



QRO

MONTHLY NEWSLETTER OF THE PALOS VERDES AMATEUR RADIO CLUB

MARCH 2021



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All **QRO** monthly issues since 2007 are on the PVARC website at: www.k6pv.org in the "Newsletter" tab. Additional club news appears in emailed PVARC Weekly Bulletin.

Tool-Free Troubleshooting

Wayne Yoshida, KH6WZ

Thursday, March 4, 2021

via Cisco Webex

7:15 pm: Webex meeting room opens

7:30-9:00 pm: Meeting

Guests welcome: email to ai6df@arrl.net for the Webex meeting link.

All PVARC meetings will be through Webex video conferencing until conditions permit safely resuming in-person events.

PVARC's upcoming meeting topics

The PVARC's **March 4 monthly meeting** features a new presentation by Wayne Yoshida, KH6WZ in Orange County, entitled "**Tool-Free Troubleshooting.**" It will reveal ways to systematically determine sources of many ham radio (and electrical) problems without an array of equipment on-hand. Wayne is widely-known in ham radio circles as a technical writer and Contributing Editor for **CQ Magazine**. He attended the PVARC's February monthly meeting via Webex and mentioned then how hams may need to diagnose radio problems in field settings—such as at public service events, communication exercises, or an actual disaster situation—but without having diagnostic gear or other tools available.

Our **April 1** monthly meeting via Webex won't pay attention to April Fool's Day. Instead we'll have an excellent ARRL presentation on **Using the FT8 and FT4 Digital Modes**. Although aimed at hams new to these digital modes—which kept HF bands alive during the recent Solar Cycle downturn—even experienced users will find value in this presentation. PVARC members with FT8/FT4 experience will discuss some additional considerations.

The PVARC's May 6 monthly meeting topic will be announced soon. ■

Breakout sessions at PVARC monthly meetings — new for the past

The 1985 time-travel film "Back to the Future" was that year's hit. But in 2021 the time-travel hit for Webex meetings—Breakout sessions—might be more like "Ahead to the Past."

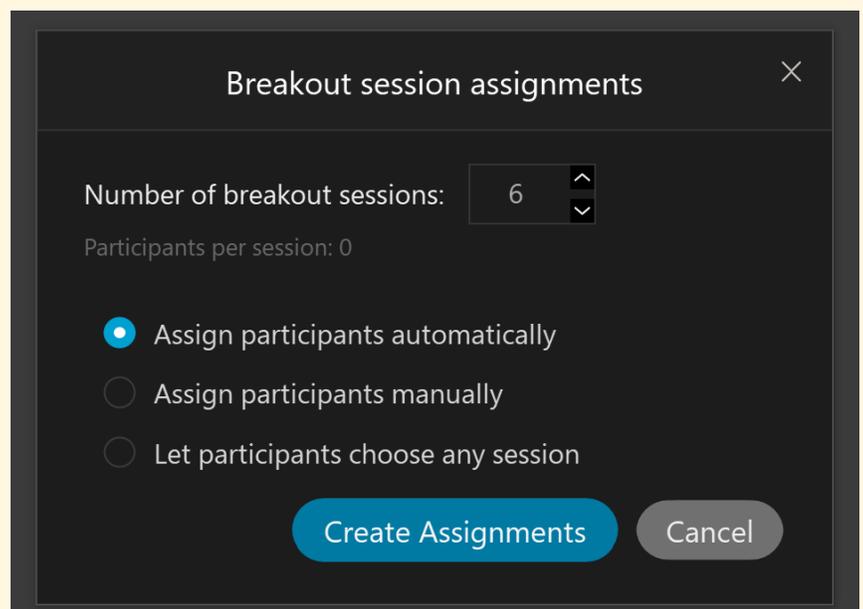
Breakout sessions came to our Webex subscription level in late January. These let virtual meeting attendees have small-group interactions like those during refreshment breaks at our Hesse Park in-person meetings.

We received many favorable comments about Breakout sessions after our February meeting. We'd like to explain how they work...and the situations where you might not be in one.

