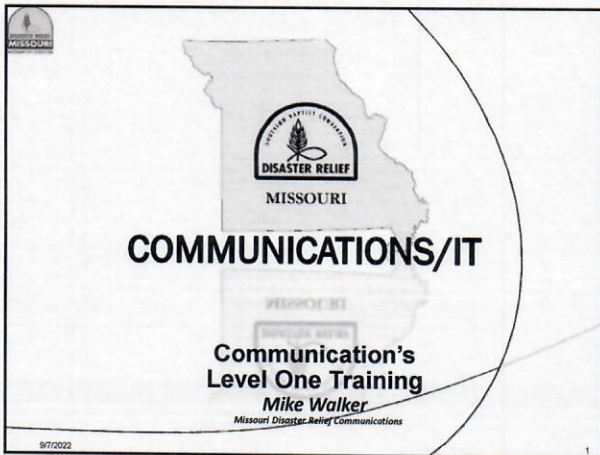




**MOBAPTIST.ORG/DR**

**Communications/I.T.  
Level 1  
Training**



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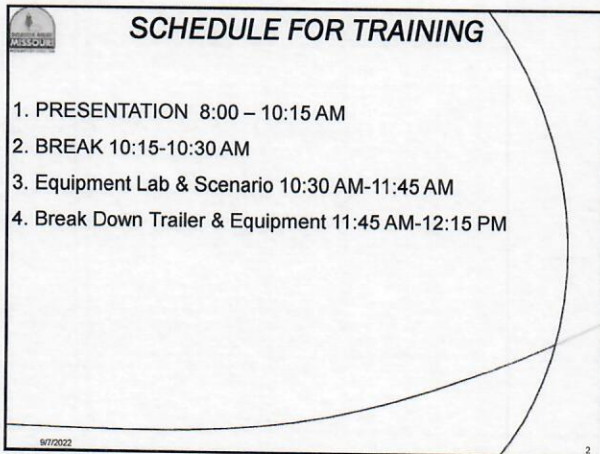
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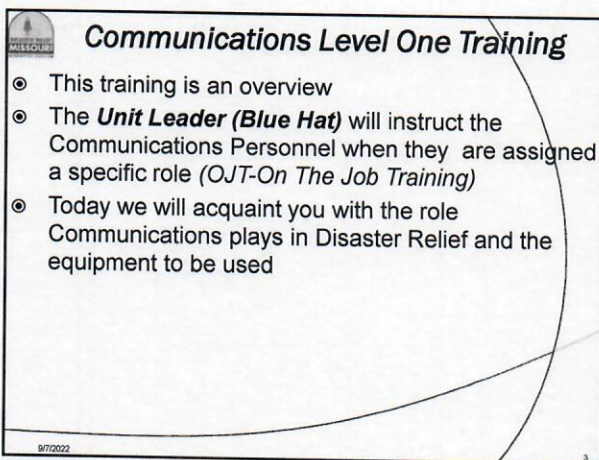
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## DISASTER RELIEF!

*"What use is it, my brethren, if a man says he has faith, but he has no works? Can that faith save him? If a brother or sister is without clothing and in need of daily food, and one of you says to them, "Go in peace, be warmed and be filled," and yet you do not give them what is necessary for their body, what use is that?"*  
James 2:14-16 NAS

**FIRST  
WE MEET THE NEED  
THEN  
WE PLANT THE SEED!**

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## DISASTER RELIEF!

- ⦿ Communications is *not* the most visible units in Disaster Relief
- ⦿ We support other units and those in leadership
- ⦿ All the Equipment and the satellite dish will gain attention

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## Why a Communications Unit?

- ⦿ Previous gaps in communications in the field
- ⦿ Initiation of the "Incident Management Team" (IMT)
- ⦿ IMT has standardized the command structure of DR Partners
  - And a greater need for Communications

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### Overview

- The primary function of Missouri Disaster Relief Communications Unit is:
  - To provide logistical and tactical communications support, as directed
  - To whatever unit or task to which they have been assigned
  - Using multiple communications methods

