# QRO

## THE PALOS VERDES AMATEUR RADIO CLUB NEWSLETTER

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All **QRO** monthly issues since 2007 are on the PVARC website at <u>www.k6pv.org</u> under the "Newsletter" tab.

Additional club news appears in the PVARC Weekly Bulletin sent by email to members.

# "Digital Mobile Radio (DMR)"

### Kirk Beasley, KN6UMV

Thursday, April 4, 2024, 7:30 pm, hybrid meeting in-person at Hesse Park and via Zoom

- PVARC Hesse Park room opens at 6:45 pm
- Zoom online meeting room opens by 7:10 pm

### Also in April:

Saturday, April 13, 10:00 am-Noon,

PVARC HF Enthusiasts Group meeting at Palos Verdes Library main branch in the Conference Room



**APRIL 2024** 

# Upcoming PVARC meeting speakers in 2024...

PVARC's 7:30 pm **April 4<sup>th</sup> monthly meeting** at Hesse Park and via Zoom is all about "Digital Mobile Radio" (DMR). It's also a five-year anniversary celebration of our K6PV repeater becoming a dual-mode analog/DMR repeater on March 22, 2019. Speaking about DMR, experiences with it, and how you can use DMR is fellow PVARC member Kirk Beasley, KN6UMV. Note: our Hesse Park meeting room now opens at 6:45 pm; our Zoom virtual room by 7:10 pm.

Our **May 2<sup>nd</sup> monthly meeting** at Hesse Park and via Zoom features "Summits on the Air" presented by Don Minkoff, NK6A.

20.0 kHz channel Conventional Analog FM (UHF) 12.5 kHz channel 6.25 kHz 6.25 kHz 6.25 kHz channel Yaesu C4FM Icom D-Star (Frequency Division Voice Data Multiple Access) 1200 bits 3600 bits per second voice per second data Voice or Data or 12.5 kHz channel Either Time Slot may be used for Voice or Data simultaneously **Digital Mobile Radio** Time Time Time Time i.e., MotoTrbo® and others Slot Slot Slot Slot (Time Division 1 2 1 2 Multiple Access) 30 ms 30 ms 30 ms 30 ms TDMA TDMA TDMA TDMA burst burst burst burst 60 ms 60 ms **TDMA** frame **TDMA frame** ILLUSTRATIONS: DIANA FEINBERG, AI6DF

Speakers for our June and July hybrid meetings will be announced soon. Our July meeting will be on Wednesday evening, July 3, because the 1<sup>st</sup> Thursday is 4<sup>th</sup> of July.■

# A quick visual comparison of major ham radio digital modes

In just a one-year span our club's monthly meetings will have covered all three main voice/data ham VHF/ UHF digital modes.

Our upcoming April 4, 2024, meeting about DMR follows PVARC meeting presentations on D-Star (May 2023) and Yaesu C4FM System Fusion (September 2023).

On the left: Reprinted from the January 2019 **QRO** is a succinct visual comparison of the respective channel widths and channel splitting/uses for DMR, C4FM, and D-Star.

In early 2019 our Board felt DMR offered us the most current and future potential. **QRO** Editor's Note: The Palos Verdes Amateur Radio Club is not the sponsor of this trip to Owens Valley Radio Observatory. All information below is provided by fellow member Doug Millar, K6JEY.

### OWENS VALLEY RADIO OBSERVATORY TRIP SCIENCE BEYOND THE BOOK June 7-9<sup>th</sup>, 2024

With Dr. Mark Hodges and Dr. Doug Millar and Cecilia Caballero, MA

Please join with us on the above date for an extraordinary adventure in science education at the Owens Valley Radio Observatory outside of Big Pine, CA. Included are science demonstrations at the 40m radio telescope and a tour, walking a scale model of the Solar System, solar astronomy, and night time astronomy. We will also make ice cream with liquid nitrogen.

This year we are emphasizing the DSA projects that are being built at OVRO. (See the OVRO website for more info: <u>http://www.ovro.caltech.edu</u>

If you want to come on Friday, 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. We will also do astronomy on Saturday night. The main program will be on Saturday afternoon, starting in the dining area in Building #10. We will go to the Pizza Factory in Bishop for dinner.

All the above is free and courtesy of Dr. Mark Hodges, OVRO, and Caltech. This trip is open to teachers, students with their families, members of local astronomy clubs, and radio hams. You must RSVP to go on the trip to Dr. Millar so that we know how many to expect (contact information below). Please also forward your cell phone number.

