

## In This Issue

- [A Word](#)
- [RadioActive!](#)
- [From the Secretary](#)
- Editor's Note
- Off Grid Power Solutions:
  - [W6WBT](#)
  - [K4CMF](#)
  - [AB6DM & KK6WLQ](#)
- [Humor](#)
- [ARRL Calendar](#)
- [TARA Calendar](#)
- [Reference Information](#)
  - Local Repeaters
  - Club Repeaters
  - Officer's/Committees
  - Meeting & Club info
  - Membership Application

## Contact Us

- Via [Facebook](#)
- Via [WWW.AC6EE.ORG](http://WWW.AC6EE.ORG)
- U.S. Mail:
 

TARA  
P.O. Box 1681  
Tehachapi, CA 93581

## A Word

### Dan Mason, AB6DM, President

As some of you know, we have an Emergency Radio Team net every Sunday night at 7 PM on the W6SLZ repeater. After this net, the net controller of the month forwards me the call-in/availability numbers for me to again forward to the Western Kern County ARES Monday night net on the W6LIE repeater. Their compilation of regional numbers get forwarded on up the chain to eventually get to FEMA.

On the night of Monday, February 28th, the ARES net conducted a simplex test of the net in conjunction with the repeater. We here in Tehachapi have done the same simplex check, though just once or twice. On this particular Monday, we called in our numbers, then moved to a simplex frequency to figure out how to get through to the net controller. So I made my call to net controller Glen WB6DTJ and got no response. Called a couple more times with no response. So now Arley N6INT realizes that I need a replay and responds to me. I give him my traffic, and he calls and reaches Glen. Glen acknowledges the traffic, and Arley reports to me that the traffic was received.

As all this is going on, I notice who I can and can't hear on simplex in and around Bakersfield. I take it for granted that I can talk to many of these operators on the W6LIE repeater; but now know that without it, I have a small number of folks to move messages through.

Don't be surprised if we do a simplex check on a Sunday night sometime. We will all get on the same page prior to the event.

**EDITORS' Note:**

April will focus on **Field Day Preparations**. Please share a few paragraphs (and photos) describing your approach to our annual operating event Field Day. Are you scouting sites from which to operate, checking out and testing portable antennas or honing operating skills?

Please email your contributions to [AC6EE@arrl.net](mailto:AC6EE@arrl.net) by 31 March 2022

73 ...Ray W6QPA

## RadioActive!

Phil Dolber, W6WBT, 1st Vice President

Here is a quick update for the On-the-Air Game progress. The Game Committee will meet on the 19<sup>th</sup> of March to finalize the physical aspects and layout of the first game. This will lead to refining the rules that we plan to cover with the membership at April's meeting. We will host the build party for those who need a T-Hunting outfit for the game. I have already emailed the plans, parts list and sources for the attenuators. The build party will be March 26<sup>th</sup> at the Salvation Army on Tehachapi Blvd. We will decide on a time this week and I will send out an email invitation with all the details for the Build Party by the March 18<sup>th</sup>. Please RSVP if you plan to attend the build party by replying to the invitation email. This will determine how we set up the venue to accommodate the number of attendees.

### 73 – Let's Get RadioActive!

## From the Secretary

Valerie Mason, KK6WLQ

Reminder, please let me know if you may be coming to breakfast at Mulligan Room in BVS on March 26<sup>th</sup> at 8 am. Reserved seating for staffing restaurant and we need to get people outside of BVS a gate pass set up before then. Contact us (Dan Mason or me) by the 14<sup>th</sup>. Thank you.

The club has some fun stuff planned, come to the meetings and learn more in person if you can.