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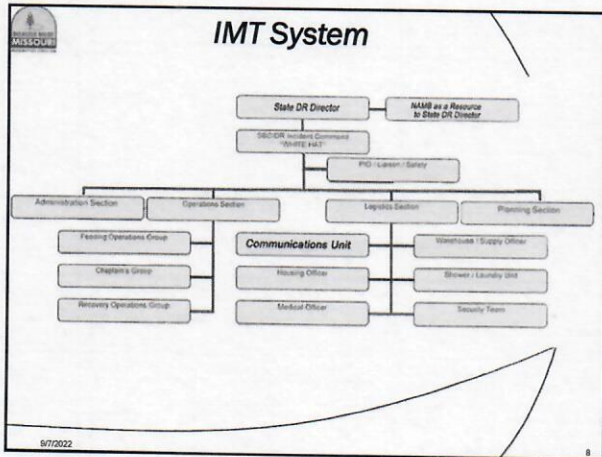
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### Incident Management Team (IMT)

- Incident Commander (IC)
  - White Hat assigned by State DR Director
  - In Charge of overall Relief effort
- Safety Officer
  - May be IC
  - Oversees all health & safety aspects of DR volunteers
- Public Information Officer (PIO)
  - May be IC
  - Informs the public, media and agencies of the progress being made during the response

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### IMT (cont)

- Operations Chief
  - Responsible for the recovery units working in the field
- Logistics Chief
  - Responsible for all units in route to
  - And at the assigned location
- Administration Chief
  - Responsible for all reports, paperwork, etc
- Planning Chief
  - Responsible for preparations for deployment

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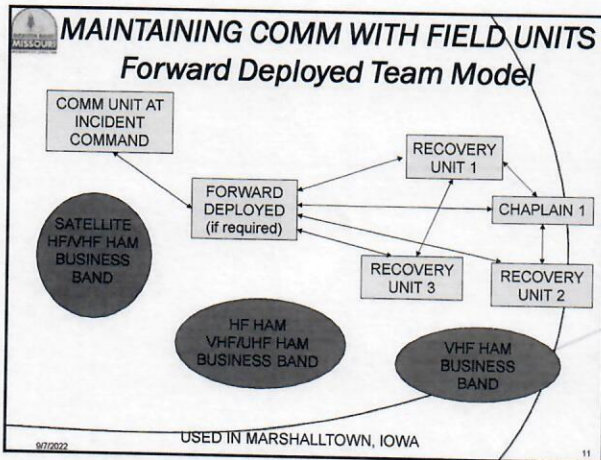
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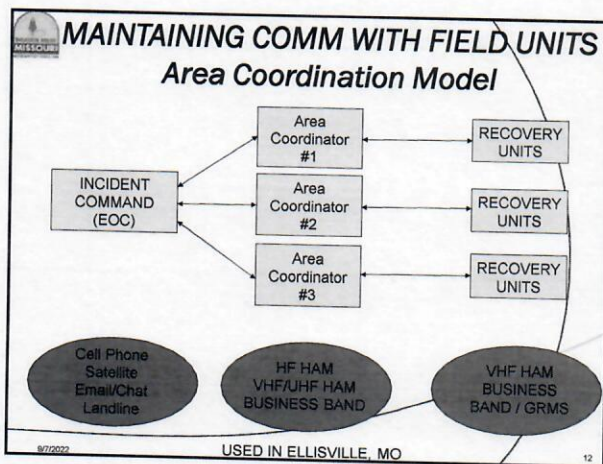
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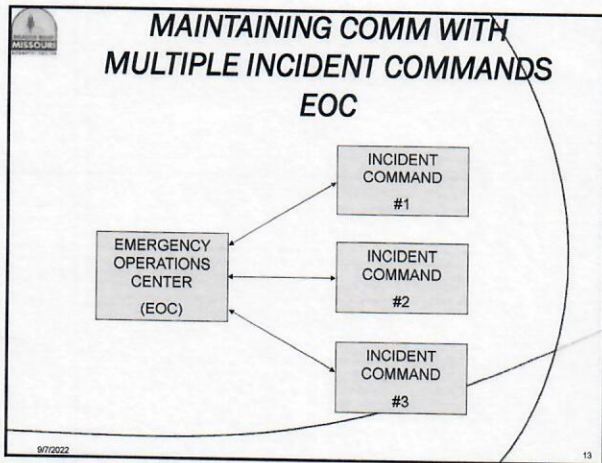
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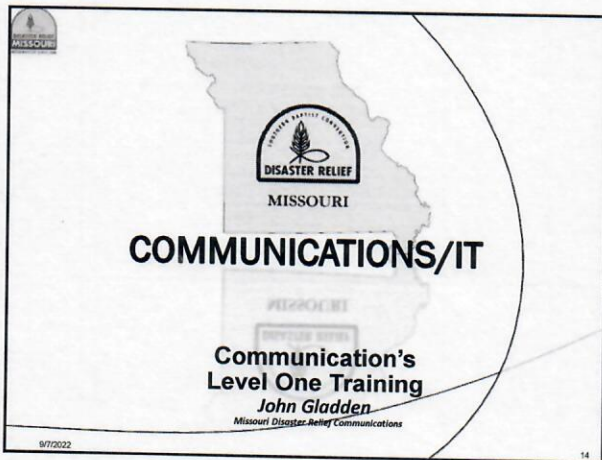
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- Communications/IT**
- ◎ Personnel
    - State DR Communications Coordinator
      - Assistant Coordinator
    - Unit Blue Hat
    - Two Teams
      - Radio Operations Team
      - IT Team

