



QRO

MONTHLY NEWSLETTER OF THE PALOS VERDES AMATEUR RADIO CLUB

SEPTEMBER 2021



Inside this month's QRO

Upcoming monthly meeting speakers	2
Update on resuming PVARC in-person meetings.....	2
FCC ham licenses fees probably not until 2022.....	3
Brian Tilley, KA6UHM (SK)	4
PVARC public service at Hills Are Alive.....	4
A useful "how-to" technique: Separating coax conductors	5-6
A lot more than just hams on 70-cm frequencies	7-8
PVARC club news	9-10
PVARC September calendar of events.....	11
For sale by PVARC member.....	12
PVARC 2021 membership renewal form	13

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

HF Noise Mitigation
Mike Ritz, W7VO (pre-recorded)
-and-

**State of the Art Equipment for
RFI Detection and Locating**
Live: Gary Lopes, WA6MEM and
Chris Parker, AF6PX

**Thursday, Sept. 2, 2021
via Cisco Webex**

7:15 pm: Webex room opens
7:30-9:15 pm: Meeting

Guests welcome. Email ai6df@arrl.net for the Webex meeting link.

Also via Webex:

PVARC HF Enthusiasts Group meeting,
Saturday, Sept. 11, 10:00-11:45 am.

PVARC EmComm Interest Group meeting,
Saturday, Sept. 18, 10:00-11:00 am.

PVARC's upcoming meeting topics...

The PVARC's **September 2** monthly meeting held via Webex kicks off Labor Day weekend with a double-feature on "**HF Noise Mitigation.**" As urban EMI/RFI noise floors rise hams will increasingly seek the causes and solutions. Presenting first via a pre-recorded talk is Mike Ritz, W7VO, who is also ARRL Northwestern Division Director (encompassing the ARRL Oregon, Western Washington, Eastern Washington, Idaho, Montana, and Alaska Sections.) After an online social break, we have a "live" presentation by our fellow PVARC member Gary Lopes, WA6MEM and Chris Parker, AF6PX discussing sophisticated new RFI/EMI devices the ARRL Los Angeles Section recently acquired to assist area hams experiencing noise. Gary is also the ARRL Los Angeles Section's Technical Coordinator and Chris is an ARRL Technical Specialist in the LAX Section.

Our **October 7** monthly meeting has a new presentation by our fellow member Ray Day, N6HE, on using the \$60 NanoVNA (see photo at right) for antenna analyzing (VHF/UHF as well as HF). This small device is far less expensive than most other antenna analyzers and connects via USB directly to your computer. The capabilities also far exceed many analyzers.

The PVARC's **November 4** meeting features Bob Sylvest, AB6SY, giving an updated version of his outstanding presentation All About Microphones. Bob gave a previous version of this talk to our club in 2017 and also in-person at several other ham radio clubs in the ARRL Los Angeles Section.

Our December 2nd Holiday Dinner is currently "up in the air" (so to speak). There's a high likelihood this year's traditional eat-out dinner will not be feasible for public health reasons. But there will be a "Holiday Dinner" even if held virtually with prizes for attendees as was done last December. Stay tuned for details. ■



Above: The \$50-70 NanoVNA Vector Network Analyzer

Updates on PVARC meetings resuming in-person

Since our last **QRO** newsletter we obtained permits to use Hesse Park's McTaggart Hall for our September through November monthly meetings, as well as Walt Ordway's ham license classes in early November and a Volunteer Examiner testing session in another Hesse Park room.

Our Board of Directors decided (as of August 18) that the wisest course is to continue holding all PVARC September meetings virtually and re-evaluate the situation by mid-September. A new stipulation now in all Hesse Park room permits requires ensuring all attendees are in compliance with applicable public health orders (i.e., everyone wears a face mask, etc.)

In the meantime, we'll continue using Webex for all meetings...and prepare for hybrid meetings to allow attending either virtually or in-person when the latter's time comes. ■

ICYMI: FCC Application Fees Unlikely to Take Effect Until 2022

From the ARRL Bulletin, August 17, 2021

In case you missed it...

