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Net Control Type III

Class Presentation for Part A

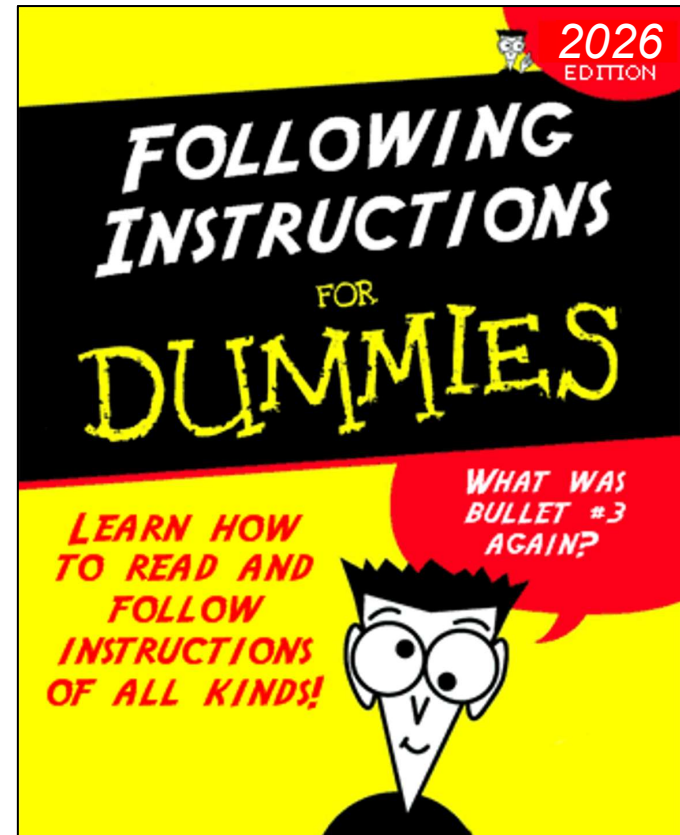


Santa Clara County ARES®/RACES

Last Updated: 01-March-2026

Housekeeping

- Introductions
- Pen/pencil & paper
- Cell phones on silent or vibrate
- Side conversations
- Questions
- Breaks
- Restrooms
- In case of emergency
- No wandering around the building



Remember This?



Lots of talking ...
NO Communication!

Our Goal(s) as Operators:

- Minimize:
 - Number of words said
 - Time spent on the air
 - Repetition
- Maximize:
 - Accuracy
 - Information throughput
 - Efficiency
- Example: If this were an SCCo ARES/RACES exchange:
 - Abbott: Who is on First, What is on Second, I Don't Know is on Third
 - Costello: Roger
 - Abbott might have used the "I Spell" ProWord for proper names

What does it take to be a great Net Control Operator?

- You need to be a great communicator,
 - com·mu·ni·cate: to transmit information, thought, or feeling so that it is satisfactorily received or understood
- A great NC operator is able to communicate precisely,
 - pre·cise·ly: 1. in a precise manner 2. exactly
- Following a shared, standard procedure, that EVERYONE is trained to use!
- How do we do that?

Practice!!!

- Net Control for your city nets
- Net Control for SPECS or SVECS Nets
- Net Control at a drill, exercise, or public service event
- Being an NCO in the County EOC radio room for a Quarterly City/County drill (normally requires an N3 Credential)

Learning Objectives



At the end of this class, you should be able to:

- Describe the Net Control Type III credential (qualification)
- Describe the purpose and usage of each of the main Santa Clara County nets
- Describe the key attributes of a net control operator
- Perform proper record keeping and logging
- Create your own pre-operation checklist
- Properly start up a net
- Properly collect damage reports
- Properly hand off damage report summaries
- Describe general procedures to properly run a net

Agenda: Net Control Classes

Net Control Type III, Part A

- Net Control III credential
- Santa Clara County Nets
- NCO Attributes and techniques
- Record keeping and logging
- Starting a Net
- Handling damage reports
- Operating a Net

Net Control Type III, Part B

- Dealing with challenges
- Working with a scribe
- Resource Tracking
- Resource Net for an Event
- Handing off a Net
- Closing a Net

Net Control Type II: Advanced techniques, such as faster, higher efficiency operations, equipment for net controls, county Message Net operations, county EOC operations, and working two nets at once



Net Control Type III Credential

- Capabilities and services offered
 - Fully independent operator
 - Capable of basic net control assignments without assistance or coaching
 - Net control operator for low to medium traffic nets
 - Scribe for low to medium traffic nets
 - Equipment: SCCo Go Kit (includes HT, batteries, coax/pwr adapters)
 - Ambassador to the public for SCCo ham radio emergency communications
- Typical Assignments
 - Resource Net Level 1, immediately after incident
 - Resource net for smaller drills and public service events
 - Small to medium city and tactical nets
 - County Command Net NCO
 - Small staging area net control
 - Drills and public service events

Thank you for working towards a Type III credential!!

- Obtaining any Type III credential (F3, N3, P3, S3) is a nice step
 - You have gone through at least one evaluation consideration process
 - You are an Independent Operator
 - You have demonstrated your capability and performance for the resource type based on SCCo RACES program standards
 - SCCo, your EC, and you have confidence that you can provide dependable and reliable communication services to a served agency in benefit to the public for real and public service events.

It doesn't stop with this training or with earning a credential

- Please practice when you can on your own, drills, exercises, practices, etc.
- Please keep your go-kit updated (everything working, batteries charged, etc.)
 - Verify preparation and that everything is working before arriving at your assignment
- You are responsible for staying current with SCCo documentation (frequency lists, docs, training material, forms, etc.) Changes announced on Groups.io *Announce List*
- Keep your profile contact information up-to-date (i.e., phone and email) you must be reachable
- Please print your wallet card before it expires (Jan 31st). Print it again after you obtain any new credential or endorsement
- Consider setting up periodic (e.g., 30-day and/or 90-day) preparation readiness and practice checklists

Our Example Operator: Herman Munster

- “The Munsters” was a TV show in the mid-1960s
- Herman was the father, played by Fred Gwynne
- Herman was an amateur radio operator ...



Santa Clara County Voice Net Review

Net Name	Questions about each net
Resource Net Level 1 - Information Gathering	Open or directed?
Resource Net Level 2 - City Check-Ins/referral	When and who starts?
Resource Net Level 3 - Coord of Mutual Aid	How busy expected to be?
Message Net	Operator level expected?
Command Net	Who are the participants?
Hospital Net	Type of message traffic?
EOC-to-EOC Net	
SHARES HF Net	
Other Tactical voice nets?	