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### Communications Team Member

- All Communications Team Members need:
  - To be Disaster Relief certified
  - To complete this training
  - Basic computer & phone skills
  - Know how to work in a team environment
- Communications Team Members are not required to hold an Amateur Radio License
  - Preference will be given to the Communications Team Members on the Comm Trailer holding at least a Technicians License

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### Comm Team Organization (cont)

The Communications Team is organized in to two groups

- Information Technology (IT) Team
  - IT Assistants with basic skills in
    - Networks
      - Modem, Routers, Switches and interconnect
    - Internet over Satellite
    - Computer hardware and software application support
    - Printer setup and support
    - Voice over IP (VoIP) Phone support
    - OTJ training for those with basic skillsets
    - Setup, Teardown, Support, Configuration, & Maintenance
  - Documentation – Procedures, Go-Box Inventories, etc

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### Communications Team Organization

- Radio Operations Team
  - All Radio Comm equipment
  - Setup, Teardown, Support, Configuration, & Maintenance
  - Must have at least a Technicians License
  - Preference given to Amateur General or Extra
  - At least 1 Comm Team Member during radio operations must hold an Amateur Radio Technician license or higher

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### Communications Level One Training

- This training is an overview
- The **Unit Leader (Blue Hat)** will instruct the Communications Personnel when they are assigned a specific role (*OJT-On The Job Training*)
- Today we will acquaint you with the role Communications plays in Disaster Relief and the equipment to be used

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### Comm Team Equipment Types

- The Comm Team utilizes and supports 5 Equipment types
  - Satellite Internet/Intranet
    - Modems, Routers, Switches, Access Points
  - Cellular based Internet
    - Cradlepoint LTE Modem/Router
  - VoIP (digital) Phone System
    - Phones, PoE
  - Desktop, Laptop, Printer Equipment
  - Radios
    - Amateur & Business Band

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### Comm Team Equipment Types (cont)

- Satellite Internet
  - Capable of deploying a HughesNet Gen 5 Satellite based Internet
  - Includes Satellite dish, stand, & modem/router
  - Internet access independent of
    - Land based Internet providers
    - Cellular based Internet providers and cell towers
  - Currently requires "pointing" of dish at correct satellite
  - Susceptible to signal interference from trees, buildings, and clouds
  - Currently evaluating feasibility of Starlink satellite technology

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### Comm Team Equipment Types (cont)

- Cellular Based Internet
  - Capable of deploying 2 Cradlepoint IBR1700 Mobile Ruggedized Gigabit-Class LTE Routers
    - Analogous to in-home DSL or Cable Modem/Wireless Routers
  - Uses FirstNet first responder services over ATT cellular spectrum
  - Internet access independent of
    - Land based Internet providers
    - Requires ATT cellular service at IMT location
    - It is the Internet preference when cell service is available
  - Can be susceptible to severe weather conditions

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### Comm Team Equipment Types (cont)

#### VOIP Phone System

- Works like a Telephone
  - Supports voice mail, call history, etc
- Tied to the phone Trunk Lines at the Jefferson City Baptist Building
- Transfer calls from extension to extension or calls directly from extension to extension.
  - Calls from outside:
    - "Baptist Disaster Relief, may I help you?"
  - Calls from extensions:
    - "Communications Unit, may I help you?"

