



Introduction to Clackamas ARES

The Clackamas ARES Organization

Jeremy Tanzer – KI7BDP • 11.08.2022 • Ver 1.0
Clackamas ARES Training Program

Today We Will Cover:

1. What is ARES?
 2. How are we organized in Oregon?
 3. Roles and Responsibilities
 4. Resources and Equipment
 5. Good places to find Information
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Introductions

- Introduce yourself
 - Let us know about you:
 - Name
 - Call sign (if you have one)
 - What brought you to ARES?
 - Skills that you might apply to the ARES organization
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Introducing the Member Packet

- This collection of documents will help guide us through the rest of today's activities.
 - Included in this packet is:
 - Current band plan
 - Training task book
 - Meeting and Net information
 - CARES leadership contact info
 - Preliminary checklists
 - Copies of common forms
 - Glossary of common terms
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What Is ARES?

(Part 1)

- Purpose and History
- Mission
- Responsibilities
- Training and Levels of proficiency
- Keeping in practice for when the “big one” comes

Purpose of ARES

- Established by the ARRL in 1935 as a way for Amateur Radio Operators to assist in times of disaster
 - Served agencies can include (but are not limited to):
 - Local or county governments
 - National Weather Service
 - Salvation Army
 - ARES members are volunteers who offer their expertise, equipment and time to effectively and accurately communicate messages and relay information when other means of communication are down or overloaded.
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History of ARES

- ARES and RACES came into their own after WWII
 - RACES is part of the Civil Defense structure developed
 - RACES takes effect when enlisted amateurs either are passing government messages on government equipment or are operating under the permissions of the War Powers Act.
 - ARES, on the other hand, is a public service organization and arm of the ARRL which responds to local emergencies and public service opportunities.
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ARES Mission

Oregon Section ARES exists to provide a viable first response to local or regional communications system outages or overloads. Using Amateur Radio equipment, systems, and operators as directed by the local Disaster Manager, ARES provides backup voice and digital communications networks to designated agencies for a period of not less than 72 hours, or until normal communications are restored.

Our major responsibilities:

- Prepare equipment/materials for emergency communication
- Continually enhance our skills and knowledge
- Respond and provide communication when other lines of communication are down, overloaded or otherwise needed.

Common types of emergencies that ARES members provide communications support for include:

- Earthquakes / Volcanoes
 - Hurricanes / Tornadoes
 - Fires
 - Storms / Floods
 - Search and Rescue Operations
 - Other Communications Disruptions (e.g. Fiber line cut/Pandemic)
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How to Track Your Proficiencies

- Maintain your training and skills record in the:
CLACKAMAS ARES® STANDARDIZED TRAINING AND ASSESSMENT
PLAN ARES® EMERGENCY COMMUNICATOR INDIVIDUAL TASK
BOOK
 - 4 Levels: Introductory, Level 1, Level 2, Level 3
 - Includes Responsibilities, Required Equipment,
Necessary and Optional Education, Qualifications,
Proficiencies, Skills and Participation
 - Required for all members
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Introductory Level Requirements

- Take this class
 - Be at least 18 years old
 - Must possess or obtain at least a Technician level Amateur Radio License
 - Demonstrate proficiency in net participation
 - Demonstrate programming tone, frequency & offset into radio
 - Demonstrate ability to properly use radio
 - Attend at least 3 monthly ARES® meetings each 6 months (Ongoing requirement to maintain membership)
 - Maintain Individual Task Book throughout membership
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Level I Requirements

- Completion of ARRL EC-001 Course
 - Completion of ARES® Communications for Oregon
 - Demonstrate proficiency in ITU phonetic alphabet
 - Actively participate in at least one field Simulated Emergency Test (SET) per year.
 - Actively participate in at least one county exercise per year.
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Level II Training Requirements

- ICS-100.b - Introduction to Incident Command System
 - ICS-200.b – ICS for Single Resources & Initial Action Incidents
 - ICS-700.a – NIMS, An Introduction
 - ICS-800.b – National Response Framework, An Introduction
 - SKYWARN Spotter Training (when/where available)
 - Disaster Communication: Principles, ICS message forms, pro-signs, and voice message passing (CARES Training)
 - DC Power (CARES Training)
 - Basic WINLINK Training (CARES Training)
 - Slow Scan Television (SSTV) proficiency (CARES Training)
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Level II Proficiency Requirements