The schedule of FCC amateur radio application fees likely will not go into effect before 2022. FCC staff confirmed during a recent virtual meeting with Volunteer Examiner Coordinators (VECs) that the agency is still working on the necessary changes to the Universal Licensing System (ULS) software and other processes and procedures that must be in place before it starts collecting fees from amateur applicants. Earlier this year, the FCC said it would not start collecting fees from amateur applicants before this Summer. The new estimate is that the fees won't go into effect until early next year.

Once it's effective, the \$35 application fee will apply to new, modification (upgrade and sequential call sign change), renewal, and vanity call sign applications. All fees will be per application. Administrative update applications, such as those to change a licensee's name, mailing, or email address, will be exempt from fees. ARRL VEC manager Maria Somma, AB1FM, said Volunteer Examiner (VE) teams will not face the burden of collecting the \$35 fee.

"Once the FCC application fee takes effect, new and upgrade applicants will pay the exam session fee to the VE team as usual, but they'll pay the \$35 application fee directly to the FCC using the FCC Pay Fees system," she explained. When the FCC receives the examination information from the VEC, it will email a link with payment instructions to each successful candidate who then will have 10 days from the date of the email to pay. The FCC Pay Fees system can be accessed at https://apps2.fcc.gov/Batch_Filer/login.cfm.

After the fee is paid and the FCC has processed an application, examinees will receive a second email from the FCC with a link to their official license. The link will be good for 30 days. Licensees also will be able to view, download, and print official license copies by logging into their FCC ULS account. The FCC no longer provides printed licenses.

Licensees can log into the ULS with their 10-digit FRN (FCC Registration Number) and password at any time to view and manage their license and application, print their license, and update anything in their FCC license record, including adding an email address.

FEE SCHEDULE:

INDIVIDUALS -

\$35 FEE: New, modification (upgrade and sequential call sign change), renewal, and vanity call sign applications. All fees will be per application.

NO FEE: Administrative updates, such as a change of name, mailing or email address, or license cancellation.

AMATEUR RADIO CLUBS -

\$35 FEE: New, renewal, trustee change, and vanity call sign applications. All fees will be per application.

NO FEE: Administrative updates, such as a change of name, mailing or email address, or license cancellation.



Brian Tilley, KA6UHM (SK)

We are saddened to report fellow member Brian Tilley, KA6UHM, of Rancho Palos Verdes became a Silent Key on the evening of August 31, 2021. He was 85 and suddenly passed away from heart failure at Torrance Memorial Medical Center.

Brian joined the PVARC in early 2009 and quickly became a regular at all our monthly meetings whether in-person or virtually (more recently). He was also a member of our April 2009 Islands On The Air DXpedition team to Two Harbors on Catalina Island.

He had been licensed for 40 years, along with his son Neil who was issued the adjoining call sign KA6UHN. Brian and Neil took their license tests at the same session and turned in their test results back-to-back to ensure getting adjacent calls.

We will remember Brian for his kindness towards all, unselfishness, and willingness to always help with technical issues. Thank you, Brian, for being our colleague. ■



Brian, KA6UHM, at Two Harbors on Catalina Island during PVARC's 2009 IOTA DXpedition.

Rolling Hills Estates "Hills Are Alive 10K/5K" recap

On August 7, 2021, many ham operators provided radio communications for the 40th annual Rolling Hills Estates "Hills Are Alive" 10K & 5K races. There were 131 runners for the two events (10K and 5K), a lower number than usual due to the virus. The good news is that no runners were injured in the event.

The ham radio operators who supported this year's event were: Bob W6HIP, Herb KO6RC, Mike K6HF, Sid KF6QFH, Fran KF6QFG, Richard KJ6CBA, Mike KK6KCH, Jeff KD6BWX, Dave K9DBA, Ralph AI6GP, Matthew N6MDC, Bob AC6RM, Jay KI6FVY, Cynthia AG6NW, and Walt K1DFO. ■

A useful “how-to” technique: Separating coax conductors

By Jerry Kendrick, NG6R

There are occasions when it's convenient or necessary to separate the center conductor and the braided shield conductor of a coax cable when transitioning from an “unbalanced” to a “balanced” application. This situation occurs, for example, when attaching a coaxial RF choke to a balanced antenna, like a dipole, hex beam or Yagi (such as in Figure 1, below right).

