



# W6TRW CROSSTALK

Monthly news bulletin of the W6TRW Amateur Radio Club  
May 2024

Total Solar Eclipse April 8, 2024 by Ashley KO6BKR



*Ashley LaGue*  
PHOTOGRAPH

## What's Inside

- General Club Meeting
- News & Announcements – **LAST CALL** for Orange Valley Radio Observatory tour
- Membership – 2024 Application
- Repeaters & Nets
- About Us

# Monthly General Club Meeting

**When: Tuesday, May 14th at 5:30 PM**

**Where: S Cafeteria & Virtual Meeting on Zoom**

The 2024 W6TRW Club Meetings are being held as hybrid in-person & virtual via Zoom. In-person meetings take place in the Northrop Grumman Cafeteria (see map, page 3). For Zoom, click on the link below on your computer, tablet, or smartphone. Same meeting link every month, 2<sup>nd</sup> Tuesday of every month, 5:30 PM Pacific Time. **FREE PIZZA ☺!**

<https://us02web.zoom.us/j/82794654895>

Phone dial-in: 1 669 900 6833, Meeting ID: 827 9465 4895

## Speaker Topic for This Month:

**"Everything About Electrical Vehicles (EVs)"**

**Aaron Dyer, Southern California Edison**

Aaron will be presenting Everything About Electrical Vehicles (EVs). Whether one chooses a pre-owned or a new car, this presentation will help the consumers make informed decisions as this is a significant household purchase. Some topics are getting started on the road to ownership, what's involved along the way, and how to maximize cost-saving benefits while going green with EV. Learn how SCE customers saved time and costs by making the switch to EV.

