

Fundamentals of Public Service Communications



MARION COUNTY AMATEUR RADIO EMERGENCY SERVICE



Housekeeping



- Pen/pencil & paper
- Cell phones & pagers
- Side conversations
- Questions
- Refreshments
- Breaks
- Restrooms
- In case of emergency



Introductions



- Name
- Call sign
- First year licensed
- What part of the county do you live in?
- Why are you interested in public service?



Topics of Discussion



- Amateur Radio Public Service Organizations
- Voice Communications
- Data Communications
- Marion County ARES Nets
- Activation Procedures
- Documentation Basics
- Message Handling Skills
- Additional ARES Communicator Skills

Amateur Radio Public Service Organizations



Salvation
Army
Team
Emergency
Radio
Network



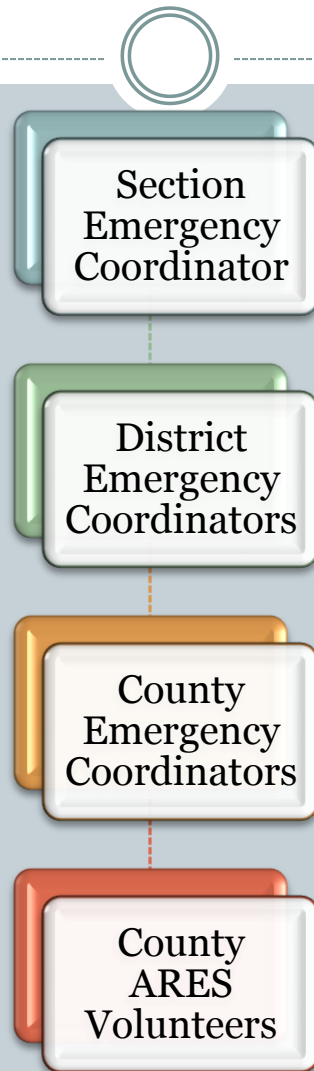
ARES and RACES



- **ARES: Amateur Radio Emergency Service**
 - ✦ A division of ARRL Field Services
 - ✦ Supports local government, non-profit organizations
- **RACES: Radio Amateur Civil Emergency Service**
 - ✦ Official unit under FEMA, defined by FCC Part 97.407
 - ✦ Supports continuity of government only



Indiana Section ARES Organization



MC ARES Leadership



MC ARES
Emergency
Coordinator

Assistant EC
Operations

Assistant EC
Logistics

Assistant EC
Planning

Assistant EC
Liaison

Marion County ARES



- **Marion County ARES Team**

- ✦ Train and develop a team of professional radio communicators
 - Weekly ARES Net
 - Monthly training sessions
 - Quarterly general business meetings
 - Public service events
 - Support our served agencies



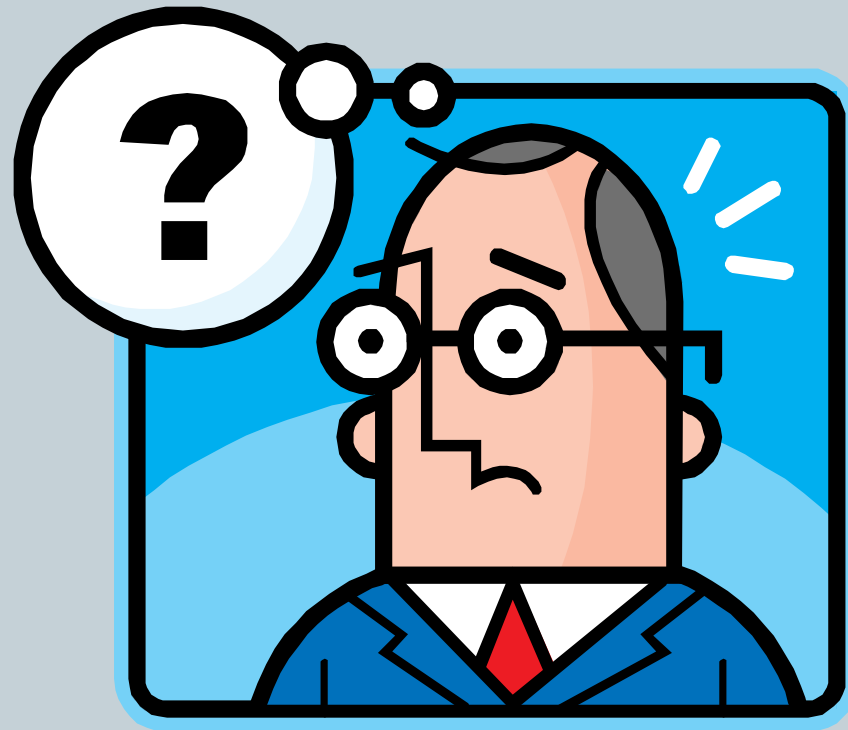
Other Organizations



- **SATERN:** Salvation Army Team Emergency Radio Network
- **REACT:** Radio Emergency Associated Communication Team
- **MARS:** Military Auxiliary Radio System



QUESTIONS ???



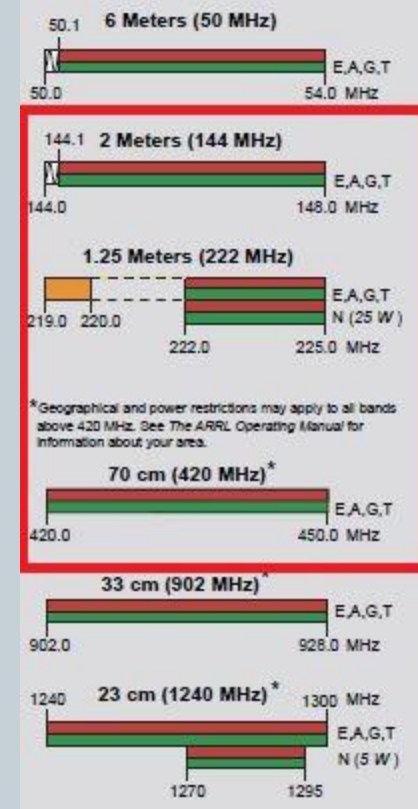
Voice Communications



VHF/UHF Voice Communications



- 2 meter band (commonly called “2 meters”)
 - ✦ 144 to 148 MHz (VHF)
- 70 cm band (commonly called “440”)
 - ✦ 420 to 450 MHz (UHF)
- Also, 1.25 meter band (“220” or “222”)
 - ✦ 222 to 225 (VHF)
- Where do the names come from?
 - ✦ $300 / \text{Frequency (MHz)} = \text{Wavelength (m)}$
 - ✦ Example: $300 / 148 \text{ MHz} = 2$



Characteristics of VHF/UHF FM



- **Short Range**
 - ✦ Point to point range typically < 5 to 7 miles (portable/mobile)
 - ✦ Influenced by line of sight; dependent on antenna height
- **Frequency re-use**
 - ✦ Short range allows for multiple conversations on the same frequency throughout the region
- **Well suited for local emergency communications**
 - ✦ Portable (handi-talkie or “HT” and mobile stations)
 - ✦ Clear voice quality (think of FM vs. AM broadcast radio)
 - ✦ Coverage can be extended by repeaters