- Demonstrate ability to run a net
 - Actively participate in at least one field Simulated Emergency Test (SET) per year.
 - Actively participate in at least two county exercises per year.
 - Send and receive ICS-213 messages by voice
 - Demonstrate composing and sending WINLINK communication
 - Demonstrate composing and sending ICS-213 forms via WINLINK communication
 - ARES® and/or Sub-unit Net Participation (Minimum once per Month)
 - Demonstrate the ability to relay simplex traffic on VHF/UHF on ICS-213 forms
 - Demonstrate proficiency in logging and activity reporting
 - Obtain minimum equipment as specified by your EC
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Level III Requirements

- Training: EC-016, ICS-120, ICS-230, ICS-241, ICS-242, ICS-244, ICS-288
 - Participate in two Simulated Emergency Test per year. Ongoing requirement to maintain level.
 - Participate in two County Exercises Annually. If possible, lead at least one exercise or exercise portion.
 - Serve as Net Control (ARES® and/or sub-unit nets) at least two times in each 6 month period. Ongoing requirement to maintain level.
 - Submit appropriate reports including Net reports, Training reports, Timesheets, etc. in a timely manner.
 - Demonstrate ability to build a simple dipole, J-Pole or similar antenna
 - Demonstrate ability to build Powerpole® adapter cable
 - Demonstrate ability to attach PL-259 coax connectors
 - Maintain 96-hour kit
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Training

- CARES offers regular training at our meetings and at events such as this.
 - Public Service events which CARES or its subunits participate in (e.g. Teddy Bear Parade) as well as mini-SETs count as training exercise
 - Bring your task book with you and have your trainer or AEC sign off relevant portions. Keep your AEC informed of FEMA and other courses you've completed.
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Staying In Practice

- ARES members help their community in times of calm, too. Activities such as parades, races, and parking for events can be a good way to help your community out, practice and hone your EMCOMM skills in a low-risk environment, and maybe even recruit new hams to your ranks.
 - Twice a year, OR ARES engages in a SET or Simulated Emergency Test where our skills are practiced and tested based on a scenario.
 - Events including Field Day (in June), contests, POTA (Parks on the Air) and SOTA (Summits on the Air). Field Day, POTA and SOTA all require a “field setup” which is good practice for deployment.
 - Many counties, districts, and Oregon state as a whole, have regular over-the-air “nets” where individuals can practice their skills, check their equipment, and get organizational news. You can find many of these nets listed on the CARES website.
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Even More Practice

- Contesting – Check QST for upcoming contests. Many of these are HF in nature requiring at least a General Class license.
 - ISS Events – often several times a year, the International Space Station transmits SSTV images, often in celebration of some space exploration event.
 - Know of a good opportunity for practice or radio fun? Let your AEC know and they'll spread it around CARES.
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Common CARES Events

- Teddy Bear Parade (May)
 - OC Concerts in the Park (July/August)
 - SKYWARN Appreciation Day (December)
 - National Night Out (August)
 - SETs (Spring and Fall)
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- If you know of an activity that CARES can participate in, let your AEC know.
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Exercise/Discussion

ARES Structure

(Part 2)

- State and District Level Leadership
 - County Level Leadership
 - Served agencies
 - Your role in the ARES organization and structure
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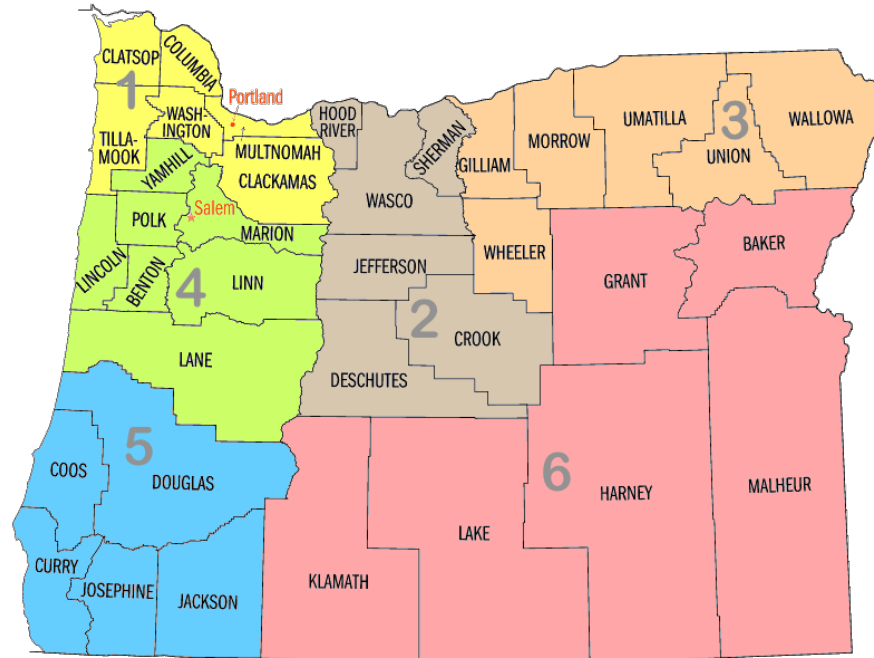
State Level Leadership

