



# **W6TRW** **CROSSTALK**

Monthly news bulletin of the W6TRW Amateur Radio Club  
**January 2024**

## Winter Field Day

January 27th & 28th, 2024

[Register Your Location / Club](#)

W6TRW site: Chino Hills State Park

Time 1100 PST Saturday 1/27 – 1059 PST Sunday 1/28

Details & Contacts: *See page 4!*

### What's Inside

- General Club Meeting
- News & Announcements
- Membership – 2024 Application
- Repeaters & Nets
- About Us

# Monthly General Club Meeting

**When: Tuesday, January 9th 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.

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

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

## Speaker Topic for This Month:

**“AREDN: Amateur Radio Emergency Data Network”**

**Orv Beach, W6BI**



The **AREDN™** Project's focus is Emergency Communications (EmComm). It adapts WiFi-type mesh networking to amateur radio bands, enabling higher power, higher gain, and higher bandwidth, to support local and regional emergency communications needs.



Orv W6BI lives in Simi Valley, California. He's a retired Linux system administrator, an ARRL Santa Barbara Section Technical Specialist and an AREDN Ambassador.

He was first licensed as WN6WEY in 1967. He's been into digital ham radio all his life, starting with CW. He worked his way up through RTTY, PACTOR, packet radio and PSK31, and started messing around with ham radio networking in 2014. He helped deploy the initial network nodes and backbone buildout in Ventura County and western Los Angeles County. He currently administers several dozen of them.



Orv is also active in coordinating the build-out and maintenance of the wider Southern California ham radio network, which now spans from Paso Robles in central California south to the Mexican border and east to Las Vegas, comprising over 450 nodes, both hilltop and ground-level, including hospitals, police departments and EOCs.

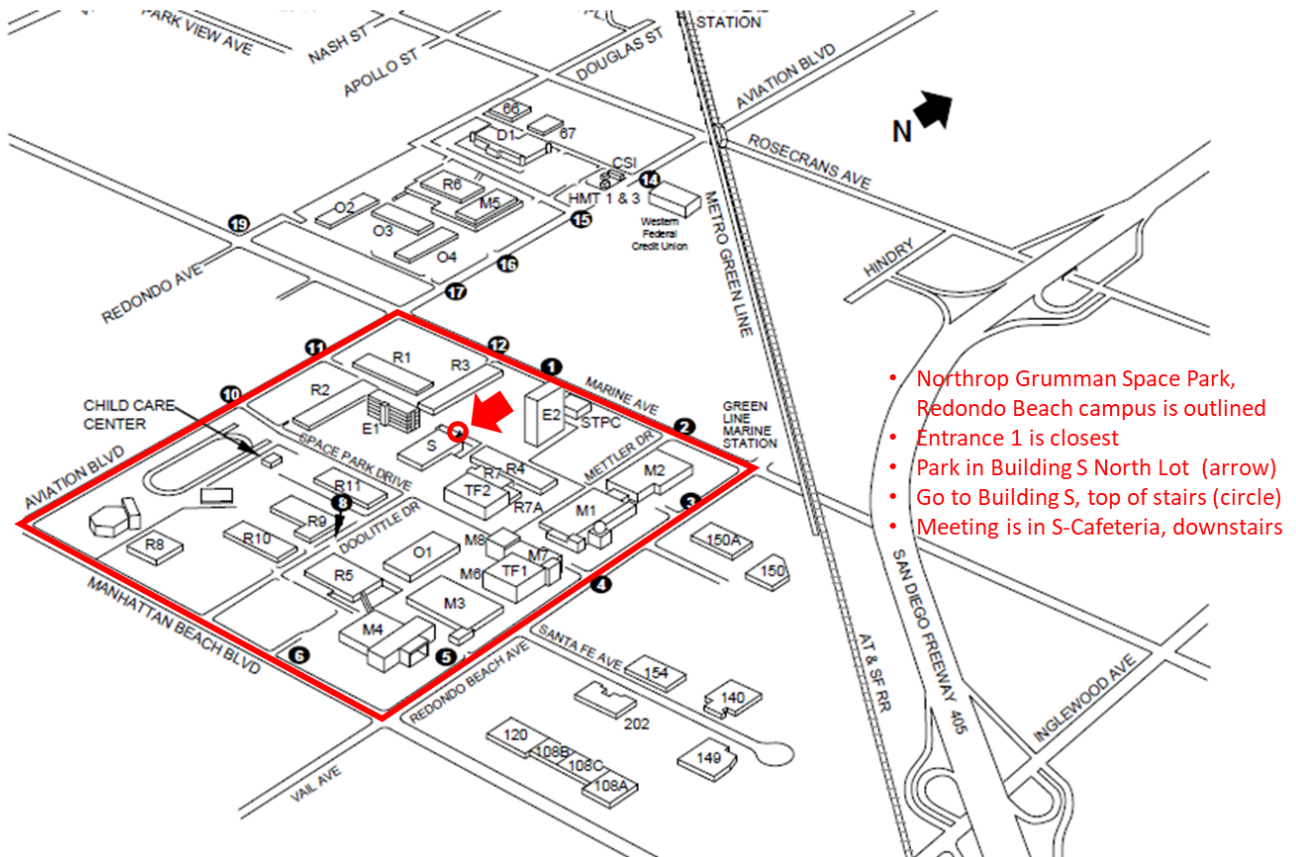
As an AREDN Ambassador, he's given over 60 presentations about ham radio networking using