FM Voice Operating Modes



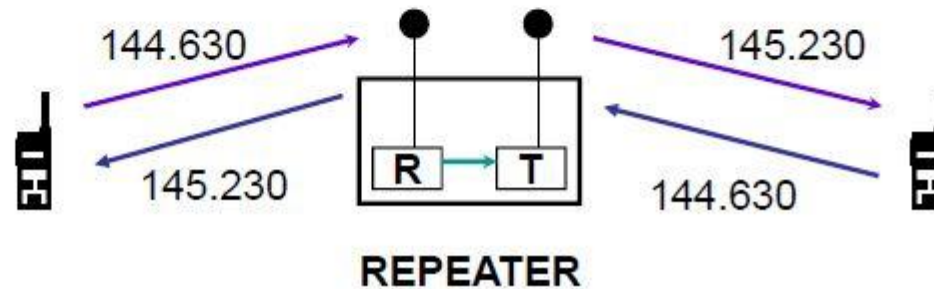
SIMPLEX

Single frequency - one station at a time



DUPLEX

Two frequencies - one station at a time

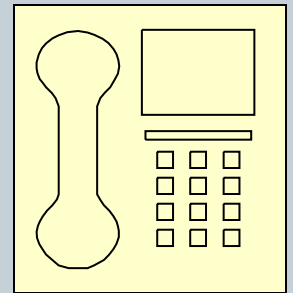


A Radio is NOT a Telephone!



BECAUSE:

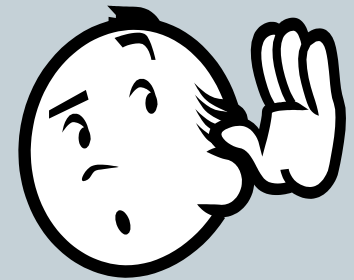
- When YOU talk, you can't hear
 - ✦ The receiver is cut-off while the transmitter is operating
- When YOU talk, no else can talk
 - ✦ If you talk too long, you may prevent emergency traffic
 - ✦ Many repeaters have timers that help to enforce this
- IF EVERYONE talks, NOBODY understands
 - ✦ A “double” occurs and all you hear is a garbled noise
- SO.....



Listen First!



- **Simplex or repeater:**
 - ✦ Leave a pause before keying up to allow others to break in
 - ✦ Check your volume (up) and squelch (down)
- **Simplex**
 - ✦ You may not be able to hear someone who can hear you
 - ✦ Always ask, “Is this frequency in use?”
 - ✦ Usually, someone who can hear you both will tell you
- **Repeaters**
 - ✦ What you’re really listening to is the repeater itself
 - ✦ So, if you can hear anyone, then you can hear everyone
 - ✦ Listen for a brief period to make sure others are not pausing during a conversation
 - ✦ Wait for the courtesy tone if there is one otherwise let the repeater drop between transmissions so emergency traffic can break in



Courtesy Tone



- Audible tone from repeater after each transmission
- Indicates when it is OK to transmit
 - ✦ After other person has dropped carrier
 - ✦ Plus slight pause for other to break in
- Eliminates need for saying “over” or “go ahead”
- Sent by many (not all) repeaters
- Wait until you hear the courtesy tone before you transmit

When Do You Speak?



- Speak ONLY if you have to
- Wait for the courtesy tone and/or leave a gap
 - ✦ If truly urgent, use “break” or “priority” or “emergency” as appropriate
- Key the PTT and pause slightly
 - ✦ Avoid clipping your first syllable; wait longer with linked repeaters
- Speak Accurately, Briefly, Clearly
 - ✦ Keep it short and accurate
 - ✦ Use plain English; no 10-codes or Q-signals or abbreviations
 - ✦ Stick to the facts; don’t speculate; don’t assume
 - ✦ Remember other are listening
 - General public, news media,
 - Avoid personal info, sensationalism
 - Be professional at all times
- Release PTT as soon as you finish speaking; don’t create “dead air”
- In a Directed Net, be sure to follow Net Control’s instructions



Standard Phonetics



A - alfa (AL-fa)
B - bravo (BRAH-voh)
C - charlie (CHAR-lee)
D - delta (DELL-tah)
E - echo (ECK-oh)
F - foxtrot (FOKS-trot)
G - golf (GOLF)
H - hotel (hoh-TELL)
I - india (IN-dee-ah)
J - juliet (JU-lee-ETT)
K - kilo (KEY-loh)
L - lima (LEE-mah)
M - mike (MIKE)

N - november (no-VEM-ber)
O - oscar (OSS-cah)
P - papa (pah-PAH)
Q - quebec (keh-BECK)
R - romeo (ROW-me-oh)
S - sierra (see-AIR-rah)
T - tango (TANG-go)
U - uniform (YOU-ni-form)
V - victor (VIK-tah)
W - whiskey (WISS-key)
X - x-ray (ECKS-RAY)
Y - yankee (YANG-key)
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”

Pronouncing Numerals



0 - zero (ZEE-row)

1 - one (WUN)

2 - two (TOOO)

3 - three (THUH-ree)

4 - four (FOH-wer)

5 - five (FY-ive)

6 - six (Sicks)

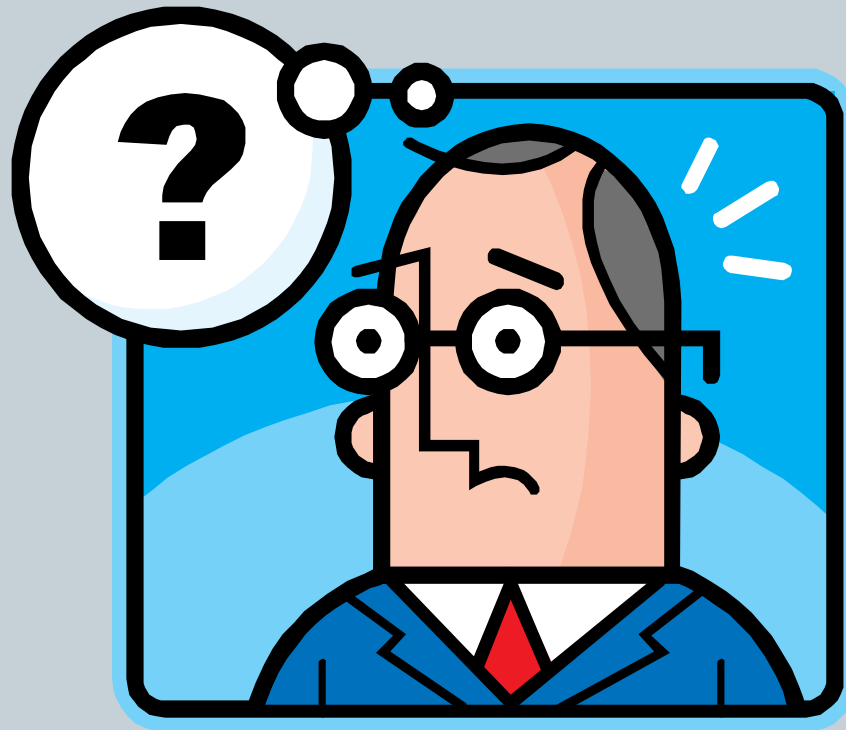
7 - seven (SEV-vin)

