



Blue Ridge Amateur Radio Society (BRARS)



Net Control -101 **(Working in a directed net)**

25 March 2017
Greenville, SC



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The Directed (Formal) Net – Two Types In-Scope for Today

Tactical	“Club” or “Repeater”
Tactical call signs & tactical frequency ids	FCC-assigned call signs
No general conversation or “rag chew”	Conversation and “rag chew”
Public service events or emergencies	Regularly scheduled nets
Designated Net Control Station (NCS)	Designated Net Control Station (NCS)
NCS prioritizes & may handle multiple simultaneous stations with traffic	Usually “single thread” traffic
Clear, crisp, clean message traffic	Clear, crisp, clean message traffic
Higher volume of traffic & “intensity”	“Lower” volume of traffic and “intensity”
Separate logger recommended	Separate logger an option



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Preparing for the Net Control Role

- Ensure equipment is “ready” (radio, antenna, feed line, power, laptop)
- Radio traffic recording equipment (optional but very helpful)
- Back up equipment and supplies
- Seat and table surface
- Note taking / logging materials
- Preamble (net script)
- Critical contact information (tactical net)
- Authorized stations & freqs. list from convening authority (tactical net)
- Map of the in-scope area (tactical net)
- Food and sleeping materials (tactical net)
- **Plenty of SLEEP, a CLEAR HEAD, and a CAN DO ATTITUDE**



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Changes Coming for Tactical Net Control

- Following the events of 11 September 2001 things have changed
- New requirements are not entirely implemented...but that is coming
- Emergency management agencies, first responders, and some SECs (ARES) require the following FEMA NIMS ICS courses:
 - IS-100b Introduction to Incident Command System, ICS-100
 - IS-200b ICS for Single Resources and Initial Action Incidents
 - IS-700a National Incident Management System (NIMS) An Introduction
 - IS-800b National Response Framework, An Introduction
- To take these courses you must register for a FEMA Student ID (SID) at:
<https://cdp.dhs.gov/femasid/register>
- Will be helpful as ARES affiliation and migration to AUXCOMM occurs
[AUXCOMM Link](#)
- It is a good idea to take these courses...there is no cost to you



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The Net Control Station (NCS)...Functions

- Opens and closes net as required
- Checks in and releases stations
- Prioritizes and controls message traffic
- Maintains net discipline
- Move message traffic efficiently (our goal)
- Actively maintains location of “mobile” stations (tactical net)
- Calls for a status check for all stations (tactical net)
- Requires stations to have permission prior to speaking
- Logs message traffic for record (or has a logger working in tandem)
- Transitions responsibilities to next “shift” (tactical net)



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The Net Control Station (NCS) – Traffic Nuances

• **Priority or Emergency Traffic**

- Net Control states - “All stations stand by”
- Gives calling station go ahead for traffic
- When traffic received...immediately contact designated message recipient by most direct means

• ***“Go Direct”***

- Net Control may authorize direct contact between stations
- Traffic level & nature of message drive authorizing “direct” contact
- Net control will reply to calling station with “Go Direct with...”

• ***“Contact station X on alternate frequency Y”***

- Used in response to station indicating large message to pass
- Moves long contact to other frequency, keeps main frequency open
- Use designated frequency ID – not frequency value
- Instruct stations to return to main frequency when traffic passed



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The Preamble – The Net Controller’s “Script”

Tactical	“Club” or “Repeater”
Tells listeners and participants “what is going on”	Tells listeners and participants “what is going on”
Diverts non-net traffic away from the active frequency	Governs the “order” of events during the net
Is repeated at regular intervals during the term of the net (about 15 – 20 mins)	Is “read” through and used during the term of the net (used as a guide)
Addresses the priority of the net traffic over routine traffic	



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Blue Ridge Two Meter Net Script and Net Control Points

- Two parts to the net: formal and informal
 - Formal portion for check ins, announcements, formal traffic **only**
 - Informal portion for rag chew, informal (direct) contacts & etc.
- Formal portion procedures
 - Introduction: Net purpose, meeting times, location & etc.
 - Acceptance of formal traffic, announcements or bulletins
 - Echo Link is always the first check in group, unless Echo Link is down
 - Over the air alphabetical groups...starting group differs by day
 - Ask for check ins by alphabetical group
 - At a pause point, acknowledge all stations that have checked in
 - Call for that groups check ins a second time
 - At the next pause point, acknowledge all stations that have checked in
 - Proceed to next alphabetical group



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Blue Ridge Two Meter Net Script and Net Control Points

Informal portion procedures

- Rag chew
- Additional comments related to rag chew
- Informals / directs between two stations
- Remember **you** control what goes on...keep things clean and tidy
- We will discuss “problem” exchanges shortly

Net Close Out

- Ask for additional check ins or comments (rag chewers)
- Nothing else...give net manager the net report
- Close and return the repeater to normal amateur use



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Net “Participants”

- Know how a net is run
 - Have active current knowledge in net procedures
- Arrive and be “ready to go” prior to designated reporting time
- Check in with NCS when on station and ready
- Contact and respond to NCS only
 - Actively listen – respond promptly
 - NCS may authorize “go direct” as necessary
- Only pass message traffic when necessary
- Request authorization from NCS before leaving the net or taking a break
- Stand down only when released by NCS



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Network Traffic

- Network traffic intended to convey:
 - Information
 - Status
 - Requests
- Exchanges are “efficient”
 - Accuracy + Brevity = Clarity
 - Use of correct phonetics
 - Use of pro-words, not jargon, no 10-codes, no “Q” codes
- Although we are not professionals...we must strive for professionalism



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The “Exchange” (Tactical Net)

- There are three essential parts to the exchange
 1. Station ID being called
 2. Your tactical station ID (or call sign if not checked into the net)
 3. Direction (by NCS) or information, request, or question