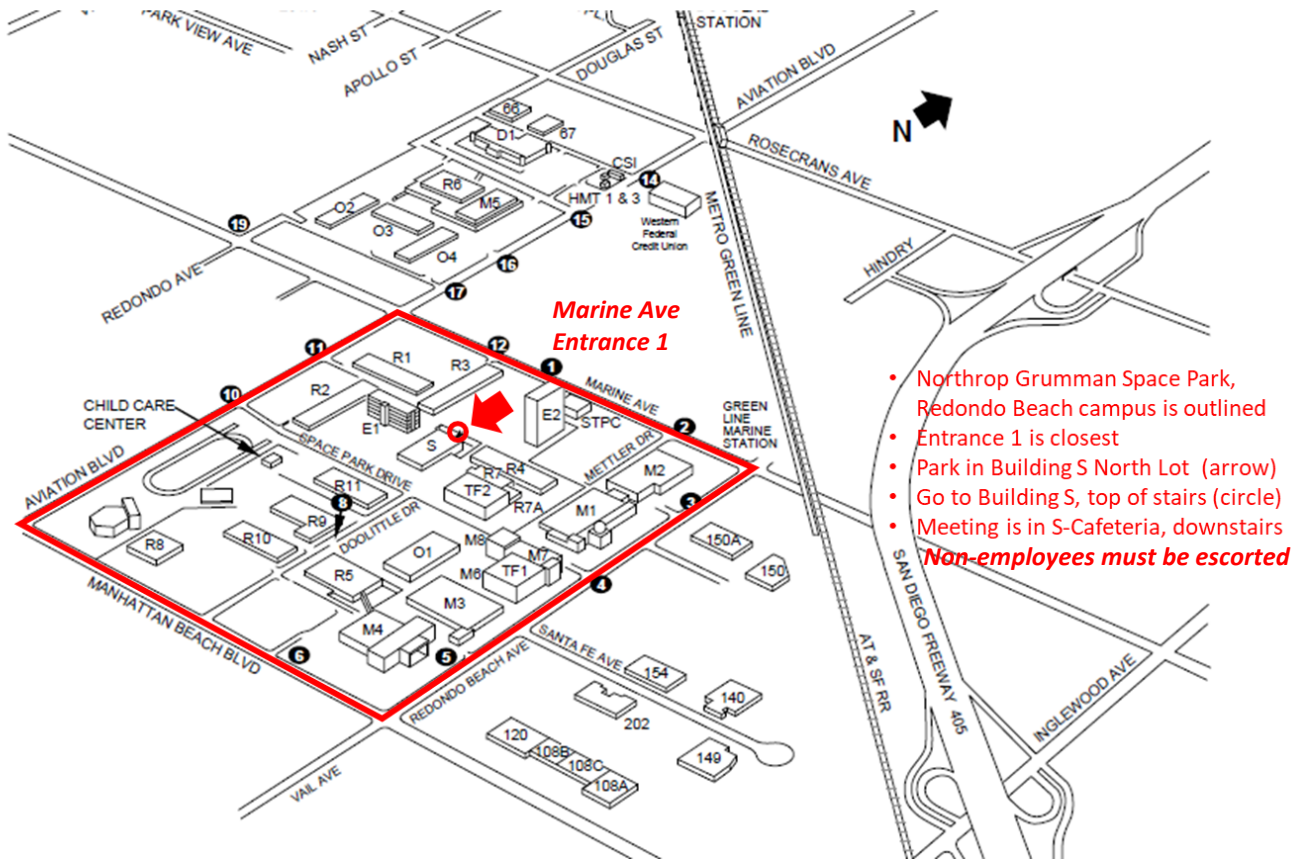


Aaron Dyer moved to California in 2007 and has lived in Ontario since 2011. He is the Senior Manager of the Program Design and Development team in Southern California Edison (SCE)'s Customer Programs and Services organization. His team focuses on designing programs and services for SCE's customers that will advance the deployment of clean energy solutions, with specific focus on transportation and building electrification. Aaron is an engineer-by-training and, prior to joining SCE in 2019, he spent over a decade designing emissions control systems for power plants and petrochemical facilities. He went on to manage the development of multiple lithium-ion based energy storage products.

# In-person W6TRW meetings - Map

Here is the map for the location of the Northrop Grumman Cafeteria. This building is in the NG Space Park campus, in the northwest corner of Redondo Beach.

## Space Park Map – W6TRW Meetings



## Classified Ads

### Amateur Radio Ads

No new ham classifieds this month. If you have ham equipment to sell, please send the info to Greg KE6YEX as a reply to the Newsletter email; thanks!



Dr. Doug Millar will be leading a visit to Owens Valley Radio Observatory on the Weekend of June 7. The visit will include a tour of the observatory and nighttime astronomy. You can bring your own scope or look through others. More information is available if you email him at [drzarkof56@yahoo.com](mailto:drzarkof56@yahoo.com). See the flyer and RSVP on following pages.



# Visit W6TRW Field Day 2024, Sat-Sun 22-23 June !!



The **W6TRW Amateur Radio Club** will set up their antennas and emergency communications equipment in Friendship Park in Rancho Palos Verdes / San Pedro, Saturday & Sunday June 22-23, 2024.

Please stop by and visit, to see ham radio in action! We'll have the operating station, info desk and snacks table all grouped together for easy access, questions and answers. In addition, we'll have the "Get On The Air" station, for a quick, assisted 30-second on-the-air contact opportunity for new hams and non-hams. **Fun for all!**

The map to the site, and more details, will be in the June CROSSTALK.



**STOP BY  
AND LEARN  
ABOUT  
RADIO!!**



# INVITATION - Owens Valley Radio Observatory

## Owens Valley Radio Observatory (OVRO) - Invitation and RSVP -

Astronomers setting up for nighttime astronomy.



**Dr. Doug Millar, K6JEY** from San Bernadino Microwave Radio Club, invites current members of W6TRW to the Cal Tech **Owens Valley Radio Observatory (OVRO)** near Big Pine in early June 2024.

**Date:** If you want to come **Friday June 7, 2024**

We will have an evening of astronomy to the south of Building #10 at the west end of the observatory. You can bring your own telescope and there will be a number of telescopes set up to share their views. 120V AC is available.

**Date: Saturday, June 8, 2024**

The main program will be on Saturday afternoon, starting in the dining area in Building #10. Please arrive by 1:00 pm Saturday June 8<sup>th</sup>.

We will go to the Pizza Factory in Bishop for dinner. -TBD

Saturday Night: We will also do Astronomy. You can bring your own telescope.

**Date: Sunday, June 9, 2024**

Gather for breakfast at a local restaurant (more info available on Saturday).

Leave whenever you like.

Check websites about the area and the Highway 395 for sightseeing opportunities.