Hams have devised ways for separating coax conductors, including painstakingly “unbraiding” a length of the multi-strand shield, then twisting the strands together prior to attaching the twisted-strand conductor to its destination terminal. This method works OK for small diameter coax and if the length required is fairly short. Another method is to cut off the braid, wrap a solid wire around the braid and solder it into place. The downside of this technique is that the interface between the braid and the solid wire is vulnerable to solder deterioration as well as dissimilar metal corrosion, especially in outdoor applications. These two methods are illustrated in Figure 2 (bottom photos).

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Figure 1. An application in which separation of coax conductors is needed.

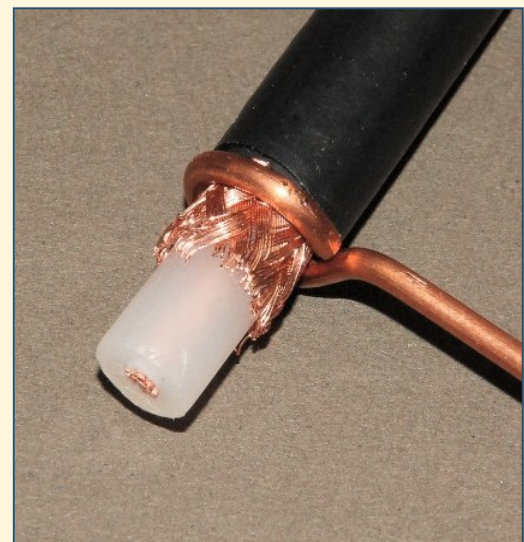


Figure 2. (Left) “Unbraiding” coaxial shield before twisting into a multi-strand conductor; (Right) Wrapping a solid conductor around a shield that has been cut, prior to soldering into place and the solid wire then attached to the destination terminal

A useful “how-to” technique: Separating coax conductors

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An alternative approach that I prefer, especially for larger-diameter coax like RG-213 or RG-8U and when a longer shield conductor is needed, is illustrated in Figures 3A-3D below.

