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# Net Control Type III

## Homework for Part A

To be completed before class



Santa Clara County ARES®/RACES

Last Updated: 17-Feb-2025

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This homework consists of a review of things you have already learned in other prerequisites classes and some exercises to save class time during class to practice forms and scripts.

Credential and Endorsement Review

## **NET CONTROL**

N3

## Net Control Type III

- 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

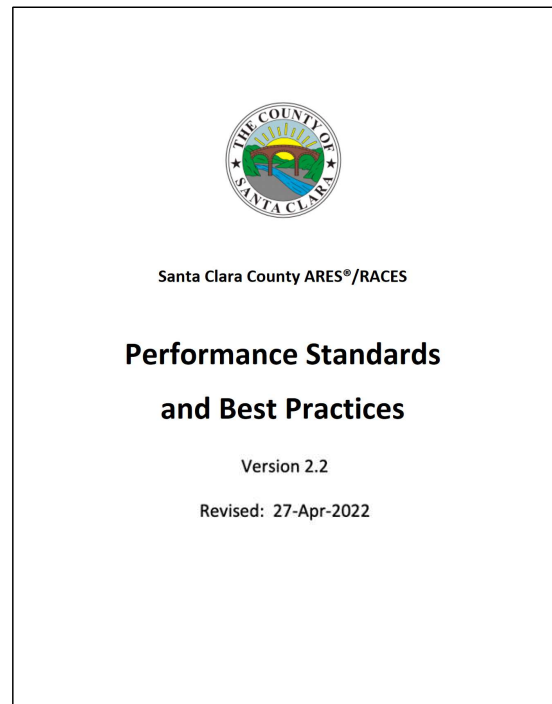
## Net Control Type II, Type I

- Net Control Type II = Advanced Operator
  - Medium - to - high traffic nets
    - County Resource Net Level 2 and 3
    - County Message Net
  - Multiple nets; cross-band repeat
  - Plan small events
  - Equipment: SCCo Go Kit + mobile (25+W) radio, antenna, mast, coax, ...
- Net Control Type I = Specialist Operator
  - Most critical and complex nets
  - Principal interface for planning, design, set-up, operations
- Net Control Type III, Parts A & B focus on the N3 Credential
- Net Control Type II course focuses on the N2 Credential



## Credentialed Operators Follow Performance Standards and Best Practices

- Covers all performance aspects of operating in ARES/RACES
  - Professionalism and Training
  - Communications Technique
  - Safety
  - Methods and Procedures
  - Equipment
  - Documentation
- Applies to all operators
- Standard used for credential performance evaluations



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

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## Earning a Credential

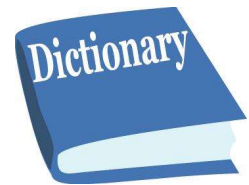
- Training
  - SCCo ARES/RACES courses: technical and role-specific
  - ICS/SEMS/NIMS courses
- Experience
  - Participation in nets, events, incidents
- Knowledge
  - Able to explain key concepts (general and role-specific)
- Equipment
  - Standard 12-hour go kit, plus more as appropriate
- Performance
  - Peer-reviewed, based on Performance Standards
  - Conducted at regular events (no special circumstances needed)

## Mutual Aid Communicator (MAC)



- This is an Endorsement
- An amateur radio operator that meets certain minimum requirements and is willing to help outside own city/agency when needed
  - Only called upon when not needed within own city/agency
- Must be at least Type IV:
  - Administrative: age, amateur radio license, transportation, ...
  - Training: ICS, “Intro to EmComm”, “Fundamentals of EmComm”, ...
  - Experience: nets, drills, public service events
  - Equipment: standard SCCo ARES/RACES go kit
  - Skill: demonstrated capability, commitment to excellence
- Encouraged to earn role-specific credentials (Type III, II, I)

## County EOC Radio Operator (ERO)



- This is an Endorsement
- An amateur radio operator that participates at the County EOC radio room for activations and exercises.
- Provides understanding and documentation of the radio room procedures, equipment, checklists, etc.
- Must be at least N3 or P3.
- Requires: IS-800: Intro to National Response Framework
  - <https://training.fema.gov/is/courseoverview.aspx?code=IS-800.d>
- Requires: County RACES EOC Radio Room Orientation and County OEM EOC Orientation classes.

# Credentials More Information

- Program Handbook
- Forms
- Credential Record forms
- Training Requirements
- Other information

**Santa Clara County ARES®/RACES**

[Home](#) [Services](#) [Operations](#) [Data](#) [Training & Events](#) [Reference](#) [About](#) [January 24, 2020](#)

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**Credentialing Program**

[Overview](#) | [Documentation](#) | [Forms](#) | [Records](#) | [Training](#) | [Support](#) | [Management](#)

**Overview**

Santa Clara County ARES/RACES has maintained a credentialing program for Mutual Aid Communicators (MACs) since 2009. The program is now being expanded to include all Santa Clara County amateur radio operators, whether they wish to operate outside their home city (MAC) or not. The following presentation provides an overview of the coming changes.

