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Test your HT

- Make sure your radio is programmed to these frequencies:
 - Primary 147.525 Simplex, No Tone
 - Backup 1 446.500 Simplex, No Tone
 - Backup 2 146.490 Simplex, No Tone
- Set your radio to its lowest power setting.
- Call Net Control using your FCC Call Sign for a radio check on the Primary only.
- **You need to use a head set or ear bud during class.**

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Field Operations
Type III Part B and Type II



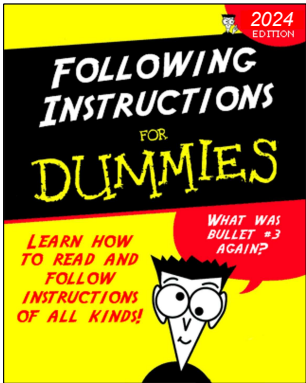
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Housekeeping

- Introductions
- Pen/pencil, paper, course materials
- Cell phones
- Side conversations
- Questions
- Breaks **Water Only in this room**
- Restroom
- In case of emergency
- PARKING – move at first break



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Bring your ICS-214 and ICS-211 that you started in the Part A class.

You will need a student number for the exercises. Use your student number from the Part A class.

If you did not attend Part A, please review the slides and complete the ICS-214 and 211 forms from that class. You will be assigned a student number at the beginning of class.

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Fictitious Examples Used Today

- W6XRL4: Herman Munster
 - Father in 1960’s sitcom “The Munsters”
 - Was an aspiring amateur radio operator
 - Call sign: W6XRL4



- XNDEOC: City of Xanadu Emergency Operations Center



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Forms and Tactical Call Signs for Exercises

- Take out your partially completed forms from Part A of this class and the other blank forms
 - ICS-211
 - ICS-214
- Remember your tactical call sign from Part A.
 - Your tactical call sign will be “Student ###”, where “###” is your number.

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Student Number

You will be assigned a student number for the class exercises if you did not get one in the Part A class last month.

Please complete the homework before coming to class.

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Learning Objectives (Reminder)



- At the end of this two-part course, you should be able to:
- Describe the role of a field operator, including
 - Served agency needs, field assignment types, SCCo ARES/RACES credentialing system
 - Explain and perform basic safety procedures
 - Properly execute an assignment, including
 - Mobilization, selecting equipment, field operations, dealing with problems, demobilization
 - Understand and use field operations checklists

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Agenda



- Type III, Part A (Reminder):

 - Mastering Field Communications
 - Supporting Our Served Agencies
 - Field Comms Assignments
 - Credentials
 - Safety
 - Simulated deployment
 - Mobilization
 - Setting Up a Field Station
- Type III, Part B:

 - Review of Part A
 - Simulated Deployment (cont.)
 - Type III Field Equipment
 - Type II Field Equipment
 - On-Site Operations
 - Traffic Types
 - Message Passing Intro
 - Advanced Techniques (Type II)
 - Dealing with Problems
 - Demobilization
 - Field Ops Checklist

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Review: Field Operations Type III Part A

5m

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Review: Communicating

- The definition of “communicate” is:
 - com·mu·ni·cate: to transmit information, thought, or feeling so that it is satisfactorily _____ and _____.
- Field Emergency Communications can involve threats to _____ and _____
- To be effective and efficient in such critical situations, we strive to _____ field communications.

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Review: Served Agency Procedures

- Most of our served agencies are required by law to use _____ and _____
- It is important for us to understand these systems because
 - We can be more _____ and _____ at supporting our agencies if we understand how they work
 - Messages are usually addressed to/from _____ positions, which are grouped into these five sections: _____, _____, _____, _____, and _____
 - Requests for resources move between agencies following the hierarchy defined in _____, which is: _____ > _____ > _____ > _____ > _____



Equipment for Field Communications, Type III

Standard Go Kit

- 2-hour Carry Kit
 - Keep it nearby
 - Use to make resource net damage reports
- 12-hour Go Kit
 - Needed for any deployment
- Extended Kit
 - 12+ hours
- Includes:
 - X = Required
 - R = Recommended
 - O = Optional
- Always wear a safety vest
 - Unless the served agency has something else to wear

Santa Clara County ARES/RACES Go Kit Checklists	
Revised: 29-Apr-2022	
Legend: X = Required (must have in kit at all times) R = Recommended (highly useful on many assignments) O = Optional (useful on some assignments)	
2-Hour Carry Kit Purpose: To be kept nearby at all times for immediate backup/initial communication of damage reports during Resource Net Level 1 ops. Also used to remain in contact with Resource Net Level 2 while returning home to retrieve 12-hour Go-Kit.	
Items: <ul style="list-style-type: none">X 2m/70cm dual-band radio<ul style="list-style-type: none">• HF recommended (min. 5W on 12V/2.5W on batt)• Mobile 25W optional (if vehicle will not be for away)• Programmed with Resource Net frequenciesX Charged batteries for 2-3 hours operationX 2m/70cm dual-band mobile antenna (mag mount, window mount or existing mobile antenna)X Current SCCA Voice Frequency ListX Modified Micro-USB (Data-M) cableX Headset / pttR Cigarette lighter adapterX Emergency county and city telephone contact listR Cell phoneR Water (24 oz.)	<ul style="list-style-type: none">R Small backpack, vest, chest harness or other similar method for carrying HT while operating portableMobile to Station Radio Equipment:<ul style="list-style-type: none">X 2m/70cm mobile radio (separate/removable from vehicle)<ul style="list-style-type: none">• 25W minimum• Dual receive, cross-band repeatR Radio user manual or cheat sheetR Headset (recommended for VFO per ear) w/ rfm, handswitch or footswitch pttR Battery for 12-hour operation (20 Ah min.; 26 Ah rec.)R Power cord/adapters – connect mobile to power sources:<ul style="list-style-type: none">• Powerpiles• Cigarette lighter socket• Vehicle battery terminalsR Powerpole splitter or fused distribution panelR Spare fusesR Coax adapter: connect mobile radio to coaxR Min. 25' add'l feet of 50 Ohm coaxial cable w/ barrel conn.R Extension cord, 3-wire, 3-6 ft., multi-outletO Extension cord, 3-wire, 50-100 ft.
12-Hour Go Kit Purpose: For fully independent operations; unknown environments (fire, etc), which require unknown time (day, night, up to 12 hours). Return home to retrieve.	
Equipment: <ul style="list-style-type: none">Portable Radio Equipment:<ul style="list-style-type: none">X 2m/70cm dual-band handie-talkie (HT)<ul style="list-style-type: none">• Minimum 5W on 12V/2.5W on batteries (Note 2)• Dual receive recommendedX Radio user manual or cheat sheetX Earbud or headphones minimum; headset, w/boom/mic or headset/microphone, or similar recommendedX Charged batteries for 12 hours (min. 3000 mAh) (Note 2)X Coax adapter – connect HT to coaxX Min. 25' feet of 50 Ohm coaxial cableX Power cord/adapters – connect HT to power sources:<ul style="list-style-type: none">• Powerpiles• Cigarette lighter socket• Vehicle battery terminalsX Spare fusesX Coax adapter: connect HT to coaxX Min. 25' feet of 50 Ohm coaxial cable	<ul style="list-style-type: none">R Small backpack, vest, chest harness or other similar method for carrying HT while operating portableMobile to Station Radio Equipment:<ul style="list-style-type: none">X 2m/70cm mobile radio (separate/removable from vehicle)<ul style="list-style-type: none">• 25W minimum• Dual receive, cross-band repeatR Radio user manual or cheat sheetR Headset (recommended for VFO per ear) w/ rfm, handswitch or footswitch pttR Battery for 12-hour operation (20 Ah min.; 26 Ah rec.)R Power cord/adapters – connect mobile to power sources:<ul style="list-style-type: none">• Powerpiles• Cigarette lighter socket• Vehicle battery terminalsR Powerpole splitter or fused distribution panelR Spare fusesR Coax adapter: connect mobile radio to coaxR Min. 25' add'l feet of 50 Ohm coaxial cable w/ barrel conn.R Extension cord, 3-wire, 3-6 ft., multi-outletO Extension cord, 3-wire, 50-100 ft.
Other Communications Gear: <ul style="list-style-type: none">X Cell phone in the car and/or cigarette lighter adapt.O PEGCOMS radioO Satellite phone	
Tools: <ul style="list-style-type: none">R Duct tapeR Electrical tapeR Nylon Tie-Wraps/Velcro tiesR Utility knifeR Small multi-tool or tool kit	
Santa Clara County ARES/RACES	
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<https://www.scc-ares-races.org/operations.shtml#equip>