AREDN software over the last five years and Elmered many hams worldwide on ham radio networking. Orv is active in AREDN groups in Facebook, Slack, Telegram, and Discord, and monitors the forums on the AREDN website.

## 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 Estate

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!

### AltaSea / LAMI

W6TRW club member Joe Lai KB6UCU has long volunteered with organizations at the San Pedro port to promote STEM (Science Technology Engineering Math), electronics, and amateur radio education for the students that pass through AltaSea and the [Los Angeles Maritime Institute \(LAMI\)](#). Joe volunteers time and materials to make electronic kits assembled by the students. He's always looking for more hams to get involved in these worthy endeavors. If you're interested in helping Joe, or interested in [AltaSea](#), ocean research at the port, or ham radio volunteer opportunities, please contact Joe at 310-408-9711.



# W6TRW Amateur Radio Club

## Winter Field Day 2024



Planning to attend? Please RVSP to WFD Chairs by email

**Date** January 27-28, 2024  
**Time** 1100 Saturday – 1059 Sunday (PST)  
**Location** Chino Hills State Park  
Rolling M. Ranch Campground, Site #GC1

### WINTER FIELD DAY

Mission of WFD is to encourage emergency preparedness during winter months when weather presents unique operational challenges. WFD will:  
**1** – Build your skills/confidence for winter camping  
**2** – Provide experience conducting outdoor radio communications under unusual conditions

### CAMPING

**Tents only.** The group site we have reserved is a drive-up primitive site. There is a bathroom, but no other amenities. (you can reserve your own adjacent site if you want to bring a camper)

Chino Hills typically has January temperatures in the range of 69° / 40° - make sure you bring enough layers and a warm sleeping bag.

### FOOD

**Bring your own food!** The club is not providing food – this is a chance to plan how you'd eat in an emergency. Bagged, dehydrated food is an option – or you can bring a stove and get creative!

### SOTA/POTA

Chino Hills SP offers opportunities for both Summits on the Air (SOTA) and Parks on the Air (POTA) activations – you can do these in addition to participation in WFD!

**SOTA** San Juan Hill, W6/CT-230 (5.5 mile round trip hike from camp, with 1200 ft of ascent)

**POTA** Chino Hills State Park, K-1139

### OPERATING PLAN

W6TRW to operate as **50 ORG** station (up to 5 simultaneous transmitting stations, operating outdoors)\*

<u><b>TX power</b></u>	QRP (5 W CW/Digi, 10W Phone)
<u><b>Antennas</b></u>	Hex beam with triplexer for 10/15/20m, 40m EFHW
<u><b>Radios</b></u>	Provided by attendees
<u><b>Power supply</b></u>	Solar, batteries (no power main connections)