How they work: As shown above, the Webex meeting moderator first sets the number of breakout sessions as appropriate. One option lets Webex randomly assign meeting attendees to Breakout sessions so each group is about equally-sized. We are currently using this method so there is no favoritism or discrimination towards anyone. A second option lets the moderator directly assign meeting attendees to pre-defined Breakout groups (such as by subject matter, organizational needs, or personal aspects). The third option lets meeting participants themselves choose any Breakout session that's been defined—and move at-will between sessions. Regardless of assignment method all Breakout participants automatically return to the main meeting at the same time.

Why you might not be in a Breakout session: Webex is working to fix a few technology limits. First, Breakout sessions cannot be joined by phone-only (call-in) participants. Second, iPhone participants cannot be moved or exchanged to another Breakout session after the sessions have started. Of course, participants can mute their audio and/or video during Breakout sessions and take their own break.

What's currently missing in Breakout sessions: Being addressed for Breakout sessions in future Webex versions are sharing of multimedia, web browser screens, or iPad/iPhone screens; live-streaming; polling; and recording. In the meantime we look forward to meeting you at a Breakout session in the near future. ■



Above: Screen-shot of how Cisco Webex sets up Breakout sessions during video conference meetings. When meeting in-person at Hesse Park we called these Breakout sessions our Refreshment break.

Bryant Winchell, W2RGG (SK)

It is with great sadness to report that long-time PVARC member Bryant Winchell, W2RGG, became a Silent Key in mid-February 2021 following complications from a stroke.

Bryant served as PVARC President in 1987 plus other duties over the years as **QRO** newsletter Editor, newsletter Contributor, or Proofreader as well as Club Librarian. But he also left a significant legacy of organizing amateur radio public service on the Palos Verdes Peninsula.

In 1993 Bryant co-founded the City of Palos Verdes Estates' Neighborhood Amateur Radio Team to organize ham operators into supporting the city's emergency communication needs. He served as NART-001 until 2013 when he relinquished his leadership role to Bob Sylvest, AB6SY.

In 1996 Bryant was co-leader of the PVARC's project to get amateur radio equipment and staff members licensed as hams at every Palos Verdes Peninsula school for emergency communication purposes.

The PVARC continued managing this project until 1998 when responsibility transferred to hams in the Lomita Sheriff Station's L.A. County Disaster Communications Service group. DCS today supports the disaster amateur radio needs at 21 public and three private school sites across the Peninsula's four cities.



Above: Bryant, W2RGG, operating inside NART's mobile command post trailer. PHOTO: PVE NART



Above: Bryant Winchell, W2RGG, receives from fellow NART members in May 2019 an inscribed tribute remembering him as "Always NART-001" shortly before moving to La Quinta, CA. PHOTO: DIANA FEINBERG, AI6DF

After living in Palos Verdes Estates for over 40 years Bryant moved to La Quinta in the Coachella Valley during mid-2019 to be near his son, Bryant Jr., KD6NDB. On the day of his passing at age 90 Bryant and Bryant Jr. had been scheduled to re-locate from La Quinta to Idaho where Bryant Jr. purchased a new home.

Bryant W2RGG has been remembered by NART members as "Always NART-001." As PVARC members we will always remember him too. ■

Part 5 (The Last): Where Los Angeles-area hilltop VHF/UHF amateur repeaters are...or aren't

By Diana Feinberg, AI6DF

Since the November 2020 QRO issue we've covered the Los Angeles area's higher-elevation amateur radio repeater sites. We now end with Orange County's three developed repeater hilltops in the Cleveland National Forest that provide great coverage not only locally but well into the Los Angeles Basin, much of western San Bernardino and Riverside Counties, and parts of northern San Diego County.

