

**EMERGENCY
COMMUNICATIONS**

HOW FRS RADIO NETWORKS
MAY BE USED WITH HAM AND OTHER
NETWORKS IN DISASTERS

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**EMERGENCY
COMMUNICATIONS**

- The job of Emergency Communications is to accurately pass messages via any media necessary.

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**EMERGENCY
COMMUNICATIONS**

NOAA - Weather Radio Alert System
EAS - Radio and TV Alert (banner line)
sometimes called Emergency Broadcast System
Automatic Telephone Alert - (reverse 911)

Local Alert - 911 System /
Emergency Operations Center (EOC)

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**When You Need to
Communicate**

- Landline Phones
- Cell Phones
- Satellite Phones
- Nextel/Radio Phones
- Computer/Internet Email
- FAX
- HAM Radio
- FRS/GMRS Radio
- Message Runners, smoke signals, flashing mirrors, whistles and sirens, etc.

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RADIOS

- Function
 - Transmit and receive radio waves & convert them to sound

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RADIO COMMUNICATIONS

- "800" - professional response agencies
- HAM - amateur radio; need a license, take a test, has specific rules of use
- FRS - Family Radio Service; no license, power restrictions, short range
- GMRS - General Mobile Radio Service; need license, but no test, longer range

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GOING THE DISTANCE

- “Simplex” mode or Repeaters for HAM
- For FRS/GMRS - Set up a relay to pass a message farther or over difficult terrain. (ex.) The signal goes from the EOC to Bob, up on the hill, who talks to Jill, down the road on the other side of the hill.
- Now you have a Network

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CERT Communications

- Between individuals on OP’s Teams
 - FRS/GMRS; using tactical channel
 - Keep track of volunteers in potentially unsafe situations, over short distances.
- Between Teams & their CERT EOC’s
 - FRS/GMRS, HAM; using Team channels
 - Report hazards, report areas searched, report victims/patients needs, over short or longer distances.

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RADIO NETWORKS

- Called Nets
- A Radio Net is a group of people with a common goal or interest, communicating with one another over a common channel or frequency.
- A little bit like a “party line”.

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RADIO NETS

- Directed Nets - one person is in charge, you answer when you are called.
- May be directed with a set roster or by check-in at the start.

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RADIO NET CONTROL

- One person is in control until they pass that control to someone else
- Wait until you are asked to respond
- Wait until your response is acknowledged before continuing
- No “side conversation” without permission
- Emergency exception

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USING A RADIO NET

- How will a Net of FRS radio users be of use during a disaster response?
- Combining FRS and HAM Nets

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CERT Communications with Professional Responders

- CERT EOC's to Fire District EOC's
 - HAM
 - Fire Stations will have HAM operators to take in information from CERT teams to help define community needs.
- Fire Districts to County, City EOC's
 - 800 Trunking Systems
 - HAM
 - A HAM operator from ARES is assigned to Portland Metro EOC. Most other EOC's also have HAM setup.
 - Hospitals, some businesses have HAM setup, too

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EMERGENCY COMMUNICATIONS

- To Identify Community Needs
- To Assign Resources
- Provide Accountability and Monitor Safety of Team Members
- Health & Welfare reporting
- Family messages
- Community Status-board Updates

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PARTS OF A RADIO

- Parts
 - Antenna, speaker, microphone, on-off switch, volume control, tuner (channel selection), PTT button - "push to talk" (release to listen)
- Extras may include roger or beep tones, ctcss codes (sub channels), vox (voice activated mode, weather alert, scan function)

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RADIO VOCABULARY

- Control - the person in charge of the
- Net - single group on one task
- Traffic - messages to pass on
- Tac channels - tactical channels; dedicated to a particular group or task
- Station - the person on a radio

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Radio how-to's

- Press the PTT button and hold it down
- Take a breath (inhale)
- Talk across the mic, not into it
- When you have finished talking, release the PTT button and listen.

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RADIO PROTOCOLS

- Hey You, It's Me.
 - Say the name of the person you want to talk to, then say your name.
- Wait for a response before you continue with a message.
- When it's over, you're "clear", or you are "monitoring".
- Breaking or Emergency Traffic

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MSG CLASSIFICATIONS

- C-1.....Danger to Human Life or Safety
- C-2....Injury to People or Animals
- C-3....Damage to Property
- C-4....Any other emergency traffic

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THE ABC'S OF RADIO

- Use when the connection is not clear
- Use when your msg contains a name or numbers
- If you are asked to repeat

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PHONETIC ALPHABET

- | | |
|-----------------|--------------------------|
| A= Alpha | N= November |
| B= Bravo | O= Oscar |
| C= Charlie | P= Papa (<u>Papah</u>) |
| D= Delta | Q= Quebec |
| E= Echo | R= Romeo |
| F= Foxtrot | S= Sierra |
| G= Golf | T= Tango |
| H= Hotel | U= Uniform |
| I= India | V= Victor |
| J= Juliet | W= Whiskey |
| K= Kilo | X= X-ray |
| L= Lima (Leema) | Y= Yankee |
| M= Mike | Z= Zulu |

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PHONETIC NUMBERS

- | | |
|--------------------|------------------|
| (1) ONE= Wun | (6) SIX= Six |
| (2) TWO= Too | (7) SEVEN= Seven |
| (3) THREE= Thahree | (8) EIGHT= Ate |
| (4) FOUR= Fohwer | (9) NINE= Nyhner |
| (5) FIVE= Fife | (0) ZERO= Zero |

10 is "one, zero"
 11 is "one, one" etc.

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