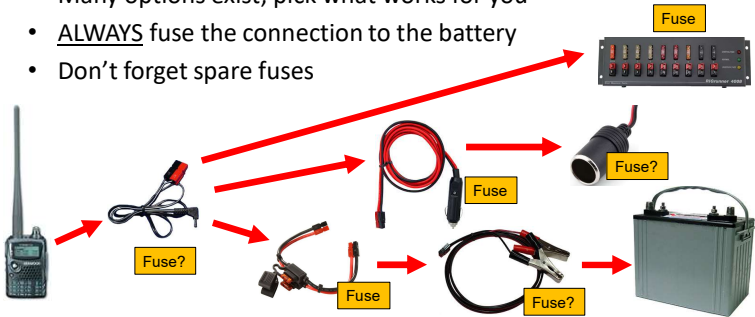
Radio – Portable: “Handie-Talkie” (HT)

- Radio
 - 5 Watts
 - Dual-band (2m, 70cm)
 - Recommended: dual-receive
 - Charged batteries for 12 hours (min. 3000 mAh)
 - Be careful with AA battery packs. On some HTs it will lower the power output to about 1 Watt max!
 - Recommended:
 - After market antenna can be a significant improvement
 - Chest pack or vest pocket to carry radio up high, not at waist
 - “Surveyor” and “Engineer” vests usually have two chest pockets
 - Rubber band(s) for headset plugs on some Yaesu HTs
 - Beware of cheap, non-Part 97 compliant junk radios



Radio Power Adapters

- Required: adapters to get power from three sources
 - 1) Anderson Powerpoles, 2) cigarette lighter socket, 3) car battery terminals
- Many options exist; pick what works for you
- **ALWAYS** fuse the connection to the battery
- Don't forget spare fuses



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HT Headset/Mic Options

- You need to hear and be heard in noisy environments
- Minimum required: earbud or headphones
 - Only improves what you hear, not your ability to be heard by others
- Recommended: headset
 - Alternatives: earbud/mic, speaker/mic/earbud



Headset

- **Usually best** for
 - Hearing
 - Being heard
- Consistent mic position
- Noise cancelling mics available from some manufacturers



Earbud/mic

- Simple, inconspicuous
- Poor mic location, picks up surrounding noise



Speaker/mic

- Hard to hear in noisy environment
 - May support attached earbud
- Mic location depends on how used
 - Not ideal if left clipped to clothing

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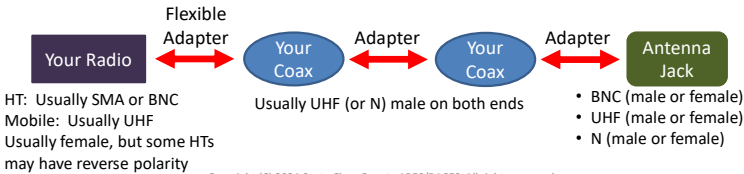
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Coax

More Info: Antenna Fundamentals Class

- Need to connect to existing installed antenna
 - Required
 - Minimum 25 feet of 50 ohm coax (50' recommended)
 - Adapters to connect radio, coax to common antenna connector types
 - Recommended
 - 25-50 feet of low-loss (LMR-400 UF equiv.) to reach station
 - When you add an antenna and mast (Field Type II):
 - 25 feet of lightweight (LMR-240 UF or equiv.) to go up antenna mast
 - Sufficient adapters to connect radio, coax(es), antenna



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Equipment for Field Communications, Type II

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Radio - Mobile

- Minimum 25 Watts (50 Watts recommended)
- Dual band (2m, 70cm)
- Dual-receive
- Cross-band repeat capable (CW-ID recommended)
- Data connector for packet is recommended
- Power adapters (with fuses) for: Anderson Powerpoles, cigarette lighter socket, vehicle battery



<https://www.scc-ares-races.org/operations/vhf-uhf-mobile-voice-radio-considerations.html>

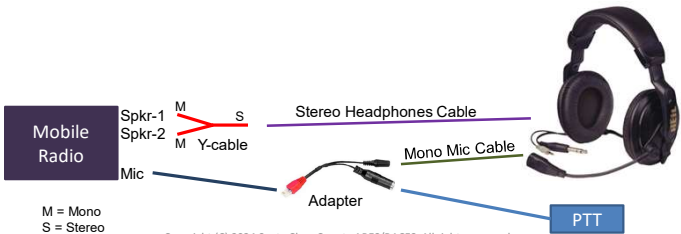
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Headset

- Stereo headset is best for dual-receive
- Y-cable needed for most dual speaker-jack mobile radios
- Radio-specific adapter cable needed for external PTT, headset
- Foot switch or hand switch for PTT



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Push-to-Talk (PTT) Options for Headsets

- Headset needs hand or foot-switch for PTT
- Hand switch (usually best for outdoors)
 - Doesn't sit on the ground - good in dirt or rain, vehicle
 - One hand occupied
 - But can now be repositioned; can hold down papers
 - Hard to type and use a computer
- Foot switch (usually best for indoors)
 - Frees both hands for typing, computer logging
 - Beware of hinged, gas-pedal style
 - Ankle fatigue; chasing it around under the desk
 - Round, heavy is preferred by many
 - Stays put, allows different foot positioning, prevents fatigue
 - Local contesting favorite: Linemaster Gem V2 (shown here)
 - Not ideal outdoors (in dirt or rain)



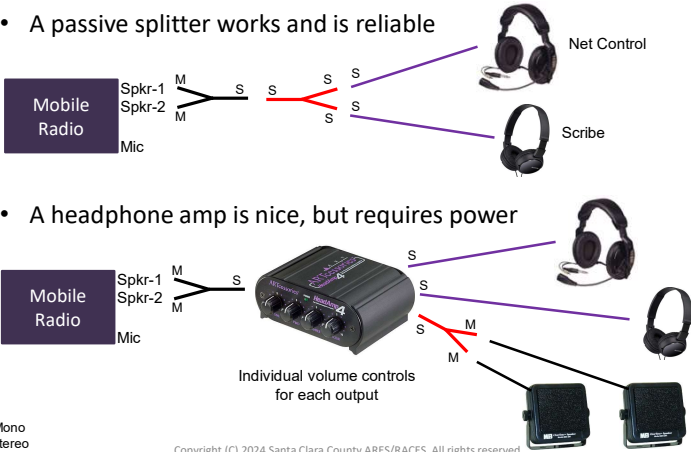
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Headset + Headphones and/or Speakers

- A passive splitter works and is reliable
- A headphone amp is nice, but requires power



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Antenna and Mast

More Info: Antenna Fundamentals Class

- Mast
 - Telescoping mast is light, compact
 - Minimum: Base of antenna > 10 ft
 - Recommended: 32' puts your antenna above all single story and most two-story buildings
- Antenna
 - Roll-up J-pole, dual-band (2m, 70cm)
- Tripod
 - “Speaker stand” tripods are excellent
 - Use 15+ lb sand bag on each leg
 - Be sure collapsed length fits in your vehicle
- Also helpful
 - Heavy-duty Velcro straps to secure mast to tripod or pop-up tent legs



<https://www.scc-ares-races.org/operations/vhf-uhf-antenna-considerations.html>

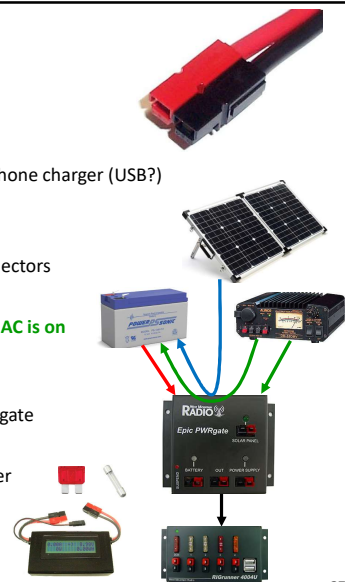
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Power Distribution

- Power requirements
 - Radio(s), fan, lighting, HT charger, cell phone charger (USB?)
 - Scribe’s equipment, others
- DC Power Supply
 - Consider one with multiple output connectors
- Battery charger/battery backup switch
 - Powers radio and charges battery while **AC is on**
 - Switches to battery power if **AC fails**
 - Optional **solar** for battery charging
 - Shown: West Mountain Radio Epic PWRgate
- Fused distribution
 - Shown: West Mountain Radio RigRunner
 - Don’t forget the spare fuses!
- An in-line V/A/W meter can be useful



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Batteries for Field Operations

- SCCo Go Kit recommended battery size
 - AGM: 20 Ah minimum; 26 Ah recommended
 - LFP (LiFePO4): 20 Ah; No firm requirement yet
- Expected [Busy] Duty Cycle (per hour)
 - 5% idle: 3 minutes
 - Nothing received
 - 20% transmit: 12 minutes
 - Send 2 formal messages
 - Receive two formal messages
 - Send/receive informal traffic
 - 75% receive: 45 minutes
 - Listening to other traffic
- This is for voice field operations. Net Control and Packet have different duty cycles.