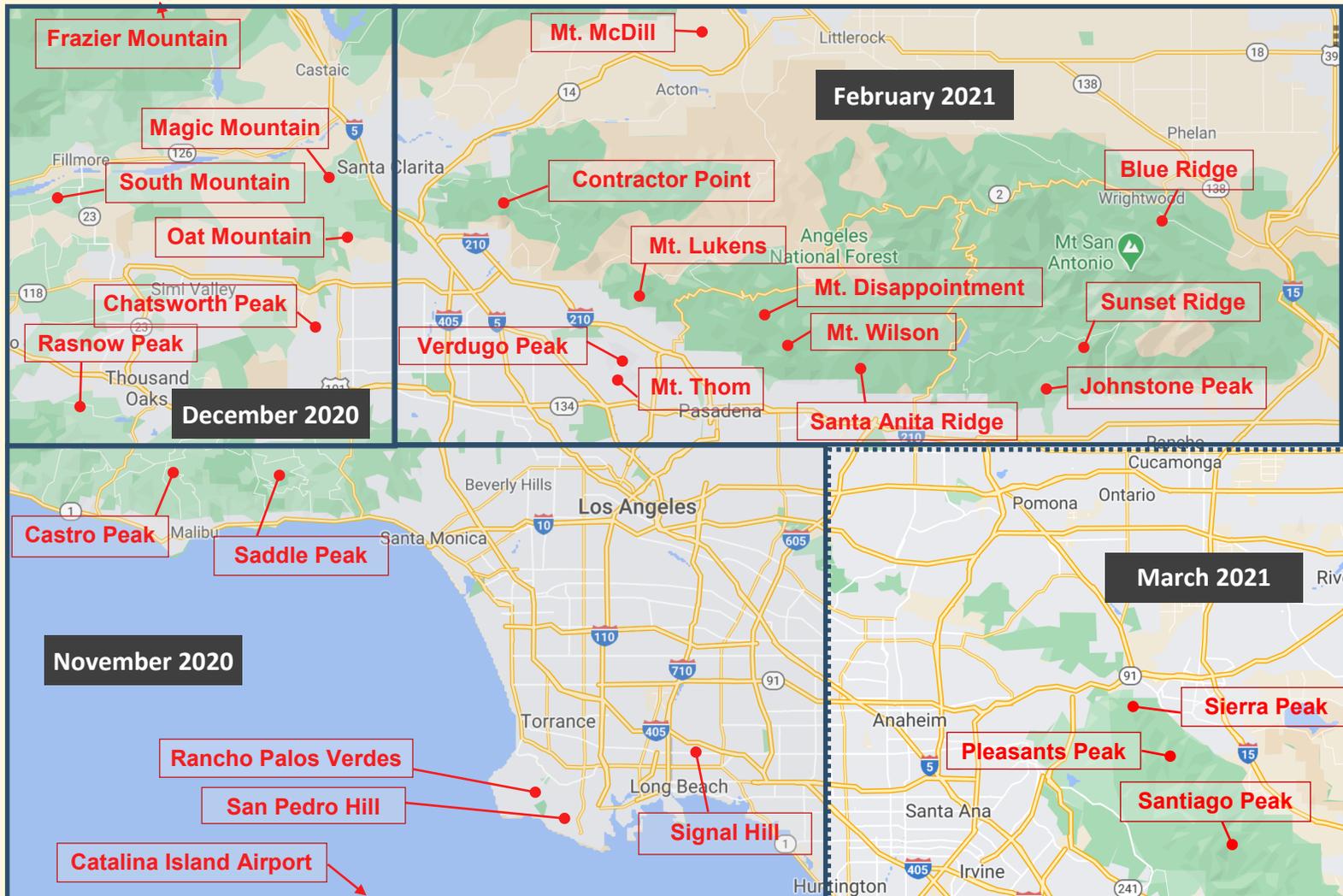
With only three O.C. major hilltops available for communication purposes these sites are crammed with repeaters and microwave links, especially atop Santiago Peak (Orange County's highest point, 5,689 feet above sea level). Santiago has very large facilities owned by cell tower operators American Tower and Crown Castle; several Part 90 land mobile radio operators; Orange County government; Federal government; State of California; and Southern California Edison—among others.

Over the past 10 years large increases in U.S. Forest Service lease payments have forced some ham repeaters off Santiago Peak. Many amateur repeaters remain on Santiago—as shown later in this article—but most are private/closed systems dependent on membership income or a viable cost arrangement for now. As leases for Santiago's multi-user towers and buildings come up for renewal the ham repeater owners affected will need to re-assess their business models.

Repeater listings for Orange County's three high-elevation repeater sites are on the next two pages.



