



PRINCIPLES OF AMATEUR RADIO NET CONTROL

Good operators are made, not born!

What is an Amateur Radio Net?

- ❖ An **Amateur Radio Net** exists whenever 3 or more operators are in simultaneous contact with each other for the purpose of exchanging information or passing informal or official traffic.

Types of Nets

- **Open Net** – Stations call each other directly to pass traffic
- **Directed Net** – Stations call only net control directly, go direct to other stations only with net control permission

Net Control Operator

- The most essential part of any emergency net is the character and skill of the net control operator (NCO)
- The NCO coordinates all net activity and shapes the efficiency (or inefficiency) of the net operation

SCCo Emergency Nets

- **Command Net** – Official traffic between OpArea command staff and between EOCs
- **Message Net** – Official traffic on behalf of served agencies
- **Resource Net** – Unofficial information and volunteer contacts
- **Tactical Net** – Unofficial and official traffic of a local nature
- **Hospital Net** – Official traffic with Dept. of Public Health

Net Control Operator...

- ...must have a commanding signal
- ...is in charge of the net
- ...activates and assigns resources
- ...keeps track of resources
- ...assigns tactical calls
- ...keeps a good log

Net Control Operator...

- ...has a clear speaking voice
- ...controls his or her tone of voice
- ...has good command of the English language
- ...can handle physical and mental stress for long periods
- ...can listen and respond in a noisy/chaotic environment
- ...has good hearing
- ...writes legibly

Net Control Operator...

- ...enforces net discipline (in a nice way)
- ...uses tactical calls
- ...uses plain English – no “10” codes or “Q” signals
- ...uses standard phonetics
- ...performs welfare checks
- ...thinks before keying

Net Control Operator...

- ...is as concise as possible
- ...knows how to operate the radio
- ...frequently identifies name and reason for the net
- ...transmits only facts, not conjecture
- ...takes frequent breaks

Useful Info for NCOs

- Control Phrases
- Prowords
- Phonetics
- Numbers
- Break Tags

Control Phrases

- “All stations standby” or “All stations hold your traffic”
- “Pass messages no faster than you can write them”
- “Pass messages in five word groups”
- “Use phonetics when spelling”

Voice Net Prowords

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

Msg. Handling Prowords

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

Phonetic Alphabet

A - Alfa (AL-fa)	N - November (no-VEM-ber)
B - Bravo (BRAH-voh)	O - Oscar (OSS-cah)
C - Charlie (CHAR-lee)	P - Papa (PAH-PAH)
D - Delta (DELL-tah)	Q - Quebec (kay-BEC)
E - Echo (ECH-oh)	R - Romeo (ROW-me-oh)
F - Foxtrot (FOKS-trot)	S - Sierra (SEE-air-rah)
G - Golf (GOLF)	T - Tango (TANG-go)
H - Hotel (HOH-tel)	U - Uniform (YOU-ni-form)
I - India (IN-dee-ah)	V - Victor (VIK-tor)
J - Juliet (Ju-lee-ett)	W - Whiskey (WISS-key)
K - Kilo (KEY-loh)	X - X-Ray (ECKS-ray)
L - Lima (LEE-mah)	Y - Yankee (YANG-key)
M - Mike (MIKE)	Z - Zulu (ZOO-loo)

Number Pronunciation

- 1 - one (Wun)
- 2 - two (TOOO)
- 3 - three (THUH-ree)
- 4 - four (FOH-wer)
- 5 - five (FY-ive)
- 6 - six (Sicks)
- 7 - seven (SEV-in)
- 8 - eight (Ate)
- 9 - nine (NINE-er)
- 0 - zero (ZEE-row)*

***Zero is never “oh”**

Numbers are always pronounced individually

Decimal point is never “dot”

Break Tags

- “Answer”
- “Question”
- “Info”
- “Priority”
- “Medical”
- “Emergency”
- “Relay”
- “Break”
- and your call sign

Some Rules of Directed Nets

- State the existence and purpose of the net and your call sign at least every 10 minutes (5 minutes is better)
- Emergency traffic always trumps the net
- Insist that all net traffic go through net control
- Allow non-net traffic during breaks in net traffic
- Just because you have a net does not mean you own the frequency

Crowded Nets

- Call by suffix groups or precedence
 - ◆ “A thru E”, “Immediate”, “Priority”, “Routine”
- Doubles
 - ◆ Try to pick up at least one letter of the call sign—transmit “SAY AGAIN ...”
- Relays
 - ◆ Ask if anyone else can hear the station
 - ◆ If you can hear a station that net control does not, offer a “RELAY”

LOGS & FORMS

- ICS-211a: Checkin List
- ICS-214-MTV: Unit Log
- ICS-309-MTV: Comm. Log
- ICS-213-MTV: Message Form
- PD-213: Incident Report
- Mike-Mike Summary

AMATEUR RADIO NET CONTROL

- Practice, Practice, Practice!!
- Listen to the pros—MVFD 154.025
- Be the best that you can be!!
- Strive to sound professional!!

Who is NCO After the Earthquake??

It could be you!!

- Come up on 145.270 repeater
- Listen for active stations
- Announce that you are organizing a net to collect damage information
- Inform that you have no ability to dispatch help
- Take Mike-Mike reports of damage until relieved

Post-Earthquake Damage Reports (Mercalli Scale)

- SCCO ARES/RACES “MIKE-MIKE” SCALE
 - ◆ Mike-Mike 1 – Not felt at all
 - ◆ Mike-Mike 2 – Barely noticed
 - ◆ Mike-Mike 3 – Know it was an earthquake somewhere
 - ◆ Mike-Mike 4 – Windows, dishes rattle
 - ◆ Mike-Mike 5 – Pictures move, doors swing, small items on floor
 - ◆ Mike-Mike 6 – Glassware broken, books off shelf, floor lamps topple
 - ◆ Mike-Mike 7 – Furniture broken, cannot stand, chimneys fall
 - ◆ Mike-Mike 8 – Buildings collapse
- Typical Response to Call for Damages by Net Control:
 - ◆ “This is KF6ZSQ, Winfield & Preston, Mike-Mike 4 ”

What Frequencies Do We Use?

- 145.270 (R) – North County Resource
- 146.115 (R) – Main County Resource
- 146.535 (S) – MTV Primary Tactical
- 146.415 (S) – MTV Secondary Tac.
- 440.800 (R) – MTV Command
- 145.230 (R) – Hospital Net
- 444.625(R) – South County Rsrce.

Wrap-Up

- Questions/Discussion
- Personal Experiences
- Exercise

Exercise

- Fan out around the building with your HT and writing materials
- Leader will appoint a Ham to be “Exercise Net Control Operator”
- New Net Control will announce as net control of a controlled net for exercise purposes
- Exercise NCO takes check-ins for the net
- NCO rotates to other operators as directed by Instructor