[Overview of SCCo ARES/RACES Credentialing Program \(PDF - 1.0 MB\)](#)

**Program Documentation**

**Program Handbook**

The Credentialing Program Handbook describes the program, how it works, and the details of each credential and endorsement type. The Program Handbook takes precedence of all other program documents.

[Credentialing Program Handbook v3.0 \(PDF - 1.2 MB\)](#)

**Performance Standards**

All radio operators are expected to perform their duties according to the *Santa Clara County ARES/RACES Performance Standards and Best Practices* ("the Performance Standards"). These standards are recommended for everyone and are the required minimum standard for credentialed operators. They are located in the [Operations > Standards and Procedures](#) section of this website.

**Forms**

**Credential Progress Record Forms**

Candidates for credentials use these forms to keep track of progress toward each award.

Capability Level	Field Operations Record	Net Control Record	Packet Operations Record	Shadow Communications Record
Specialist	Type I	Type I	Type I	Type I
Advanced	Type II	Type II	Type II	Type II
Independent	Type III	Type III	Type III	Type III
Basic	Type IV Communicator			

**Endorsement Progress Record Forms**

Candidates for endorsements use these forms to keep track of progress toward each award.

- Mutual Aid Communicator (MAC)
- County Fire Station Radio Operator
- County EOC Radio Operator
- County EOC RACES Unit Leader

**Approved Activity Request Form**

Used by local jurisdiction Radio Officers to request that their exercise, event or incident be designated as an approved activity for credentials and endorsements.

- Approved Activity Request

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

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## Thank you for working towards a Type III credential!!

- Obtaining any Type III credential (F3, N3, P3, S3) is a nice step (F3 is required for other Type 3 credentials)
  - You are an Independent Operator
  - You have the equipment needed for the assignment
  - You have demonstrated your capability and performance for the resource type based on SCCo RACES program standards
  - SCCo 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, public service events, 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.)
- 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 31<sup>st</sup>). 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



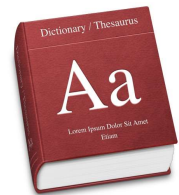
Overview

# **SANTA CLARA COUNTY NETS**

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## 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.
- 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

## How Are ARES/RACES Nets Different?

Characteristics	Typical Ham Nets	ARES/RACES Nets
Content / Topic	General; whatever we want	Specific; whatever the supported agency wants
Order	Round-robin	By message priority
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)

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# County Nets - Frequency Information

<http://www.scc-ares-races.org/operations.shtml>

**Santa Clara County ARES®/RACES**

Home Operations Data Training & Events Reference FAQ January 28, 2019

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**OPERATIONS**

Activation | Contact | Forms/Signs | Frequencies | Equipment | DSW/Mutual Aid | Nets | Programs | Standards | Reports | Misc

**Activation Info**

- AlertSCC System Information for Hams
- ARES®/RACES Activation Level Definitions (PDF)(Updated 9/4/12)

**Contact Info**

- Direct-Dial Emergency Numbers, Santa Clara Co. (PDF)(Updated 9/20/2012)
- County Staff (DEC/ADEC)
- City Emergency Coordinators/Radio Officers

**Forms and Signs**

- ICS and Other Forms Used in Communications
- Modified Mercalli Earthquake Reporting Scale
- Modified Mercalli Earthquake Reporting Summary Form (PDF)
- RACES Assignment Form (PDF) (also MS-Word version)
- Radio Communications Signs
- Resource Net Travel Tracking Form (PDF) (also MS-Word version)

**Frequency Lists**

- County Voice Frequency List
- County Packet Frequency List and BBS Info
- Regional Frequencies and Nets

**Go Kit and Other Equipment**

- Go Kit Checklists:** MS-Word Version or PDF Version (Updated 03-Jun-2018)
  - You can use the MS-Word version to print on legal sized paper for a single sheet.
- Expectations, Considerations and Recommendations for constructing stations**
  - The "Hidden Node" Problem
    - Antenna and radio issues to consider when operating simplex
  - City/Agency Emergency Operations Center Equipment
  - Hospital Command Center Equipment
- Station Components**
  - Mobile VHF/UHF Voice Radio Considerations
  - General VHF/UHF Antenna Considerations
  - General VHF/UHF Lightning Arrestor Considerations
  - USB-to-Serial Adapters

**Mutual Aid and DSW**

- RACES Mutual Aid Actions and Responsibilities - As of 12/27/2012, (PDF 102 kb)
- Mutual Aid Requirements for Public Service Events
- DSW Program Information**
  - Disaster Service Workers Information Brochure - (PDF 695kb)
  - Cal OES Disaster Service Worker Volunteer Program Guidance, Oct 2016 (PDF)

**Santa Clara County OEM ARES/RACES Frequency List**

This list updated by Mark Laubach, K6FJC, SCCo ADEC, K6FJC@arrl.net  
Items in red have been recently added or changed.