Below: The Los Angeles-area hilltop amateur repeater site tour in QRO issues since last November concludes with three Orange County sites. IMAGE: GOOGLE MAPS; REPEATER SITE DATA RESEARCH FROM COORDINATION LISTS AND SECONDARY SOURCES: DIANA FEINBERG, AI6DF



Part 5 (The Last): Where the Los Angeles-area hilltop VHF/UHF amateur repeaters are...or aren't (*in Orange County*)

Sierra Peak (elev. 3,045 ft.)

P=Private; C=Closed

Frequency	Rpt. Shift	Callsign	Location	O=Open	PL Tone	Owner
146.61	-	KD6DDM	Sierra Peak	O	103.5	Fam-Comm ARC
223.76	-	W6KRW	Sierra Peak	O	110.9	Orange County RACES
445.76	-	KD6DDM	Sierra Peak	O	103.5	Sierra Peak Repeater System
446.18	-	WA6LIF	Sierra Peak	P		
447.08	-	AF6HP	Sierra Peak	P		
449.44	-	WOPE	Sierra Peak	P		WOPE
449.68	-	W6KRW	Sierra Peak	P		Orange County RACES

Pleasants Peak (elev. 3,973 ft.)

P=Private; C=Closed

Frequency	Rpt. Shift	Callsign	Location	O=Open	PL Tone	Owner
145.14	-	W6HBR	Pleasants Peak	O	110.9	WD6AWP (AllStar, EchoLink)
145.46	-	K6PIN	Pleasants Peak	O	141.3	Pacific Intertie Network (<i>also C4FM</i>)
448.28	-	K6ARN	Pleasants Peak	O	107.2	Kaiser Permanente ARN
224.80	-	W7BF	Pleasants Peak	P		SPARK
446.12	-	WB6MIE	Pleasants Peak	P		Henderson (NV) Amateur RC
446.36	-	WD6FZA	Pleasants Peak	P		PAPA System
449.18	-	W6KRW	Pleasants Peak	C		Orange County RACES

Santiago Peak (elev. 5,689 ft.)

Frequency	Rpt. Shift	Callsign	Location	O=Open	PL Tone	Owner
224.22	-	WR6AAC	Santiago Peak	O	151.4	(AllStar)
224.82	-	K8BUW	Santiago Peak	O	156.7	Condor Connection
224.88	-	KB6TRD	Santiago Peak	O	107.2	Hispanic Radio Amateur Network
446.64	-	KF6PHX	Santiago Peak	O	77.0	(EchoLink)
448.06	-	K6JSI	Santiago Peak	O	UNK	Western Intertie Network
448.08	-	K6LNLK	Santiago Peak	O	88.5, 162.2	
449.0375	-	KA6P	Santiago Peak	O	CC1	(DMR)

Santiago Peak's Private and Closed System amateur repeaters follow on the next page



Part 5 (The Last): Where the Los Angeles-area hilltop VHF/UHF amateur repeaters are...or aren't (in Orange County)



Santiago Peak (elev. 5,689 ft.)

P=Private;

C=

Closed

PL Tone Owner

Frequency	Rpt. Shift	Callsign	Location	P	C	PL Tone	Owner
145.22	-	N6SLD	Santiago Peak	P			Claremont Repeater Assn.
223.82	-	WA6SVT	Santiago Peak	P			
224.22		WR6AAC	Santiago Peak	P			VULTURE
224.54	-	W6YQY	Santiago Peak	P			
224.64	-	K6SOA	Santiago Peak	C			South Orange ARA
224.76	-	W6SCE	Santiago Peak	P			Edison ARN
224.80		W7BF	Santiago Peak	P			SPARK
224.96	-	KF6JWT	Santiago Peak	P			
446.32		AA4CD	Santiago Peak	C			
446.76		WD6FZA	Santiago Peak	P			PAPA System
446.84		N6EHM	Santiago Peak	P			Law Enforcement ARN
446.90		WD6DIH	Santiago Peak	C			ALERT radio system
447.02		N6AJB	Santiago Peak	P			
447.18		KG6GI	Santiago Peak	C			
447.34		KE6BVI	Santiago Peak	P			
447.38		W6YJ	Santiago Peak	P			
447.54		KB6CRE	Santiago Peak	P			Bikini ARN
447.68		K6UHF	Santiago Peak	C			
447.70		W6YQY	Santiago Peak	C			
448.04		WD6AWP	Santiago Peak	P			WD6AWP (P-25 digital)
448.12		KA6JRG	Santiago Peak	C			CalNet
448.30		KE6BVI	Santiago Peak	P			
448.32		W6KRW	Santiago Peak	P			CPRA
448.82		W6ZOJ	Santiago Peak	P			Los Angeles Repeater System
448.92		N6SLD	Santiago Peak	P			DARN System
449.40		WA6SBH	Santiago Peak	P			
449.74		WA6TTL	Santiago Peak	P			
449.76		WA6DPB	Santiago Peak	C			
449.80		WB6BWU	Santiago Peak	P			
449.94		WR6SGO	Santiago Peak	P			