### RULES

**Modes** All modes allowed, as long as they can transmit the field day exchange. *Note that this excludes FT4 & FT8*

**QSO points** Phone contacts count as one point each, and all CW and digital modes count as 2 points each. Logging incorrect data will be penalized by two points for each missed exchange or call sign. Duplicate contacts (same call, band, and mode) will not be counted nor penalized

**Multipliers** Total number of points will be multiplied by two numbers.

- **Power Output Multipliers:** QRP stations are defined by transmitting less than 5 watts on CW or 10 watts on phone and will get a multiplier of 2. All other stations have a multiplier of 1. The maximum permitted power is 100 watts measured from the output of the final amplifier
- **Band / Mode Multipliers:** Each mode worked on each band counts as 1 multiplier. If you worked both CW and Phone on 20 & 40 meters, your total multiplier would be 4. If you operated CW and Phone on 80, 40, 15, and 10 meters, CW and PSK31 on 20m, FM on 2 meters & 440 you would have a total multiplier of 12x

**Objectives** Multiple available, including 6-bands and satellite

\* *Category may adjust based on attendance & # of band captains*

### WFD CHAIRS

Dylon Mutz, N6MX and Mark Knight, KD7DTS  
W6TRW President W6TRW Secretary  
[n6mx@arrl.net](mailto:n6mx@arrl.net) [kd7dts@arrl.net](mailto:kd7dts@arrl.net)

### TALK-IN FREQUENCY

**146.55 MHz**

On-site communication will use VHF for event coordination

Note: cell service may be limited

# Article – Operating Bench Considerations

## Operating Bench Considerations

Bill Shanney, W6QR

When I became active again in 1988 I set up my small IC-735 transceiver, power supply and an antenna tuner on a small computer desk in our bedroom. I could have added a computer but that's about all. About 6 months later I purchased a much larger IC-765 which made things crowded. I had also added a few more antennas so I needed a switch. Well, you get the picture.

Fortunately, we had a small spare bedroom we used for the family computer and storage. I built a 7' long table and used that as the base for my equipment for many years. There were a few things I learned early on:

- Since you will be running wires and cables you need space between your table and the wall behind it
- Decide how you will bring antenna feedlines into the shack. I installed a dryer vent in the wall below my bench, off to one side so I could easily access it.
- Install a safety ground before you add a lot of equipment
- Make your bench larger than you need, if possible. You will add more equipment later if you are like me.

I found having my transceivers on the table was the most comfortable for tuning. Some operators raise them a few inches and put their keys, keyer and logbook or notepad underneath. I had my operating table arranged like this for a while. If you have to hold your arm too high to tune you will tire quickly.

Most hams use a computer; you should decide where you will put the keyboard and monitor. Many operators want the keyboard on the tabletop. I have a small wireless keyboard that I can move around. Most operators find the monitor most useful at eye level in front of them. I have 2, one in front of me that displays my log and QRZ.com. The second is the laptop screen off to one side.

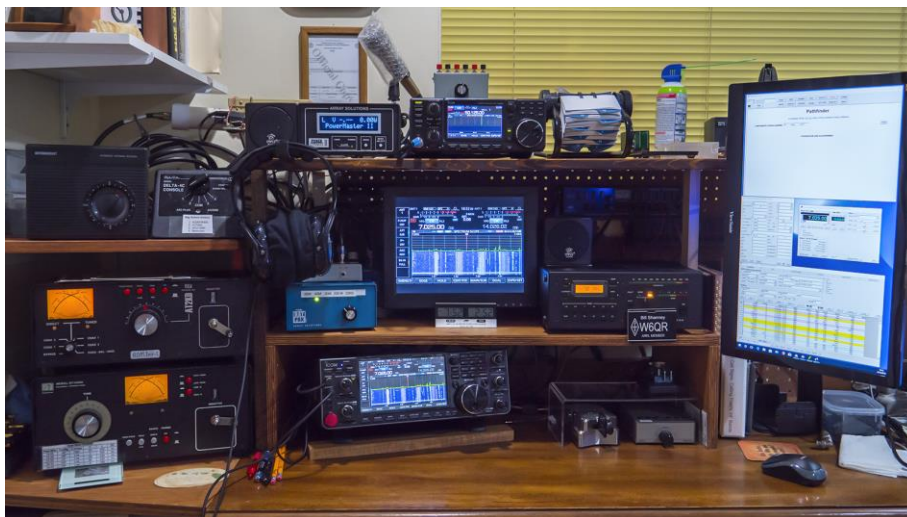
We are now at the point where we most likely need a shelf or two for things like antenna tuners, antenna switches, station monitors. VHF/UHF FM equipment needs space as well. Seldom touched equipment like antenna tuners can be on a higher shelf. Heavy items like power amplifiers should be on the desktop.