Adobe PDF versions available: [1 per page](#), [2 per page](#) or [4 per page](#) - [Notes](#) - [Definitions](#) - [Excel Version](#)

COUNTY						
Operational Area	Channel Name	Resource Name	R/S	Frequency	OS	PL Notes Reviewed
County	Message Net	W6TI	R	147.360	+	110.9 Feb-11
County	Message Net Alt (Linked)	K6FB	R	145.450	-	100 H Jun-12
County	Command	W6GGF	R	442.575	+	100 H Jun-12
County	Command Net Alt.					
County	Resource Net Alt.	K6SNY	R	443.275	+	107.2 G Feb-11
County	Resource, Primary	AA6BT	R	146.115	+	100 D Feb-11
County	Resource, North	W6ASH	R	145.270	-	100 E Feb-11
County	Resource Alt, North	W6ASH	R	440.800	+	100 E Jul-17
County	Resource, South	N6NAC	R	444.625	+	110.9 Feb-11
County	Hospital Net	N6NFI	R	145.230	-	100 F Feb-11
County	Hospital Net Packet	simplex	S			A Feb-11
County	NTS	WR6ABD	R	146.640	-	162.2 Feb-11
For packet frequencies, see: <a href="http://www.scc-ares-races.org/freqs/packet-freqs.html">http://www.scc-ares-races.org/freqs/packet-freqs.html</a>						
220 Simplex: 223.400, 223.420, 223.440, 223.460, 223.480, 223.500 (National calling frequency)						
440 Simplex: 441.000, 446.500, 446.000 (National Simplex Frequency)						
RED CROSS, SILICON VALLEY CHAPTER						
Operational Area	Channel Name	Resource Name	R/S	Frequency	OS	PL Notes Reviewed
Red Cross SVC	Command	W7AFG	R	444.300	+	173.8 Feb-11
Red Cross SVC	Command Alt	WB6OOS	R	444.600	+	141.3 Feb-11
Red Cross SVC	Tactical 1	K6FECC	R	147.165	+	162.2 Feb-11
Red Cross SVC	Tactical 2	K6FECC	R	147.675	-	162.2 Feb-11
Red Cross SVC	Tactical Alt	WB6OOS	R	146.760	-	151.4 Feb-11
Red Cross SVC	Ink	WB6OOS	R	224.260	-	100 Feb-11
Red Cross SVC	Talk Around	WB6RNH	R	444.300	+	162.2 Feb-11
RED Cross - All	All Areas	Simplex	S	147.420		Feb-11
CAMPBELL						
Operational Area	Channel Name	Resource Name	R/S	Frequency	OS	PL Notes Reviewed
Campbell	Tactical	Simplex	S	146.565		J Feb-11
Campbell	Alt Tactical	Simplex	S	147.585		C Feb-11
Campbell	Packet 220	Simplex	S			A Feb-11
Campbell	Packet 440	Simplex	S			A Feb-11
CUPERTINO						
Operational Area	Channel Name	Resource Name	R/S	Frequency	OS	PL Notes Reviewed
Cupertino	Resource Net Alt (TAC1)	Simplex	S	147.570		151.4 2 Feb-11
Cupertino	Message Net (TAC2)	Simplex	S	146.460		151.4 Feb-11

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## Overview: Resource Net

- Usually the first net activated at the county level
- Directed net; usually with N3 net control (N2 for heavy traffic)
- Manage resources and info from/about resources
- Three levels of operation
  - Level 1: Information Gathering (initial damage reports)
    - Individuals submit earthquake Modified Mercalli (Mike-Mike) reports; flood levels; power; etc. to county
  - Level 2: City EOC check-ins and referral to city tactical nets
    - City EOCs check-in and announce status; individuals referred to city nets
  - Level 3: Coordination of mutual aid; tracking county resources
    - Mobilization (resource check-ins, activations and assignments)
    - Location/Travel tracking (you MUST be in contact while traveling)
    - Demobilization (resource release, tracking during return home)

## Overview: Resource Net (cont.)

- Resource Net for a drill or public service event
  - Simplified version of full Resource Net Level 3
  - Should be easily handled by an N3 communicator
    - If repeaters aren't linked, then an N2 should be able to handle it
  - Used for pre-planned drills and public service events
- Resource Net frequencies (approximate county coverage):
  - Primary AA6BT 146.115 (+) 100.0 (middle SCC)
  - North W6ASH 145.270 (-) 100.0 (North, southern peninsula)
    - North Alt W6ASH 440.800 (+) 100.0
  - South K6SNY 443.275 (+) 107.2 (South of 101 & 85; S. San Jose)
  - <https://www.scc-ares-races.org/operations.shtml>