This is not a school or OCA sponsored event. Everyone is on their own for transportation and lodging. You have many options. 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.

Please arrive at OVRO by 1:00 PM on Saturday for the program. The weather will be warm and dry. Evenings will be a little cooler, so dress accordingly for the nighttime astronomy.

### Schedule:

### Friday-

Setup telescopes to the south of building #10 for astronomy by sunset. 120v AC, bathroom and coffee and water available.

### Saturday

1:00pm: arrive at kitchen in building #10 for start of program and tour. 5pm: check in at your Motel (if not already checked in) and go to dinner in Bishop. Evening- Astronomy at the site

#### Sunday

A lot of us like to gather for breakfast about 9:30 at one of the local restaurants. More information will be available on Saturday.

Leave whenever you like. Check websites about the area and the Highway 395 for sightseeing opportunities.

Continued on next page ►

### OWENS VALLEY RADIO OBSERVATORY TRIP SCIENCE BEYOND THE BOOK June 7-9<sup>th</sup>, 2024

### Continued from previous page

The directions from the LA area are: 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. Below is a more detailed map. The observatory address is: 100 Leighton Lane, Big Pine, CA.

If you would like to bring your own telescope, please do so. If you have a telescope and don't know how to use it, please bring it as there will be people to show you how to properly set up and use the telescope.

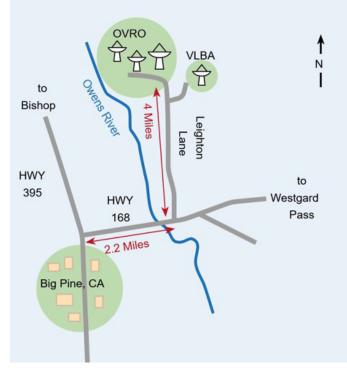
For any questions and RSVP's my contact information is Dr. Doug Millar Cell- 562-810-3989 and email is drzarkof56@yahoo.com

#### Thank you and I hope to see you on the trip! Dr. Millar

### Local Directions to the observatory:

n.b. The large pine tree no longer exists.

# 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.

# Some photos from past visits at OVRO



**Top photo:** The main dish to explore is the middle one, 40 meters in diameter.

Photos by Doug Millar, K6JEY





# PVARC begins planning for ARRL Field Day, June 22-23

For this year's ARRL Field Day the PVARC plans to again operate from Soleado Elementary School in Rancho Palos Verdes, subject to final School District permit approval.

We've enjoyed Soleado's quiet site since 2018 which, although somewhat "off the beaten path", offers an outstanding transmit location above the Los Angeles Basin. Previous PVARC Field Day sites have been at Palos Verdes Peninsula High School (mid-1990's through 2011) and Ridgecrest Intermediate School (2012-2017). Coincidentally, we had to move from Pen High and later Ridgecrest because major construction work in progress prevented access for Field Day.

The PVARC expects to again operate as a 2A station on emergency power. We always encourage newer hams to visit our Field Day site and try operating on the HF bands, including under a higher-licensed ham.

Don't wish to operate radios? We still up our stations in limited time. after 8:00 am Saturday–and we am. Many other clubs will start gear on the day before, which is When Field Day ends at 11:00 disassembling everything and site by 1:00 pm

This year's ARRL Field Day logo with a Civil Defense-inspired visitor traffic at Soleado which has



need help from PVARC members to set PVARC typically has site access just need to be "on the air" by 11:00 setting up their antennas and allowed by the Field Day rules. am Sunday we then need help completely vacating the school

uses the pun "Be Radio Active" design. We don't expect that to hurt very little to begin with.

Stay tuned for more Field Day details...this year should be another great one for the PVARC.■

# Need to renew your amateur radio license and pay the \$35 fee? ARRL's easy to follow article has the steps you need

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		he ARRL VEC prov adio license renew FCC's new COn	al app		ke a pa	ayment via the			
a F F F	and the CC ch bay the blete th	en link your FCC Registra narges a \$35 fee to renew e fee. Follow the steps be ne license renewal applica	you renew your license, you will need to create a new FCC CORES username account, n link your FCC Registration Number (FRN) to your new account. As of April 2022, the arges a \$35 fee to renew amateur radio licenses. You must create the new account to fee. Follow the steps below to create a new CORES account, and then after you com- e license renewal application, the License Manager system will automatically direct he CORES system. Log in and pay the fee.						
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	2	Log in to your new accou		click the first option, AS	SOCIATE	USERNAME TO FRN.			