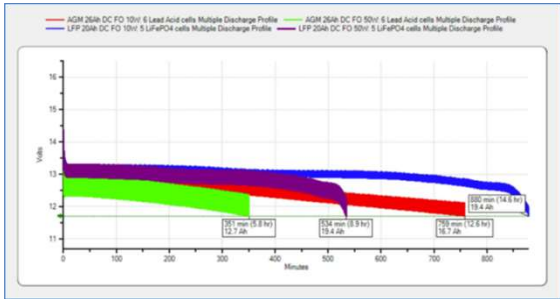
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Field Operations Duty Cycle Testing

- Tested: 10 W and 50 W transmit power; AGM and LiFePO4 batteries
- Results: Use 10 W
 - 50 W with 26 Ah AGM battery will not last a full shift
 - 50 W with 20 Ah LFP battery will last 8+ hours



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Battery Runtime Rule of Thumb



- **Recommended size:**
 - AGM: Minimum 20 Ah minimum; 26 Ah Recommended (SCCo Go Kit)
 - LFP (LiFePO4): 20 Ah Recommended (no required min. value defined yet)
- **Battery size rules of thumb:**
 - AGM: runtime (hr) = 50% of Rated Capacity (Ah) / weighted avg. current (A)
 - LFP: runtime (hr) = Rated Capacity (Ah) / weighted avg. current (A)
- **Example: Field Operator field operator using 50 W transmit power**
 - Duty cycle = 5% idle @ 0.5A; 20% transmit @ 9.2A; 75% receive @ 0.6A
 - Weighted avg. current = (0.05)(0.5 A) + (0.20)(9.2 A) + (0.75)(0.6 A) = 2.3 A
- **Example: 26 Ah AGM Battery**
 - Runtime = (0.50)(26 AH) / (2.3A) = 5.7 hours (actual test result = 5.8 hours)
- **Example: 20 Ah LFP Battery**
 - Runtime = (20 Ah) / (2.3A) = 8.7 hours (actual test result = 8.9 hours)

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Operating On-Site, in the Field

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Example Deployment - Operations

- Net Check-in
- Logging
- Voice Technique
- Examples

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Check-In



- As soon as your station is set up ...
- Check into the assigned net
 - Use phonetics for your call sign since this is the first time net control is hearing it
- If you were assigned a tactical call sign
 - You are checking in as a function or location, not yourself
 - Say: Net Control, <tactical call sign> checking in, <FCC call sign>
 - Example: Net Control, Shelter 1 checking in, W6XRL4
- If you were not assigned a tactical call sign
 - You are checking in as yourself
 - Say: “Net Control, <FCC call sign> checking in”
 - Example: “Net Control, W6XRL4 checking in”
- Update your ICS-214

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Exercise: ICS-309 Communications Log

COMM Log ICS 309-SCCo ARES/RACES	1. Incident Name and Activation Number <i>Field Ops III/II Training Class</i> <i>TC-24-02T</i>	2. Operational Period (Date/Time) <i>MM/DD/YYYY MM/DD/YYYY</i> From: <i>09:00</i> To: <i>12:00</i>			
	3. Radio Net Name (for NCOs) or Position/Tactical Call <i>Student <your number></i>		4. Radio Operator (Name, Call Sign) <i><your name>, <your call sign></i>		
5. COMMUNICATIONS LOG					
Time (24:00)	FROM		TO		Message
	Call Sign/ID	Msg #	Call Sign/ID	Msg #	
09:00			NC		Check-in

Suggestion:
If you leave the field representing you or your position blank,
it can make the log a little easier to read as it fills up

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Communications Technique



- Verbal communication must be effective, clear and concise
 - Plain English; No 10-codes, Q-codes, etc.
 - Proper (ITU) phonetics, prowords, numbers
 - Follows standard procedures
- Radio technique is effective
 - Proper power levels: repeaters vs. simplex
 - Pause for repeaters, especially when linked
- Written communication is effective, clear, concise, legible
 - Correct forms used for each function; properly completed
- Call signs and tactical calls are used properly

Reference: SCCo Performance Standards, page 7

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Methods and Procedures - General

- Operator understands and is able to describe the purpose and appropriate usage of the main nets
 - Resource, Message, Command, Hospital, City, Tactical, Packet, EOC, ...
- Makes proper use of the Resource Net
- Passes messages appropriately using correct ProWords
- Maintains contact with Net Control
- Keeps logs and records correctly
- Follows served agency protocols and procedures
- Provides complete and accurate relief briefings
- Attends debriefing, if one is available

Reference: SCCo Performance Standards, pp 10-13

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Responding to Health & Welfare Checks





- Health and Welfare Checks
 - Key Points
 - Field operators responded with tactical call (good)
 - Identified any problems or needs (none in this case)
 - Ended with FCC call sign, as requested (excellent)
 - Note:
 - Checkpoint 1A has Yaesu Wires turned on. Notice the beep and the suppression of audio at the beginning of his transmission. The words “Checkpoint 1 Alpha” are completely missed!
 - If you have a Yaesu radio, you MUST disable and avoid activating that terrible “feature”!

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Keep Net Control Informed At All Times



- Example: assignment change
 - Staging has reassigned this operator to a new position
 - He does an excellent job of telling net control:
 - Old assignment (old tactical call sign)
 - New assignment (new tactical call sign)
 - The fact that he is on his way there
 - Ends with FCC call sign
- Example: restroom break
 - Never leave the net without telling net control
 - Operator arranged for a stand-in, reducing the load on net control
 - Ends with FCC call sign

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Making Reports


- Example: crowd count reports
 - Checkpoints report number of rows of people on each side of the block they are monitoring, first left, then right
 - Technically, they should use the proword "figure(s)" before saying the number. But the requested information is a number. So, the answer is understood to be a number anyway.
- Key points for both example recordings:
 - They are called by their tactical call sign
 - They answer as their tactical call sign
 - They give the required information, nothing more, nothing less
 - They end with their FCC call sign to satisfy the FCC and indicate that the transmission is completed

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Requesting / Receiving Information

- Example: directed net, always go through net control
 - Both checkpoint 10 and staging use their tactical call signs to communicate
 - Both stations go through net control
 - Both end their transmissions with their FCC call signs. Excellent.