Studies on the forgetting curve reveal that **learners forget about 50% of new information within one hour**, **70% within 24 hours**, and up to **90% within a week**.

<https://beardedskptic.com/learning/learning-retention-statistics/>

<https://gitnux.org/learning-retention-statistics/>

How Are ARES/RACES Nets Different?

Characteristics	Typical Ham Nets	ARES/RACES Nets
Content / Topic	General; whatever we want	Specific; whatever the served agency wants
Order	Round-robin	By message priority (handling)
Speak	When it's your turn	Only when necessary
Say	As much as you want	As little as possible
Tone	Friendly (usually!)	Professional
Use	Q-codes: "QSL, QRT, ..." "73", "88", ... Abbreviations: OM, YL, ... DX phonetics: Norway, Mexico	Plain English Pre-defined prowords ITU phonetics Shared procedures.
Speed / length	As long as it takes	As brief / quick as possible
Documentation	None, unless within a contest	Everything (check-ins, messages, acknowledgements, check-outs, other)



The Net Control Operator

KEY PERSONAL ATTRIBUTES

The Net Control Operator



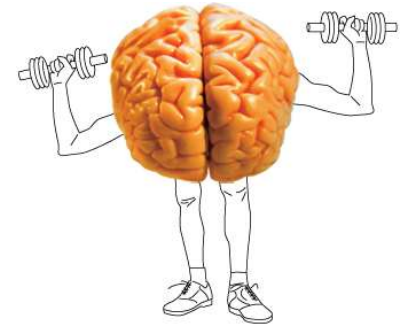
- The most essential part of any emergency net is the attitude and skill of the net control operator (NCO)
- The NCO coordinates all net activity and shapes the efficiency (or inefficiency) of the net operation
- The NCO sets the standard for all others on the net
 - Other operators will pattern their behavior after the NCO
 - Be a great Message Passer
- Who becomes the NCO?
 - The role may be assigned in advance; e.g. by Unit Leader/Super.
 - For spontaneous incidents, often the first station on the air
 - The role may be handed off from one station to another

Station Quality & Preparation



- Must have a clean and commanding signal
 - Antenna height & gain, RF power, audio quality
- Must have reliable power
 - AC, battery, generator/solar, station grounding, emergency lighting, fuses
- Properly equipped
 - Radio manuals!
 - Headset (stereo), footswitch, forms, maps, procedures, frequency lists, telephone numbers, notepads, pens, ...
- Prior planning and configuration
 - Radio memories, modes, menus, configurations, cabling, labels
- Solid radio operations knowledge
 - Frequency changes, multiple frequencies, duplex/simplex/tones

Personal and Mental Fitness



- Can handle physical and mental stress for long periods
 - Physical and mental fitness are essential
 - Self manages stress and fatigue – takes breaks as needed
- Can listen and respond in a noisy/chaotic environment
 - Net in one ear, EOC discussions in the other
 - Different net in each ear (stereo headphones, one ear per VFO)
 - Frequent interruptions, distractions
- Must have a clear voice and good hearing
 - Speak clearly, enunciate properly, ...
 - Copy message traffic in difficult or noisy situations
 - Copy call signs quickly and accurately
- Attention to detail is critical

Operating Technique: Verbal Communications

- Maintain a clear speaking voice
- Control tone of voice, even under stress
- Have a good command of the English language
- Use plain English, no 10-codes, no Q-codes, etc.
- Know message passing Prowords and procedures by heart
- Know your net before you start
 - Stick to the prepared scripts for the net
 - Stick to the business of the net
- Important: be clear and concise when giving instructions !!!
 - E.g. Mike-Mike report instructions
- During a drill, appropriately identifies “This is drill traffic”.
- ID frequently and remind others to do the same



Operating Technique: Radio Technique

- Make only necessary transmissions
- Use procedures and techniques to reduce number of transmissions
- Press PTT, then pause before speaking; allow repeater to key up
 - If repeaters are linked, leaves longer pause, advises others on pauses
- Use a minimum of words to convey an informal message; proper prowords
 - Be a "FAX machine" for 3rd party messages and forms
- Drop PTT when not speaking; avoid open mic or dead air
- Remind operators to close with their FCC call-sign, as needed
- Train yourself to allow sufficient gaps between transmissions !!!
 - For other stations to break in with other or higher priority traffic
 - For other stations that may have problems reaching the repeater
 - E.g., checking in or out of the resource tracking net
 - For primary users to use the resource

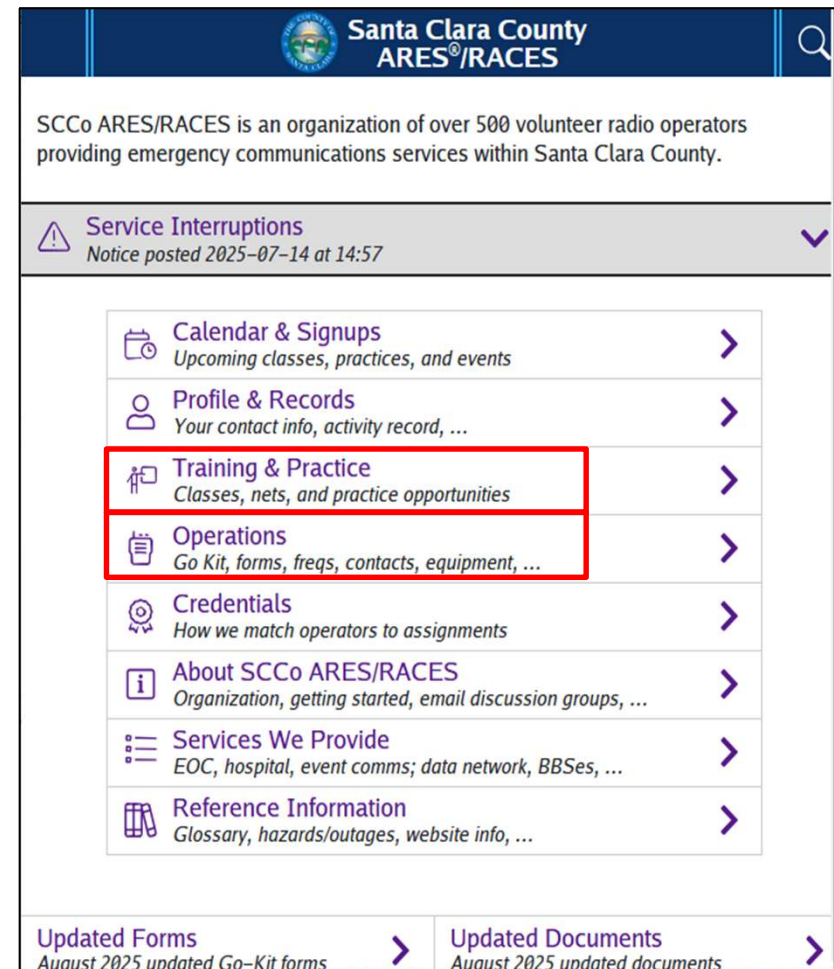


Develop & Maintain Proficiency

- Being a high-quality operator isn't hard, but it takes practice
- Developing and maintaining proficiency is a personal responsibility
- Recommended activities:
 - Practice logging on any/all nets you listen to
 - Be ready to fill in if Net Control needs a break, has equipment failure, ...
 - Message Passing Class is essential for voice Net Control Operators
 - And Practice, Practice, Practice (procedures and Prowords):
 - Weekly SPECS, SVECS and City Nets
 - Quarterly drills; public service events
 - County-wide Communications Drills
 - Work on additional credential levels
 - The experience you gain makes you a better operator