### Visit:

https://www.arrl.org/files/file/QST/ This%20Month%20in%20QST/ 2023/10%20october%2023/10%2023 %20Somma%20renew%20license% 20online.pdf



Left: March 18, 2024, Starlink launch visible from near Torrance Beach after starting as a small orange glow just above the horizon near Santa Barbara.

**Below:** Contrail from March 18 Starlink launch as seen directly above Torrance's Hollywood Riviera neighborhood. Dark object in top left corner is the house roof eave.

PHOTOS: DIANA FEINBERG, AI6DF

# Is there a Starlink in your ham radio future?

When SpaceX Starlink satellite missions launch from Vandenberg Space Force Base in early-evening hours many PVARC members at home can easily view the spectacular rocket contrails. Starlink intends to eventually provide high-speed internet access from almost anywhere using a constellation of nearly 12,000 low-Earth orbit satellites; Starlink currently reports having 2.6 million customers, with plans starting

at \$120 per month (plus \$600+ for hardware.)

While Starlink does not use amateur radio frequencies already some hams in EmComm groups are using their sponsoring agency's Starllink.

In late March, for example, L.A. County DCS hams supporting a search and rescue operation deep in the San Gabriel Mountains used their agency's Starlink internet and WiFi to send/receive Winlink traffic and email. Perhaps Starlink will be in your ham future too.■



# PVARC 2024 membership (as of 3/29/2024)

Thank you to everyone who has renewed their PVARC membership for 2024 or holds a complimentary membership for this year. To ensure we better acknowledge all membership renewals–whether received by postal mail, PayPal, or in-person–we'll be listing renewals in **QRO** for the next several months. Let us know if you renewed (or recently joined) but do not see your call sign here.

Haven't renewed yet? Renew at either a PVARC in-person monthly meeting; by using the fillable form on our website with your PayPal payment; or print and mail the form with your check to our PO Box address. ■

AB6SY AB9A AC6RM AC6RM-XYL AC6RW AF6VT AI6DF AK6CZ K0MZ K1DFO K5LAX K6BRN K6DMO K6JW K6JW-XYL K6LH K6MU K6JW-XYL K6LH K6MU K6NT K6UU K9BGC KA6JMR KA6JWR KA6JWR KA6JWR KA6JNR KA6JNR KA6LJR KA6MJR KA6ZTO KC6NNV KE6PMN	KF6VTN KG6BNN KG6BPH KG6RH KI6EAI KI6GUY KI6HQX KI6HQX KI6SUA KI6SUA KI6SUA KI6SUA KI6TEQ KI6YMD KJ6CAU KK6EWB KK6KCH KM6ATI KM6LGU KM6LGX KM6LGX KN6BBO KN6FYW KN6QHJ KN6QHJ KN6QHJ KN6QHJ KN6YDX KN6YSJ KO6BVD KO6CIA KO6CIK	N6HE N6KN N6MDC N6NNW N6YFM NA6Z NG6R NT6E W6BMD W6DLD W6GEZ W6HIP W6HIP-XYL W6KCV W6KCV-XYL W6KCV W6KCV-XYL W6KCV W6KCV-XYL W6MO W6OQ W6PBH W6YBW W6YBW-XYL WA6LKV WA6LKV WA6MEM WA6NSR WA6OWM WA6OWM-XYL WA6WV WD6Y
KA6MJR	KO6BVD	WA6OWM
		WA6WV WD6Y WJ1P WW6WW

# **PVARC 2024 upcoming events**

 PVARC hybrid monthly meetings online via Zoom and in-person as announced

1<sup>st</sup> Thursday each month, 7:30-9:15 pm, except in August and December; July 2024 meeting held on 1<sup>st</sup> Wednesday, July 3,

 PVARC HF Enthusiasts Group meetings in-person at Palos Verdes Library main branch

2<sup>nd</sup> Saturdays, 10:00am-Noon

- PVARC EmComm Interest Group online meetings via Zoom (currently under review)
- Walt Ordway K1DFO Technician and General amateur radio license classes at Hesse Park

May 11 and 18, 2024; 9:30 am to 5:00 pm

- Volunteer Examiner license test session at Hesse Park, May 25, 2024 (Fireside Room) 10:00 am
- PVARC 2024 Holiday Dinner or virtual "After-Dinner", December 12