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Exercise: ICS-309 Logging (1)

- At 09:30, net control conducts a health and welfare check
- At 09:45, you ask Xanadu EOC (XNDEOC) for some water
- At 09:50, Xanadu tells you that water is on the way
- At 10:00, net control performs a health and welfare check
- Log this message traffic on your ICS-309

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Exercise: ICS-309 Logging (1)

COMM Log ICS 309-SCCo ARES/RACES	1. Incident Name and Activation Number <i>Field Ops III/II Training Class</i> <i>TC-24-02T</i>	2. Operational Period (Date/Time) <i>MM/DD/YYYY MM/DD/YYYY</i> From: <i>09:00</i> To: <i>12:00</i>			
	3. Radio Net Name (for NCOs) or Position/Tactical Call <i>Student <your number></i>		4. Radio Operator (Name, Call Sign) <i><your name>, <your call sign></i>		
5. COMMUNICATIONS LOG					
Time (24:00)	FROM		TO		Message
	Call Sign/ID	Msg #	Call Sign/ID	Msg #	
09:00			NC		Check-in
09:30	NC				H&W
09:45			XNDEOC		Requested Water
09:50	XNDEOC				Water on the way
10:00	NC				H&W

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Traffic Types

Typical for field operators

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Traffic Types in the Field

- Operator-to-Operator Traffic
 - Ex: Check-in/out, health & welfare, damage reports, status reports, etc.
- 3rd Party Traffic (messages provided by others that we send)
 - Spoken
 - Message that are told to us; usually brief
 - Ex: “Ask Steve to call Jenny at 867-5309”
 - Common for shadows
 - Written
 - Messages that are written down and handed to us
 - Ex: ICS-213 and other forms, message written on plain paper

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3rd Party Spoken Messages



- For simple spoken messages, no need for a message form
 - Example: Most messages between shadows are simple, spoken messages
 - “Ask Steven to call Jenny at 867-5309”
- Use your judgement
 - IF message is longer or more complicated
 - Such as: a complicated message that needs to be delivered exactly
 - OR if it needs routing information for delivery outside the radio room
 - Such as: a message to be delivered to an ICS position in an EOC
 - OR if the message should be tracked
 - Such as: the 3rd parties may need to refer to it again
 - THEN write it down on the appropriate form; handle as a written message
- Log all 3rd party spoken messages on an ICS-309 Comm Log
 - (Shadows can log on their ICS-214)

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3rd Party Written Messages



- 3rd party written messages always use an appropriate form
 - General messages on ICS-213; resource requests on EOC-213RR; etc.
- If the message is not on the appropriate form:
 - Best: Ask the author to use the correct form
 - If they don't have one, provide it to them
 - Else: Transcribe the message to the form, asking the author to clarify and fill in missing information as you go
 - Clarify spelling, other details
 - Last Resort: Staple to an appropriate form only if necessary
 - Papers can become detached, separated
 - Staples, paper clips, and odd paper sizes can cause problems when scanning/copying
- Log all 3rd party written messages on an ICS-309 Comm Log
- See: <https://www.scc-ares-races.org> > Operations > Forms

Jurisdiction Status

- 3 page form
- Who:
 - From: City or Agency
 - To: County EOC
- When:
 - Responding to info requests
 - Submitting updated info
- Instructions
 - Last page

Shelter Status

- 2 page form
- Who:
 - From: Shelter
 - To: Managing jurisdiction
 - City or County EOC
 - Red Cross
- When:
 - Responding to info requests
 - Submitting updated info
- Instructions
 - Last page

Allied Health Status

- Who
 - From: Allied Health Facility
 - Skilled nursing, assisted living, dialysis, out-patient surgical, clinic, ...
 - To: Public Health or EMS
- When:
 - Responding to request for bed counts
 - Submitting updated general info
- Instructions
 - Last page

EOC-213RR Resource Request

- Used to request non-mutual aid resources from the county
 - Not for Law, Fire, EMS, or RACES mutual aid
- Usually sent from city EOC to county EOC (Op Area)
- Other uses
 - County-managed shelter or unincorporated area command post
 - Some cities for internal requests
- Instructions
 - Last page(s)

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Other Forms

- Hospital Forms
 - HavBed Report, Medical Facility Status, Medical Resource Request
- City/Agency specific
 - CERT Damage Assessment
 - Other: Message, ... Status, Resource Request, 9-1-1 forms
- Vendor specific
 - Food orders, Equipment orders
- In general, use the most appropriate form for the specific message. Otherwise, use an ICS-213 Message form.

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ICS-213 Message

- Any general message that isn't better suited for a more specific form
- If someone hands you a message on a scrap of paper, politely ask that they fill in an ICS-213
 - If they refuse, do it for them!
 - Ask them to check it for accuracy.
- Instructions
 - On last page

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What is Radio Routing Info?

- The extra information that a radio operator needs to send, deliver, and track a message
 - Message Numbers
 - Date, Time, Handling Order
 - To/From
 - Radio Operator Info

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Message Number Fields on Forms

Example: Shelter A1 sends to Xanadu EOC

- Origin Station:** assigns origin msg. number; sends message

Radio Operator Only:	¹ Origin Msg #: SA1-1001	Destination Msg #:
----------------------	-------------------------------------	--------------------

- Destination Station:** receives message; adds destination msg. number; provides that msg. number to Origin Station

Radio Operator Only:	¹ Origin Msg #: SA1-1001	Destination Msg #: XND-4321
----------------------	-------------------------------------	-----------------------------

- Origin Station:** updates message form with destination msg. #

Radio Operator Only:	¹ Origin Msg #: SA1-1001	Destination Msg #: XND-4321
----------------------	-------------------------------------	-----------------------------

- But some forms have no message number fields, so ...

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Message Prioritization

- Prioritize messages by:
 - Handling Order
 - Date
 - Time
 - Set by message author (3rd party)

² Date: 2	³ Time (24hr): 3	⁴ Handling: 1 <input type="radio"/> Immediate (ASAP) <input type="radio"/> Priority (<1 hr) <input type="radio"/> Routine (<2 hr)
----------------------	-----------------------------	--

- But some forms have no prioritization fields, so ...

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3rd Party Message Addressing

- Messages are addressed TO and FROM ICS Positions and Locations
 - These are required fields on all messages
- Individual names and contact info are optional fields and are seldom used

T O	⁵ ICS Position:	F R O M	⁹ ICS Position:
	⁶ Location:		¹⁰ Location:
	⁷ Name:		¹¹ Name:
	⁸ Contact Info:		¹² Contact Info:

- But some forms have no To/From fields, so ...

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Radio Routing Slip

- Like a fax cover sheet or departmental routing slip
- A place to put the radio routing info if the form doesn't have those fields
 - Message Numbers
 - Date, Time, Handling Order
 - To/From
 - Reference info about the message
 - Form Type
 - Topic/Subject of message
 - Radio Operator Info

Santa Clara County RACES – Radio Routing Slip

Radio Operator Only: Origin Msg #: Destination Msg #: Rev: 100121

This Section to be Completed by Message Author/Creator

¹ Date: ² Time (24hr): ³ Handling: ☐ Immediate (ASAP) ☐ Priority (<1 hr) ☐ Routine (<2 hr)

⁴ ICS Position:	⁵ ICS Position:
⁶ Location:	⁷ Location:
⁸ Name:	⁹ Name:
¹⁰ Contact Info:	¹¹ Contact Info:
¹² Form:	¹³ Topic:

Instructions for Message Author/Creator:

- Complete sections above, surrounded by BOLD line (see instructions on back)
- Fill in all required fields
- Attach to the front of a form to be sent via radio
- Deliver to radio operator for transmission

Radio Operator Only:

Ref:	Rev:	Call Sign:	Date:	Time (24hr):
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

SCCO ARES/RACES Radio Routing Slip Page 1 of 2

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When/How To Use a Radio Routing Slip

- When sending or receiving a form that does not contain radio routing information
- It is **NOT** a substitute for the ICS-213
 - NOT a (short) message form
 - Do NOT write a message on the routing slip
- Attach to the front of the form being sent/received
- Write Origin Msg Nbr on top right of form being sent/received
- Enter Form Type and Topic (Subject) on the Routing Slip

Santa Clara County RACES – Radio Request Slip

COMPLETED BY REQUESTOR

This Section to be Completed by Message Author/Center

Instructions for Message Author/Center:

- Complete request above, forwarded by 9022 line (see instructions on back)
- Fill in all Requested fields
- Attach to the Radio Request Form by radio
- Deliver to radio operator for transmission

Radio Operator Only:

Rating: _____ Sent: _____

Time: _____ Date: _____ Time (hr/min): _____

Page 1 of 2

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Where do we get the missing information

- Handling Order
- To ICS Position
- To Location

This Section to be Completed by Message Author/Creator: (Underlined=Required)

Date: Time (24hr): Handling: ☐ Immediate (ASAP) ☐ Priority (<2 hr) ☐ Routine (<2 hr)

To


* ICS Position: * Location: * Name: * Contact Info:

From

* ICS Position: * Location: * Name: * Contact Info:

Form: * Type: * Topic:

- These forms are normally sent via WebEOC over the Internet.
- The message author often does not know where the form goes.