- Section Manager (SM) David Kidd, KA7OZO
 - The Section Manager is elected by Oregon State ARRL Members
 - Assistant Section Manager (ASM) – Chief of Staff, Everett Curry, Jr. W6ABM
 - ASM North, Russ Garrett KD7MPK
 - ASM South, Jonathan Wanzer KK6GXG
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ARES OR Section Staff

●	Affiliated Club Coordinator:	Bonnie Altus	AB7ZQ
●	ARRL Technical Specialist:	Tom Noel	KS7RSF
●	Public Information Officer:	Jonathan Wanzer	KK6GXG
●	Section Exercise Coordinator:	Larry Clark	N7LJC
●	Section HF Net Coordinator:	Van Sias	K7VS
●	Section Training Officer:	Mitch Bayersdorfer	W7MDB
●	Section Traffic Manager:	David Bogner	W7EES
●	State Government Liaison:	Kevin E Curry	KA7KYQ
●	Technical Coordinator:	Ron Fial	KO7V
●	Winlink Technical Specialist:	Tom Noel	KS7RSF
●	Youth and Mentoring:	Russ Mickiewicz	N7QR
		Frank Gruber	KB7NJV

Oregon ARES Structure



- The entire state of Oregon is one ARES section
- Oregon is divided into 6 districts, each which has 5-6 counties