## Off-grid Power Solutions

W6WBT — Phil Dolber

I occasionally use Amazon for on line purchases, however I am still not a big online shopper. Amazon of course has tools for shoppers to make lists that you can share. I wasn't using these lists the way they were supposed to be used. I would fill them with all the possible choices for a purchase and I wouldn't go back and clear out the list after I made my decision and purchase. Or, sometimes I wouldn't make a purchase at all. So you can imagine how my wish list started to grow with things I might never purchase or want. Well, on my last birthday my kids were looking for ideas for a birthday present and they decided to look at my Amazon wish list not knowing how I was using it. They came up with a set of portable solar cells with charge controller that I had on the list, but had not researched the company or product beyond seeing it on Amazon. My kids decided to go in together and buy the Solar cells, and boy was I surprised on my birthday. I didn't even remember looking at that item. We all had a good laugh over the circumstance of how it ended up on the list and their purchase of something on that list that I would actually want and use. This turned out to be one of the best birthday gifts I have received. My birthday is usually right before or on the weekend of, Field Day, so I was able to test it out with a 120Ah marine battery, and my portable HF station. We also used it for our tent camping during field day. It worked great 300 watts is a good solution for my setup. I also use them when working from home to power my computer and network during power outages. I just throw the panels up on the roof above the door and run the DC in the door to the battery and then use a small inverter ~400 watts to power everything I need (no printer).



## K4CMF — Charlie Flint

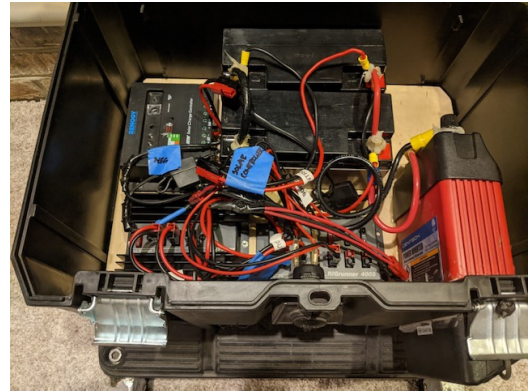
I currently have two examples of off grid power solutions for ham radio. The first example you probably have seen before. Yes, I still use it, my old Yaesu FT-857D all mode transceiver, housed in two nested Dewalt tool boxes.



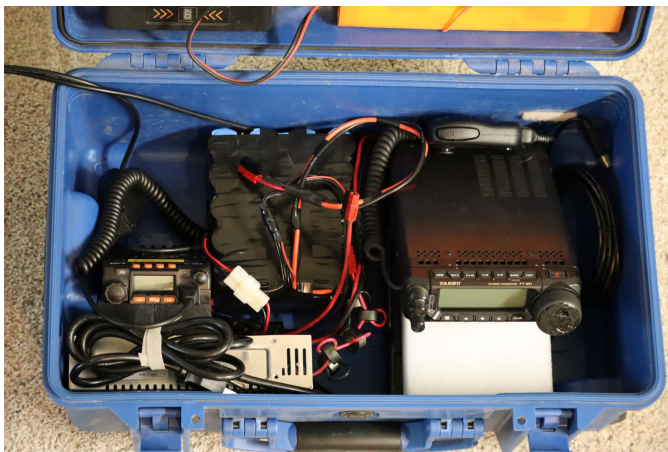
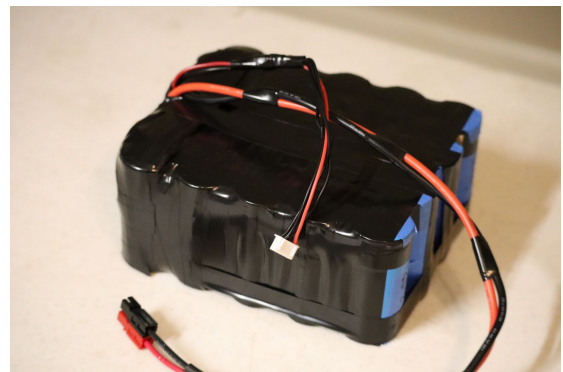
The top box houses the radio and auto tuner with a switching power supply below the deck for AC operation. The bottom box houses two SLA 18 amp hour, 12 volt batteries in parallel. It accepts a 12 volt input, and has a solar charge controller for charging with solar panels. The two boxes can be used together or separately.



I store led lights, extra cables and a DC adjustable power regulator in the bottom battery box to be used for different off grid power situations. The 800 watt power inverter can only be used for a short period, but will power a coffee maker. Together or separately, the boxes ride around in a dolly. Unfortunately, lead acid batteries can only be drained to about 50% of their rated capacity before starting to degrade the batteries. In this case it has about 18 amp hours of usable energy. Using a float charger, I replace the two batteries about every 3 years.