Stay Current, Stay Informed

- Visit the County web site often
- Check the Announcement space
- Check the Operations page
 - Contact Info, Forms, Frequency Lists, Go Kit Lists, Standards and Procedures, ... and more
 - Read the whole page
- Check Training and Events
 - Check for updates (often)
- Take personal responsibility for keeping yourself, your equipment, and your Contact Information up to date
 - Current phone number(s); needed for resource tracking and AlertSCC
 - Make a habit (calendar event) to check at least once each year.



<https://www.scc-ares-races.org>

Summary: what else does it take to be a great Net Control Operator? (Hint: another “p” word)

- **Patience**
 - With yourself
 - With your equipment & your preparation
 - With those around you
 - With any “course correction” advice received from the Net Manager
 - With the other operators on the net
 - With knowing what you are going to say before pushing PTT (includes prowords)
 - With speaking after pushing PTT on a linked repeater system -- pause
 - With pushing PTT after someone else’s transmission ends
 - Resource Net → leave longer gaps !!!
- **And yes, patience also takes practice**



Tracking Activities, Resources and Message Traffic

RECORD KEEPING AND LOGGING

Logging and Record Keeping Review

- Everyone fills out an ICS-214 Unit Activity Log (ICS 214-SCCo)
 - Start it when you get your assignment (before you leave home)
- Everyone signs in/out on an ICS-211A Communications Check-in (ICS 211-SCCo)
- Everyone except Shadows fills out an ICS-309 Communication Log (ICS 309-SCCo)
 - Does not replace the need to maintain a 214 Unit Activity Log
- Must be legible or its useless!
- Must be complete and accurate
 - Post analysis may need to reconstruct event flow and information
- Hand in your logs, notes, etc., at the end of your shift as instructed (including your ICS-214)

ICS-214 – Unit Activity Log Review

- Our version: ICS 214-SCCo
- A record of all major activities and events
- EVERYONE fills out a 214
 - Individuals: a unit of one
 - Teams: Team leader
 - Start when you get assignment (home)
- Shadows only: log message traffic on the 214, no 309 required.
- Use multiple pages if necessary
- Instructions on back
- Reminder: signature required
- Self-paced video:
<https://www.scc-ares-races.org/training/core>

[illegible]

<https://www.scc-ares-races.org/operations/forms/go-kit>

Homework Assignments Review

NET CONTROL TYPE III

Assignment 1: ICS-214 exercise

ICS-309 – Communications Log

- Our version: ICS 309-SCCo
- Net Control Operators and all stations (except shadows)
- Columns help organize key message tracking info
- Does not replace 214
 - EVERYONE fills out a 214
- Instructions on back
- Reminder: signature required
- 2-part self paced video at:
www.scc-ares-races.org/training/core/
- Part 2 is for Net Control Operators

[illegible]

<https://www.scc-ares-races.org/operations/forms/go-kit>

Assignment 2: ICS-309 review

Homework 2: ICS-309 Communications Log

- Don't forget the bottom of the form!

6. Prepared By (Name, Call Sign) <i>Your Name, Your Call Sign</i>	6A. Signature <i><Your signature></i>	7. Date & Time Prepared <i>03/07/2026 1510</i>	8. Page <u>1</u> of <u>1</u>
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- What about the ICS-214 Activity Log? Did you create one?

6. ACTIVITY LOG	
Time (24:00)	Major Activities & Events / Occasional Messages (indicate From / To / Msg# / Msg Text)
...	...
12:45	<i>Took over Tactical Net as NCO – see ICS-309</i>
15:00	<i>Closed Tactical Net</i>

Coming to you soon

MESSAGE SENDING FORMS WITH FIELD NUMBERS

Forms with field numbers

- If the form has field numbers, that is the preferred way of sending the form contents.
- Using Field Numbers results in:
 - Faster message sending and receiving
 - Less chance of confusion with long or unclear field names
 - Reduced chance of errors
- Query the receiving station to confirm they have field numbers on their copy of the form, NO NOT assume they do. Using the Word DOC or PDF date in the top right of the form is a good way to confirm the form version.

Veoci: 20250715
DOC: 20260207

Veoci: 20250715
PDF: 20250812

PDF: 20250812
PIF: 1.0

- All 3rd Party forms (except the ICS-213) will have field numbers with the next forms release.

Voicing forms with field numbers

- All fields have been assigned numbers
- Numbers jump to the next tens sequence at each section
- Fields with options have been assigned letters
- Some fields with simple one-word options have no letter.

Shelter Form				Veoci: 20250721 DOC: 20260207	
Radio Operator Only:		1. Origin Msg #:	2. Destination. Msg #:		
This Section to be Completed by Jurisdiction Personnel: (Underlined=Required)					
3. <u>Date:</u>		4. <u>Time:</u>		5. <u>Handling:</u> ☐ Immediate (ASAP) ☐ Priority (<1 hr) ☐ Routine (<2 hr)	
T O	6. <u>ICS Position:</u>		F	10. <u>ICS Position:</u>	
	7. <u>Location:</u>		R	11. <u>Location:</u>	
	8. <u>Name:</u>		O	12. <u>Name:</u>	
	9. <u>Contact Info:</u>		M	13. <u>Contact Info:</u>	
General Site Information					
21. <u>Jurisdiction:</u>					
22. <u>Shelter Name:</u>					
23. <u>Location:</u>					
24. <u>Type:</u> ☐ a. Congregate ☐ c. Temporary Evacuation Point ☐ e. Large Animals (multi-select) ☐ b. Non-Congregate ☐ d. Pets Accepted					
25. <u>Shelter Status:</u> ☐ a. Setup in progress, not accepting guests ☐ c. Full, not accepting guests ☐ b. Open, accepting guests ☐ d. Closed					
26. <u>Resources:</u> ☐ a. Warming Center ☐ c. Food & Drink (multi-select) ☐ b. Cooling Center ☐ d. Charging Stations					
27. <u>Notes:</u>					
28. <u>ADA Compliant:</u> ☐ Yes ☐ No					
29. <u>Pets Allowed:</u> ☐ Yes ☐ No					
30. <u>Maximum Capacity:</u>		31. <u>Total Registered:</u>		32. <u>Cot Numbers:</u>	
33. <u>AFN Considerations:</u>					
Contact Information					
41. <u>Managed By:</u> ☐ a. American Red Cross ☐ c. Government ☐ e. Other ☐ b. Private ☐ d. Community					
42. <u>Primary Contact Name:</u>				43. <u>Primary Contact Phone Number:</u>	
44. <u>Primary Contact Email:</u>					
Radio Operator Only:					
Relay:		Rcvd:		Sent:	
Name:		Call Sign:		Date:	
				Time (24hr):	
SCCo ARES/RACES					