## Overview: Message Net

- Usually the second net activated at the county level
- Directed net, usually with an N2 net control
  - Can get very busy!
- Official message traffic between Emergency Operations Centers (EOCs), Departmental Operations Centers (DOCs)
  - Typically between cities/agencies and the County
  - Sometime between cities/agencies
- Mostly 3<sup>rd</sup> party messages
  - ICS 213 and other forms, ...
- Some informal messages
- All messages and responses numbered, tracked, and logged
- Superior message passing skills required

## Overview: Message Net (cont.)

- General rule of thumb for message routing:
  - Send emergency traffic using the (voice) message net
  - Send non-emergency message traffic via the packet network whenever possible (i.e. both sender & receiver have packet stations)
    - Packet is 7-15 times faster than most voice message net operators
      - County / Cities will “poll” their BBS every 5 to 10 minutes
- Message Net frequencies
  - Primary W6TI 147.360 (+) 110.9 (DX club)
    - Except during real emergencies, DX club can announce DX spots without contacting net control
  - Alternate K6FB 145.450 (-) 100.0 / 442.575 (+) 100.0
  - <http://www.scc-ares-races.org/operations.shtml>

## Overview: Other Santa Clara County Nets

- Command Net
  - Official traffic between command staff (county, city, agency, ...)
  - Not intended for individual field operator use
  - Primary                    W6GGF                    442.500 (+) 100.0
- Hospital Net
  - Official traffic between hospitals and County Dept. of Public Health
  - Primary:                    N6NFI                    145.230 (-) 100.0
- EOC-to-EOC Net
  - Commercial radio may be used directly by EOC personnel
  - Typically for command and control and informal messages
  - May be active before hams arrive on scene; may be staffed by non-hams, some with little or no radio or emcomm training

## Overview: Other Santa Clara County Nets

- SHARES HF Net
  - Used at County EOC to communicate with the California State Office of Emergencies Services (CALOES) Coastal Region and State Operation Centers.
  
- Others
  - County radio room staff support a variety of other communications equipment.
  - County Control 10, regional, satellite, and other government radios.
  - Cities may have other communication tools they may ask RACES to monitor or utilize (GMRS, MURS, FRS, and Government Radios).

## Tactical Nets (including City/Agency nets)

- Established when and where needed
  - Staging areas, checkpoints, rovers, shadows
  - Each city has one or more tactical frequencies; one is for main city net
- Each city activates their city net(s) as soon as possible
  - Handle local resource check-ins, notifications
  - Check-in here to be released to the county
- Localized, often informal messages
  - “Checkpoint 3 reports Dead Man’s creek at 1 foot below flood level ...”
  - “Rover 2 reports all runners have now passed rest stop 4 ...”
- May also include formal messages
  - Ex. Resource request from school to city, CERT damage assessment forms
- Usually a directed net, but may start up as an open net
- Frequencies (<http://www.scc-ares-races.org/operations.shtml>)
  - May also be assigned at time of activation

Operating as a  
**NET CONTROL TYPE III**

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## Vocalizing – Need to be proficient

- Standard ITU Phonetics
- Standard Numbers and Times
- SCC required Prowords
  - Transmitting / Sending
  - Fills and repeats

## Review: Standard ITU Phonetics

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 (keh-BECK)
E - echo (ECK-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-TELL)	U - uniform (YOU-ni-form)
I - india (IN-dee-ah)	V - victor (VIK-tah)
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)

- If there is a chance of misunderstanding, spell it out with “I spell”:
- “go to Kay Street” → “go to Kay, I spell kilo alpha yankee, Street”

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## Review: Standard Numbers and Time

0 - zero (ZEE-row)

5 - five (Fife)

1 - one (WUN)

6 - six (Sicks)

2 - two (TOOO)

7 - seven (SEV-vin)

3 - three (Tree)

8 - eight (Ate)

4 - four (FOH-wer)

9 - nine (NINE-er)

- Zero is always “zero”; never “oh”
- Decimal point is “decimal”; never “dot” (except when using EMAIL ADDRESS, PACKET ADDRESS, and INTERNET ADDRESS prowords)
- Multi-digit numbers are spoken as a string of single digits:
  - 600 = “six zero zero”
- Preceded by the Proword “figures”
  - “Please copy 109” → “Please copy figures one zero niner”
  - “Requesting 16 blankets” → “Requesting figures one six blankets”
- Time is always 24 hour local time