David Kidd,
KA7OZO
Section Manager

ASM Chief of
Staff

ASM North

ASM South

Section Staff

District 1

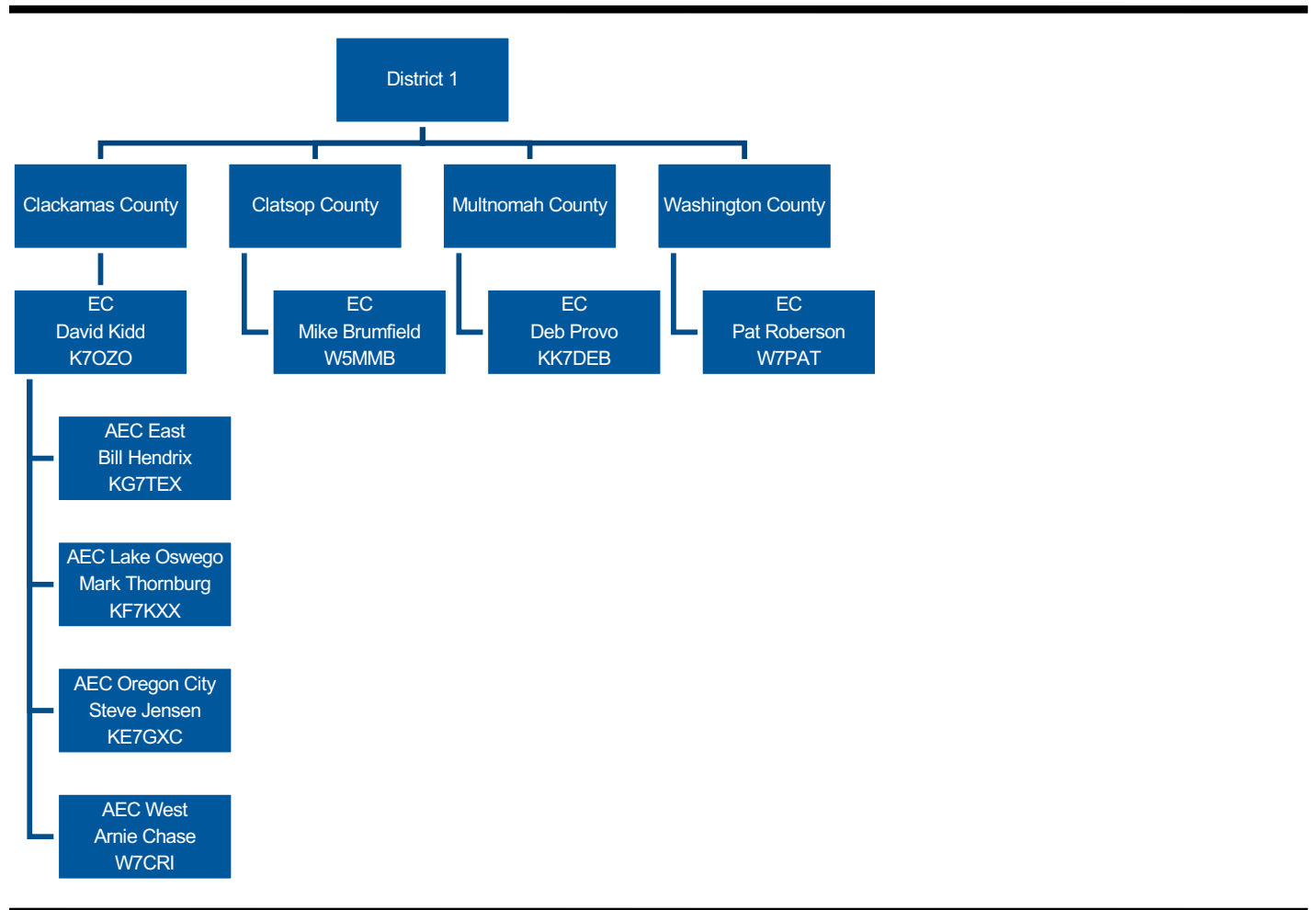
District 2

District 3

District 5

District 4

District 6



Clackamas County is in Oregon District 1

- Leadership for your district
 - District Manager (DM): (Currently open, overseen by ASM North, KD7MPK, Russ Garrett)
 - Counties Included in District 1:
 - Clackamas
 - Clatsop
 - Columbia – No current ARES unit
 - Multnomah
 - Tillamook – No current ARES unit
 - Washington
 - District net: Daily at 1930 hours on 147.320 MHz +0.6 offset Tone 100.0 Hz
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Clackamas County ARES Staff and Information

- Director of Disaster Management (DM): OPEN
 - Emergency Coordinator (EC): David Kidd
 - Asst. Emergency Coordinators (AEC) For Subunits:
 - East County: Bill Hendrix, KG7TEX
 - Lake Oswego: Mark Thornburg; KF7KXX
 - Oregon City: Steve Jensen, KE7GXC
 - West County: Arnie Chase, W7CRI
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CARES Support Staff

- Admin: Shirley Bailey, KF7UOT
 - IT: Shawn Instenes, AE7SI
 - LDS Coordinator: Allen Kerr, N7YAF
 - Packet: David Warner, W7SZS
 - PIO: **CURRENTLY OPEN**
 - Special Projects: Russ Garrett, KD7MPK
 - Training: Jeremy Tanzer, KI7BDP
 - Web: Mark Davis, AD7EF
 - Full staff info at: <http://www.clackamasares.org/staff/>
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- Clackamas County Meetings – 2nd Thursday
- 1900 Local Time
- Currently

Subunit Meetings

- East
 - 4th Wednesday @1900 hours
 - Clackamas Fire Station 19, Damascus
 - Lake Oswego
 - 3rd Wednesday @1900 hours
 - Lake Oswego Maintenance Dept. Building
 - Oregon City
 - Monday after CARES Meeting @1800 hours
 - Jimmy O's Pizza, Oregon City
 - West
 - Wednesday before CARES Meeting @ 1000 hours
 - Joy Teriyaki, Wilsonville
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Served Agencies Include

- Clackamas County Disaster Management
 - Clackamas County Sheriff's Office
 - Clackamas Fire
 - Lake Oswego Fire
 - Tualatin Valley Fire & Rescue
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Support for Served Agencies

- We primarily offer communications support
 - Email (Winlink)
 - Message traffic via voice / communication relay
 - Can send pictures when cell service is down (SSTV)
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Exercise/Discussion

Your Role

(Part 3)

- Your role in CARES
- Operational Responsibilities
- Getting deployed
- 24 & 96 Hour Kits