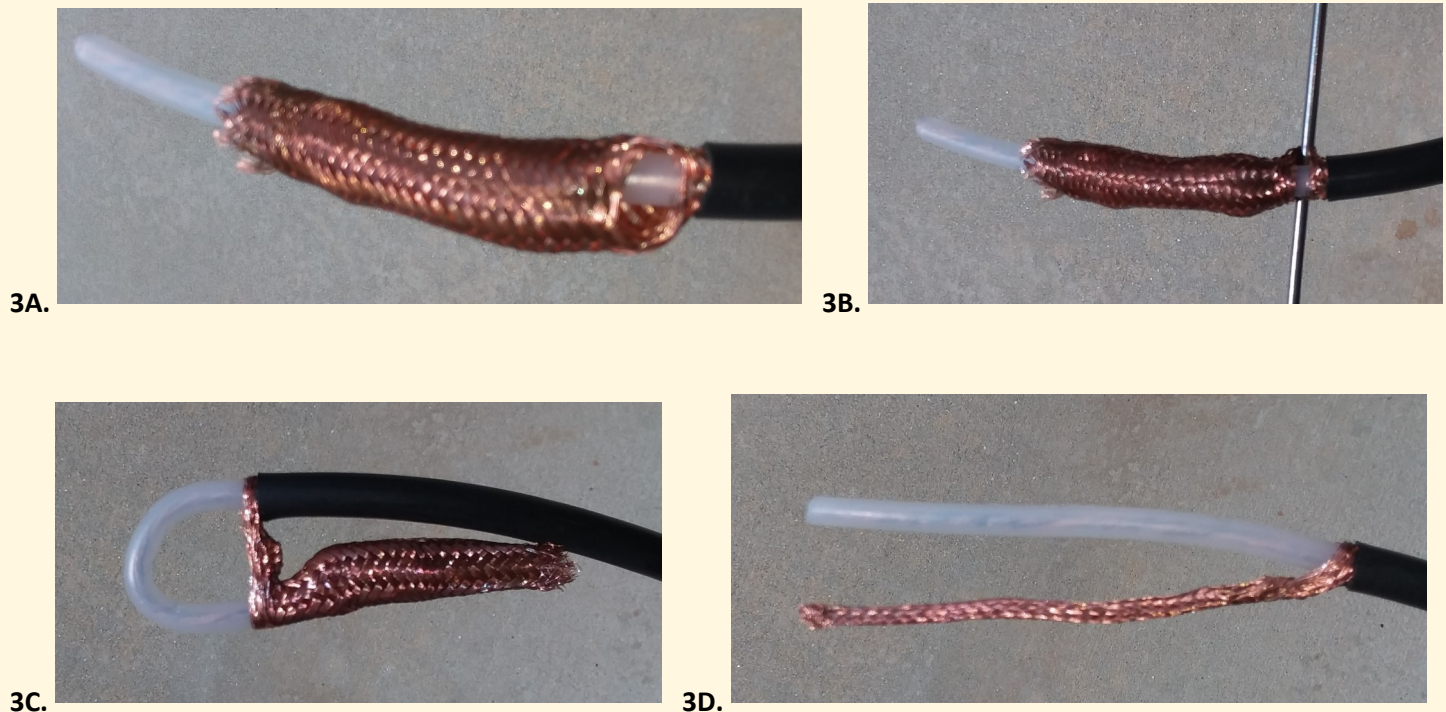


Figure 3. (A) Without cutting any strands, a hole is carefully created in the braid using a dental pick or small screwdriver to separate the strands, and the braid is slid down along the inner conductor and bunched or gathered to provide more room inside the shield; (B) A screwdriver or similar tool is inserted in the hole and used to lever the inner insulated conductor out through that opening; (C) The inner conductor is persistently extracted through this opening; (D) Finally, after the inner conductor is extracted, the braid is stretched and fully extended, all of its strands intact, and is available for termination along with the inner conductor.

First decide on the length of the coax cable’s outside insulating jacket to be cut away, depending on the required separation between the two terminals to which the two conductors will ultimately be connected. Then, using a dental pick or small screwdriver, separate the strands to form a hole in the braid near the location where the cable jacket was cut, as shown in Figure 3A, being careful not to cut any of the small wire strands. Push back along the braid so as to bunch or gather it, thus making it easier for the inner insulated conductor to move freely inside the braid, as illustrated also in Figure 3A. By pushing a screwdriver or similar tool into the opening already created in the braid, pressure on the inner conductor can force that conductor up through the opening, like a snake shedding its skin, as illustrated in Figures 3B and 3C. Finally, after the inner conductor has been fully extracted from within the braid through this opening, the braid can be smoothed out and stretched to its full length, thus enabling the braid conductor to be terminated along with the inner conductor, as shown in Figure 3D.

This technique has been employed when coax cable must be divided cleanly into its two separate conductors. Further refinement by adding two-part epoxy or similar sealant to the region where the outer braid is exposed and the inner insulated conductor exits the braid opening can make the junction of these two conductors virtually water impenetrable for outdoor applications. Adding electrical tape or other weatherproofing sealant over this region can then make the junction even more secure. ■

Who the “Primary” users of 420-450 MHz are (hint: they are not ham radio operators)

By Diana Feinberg, AI6DF

Amateur radio’s Technician-class license training lets U.S. hams know they are “Secondary” users in the 70-cm (420-450 MHz) band. But little is taught about knowing the band’s “Primary” users, except to say they are the U.S. government.

Our club’s K6PV repeater and other 440 amateur repeaters occasionally receive interference from these Primary users. U.S. hams near the Mexican border also have interference from Mexico’s 2019 transition of its former 440-450 MHz amateur spectrum to commercial two-way radio uses (see Feb. 2020 **QRO**: “Is there a Tijuana taxi in your 440 future?” http://www.n6rpv.net/n6rpvpage/pvarc/2020QRO/QRO_Feb_2020.pdf, pg. 4-5).

The table below identifies 11 Federal agencies collectively assigned 2,450 frequency “channels” across 420-450 MHz as Primary users, shared with amateur radio. Nearly 73% of these Primary frequencies are for military “Radiolocation” uses, i.e., radar or the like—and usually intended to transmit/receive across considerable distances. Result: hams are limited to 50-watts PEP transmit power on 70-cm in areas with certain military testing/training activities or ballistic missile early-warning radars.