[cont'd next page]

# RSVP - Owens Valley Radio Observatory

## OVRO Visit RSVP Form

*This is an invitation from OVRO. W6TRW will collect and provide an RSVP list to Dr. Millar. Please send your RSVP in reply to the W6TRW Newsletter email; thanks!*

Please provide current club member name, callsign, phone #, email with a name of non-member guest with their cell phone.

**Current Club Member\* Name:** \_\_\_\_\_ **Call sign:** \_\_\_\_\_

**Cell Phone #:** \_\_\_\_\_ **Email:** \_\_\_\_\_

**Non-Member Guest Name1:** \_\_\_\_\_ ; cell phone #: \_\_\_\_\_

Under 18 years old: Yes/No

**Non-Member Guest Name2:** \_\_\_\_\_ ; cell phone #: \_\_\_\_\_

Under 18 years old: Yes/No

**Non-Member Guest Name3:** \_\_\_\_\_ ; cell phone #: \_\_\_\_\_

Under 18 years old: Yes/No

If you have more guests, please list.

- \*Must be a current W6TRW member; **Non-member guests must sign the liability form.**
- No ID requirement for entry into OVRO for the tour.
- You must provide your own **transportation and lodging.**

You can stay at a motel nearby, camp in a campground, bring a tent or trailer and stay at the OVRO site. If you decide to camp at OVRO, you must provide your own bathroom, as the buildings will be locked. There are places to eat in Big Pine and Bishop.

Millimeter Wave Array dishes at the site.





# Directions - Owens Valley Radio Observatory

## DIRECTIONS TO OVRO

- The observatory address is: **100 Leighton Lane, Big Pine, CA.**
- Please **arrive at OVRO by 1:00 PM on Saturday** for the program.

### The directions from the LA area:

Drive north on the 5/14 through Palmdale and Mojave.

Continue past Inyokern and join 395. Continue on North through Little Lake, Lone Pine and Independence.

Continue through Big Pine.

Just as you get to the end of town turn right on Highway 168 towards the Westgard Pass.

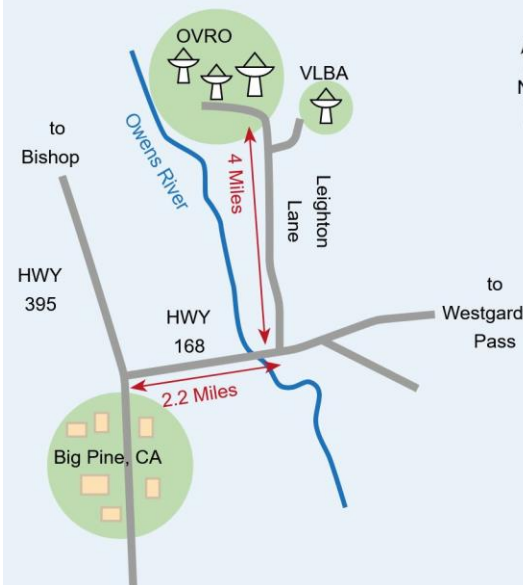
Go about 2 miles and turn left onto Leighton Lane, the observatory road.

You should be able to see the 40m dish in the distance, but it is 4 miles away!

Continue through the gate onto the property and follow the blacktop road.

Go past two 90-foot telescopes to the west end of the site and park.

### Directions to OVRO



Located southeast of Bishop, the Owens Valley Radio Observatory is 6 miles from the town of Big Pine. The only public access road to OVRO is via Highway 168, which begins at the northern end of Big Pine, by a large pine tree. Turn east onto Highway 168. After approximately 2 miles you will cross the Owens River Bridge. 1/4 mile past the bridge, turn left on a paved road, Leighton Lane.



# W6TRW Discord Channel

Did you know W6TRW has an active online discussion of ham radio adventures, build projects, and event planning? This is an excellent way to keep up with hot topics in the club. If you haven't already, please join your fellow club members on Discord. You can sign up here: <https://discord.gg/9JMY9SydV3>

## Recent posts on the W6TRW Discord:

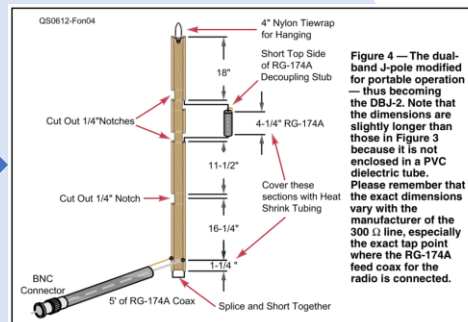
Ashley KO6BKR — 05/03/2024 11:08 AM

Finished my Ziegu G90 go-box! Big thanks to my dad for helping me build the control panel, and big thanks to @Dylon N6MX for helping me with the wiring, teaching me along the way, and improving the design with a second battery switch on the panel. Now I just need to build the antenna and then it will be ready for the field.