# Non-PVARC Events of Note:

- W6TRW Swap Meet, last Saturday each month. 7:00-11:30 am. Northrop Grumman parking lots, Aviation Blvd./Marine Ave., North Redondo Beach. VE license testing in Building S-2 at 10:00 am.
- International DX Convention: April 12-14, 2024. Visalia Convention Center, Visalia, CA; website: <u>www.dxconvention.org</u>
- Dayton HamVention: May 17-19. Greene County Fairgrounds, Xenia, OH (Dayton suburb). Largest ham convention in the Western Hemisphere. Website:<u>https://hamvention.org/</u>

# Become an ARRL member: support amateur radio while increasing your learning

Consider joining the American Radio Relay League (ARRL) if not already a member. The ARRL is the only national organization representing amateur radio and has another significance for the PVARC: We receive benefits from being an ARRL-affiliated club, which requires that at least 51% of club members be ARRL members.

Annual ARRL membership costs \$59 and includes digital access to all four ARRL periodicals (**QST** magazine, **On The Air** magazine, **National Contest Journal**, and **QEX** magazine focusing on advanced technical topics.) Subscriptions to printed copies of ARRL publications are available at additional charge.

All ARRL members can access numerous web-based materials, ARRL staff, and assistance with ham radio issues. Visit: <u>www.arrl.org/</u>. ■

# Need a PVARC badge?

If you wish to order a new or replacement engraved PVARC badge contact Gary Lopes at wa6mem@cox.net and he will make arrangements for your payment and sending your new badge. Badges cost \$13. ■

# Embroidered PVARC patches available

PVARC club patches are still available for \$4 each. They may be sewn onto any cap, jacket, shirt, or bag.

If you would like a patch contact Diana, AI6DF, ai6df@arrl.net and we'll find a way to get your patch to you.■

### **APRIL 2024**



# About Us...

Welcome to the Palos Verdes Amateur Radio Club, K6PV.

Founded in 1975, today our 150+ members hail from every city in Los Angeles County's South Bay region...and beyond.

Our club fosters diverse ham radio interests including public service, DXing, contesting, digital modes, and electronic experimentation.

We also teach license classes several times annually and gladly assist newer hams in understanding amateur radio technology or procedures.

Many PVARC members serve in the government-affiliated disaster amateur radio groups for the South Bay's cities and Los Angeles County. We also provide public service communication at no charge to sponsors of community and running events.

No matter where you are along your ham radio journey you are welcome as a PVARC member. ■

### Palos Verdes Amateur Radio Club

An American Radio Relay League Affiliated Club

### **Board of Directors:**

President	
Vice President	
Treasurer	
Secretary	
Directors	

Diana Feinberg, Al6DF Ray Day, N6HE Don Putnick, NA6Z Ron Wagner, AC6RW Clay Davis, AB9A Gary Lopes, WA6MEM Bob Sylvest, AB6SY

Past Vice President

### **Appointed Offices:**

**QRO** Editor K6PV QSL Manager K6PV Trustee LAACARC Delegate VE Coordinator VE ARRL Liaison Net Control Operators:

Diana Feinberg, Al6DF Jeff Wolf, K6JW Mel Hughes, K6SY Jeff Wolf, K6JW Dave Scholler, KG6BPH Jerry Shaw, Kl6RRD Laura Remington, KA6LJR;

Ron Wagner, AC6RW; Dale Hanks, N6NNW; Bob Sylvest, AB6SY; Malin Dollinger, KO6MD; Dave Turner, KM6LGX; Jerry Shaw, KI6RRD; Gary Lopes, WA6MEM; Clay Davis, AB9A; Rick Heaston, KG6RH; Jeff Remington, KA6JMR; Marlee Remington, KA6MJR; Derek Okada, K6DMO

### Contact us:

**QRO** Editor: 310-544-2917, ai6df@arrl.net Email: k6pv@arrl.net Website: <u>www.k6pv.org</u> Postal Address: Palos Verdes Amateur Radio Club PO Box 2316 Palos Verdes Peninsula, CA 90274-8316

### Repeaters (Open, though often listed as "Closed"):

PVARC: K6PV, 447.120 MHz Analog FM: (-), PL 100.0, CTCSS Digital DMR: 447.120 MHz (RX); 442.120 MHz (TX) Talkgroup 31060, Color Code 1, Time Slot 2 "PV-West": W6MTA, 449.980 MHz (-), PL 173.8, CTCSS