8 - eight (Ate)

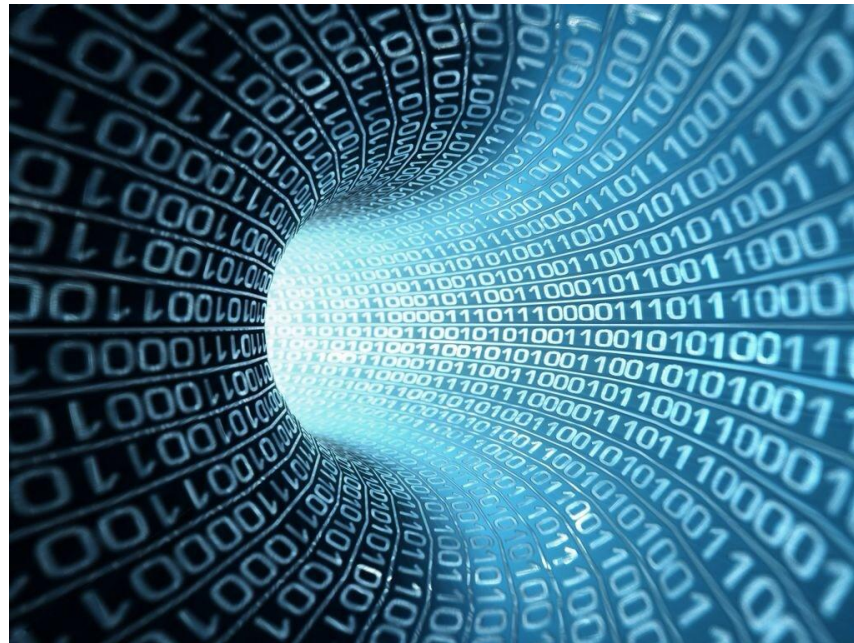
9 - nine (NINE-er)

- Multi-digit numbers are spoken as a string of single digits:
 - 600 = “six zero zero”
- Often preceded by the word “figures”
 - “Please copy 109” → “Please copy figures one zero niner”
 - “Requesting 16 blankets” → “Requesting figures one six blankets”

QUESTIONS ???



Data Communications



Why Digital Communications?



- The needs of our served agencies have changed.
- They still need voice communications but...
- There's an increasing need for data communications.
- We need to provide more than just voice communications from a ham with an HT.
- Voice communications are good for quick tactical messages
- What if you are asked to pass
 - ✦ Roster of evacuees
 - ✦ Required prescription medications
 - ✦ Directions to a disaster scene
- Complicated and involved information is better passed through digital modes

Narrow Band Emergency Messaging Software

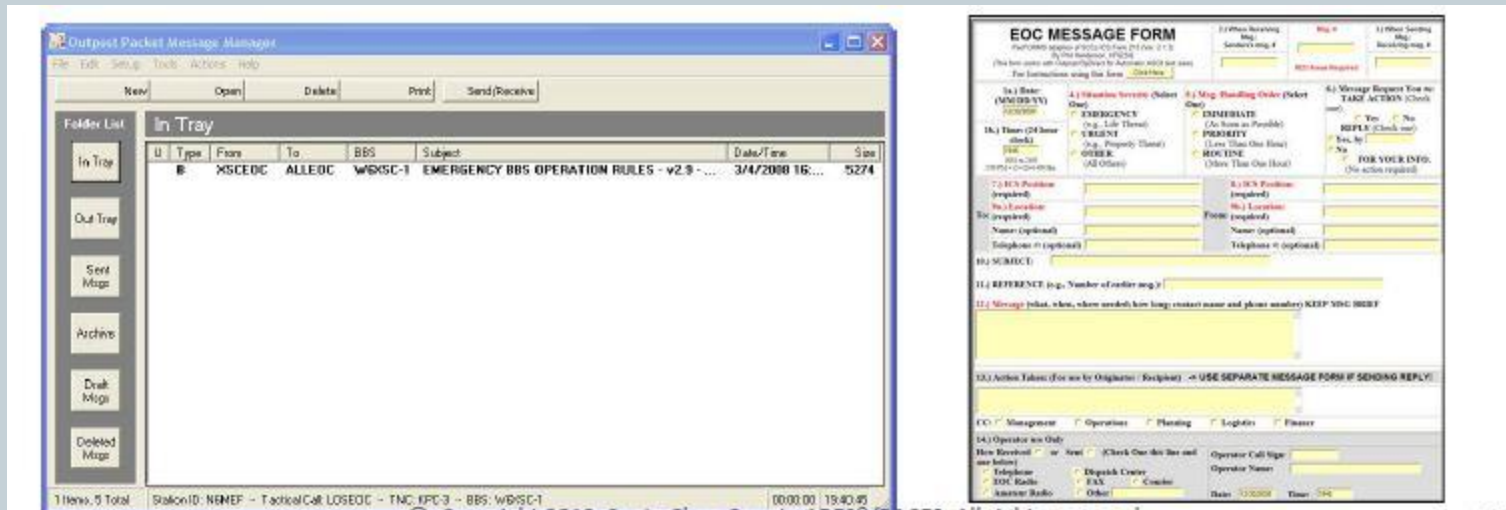


- Open Source software suite
- Can send and receive files or forms
- No specialized hardware needed
- Works on HF SSB and on VHF/UHF FM
- Data communication using nearly any computer OS
- Standard digital communications package for Indiana ARES

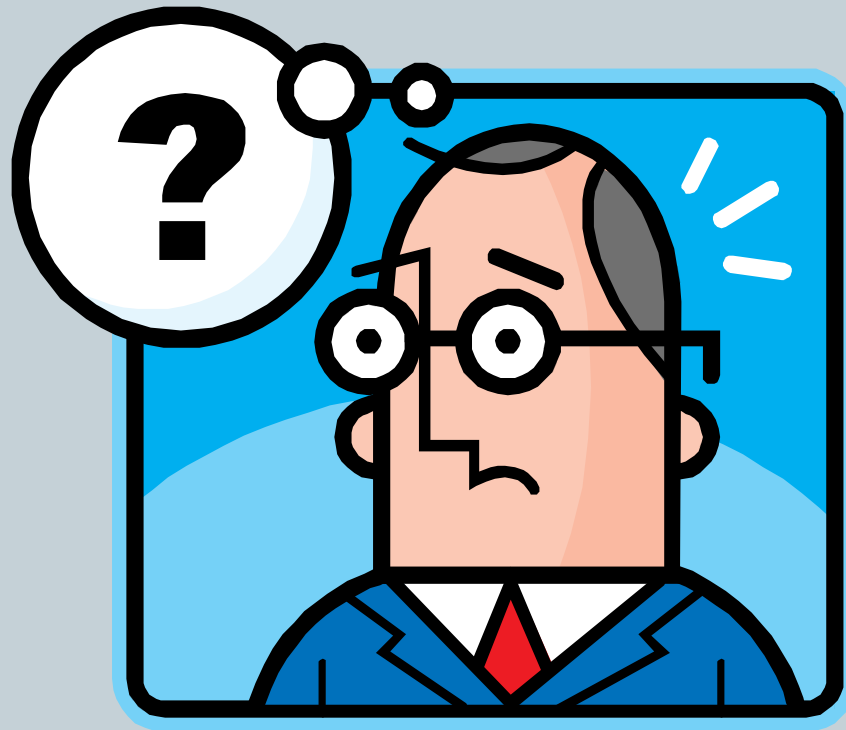
Packet



- Send and receive data via radio
- Similar to using an e-mail program
- Text Message, official forms, complex spelling (drug names, addresses), cut-and-past from other apps



QUESTIONS ???