My other solution was quite a learning experience and winter project to make a portable battery pack of 20 Lithium Iron Phosphate (LiFePo<sub>4</sub>) cells connected in series-parallel. Each cell is 60,00 mAh, 3.3volts nominal, connected in a 4S, 5P configuration. Weighing just over 5 lbs with cables and insulation, the fully balance charged pack provides 14.4volts at 30,000 mAh.



This pack fits inside my medium sized utility box, along side a small QYT dual band UHF/VHF unit and a Yaesu FT-891 mobile HF transceiver. A mag mount antenna on a small galvanized metal sheet for the UHF/VHF unit, and an end fed antenna with UNUN for the HF unit can be carried in a separate container. The box is still under construction, I need to cushion the battery pack and clean up wiring.

An advantage is, the pack weighs less than half of a comparable lead acid battery with an advertised 2,000 to 3,000 charge-discharge cycles vs. a few hundred cycles for lead acid, and up to about ten years of service. I have not personally tested this. It can also consume up to 80% of its capacity without risk of damage. Disadvantages are cost, and the need to use a balance charger designed for such packs, or an internal battery management system to balance the cells.

**A word of warning.** Although less expensive than a ready-made pack, one wrong connection while assembling this pack can result in fire. Anyone wanting to make their own pack should learn about Lithium battery chemistry and take appropriate safety precautions.



Now for the learning experience. For charging/discharging, I opted to use my existing balance charger that I use for my RC airplanes and projects. **WRONG!** It works, but takes forever to charge. My balance charger is not meant for a pack this big. The charger starts out with it's maximum 5.0 Amp output, but as the first bank of five parallel cells approaches 3.6 volts maximum charge, the charger cuts down the output amperage in order to pull down the first bank voltage and pull up the other banks, balancing the pack. During balancing at 0.5 amps, fully charging takes more than three days. Full discharge takes even longer. A much better option is a suitably sized 50A, 4S battery management system. This is something I plan to add later this year.

Overall, this new battery pack is quite light and powerful. It can go places where my old tool box rig can't. It fits in my medium size utility box, or can easily fit in a backpack for those who choose to be mountaineers or hillbillies. No, thanks, I visited a club repeater site in the Smokey Mountains here in TN, and the mountain road switchbacks convinced me I'm a flat-lander.

## AB6DM & KK6WLQ — Dan & Valerie Mason

So KK6WLQ (Valerie) and I have been slowly chipping away at our off grid power capabilities for the last few years, starting with small rechargeable batteries, and working our way up. We have a small collection of bricks we can recharge our phones with several times, then recharge them with our car if shore power is scarce.

We next got a couple slightly larger batteries and a couple small solar panels with small charge controllers. One of the slightly larger batteries (U1 type sealed gel cell) is housed in a battery box with a West Mountain Radio PWRgate (battery charger, but pre solar) screwed to one side and RIRunner 4005 screwed to the other. This setup has powered several of my radio ops.



I sometimes charge this with a Rich Solar RICH SOLAR 20 Amp 12V/24V DC Input MPPT Solar Charge Controller (overkill) fueled by a ALLPOWERS thin and flexible 100 W solar panel.



Next, we got our very own Honda EU2200i gasoline generator. I had always coveted these because besides being quiet, they were dependable for ham radio friendly power. We had tried to use a few other generators that made too much interference with the radios. This smallish generator has powered my fridge, freezer, chargers, internet and some lights several times during those wonderful California Public Safety Power Shut-offs. I also use it to power tools and my air compressor in the field. If you get a generator, make sure some other ham has tested it with radios. There are, however, ways to filter the power lines and lay them up on the ground to minimize interference.



Now I mentioned it before, but we also got one of the so-called "solar generators". It's a no-brainer all in one box solution that powers and recharges all sorts of small appliances, and is recharged by shore power, your car, and solar panels. This one is a 1000Wh system with 200 W of foldable panels. These systems come in several sizes, and I recommend everyone has one.

Our current project is putting together a portable system with some stuff we got from Renogy along with heavy cables, fuses, breakers, etc., we got from the boating world. We have a 40A charge controller, a 3000 W inverter, about 400Ah of LiFePO<sub>4</sub> batteries, but only 400 W of solar panels so far (need more). I'll show and tell when I get it together and mounted on a portable rack.