County of Santa Clara
Emergency Operations Center (EOC)
Resource Request Form 21B3R

COMPLETED BY REQUESTOR

1. Incident Name	2. Date Initiated	3. Time Initiated	4. Tracking Number (Incident #)

5. Requested By (name, agency, position, email, phone)

6. Prepared by (name, position, email, and/or phone)

7. Approved by (name, position, email, and/or phone)

How to Use the EOC Form 21B3R

The EOC 21B3R is used to request additional resources (personnel, services, personnel, basic supplies, fuel, facilities and other resources as requested) to support emergency response. When to use the Form 21B3R may be used anytime during disaster declaration. The EOC 21B3R is not used until the EOC has been activated to coordinate the request.

Prepared by
 EOC Director or Agency supporting resources (EOC Director or EOC Manager)

Approved by
 EOC Director or EOC Manager

Reviewed by
 EOC Director or EOC Manager

Approved by
 EOC Director or EOC Manager

Approved by
 EOC Director or EOC Manager

8. Requested By (name, agency, position, email, phone)

9. Prepared by (name, position, email, and/or phone)

10. Approved by (name, position, email, and/or phone)

11. Requested By (name, agency, position, email, phone)

12. Prepared by (name, position, email, and/or phone)

13. Approved by (name, position, email, and/or phone)

14. Requested By (name, agency, position, email, phone)

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86. Requested By (name, agency, position, email, phone)

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88. Approved by (name, position, email, and/or phone)

89. Requested By (name, agency, position, email, phone)

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Recommended Form Routing Sheet

- Recommended values for key form fields
 - To Position/Location
 - Handling Order
- Can help get forms to the right place faster when sent by radio
- 2 sided
 - Front is General EOC Forms
 - Back is Medical forms and RACES Mutual Aid Request form

SSC AREs/RACES Recommended Form Routing

Usage:

- This sheet summarizes the recommended **Handling**, **To Location**, and **To KS Position** when sending official forms to various readers.
- The **message author** will address the **Handling**, **To Location** and **To KS Position** for each message.
- **Sending** is a general rule, addressing a message to the **KS Position** that is **not** a subject of the destination location. If the **Sending** is not **to** the **KS Position**, then the **Handling** is **to** the **KS Position**.
- **Delivering** is **to** the **KS Position** if the **Handling** is **not** **to** the **KS Position**.

Deliverables: As a general rule, deliver the message to the holder of the **"KS Position"** identified in the message. **Unit Leader**, **Branch Director**, **Section Chief**, or the **Group**. If that position is not staffed or available, deliver to the next position above the KS hierarchy above that position.

Form Type	Handling	To Location **	To KS Position **
General OK	Author defined	Author defined	Author defined
ICS 213 Message Form	If "Priority" field (1) is "High" (1-2) then "Immediate" (3-4) If "Priority" field (1) is "Low" (5-6) then "Routine" (1-2)	County OK	Planning Section
ICS 213BMR Resource Request	If "Priority" field (1) is "High" (1-2) then "Immediate" (3-4) If "Priority" field (1) is "Low" (5-6) then "Routine" (1-2)	County OK	Situation Analysis Unit After: Planning Section
OK Activation Status	Immediate (3-4)	County OK	Situation Analysis Unit After: Planning Section
OK Station Status	Priority (1-2)	For all messages to the County OK For message to County OK	Mission Case and Station Unit OK After: Operations Section

** For actual OK activations, use the default for Location and KS Position(s) as indicated, unless otherwise in the message originator.

** For AREs/RACES or training event, use the information given to that event only. "Training OK" may be specified instead of "County OK".

Source: Chris Gaudin, ARES/ACES

Revised: 2020-03-30

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Form Handling Exercise

- For each of these forms:
 - Shelter Status (city managed)
 - Allied Health Facility Status (PHDOC open)
 - EOC-213RR Resource Request
 - ICS-213 Message
 - Jurisdiction Status

Santa Clara OK Jurisdiction Status				<input type="button" value="Save As..."/> <input type="button" value="Print"/>	
<input type="button" value="Status Summary"/> <input type="button" value="Copy Page"/>				Distribution: N/A	

This Section to be Completed by Jurisdiction Personnel					
Date:	Time:	Location:	Overseer (a):	Officer(s):	Officer(s) 2:
<input type="checkbox"/> In-Custody <input type="checkbox"/> In-Office <input type="checkbox"/> Out			<input type="checkbox"/> M <input type="checkbox"/> H <input type="checkbox"/> M	<input type="checkbox"/> In-Custody <input type="checkbox"/> In-Office <input type="checkbox"/> Out	
Contact Info:	Name:		Contact Info:		
Report To:	Officer(s)	Officer(s)	Jurisdiction Notes:		

Contact Information		<input type="button" value="Report Suspicious Person"/> <input type="button" value="Link to this Record"/>	
<input type="checkbox"/> SCL Phone <input type="checkbox"/> PM SCL Contact Name <input type="checkbox"/> SCL Contact Phone <input type="checkbox"/> SCL Contact Email <input type="checkbox"/> SCL Contact Address	<input type="checkbox"/> SCL Fax <input type="checkbox"/> PM SCL Contact Phone <input type="checkbox"/> SCL Contact Phone <input type="checkbox"/> SCL Contact Email <input type="checkbox"/> SCL Contact Address		

Government Office Status				<input type="button" value="Report Suspicious Person"/> <input type="button" value="Link to this Record"/>	
<input type="checkbox"/> Office Closed <input type="checkbox"/> Expected to Open Today <input type="checkbox"/> Expected to Open Tomorrow <input type="checkbox"/> Expected to Close Today <input type="checkbox"/> Expected to Close Tomorrow	<input type="checkbox"/> Open (a): <input type="checkbox"/> Open (b): <input type="checkbox"/> Open (c): <input type="checkbox"/> Open (d): <input type="checkbox"/> Open (e):	<input type="checkbox"/> Open (a): <input type="checkbox"/> Open (b): <input type="checkbox"/> Open (c): <input type="checkbox"/> Open (d): <input type="checkbox"/> Open (e):	<input type="checkbox"/> Open (a): <input type="checkbox"/> Open (b): <input type="checkbox"/> Open (c): <input type="checkbox"/> Open (d): <input type="checkbox"/> Open (e):		

RDC Status				<input type="button" value="Report Suspicious Person"/> <input type="button" value="Link to this Record"/>	
<input type="checkbox"/> SCL Open <input type="checkbox"/> SCL In-Custody <input type="checkbox"/> SCL In-Office <input type="checkbox"/> SCL Out <input type="checkbox"/> SCL Closed <input type="checkbox"/> SCL Expected to Open Today <input type="checkbox"/> SCL Expected to Open Tomorrow <input type="checkbox"/> SCL Expected to Close Today <input type="checkbox"/> SCL Expected to Close Tomorrow	<input type="checkbox"/> Open (a): <input type="checkbox"/> Open (b): <input type="checkbox"/> Open (c): <input type="checkbox"/> Open (d): <input type="checkbox"/> Open (e):	<input type="checkbox"/> Open (a): <input type="checkbox"/> Open (b): <input type="checkbox"/> Open (c): <input type="checkbox"/> Open (d): <input type="checkbox"/> Open (e):	<input type="checkbox"/> Open (a): <input type="checkbox"/> Open (b): <input type="checkbox"/> Open (c): <input type="checkbox"/> Open (d): <input type="checkbox"/> Open (e):		

Declarations				<input type="button" value="Report Suspicious Person"/> <input type="button" value="Link to this Record"/>	
<input type="checkbox"/> Not in Custody <input type="checkbox"/> In Custody <input type="checkbox"/> In Office <input type="checkbox"/> Out <input type="checkbox"/> Closed <input type="checkbox"/> Expected to Open Today <input type="checkbox"/> Expected to Open Tomorrow <input type="checkbox"/> Expected to Close Today <input type="checkbox"/> Expected to Close Tomorrow	<input type="checkbox"/> Open (a): <input type="checkbox"/> Open (b): <input type="checkbox"/> Open (c): <input type="checkbox"/> Open (d): <input type="checkbox"/> Open (e):	<input type="checkbox"/> Open (a): <input type="checkbox"/> Open (b): <input type="checkbox"/> Open (c): <input type="checkbox"/> Open (d): <input type="checkbox"/> Open (e):	<input type="checkbox"/> Open (a): <input type="checkbox"/> Open (b): <input type="checkbox"/> Open (c): <input type="checkbox"/> Open (d): <input type="checkbox"/> Open (e):		

- Does it need a routing slip? Why or why not?
- What is the recommended Handling?
- What is the recommended To Location?
- What is the recommended To Position?

