeting is completed, net control may close the net or proceed with an informal rag chew session with participating stations. This decision will be made at net controls discretion. If participating in rag chew, periodically ask for check-ins during the session.]

This is WS4FC closing this regularly scheduled session of the Forsyth County ARES net at _____ local time. Net control would like to thank all stations for participating and we would like to thank Forsyth Amateur Radio Club for the use of our primary and back-up repeaters. This is net control WS4FC saying good evening and returning the repeater to normal amateur use. 73's.

(NOTE: Full Phonetic call sign is only required for the FIRST use of the call sign. All following uses should use alphanumeric. Full Phonetic call sign is identified in the script by underline WS4FC.)

Forsyth County Amateur Radio Emergency Services Net Controller Standard Operating Procedures

XV. APPENDIX 2 SPECIAL EVENT NET SCRIPTS

(REVISED 6/2/2017)

FORSYTH COUNTY ARES /RACES

SPECIAL EVENT NETS

ROLL CALL PROCEDURE

This is WS4FC opening the [*Name of Net*] Net. This is a directed net for [*Name of Event*]. All stations should direct their traffic to NET CONTROL. All participating stations standby for roll call, over.

{Periodic Calls}

This is WS4FC for the [*Name of Net*] Net. All stations should direct their traffic to NET CONTROL, out.

{CLOSING}

This is WS4FC closing the [*Name of Net*] Net at ____local time. Net control would like to thank all stations for participating and we would like to thank Forsyth Amateur Radio Club for the use of our primary and back-up repeaters. This is net control WS4FC saying good evening and returning the repeater to normal amateur use. 73's.

RADIO CHECK-IN PROCEDURE

This is WS4FC opening the [*Name of Net*] Net. This is a directed net for [*Name of Event*]. All stations should direct their traffic to NET CONTROL, out.

(Note: Participating stations in this mode will perform a radio check with the NCS and hence be checked into the net. Example: WA4AAA - "Net Control this is WA4AAA radio check, over." NCS - "WA4AAA Loud and Clear, out.")

{Periodic Calls}

This is WS4FC for the [*Name of Net*] Net. All stations should direct their traffic to NET CONTROL, out.

{CLOSING}

This is WS4FC closing the [*Name of Net*] Net at ____local time. Net control would like to thank all stations for participating and we would like to thank Forsyth Amateur Radio Club for the use of our primary and back-up repeaters. This is net control WS4FC saying good evening and returning the repeater to normal amateur use. 73's.

Forsyth County Amateur Radio Emergency Services Net Controller Standard Operating Procedures

PAGE INTENTIONALLY LEFT BLANK