## Review: Standard Message Handling Prowords

- I SPELL Ex: "I spell Alfa, Bravo..."
- FIGURES Ex: "Figures Wun, ZEE-row, NINE-er" (= 109)
- INITIAL(S)/LETTER GROUP A group of one or more letters - Ex: ARES
- AMATEUR CALL An amateur call sign; use mixed group if contains "/"
- MIXED GROUP A mixed group starting with one or more letters: Ex: AF3J/4
- MIXED GROUP FIGURE(S) A mixed group starting with one or more figures Ex: 2/A
- MIXED GROUP SYMBOL(S) A mixed group starting with one or more symbols \$2.00
- TELEPHONE FIGURES A telephone number (typically 10 digit)
- SAY AGAIN ... Repeat – usually used with a qualifier ...
  - ... WORD AFTER Ex: "Say again word after ..."
  - ... WORD BEFORE Ex: "Say again word before ..."
  - ... ALL AFTER Ex: "Say again all after ..."
  - ... ALL BEFORE Ex: "Say again all before ..."
  - ... BETWEEN Ex: "Say again between ... and ..."
- ROGER Received and understood. (Does NOT mean "yes)
- AFFIRMATIVE "Yes"
- NEGATIVE "No" or "not received"

## Review: Additional Prowords

- Introductory Prowords
  - Email Address
  - Packet Address
  - Internet Address
  - GPS Coordinates
- Qualification Prowords (used within a group)
  - Uppercase
  - Lowercase

Net Control Operators (NCOs) need to stay up to date on the most recent SCCo Message Handling procedures:

- [Course description and materials](#)
- Note: The next Message Passing Tabletop scheduled for 19 July 2025
- Please follow and/or participate in the Quarterly Message Training Net



Tracking Activities, Resources and Message Traffic

## **RECORD KEEPING AND LOGGING**

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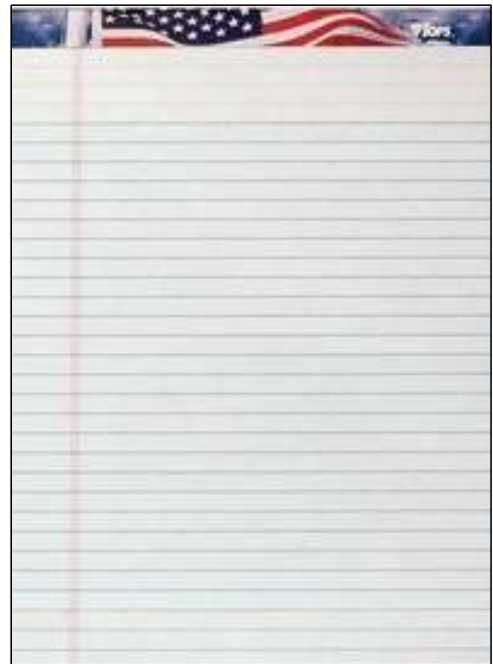
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## All Forms

- Complete all forms accurately and entirely
  - When in doubt, read the instructions if printed on the back or ask the shift supervisor.
- Default: turn in as instructed at the end of your shift and/or event; i.e., before you sign out on the ICS-211.
  - ICS-309 stays with NC station until end of event
  - Yes, turn in even informal messages, notes, and doodles
  - Follow any other local directions for turning in documentation
- Forms become legal documents
  - We will scan/retain everything turned in. SCCo OEM requirement to retain for 7 years all DSW activation paperwork.
  - Use blue or black ink, no pencil.
  - ICS-214 and ICS-309 form must be signed to be complete
  - Must be legible

## Form 1

- Main point is good documentation
- A simple writing tablet works
- Lots of uses
  - ... when you run out of the right form;  
e.g., 2<sup>nd</sup> page of a ICS-213.
- Date, time, message #, subject for tracking

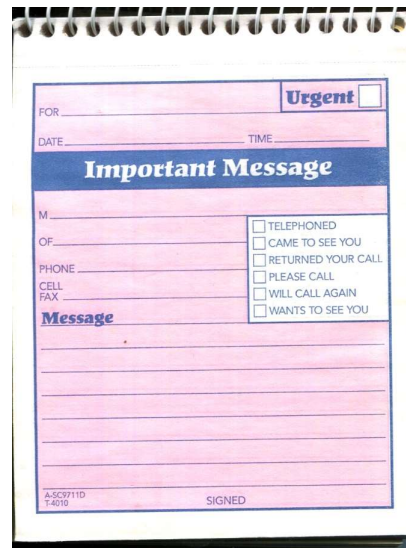
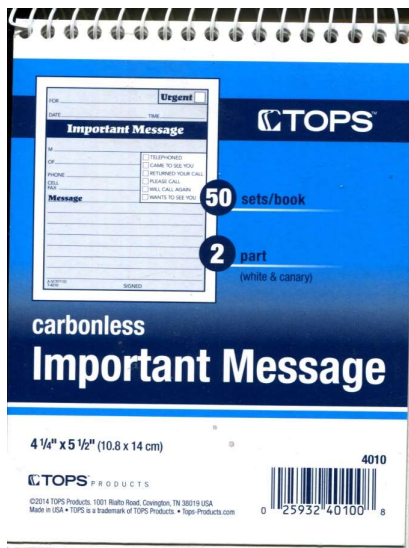


## “Phone” Message Pad

- Two part, non-carbon is best
- Brief, tactical messages between staff members
  - Message net NCO to packet net NCO
  - Any NCO to shift supervisor
- Tactical messages between field and staff
  - Request for contact on phone or alternate net
- Consider adding your message number and requesting one, as needed.