Your Role and Expectations

- In any deployment, our task is to serve as a resource and a conduit for effective communications
 - Know and communicate your capabilities and limitations
 - Be respectful and polite – it goes a long way in stressful situations
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Professional Amateur

- Just because we are amateurs does not mean that we do not act professionally.
 - Demonstrating professionalism includes
 - Appearance
 - Communication Skills
 - Demonstrated expertise (know your job and how to do it)
 - Knowing your limits and capabilities
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The CARES “Uniform”

- CARES Shirt
 - CARES Vest
 - CARES/County ID
 - On deployments, wear closed-toed shoes/boots
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Operational Responsibilities

- Prior to and at Staging
 - Receive Job assignment, reporting location and travel instructions.
 - Verify equipment needed for assignment.
 - Assess personal readiness for incident and climate (physical condition, clothing, medications, money, equipment and guides, “96-hour Go-Kit”, etc.)
 - Perform a check-list of your equipment and personal “96-hour Go-Kit.”
 - Inform others or leave publically visible record as to where you are going and how to contact you.
 - Review your Operations and Procedures Notebook/Documentation.
 - Check in at Staging Area.
 - Obtain briefing from Agency Lead or Resource Team Leader regarding incident/event including frequency plan.
 - All equipment should be permanently marked with your call sign.
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Operational Responsibilities

- At Assignment

- Check in with the on-site leader or served agency official.
 - Check in with Net Control to inform you are on site.
 - Determine location to set up equipment.
 - Safely set up your equipment.
 - Maintain log of actions, events and suggestions for future improvement on appropriate ICS forms.
 - Establish radio contact with net control per frequency plan.
 - Prepare and maintain reports and forms relevant to your tasks.
 - Use clear text and ICS terminology in all radio communications (no codes).
 - Carry out assignments as directed.
 - Take responsibility for your personal safety, health and welfare throughout assignment/deployment.
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Operational Responsibilities

- At end of shift or demobilization
 - Brief relief communicator on operations/status/open issues.
 - If indicated, retrieve all personal gear and return your area to pre-arrival condition.
 - Check out with Net Control and/or return to staging area.
 - Report to staging area or assigned location for rest, reassignment or deactivation.
 - Participate in after-action activities (known as a Hot Wash) as directed.
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Notification

- Tune your radio to the primary Frequency (CLAC 1). Make sure that you have the secondary and tertiary frequencies handy as well, in case the first is down or clogged.
- Please provide how to send e-mail to generate an SMS to your phone to: (copy your AEC)

Shirley Bailey <KF7UOT@arri.net>

Deployment

- Deployment of ARES volunteers occurs when the County Disaster Manager determines that Amateur Radio communications are needed. The County Disaster Manager will then contact the ARES County EC to request assistance.
 - County EC will then work with the Disaster Manager to deploy volunteers as needed.
 - ARES members are NOT to self-deploy during a disaster.
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I'm Deployed... Now What?

- You are going to have to bring your equipment and supplies with you.
 - Having a kit or set of kits that can be grabbed and ready to go is important.
 - Two basic philosophies:
 - All-in-one kit
 - Modular system
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All-in-one kits

- A single bag, box or crate which holds all of the materials you need for 96 hours in the field.
 - Food
 - Shelter
 - Clothing
 - Water
 - Equipment
 - Etc
 - Kits must be reviewed/updated regularly (clothing, for example, changes by season)
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All-in-One Kits, continued:

Advantages:

- Grab-and-go
- Everything in one place

Disadvantages:

- Requires seasonal maintenance
 - Kits can get cumbersome and heavy
 - Often requires having more than one of any thing
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Modular Systems

- Kits organized by “type” of stuff.
 - Pull the parts together to assemble the kit
 - You can have shelter systems based on season, for instance, but none of them are in your kit immediately.
-

Modular Systems, continued

Advantages:

- Can build/shift “on the fly”
- Allows you to size up or down the kit based on timeline
- If you keep it organized, you can use parts of the kit for other things (i.e. tools)

Disadvantages:

- Not “grab-and-go”
 - Requires “constant” maintenance
 - Requires good discipline to make sure that everything used is returned
-

Building a “Checklist Culture”

- Have a checklist of your go-kit or the components of it.
 - Build checklists and “cheat sheets” for software settings
 - Your checklists should be:
 - Detailed
 - Complete (down to individual item level)
 - Dated (when was it checked)
 - For batteries, have a
 - “Last charged” date
 - “Last tested” date
 - When you get your checklists set, you may want to laminate them to keep them more permanently.
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Exercise/Discussion