Voicing forms with field numbers

- Voice every field that has a value in it
- Skip empty fields
- Voice each field as "Field «number», «value»," with a pause between the field number and the value.
- Field numbers are voiced as English cardinal numbers, not digits. Example: "field twentythree", not "field two three".
- If there is a letter suffix on the field number, voice that phonetically with no pause between them. Example: "field thirtyone-alpha."

Shelter Form				Verdi: 20250721 DOC: 20260207	
Radio Operator Only:		1. Origin Msg #:	2. Destination. Msg #:		
This Section to be Completed by Jurisdiction Personnel: (Underlined=Required)					
3. Date:		4. Time:	5. Handling: ☐ Immediate (ASAP) ☐ Priority (<1 hr) ☐ Routine (<2 hr)		
T O	6. ICS Position:		F	10. ICS Position:	
	7. Location:		R	11. Location:	
	8. Name:		O	12. Name:	
	9. Contact Info:		M	13. Contact Info:	
General Site Information					
21. Jurisdiction:					
22. Shelter Name:					
23. Location:					
24. Type: ☐ a. Congregate ☐ c. Temporary Evacuation Point ☐ e. Large Animals (multi-select) ☐ b. Non-Congregate ☐ d. Pets Accepted					
25. Shelter Status: ☐ a. Setup in progress, not accepting guests ☐ c. Full, not accepting guests ☐ b. Open, accepting guests ☐ d. Closed					
26. Resources: ☐ a. Warming Center ☐ c. Food & Drink (multi-select) ☐ b. Cooling Center ☐ d. Charging Stations					
27. Notes:					
28. ADA Compliant: ☐ Yes ☐ No			29. Pets Allowed: ☐ Yes ☐ No		
30. Maximum Capacity:		31. Total Registered:		32. Cot Numbers:	
33. AFN Considerations:					
Contact Information					
41. Managed By: ☐ a. American Red Cross ☐ c. Government ☐ e. Other ☐ b. Private ☐ d. Community					
42. Primary Contact Name:				43. Primary Contact Phone Number:	
44. Primary Contact Email:					
Radio Operator Only:					
Relay:		Rcvd:		Sent:	
Name:		Call Sign:		Date:	Time (24hr):
SCCo ARES/RACES					

Voicing forms with field numbers

- Fields with choices are read with just the phonetic letter(s) of the selected option(s). No prowords are used.
- Examples:
 - "Field twentyfour, charlie"
 - "Field twentysix, alpha and delta."
- Note: circles are single-select while boxes are multi-select.

Shelter Form				Verdict: 20250721 DOC: 20260207	
Radio Operator Only:		1. Origin Msg #:	2. Destination. Msg #:		
This Section to be Completed by Jurisdiction Personnel: (Underlined=Required)					
3. Date:		4. Time:	5. Handling: ☐ Immediate (ASAP) ☐ Priority (<1 hr) ☐ Routine (<2 hr)		
T O	6. ICS Position:		F	10. ICS Position:	
	7. Location:		R	11. Location:	
	8. Name:		O	12. Name:	
	9. Contact Info:		M	13. Contact Info:	
General Site Information					
21. Jurisdiction:					
22. Shelter Name:					
23. Location:					
24. Type: ☐ a. Congregate ☒ c. Temporary Evacuation Point ☐ e. Large Animals (multi-select) ☐ b. Non-Congregate ☐ d. Pets Accepted					
25. Shelter Status: ☐ a. Setup in progress, not accepting guests ☐ c. Full, not accepting guests ☐ b. Open, accepting guests ☐ d. Closed					
26. Resources: ☒ a. Warming Center ☐ c. Food & Drink (multi-select) ☐ b. Cooling Center ☒ d. Charging Stations					
27. Notes:					
28. ADA Compliant: ☐ Yes ☐ No					
29. Pets Allowed: ☐ Yes ☐ No					
30. Maximum Capacity:		31. Total Registered:		32. Cot Numbers:	
33. AFN Considerations:					
Contact Information					
41. Managed By: ☐ a. American Red Cross ☐ c. Government ☐ e. Other ☐ b. Private ☐ d. Community					
42. Primary Contact Name:				43. Primary Contact Phone Number:	
44. Primary Contact Email:					
Radio Operator Only:					
Relay:		Rcvd:		Sent:	
Name:		Call Sign:		Date:	Time (24hr):
SCCo ARES/RACES					

Voicing forms with field numbers

- Fields with "Message #" in the name are read without the initial proword "mixed group".
- Fields with "Date" or "Time" in the name are read without the initial proword "mixed group figures".
- Fields with "Phone" or "Fax" in the name are read without the initial proword "telephone figures".
- In all other cases, prowords are used when needed: figure(s), mixed group, I spell, etc.

