

Multnomah County ARES June 2018

MultnomahARES.org Leadership@multnomahARES.org

Welcome to the ARRL field unit for Multnomah County!



First Meeting? Please introduce yourself!

Photo: Robert Anglin

Please sign the attendance sheet.



Leadership Team

- Emergency Coordinator: Nate Hersey NA7EE
- Assistant EC: Adam Karol KF7LJH
- Assistant EC: Robert Anglin WX5TEX
- Assistant EC: Deb Provo KK7DEB
- Training Manager: John Underwood KI7LYP
- Net Manager: Rachel Stout KI7NMB
- Net Content Coordinator: Patti U KB7GMM
- Web Master: Brian Cochrane KE7QPV
- PIO: Open



Team Leaders

- A- Robert Anglin
- B– Emily Newberry
- C- Carrie Conte
- D– Nate Hersey
- E– Eli Pride
- M-Adam Karol





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)
- **THTN**: 4th Tues, 8:00 P.M. 146.840
- ARES net: Wednesdays 7:00pm on 146.840 except Second Wednesday!!! (Simplex or Temp Infrastructure)
- Neighborhood Emerg. Comms Training net (NECTN): Sundays 8:10pm on 147.040(+, 100Hz)

Agenda

- Leadership Updates
- Events Completed
- Events Upcoming
- Raffle
- Satchels
- Training
 Power





Leadership updates

- Contact Leadership
 - <u>Leadership@multnomahares.org</u>
 - All Folks Q&A @ 6:15 prior to the meeting
- Facebook.com/MultnomahARES
- Instagram: @MultnomahARES
- MC EC Report 98(+3) Members / 280 Hours for May
- Mid Month Update 101!!!
- PIO Open Position in Multnomah
- VARA Gateway Testing
- OCT 14th NET Ex, July 28th Drill





Events Completed



- SeaPac Outreach
- Hardware Workshop
- Field Day!



Field Day











Events/Training Upcoming



HF Workshop July 7th

Vista House July 14th

- July Gen Memb
 Go Kits and Burgers
- 7–28 Shelter Drill



Caldwell County

Thanks to the Members and Raffle





Other Announcements?



Field Power



Today's focus – Setting up DC field power



Field Power

- Power Needs
- Storage Battery
- Charging
- Distribution
- Fusing





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? And what's the aH rating on that storage battery mean?

Deep Cycle AGM

- Valve Regulated Non–Spillable
- Low Self Discharge
- Can deliver high current
 - Internal resistance
- Depth of discharge good
- Can be floated







Storage without float



Protecting your investment



STATE of CHARGE (SOC) vs OPEN CIRCUIT VOLTAGE (OCV)





Float Voltage for 12V AGM – 13.65 (ish)

If you're connected through Pwrgate?

Power Poles

▶ 15 30 45 A

Cutaway view of a Powerpole connecor.

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.







Solar Charging

- How big?
 - Undersized will bite you later
 - 80–120W



- Solar PWM controller is necessary to control terminal voltage
- In Field, Solar Panel takes place of Power Supply in PWRGate ckt (or MPPT Solar slot in fancy Epic PWRGate)

Fuse Sizing Calculations

- How Much Current is the weakest link in my system rated for?
 - Isolate Fault Current
 - Isolate sustained overcurrent
- How much current do I expect to draw when all loads are operating?