Part 5 (The Last): Where Los Angeles-area hilltop VHF/UHF amateur repeaters are...or aren't



We close with a few thoughts that also extend from your **QRO** Editor's former leadership roles with the 220 Spectrum Management Association of Southern California during 2014-2017.

- 1) In general, Private and Closed-System repeaters outnumber Open repeaters on most prime hilltops.
- 2) Rental costs for rack and tower space at the better hilltops have ballooned since the early days of amateur radio repeaters when hams frequently received "courtesy" rates of \$15-20 a month. Today atop some L.A.-area prime sites a single repeater can now cost its owner over \$1,000 per month for equipment space inside the building and one antenna on the big tower. Some ham groups will likely experience price "sticker shock" when their current long-term repeater leases renew.
- 3) Our intention in these **QRO** articles was to show the Open repeaters on the best hilltops around Los Angeles. But we've also shown all Private and Closed-System repeaters so unauthorized users do not transmit on those frequencies (i.e., if you hear a frequency in use don't automatically assume it's an Open repeater.)
- 4) Weren't cellphones supposed to reduce needs for Part 90 two-way radio services...and consequently the demand for hilltop repeaters? It didn't completely turn out that way. As events unfolded, the cell network operators took an increasing number of tower positions at many key sites for microwave hubs to move traffic. Market needs also came from broadcast television stations in Los Angeles using microwave video repeaters at multiple prime hilltops for news van communication with the studio (cheaper than satellite feeds). New government needs also emerged.
- 5) Not listed in these **QRO** articles: Many fine ham repeaters are at lower elevations in the L.A. area atop buildings, water towers, and smaller hills. Nothing wrong with these repeaters but their coverage won't match the better sites. Also, intentionally omitted from Santiago Peak's list is the foul-language 147.435 MHz repeater (we don't want you going there).
- 6) Use them or we'll lose them. Help keep ham repeaters healthy through usage and/or your financial support. ■



Palos Verdes Amateur Radio Club
 P.O. Box 2316
 Palos Verdes Peninsula, CA 90274
<http://k6pv.org>

**NEW MEMBER & 2021
 MEMBERSHIP RENEWAL FORM**

NEW: _____ **or RENEWAL:** _____ **MEMBERSHIP** **DATE:** _____

Last Name: _____ **First Name:** _____ **Spouse:** _____

Street Address: _____

PVARC dues waived for 2021...but you need to complete a membership renewal form to get your free membership

We say again...PVARC membership in 2021 is free for new and renewal memberships after your Board of Directors voted to waive dues this year. That's because the pandemic prevented us from spending 2020 dues on most planned activities. Whether you have an individual or family membership the 2021 free renewal requires completing and returning our membership form shown on page 12 of this **QRO** issue. We still have ongoing expenses such as our liability insurance, video conferencing service, and PO Box. All voluntary donations toward these will be greatly appreciated.

You may send your membership form to our Post Office Box address or scan and send it via email. ■

Ham radio news you might use...

Major marathon events served by hams still tentative for 2021

Marathons are major running events but mid-November 2021 may become a Marathon of Marathons in the Los Angeles area.

The 2021 Palos Verdes Half Marathon, 10-K, and 5-K along the Peninsula's shoreline normally would be held on Saturday, November 20, although that date isn't confirmed on the Half Marathon website.