Shelter Form		Veoci: 20250721 DOC: 20260207	
Radio Operator Only:		1. Origin Msg #:	2. Destination. Msg #:
This Section to be Completed by Jurisdiction Personnel: (Underlined=Required)			
3. Date:		4. Time:	5. Handling: ☐ Immediate (ASAP) ☐ Priority (<1 hr) ☐ Routine (<2 hr)
T O	6. ICS Position:	F	10. ICS Position:
	7. Location:	R	11. Location:
	8. Name:	O	12. Name:
	9. Contact Info:	M	13. Contact Info:
General Site Information			
21. Jurisdiction:			
22. Shelter Name:			
23. Location:			
24. Type: ☐ a. Congregate ☐ c. Temporary Evacuation Point ☐ e. Large Animals (multi-select) ☐ b. Non-Congregate ☐ d. Pets Accepted			
25. Shelter Status: ☐ a. Setup in progress, not accepting guests ☐ c. Full, not accepting guests ☐ b. Open, accepting guests ☐ d. Closed			
26. Resources: ☐ a. Warming Center ☐ c. Food & Drink (multi-select) ☐ b. Cooling Center ☐ d. Charging Stations			
27. Notes:			
28. ADA Compliant: ☐ Yes ☐ No			
29. Pets Allowed: ☐ Yes ☐ No			
30. Maximum Capacity:		31. Total Registered:	32. Cot Numbers:
33. AFN Considerations:			
Contact Information			
41. Managed By: ☐ a. American Red Cross ☐ c. Government ☐ e. Other ☐ b. Private ☐ d. Community			
42. Primary Contact Name:		43. Primary Contact Phone Number:	
44. Primary Contact Email:			
Radio Operator Only:			
Relay:		Rcvd:	Sent:
Name:		Call Sign:	Date: Time (24hr):
SCCo ARES/RACES			

Voicing forms with field numbers

- Standard Field Grouping applies
- After that, transmissions are split up based on the number of groups in the field values. Here are some guidelines (not rigid rules):
 - Any field with three or more groups in its value should be transmitted by itself. (If it has much more than five groups, it will likely be multiple transmissions, five groups in each.)
 - Remaining fields should be transmitted in batches of three fields per transmission, more or less.
 - Always start a new transmission when you change pages of the form and tell the receiver the page number on the form.

Damage Assessment

Veoci: 20250715
DOC: 20260207

Radio Operator Only:	1. Origin Msg #: XND-321	2. Destination. Msg #:
----------------------	--------------------------	------------------------

This Section to be Completed by Jurisdiction Personnel:
(Underlined=Required)

3. Date: 03/07/26	4. Time: 0930	5. Handling: ☐ Immediate (ASAP) ☒ Priority (<1 hr) ☐ Routine (<2 hr)
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T O	6. ICS Position: Operations	F R O M	10. ICS Position: Operations
	7. Location: County EOC		11. Location: Xanadu EOC
	8. Name:		12. Name:
	9. Contact Info:		13. Contact Info:

Overview

21. Jurisdiction: Xanadu	22. Incident Name: Classroom Demo
--------------------------	-----------------------------------

23. Address: 1234 Main St.	24. Unit/Suite:
----------------------------	-----------------

25. Type of Structure:	☐ a. Single Family ☐ c. Mobile Home ☐ e. Non-Profit Orgs
	☒ b. Multi-Family ☐ d. Business ☐ f. Outbuilding

26. Number of Stories: 3

27. Own/Rent:	☒ Own ☐ Rent
---------------	---

28. Types of damage:	☐ a. Flooding ☒ c. Structural
	☐ b. Roof / Windows / Other Exterior ☐ d. Other (define in comments)

29. Basement Type:	☐ a. Basement ☐ c. Basement and Crawlspace
	☐ b. Crawlspace ☒ d. N/A

30. What is the damage classification for this property?
☐ a. Destroyed ☒ c. Minor ☐ e. No Visible Damage
☐ b. Major ☐ d. Affected (Superficial or Cosmetic Damage Only)

31. Tag:	☐ a. Green Tagged ☐ b. Yellow Tagged ☐ c. Red Tagged
----------	--

32. Insurance: ☐ Yes ☐ No	33. Estimated Damage (\$):
---	----------------------------

34. Comments:

35. Contact Name:	36. Contact Phone:
-------------------	--------------------

Herman Munster	408-555-1212
----------------	--------------

Radio Operator Only:

Relay:	Rcvd:	Sent:
--------	-------	-------

Name:	Call Sign:	Date:	Time (24hr):
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SCCo ARES/RACES

Damage Assessment

“By failing to prepare you are preparing to fail.”
-- Benjamin Franklin

It's all about preparation

HOMEWORK REVIEW BEFORE STARTING A NET

Preparing to Start a Net – Homework Review

- The degree of preparation depends on the situation
 - Think about the impact of any potential problems and plan accordingly; common sense should prevail
 - In real, county-wide incidents, failure to adequately prepare can result in delays and disruptions to our response
- Four steps
 1. Arrive with sufficient time to complete all preparations and briefings
 2. Prepare your station
 3. Prepare your script (intro, reports/check-ins, update, close)
 4. Prepare yourself
- Then Go!

Prepare Your Station

Homework Review

- Prepare your work-space. Be NEAT!!!
 - Pen (blue or black ink) and paper
 - Visible clock (24-hour clock is convenient)
 - Frequency lists, contact numbers/info
 - Forms (Form 1, phone message, ICS 214, ICS 309, ICS 213, ...)
 - Maps (Google Maps “Offline maps”, maps.me, Here WeGo, etc.)
Note: must be able to navigate “off-Internet” or in Airplane mode.
 - Water/liquids for drinking
 - Place regularly accessed items within easy reach
- Prepare your radio & know how to use it
 - Oriented in a comfortable position
 - Check programmed memories
 - Check all connections, settings – especially for shared stations
 - Skim the manual or cheat sheet and keep it handy
 - Perform a radio check



Prepare Your Script Homework Review

- Main county nets have prepared scripts
 - Consult the county manual for each net in county EOC radio room
- SPECS & SVECS also have prepared scripts
 - Consult their websites
- Don't expect prepared scripts. Write up your own and have in your go-kit!
 - Start / Intro
 - Reports / Check-ins
 - Update
 - Close

Basic Templates for Net Control Scripts

Homework Review

- Start / Intro
 - Check for a clear frequency
 - Identify yourself, including the tactical call sign of net control
 - Identify the purpose of the net, and whether it will be operated as open or directed
 - State whether or not you have the ability to dispatch resources.
 - State what to do if immediate help is needed (e.g., call 911 or city tactical)
 - Ask if there is any emergency traffic
 - Ask if there is any traffic for net control
- Reports/Check-ins
 - Describe how people should make reports or check-in
 - May include when to use Tactical and FCC call signs
- Update
 - NCO must remember to ID with FCC call sign every 10 minutes
 - Purpose of net and operating mode (directed/open) as appropriate
- Close
 - Thank owners and operators of repeater(s) (if used)
 - Announce that the repeater/frequency is returned to normal use

Net Control Examples

- Start / Intro

- Message Net
- Resource Net Level 1



What do you hear that is not correct?



- Reports/Check-ins

- Message Net (roll-call)
- Resource Net Level 1 (Mike-Mike reports)
- Tactical Net Check-ins (tactical calls)



- Update

- Message Net
- Resource Net Level 3



- Close

- Message Net



Assignment 3 Review - Net Start Up Script

Any volunteers in the class willing to read their script?

