

Multnomah County ARES

May 2019

Welcome to the ARRL field unit for Multnomah County!



- ▶ First Meeting? Please introduce yourself!
- ▶ Please sign the attendance sheet
 - AT THE DOOR!!!



Photo: Robert Anglin
Classification: Public

Leadership Team



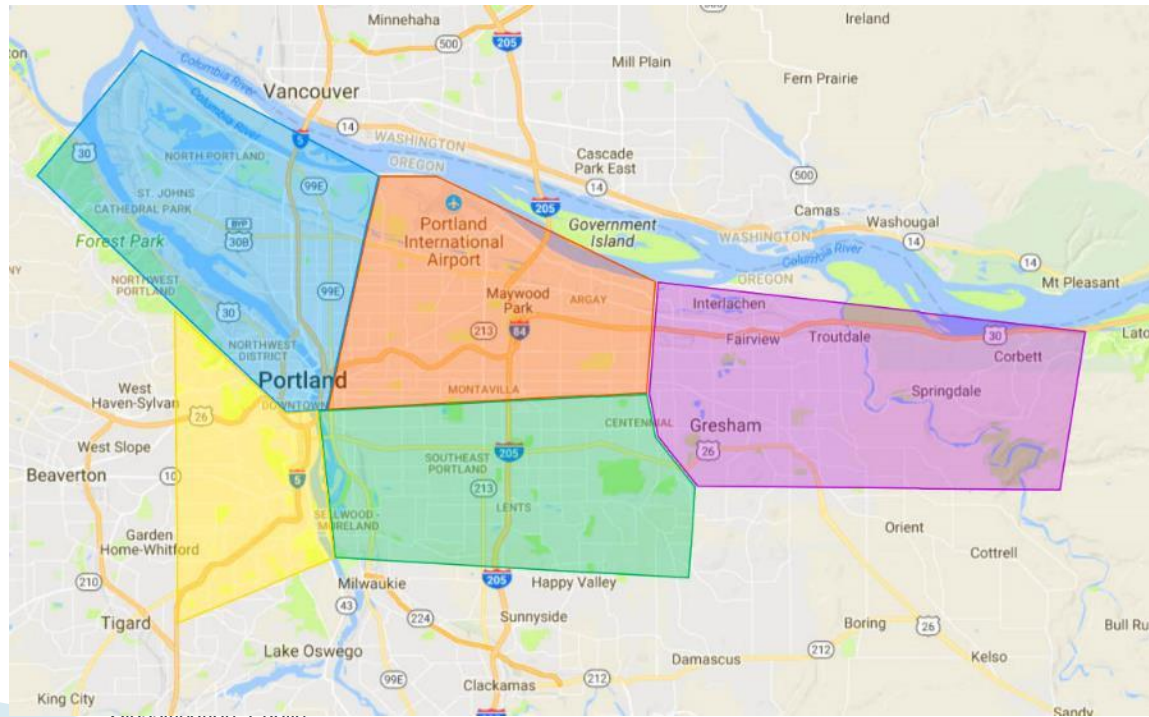
- ▶ Emergency Coordinator: Nate Hersey NA7EE
- ▶ Assistant EC: Adam Karol KF7LJH
- ▶ Assistant EC: Deb Provo KK7DEB
- ▶ Training Manager: John Underwood KI7LYP
- ▶ Net Manager: Rachel Stout KI7NMB
- ▶ Net Content Coordinator: Patti U KB7GMM
- ▶ Web Master: Brian Cochran KE7QPV

Team Leaders



When You feel the shake, get on .28!

- ▶ A– Ralph Merwin
- ▶ B– Emily Newberry
- ▶ C– Carrie Conte
- ▶ D– Nate Hersey
- ▶ E– Eli Pride
- ▶ M–Adam Karol



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Regular Meetings and Nets

- ▶ **Clubs are where you can get ham stuff we don't teach or drill!!!!**
 - **PARC:** Second Monday of the Month, 7:30pm at Central Northeast Neighbors Bldg
 - **HARC:** Third Thursday of the Month, 7:30pm MHCC Rm 1001 (WB7QIW.org)
- ▶ **Digital** Modes Training Net – first Tuesday of each month 8PM, 443.300 (100 Hz tone)
- ▶ **ARES** net: Wednesdays 7:00pm on 146.840 except Second Wednesday!!! (Simplex or Temporary Infrastructure)
- ▶ **Neighborhood Emerg. Comms** Training net (NECTN): Sundays 8:10pm on 147.040(+, 100Hz)

Agenda

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- ▶ Leadership Updates
- ▶ Events Completed
- ▶ Events Upcoming
- ▶ Training



Leadership updates



- ▶ Contact Leadership
 - Leadership@multnomahares.org
 - All Folks Q&A @ 6:15 prior to the meeting
- ▶ Facebook.com/MultnomahARES
- ▶ Instagram: @MultnomahARES