The pandemic forced cancelling all 2020 PV Half Marathon events and their registrants were automatically deferred to the 2021 runs. It's quite possible COVID vaccinations by early Fall 2021 will allow this year's Half Marathon to proceed.

The PVARC has provided extensive amateur radio support for this event and the predecessor Palos Verdes Marathon since our club's earliest days in the mid-1970's. Our operators provide communication from water stations, the Start/Finish area, major turn points, net control...and more. Steve Collins, KI6TEQ, has coordinated the PVARC's radio operator team for the PV Half Marathon since 2018.

Meanwhile, the Los Angeles Marathon that usually attracts 25,000 runners has now twice deferred its 2021 run. Originally set for Sunday, March 21, it was re-scheduled to May 23, and then to November 21—the day after the Palos Verdes Half Marathon. The L.A. Marathon website does not have a confirmed date at this time pending health department and city permit approvals.

The Los Angeles Marathon's 26.2 mile route needs about 80 ham operators annually, including operators at 10 USC-Keck medical aid stations along the course. For 2021 the L.A. Marathon revised its course to move the race finish line to Avenue of the Stars in Century City. The City of Santa Monica has been dropped from the L.A. Marathon route which will now U-turn in Brentwood to return eastbound for Century City. Dodger Stadium continues as the Start line.



QRO will keep you advised when these events seek their amateur radio operators.

Start getting ready for Field Day, June 26-27

The PVARC encourages as many members as possible to operate from their homes (in whatever manner) during the 2021 ARRL Field Day on Saturday-Sunday, June 26-27. It's never too early to start planning...or start on the HF bands.



The ARRL recently approved retaining in 2021 last year's temporary Field Day rules allowing all 1-D home stations to receive credit for working any other station and for clubs to aggregate their members' scores. One change however in 2021: 1-D home stations (using AC mains power) will be limited to a maximum transmit power of 150 watts. ■

PVARC Club News

Become an ARRL member: Support amateur radio while increasing your learning

Please consider joining the American Radio Relay League (ARRL) if not 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. But an ARRL-affiliated club requires at least 51% of club members also be ARRL members.

Annual ARRL membership costs \$49 and includes your choice of the printed monthly **QST** magazine or the ARRL's new **On The Air** magazine for newer hams. Both are available electronically to all ARRL members plus a new member benefit: free online access to ARRL's two other publications, **QEX** and **National Contest Journal**. Additionally all ARRL members can access numerous web-based materials, ARRL staff, and assistance with ham radio issues. Visit: www.arrl.org/ then click "Join/Renew." ■

Need a PVARC badge?

Gary Lopes, WA6MEM, has distributed all PVARC badges that were ordered before our transition to virtual meetings in April 2020. If you wish to order a new or replacement badge please contact him at wa6mem@cox.net and he will make arrangements for your payment and sending your new badge. ■

Embroidered PVARC patches still available

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

The four illustrations in the patch center are emblems of the Palos Verdes Peninsula's four cities (clockwise from top left: Palos Verdes Estates, Rolling Hills Estates, Rancho Palos Verdes and Rolling Hills.)



During our COVID-19 period of virtual meetings if you would like a patch please contact Diana, AI6DF, at ai6df@arrl.net and we'll find a way to get your patch to you. ■

Palos Verdes Amateur Radio Club

An American Radio Relay League Affiliated Club

Board of Directors:

President	Diana Feinberg, AI6DF
Vice President	Ray Day, N6HE
Treasurer	Georgiann Keller, KM6YGM
Secretary	Ron Wagner, AC6RW
Directors	Clay Davis, AB9A
	Gary Lopes, WA6MEM
Past Vice President	Bob Sylvest, AB6SY

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K6PV QSL Manager	Jeff Wolf, K6JW
K6PV Repeater Trustee	Mel Hughes, K6SY
LAACARC Delegate	Jeff Wolf, K6JW
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VE ARRL Liaison	Jerry Shaw, KI6RRD
Net Control Operators	Malin Dollinger, KO6MD;
	Dale Hanks, N6NNW; Bob Sylvest, AB6SY;
	Ron Wagner, AC6RW; Dave Turner, KM6LGX

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Email us: k6pv@arrl.net

Website: www.k6pv.org

Mailing Address:

Palos Verdes Amateur Radio Club
PO Box 2316
Palos Verdes Peninsula, CA 90274-8316

Monthly Meeting:

1st Thursdays at 7:30 pm via Webex
Visitors always welcome.