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### Comm Team Equipment Types (cont)

- Desktop, Laptop, Printer Equipment
  - Comm Team has 9 ThinkCentre Desktops
    - 4 in Go-Box 1
    - 3 in Go-Box 2
    - 2 in Comm Trailer in addition to a laptop
  - Equipment allows users (IC, Operations, Logistics, Planning, Administration) to
    - Perform email communication tasks
    - Perform data entry (Work Orders, Excel sheets, Mapping) and logging with applications over DropBox
    - General computer and printer functionality

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### Comm Team Equipment Types (cont)

- ◉ Radios**
  - Amateur Radios
    - KDØKVS-Com Unit License
    - See Communications Level One Booklet -Appendix E
  - Business Band
    - WQAL495-NAMB License
    - See Communications Level One Booklet -Appendix E

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### MODR IT Training

1. Jerry's Comm/IT Motto
2. IT Purpose and Goals
3. Typical Network Configuration
4. IT DR Phases
  - A. Prepare
  - B. Deploy
  - C. Recover

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### Jerry's Comm/IT Motto

- ◉ Jerry's Comm/IT Motto**
  - We want multiple ways to communicate in hopes that, at least one, will work when we need it
  - Memorize and repeat!
- ◉ IT provides multiple ways to communicate**
  - Various internet paths, radios, phones, etc
  - In hopes that, at least one, will work when we need it at a Disaster Event

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### IT Purpose & Goals

- MODR IT Purpose and Goals
  - Provide the communication network infrastructure in support of:
    - Incident Management Team
    - Assessors
    - Logistics
    - And other volunteers to fulfill their missions
  - If the IT team does its job correctly
    - We are transparent
    - Nobody will notice or know what you do
    - And you will likely have spare time to help others
  - Otherwise, if the network is down
    - Everybody will know who you are and what you are not doing...
  - That is the life of an IT-type person

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### Network Configuration Diagrams

- The following is a typical Network configuration used during deployments
  - Not static
  - Expected to evolve over time as capability and technology changes
  - Hoping to add Starlink internet configuration
    - When it becomes available
  - Will continue to make changes to routers and VoIP phones configurations

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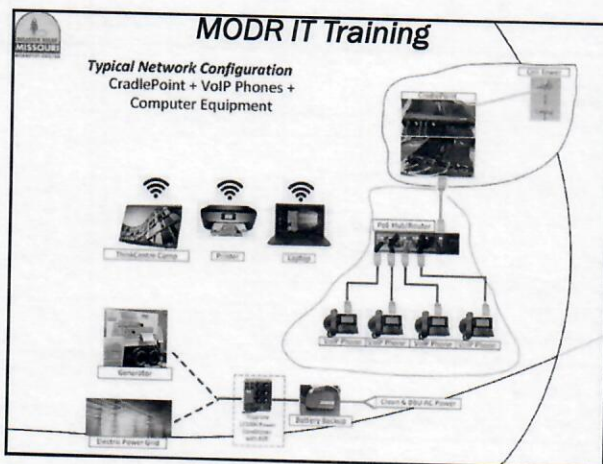
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### Network Configuration Diagrams

- This configuration incorporates: CradlePoint (CP), PoE router, VoIP phones, wireless computers & printer
- Internet comes into the CradlePoint and is converted to wired and wireless internet
- CP Enet port is attached to PoE port via copper Enet
- The VoIP phones are attached to the PoE router via copper Enet
- Wireless equipment (computers and printers) attach to the wireless side of the CP
- Power may come from power grid or generator
- Similar configuration used at: Mandeville, LA, Kentucky, and currently in St. Louis

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### Comm/IT DR Phases

- MODR Comm/IT efforts tend to fall into the following phases
  - 1) Prepare
    - Success of DR deployments is largely dependent upon the individual and group preparation
    - Preparation occurs prior to a DR event
    - Preparation includes: Spiritual, Mental, Training, Equipment Configuration, and Documentation
  - 2) Deploy
    - Be READY TO GO
    - Be FLEXIBLE
    - Be Safe
    - Be Ready to Support
    - Be Ready to Leave

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### Comm/IT DR Phases (cont)

