

01-20-22 Solar and Batteries for Emcomm – CHAT

Topic: Solar and Batteries for Emcomm

Speaker/Presenter: Chris Mattia, [W6AH](#)

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YouTube: <https://youtu.be/pBjGyUAm8Go>

Text from Presentation Chat

- ▶ From Barry Porter, KB1PA, SFL to Everyone: Please precede any questions with a Q:
- ▶ From Richard Shaw KF5OIM to Everyone: Forgot, no mic on this computer, BRB.
- ▶ From Oliver Dully to Everyone: Little info: the Baker to Vegas Relay Race is a relay race for law enforcement teams. In 2019 283 teams from all over the US, Canada, Australia and Belize (the 2019 winners).
- ▶ From Oliver Dully to Everyone: More information here: <https://bakervegas.net/>
- ▶ From Oliver Dully to Everyone: Interested amateur radio operators can find more information here:
- ▶ From Steve, K4CJX, TN to Everyone: Game changer
https://battlebornbatteries.com/?gclid=EA1aIQobChMIyNjji-PB9QIVRCctBh1YGQV0EAAYASAAEgKN7fD_BwE
- ▶ From George, K7YHB, WWA to Everyone: Suggest not cutting connectors off radio. It will void the warranty.
- ▶ From Tom W3TDH Montgomery CNTY Maryland to Everyone: Q: I have an important point to make about fused power strips like the Rigrunner and others W3TDH
- ▶ From Richard Shaw KF5OIM, MS to Everyone: Use a DC clamp meter and measure idle and TX amp draw :)
- ▶ From k9wkj wayne to Everyone: A 50-watt radio draws at least 100 watts on TX, we never get more than 50% efficiency on FM rigs
- ▶ From Cal AI6MC to Everyone: Includes 30a power pole connectors
<https://ecoflow.com/products/ecoflow-delta-pro-portable-power-station>
- ▶ From Richard Shaw KF5OIM, MS to Everyone: Rounded corners because they come from a single wafer which starts its life round.
- ▶ From Mike NN3I MD to Everyone: This is an excellent online calculator for determining the size of a battery in amp-hours required to operate a ham radio for specific mode duty cycles, operator duty cycles, and mission durations:
http://www.4sqr.com/Battery_Capacity/index.php
- ▶ From Tom W3TDH Montgomery CNTY Maryland to Everyone: Q: Since you are a sailor you may have you used any of the small wind generators? Might one be used as a back up to solar for smoke or cloudy periods? How much do they weigh?
- ▶ From k9wkj wayne to Everyone: With FM radios PWM is just fine
- ▶ From George, K7YHB, WWA to Everyone: Leaving for another meeting. Looking forward to seeing the rest on the recording.
- ▶ From k9wkj wayne to Everyone: HF, they can get a bit noisy
- ▶ From Richard Shaw KF5OIM, MS to Everyone: MPPT can frequently accept higher solar input voltage because they have buck converters and will trade higher voltage for more amps to your battery.
- ▶ From Mark to Everyone: Is it ok for the controller if you connect the radio to the battery directly?
- ▶ From Richard Shaw KF5OIM, MS to Everyone: Yup
- ▶ From k9wkj wayne to Everyone: For sure, but make sure your fused properly

- ▶ From k9wkj wayne to Everyone: Properly
- ▶ From Steve, K4CJX, TN to Everyone: Must leave. Great presentation and thank you.
- ▶ From Michael KB6USJ Ca to Everyone: I learned a lot about this subject thank you agn!
I feel confident to get into alternative power sources like solar.
- ▶ From George KDØPMW MO to Everyone: So double pigtailed on battery, one for connecting charge controller and the other with fuses to power the radio is ok?
- ▶ From k9wkj wayne to Everyone: I will be adding heaters to our new repeater backup systems
- ▶ From Jed N6JED CA to Everyone: Third time I have heard this talk and look forward to hearing it again.
I always learning something I missed. Thank you.
- ▶ From Jim, w2kfv, nli, sm to Everyone: great presentation Chris...thank you
- ▶ From Don KE7ARH - Bellevue, WA to Everyone: Q: I think the Epic Powergate has a temperature sensor to avoid charging below 32 degrees? In a pinch would you charge at 30 degrees? 25 degrees?
http://www.westmountainradio.com/product_info.php?products_id=epic-pwrgate
- ▶ From Charley Speelman to Everyone: I have 20 Ah Bioenno battery and it sometimes shutdown when transmitting 70cm . have you found this happening?
- ▶ From Steven KB9VUJ Wisconsin to Everyone: Summer in northern clime is actually beneficial, right now, yeah, not so much...
- ▶ From Don KE7ARH - Bellevue, WA to Everyone: Thanks, something to be said for not living in Fargo, ND when working with LiPo!
I will work to protect my battery from low temps.
- ▶ From Mike NN3I MD to Everyone: There is a huge different in cost and weight between a PWT and MPPT solar charger.
I have both in 30amp size from Renogy and the slight increase in performance with the MPPT isn't worth it unless it's for a permanent installation running 24/7. They both are reasonably RF quiet.
- ▶ From Lloyd KO4L SC to Everyone: Shielding of the battery from the antenna may help
- ▶ From Lee KM6UFF SoCal to Everyone: Solar system calculator can be found on Fallbrook CA FARC website under Presentations / UM6UFF / Solar Calculator.
- ▶ From Michael KB6USJ Ca to Everyone: 73's to you all see you next session 😊
- ▶ From Shelia, KN4IRZ, NC to Everyone: Please give further presentations. Loved the information. 73
- ▶ From Char KC9EVZ WI & Bill K9NY WI to Everyone: +Great Presentation. Thank you!
- ▶ From Shelia, KN4IRZ, NC to Everyone: Please post when classes are: Poor reception, Thanks
- ▶ From Lloyd KO4L SC to Everyone: Sunday at 1pm Pacific time on <https://wavetalkers.com>
- ▶ From Mike NN3I MD to Everyone: Rockpals RP082 100w foldable solar panel are very small and light to carry
- ▶ From Richard Shaw KF5OIM, MS to Everyone: For all things Solar (not Ham Radio related) binge watch everything by Will Prowse on YouTube.
- ▶ From k9wkj wayne to Everyone: I agree
- ▶ From Don KE7ARH - Bellevue, WA to Everyone: The ability to provide a community solar USB cell phone charger kiosk, although not COMS, is a great service to consider offering your served agency. This was really appreciated in Haiti.
- ▶ From Brian WB7OML Georgia to Everyone: The problem is the materials for the batteries are not mined here in the US
- ▶ From Brian WB7OML Georgia to Everyone: There is emerging battery technology on the horizon for electric vehicles, wearables, and cellular that is also promising.

- ▶ From michellebloker ki7pon Oregon to Everyone: Thank You for the presentation. We appreciate the information in rural eastern Oregon/
- ▶ From dan wl7coo CA to Everyone: Solar panel creating current from info rights is 'renewable energy' at its best.
- ▶ From dan wl7coo CA to Everyone: ...from indoor lights
- ▶ From WB8YHD Frank to Everyone: Yes, I'd be interested in the chat log, Frank, WB8YHD good on QRZ, tnx and 73

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ratpac.plan@gmail.com

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