Marion County ARES Nets



What is an Amateur Radio Net?



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



Types of Nets



- Open Net
 - ✦ Station call each other directly to pass traffic
- Directed Net
 - ✦ Station call only net control directly, go direct to other station only when net control grants permission

What is a “Directed Net”



- One station (“net control”) controls manages the communication flow
 - ✦ Other respond to Net Control when called
 - ✦ Other must call Net Control to get permission before calling anyone else
- Generally used with more than four people
- A net control operator can:
 - ✦ Coordinate communication for best efficiency
 - ✦ Prioritize use of the net for the most urgent traffic
 - ✦ Record a log of net activity

Check-In

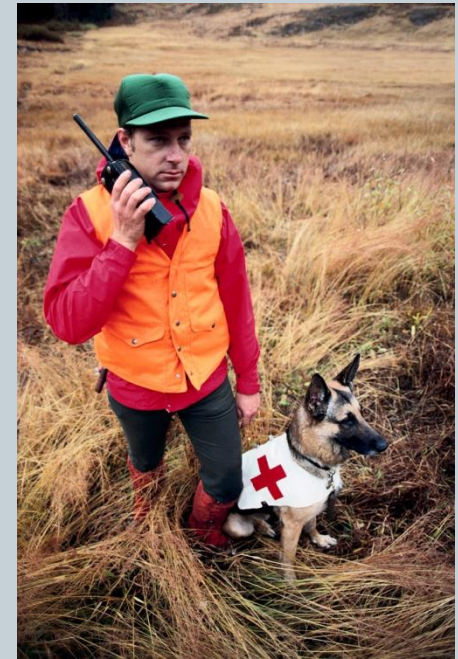


- Check-in is how you make yourself known to net control
- Net Control directs the process; follow their instructions
 - ✦ Net Control: “Will all stations with the call sign suffix Alpha through Echo, A through E please check in now?”
- Speak slowly, enunciate clearly, make use of phonetics
 - ✦ The entire net slows down if Net Control needs to ask for a “fill” or repeat
 - ✦ Gives Net Control time to write it down

Participating in a Directed Net



- Route all communications through net control
 - ✦ Get permission before contacting anyone else
- When called, answer **PROMPTLY**
 - ✦ Monitor the radio continuously
 - ✦ Answer immediately if called
 - The entire net is waiting on you to answer
 - ✦ End your message with your call sign
 - Tells net control that you have nothing else to add
 - Assures that you comply with FCC ID requirements
- Check-in and Check-out
 - ✦ Don't leave the net without checking out!
 - ✦ Otherwise, Net Control wastes time
 - They may send someone to find you; see if you're o.k.
 - You've now become part of the problem



Calling Net Control



- If the Net has been quiet for a while, you might say:
 - ✦ “Net Control, this is <your ID>” checking in
 - ✦ “Net Control, this is <your ID> with one priority message”
- To convey a message or info, indicate what it is so Net Control can prioritize
 - ✦ “<your ID> with one announcement”
 - ✦ “<your ID> with one emergency message”
- On a very active net, usually just say your ID
 - ✦ <your call sign/tactical identifier”
- Wait for Net Control to answer
 - ✦ Don’t call repeatedly; Net Control probably heard you and is busy
 - ✦ Net Control will decide when you can speak
 - ✦ Net Control: “<your ID>, go ahead”
- Then you can speak ... keep it brief



Acknowledging a Call



- When Net Control calls you...
- Pause briefly before pressing PTT
 - ✦ Wait for the courtesy tone or slightly longer
 - ✦ Gives others a chance to break in
- Then respond right away
 - ✦ Don't keep the net waiting
- Say, “This is <your ID>, go ahead”



Ending a Call



- The person who initiated the call ends it
- End a call:
 - ✦ Say “... this is <your call sign>”
 - ✦ We don’t use “73” – keep it short
 - ✦ Maintains compliance with FCC Part 97 to ID at end of last transmission



Tactical Call Signs or “Unit ID’s”



- Identifies a location or function instead of an individual
 - ✦ Examples: “Mile Marker 3”, “Race Director”, “Aid Station I”
- Allows Net Control to manage resources without regard to who is staffing any particular location or function
 - ✦ Simple, plain English
 - ✦ Tactical call stays the same throughout the incident or event
 - ✦ Use your tactical call consistently
 - ✦ Contact Net Control or others by their tactical call
 - ✦ Listen for your tactical call and respond promptly when called

IMPORTANT: Does not eliminate FCC requirement to ID with your FCC call sign at least every 10 minutes and at the end of your last transmission.

- It may be longer than 10 minutes before Net Control gets back to you again
- So, finish your transmission with your FCC call sign

Relays



- Sometimes, a station cannot be heard by net control
 - ✦ Very weak station (poor antenna, bad location, low power)
 - ✦ Net Control may not be in an ideal location or have an ideal antenna (emergency situation, temporary net control)
- All participants need to actively monitor check-ins and acknowledgements to see if Net Control misses anyone
- If you hear a station that Net Control misses, you should relay the information to Net Control

Calling Another Station Directly



- We don't (usually) use "CQ" in FM EmComms
- Say "<their ID>, this is <your ID>"
- Wait until they acknowledge
 - ✦ "this is <their ID>, go ahead" or
 - ✦ "<your ID>, this is <their ID>, go ahead"
- Then you can speak... keep it brief
- Remember to ID at the end of the call
- In a directed net:
 - ✦ You must ask Net Control to "go direct" with another station
 - ✦ If possible, Net Control will give you permission to "go direct"
 - ✦ When finished, turn it back to Net Control
 - ✦ "this is <your ID>, back to Net Control"



Example: Net Check-In



NC	This is <NC call sign>. My name is <name>, Net Control for the Training Net. Stations with Emergency or Priority traffic may break in at any time.
NC	We will now take check-ins by call sign suffix. Will all stations with call sign suffixes beginning with A-L, Alpha through Lima, please check-in now.
Various	<callsign#1> (phonetically) <callsign#2> (phonetically)
NC	Net control acknowledges <callsign#1>, <callsign#2> -- or -- "None heard." Are there any other stations with call sign suffixes A-L, Alpha through Lima, or stations that I missed?
NC	None heard. Will all stations with call sign suffixes beginning with M-Z, Mike through Zulu, please check in now.
Various	<callsign#3> (phonetically) <callsign#4> (phonetically)
NC	Net control acknowledges <callsign#3>, <callsign#4> -- or -- "None heard" Are there any other stations with call sign suffixes M-Z, Mike through Zulu, or stations that I missed?
NC	None heard. Thank you all for checking in. This is <NC call sign>