**POST DEPLOYMENT**

- 3) Recover
  - Rest
  - Talk
  - Write

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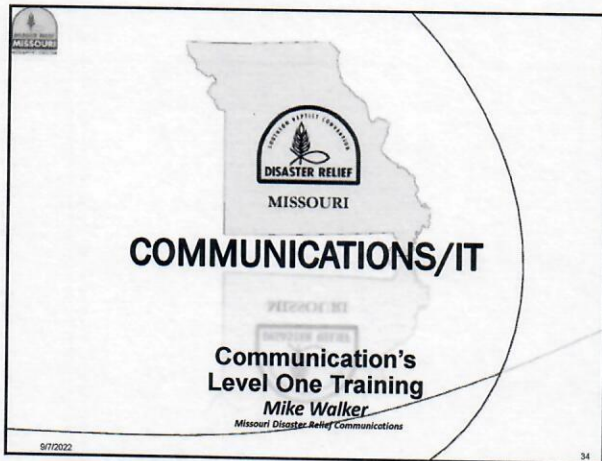
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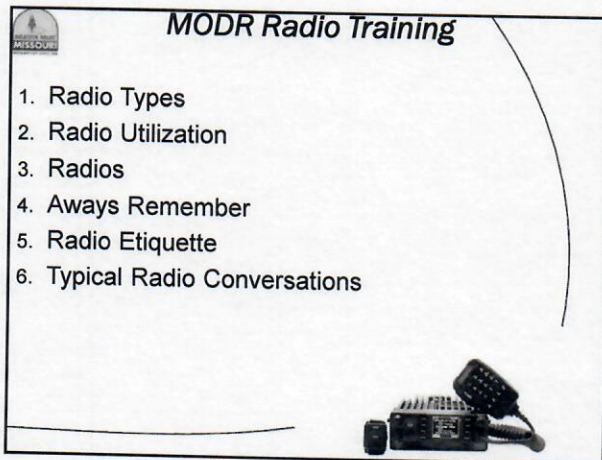
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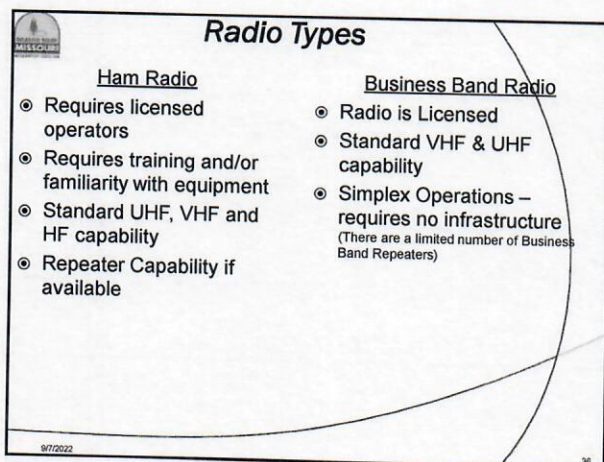
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### Radio Utilization

#### Ham Radio

- Establish VHF Net --- "KDØKVS Baptist Com"
- Mobile Unit communicates with Com Trailer on 2 meter
- Possible Chaplain/Assessor Teams communicating on 2 meter

#### Business Band Radio

- Recovery Unit communicate on Business Band 151.525 to Mobile Unit (Chain Saw 23 or Mudout 3)
- IC and Logistical Units communicate on Business Band-UHF (Mass Care 2, Child Care, Shower Trailer2, etc.)
- Possibly in the future we will have a business band repeater and/or Cross Band Repeating (For use by Recovery Units)