- ▶ Feb 2019 report **108 (+1)** members

- ▶ Sisters Leadership Conference
 - SM, State Comm Officer, NW Dir, ODOT Wireless Specialist, Winlink Spec, OO Coord

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Events/Training Completed

- ▶ Spring SET – April 26th and 27th
- ▶ PBEM NET Ex – April 28th
- ▶ HF Workshop – May 4th
- ▶ Walk MS – May 11th
- ▶ Cars for a Cause – May 19th





Events/Training Upcoming

- ▶ Cable Workshop – May 25th
- ▶ VHF to HF Winlink relay Station Test
 - Saturday May 25th 10:00–11:00
 - NA7EE–10 144.920
 - Voice coordination MC1
- ▶ SeaPac June 1st and 2nd
- ▶ Field Day – June 22–23
 - Signups via signupgenius – See email
- ▶ HF Campout!!! – Sept 13–15



Other Announcements?



Field Operations

- ▶ As with all radio, the first question to ask is: “with whom am I trying to communicate?”
 - What type of traffic, How Far, How long?
- ▶ Answering this question points you towards efficiently creating your field station



Station Capabilities



- ▶ Bands?
 - Around Town? Across The State? Across the Ocean?
- ▶ Modes
 - Packet, Soundcard, Voice
- ▶ Operating independent from Mains?
 - How Long?

- ▶ First Aim for FM VHF Voice, then Packet, then Regional HF Winlink (Soundcard) [As Far As ARES is Concerned]

Power Needs



- ▶ How much storage do I need?
 - How long will I operate?
 - How much time will I transmit?
 - What is the current draw of my Radio?
 - aH calculation example

20 Hours operating, 10% Tx at 10 Amps, 2 Ah Rx
About 56 aH

Where do I get 56-ish aH of electrical storage?

- AGM will most likely be the price/capacity sweet spot



Power Poles

- ▶ 15 30 45 A



Cutaway view of a Powerpole connector.

Note that the contact must fit through the gap between the housing and the spring and that the contact is snapped over the end of the spring.



Long Term Power

▶ Solar Charging

- How big?
 - Undersized will bite you later
- 80–120W
- Solar PWM controller is necessary to control terminal voltage



▶ Portable Genny

- Inverter
- Propane Mod



Masting, Antennas and Feedline

- ▶ There's no doubt that Coax rules in the field for ease of deployment, but it can be lossy
 - For your VHF and UHF runs – Keep it Short!
- ▶ Mast Solutions must be safe, easy to erect and properly guyed!
- ▶ Antennas should be simple
 - Simple wires for HF (Dipoles, Fan Dipoles)
 - Verticals/J-poles/Roll-up J-poles on VHF/UHF



Field Day



Signups



- ▶ Willamette Park
- ▶ 2019 Field day runs from Early Saturday to Mid Day Sunday
 - Assistance will be needed for setup and teardown
 - 08:00 Saturday
 - 10:00 Sunday
- ▶ There are 3 signups on SignupGenius
 - RSVP / Headcount
 - Operators
 - Potluck – Supper

Operating Class / Stations

- ▶ 2A Low Power (100W)
 - Last Year we ran 2A Battery
- ▶ GOTA
 - Last Year We had an outreach table, this year all outreach will be funneled to the GOTA station (trailer)
- ▶ 2 HF Points stations
 - FT8/SSB Voice/CW?
- ▶ Skunkworks VHF



Antennas

- ▶ Wire Everywhere!
- ▶ VHF Broadband Hexbeam
- ▶ 40M Loop
- ▶ Inverted L
- ▶ Launcher – 60 Ft