Example: Net Check-In w/ Relay



NC	This is <NC call sign>, My name is <name>, Net Control for the Training Net.
NC	We will now take check-ins by call sign suffix. If you hear a station that I miss, please relay it to me. Will all stations with call sign suffixes beginning with A-Z, Alpha through Zulu, please check in now.
Various	<callsign#1> <callsign#2> ...
NC	Net control acknowledges <callsign#1>, <callsign#2>, ... Are there any other stations with call sign suffixes A-Z, Alpha through Zulu, or stations that I missed?
Relay Station	"Relay", <relay's ID>
NC	Go ahead <relay's ID>
Relay Station	Net Control, I heard <weak-station-call-sign>. This is <your-call-sign>.
NC	Thank you. Acknowledging <weak-station-call sign>. Are there any other stations with call sign suffixes Alpha through Zulu or stations that I missed?
NC	None heard. Thank you for checking in. This is <NC call sign>

Example: Tactical Call Signs



NC	This is <NC call sign>, My name is <name>, Net Control for the Sitting Left Net.
NC	I will now poll all observers for a count of people sitting to their left. When you hear your call sign, report the number of people who are sitting to your left.
NC	Observer 1
Observer 1	Observer 1 reports <#> people sitting to my left. This is <your call sign>.
NC	Acknowledge # people. Observer 2
Observer 2	Observer 2 reports <#> people sitting to my left. This is <your call sign>
NC	Acknowledge # people. Observer 3
Observer 3	Observer 3 reports <#> people sitting to my left. This is <your call sign>
	... Etc.
NC	Poll of observer stations complete. This is <your call sign>, net control

Marion County Primary Emergency Nets



- **Resource Net**
 - ✦ Usually the first county net activated
 - ✦ Official traffic; type of traffic depends on level of operation

- **Message Net**
 - ✦ Usually the second county net activated
 - ✦ Could be voice or digital
 - ✦ Official message traffic for served agencies

- **Tactical Net**
 - ✦ Official and unofficial traffic of a local nature

- **Command Net**
 - ✦ Official traffic between Operational Area command staff, and the county EOC or between several counties

Frequency List



- Keep an up-to-date copy
 - ✦ County frequency list (IC-217A)
 - ✦ Any additional frequency list(s)
- Program your radio
 - ✦ At least with Resource Net

Marion County ARES Frequencies

The frequencies below are the pre-planned frequencies for each of the net types. All volunteers should be familiar with the IC-217A Communications Resource Availability Worksheet for Marion County. The frequencies identified in the IC-217A may be used for any of the nets based upon resource availability and incident location.

Net Name	Channel Configuration	RX Freq	RX Tone	TX Freq	TX Tone
Primary Resource Net	Repeater	147.120	None	147.720	None
ALT Resource Net	Repeater	443.850	None	448.850	100.0
Message Net	Repeater	443.000	None	448.000	100.0
Message Net Alt	Repeater	146.700	None	146.100	None

MC ARES Simplex Frequencies



Marion County ARES Simplex Frequencies

The frequencies below are pre-planned simplex frequencies for use by the Marion County ARES team.

Channel Name	Frequency	CTCSS Tone	Usage
2 Meter Simplex			
TAC 1	146.400	None	2M FM Simplex – Countywide
TAC 2	146.550	None	2M FM Simplex – NE
TAC 3	146.580	None	2M FM Simplex – SE
TAC 4	147.420	None	2M FM Simplex – SW
TAC 5	147.450	None	2M FM Simplex – NW
70 cm Simplex			
TAC 6	446.450	None	70cm FM Simplex – Countywide
TAC 7	446.500	None	70cm FM Simplex – NE
TAC 8	446.530	None	70cm FM Simplex – SE
TAC 9	446.560	None	70cm FM Simplex – SW
TAC 10	446.590	None	70cm FM Simplex – NW
IN ARES Simplex			
VTAC IN	146.490	None	Indiana ARES VHF Simplex
UTAC IN	446.100	None	Indiana ARES UHF Simplex

Resource Net



- Usually the first net activated in the county
- Directed net
- Activation Levels
 - ✦ Level 5 – normal operations
 - ✦ Level 4 – prepare to mobilize
 - ✦ Level 3 – prepare to respond immediately
 - ✦ Level 2 – volunteers have been mobilized
 - ✦ Level 1 – national level disaster declared
- Frequencies
 - ✦ Primary: 147.120 (-)
 - ✦ Alternate: 443.850 (+) PL 100
 - ✦ These frequencies are pre-planned and may change depending on resource availability

Message Net



- Usually the second net activated in the county
- Directed net
- Official message traffic for served agencies
 - ✦ Typically: agency to agency
- Formal messages
 - ✦ Official Message Form (ICS 213)
 - ✦ All message and responses numbered and tracked
- Information messages
 - ✦ “MEDMACC is checking in...”
- Frequencies
 - ✦ Primary: 443.000 (+) PL 100
 - ✦ Alternate: 146.700 (-)
 - ✦ These frequencies are pre-planned and may change depending on resources availability.



Tactical Net



- Maybe a directed or informal net
- Established when and where needed
 - ✦ Staging areas, checkpoints, rovers, shadows
- Localized, often informal messages
 - ✦ “Checkpoint 3 reports Bryant’s creek at 1 foot above flood stage”
 - ✦ “Rover 2 reports all runners have now passed rest stop 4...”
- May also include formal message
 - ✦ Resource request from shelter, hospital, or school
- Frequencies
 - ✦ Assigned as needed at the time of net activation
 - ✦ Utilize preplanned simplex frequencies as applicable

Marion County ARES Frequency List

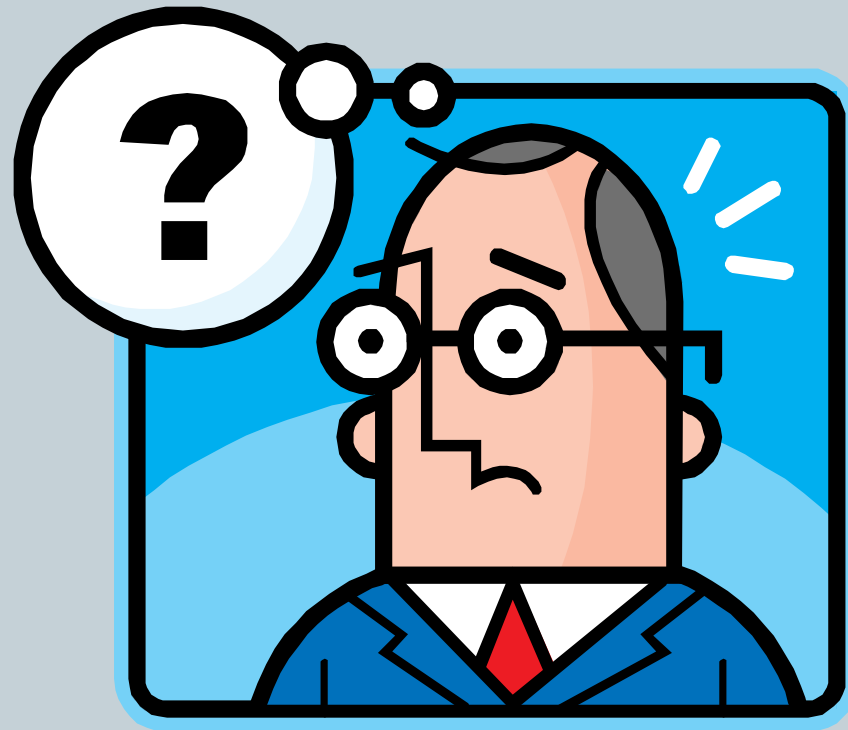


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QUESTIONS ???