Umesh KK6TXI — 05/05/2024 6:29 PM

Thanks! Tuning this after the fact is a bit difficult... I already ruined one antenna making changes haha... I'm going to build another and adjust measurements. I THINK 😞 I need to move the stub if RG174 further up the line to get then the 70cm tune to shift lower. To make matters worse, all of my measurements vary slightly as well since the components vary from Ed's spec.



Tony KC6QHP — 04/12/2024 4:18 PM

My pictures from Burleson, TX. I got overly ambitious and forgot to fix the focus on my lens before totality, and didn't get anything close up that is super sharp.

Ashley KO6BKR — 04/12/2024 10:59 AM

Hi everyone! I just wanted to share some pictures I took of the eclipse in TX. Hope you all enjoy!  
Camera: Nikon D5600  
Lens: Nikon 500mm f/8 Reflex-NIKKOR-C





# Of Interest – Giant Storage Batteries

Since our guest speaker this month is from Southern California Edison, here is a topical recent story about electric utilities using acres of lithium batteries to store excess solar and other renewable energy for later use.

## Giant Batteries Are Transforming the Way the U.S. Uses Electricity

May 7, 2024

Since 2020, California has installed more giant batteries than anywhere in the world apart from China. They can soak up excess solar power during the day and store it for use when it gets dark.

Those batteries play a pivotal role in California's electric grid, partially replacing fossil fuels in the evening. Between 7 p.m. and 10 p.m. on April 30, for example, [batteries supplied more than one-fifth of California's electricity](#) and, for a few minutes, pumped out 7,046 megawatts of electricity, akin to the output from seven large nuclear reactors.

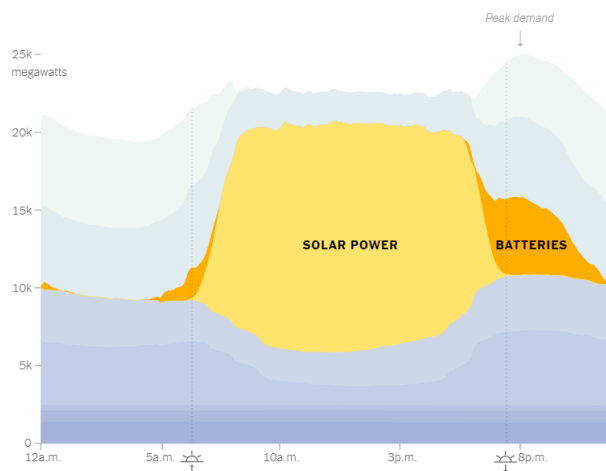


43-acre battery being built in Menifee, CA.

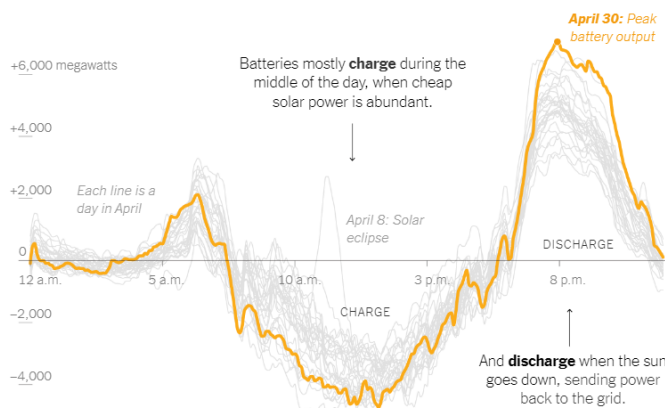
Most grid batteries use lithium-ion technology, similar to batteries in smartphones or electric cars. As the electric vehicle industry has expanded over the past decade, battery costs have fallen by 80 percent, making them competitive for large-scale power storage. Government mandates and subsidies have also spurred growth.

As batteries have proliferated, power companies are using them in novel ways, such as handling big swings in electricity generation from solar and wind farms, reducing congestion on transmission lines and helping to prevent blackouts during scorching heat waves.