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

To order a Club badge:

Gary Lopes, WA6MEM, wa6mem@cox.net

To order a Club jacket or patch:

Dave Scholler, KG6BPH, 310-373-8166

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Front page photo — Pt. Vicente Lighthouse shortly before sunset on December 4, 2019.

PHOTO: DIANA FEINBERG, AI6DF

PVARC Club News

PVARC upcoming dates in 2021

- ◆ **PVARC monthly meetings online via Webex**
1st Thursday each month, 7:30-9:00 pm, except in December.
(in-person meetings will resume at Hesse Park's McTaggart Hall when permitted)
- ◆ **PVARC HF Enthusiasts Group meetings online via Webex**
2nd Saturday each month, 10:00 am to Noon
(in-person meetings at Palos Verdes Library main branch's Purcell Room will resume when permitted)
- ◆ **PVARC EmComm Interest Group online meetings via Webex**
3rd Saturday every month, 10:00-11:00 am
- ◆ **Walt Ordway, K1DFO, Technician and General amateur radio license classes at Hesse Park**
(Will resume when in-person classes at Hesse Park are permitted)
- ◆ **ARRL Field Day**, June 26-27 from your home or other safe location
- ◆ **Public service events**
(TBA as public health conditions allow)
- ◆ **PVARC 2021 Holiday Dinner**, Dec. 2 at Los Verdes Golf Course, Rancho Palos Verdes

Non-PVARC Events of Note:

- ◆ **W6TRW Swap Meet** *canceled until further notice.* Northrop Grumman Space Park, North Redondo Beach.
- ◆ **QSO Today Virtual Ham Expo**, March 13-14.
<https://www.qsotodayhamexpo.com/>
- ◆ **2021 Virtual International DX & Contesting Convention**, April 16-18 and April 23-25. <http://www.dxconvention.com/> ■

WELCOME NEW MEMBERS OF THE PALOS VERDES AMATEUR RADIO CLUB IN 2020-2021

Jon Kuroyama, K6LDQ
Ray Grace, WA6OWM
Robert Keller, K9BGC
Alex Marko, KD6LPA
Erin Okada, KN6FYV
Derek Okada, K6DMO
Xing Yang, KN6FYX
Stephen Anderson, KN6FZA
Charles Tang, KN6FYY
Ikue Duncan, KN6FYW
Judy Frankel, KN6FYU
Robert Sawyer, KG6SFQ
Heidi Gransar, KN6HVG
Bruce Ward, KN6HVI
David Salazar, KE6GFR
Ed Jenkins, K6EXY
David Hostetler, W6OQ
Robert Rodriguez, KN6FQL
Yaniv Waisman, KN6HSJ
Jeff Remington, KA6JMR
Laura Remington, KA6LJR
Marlee Remington, KA6MJR

PVARC Calendar

March 2021

SUN	MON	TUE	WED	THU	FRI	SAT
	1	2 PVARC analog weekly net on K6PV repeater 7:30-7:55 pm	3 PVARC DMR weekly net on K6PV repeater 7:30-7:55 pm	4 PVARC Monthly Meeting 7:30-9:00 pm via Webex	5	6
7	8	9 PVARC analog weekly net on K6PV repeater 7:30-7:55 pm	10 PVARC DMR weekly net on K6PV repeater 7:30-7:55 pm	11	12	13 PVARC HF Enthusiasts Group Meeting, Webex, 10:00 am-Noon <hr/> QSO Today Ham Expo (virtual)
14 QSO Today Ham Expo (virtual)	15	16 PVARC analog weekly net on K6PV repeater 7:30-7:55 pm	17 PVARC DMR weekly net on K6PV repeater 7:30-7:55 pm	18	19	20 PVARC Em-Comm Interest Group Meeting via Webex, 10:00-11:00 am
21	22	23 PVARC analog weekly net on K6PV repeater 7:30-7:55 pm	24 PVARC DMR weekly net on K6PV repeater 7:30-7:55 pm	25	26	27
28	29	30 PVARC analog weekly net on K6PV repeater 7:30-7:55 pm	31 PVARC DMR weekly net on K6PV repeater 7:30-7:55 pm	<div style="border: 1px solid black; padding: 5px;"> <p>Major radio contests, March 2021</p> <p>ARRL International DX Contest, SSB 0000Z, Mar 6 to 2400Z, Mar 7</p> <p>CQ Worldwide WPX Contest, SSB 0000Z, Mar 27 to 2359Z, Mar 28</p> </div>		