The image shows a spiral-bound notebook with several 'PHONE CALL' message pads. The pads are purple and white, with fields for 'TO', 'FROM', 'DATE', 'TIME', 'MESSAGE', and 'REMARKS'. The pads are arranged in a cross shape, with one pad in the center and four others overlapping it.

## Alternate Memo pad



- This example is from Amazon: 2-Part Carbonless Phone Message Book





## Homework 1: ICS-214 Unit Log

- Create an ICS-214 log for the upcoming SCCo ARES/RACES class:
  - Incident is “Net Control Type 3 Part A class”,
    - Activation # XND-25-1NC (not a real activation, for training only)
  - The class will begin on 3/1/2025 at 09:00 hours and end at 12:00 hours
  - Your tactical call is “Student” followed by your FCC call sign suffix
  - Log:
    - Time of actual departure, major intersection, and Odometer
    - Time of actual arrival at parking, street address, and Odometer
    - Class start time (promptly 09:00)
    - Class end time
    - Any comments or questions not covered by the evaluation form
  - Have your form reviewed before signing out on the ICS-211 at end of class.

Review the self-paced-video training for this form:

<https://www.scc-ares-races.org/training/ar-courses.shtml>

## ICS-211A – Communications Check-In

<b>ICS 211A CHECK IN LIST (COMMUNICATIONS)</b>	1. INCIDENT NAME: Mockingbird Heights Race	2. DATE: 10/31/23	3. INCIDENT NUMBER: MHT-24-13T	4. CHECK IN LOCATION Funeral Home		
<b>5. INFORMATION</b>						
PERSONNEL NAME	CALL SIGN	AGENCY	TIME IN	TIME OUT	HOURS	REMARKS
Herman Munster	W6XRL4	XND	2330			

<http://www.scc-ares-races.org/operations.html>

- EVERYONE signs in/out on a 211
- If one doesn't exist, start one!
- Our version: ICS 211A-SCCo
- Reminder: please have a reachable phone # in your SCC Contact Information; we do call folks who forget to sign out.

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## Example ICS-309 – Resource Net

FROM and TO are usually FCC Call Signs; no message numbers

<b>COMM Log</b> ICS 309-SCCo ARES/RACES	1. Incident Name and Activation Number Mockingbird Heights Mummy Race MHT-24-13T		2. Operational Period (Date/Time) 10/31/24      11/1/24 From: 2000      To: 0400		
	3. Radio Net Name (for NCOs) or Position/Tactical Call Resource Net		4. Radio Operator (Name, Call Sign) Wolf Man, W6WOOF		
<b>5. COMMUNICATIONS LOG</b>					
Time (24:00)	FROM		TO		Message
	Call Sign/ID	Msg #	Call Sign/ID	Msg #	
...	...			...	
2300	W6XRL4				Leaving home – 1313 Mockingbird Lane ODO 123
2315			W6XRL4		H&W - Highway 13 – ODO 141
2330	W6XRL4				Arrived ICP ODO 150; Check-Out

- Recommended: instead of writing your Tactical Call for yourself, leave the call sign field blank.
  - Makes it easier to see which messages were from/to field operators

## Example ICS-309 – Message or Tactical Net

FROM and TO are usually tactical call signs; messages are numbered

<b>COMM Log</b> ICS 309-SCCo ARES/RACES	1. Incident Name and Activation Number Mockingbird Heights Mummy Race MHT-24-13T		2. Operational Period (Date/Time) 10/31/24      11/1/24 From: 2000      To: 0400		
	3. Radio Net Name (for NCOs) or Position/Tactical Call Event Tactical Net		4. Radio Operator (Name, Call Sign) Herman Munster, K6XRL4		
<b>5. COMMUNICATIONS LOG</b>					
Time (24:00)	FROM		TO		Message
	Call Sign/ID	Msg #	Call Sign/ID	Msg #	
0000	W6DRAC				Check-In – Assigned tactical Blood Bank 1 (BBANK1)
0005			All Checkpoints		First mummy on course; advise when at your station
0015	BBANK1	107	MH-ICP	204	Blood bank is running short of 0+ blood
0020	CP1				First mummy passing checkpoint 1

- Use Msg # column for formal message nbrs; otherwise blank
- For tactical messages, instead of writing your Tactical Call for yourself, leave the call sign field blank.