We also have dreams of building larger solar systems, but that will be a while.

## Humor

Laura Sherrod, KI6EOG

- Q: Did you know they had automobiles in Jesus' time?  
A: Yes, the bible says that the disciples were all of one Accord.
- My dad loves to boast about how he can get Mexico on his ham radio set up.  
That's nothing I'd say, I can open my window and get Chili.

## ARRL Contest Calendar

This page provides a summary of events sponsored by the ARRL, the national association for amateur radio. The most current information is on the website at:

<http://www.arrl.org/contest-calendar>

### March 2022

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- 5-6 International DX- Phone

### April 2022

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- 10 Rookie Roundup – Phone

### May 2022

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- Nothing scheduled

## TARA Calendar

This page is a summary of events sponsored by or involving our club.

All dates are subject to change. Please check the club Facebook and website for updates.

### March 2022

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- 2, 9, 16, 23, 30 – 19:00 PST (PDT 16, 23, 30) “Just Because” Net (W6SLZ VHF rpt, 146.70 - / 123.0)
- 3 – 19:00 PST, TARA Board Meeting, Via Zoom (invite via email)
- 10 – 19:00 PST, Club Meeting, Tehachapi Police Department Conference Room, 220 W C St, Tehachapi.
- 12 — 08:30 PST, TARA Club Breakfast at Gracian Grill
- 26 — 08:00 PDT, TARA Club Breakfast at BVS Mulligan Room. Reserve a spot with Valerie Mason by 14 March 2022.

## April 2022

- 6, 13, 20, 27 – 19:00 PDT “Just Because” Net (W6SLZ VHF rpt, 146.70 - / 123.0)
- 7 – 19:00 PDT, TARA Board Meeting, Via Zoom (invite via email)
- 9 — 08:30 PDT, TARA Club Breakfast at Gracian Grill
- 14 – 19:00 PDT, TARA Club Meeting, Tehachapi Police Department Conference Room, 220 W C St, Tehachapi.
- 30 — 08:00 PDT, TARA Club Breakfast at BVS Mulligan Room. Reserve a spot with Valerie Mason by 14 April.

## May 2022

- 4, 11, 18, 25 – 19:00 PDT “Just Because” Net (W6SLZ VHF rpt, 146.70 - / 123.0)
- 5 – 19:00 PDT, TARA Board Meeting, Via Zoom (invite via email)
- 7 — 08:30 PDT, TARA Club Breakfast at Gracian Grill
- 12 – 19:00 PDT, TARA Club Meeting, Tehachapi Police Department Conference Room, 220 W C St, Tehachapi.
- 14 — 14:30 PDT — VE Session at the Salvation Army Community Center, 538 E Tehachapi Blvd, Tehachapi, CA 93561.
- 28 — 08:00 PDT, TARA Club Breakfast at BVS Mulligan Room. Reserve a spot with Valerie Mason by May 14th

## Reference Information

| Local Repeater Information |                    |                          |          |                       |
|----------------------------|--------------------|--------------------------|----------|-----------------------|
| TARA APRS Digipeater       | 144.390            | No tone                  | AC6EE-3  | APRS                  |
| BVS APRS Digipeater        | 144.390            | No tone                  | WA6LDQ-3 | APRS                  |
| BVS Repeater Backup Freq.  | 146.700<br>145.580 | 123.0 Hz Tone<br>Simplex | W6SLZ    | Open Machine          |
| BVS Repeater               | 440.625            | 100.0 Hz Tone            | W6SLZ    | Open Machine          |
| Tehachapi Repeater         | 444.225            | 100.0 Hz TONE            | KG6KKV   | Overlooks Bakersfield |



| Local Repeater Information |         |                                |       |   |
|----------------------------|---------|--------------------------------|-------|---|
| DMR Digital                | 442.675 | Offset: +5.000<br>ColorCode: 1 | K7RET | Brandmeister,<br>Bakersfield, CA<br>The location is in<br>the Tehachapi<br>Mountains near<br>Cummings<br>Mountain   |
| DMR Repeater               | 447.120 | Offset: -5.00<br>ColorCode: 1  | KR6DK | Brandmeister,<br>McKittrick, CA<br>The location is in<br>the Tehachapi<br>Mountains near<br>Double Mountain<br>This repeater is<br>permanently linked<br>to the KR6DK<br>analog repeater<br>system. |
| Tehachapi Simplex          | 145.58  | No Tone                        |       | Local Simplex   |
| Tehachapi Simplex          | 146.54  | No Tone                        |       | Local Simplex   |