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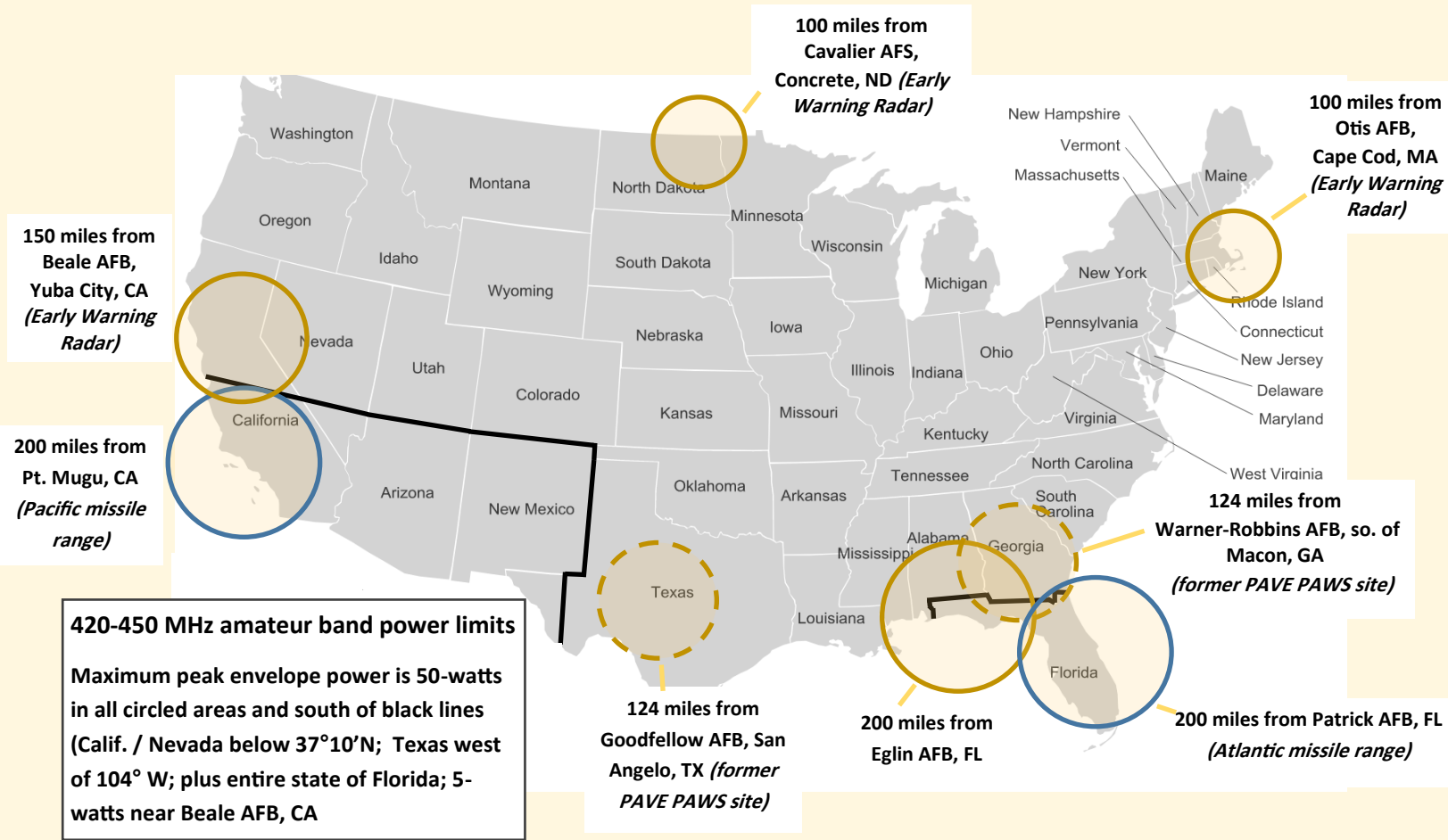
Federal Agency	Total Channels, 420-450 MHz		...for Land Radiolocation	...for Mobile Radiolocation	...for all other radio uses
Air Force	1,480		584	734	162
Army	372			310	62
Coast Guard	5			3	2
Dept. of Homeland Security	8			7	1
Dept. of Commerce	13		5		8
Dept. of Energy	25			1	24
Dept. of Justice	1				1
Marine Corps	48			36	12
Navy	475			99	376
NASA	19				19
National Science Foundation	4				4
TOTAL	2,450		589	1,190	671