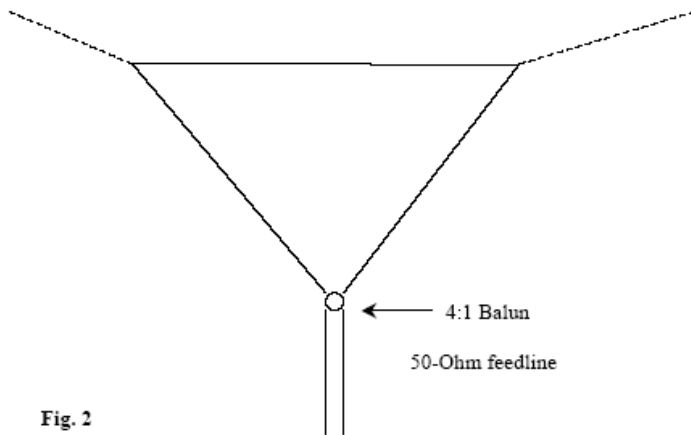
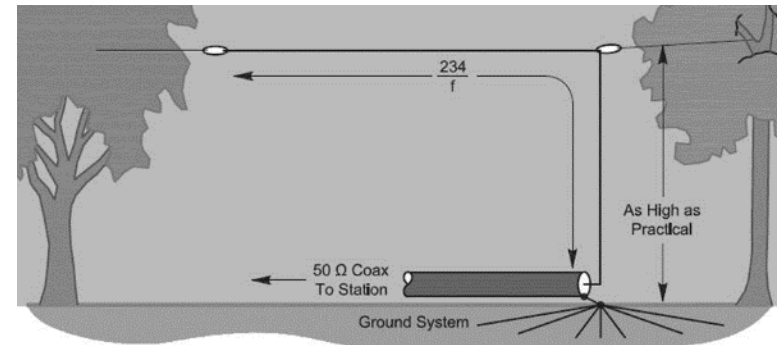
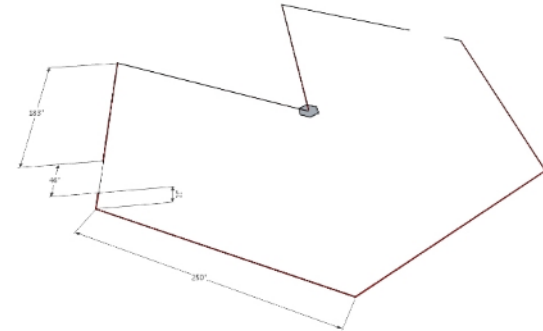


Fig. 2



MCARES Field Ops at Full Tilt



Resource Net / Operator Assignments

- ▶ MC2 147.28(+) 167.9 WB7QIW
 - All Operators
 - All Statuses
 - Be prepared to take this net!
- ▶ NETs self deploy, ARES waits for assignment
 - Where Might one expect to get assigned?
 - Portable Operator
 - Fixed Station
 - Wherever you are sent, be prepared to:
 - Operate a Winlink Client Station
 - Pass Voice Traffic
 - Keep a log
 - Represent MC ARES with decorum and skill!



Higher level Resources



▶ Capabilities

- Operator Coordination
- Voice Traffic around the County

▶ Equipment

- N7MCU – Coordination, Control
- UHF Repeater – Voice, as needed 440.275(+) 151.4
- Cross Band Repeater – 446.150 151.4 / 146.48
- Digipeater, as needed (145.070 or 144.920)
- Winlink Field Relay NA7EE-10 (144.920)

Paperwork

- ▶ Keep it all together and up to date!
- ▶ <https://www.multnomahares.org/docs/>

- ▶ ICS 205
- ▶ ICS 213
- ▶ ICS 214
- ▶ ICS 309

INCIDENT RADIO COMMUNICATIONS PLAN		1. Incident Name: Planning Document		2. Date/Time prepared:				3. Operational Period Date/Time:			
4. Basic Radio Channel Utilization											
Chan	Function	Alias	Assignment	Rx Frequency	W/N	Rx Tone/DCS	Tx Frequency	W/N	Tx Tone/DCS	Mode	Remarks
63	Command	MC-1	ARES	146.84			146.24			A	Repeater
64	Resource Net	MC-2	ARES/NET	147.28			147.88		167.9	A	Repeater
65	Tactical	MC-3	ARES	146.94			146.34			A	Repeater
66	Command Simplex	MC-4	ARES	146.48			146.48			A	Simplex
67	Tactical Simplex	MC-5	ARES	146.46			146.46			A	Simplex
68	Backup Repeater	MC-6	ARES/NET	147.04			147.64		100	A	Repeater
69	Gresham Simplex	MC-7	ARES	147.56			147.56			A	Simplex
70	NET tac 1	MC-8	NET/PBEM	147.58			147.58			A	Simplex
71	NET tac 2	MC-9	NET/PBEM	147.54			147.54			A	Simplex
72	RMS	MC-10	ARES	145.07			145.07			A	K7MCE-10 & KF7LH-10
73	Command	MC-11	ARES	146.84			146.84			A	Repeater Simplex
74	Resource Net	MC-12	ARES/NET	147.28			147.28			A	Repeater Simplex
75	Tactical	MC-13	ARES	146.94			146.94			A	Repeater Simplex
76	Backup Sim	MC-14	ARE/NET	147.04			147.04			A	Repeater Simplex
NOTE: Only use MC-11 thru MC-14 if repeater is NOT functioning											
	ARES RPTR portable	UHF RPTR	ARES UHF	440.275		151.4	445.275		151.4	A	MCARES Portable Repeater
	ARES RPTR x-band	Cross-band	ARES Cross-band	446.150		151.4	146.480			A	MCARES Cross-band Repeater
5. Prepared by (Communications Unit):			Contact Number:			Incident Location:			County:		

ICS 205 MC

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Rev 11 Jan 2019

Most Importantly – Decorum and Attitude!