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## ICS-309: Start of Net

- Start a new ICS-309 Form
- Log an entry for start of net; identify scribe, if present
- NOTE: every net gets a separate ICS-309

<b>COMM Log</b> ICS 309-SCCo ARES/RACES		1. Incident Name and Activation Number <i>Mockingbird Heights Mummy Race</i> <i>MHT-24-13T</i>		2. Operational Period (Date/Time) <i>10/31/24</i> <i>11/1/24</i> From: <i>2000</i> To: <i>0400</i>	
3. Radio Net Name (for NCOs) or Position/Tactical Call <i>Event Tactical Net</i>			4. Radio Operator (Name, Call Sign) <i>Herman Munster, W6XRL4</i>		
5. COMMUNICATIONS LOG					
Time (24:00)	FROM		TO		Message
	Call Sign/ID	Msg #	Call Sign/ID	Msg #	
<i>2000</i>	<i>----</i>	<i>---</i>	<i>----</i>	<i>---</i>	<i>Start Net</i>
<i>---</i>	<i>----</i>	<i>---</i>	<i>----</i>	<i>---</i>	<i>Scribe = Wolf Man, W6WOOF</i>

## ICS-309: New Op Period or Shift Change

- Start a new ICS-309 Form
- Log an entry for shift change; identify scribe, if present

### Previous Operator

1159	... something ...	... something ...	... something ...
0000	----	---	----- <i>Shift Change</i>

### New Operator

<b>COMM Log</b> ICS 309-SCCo ARES/RACES	1. Incident Name and Activation Number <i>Mockingbird Heights Mummy Race RIP-24-13T</i>		2. Operational Period (Date/Time) <i>10/31/24                      11/1/24</i> From: <i>2000</i> To: <i>0400</i>		
	3. Radio Net Name (for NCOs) or Position/Tactical Call <i>Event Tactical Net</i>		4. Radio Operator (Name, Call Sign) <i>Wolf Man, W6WOOF                      (New Net Control)</i>		
<b>5. COMMUNICATIONS LOG</b>					
Time (24:00)	FROM		TO		Message
	Call Sign/ID	Msg #	Call Sign/ID	Msg #	
<i>0000</i>	----	---	-----	---	<i>Shift Change</i>
	----	---	-----	---	<i>Scribe = Herman Munster, W6XRL4</i>

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## ICS-309: End of Net

- Log an entry for end of net

<b>COMM Log</b> ICS 309-SCCo ARES/RACES		1. Incident Name and Activation Number <i>Mockingbird Heights Mummy Race</i> <i>MHT-24-13T</i>		2. Operational Period (Date/Time) <i>10/31/24</i> <i>11/1/24</i> From: <i>2000</i> To: <i>0400</i>	
3. Radio Net Name (for NCOs) or Position/Tactical Call <i>Event Tactical Net</i>			4. Radio Operator (Name, Call Sign) <i>Wolf Man, W6WOOF</i>		
<b>5. COMMUNICATIONS LOG</b>					
Time (24:00)	FROM		TO		Message
	Call Sign/ID	Msg #	Call Sign/ID	Msg #	
<i>0358</i>	<i>... something ...</i>		<i>... something ...</i>		<i>... something ...</i>
<i>0359</i>	<i>... something ...</i>		<i>... something ...</i>		<i>... something ...</i>
<i>0400</i>	<i>----</i>	<i>---</i>	<i>----</i>	<i>---</i>	<i>End of Net</i>

## ICS-309: Short Breaks

- What about a short bio-break, or grabbing a quick snack?
- Use your judgement
  - If you formally change shifts, then start a new page
  - If it's just a quick break for a few minutes, then make a quick note

Example: Wolf Man is Net Control; takes a break

0102	... something ...	... something ...	... something ...
0105	----	----	Temp NC: Herman Munster, W6XRL4
0108	... something ...	... something ...	... something ...
0115	----	----	NC: Wolf Man, W6WOOF
0120	... something ...	... something ...	... something ...

## ICS-309 Multi-recipient Messages

### Also referred to as All Station Message

- Use a separate line for each acknowledgement
- Either repeat the From message number, or use ditto marks, or an arrow, or something else to clearly indicate that all entries are part of the same message
- After confirming the pacing station, may want to verify with each of the intended recipients that they are ready to copy before starting

5. COMMUNICATIONS LOG					
Time (24:00)	FROM		TO		Message
	Call Sign/ID	Msg #	Call Sign/ID	Msg #	
1310		XND-100	All Agencies		Report supply levels by 1400
1311		“	Agency 1	A1-123	
1312		“	Agency 2	A2-456	
1313		“	Agency 3	A3-789	