Resources and Equipment

(Part 4)

- Band Plan
- Emergency Power
- Safety Equipment / PPE
- Radios and antennas
- Laptop
- Recommended software

Local and County Band Plan

- Refer to ICS-217a Document for Clackamas County
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Communication Band Plan

- Benton County ARES Website is the clearinghouse for all counties' band plans: <http://www.bcares.org/>
 - Oregon State HF Frequencies:
 - 160M – 1.978 MHz LSB
 - 80M – 3.964 MHz LSB
 - 60M – 5.330.5 MHz USB
 - 40M – 7.248 MHz LSB
 - Communication to OEM should be addressed to W7OEM
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Emergency Power

- You are expected to have emergency power
 - Can include:
 - Small batteries for your HT
 - Large AGM (Adsorbed Glass Mat) batteries or LiFePO4 (Lithium Iron Phosphate)
 - Gas power generators
 - Solar panels.
 - More information in the “DC Power” class
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Safety Equipment / PPE

- CARES Vest
 - CARES Hardhat
 - Gloves
 - Boots
 - Eye protection
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Radios

- Handheld Transceiver (HT)
 - Remote microphone
 - Earpiece very helpful in noisy environments
 - Spare batteries, and “clamshell” for AA batteries
 - Mobile Rig
 - Mounted in vehicle
 - Go-box/Portable Rig
 - Need to consider antenna deployment and power source
 - Remember all of your cables!
 - Home Station
 - Have a battery backup and/or emergency power
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Antennas

- Get a longer antenna for your HT, the “rubber duck” antennas aren’t very good
 - A counterpoise helps with your HT
 - Consider a roll-up J-pole or Yagi; both have better gain and are portable into the field.
 - Highly recommend having a “backup” antenna in case one breaks.
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Antennas, continued

- How do you get that antenna up in the air?
 - Options include:
 - Military tent poles
 - Arborist's throw bag and rope
 - Drive-on masts
 - Painter's poles
 - Camera tripods
 - Generally higher is better, but just get the antenna up best you can and see how it works.
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Computer Power

- CARES increasingly relies on digital communications in working with our served agencies.
 - Two major uses of computers with CARES deployments: email (Winlink) and images (SSTV).
 - Get yourself a cheap, reliable laptop just for field use
 - It is recommended that you set up the following account:
 - U/N: cares
 - P/W: cares
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Recommended Software

- Ham Radio Related Software You Need:
 - Chirp: <https://chirp.danplanet.com/>
 - Winlink Express: <https://www.winlink.org/>
 - SoundModem: <http://uz7.ho.ua/packetradio.htm>
 - VARA: <https://rosmodem.wordpress.com/>
 - Yoniq: <https://hamsoft.ca/pages/mmsstv-yoniq.php>
- Other Software CARES Encourages You to Have
 - Firefox: <https://www.mozilla.org/en-US/firefox/new/>
 - Libre Office: <https://www.libreoffice.org/>

Links to this software can be found on the CARES Website

Your Radio Go-Kit

- Think of all of the components you will need, and all of the parts to connect them:
 - Antenna
 - Radio
 - Power
 - Laptop
 - Signalink
 - Coax
 - Cables
 - Again, checklists can save the day and get and keep you on the air
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Testing Your Equipment

- You should regularly inspect and test your equipment.
 - Both your go-kit (field radio) and your 96 hour kit should be inspected and tested
 - Sure, you got it, but :
 - is it useful
 - can it be used
 - can you get it to work?
 - Best way to test your radio equipment is to use it to check into the weekly CARES net!
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Exercise/Discussion

- Programming your radio

Places to Find Info

(Part 5)

Resources to get you started:

- FEMA Training Courses: <https://training.fema.gov/nims/>
 - For ICS 100, 200, 700 & 800, plus other online courses
 - Oregon OEM:
<https://www.oregon.gov/OEM/Pages/default.aspx>
 - The department which oversees ARES for the State
 - Oregon ARES: <https://www.arrloregon.org>
 - State Level ARES
 - Benton County ARES: <http://www.bcares.org/>
 - Clackamas County ARES (CARES):
<http://www.clackamasares.org/>
 - American Radio Relay League (ARRL): <http://www.arrl.org>
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Credits

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