In addition to the repeaters listed above the following repeaters, part of the Kern System, can be reached from locations throughout the Tehachapi area. They are linked together and more information may be found at <http://www.KernSystem.org>

| KERN System Linked Repeater      |         |               |        |              |
|----------------------------------|---------|---------------|--------|--------------|
| Frazier Mountain<br>(8,000')     | 447.860 | 141.3 Hz Tone | KK6AC  | Jerry Garis  |
| Cummings<br>Mountain<br>(7,800') | 442.95  | 141.3 Hz Tone | KI6HHU | Lee Bouchard |
| Double Mountain<br>(8,000')      | 446.320 | 151.4 Hz Tone | KI6HHU | Lee Bouchard |

### **ATTENTION:**

For those interested in monitoring dispatch for the Bear Valley Springs Police Department

- KCSO Eastern Dispatch — 460.225
- KCSO East TAC — 460.125

All dispatch for BVSPD will be handled by the Kern County Sheriff's Department

| Club & Other Websites                                       |   |
|---|---|
| TARA website  | <a href="http://www.ac6ee.org">http://www.ac6ee.org</a>   |
| TARA Facebook   | <a href="https://www.facebook.com/TARAtchapiamateurradio/">https://www.facebook.com/TARAtchapiamateurradio/</a> |
| Antelope Valley Amateur Radio Club (AVARC)                  | <a href="http://www.k6ox.club/index.html">http://www.k6ox.club/index.html</a>                                   |
| Kern County-Central Valley Amateur Radio Club (KCCVARC)     | <a href="http://www.w6lie.org">http://www.w6lie.org</a>   |
| ARRL  | <a href="http://www.arrl.org">http://www.arrl.org</a>   |
| West Kern County Amateur Radio Emergency Services (WKCARES) | <a href="http://westernkerncountyares.org/index.html">http://westernkerncountyares.org/index.html</a>           |

| Officers & Committee Chairs     |               |        |  |
|---------------------------------|---------------|--------|--|
| Office/Committee                | Name          | Call   | Email  |
| President                       | Dan Mason     | AB6DM  | <a href="mailto:ab6dm@arrl.net">ab6dm@arrl.net</a>               |
| 1st Vice President              | Phil Dolber   | W6WBT  | <a href="mailto:w6wbt@arrl.net">w6wbt@arrl.net</a>               |
| 2nd Vice President              | Ray Gretlein  | W6QPA  | <a href="mailto:w6qpa@arrl.net">w6qpa@arrl.net</a>               |
| Secretary                       | Valerie Mason | KK6WLQ | <a href="mailto:val3mason@yahoo.com">val3mason@yahoo.com</a>     |
| Treasurer                       | Dick Brown    | W6SLZ  | <a href="mailto:db24130@sbcglobal.net">db24130@sbcglobal.net</a> |
| Web Page & FaceBook maintenance | John Dyer     | KM6DXY | <a href="mailto:km6dxy@gmail.com">km6dxy@gmail.com</a>           |

## Meeting and Club Membership Information

The Tehachapi Amateur Radio Association meets every second Thursday of the month at 7:00 PM (except for July - no meeting). Our meetings are on Zoom and in-person meeting site is now Tehachapi Police Department Conference Room, 220 W C St, Tehachapi.

Member Annual Dues: \$25.00/year

Additional Family Member: \$12.50/per person

## Membership Application

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Download a copy of our Membership Application [here](#). Please share this with any friends, family or neighbors that are either Hams or may be interested in Amateur Radio. Applications are accepted at all club meetings if we are meeting in-person. Or you may mail your application along with the applicable dues to the club Post Office Box:

Tehachapi Amateur Radio Association (TARA)

P.O. Box 1681

Tehachapi, CA 93581-1681