Activation Procedures



Alerting Types



- **Self alerting**
 - ✦ Earthquakes (if you can feel them)
 - ✦ Floods (if you can see them)
 - ✦ Tornados
 - ✦ Other situations where you know there's a problem

- **Non-self alerting**
 - ✦ Hazardous material spills
 - ✦ Local infrastructure failure
 - ✦ Other situations where you don't know a problem has occurred until you are alerted by someone

- **Team Activation**
 - ✦ A telephone recall will be initiated of registered volunteers and a Resource Net started

Marion County ARES Activation



What do to when activated?



- Check your family and your home
 - ✦ Without question, your family and home come first
 - ✦ You're no good to anyone if you're worried about folks at home
- Check-in/monitor county resource net
 - ✦ Primary: 147.120-
 - ✦ Alternate: 443.850+ PL 100.0
 - ✦ These frequencies are pre-planned and may change depending on resources availability.
- Review your go-kit and make sure you're ready
- When instructed, switch to assigned frequency
- Check-in with your Net Control
- Standby for assignment and activation
 - ✦ Make sure your family will be okay if you take an assignment

Who activates the team?



- Section or State Level emergency
 - ✦ Indiana Section Manager
 - ✦ Indiana Section Emergency Coordinator
- District 5 Emergency
 - ✦ District 5 Emergency Coordinator or delegated party
- Marion County Emergency
 - ✦ Marion County ARES Emergency Coordinator
 - ✦ Marion County ARES Assistant Emergency Coordinator
 - ✦ Marion County ARES Served Agency

MC ARES Activation Levels



- **Level 5**
 - ✦ Potential for emergency conditions exist (ie. winter weather forecast, etc)

- **Level 4**
 - ✦ Emergency conditions have occurred with limited impact

- **Level 3**
 - ✦ Emergency conditions have occurred with serious impact on all or most of Marion County

- **Level 2**
 - ✦ Emergency conditions have occurred with mutual aid need from District or Section ARES communicators

- **Level 1**
 - ✦ National Command Authority has declared a National Security Emergency.

Preparation



- **DO NOT SELF ACTIVATE or SELF DEPLOY !!!**
 - ✦ Don't go anywhere, don't do anything except prepare
- **Net Control may or may not make immediate assignments**
 - ✦ It may take time for incident command to determine what resources are needed and where they need to be deployed
 - ✦ Be patient; pay attention; monitor closely; respond promptly
 - ✦ If you are unable to monitor; inform Net Control that you need to leave the net and provide an alternate contact method
- **If not immediately activated, use the time wisely to prepare**
 - ✦ Double check your personal situation: home, family
 - ✦ Double check your go-kit, including batteries, food, water, etc
 - ✦ Review proper emergency communications procedures and techniques

Go Kit



- 2 Hour Carry Kit
 - ✦ Keep nearby at all times
- 12 Hour Go kit
 - ✦ Fully independent operations for 12 hours
 - ✦ Return home to retrieve
- Extended Kit (optional)
 - ✦ 72 hour or longer



Assignment



- Net Control may call you at some point and offer an assignment
- If you accept the assignment, you will be activated
 - ✦ Do not accept any assignment if you don't feel safe, aren't trained or don't have the proper equipment
 - ✦ Do not accept an assignment if you not ready to leave
- Before leaving home, notify Net Control you are ready to roll
- You will be given travel and reporting information
 - ✦ Write it down! This likely will include important travel restrictions

Travel



- While enroute, check-in every 15-20 min (or as directed by Net Control)
 - ✦ Report any travel restrictions encountered while traveling
 - ✦ Don't make Net Control ask you for information
 - Know what is needed; be prepared to provide it



Arriving on Scene



- Pick an appropriate and safe place to park

- Stay in your vehicle and do the following:
 - ✦ Tell the Resource Net (or assigned net) that you have arrived
 - ✦ Net Control will inform you of local tactical net
 - ✦ Acknowledge and check out of Resource Net (if directed)
 - ✦ Check in on the local Tactical Net (if directed)
 - ✦ If you CANNOT make contact with local tactical net, return to the Resource Net and ask for further instructions
 - ✦ Do all this FROM YOUR VEHICLE using the more powerful mobile radio and/or antenna
 - ✦ Do NOT Leave your car and walk to the scene unless instructed to do so
 - They may not want you there yet and may violate standard operating procedures of public safety agencies

Interacting with Local Authorities



- Approach in the field of vision of the officer
- Keep hands in plain sight
- Greet the officer
- Identify yourself
- Show identification
- State who sent you
- State where you are headed
- State what you will do there
- Request permission to pass
- Thank the officer
- If you have difficulty, do not argue!
 - ✦ Walk away (as appropriate) and contact net control to ask for instructions



Checking In at your assignment



- At the event, check in where instructed
 - ✦ ICS 211A Communications Check-In form
- Follow the instructions of the local team
 - ✦ Be patient; you may be asked to wait until other s arrive
 - ✦ Be courteous; you are there to help, not run the show
- Remain in constant contact with local tactical net
 - ✦ If you need to go off the air, inform Net Control
 - ✦ If we loose track of you, you have become part of the problem, we have to go find you!

Conducting Yourself at the Scene



- You are there to assist with communications
 - ✦ You are not there to manage the incident; nor to manage all comms
- You must be courteous and respectful at all times
 - ✦ You are an ambassador for ALL amateur radio!
 - ✦ What you do and how you act reflect on ALL of us
 - ✦ If you experience difficulty, contact your supervisor or net control
- Your job is to be a communicator
 - ✦ Do NOT take on tasks that will interfere with duties as a communicator
 - ✦ Do NOT take on tasks or go places if you do not feel safe
 - ✦ Do be the best, most effective communicator you can be!
- At all times, remain in contact with your net control