- State scenario selected
- Read your script as you would on the air

Prepare Yourself, and Go!



- Make sure you get a briefing
- Learn/know the procedures, traffic flow of the net
- Prepare your log sheet, note paper
- Don't start until you are ready; never let yourself get "behind"
- When you're ready (and not before then):
 - Take a deep breath; Relax
 - Check that the frequency is clear
 - Key up, breathe, read the introduction

Endorsement Overview

COUNTY EOC RADIO OPERATOR

County EOC Radio Room Endorsement

- Goal: create a team of experienced (and credentialed) Net Control Operators that have a deeper understanding of the County EOC Radio Room
 - Radio Room Position Binder contents
 - Primary and ALT Radio Room Layout: positions, equipment, forms, etc.
 - EOC activation procedures
- Course description: [SCCo Radio Room Orientation training](#)
 - Prerequisites:
 - Net Control Type III or Packet Operator Type III Credential
 - Mutual Aid Communicator Endorsement
 - Registered as a County DSW
- Prerequisite Emergency Management training courses
 - FEMA IS-800: Intro to National Response Framework

Endorsement Requirements

SCCo RACES Endorsement Record

County EOC Radio Operator

Name: _____ Call Sign: _____ Jurisdiction: _____

All activities must be performed according to the Performance Standards. For specifics of each of these requirements, consult the Credentialing Program Handbook.

Program Manager			Endorsement Requirements
Date	Call Sign	Initials	
			Credentials
			SCCo RACES Type III Net Control (N3) or Packet Operator (P3)
			Endorsements
			SCCo RACES Mutual Aid Communicator (MAC)
			Administrative
			Recommendation from SCCo RACES Chief Radio Officer
			Registered as County Disaster Service Worker (DSW)
			Training
			Santa Clara County ARES/RACES Training
			SCCo EOC Radio Room Orientation
			Emergency Management Training
			SCCo EOC Orientation (County OEM)
			IS-800: Intro to National Response Framework
			Mentored Experience at County EOC Radio Room
			Min 1: Net Ctrl or Packet Op at approved exercise, event, or incident
			Must be completed after the EOC Radio Room Orientation class and with use of Position Binder discussed during class.

County EOC Radio Room Position Binder Overview

INTRODUCING CHECKLISTS

Tab 2 and 3 the same for all positions



COUNTY OF SANTA CLARA
EMERGENCY OPERATIONS CENTER – RADIO ROOM

TAB 2 – Activation and Operation

Process Flow	2
Responsibilities – Single operator versus NCO + Scribe	2
Mobilization.....	3
EOC (Arrival) Check-in	3
Activate Radio Room: first person to arrive (or arrive at the position):.....	3
Start of Shift.....	4
Operate	5
Brief & Break (Optional)	6

Tab 2 and 3 the same for all positions



COUNTY OF SANTA CLARA
EMERGENCY OPERATIONS CENTER – RADIO ROOM

TAB 3 – End of Shift and De-Mobilization

Process Flow2

End of Shift3

Deactivate Radio Room3

EOC Check-out.....4

De-Mobilization4

Radio Room Management – Event Documentation Review4

Tab 8 has position specific procedures

For Message Net – all the scripts for operating based on activation type and resources used



COUNTY OF SANTA CLARA
EMERGENCY OPERATIONS CENTER – RADIO ROOM

TAB 8 – Position Procedural – Message Net

Activation Type	2
Emergency Activation (“Normal”) Start Script.....	3
Emergency Activation (“Normal”) Update Script	3
Exercise Activation Start script using W6TI.....	4
Exercise Activation Update script using W6TI	5
Drill / Training Exercise Activation Start using K6FB.....	6
Exercise Activation Update script using K6FB.....	6
Roll Call / Health & Welfare Script.....	7
Closing Script	7

Example Checklist: Start of Shift

Start of Shift

☐	Put on the assigned vest for your position.
☐	Review the contents of each tab of this position binder.
☐	Obtain the Relief Briefing from the current staff (if you are not the first person to arrive)
☐	Locate and have available on the counter-top multiple copies of the following set of forms appropriate to the station/position. For example: 1. ICS 309 Communication log 2. ICS 213 Message Form 3. Radio Routing Form 4. T-Cards 5. Form 1 – blank paper
☐	Locate other forms (as needed), blue or black ink pens, stapler and staple refills
☐	Enter/update your identification information: For voice net: start your ICS 309 form for your position. For packet: update your Identification information in Outpost
☐	Verify the starting number or continuing number for the message numbering for your position.
☐	Verify your position equipment can communicate: For voice net and packet via radio: radio is operational and on frequency. For packet: communicate with the intended BBS <u>Review Tab Nine (9)</u> for any radio equipment reference and supplemental material that may be appropriate for this position: e.g., EOC to EOC radio, OASIS radio, etc.
☐	For voice net: If not open: <u>upon permission from the Unit Lead / Shift Supervisor</u>, open the net. If open: announce the update script Review Tab Eight (8) Radio Room Position Procedural for the appropriate scripts and any preparation work (if needed).

--end of checklist--



Resource Net – Level 1

DAMAGE REPORTS

Self Alerting Incident

- You feel an earthquake, flooding or a fire ...
- What do you do first?
 - Ensure your personal safety
 - Ensure the safety of your family
- Follow your city's procedures for the type of event
- When able: tune to Resource Net
 - Use either the North or South repeater (K6SNY 443.275 or W6ASH 145.270)
 - Be aware that the Resource Net repeaters may not be fully linked at the start
 - Note: individual cities may first gather initial reports on city tactical frequencies and then report totals to Resource Net.
- Prepare your station, your script and yourself
- Check for an active net
 - “This is _____ calling from {city, County EOC, etc.}; is there an active net on this repeater at this time?”
- If a net doesn't exist, start one!