Club badges: Gary Lopes, WA6MEM, <u>wa6mem@cox.net</u> Club jackets or patches: Dave Scholler, KG6BPH, 310-373-8166

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Front page photo — Pt. Vicente Lighthouse with Catalina Island in background after sunset on November 14, 2018. PHOTO: DIANA FEINBERG, AI6DF

PVARC CALENDAR OF EVENTS APRIL 2024							
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	
	1	<b>2</b> K6PV analog net, 7:30 pm	<b>3</b> K6PV DMR net, 7:30 pm	<b>4</b> PVARC monthly meeting at Hesse Park and via Zoom, 7:30 pm:	5	6	
7	8	<b>9</b> K6PV analog net, 7:30 pm	<b>10</b> K6PV DMR net, 7:30 pm	11	<b>12</b> Intl. DX Convention, Visalia, CA	<b>13</b> HFE Enthusiasts Group meeting, PV Library, 10 am Intl. DX Convention, Visalia, CA	
<b>14</b> Intl. DX Convention, Visalia, CA	15	<b>16</b> K6PV analog net, 7:30 pm	<b>17</b> K6PV DMR net, 7:30 pm	18	19	20	
21	22	<b>23</b> K6PV analog net, 7:30 pm	<b>24</b> K6PV DMR net, 7:30 pm	25	26	<b>27</b> W6TRW Swap Meet, Northrop Grumman, N. Redondo Bch. 7:00-11:30 am	
28	29	<b>30</b> K6PV analog net, 7:30 pm					

PALOS	Palos	s Verdes Amateur Rad P.O. Box 2316	MEMBERSHIP FORM				
ALC: NOTION	Pale Pale	os Verdes Peninsula, CA <u>http://www.k6pv.org</u>	New Renew			w	
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	(Unles	ss otherwise noted, emails wil	ll be sent to the appl	ying member o	only)		
License C	all	Class _	<b>v</b>	ARR	L Member?		
Other am	ateur radio groups y	ou belong to					
	5 1, ,						_
Additiona	l Household and/or	Family Members (if Applica	able):				
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Last	First		Call	Class		~	ARRL?
Last	First		Call	Class		~	ARRL?
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			(Optional) do	nation to sup	port PVARC a	ctivities	\$
						TOTAL	\$
Paypal to recipient Check made payable to							
PVARC90274@gmail.com Cash Palos Verdes Amateur Radio   Go to www.paypal.com Club Check #							
Please email completed form to PVARC90274@gmail.com or print and mail to the address at top. Dues based on January 1st to December 31st year.							
	By submitting this application/renewal you agree to the Club's constitution and by-laws, available on-line at: http://www.n6rpv.net/n6rpvpage/pvarc/constitution.pdf.						
							ership Form: 2-2023

# **Two Free Amateur Radio Courses**

FCC <u>"Technician"</u> course (entry level) FCC <u>"General"</u> course (2<sup>nd</sup> level) <u>Each course is 2 sessions</u> <u>The sessions</u> will be on 11 and 18 May 2024 <u>Technician</u> 9:30 AM to 1:15 PM both Saturdays (bring your lunch) <u>General</u> 1:30 PM to 5:00 PM both Saturdays The FCC tests will be 10:00 AM to noon on 25 May 2024

At the start of the 11 May Technician course, a member of the Palos Verdes Amateur Radio Club will give a 30-minute presentation on how to get further involved in amateur radio.

The class location is at Fred Hesse Community Park, 29301 Hawthorne Blvd., Rancho Palos Verdes, CA 90275 Confirm your attendance to Walt, K1DFO at waltfordway@juno.com

I charge <u>no fee</u> for either course. Taking the FCC test is \$15. After passing the Technician test the FCC will send you an e-mail for paying its \$35 license fee and then they will post your call sign.

> Optional Material (sold at cost) Gordon West books with all the FCC test questions, \$30 for the Technician and \$33 for the General Paper copy of Walt's Power Point charts, \$29 for the Technician and \$26 for the General

For courses sponsored by the Palos Verdes Amateur Radio Club, students thru grade 12 who pass their examination at a PVARC VE test session will, upon application to the Club, be eligible for reimbursement up to a maximum of \$85 to cover the costs of materials, examination fee, and FCC license fee.

Everyone who obtains their first ham radio license through a PVARC VE test session, regardless of age, will receive a free membership in the Palos Verdes Amateur Radio Club for the remainder of the current calendar year.