I have lost count of how many times I've rearranged my operating bench and rebuilt the shelving. Every time I add a new piece of equipment (or remove one). I like my present layout but am thinking about a new shelf. I'm going to try to make it modular, so I can make changes easier.

There are hundreds of shack layout photos on line to get you started. Take your time and it will be more user friendly, but don't worry too much...it will change ☺

[cont'd next page]

## A Few of My Operating Bench Layouts



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My good friend Don, WB6BEE, has his station in a furniture cabinet. Don's wife Wendy doesn't like it visible when he's not using it. He needs to keep her happy though, she bought him his Elecraft K-Line ☺



Also see Bill's Presentation [HF Update: Making The Most of Your Operating Time](#) on the [W6TRW Presentations page](#).

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## 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:

<https://discord.com/channels/701248934441517187/1170110415427084369>

Our Ham Alerts Discord page keeps us up to date on W6TRW member ham activity!



**Mike WB6DJI** — 12/26/2023 10:50 AM  
New QuanSheng All mode 18MHz to 1300MHz HT New firmware mod

**Ham AlertBOT** — Today at 6:00 PM  
SPOT: KD7DTS seen by W6YX on 7.061 MHz (cw) at 02:00 UTC

**Mark KD7DTS** — 12/24/2023 9:56 AM  
New ham **@Di K06BTM** using her technician CW privileges on HF! Good to have the Oregon ham shack back in action.



- Ham Alert BOT** Yesterday at 10:02 AM  
SPOT: WA6RLR seen by WE9V on 28.074 MHz (ft8) at 18:02 UTC
  - Ham Alert BOT** Yesterday at 12:05 PM  
SPOT: WA6RLR seen by KM3T on 28.074 MHz (ft8) at 20:05 UTC  
SPOT: W6QR seen by NG7M on 18.088 MHz (cw) at 20:08 UTC
  - Ham Alert BOT** Yesterday at 3:05 PM  
SPOT: W6TRW seen by W3OA on 28.074 MHz (ft8) at 23:05 UTC
  - Ham Alert BOT** Yesterday at 3:25 PM  
SPOT: W6TRW seen by K1RA on 21.074 MHz (ft8) at 23:25 UTC
  - Ham Alert BOT** Yesterday at 11:44 PM  
SPOT: KC6QHP seen by G4IRN on 7.074 MHz (ft8) at 07:44 UTC
- January 4, 2024
- Ham Alert BOT** Today at 9:12 AM  
SPOT: W6QR seen by K4PP on 18.088 MHz (cw) at 17:12 UTC