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Message Passing Intro

A very basic intro

Messages Are Provided To You

- As radio operators we do not generate the 3rd party messages
- You will be provided the message contents by someone from the served agency
- You will give all received 3rd party messages to a designated person at the served agency
- You should not create 3rd party messages during a drill, exercise, credential evaluation, or real activation unless specifically asked to do so by your supervisor

Message Initiation

- Step 1: Announce quantity and handling order
 - Sender calls receiver (Example: Sender is Shelter 1; Receiver is Net Control)
 - “Net Control, I have 2 Priority messages for you”
 - “Net Control, I have 1 Immediate and 1 Routine message for you”
 - Receiver prioritizes by handling order
 - “Shelter 1, go ahead with your Immediate message”
- Step 2: Announce message type [and need for routing slip]
 - Sender tells receiver
 - “Message type is ICS-213”
 - “Message type is Shelter Status form”
 - “Message type is EOC-213RR with routing slip”
 - Receiver readies the right form, then:
 - “Go ahead” or “Go”
- Step 3: Send the message as usual
 - Five groups/fields at a time, starting with “Message number ...”

Message Logging

- Assume you sent this message to Xanadu EOC
- Assume Xanadu EOC (receiver) assigns message number: XND-205
- The time is now 10:10
- Log it! On which form?

MESSAGE FORM		Origin Msg #: ²	Destination Msg #: ³
* For paper use highlight pen - blue or black ink only (see back for instructions)		SXX-100	XND-205
Date: ¹	Time (H:MT)	Handling: ^{5 (only)} <input type="radio"/> Immediate (ASAP) <input type="radio"/> Priority (<1hr) <input checked="" type="radio"/> Routine (<2hr)	
MM/DD/YYYY (mm/dd/yyyy)	1010 (0000 to 2300)	This Message Requests You To: ⁴	
		TAKE ACTION (<1000): <input type="radio"/> Yes <input checked="" type="radio"/> No	
		REPLY (<1000): <input type="radio"/> Yes, by <input type="text"/> <input checked="" type="radio"/> No	
ICS Position: (required) ⁷		ICS Position: (required) ⁷	
Situation Status Unit		Student XX	
Location: (required) ⁸		Location: (required) ⁸	
Xanadu EOC		Location of class:	
Name: (optional)		Name: (optional)	
Telephone #: (optional)		Telephone #: (optional)	
SUBJECT: ¹⁰ Classroom Status			
REFERENCE (e.g., Number of earlier msg.): ¹⁰			
MESSAGE: ¹¹ (what, who, where needed, how long; contact name and phone number - KEEP MSG BRIEF)			
Field Operations Type III B and Type 2 is underway. Anticipate completion at 1200 hours. Will call Jenny at 408-555-1234 when done			
ACTION TAKEN: ¹² (For use by Originator / Recipient) - USE SEPARATE MESSAGE FORM IF SENDING REPLY			
CC: <input type="checkbox"/> Management <input type="checkbox"/> Operations <input type="checkbox"/> Planning <input type="checkbox"/> Logistics <input type="checkbox"/> Finance			
Operator Use Only: ¹³			
Relay: <input type="checkbox"/> Recv <input type="checkbox"/> Sent			
How: <input type="radio"/> Received <input type="radio"/> Sent (<1000)			
Operator Call Sign: <your FCC call sign>			
<input type="radio"/> Telephone <input type="radio"/> Dispatch Center			
Operator Name: <your name>			
<input checked="" type="radio"/> EOC Radio <input type="radio"/> FAX <input type="radio"/> Courier			
<input checked="" type="radio"/> Amateur Radio <input type="radio"/> Other			
Date: MM/DD/YYYY Time: 1010			
* Message Originator: Send the original to radio. Retain a copy for your reference.			
* Recipient: After sending, complete Operator Use Only and file to radio.			
* Recipient: Complete Operator Use Only then route to the Addressee. Retain a copy in radio if directed by Supervisor.			
* Addressee: Take appropriate action.			
SCCC RACES PCS Form 213 (01/18/2022, Revable 3/21/2022)			

Message Passing Training

MESSAGE FORM		Origin Msg #: ² XND-2145	Destination Msg #: ³
▶ For paper: use ballpoint pen – blue or black ink only (See back for instructions)			
Date: ¹	Time (24hr):	Handling: ⁵ (✓one) <input type="radio"/> Immediate (ASAP) <input checked="" type="radio"/> Priority (< 1hr) <input type="radio"/> Routine (< 2hr)	
<div style="display: flex; justify-content: space-around;"> 02/06/2024 (mm/dd/yy) 10:32 (0001 to 2400) </div>		This Message Requests You To: ⁶	
		TAKE ACTION (✓one) <input checked="" type="radio"/> Yes <input type="radio"/> No	
		REPLY (✓one) <input checked="" type="radio"/> Yes, by <input type="radio"/> No	
T O	ICS Position: (required) ⁷	F R O M	ICS Position: (required) ⁸
	CERT Team Bravo Lead		CERT Coordinator
	Location: (required) ⁹		Location: (required) ⁹
	Columbia Park Staging Area		Xanadu EOC
	Name: (optional)		Name: (optional)
Telephone #: (optional)	Telephone #: (optional)		
SUBJECT: ¹⁰ Task Assignment #25			
REFERENCE (e.g., Number of earlier msg.): ¹¹ 			
MESSAGE: ¹² (what, when, where needed; how long; contact name and phone number - KEEP MSG BRIEF)			
Send a team to do damage assessment on the 200 block of San Anselmo Avenue. Reply with ETA.			
This is drill traffic.			

[illegible]

- ## Message Logging
- Logging with message numbers

Exercise: ICS-309 Logging (3)

- At 10:20, you send an EOC-213RR Resource Request form asking for more donuts.
- Your message number is S##-101. Xanadu’s message number is XND-206.
- Log it on your ICS-309.

Exercise: ICS-309 Logging (3)

COMM Log ICS 309-SCCo ARES/RACES	1. Incident Name and Activation Number	2. Operational Period (Date/Time)			
	Field Ops III/II Training Class TC-24-02T	MM/DD/YYYY MM/DD/YYYY From: 09:00 To: 12:00			
3. Radio Net Name (for NCOs) or Position/Tactical Call		4. Radio Operator (Name, Call Sign)			
Student <your number>		<your name>, <your call sign>			
5. COMMUNICATIONS LOG					
Time (24:00)	FROM		TO		Message
	Call Sign/ID	Msg #	Call Sign/ID	Msg #	
09:00			NC		Check-in
09:30	NC				H&W
09:45			XNDEOC		Requested Water
09:50	XNDEOC				Water on the way
10:00	NC				H&W
10:10		S##-100	XNDEOC	XND-205	[213] Classroom Status
10:20		S##-101	XNDEOC	XND-206	[213RR] More donuts

Exercise: ICS-309 Logging (4)

- At 10:30, Net Control performs a health and welfare check
- At 10:45, Xanadu sends you an ICS-213 Message form with a subject of “Donut Status”. Their message number is XND-207. Your message number is SXX-102.
- Log these messages.