California now has [10,000 megawatts of battery capacity on the grid](#), enough to power 10 million homes for a few hours.



California How Batteries Operated on the Grid in April 2024



Sources: California Independent System Operator via [Grid Status](#) · By The New York Times

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# Crosstalks from the Past – July 1969

For fun, a page from W6TRW's past. See <https://w6trw.com/crosstalk-newsletter/> for newsletters.

- July 1969 -

[https://w6trw.com/wp-content/uploads/Crosstalk/1969/1969\\_07\\_W6TRW\\_Crosstalk.pdf](https://w6trw.com/wp-content/uploads/Crosstalk/1969/1969_07_W6TRW_Crosstalk.pdf)

Amateur  
TRW Radio  
Club WB6WPO

## cross talk

A MONTHLY NEWS BULLETIN OF TRW AMATEUR RADIO CLUB

Sponsored by Systems Employee Association

JULY 1969  
VOL. II, No. 7

President	Doug Heydon (WB6WDS)	M3/2580	53694
Vice-President	AL Lee (W6KQI)	M2/1579	62806
Secretary	Bill Thompson (W6PMV)	E2/6062	67093
Treasurer	Bill Dews (K6AWO)	M1/2113	63606
Activity Manager	Ed Thornley (WA6JHD)	R6/2174	62845
Trustee	Carl Rothrock (W6MYC)	S/389	69663

### JULY MEETING

When: Wednesday, 30 July 1969, 12 Noon  
Where: R4/1041  
What: "Communications of the Future"  
Who: Vern Steinman (ex-W9PY) of General Electric Co.

### THE PREZ SEZ

By Doug Heydon (WB6WDS)

Field Day 1969 is now history, with the logs being cleaned-up and prepared for formal submittal to ARRL before the end of this month. As noted in the Activity Report elsewhere in this issue, our unofficial score is in excess of 17,000 points with nearly 2400 contacts. It looks very likely that our objective of bettering last year's fourth place finish will be achieved. For those of you who participated in the fun, thanks for a job well done. For those who couldn't (or wouldn't), we missed you and hope that you will be part of next year's festivities. I would like also to take this opportunity to personally encourage all club members to actively participate in the second TRW Systems Family Day coming up on September 6. Ed Thornley has a note in the Activity Report on this item as well, but it deserves a special emphasis since it is only a little more than 6 weeks away. Give Ed a call at the phone number shown above if you can help with equipment, set-up and most of all, operation.

I hope you all had a chance to work WB4ICJ after the Apollo 11 lift-off. Their special QSL will make a dandy memento of this exciting spaceflight achievement. I made my contact on 15 Meter SSB, with the aid of the club Swan 500 Transceiver. Rather humiliating for a confirmed brass pounder, but sometimes you take them anyway you can get them.

See you all on Wednesday the 30th.

## News and Announcements



### Membership

The W6TRW 2024 Membership Form is on our [Membership](#) page. Be sure to renew for the 2024 club year! **Our annual participation fee for the W6TRW club is still \$5, as it always has been! You can now send the participation fee ELECTRONICALLY to Dylan N6MX – see the note in the new 2024 W6TRW Membership Form! And you can scan your signed ink signature pages and send to Dylan’s email address on the form. We’re going electronic!**

**Our durable, high-tech magnetic club badges are now \$30, the real cost of making them.** The badge, with your call sign, name & W6TRW logo, will last for many years!

Each year, when you renew or join the W6TRW Amateur Radio Club, we will send out a physical membership card via regular mail, as confirmation that you are a member for the year.

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### W6TRW Swap Meet – Last Saturday of Every Month !

Our club puts on the largest monthly amateur radio swap meet in the Los Angeles area. The W6TRW Swap Meet has been held monthly for almost 40 years. The W6TRW Swap Meet is well known throughout the western US and even the world! It is always held the last Saturday of every month, rain or shine, holiday or not, from 7:00 AM until 11:30 AM, in the R2 parking lot near the southeast corner of Aviation Blvd. and Marine Ave. where the cities of Redondo Beach, Manhattan Beach, and Hawthorne meet. Talk-in on 145.320 -600 PL 114.8.

If you wish to sell at the swap meet, please visit our [swap meet sellers’ webpage](#) for all the necessary information.