## Homework 2: ICS-309 Communications Log

- Create an ICS-309 log for the following simulated scenario in City of Xanadu (XND)
  - Incident is “Training Class Exercise” with activation code XND-25-1NC
  - Operational period is planned from 12:30 to 15:00 on March 2nd
  - Radio Net Name is “Xanadu Tactical Net”
  - You took over as NCO (shift change) for the city’s Tactical Net at 12:45
  - Your scribe is Herman Munster, W6XRL4
  - You receive a message from Shelter 1 to the XND EOC at 12:55
    - Their msg # S1-113; your msg # XND-206; subject = “Bed count”
  - Joe Hamm, KJ6HAM, checks in at 13:10; assigned tactical call “Shelter 2”
  - Betty Ham, KB6HAM, checks in at 13:20; assigned tactical call “Shelter 3”
  - You send a message from Xanadu EOC to Shelter 3 at 13:50
    - Your msg # XND-207; their msg # S3-1004; subject = “Inventory checklist”
  - You receive a message from Shelter 2 to the XND EOC at 14:05
    - Their msg # S2-121; your msg # XND-208; subject = “Supply status”
  - You send to All Shelters at 14:30, your msg # XND-209, “Exercise complete”
    - Shelters respond with their msg #s: S1-122; S2-114; S3-2005
  - Your supervisor tells you to close the Net, you do so at 15:00

## Other Forms You May Encounter

- Message Net
  - RACES Recommended Form Routing Cheat Sheet (keep current!)
  - SCCo Radio Routing Slip
  - SCCo ICS 213 Message Form
  - SCCo OA Jurisdictional Status
  - SCCo OA Shelter Status
  - SCCo EOC-213RR Resource Request Form
  - SCCo Allied Health Facility Status
  - RACES Mutual Aid Request
  - Non-standard forms
- Hospital Net
  - Several form types
- Whatever the form:
  - Proceed in an orderly sequence; follow or create field numbers
  - 5 groups at a time
  - Standard phonetics, numbers, prowords

## Summary of Logging and Record Keeping

- Everyone fills out an ICS-214 Unit Activity Log
  - Start it when you get your assignment (before you leave home)
  - Real event: their ICS-214
  - RACES: ICS 214 SCCo ARES/RACES Unit Activity Log
- Everyone signs in/out on the appropriate ICS-211:
  - Real event: use their ICS-211
  - RACES: ICS 211A SCCo RACES Check In List - Communications
- Everyone (except Shadows) fill out an ICS-309 Communication Log (ICS 309-SCCo)
  - Does not replace the need to maintain an ICS-214 Unit Activity Log
- Must be legible or it is useless!
- Only use blue or black ink ball-point pen when handwritten
- Must be complete and accurate
  - Post analysis may need to reconstruct event flow and information
  - Signatures required on ICS-214 and ICS-309
- Hand in your logs, notes, etc., at the end of your shift

Preparation for running a Net  
**NET CONTROL TYPE III**

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## Preparing to Start a Net

- 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. Verify / Prepare your station
  3. Verify / Prepare your script (intro, reports/check-ins, update, close)
  4. Prepare yourself
- Then Go!

## Prepare Your Station

- 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. )
  - 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

- Main county voice nets have prepared scripts
  - Consult the county manual for each net in county EOC radio room
  - Example for Resource Net  
[https://www.scc-ares-races.org/operations/docs/Resource\\_Net\\_SOP\\_v20240828.pdf](https://www.scc-ares-races.org/operations/docs/Resource_Net_SOP_v20240828.pdf)
- SPECS & SVECS & City Nets also have prepared scripts
  - Consult their websites
- If no prepared script is available, write one!
  - Intro
  - Reports/Check-ins
  - Update
  - Close

## Basic Template for Net Control Scripts

- 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

## Homework 3: Net Start Up Script

### **Situation (pick one):**

1. You are watching the news on TV when you learn that hackers have attacked the telephone network. Northern California and parts of Nevada are reported to be affected. You pick up your phone and have no dial tone. You decide to start a Level 1 Resource Net.
2. You have been assigned to run the staging net at a county-wide drill.
3. You just arrived at your city EOC and you've been asked to get the city tactical net on the air ASAP.

### **Exercise:**

- Prepare your script (intro, reports/check-ins, update and close)
- Be prepared to share it with the class

## Homework Completion Checklist

Complete all items prior to class

<u>Done?</u>	<u>Homework Item</u>
<input type="checkbox"/>	Reviewed self-paced training video for ICS-214
<input type="checkbox"/>	Started ICS-214 for the class
<input type="checkbox"/>	Reviewed both parts of self-paced training video for ICS-309
<input type="checkbox"/>	Filled out the homework ICS-309
<input type="checkbox"/>	Prepared a Net Start-up script using one of the three situations

<u>Done?</u>	<u>Optional Other Items</u>
<input type="checkbox"/>	If needed, print your credential wallet card. Cards expire on Jan.31 each year
<input type="checkbox"/>	If needed, check SCCo go-kit forms for any updates and update personal go-kit
<input type="checkbox"/>	<p>If needed, review your scc-ares-races.org "My Profile" -&gt; "My Contact Info"</p> <ul style="list-style-type: none"> <li>• Updated any information</li> <li>• Check the box following "I have reviewed the information on this page"</li> <li>• Pressed "Save Changes"</li> </ul> <p>Note: please try to do this at least once every year and when there are changes to your contact information</p>

# Thank You!

Some of the homework and the assignments will be reviewed during the class.

The rest you will have to retain in your knowledge.