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### Radio - HF/VHF-UHF

- YAESU FT-897



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### Radio - VHF-UHF

- ANYTONE AT-D578 uviii



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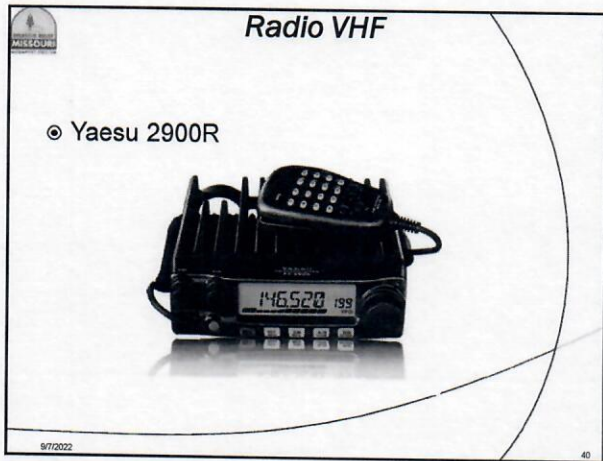
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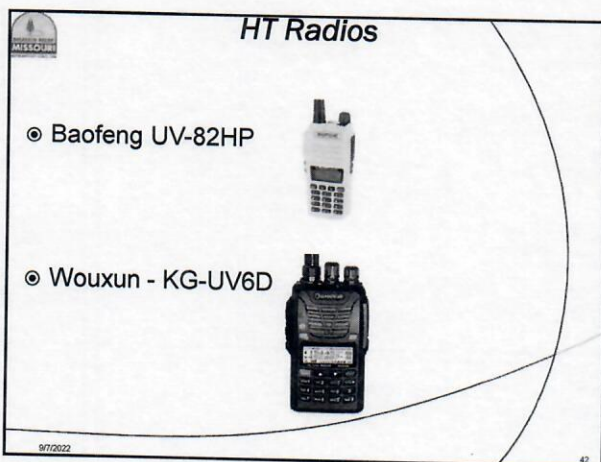
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### Always Remember

1. Use plain Language
  - Phone & radio
2. Repeat all information
  - Phone & radio
3. Leave "Roger" at home
4. Never use special codes
  - 10 codes or Q codes
5. Learn the International Phonetic Codes

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### Radio Etiquette

Contact Com Trailer/Mobile Unit to inform them you are:

1. Ready to deploy
2. On location
3. Changing locations
4. About to return to base
5. Have arrived back at base

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### Typical Radio Conversations-Part 1

**Com Trailer on 2 meter Amateur:** "WØGRP Mobile 2 this is KDØKVS Baptist Com"

**Mobile 2:** "KDØKVS Baptist Com, this is WØGRP Mobile 2, go ahead"

**Com Trailer:** "Operations needs to know the current work order number where Recovery 35 is located."

**Mobile 2:** "Operations needs to know the current work order number where Recovery 35 is located. Stand by Baptist Com and we will check, WØGRP Mobile 2 clear"

**Com Trailer:** "That is correct, KDØKVS Baptist Com standing by"

**Mobile 2 on Business Band:** "Recovery 35, this is Mobile 2."

**Recovery 35:** "Recovery 35, go ahead"

**Mobile 2 on Business Band:** "Recovery 35, Operations needs to know the current work order number where you are working."

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**Typical Radio Conversations-Part 2**

**Recovery 35:** "Mobile 2, Operations needs to know the current work order number where we are working. We are currently at Work Order # 135."

**Mobile 2:** "I understand, Recovery 35 is currently at Work Order # 135. Thank you Recovery 35, Mobile 2 clear"

**Recovery 35:** "Recovery 35 clear".

**Mobile 2 on 2 meter:** "KDØKVS Baptist Com, this WØGRP Mobile 2."

**Com Trailer:** "WØGRP Mobile 2, this is KDØKVS Baptist Com"

**Mobile 2:** "Baptist Com, Recovery 35 is currently at Work Order # 135."

**Com Trailer:** "Recovery 35 is currently at Work Order # 135. Thank you Mobile 2, KDØKVS Baptist Com clear"

**Mobile 2 on 2 meter:** "WØGRP Mobile 2 clear"

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**Additional Information**  
**Appendix A**

- Occasionally we schedule a two-day class for the Amateur Technicians License
- If we have five or six people in a region willing to host this Friday and Saturday Class
  - The students will end that day by taking the FCC exam
- [www.fema.gov](http://www.fema.gov) for ICS 100, 200, 700, 800
- [www.arrl.org](http://www.arrl.org) [www.hamtestonline.com](http://www.hamtestonline.com)
- <https://hamstudy.org>
- [www.qrz.com](http://www.qrz.com)

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**Additional Information**  
**Missouri Baptist Communication's CONTACTS**

- Gaylon Moss, DR State Director,
  - 1-800-736-6227 or [gmoss@mobaptist.org](mailto:gmoss@mobaptist.org)
- Jerry Palmer, MO Baptist Communications Coordinator/Trainer
  - WØGRP, (417) 630-8848, [w0grp@mobears.org](mailto:w0grp@mobears.org)
- Linda Palmer, MO Baptist Communications Trainer,
  - WØLSP, (417) 468-8801, [w0lsp@mobears.org](mailto:w0lsp@mobears.org)

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