Our Swap Meet Manager, Wendell KE6ASC, is always on the lookout for volunteers to help at the Swap Meet. If you'd like to get up early and help the club put on this important traditional activity, email Wendell at [w6trwswapmeet@gmail.com](mailto:w6trwswapmeet@gmail.com) to get more information.

The next swap meet is the last Saturday of the month, from 7:00 am to 11:30 AM. See you there!

## W6TRW Club Members SHOW ‘N TELL

### W6TRW Club Members SHOW ‘N TELL / DIY / Maker / Activity Talks

At past and recent club meetings, we’ve had members of our club describe and/or demonstrate projects they have created or been involved in. We’d like to continue that tradition! We’re all excited to hear what you’ve been doing. All you need to do is put together a few slides!

**If you’ve been building something interesting, or engaged in recent ham radio adventures or volunteering, please send a reply to [newsletter@w6trw.com](mailto:newsletter@w6trw.com), and we’ll get you on the agenda in 2024!**

**Please REPLY if interested!**

# News and Announcements

## W6TRW Repeaters Now Playing Newsline & ARRL News

We're putting a regularly scheduled rebroadcast of [Amateur Radio Newsline](#) ham radio news and the [ARRL weekly news](#) on the W6TRW repeaters on Wednesdays and Sundays at 9:00pm Pacific time! Newsline is a free service that produces a weekly report of important goings-on in the ham radio community and is a great way to stay in the loop on current ham radio topics.

Take a listen and let us know what you think!

-- Shackmaster, Dylon N6MX

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## [AMSAT - Amateur Radio in Space](#)

The number of active amateur radio satellites keeps increasing. Here is the current satellite status, making it easy to find satellites you may be able to hear: <https://www.amsat.org/status/>. For many satellites, the telemetry downlink or Morse code beacon is easy to receive with a simple dual-band VHF-UHF magmount antenna.

If you have a VHF/UHF SDR (software defined radio) connected to your computer, you can see the Doppler shift of the signal on the waterfall display, as the satellite passes over.

To find out when a satellite will fly over your location, go to <https://www.amsat.org/track/index.php>. Just put in your grid square or approximate latitude-longitude. One of the most reliable and easy downlinks is the ISS (International Space Station) on 145.800 MHz.

The next step is transmitting – making amateur contacts through the satellites. AMSAT satellites for amateur communications: <https://www.amsat.org/two-way-satellites/>.

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## [Amateur Radio Contests - Calendar](#)

There are many amateur radio contests during the year, for the full range of different radio interest areas. Click [here \(WA7BNM's Contest Calendar\)](#) for a listing of all the amateur radio contests.

Just listening to contests is a great way to hear a lot of stations from all over the US and even all over the world – better than just randomly tuning on any given day, hoping to hear something.

One popular contest is the [ARRL January VHF Contest](#) (The third or fourth full weekend in January) and the [ARRL June VHF Contest](#). The VHF contests are easy and fun – just find your grid square at [Amateur Radio Ham Radio Maidenhead Grid Square Locator](#) and then key up your VHF/UHF FM radio on the calling frequencies – 146.52 MHz and 446.000 MHz. The calling frequencies 146.52, 146.55, and 146.58 are busy during the contest and you can make many contacts just by answering contest calls. It's a great way to check out your VHF/UHF radios!



# W6TRW Repeaters and Nets

## W6TRW Repeaters

VHF 2 Meters • 145.320 MHz, Offset: -600 kHz, PL: 114.8 Hz; Located in Redondo Beach, CA • All-Star node 505680  
UHF 440 MHz • 447.000 MHz, Offset: -5 MHz, PL: 100.0 Hz; Located in Redondo Beach, CA • All-Star node 505681  
(Our VHF 145.320 MHz and UHF 447.000 MHz repeaters are linked – but may be disconnected for certain nets listed below)  
UHF MotoTRBO DMR • 446.050 MHz, Offset: -5 MHz, Color Code: 2; Located in Redondo Beach, CA

### **Monday K6MBC Manhattan Beach MBCERT Net**

Weekly; Monday nights at 6 PM \*except\* first Monday of the month, on the W6TRW 447.000 MHz repeater

### **Monday Lomita and South Los Angeles DCS Net: Weekly**

Monday nights at 7:30 PM, on the W6TRW 145.320 MHz repeater

### **Tuesday Absolute Tech Net: Weekly**

We retransmit the weekly [Absolute Tech Net](#) on Tuesday afternoons at 4 PM Pacific time. This is a great group of knowledgeable people who are enthusiastic to share their knowledge with others. Please see the [Absolute Tech Net web page](#) for the many topics they have discussed, and upcoming topics.