Exercise: ICS-309 Logging (4)

COMM Log ICS 309-SCCo ARES/RACES	1. Incident Name and Activation Number	2. Operational Period (Date/Time)			
	Field Ops III/II Training Class TC-24-02T	MM/DD/YYYY MM/DD/YYYY From: 09:00 To: 12:00			
3. Radio Net Name (for NCOs) or Position/Tactical Call		4. Radio Operator (Name, Call Sign)			
Student <your number>		<your name>, <your call sign>			
5. COMMUNICATIONS LOG					
Time (24:00)	FROM		TO		Message
	Call Sign/ID	Msg #	Call Sign/ID	Msg #	
09:00			NC		Check-in
09:30	NC				H&W
09:45			XNDEOC		Requested Water
09:50	XNDEOC				Water on the way
10:00	NC				H&W
10:10		S##-100	XNDEOC	XND-205	[213] Classroom Status
10:20		S##-101	XNDEOC	XND-206	[213RR] More donuts
10:30	NC				H&W
10:45	XNDEOC	XND-207		S##-102	[213] Donut status



Advanced Techniques

For Field Operator Type II Credential

10m

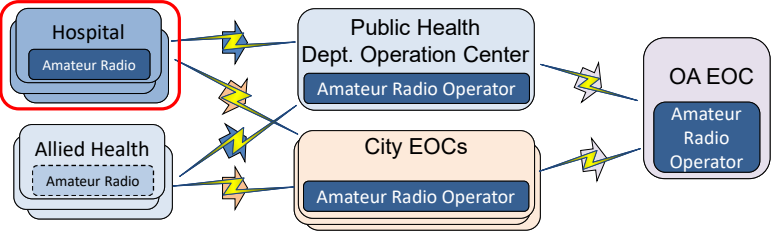
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Operating on Two Nets Simultaneously

- Some field assignments require simultaneous operation on two nets
- Example:
 - Hospital Net: Hospitals to PHDOC; medical issues
 - City Net: Municipal issues, such as fire, law, utilities, public works



```
graph LR; Hospital[Hospital Amateur Radio] --> PHDOC[Public Health Dept. Operation Center Amateur Radio Operator]; Hospital --> CityEOCs[City EOCs Amateur Radio Operator]; AlliedHealth[Allied Health Amateur Radio] --> PHDOC; AlliedHealth --> CityEOCs; PHDOC --> OAEOC[OA EOC Amateur Radio Operator]; CityEOCs --> OAEOC
```

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Operating on Two Nets Simultaneously

- Establish your primary net
 - All other things being equal, which net will you answer first?
- Use at least a dual-receive mobile radio, stereo headphones
 - If possible, use a separate radio for the secondary net so you can hear both nets while you are transmitting
 - An HT with an earbud under your headphones usually works well
- Use a separate ICS-309 Message Log for each net
 - Include net name in field 3: Radio Net Name or Position/Tactical Call
 - Examples: "Hospital Net / Velly Medical; "Santa Clara Tac 1 / Kaiser SC"
- Inform both net controls
 - "Net control, be advised that I am operating two nets simultaneously. This is my {primary|secondary} net. I may not hear you or be able to answer right away if I'm handling higher priority traffic on the other net."
- Work at your own pace; you're still just one person
- Use previously covered techniques to avoid stress, fatigue

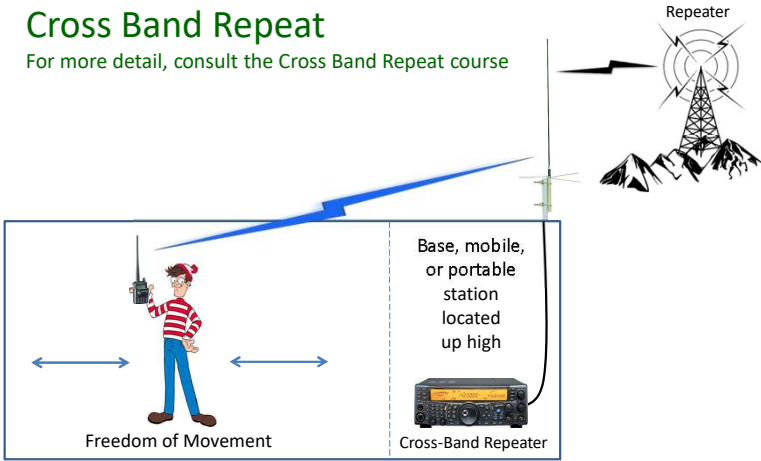
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Cross Band Repeat

For more detail, consult the Cross Band Repeat course



```
graph TD; Person[Person with radio] --> Repeater[Repeater]; Person --> Base[Base, mobile, or portable station located up high]; Base --> Repeater; Repeater --> Person
```

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Cross Band Repeat

For more detail, consult the Cross Band Repeat course

- Advantages
 - Freedom of movement within the shelter, base, or command post for message pick-up and delivery, or locating people with the information you need
 - May be the only practical option you have if you're the only operator
- Challenges
 - HT audio is usually not very good, for either TX or RX
 - Use a headset with boom mic, instead of earbud with inline mic
 - Monitor your duty cycle
 - HT batteries will run down
 - Use extra-low power, have extra batteries charging at all times
 - Cross band repeater radio will overheat
 - Use low power on local/user side
 - Use a good antenna and lowest possible power on the remote/uplink side
 - Consider using a base station radio capable of higher duty cycle
 - Remember to use tone squelch to prevent repeating of noise

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Higher Traffic; Higher Speed



- A Type II operator is expected to have higher traffic levels
- Speed comes with practice and following procedures
- Net procedures
 - Proper net procedures speed up overall net operations
 - Check-in/out, constant monitoring, pauses, reporting formats, phonetics
- Message passing procedures
 - Most net traffic is message traffic
 - Proper message passing procedures speeds up most nets
 - Message prioritization, prowords
 - Those skilled at message passing can transfer a message two to four times as fast as others; as much as 10 more messages per hour!
- Take every opportunity to practice
 - On air message passing practice, weekly nets, drills and exercises

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Dealing with Problems in the Field

Challenges and What to Do About Them

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Loss of Repeater



- How to recognize
 - No courtesy tone (and there used to be one)
 - No squelch tail
 - Not receiving responses
 - No health & welfare checks; no traffic at all
 - You might hear people on the input but not the output
 - Use "Reverse" button to check

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Loss of Repeater – What to Do



- Check your equipment
 - Volume turned up? On the right frequency?
 - Equipment is operational; adequate battery power
- Switch to simplex on repeater output
 - Switch to high power; include tone, in case others are using tone squelch
 - Program backup frequencies from the ICS-205 into your radio memory and be ready to switch to them in case of repeater failure or malicious interference
- Alternate paths of communications
 - Check your Comm. Plan (ICS 205)
 - Check your briefing notes/documents
 - Have a list of frequencies for the area you are in.
- Try tactical simplex frequency for served agency
- Contact other fielded operators on tactical simplex

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Power & Phone Outages



- Field station
 - Check to be sure it's not your equipment
 - Have your flashlights and or battery-operated lanterns nearby, at all times.
 - Configure station to automatically switch to back-up power
 - Batteries – multiple sources and types
 - Back-up generator
 - Vehicle
 - Safety, safety, safety (particularly at night)
 - May affect your ability to call 911
 - Check Comm. Plan (ICS 205) for alternative method of reaching emergency services
- Traveling
 - ATM's, gas stations, banks, stores – all may be closed
 - Signage may be dark and hard to read
 - Keep flashlight/headlamp handy

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High Temperature



- Situation
 - You are operating in the middle of the summer in an area with very high temperatures which could affect equipment performance and your health.
- Action
 - Use a pop-up or other means to create shade for yourself and radio
 - Use lowest radio power possible
 - Switch radios
 - Position radio for sufficient air flow
 - Sufficient space around cooling fins
 - "Radio in a box" is not the best approach in a hot environment unless it includes forced air (fan) ventilation
 - Consider sealed "blue" ice packs (but watch for condensation!)
 - Use a 12v DC fan (consider CFM > 50 and dB < 25)



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Rain, Wind



- Situation
 - You have to operate in rain, wind or both
- Action
 - Protect your paperwork and equipment from wind, rain
 - Plastic bags for radio, clipboard
 - Clipboard(s) and weights for paperwork
 - Use a pop-up or other means to create shelter
 - Add sides to protect from blowing rain
 - Add weights to protect against wind, especially if pop-up has sides
 - Typically 40+ lbs per leg are needed
 - Keep electrical connections off wet ground

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Difficult People



- Situation
 - People may be scared, tired, stressed, or all of the above
 - This applies to other staff as well as the general public
- Action
 - Stay calm; project calmness, confidence
 - Focus on the problem, not the personality
 - Most people will calm down when they see their concern is being addressed
 - If you are unable to address the problem or if the situation persists, seek help from your supervisor

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Safety

- Pay attention to your health and those around you
 - Hydration
 - Cold and heat
 - Stress
 - Fatigue
- Do not go places that you feel are not safe
 - Moving water
 - Mud/Land slides
 - Active fires

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RF Safety (Review)

- Perform an RF Exposure Calculation
<http://www.arrl.org/rf-exposure-calculator>
- More details in the Antenna Fundamentals class and in Field Operations Type III A class

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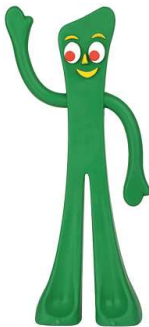
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Key To Success ...