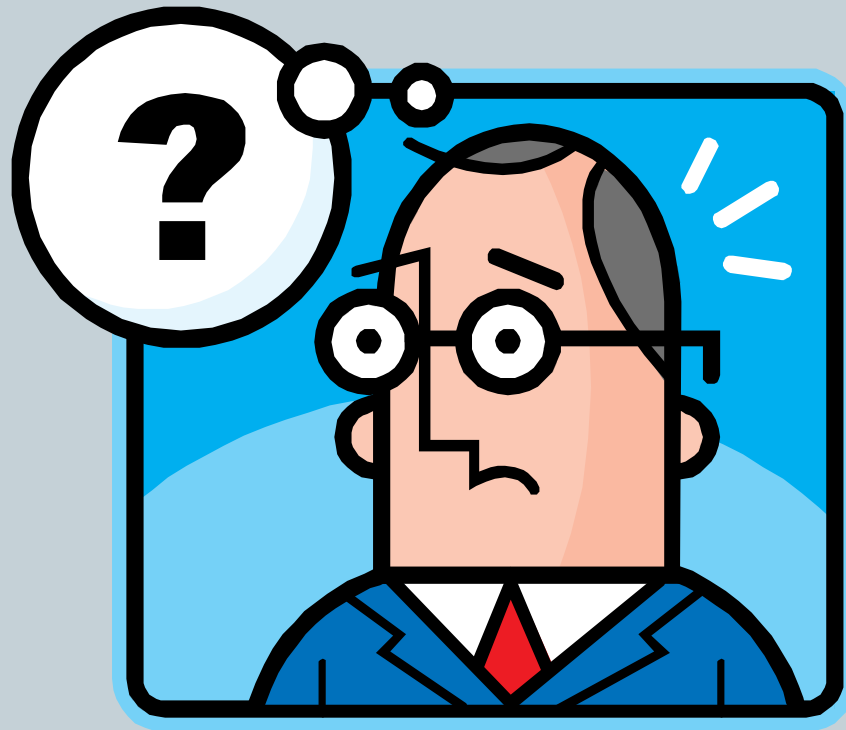
Demobilization



- Upon relief at end of assignment, sign out on the ICS 211 form
- Check out of the local event tactical net (if active)
- Check in on Resource Net (or other applicable net)
- Inform Resource Net control that you are proceeding home
- Check out when you arrive home
- If you have somewhere else to go, you can check out early, before arriving home
- You are responsible for maintaining contact with net control at all times while checked in



QUESTIONS ???



Documentation Basics



Three Primary Logging Forms

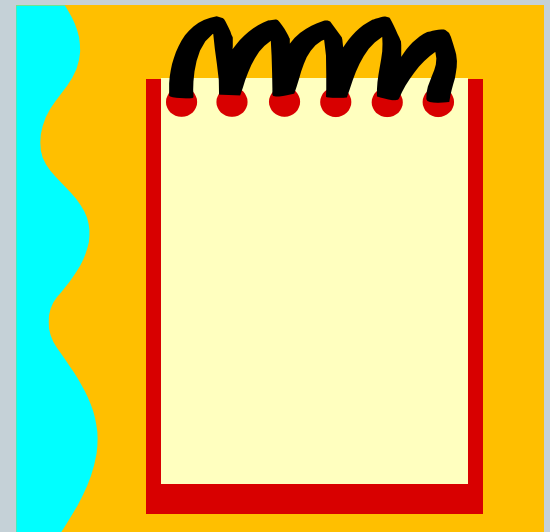


- Writing tablet
- ICS 214 – Unit Activity Log
- ICS 309 – Communications Log

Writing Tablet



- Clear documentation is required
- A simple writing tablet is the basic tool
- Lots of uses
 - ✦ Writing down assignment
 - ✦ Writing down activation information
 - ✦ Copying directions
 - ✦ Informal notes and messages
 - ✦ Scratch paper
 - ✦ Food and drink orders for the team
 - ✦ When you run out of the correct form
- Turn in at the end of your shift
 - ✦ Yes, even your informal notes!



ICS 214 – Unit Activity Log



- A record of all major activities
 - ✦ Assignment, departure, arrival, etc.
- Start when you get your assignment
- **EVERYONE** fills out a 214
 - ✦ Individuals: a unit of one
 - ✦ Teams: Team Leader
- Occasional message traffic?
 - ✦ Just log it right on the 214
 - ✦ No need to use a 309 Comm Log
- Use multiple pages if necessary
- Turn in at end of shift

ICS 309 – Communications Log



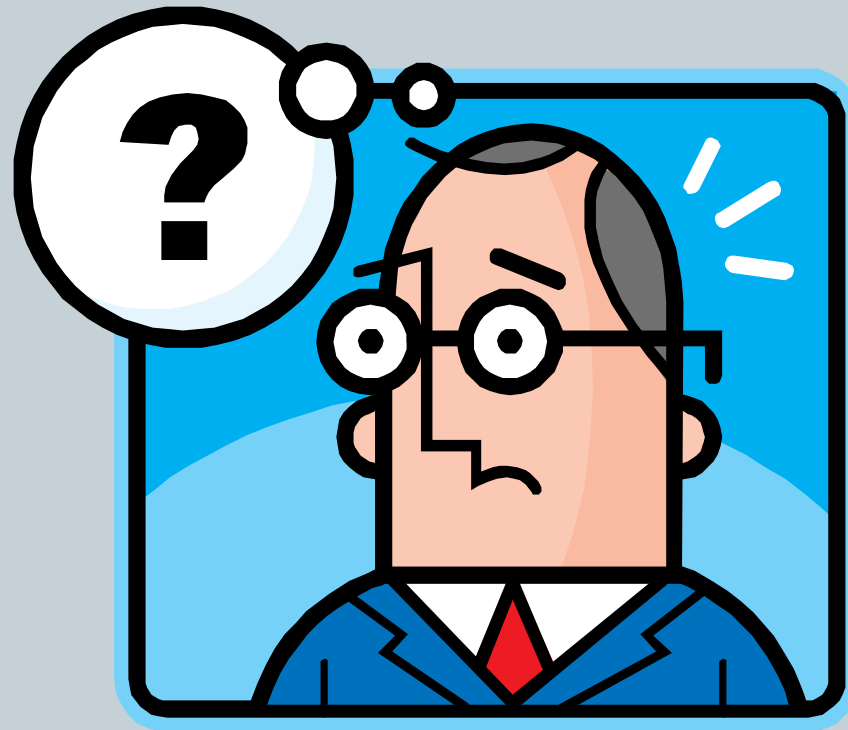
- Net Control Operators and station with high message traffic
- Columns help organize key message tracking info
 - ✦ Time
 - ✦ From
 - ✦ To
 - ✦ Message Subject
- Does not replace ICS-214
 - ✦ ICS-214 is a Unit ACTIVITY Log
 - ✦ EVERYONE fills out a ICS-214
- Turn in at end of your shift or assignment

Summary of Logging Responsibilities



- Everyone fills out a 214 Unit Activity Log
- Only Occasional message traffic?
 - ✦ Log it on the ICS-214 Unit Log
 - ✦ NO ICS-309 Communications Log is required
- Net control operator or significant message traffic?
 - ✦ Also use an ICS-309 Communications Log
 - ✦ Does not replace the need to maintain a 214 Unit Activity Log
- Start your ICS-214 as soon as you receive your assignment
- Must be legible!
- Hand in your log(s) at the end of your shift

QUESTIONS ???



Message Handling Basics



What is a Message Net?



- A network of Amateur Radio Operators acting in an official capacity to pass traffic to or receive traffic from a served agency.

Important
message

For _____
From _____
Time _____ Date _____
Phone _____
 URGENT!
Message _____

The logo for Post-it notes, featuring the word "Post-it" in a stylized font with a graphic of a note being stuck to a surface.