### **Wednesday W6TRW Emergency Communications Team (ECT) Net: Weekly**

The ECT net is held weekly Wednesdays starting between 12:00-12:15pm on our 145.320 MHz and 447.000 MHz repeaters. The whole net only takes about 10-15 minutes.

The purpose of the net is to promote club participation and to increase the general awareness of hams to emergency communications resources. The net is open to all W6TRW members as well as any non-member visitors!

Check-ins reply with their name and callsign, general location, and their radio communication capabilities at the time.

During an actual emergency, the W6TRW 145.320 MHz repeater will be dedicated to DCS, and won't be available for open use, but it will be very useful to monitor! The W6TRW 447.000 MHz repeater should be available and open for use during an actual emergency, so please save a memory in your radio for our 447.000MHz repeater!

### **Wednesday Northrop Grumman HF Family Net**

Also at noon Pacific Time on Wednesday is a long-running Northrop Grumman net on 14.270 MHz. Northrop Grumman and TRW employees / retirees are welcome to check in and represent the West Coast!

### **Thursday Space Net**

Our W6TRW 145.320 MHz and 447.000 MHz repeaters host the long-running Space and Information Net every Thursday evening at 7:00 PM. Ronnie N6SHI (Space Hams International) is the net controller, taking check-ins and providing the best of the weekly space news, launches, and visual flyovers. Tune in and check in!!

### **Newsline & ARRL Weekly News – Wednesday and Sunday**

9:00 PM & 9:30 PM

News released every Friday

# About Us – W6TRW

The W6TRW Amateur Radio Club is a non-profit organization that started in the early 1960s.

The W6TRW Amateur Radio Club started as the TRW ARC and held the club call sign WB6WPO. The club became an ARRL Affiliated Club in 1971, and the club call sign was changed to W6TRW in 1974. The club was formed at the TRW facilities in Redondo Beach California comprised of employees of the aerospace company.

Our club station is located in Building S and includes 2 Yaesu FT-1000's, Alpha 87a amplifier, and two towers with multiple HF antennas in Redondo Beach, California. We also have all-mode capability on 6m, 2m, 440, and 1.2 GHz. We have ATV, and satellite and packet stations.

W6TRW sponsors open repeaters on 2 meters and 440 MHz that serve the Los Angeles basin. We also have a Motorola MOTOTRBO Digital Repeater in Redondo Beach. IRLP node 7067 is connected to our open 440 repeater and typically is connected to the Western Amateur Linking Association LAX Reflector 9350. Please visit our repeater page for more information!

The Amateur Radio Club (W6TRW) offers a full range of radio related activities, including contest operating events, community public service events, picnics and classes for those wishing to obtain their first license. Stop by the Amateur Radio Swap Meet on the last Saturday of the month in the R2 parking lot from 7:00-11:30am – you'll be surprised by what you will find.

## W6TRW Officers 2024

### Elected Officers:

**President** (Dylon Mutz)  
**Vice President** (Mike Hamada)  
**Treasurer** (Jason Fujino / Wendell)  
**Secretary** (Mark Knight)  
**NGRC Commissioner** (Greg Madden)

### Staff Officers:

**Banquet** (Janice Miya)  
**Publicity Chair** (Greg Shreve)  
**Training Chair** (Chris Wachs)  
**QSL Manager** (Craig Gullickson)  
**Librarian** (Janice Miya)

### Appointed Officers:

**Activities Chair** (Janice Miya)  
**W6TRW Trustee** (Chris Newton)  
**Technical Chair** (Chris Wachs)  
**Swap Meet Manager** (Wendell Young)  
**Membership Chair** (Wendell Young)  
**ECT Coordinator** (Greg Madden)  
**Web Master** (Deedee Banh)  
**Web Page Designer** (Rich Sauer)  
**Equipment Chair** (vacant)  
**S-Shack Master** (Dylon Mutz)  
**Field Day Chair** (Greg Shreve)  
**Past President** (Chris Wachs)