# Crosstalks from the Past – November 1999

## November Contests by Jim Harrison K6OUE

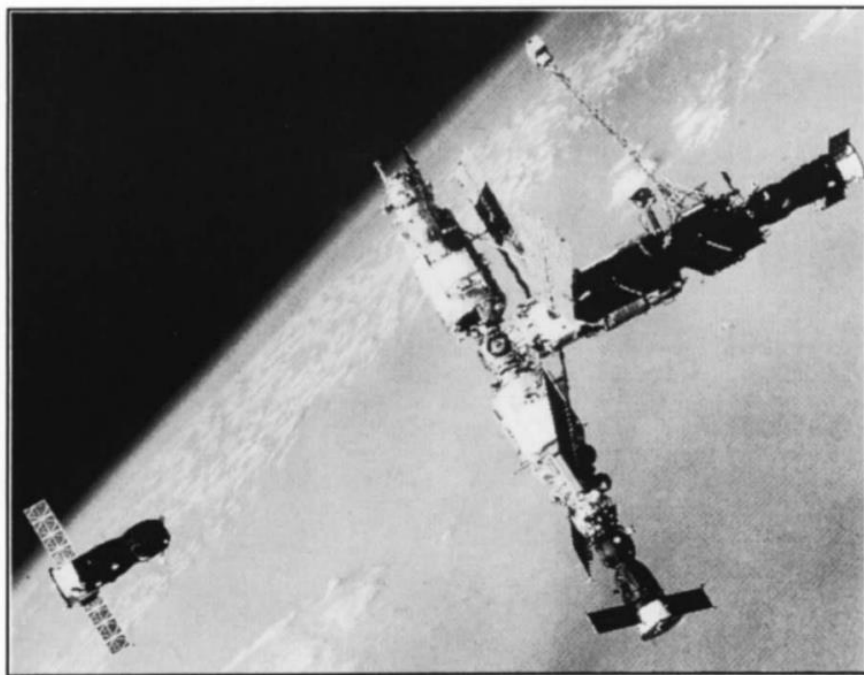
ARRL November Sweepstakes

CW Nov. 6-8

Phone Nov. 20-22

### Last QSL Cards from MIR

This is one of the last QSL cards from the MIR space station, received by K6OUE. MIR was abandoned and ceased amateur radio operations on August 28, 1999. It will burn up in the atmosphere in early 2000.



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### Presentation on ATV (and a tour of the Gordon West comm van!)

**Jim Harrison K6OUE**

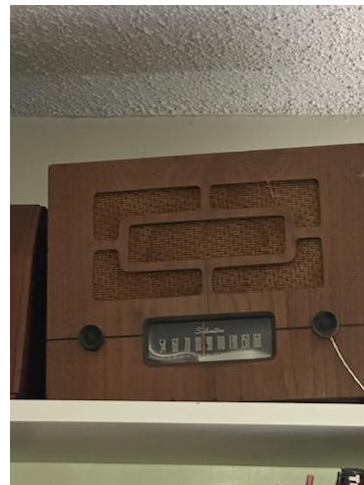
On the evening of August 26, our president Greg KE6YEX, assisted by Richard K6KMA and Jim K6OUE, gave a presentation on amateur television to the Irvine Disaster and Emergency Communications group (IDEC) at the Irvine civic center. Greg had been invited by Fred KF6BTU who is a member of IDEC and the TRW ARC. Richard gave a talk on the applications of ATV in emergency communications, and Greg gave a talk on the technical aspects and costs of setting up an ATV capability. After the meeting adjourned we all went out to the parking lot where we had set up a mobile ATV station for a demonstration. While Greg was demonstrating ATV communication thru the Santiago Peak ATV repeater, some mysterious pictures were seen. Some handwritten signs appeared saying "Hello IDEC, we know what you are doing!" When a still picture of Gordon West was seen on the repeater, we thought that someone was playing a joke. But when Greg went to demonstrate the simplex ATV frequency, there was Gordon West, WB6NOA, talking to us with a very clear TV picture. It turns out he was in his van in the parking lot on the other side of the building! He had heard that Greg was going to be doing the presentation and he wanted to help show the capabilities of ATV to IDEC, but he didn't want to take over the whole show from Greg. He came over to see our set-up and then invited everyone to see his van.

# News and Announcements

## Massive Amateur Radio Estate – Don Davis AD6PB, SK

Former W6TRW member Don Davis, AD6PB, became a Silent Key last year. He's left a huge estate of unique, well-cared vintage radio equipment, surely of interest to collectors, and a great DX station with tower and antennas. See the collection at <https://w6trw.com/classified-ads/>

***To obtain any of this incredible vintage gear, contact Linda Davis at (310) 871-9773, or email [lcpdavis@gmail.com](mailto:lcpdavis@gmail.com)***



# 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 2023!**

**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 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.