Types of Message Nets



- **County Message Net**
 - ✦ Between served agencies
 - ✦ Between Operational Area (county) and District

- **Local Message (Tactical) Net**
 - ✦ Between incident field locations and incident commander

Types of Messages



- **Formal Messages**
 - ✦ Typically between field site and agency; between agency and county; between county and region
 - ✦ Use official ICS Message Form 213

- **Informal Messages**
 - ✦ Simple, tactical messages
 - ✦ Longer messages – use dual-copy phone message form, ICS-213, radiogram, or other acceptable form

- **All messages are always logged**

Message Traffic Operator Skills



- A good radio operator....
 - ✦ Is as concise as possible
 - ✦ Frequently identifies tactical call
 - Don't forget FCC call sign at the end of traffic
 - ✦ Clearly states the nature of the traffic
 - "I have one priority message for you."
 - ✦ Passes or copies messages exactly as written
 - ✦ Uses the ICS 213 message form
 - ✦ Keeps an accurate log
 - ✦ Uses proper phonetics, numbers, and prowords
 - ✦ Passes messages five words at a time
 - And only as fast as you can write them yourself

Standard Phonetics



A - alfa (AL-fa)
B - bravo (BRAH-voh)
C - charlie (CHAR-lee)
D - delta (DELL-tah)
E - echo (ECK-oh)
F - foxtrot (FOKS-trot)
G - golf (GOLF)
H - hotel (hoh-TELL)
I - india (IN-dee-ah)
J - juliet (JU-lee-ETT)
K - kilo (KEY-loh)
L - lima (LEE-mah)
M - mike (MIKE)

N - november (no-VEM-ber)
O - oscar (OSS-cah)
P - papa (pah-PAH)
Q - quebec (keh-BECK)
R - romeo (ROW-me-oh)
S - sierra (see-AIR-rah)
T - tango (TANG-go)
U - uniform (YOU-ni-form)
V - victor (VIK-tah)
W - whiskey (WISS-key)
X - x-ray (ECKS-RAY)
Y - yankee (YANG-key)
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”

Pronouncing Numerals



0 – zero (ZEE-row)

1 – one (WUN)

2 – two (TOOO)

3 – three (THUH-ree)

4 – four (FOH-wer)

5 – five (FY-ive)

6 – six (Sicks)

7 – seven (SEV-vin)

8 – eight (Ate)

9 – nine (NINE-er)

- Zero is always “zero”; never “oh”
- Decimal point is “decimal” or “point”; never “dot”
- Larger numbers are spoken as a string of single digits:
 - ✦ 600 = “six zero zero”
- Often preceded by the word “figures”
 - ✦ Please copy 109 = “Please copy figures one zero niner”
 - ✦ Request 16 blankets = “Requesting figures one six blankets”

Message Handling Prowords



- SAY AGAIN ... Repeat – usually used with other prowords
- WORD AFTER “Say again word after...”
- WORD BEFORE “Say again word before ...”
- BETWEEN “Say again between ... and ...”
- ALL AFTER “Say again all after ...”
- ALL BEFORE “Say again all before ...”
- I SPELL “ I spell Alpha, Bravo ... “
- FIGURES “Figures Wun, ZEE-row, NINE-er” (109)
- INITIALS “Initials Echo Oscar Charlie” (EOC)

ICS 213 Form



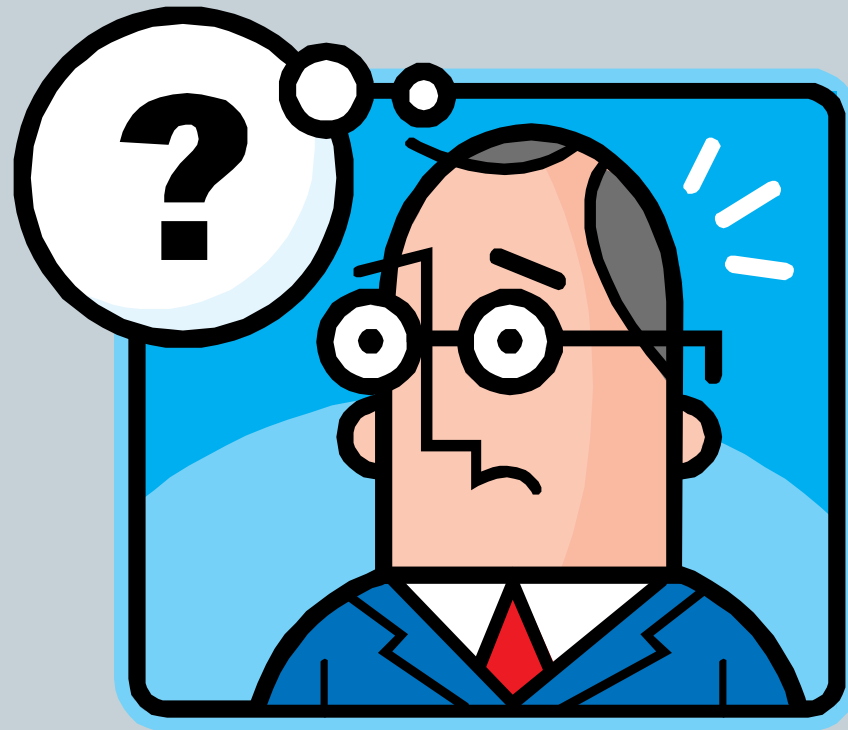
GENERAL MESSAGE (ICS 213)		
1. Incident Name (Optional):		
2. To (Name and Position):		
3. From (Name and Position):		
4. Subject:	5. Date:	6. Time:
7. Message:		
8. Approved by: Name: _____ Signature: _____ Position/Title: _____		
9. Reply:		
10. Replied by: Name: _____ Position/Title: _____ Signature: _____		
ICS 213	Date/Time: _____	

Get It Right!!



- Our task is to effectively transfer message traffic
 - ✦ Priority ONE is to get the message through accurately
 - ✦ Priority two is to do so as quickly and efficiently as possible
- We don't alter the message, we send it as written
- If we don't get that right, there's no point in us being there
- Get it right – the first time, every time

QUESTIONS ???



Additional ARES Communicator Skills



Radio Equipment Proficiency



- Do you know how to program your radio equipment?
- Do you use only computer software?
- Do you know how to change an existing memory?
- Do you know how to set a PL tone?
- Do you know how to adjust your power settings?

Situational Awareness



- Any incident or situation that you respond to will include multiple safety concerns. You will have to continually be aware of the situation and take precautions to be safe.

Confidential Information



- In the course of supporting our served agencies, you will come in contact with confidential information. This information could be in the form of medical information or sensitive information concerning how the incident is being handled. All media inquiries will be referred to the incident commander or PIO.

Continuing Education



- You now have exposure to the fundamentals of public service communications in Marion County
- To be effective, you'll need additional training and some experience in field operations, net control, digital modes, etc.
- Courses will normally be held on a Saturday morning or afternoon.
- Drills, public service events occur throughout the year
- Hope to see you there !!

THANK YOU !!



Questions, Comments, Suggestions?