Resource Net – Level 1

- Resource Net – Level 1 = information gathering
 - ... from our resources (i.e., you!)
- Purpose:
 - Gather preliminary summary of conditions across the county
 - Provide information to the county Office of Emergency Management (OEM)
 - A key Net Control duty will be summarizing the info in a useful format
- Methods:
 - Earthquake damage: “Mike-Mike” reports
 - Flood level: water height reports
 - Telephone outage: dial tone/no dial tone/can you make a cell phone call
 - Power Outage: how long has it been out, how widespread
 - ...
- Note: Damage reports are not check-ins, no 309 Comm Log is kept.
 - No one expects those making the report to stay on the net

How To Manage Damage Reports

- Net Control will identify how reports should be made
 - Defines report format
 - Example: “Make reports in the following format ...”
 - Usually requests reports of worst conditions first
 - Example: “I will now take the first five reports of Mike-Mike 7 or higher”
 - May request responses from specific cities if not heard from yet
- Typical damage report from field resource:
 - Say: Call sign, city, report, call sign
 - Earthquake: “W6XRL4, Xanadu, Mike-Mike 4, W6XRL4”
 - Flood level: “W6XRL4, Xanadu, figure 2 feet, W6XRL4”
 - Telecom: “W6XRL4, Xanadu, No cell or landline, W6XRL4”
- Net Control maintains tally as reports come in
 - Ready to summarize or hand-off at any time

The decision to activate during an event

- Scenario: It is 9:55 pm on Saturday night. You are the Duty Officer for the EOC
- Given this information: 
- Would you activate the EOC?
- The Modified Mercalli (“Mike-Mike”) scale attempts to:
 - Eliminate subjective descriptions such as “moderate” or “heavy”
 - Quantify the damage based on commonly observable events
 - “Pictures move” vs. “buildings collapse”
 - Assigns a number for quick transmission, easy summarization

The Mike-Mike Scale

- Modified Mercalli (“Mike-Mike”) scale
 - Mike-Mike 1 – Not felt at all
 - Mike-Mike 2 – Felt by persons at rest, on upper floors
 - Mike-Mike 3 – Felt indoors; hanging objects swing
 - Mike-Mike 4 – Windows, dishes rattle; like heavy truck passing or jolt
 - 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
 - ... scale actually goes higher, but we count MM8+ as one group
- Wallet cards available on county web site
 - www.scc-ares-races.org/operations/forms/go-kit-doc

Self-Alerting Incident – Earthquake

Example Opening Script

- “This is <call sign>, Resource Net Control. This net is intended to gather brief damage reports from around the county, I am NOT able to dispatch help for acute situations. If you need immediate help, use 9-1-1 to contact your local emergency response center or try to raise someone on your city tactical frequency.
- “Is there any emergency or priority traffic?”
- “I will take reports first by call sign only, five at a time, by severity, using the Mike-Mike scale. When I call you, respond again with your call sign, city, Mike-Mike number, and call sign.”
- “I will now take the first five call signs only with Mike-Mike 7 or higher.”

Example – Resource Net Level 1



- A county drill included Resource Net Level 1
- Situation
 - Simulated earthquake
 - Resource Net Level 1 established
 - The net started like this ...



- Critique
 - What techniques were used which made this effective?
 - What improvements could be made?

Recording Mike-Mike Reports

<u>CITY</u>	<u>MM-1</u>	<u>MM-2</u>	<u>MM-3</u>	<u>MM-4</u>	<u>MM-5</u>	<u>MM-6</u>	<u>MM-7</u>	<u>MM-8</u>
Campbell	+++							
Cupertino				+++				
Guerrero								

- Get worst case reports first, then move down in severity
 - “Are there any reports of Mike Mike 7 or higher?”
 - “How about any reports of Mike Mike 5 or higher?”
- Get responses from each city
 - No response does NOT mean no damage!
 - Use EC list or frequency list in your go kit for list of city names
- Continue until you have a complete picture
 - Even if no heavy damage is reported
 - Knowing (for certain) that damage is minimal is important, too!

Mike-Mike Summary Form

SCCo ARES/RACES Mike-Mike Summary		1. Incident Name (if any):							2. Incident Date / Time:					
3. City	4. Mike-Mike Tally (use tick/tally marks)								5. Reporting Totals (numerical)					
	MM-1	MM-2	MM-3	MM-4	MM-5	MM-6	MM-7	MM-8	MM1-3	MM4	MM5	MM6	MM7	MM8
Campbell														
Cupertino														
Gilroy														
Loma Prieta														
Los Altos														
Los Altos Hills														
Los Gatos														
Milpitas														
Monte Sereno														
Morgan Hill														
Mountain View														
NASA/Ames														
Palo Alto														
San Jose														
Santa Clara														
Saratoga														
Stanford Univ														
Sunnyvale														
Other: _____														
6. Prepared by (Name, Call Sign)							7. Date & Time Prepared				Page 1 of 1			

SCCo ARES/RACES Mike-Mike Summary (rev: 28-Feb-2024)

Classroom Exercise:

Resource Net Level 1 – Simulated Earthquake

- We may repeat this exercise two times based on time.
 - Net Control:
 - Conduct Resource Net Level 1 for an earthquake
 - Use a pre-printed or hand-made MM summary form
 - Everyone else:
 - Initial report use the last digit of your mobile phone number.
 - For a 0, report Mike-Mike 1
 - For a 9, report Mike-Mike 8.
 - Net Control continue collecting MM reports
 - For 2nd report use the last digit of your street address
 - For a 0, report Mike-Mike 1
 - For a 9, report Mike-Mike 8.
- NOTE: hang on to your notes for the next exercise.



Resource Net – Level 1

HANDING OFF DAMAGE REPORT SUMMARIES

Handing-off Damage Report Summaries

- Resource Net Level 1 is usually started from a remote location
 - Whoever is first on the net, wherever they are at the time
- At some point, net control may be asked to summarize the reports so far or hand off the totals to another net control
- Be prepared to hand off a summary at any time
 - Think about how to summarize your report before you get started
- Mike-Mike Summary Report form can be used to gather reports and summarize them

Handing off Damage Report Summaries

Instructions for transmitting the summary data are on the back of the Mike-Mike Summary Form.

Instructions for transmitting the summary data on this form to another operator: (See NOTE below)

Position	Script
----------	--------

Sender	I have Mike-Mike Summary data to transmit. Say when ready to copy.
--------	--

Receiver	Go Ahead
----------	----------

Sender	Incident Name _____ Date _____ Time _____
--------	---

Receiver	Go Ahead
----------	----------

Sender	Campbell figures <MM1-3 total> figures <MM4 total> figures <MM5 total> figures <MM6 total> figures <MM7 total> figures <MM8 total>
--------	--

Receiver	Go Ahead
----------	----------

Sender	Cupertino figures <MM1-3 total> figures <MM4 total> figures <MM5 total> figures <MM6 total> figures <MM7 total> figures <MM8 total>
--------	---

Receiver	Go Ahead
----------	----------

... and so

on ...

Sender	End of summary
--------	----------------

Receiver	Mike-Mike Summary Acknowledged
----------	--------------------------------

NOTE: If only providing roll-up data from a city, you do not need to transmit the Incident Name, Date, and Time. Only the City Name and figures from the Reporting Totals columns are needed. If a column is empty or has a 0 in it, the correct response for that column is "figures zero".

There is no need to send the column name, just send the data as noted above at a speed that the receiver can copy and record.

Rollup data should only be new data the city/agency has received since the last rollup was reported.