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**NEW MEMBER & 2021
 MEMBERSHIP RENEWAL FORM**

NEW: _____ **or RENEWAL:** _____ **MEMBERSHIP** **DATE:** _____

Last Name: _____ First Name: _____ Spouse: _____

Street Address: _____

City: _____ Zip: _____

Phone: Home _____ Work _____ Cell _____

Email address: _____
(Unless otherwise noted emails will be sent to the applying member only)

License Call: _____ License Class: _____ ARRL Member? _____ Birth Mo./Day: _____

Other amateur radio groups you belong to: _____

Additional Household and/or Family Members (if Applicable):

Name _____ Call _____ Class _____ ARRL _____ Birth Mo./Day: _____

Name _____ Call _____ Class _____ ARRL _____ Birth Mo./Day: _____

Name _____ Call _____ Class _____ ARRL _____ Birth Mo./Day: _____

Individual membership (2021 only): No charge

Household and/or Family membership (2021 only): No charge

(Optional) Donation to support PVARC activities: \$ _____

PayPal: _____ Cash: _____ or Check #: _____ Date _____ TOTAL \$ _____

Please make checks payable to: Palos Verdes Amateur Radio Club; Dues based on January 1st to December 31st year.

PayPal payment: Go to www.paypal.com, enter recipient name as: PVARC90274@gmail.com

All New and Renewal Member applications must be signed below.

I am applying for a new or renewal membership in the Palos Verdes Amateur Radio Club and understand that by accepting membership I agree to abide by the Club's constitution and by-laws (available on-line at: <http://www.n6rpv.net/n6rpvpage/pvarc/constitution.pdf> or upon request.)

Signature: _____ Date: _____

Family Member Signature: _____ Date: _____

Family Member Signature: _____ Date: _____



The next QSO Today Virtual Ham Expo is March 13-14, 2021.

This Expo features many new speakers, kit-building workshops, panel discussions, booth prizes, and much more. Early Bird discount tickets are available for a limited time and include entry for the Live 2-day period plus the 30-day on-demand period. Register at qsotodayhamexpo.com.

At the Expo, there's something for everyone:

- Learn from 80+ renowned ham radio speakers. See the full lineup at qsotodayhamexpo.com/speakers.
- Take part in a Live Buildathon of kit-building workshops. Purchase kits now and have them delivered prior to the Expo so you can build from the convenience of your home. Learn more and order kits at qsotodayhamexpo.com/build-a-thons.
- Walk through the virtual exhibit hall filled with popular amateur radio suppliers. Watch live product demos of the latest equipment. New video technology will be used to provide a better experience for attendees to engage with exhibitors.
- Visit the "Ask the ARRL Lab" and ARRL booths. ARRL Lab engineers will be available to answer questions and share tips about a project you're working on or suggestions to overcome a problem with a station installation, antenna, or a piece of gear.
- ARRL CEO David Minster, NA2AA, will keynote at 2000 UTC (3 PM EST) on March 13.
- Take advantage of virtual lounges outside each virtual speaker auditorium which allow meeting up with fellow hams using the latest video technology for "eyeball QSOs." Exhibitor booths will also have virtual tables where small groups of booth visitors can virtually sit with exhibit staff.
- A number of exhibitors will have drawings for some great prizes – including some exciting high-end items.

You can participate from the convenience of your home without spending a dime on travel! So if you've never been to an in-person hamfest, you can participate in the Expo and get the same benefits. The platform simulates a full convention experience. Go to qsotodayhamexpo.com now to learn more and register.