Example:

1.	2.	3.
Net Control	Shelter Two	Updated shelter status
Shelter Two	Net Control	Ready to copy your status information
Net Control	Shelter Two	We are ready to receive additional persons

The goals: effective and clear information transfer



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The “Problem” or “What’s Going On” Exchanges

The Problem Exchange

- At some point there will be extraneous or disruptive traffic
- Your objective: mitigate the situation as quickly as you can
 - **Do not** under any circumstances be combative
 - Suggest to the disruptive station they change frequencies
 - Provide your “supervisors” contact information for them to call
 - When necessary change frequencies using tactical frequency IDs
 - Let them “run out of steam”
- “Thinking on your feet” and being “nimble” are critical
- If you can obtain a name, call sign, or other information capture it

The “What’s Going On” Exchange

- Answer the question as quickly and clearly as you can



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Network Do's and Don'ts

Do's

- 1 Speak clearly
- 2 **Listen** before transmitting
- 3 Interrupt only for priority or emergency traffic
- 4 Use plain language
- 5 Use short simple phrases
- 6 Acknowledge transmissions to you
- 7 Use communication plan frequency ID
- 8 Refrain from transmitting names
- 9 Refrain from passing med status info

Don'ts

- 1 Rush or speak unintelligibly
- 2 Immediately transmit following last caller
- 3 Interrupt for routine or health and welfare traffic
- 4 Use "Q" codes, 10 codes or jargon
- 5 Use long rambling phrases / sentences
- 6 Receive without acknowledgement
- 7 Broadcast "plain" frequencies
- 8 Broadcast individual's names
- 9 Broadcast medical status info (HIPAA)



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Prowords

- Expedites traffic with minimal errors
- The Basic Four
 - “This Is” – Always use to identify your station
 - “Over” – Transmission is complete & waiting and expect your reply
 - “Go Ahead” – Proceed with your traffic
 - “Out” – Transmission finished...no reply expected
- “Roger” = OK
- “Confirm” – Acknowledges traffic sent
- “Affirmative” – Instead of “Yes”
- “Negative” – Instead of “No”
- “Say Again” – Say your traffic again
- “Say Again All After” – Say your traffic again after the word....
- “Correction” – Transmitting traffic again after the last correct word



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Phonetics

- Use standard phonetics

A - Alpha

B - Bravo

C - Charlie

D - Delta

E - Echo

F - Foxtrot

G - Golf

H - Hotel

I - India

J - Juliet

K - Kilo

L - Lima

M - Mike

N - November

O - Oscar

P - Papa

Q - Quebec

R - Romeo

S - Sierra

T - Tango

U - Uniform

V - Victor

W - Whiskey

X - X-ray

Y - Yankee

Z - Zulu



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Numbers

- *In noisy environments or poor signal conditions, numbers pronunciation must be exaggerated to be heard*

- *Recommended “exaggerated” pronunciations:*

1=“Wun” 2=“Too” 3=“Tree”

4=“Fower” 5=“Fife” 6=“Siks”

7=“Sevven” 8=“Ate” 9=“Niner”

0 =“Zearow”

- *Never say “O” (Oscar) when the number Zero is intended*



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Message Handling

- Has been traditionally done by the National Traffic System / nets
- Based on ARRL standard and established message format
- Following 11 Sep 2001 attacks on New York emergency message handling is undergoing a change
- Current means of emergency message handling will be superseded by a new standards protocol
- ICS message formats will become the standard for emergency message handling
- Health and Welfare traffic nets may still use ARRL messages and formats in support of served agencies



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Message Handling



THE AMERICAN RADIO RELAY LEAGUE
RADIOGRAM
 VIA AMATEUR RADIO



NUMBER	PRECEDENCE	HX	STATION OF ORIGIN	CHECK	PLACE OF ORIGIN	TIME FILED	DATE
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TO

THIS RADIO MESSAGE WAS RECEIVED AT

AMATEUR STATION _____ PHONE _____

NAME _____

STREET ADDRESS _____

CITY, STATE, ZIP _____

TELEPHONE NUMBER

FROM	DATE	TIME	TO	DATE	TIME
REC'D			SENT		

THIS MESSAGE WAS HANDLED FREE OF CHARGE BY A LICENSED AMATEUR RADIO OPERATOR, WHOSE ADDRESS IS SHOWN IN THE BOX AT RIGHT ABOVE. AS SUCH MESSAGES ARE HANDLED SOLELY FOR THE PLEASURE OF OPERATING, NO COMPENSATION CAN BE ACCEPTED BY A "HAM" OPERATOR. A RETURN MESSAGE MAY BE FILED WITH THE "HAM" DELIVERING THIS MESSAGE TO YOU. FURTHER INFORMATION ON AMATEUR RADIO MAY BE OBTAINED FROM ARRL HEADQUARTERS, 225 MAIN STREET, NEWINGTON, CT 06111

THE AMERICAN RADIO RELAY LEAGUE, INC. IS THE NATIONAL MEMBERSHIP SOCIETY OF LICENSED RADIO AMATEURS AND THE PUBLISHER OF QST MAGAZINE. ONE OF ITS FUNCTIONS IS PROMOTION OF PUBLIC SERVICE COMMUNICATION AMONG AMATEUR OPERATORS. TO THAT END, THE LEAGUE HAS ORGANIZED THE NATIONAL TRAFFIC SYSTEM FOR DAILY NATIONWIDE MESSAGE HANDLING.

[ARRL Message Form Instructions](#)



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Message Handling


ICS-213 report file: new.213

Originator: Responder

To: Pos.

Fm: Pos.

Sub.

Message: Date  ... Time ...

Sig. Pos.



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Your Questions?