SCCo ARES/RACES Mike-Mike Summary (rev: 28-Feb-2024)

Exercise: Handing-off Damage Summaries

- Need another net control volunteer to receive hand-off of MM summary
- First net control sends summary to second net control
- Use the script on back of MM Summary Form.



General Procedures

OPERATING A NET

Handling Check-Ins



- Identifies those that will be joining and staying on the net
- Anyone who checks in is expected to answer when called
- Net control records and keeps track of (health & welfare checks) those who check in until they check out
- Check-in methods vary:
 - Roll-call: pre-defined list of net members
 - Example: cities on Message Net, ...
 - Individual: Individual identifies with FCC call sign
 - Example: weekly city nets, resource net, ...
 - Tactical Calls: function/location identifies with tactical & FCC call signs
 - Example: tactical nets, ...
 - ... whatever meets the need at the time

Directing Traffic



- Enforce net discipline (professionally)
 - “<call sign> go direct and turn it back to me when you are done”
- Direct traffic in an effective manner for all net participants
 - Control tempo and pace
 - Watch for and help less experienced operators
- Prioritize traffic according to precedence
 - Immediate, Priority, Routine, Health and Welfare
- Control traffic flow
 - “All stations standby” or “All stations hold your traffic”
- Give instruction in a way which avoids “doubles”
 - “Station ending with zulu, go ahead”
- Allow non-net-related traffic during breaks in net traffic



ID Regularly

- Lots of stuff to remember to do regularly
 - Announce your tactical call
 - Announce the purpose of the net
 - ID with your FCC call sign every 10 minutes
 - Pause after receiving before transmitting, leave gaps for other stations to break in, or finish with their call sign
- Hint: Put it all together every 20 minutes if net is busy.
 - “This is <call sign>, net control for the Santa Clara County Resource Net. This is a directed net ...”
- Make sure all stations are identifying regularly
 - Occasionally someone will forget, so ...
 - “Roger checkpoint 1, I’ll turn it back to you for ID”

Collecting Information

- Be clear on instructions on how to report
- Using Resource Net Level 1 as a previous example
 - “I will take reports first by call sign only, five at a time, by severity, using the Mike-Mike scale. When I call you, respond again with your call sign, city, Mike-Mike number, and call sign.”
- At public events, information is routinely collected.
 - Example: Los Altos Festival of Lights Parade crowd estimates



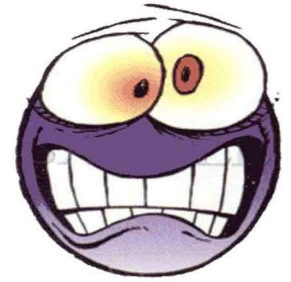
Track/Update Field Resources



- Perform regular health & welfare checks of field stations
 - “We will now do a health and welfare roll call by tactical call sign. When called, answer with your tactical call, identify any help or resources you may need, and finish with your FCC call sign”
 - Usually every 30 min or so, depending on situation & traffic volume
 - Example: Resource Net Level 3
- Provide information to field stations regularly
 - Warnings and advisories (weather, road closure, etc.)
 - Event status (first bib number in race, location of parade, etc.)
 - Be sure to indicate “drill traffic” when appropriate.
 - Other announcements received from supervisor
 - Remember, the media is listening
 - Unit Leader will coordinate with the Public Information Officer (PIO)



Busy Nets



- Make sure to leave space regularly
 - Allow all repeaters to drop, plus a few additional seconds
 - If stations are too persistent, you may need to force the space:
 - “All stations: remember to leave space between transmissions.”
 - “Are there any stations with emergency or priority traffic?”
 - “Are there any station that have been unable to reach net control?”
- When multiple stations are standing by, regularly announce list
 - Reduces stress for net members; reassurance that they are in the queue
- Maintain calm at all times, help net members to remain calm
 - Other net members will follow the lead of the NCO

Dealing with Stress and Fatigue



- Don't start until you are ready
- Control the pace of the net according to your ability
 - Work at your speed
 - If you need to, put the net on hold
- Take periodic breaks
 - As coordinated with teammates and supervisor
- Maintain proper hydration and nutrition
- Rotate positions/duties with team members
 - Observe → scribe → net control → break → scribe → net control
- Exercise patience and understanding with other operators
 - They are likely fatigued and/or stressed, too
 - They will follow your lead if you show a calm and deliberate approach

SUMMARY

Summary



You should now be able to:

- Describe the Net Control Type III credential
- Describe the purpose and usage of each of the main Santa Clara County nets
- Describe the key attributes of a net control operator
- Perform proper record keeping and logging
- Properly start up a net
- Properly collect damage reports
- Properly hand off damage report summaries
- Describe general procedures to properly run a net

Practice and Prepare

- Practice!
 - Log check-ins for any nets you're on
 - Perform net control duties for your city/agency net
 - Sign-up (at least) and perform (if possible) net control duty for the SPECS or SVECS net
 - Alert! Please know message passing and ProWords and use correctly.
 - Practice (particularly net hand-offs) with a friend
 - Attend a drill or exercise
- Prepare for the next class
 - Review any homework listed on the web page for the next class
 - Print out and review any forms used in the next class

Final Assignment

Please complete the On-Line Class Evaluation within one week.

To get course credit you need to:

- a) Attend at least 90% of the class
- b) Participate in class
- b) Complete the class evaluation

If you do these, you will get credit for the course.

Online Class Evaluation

MUST BE SUBMITTED WITHIN 7 DAYS TO GET CLASS CREDIT

Activities Database

Home
Log Out
Activities Home
SCC ARES/RACES Home
Comments/Bugs
Events
List Events By Date
List Events I Joined
Submit Class Evaluation
My Profile
My Contact Info

<https://www.scc-ares-races.org/activities/>

Website Home Page

 Training & Practice	>
Classes <i>Emergency communications training curriculum</i>	>
Submit Class Evaluation <i>How can we improve?</i>	>
Voice Nets <i>City nets, SPECS/SVECS, hospital, training, HF</i>	>

<https://www.scc-ares-races.org/>

Next Class

Net Control Type III, Part B

- Dealing with challenges
 - Working with a scribe
 - Resource Tracking
 - Resource Net for an Event
 - Handing off a Net
 - Closing a Net
-
- Have your 214 reviewed before leaving

Thank You!

If you have questions or feedback about this or other training activities,
you can join our Training discussion group.

<https://scc-ares-races.groups.io/g/training>

This is a moderated group.

Reminder next Net Control Class:

Net Control Type III Part B, Saturday 4/4/26

See: <https://www.scc-ares-races.org/activities/events.php>

Class presentation with homework will be available approximately one
week before class.