Semper Gumby

("Always Flexible")



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Demobilization

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Demobilization

- Shift Change
- Closing out your assignment
- Paperwork
- Returning home

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Shift Change

- If someone will be relieving you, they should arrive early to set up their station and receive a relief briefing from you
 - See SCCo Performance Standards for relief briefing contents
- What are some key elements of the relief briefing?
 -
 -
 -
 -
 -
 -
 -

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Closing Out Your Assignment

- Check out of the net you’ve been using
- Check into the staging net

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Exercise:

- Assume it is 12:00 and your assignment is completed
- You checked out of your assigned net
 - In this case, the Student Net
 - Typically, a tactical net
- You checked into the Staging Net
 - Or whatever net is appropriate (local tactical, resource, ...)
 - In this case, it's the Staging Net
- Update your ICS-309, ICS-214

Exercise: ICS-309 Logging

5. COMMUNICATIONS LOG					
Time (24:00)	FROM		TO		Message
	Call Sign/ID	Msg #	Call Sign/ID	Msg #	
09:00			NC		Check-in
09:30	NC				H&W
09:45			XNDEOC		Requested Water
09:50	XNDEOC				Water on the way
10:00	NC				H&W
10:10		S##-100	XNDEOC	XND-205	[213] Classroom Status
10:20		S##-101	XNDEOC	XND-206	[213RRR] More donuts
10:30	NC				H&W
10:45	XNDEOC	XND-207		S##-102	[213] Donut Status
...	--- other activities ---
12:00			NC		Check-out

6. Prepared By (Name, Call Sign) <your name>, <your call sign>	6A. Signature Your Signature	7. Date & Time Prepared MM/DD/YYYY 12:00	8. Page 1 of 1
---	---------------------------------	---	----------------

Next operator (if any) begins a new 309 form

Example: Updated ICS-214

6. ACTIVITY LOG	
Time (24:00)	Major Activities & Events / Occasional Messages (Indicate From / To / Msg# / Msg Text)
08:00	Assignment: attend Field Ops III/II Training Class. Sheriff's Office
08:05	Depart home, initial odometer 123
08:25	Arrive staging, final odometer 134
08:50	Assignment: participate as student, tactical call "student <your number>"
09:00	Station set up complete; checked into student net; see ICS-309
...	... other activities
12:00	Shift complete; checked out of student net; check into staging net

Return or Hand Off Forms

- If a new operator is relieving you
 - Take only your ICS-214 Unit Activity log with you
 - Leave everything else at the station for the next operator
 - ICS-309 Communications Log, various message forms, notes, ...
 - The new operator may need to refer to previous communications
- If you are the last operator at the site
 - Bring all forms and notes with you to staging

Return to Staging

- Pack up your station if appropriate
- Complete any procedures requested by local staff
 - Debriefing, review forms, time accounting, etc.
- Return to staging
- Close out your ICS-214
- Turn in all paperwork
- Sign-out on the ICS-211A
- Check out of Staging Net

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Exercise: Finish Up at Staging

- The time is now 12:20
- Close out your ICS-214
- Sign-out on the ICS-211A
- Check out of staging net

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Example: Updated ICS-214

6. ACTIVITY LOG	
Time (24:00)	Major Activities & Events / Occasional Messages (indicate From / To / Msg# / Msg Text)
08:00	Assignment: attend Field Ops III/II Training Class. <class location>
08:05	Depart home, initial odometer 123
08:25	Arrive staging, final odometer 134
08:50	Assignment: participate as student, tactical call "student <your number>"
09:00	Station set up complete; checked into student net; see ICS-309
...	... other activities
12:00	Shift complete; checked out of student net; check into staging net
12:20	Sign-out of staging; heading home

7. Prepared By (Name, Call Sign, ICS Position) <your name>, <your call sign>	7A. Signature Your Signature	8. Date & Time Prepared MM/DD/YYYY 12:20	9. Page <u>1</u> of <u>1</u>
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ICS 211A Check-in List (Communications)

ICS 211A CHECK-IN LIST (COMMUNICATIONS)	1. INCIDENT NAME: <i>Field Ops III/II Training</i>		2. DATE: <i>MM/DD/YYYY</i>		3. INCIDENT NUMBER: <i>TC-24-02T</i>		4. CHECK-IN LOCATION: <i><class location></i>	
	5. INFORMATION							
PERSONNEL NAME	CALL SIGN	AGENCY	TIME IN	TIME OUT	HOURS	REMARKS		
<i><your name></i>	<i><your call></i>	<i><your org></i>	<i>08:30</i>	<i>12:20</i>				
ICS 211A SCCo RACES	6. NUMBER OF PAGES: 1 of 1		7. PREPARED BY (RESOURCE UNIT): <i><your name and call sign></i>			8. MISSION NUMBER -XSC-		

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Return Home

- Check into resource net for tracking home
 - Exception:
 - IF AND ONLY IF the event is a public service event (not a real emergency incident, not a drill), ...
 - AND IF you don't need/want to be tracked home,
 - THEN you can skip the resource net on the way home
 - No need to wait around just to “check-in/checkout”
- Same Resource Net operating procedures apply
 - Check-in with your FCC call sign
 - Provide location, odometer, FCC call sign for health & welfare checks
 - Check-out when you reach your destination (Do not forget)

Congratulations!

- You have completed a simulated full activation
 - Mobilization
 - Operations
 - Demobilization
- You learned about equipment
- You learned about handling problems
- Can you remember it all?
- Can you repeat it over and over without missing anything?

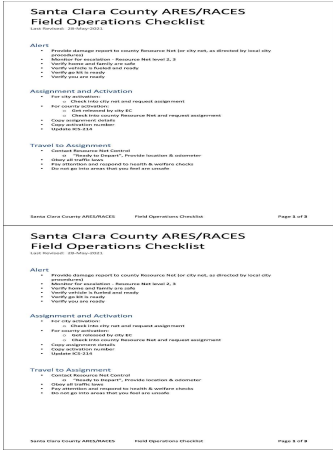


Checklists

For Field Operations

Checklists

- Each role has a checklist
 - Field
 - Net Control
 - Packet
 - Shadow
- Doesn't replace proper training
- Operator expected to
 - Review checklist at each stage of deployment
 - Understand meaning of each step
 - Complete each step correctly
- The Performance Standards & Best Practices has a more extensive list.



Summary

- You should now be able to:
- Describe the role of a field operator, including
 - Served agency needs, field assignment types, SCCo ARES/RACES credentialing system
 - Explain and perform basic safety procedures
 - Properly execute an assignment, including
 - Selecting equipment, mobilization, field operations, dealing with problems, demobilization
 - Understand and use a field operations checklist

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Final Assignment

Please complete the Class Evaluation within one week.

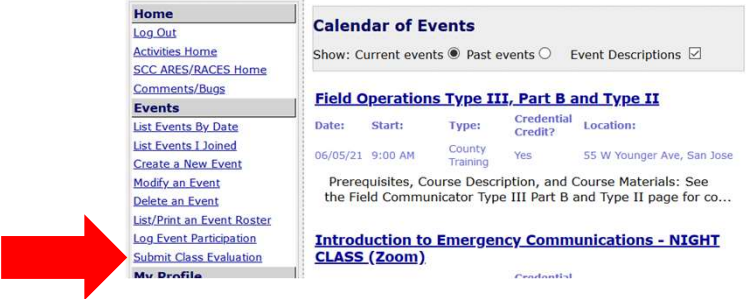
- To get course credit you need to:
- a) Attend at least 90% of the class
 - b) Participate in class
 - b) Complete the class evaluation

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

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Online Class Evaluation

Log into <https://www.scc-ares-races.org/activities/events.php>
Click “Submit Class Evaluation” in Events



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Thank You!

If you have questions or feedback about this or other training activities, please join our **Training discussion group**:

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

This is a moderated group

Sign up for:

- Message Passing Class – July 6th
- Quarterly Training Net (3rd Tuesday of first month each quarter)

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