Source: National Telecommunications and Information Administration, https://www.ntia.doc.gov/files/ntia/publications/compendium/0420.00-0450.00_01MAR14.pdf

Who the “Primary” users of 420-450 MHz are (hint: they are not ham radio operators)

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Areas in the United States with 50-watt PEP transmit power limits for 70-cm amateur radio



Map credit: By Gigillo83, original of 70.29.208.129 - w:en:Wikipedia talk:Images for upload/svg/USA-states-blank-XMLcomments-SVGnameIDs-CSSfillCLASSES.svg, CC BY-SA 4.0, <https://commons.wikimedia.org/w/index.php?curid=11099373>

Data points: Diana Feinberg, AI6DF, from information in https://www.ntia.doc.gov/files/ntia/publications/compendium/0420.00-0450.00_01MAR14.pdf

The National Telecommunications and Information Administration has indicated that Federal government use of land-, ship-, and air-borne long range search and surveillance radars using 420-450 MHz will continue for the foreseeable future, as will military position location systems using this spectrum. A newer Federal use is wind profiler radars operating on 449.0 MHz.

The southern portions of California and Nevada plus the states of Arizona, New Mexico, and Texas' western-most area are home to many military testing grounds; aerial bombing ranges; Army and Marine Corps training bases; a large Navy presence in San Diego plus the Pacific Missile Test Range. Bottom line: Hams here or in any other designated area shown above must observe 50-watt transmit limits on 70-cm and accept interference from the Federal users for the foreseeable future. And now you know. ■

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 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?

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

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 period of virtual meetings if you would like a patch contact Diana, AI6DF, 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 Bob Sylvest, AB6SY
Past Vice President	

Appointed Offices:

QRO Editor	Diana Feinberg, AI6DF
K6PV QSL Manager	Jeff Wolf, K6JW
K6PV Repeater Trustee	Mel Hughes, K6SY
LAACARC Delegate	Jeff Wolf, K6JW
VE Coordinator	Dave Scholler, KG6BPH
VE ARRL Liaison	Jerry Shaw, KI6RRD
Net Control Operators	Ron Wagner, AC6RW; Dale Hanks, N6NNW; Bob Sylvest, AB6SY; Malin Dollinger, KO6MD; Dave Turner, KM6LGX; Jerry Shaw, KI6RRD; Gary Lopes, WA6MEM; Clay Davis, AB9A

Contacts:

QRO Editor: 310-544-2917, ai6df@arrl.net

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 are 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 after sunset on September 10, 2020.

PHOTO: DIANA FEINBERG, AI6DF

PVARC Club News

PVARC upcoming dates in 2021

- ◆ **PVARC monthly meetings online via Webex**
1st Thursday each month, 7:30-9:15 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 when permitted)
 - ◆ **PVARC EmComm Interest Group online meetings via Webex**
3rd Saturday every month, 10:00-11:00 am or 11:00 am-Noon (time varies with radio events that day)
 - ◆ **Walt Ordway, K1DFO, Technician and General amateur radio license classes at Hesse Park**
(Subject to change if public health conditions warrant)
Saturdays, November 6 and 13, 9:30 am-1:30 pm for Technician class; 2-5 pm for General class; Volunteer Examiner test session, November 20, 10 am-Noon
 - ◆ **PVARC public service events**
September 6: Conquer The Bridge Run/Walk across Vincent Thomas Bridge over Los Angeles Harbor
November 20 (canceled): Palos Verdes Half Marathon along west side of Palos Verdes Peninsula
 - ◆ **PVARC 2021 Holiday Dinner**, Dec. 2 at Los Verdes Golf Course, Rancho Palos Verdes *(Subject to change if public health conditions warrant)*
- Non-PVARC Events of Note:**
- ◆ **W6TRW Swap Meet, last Saturday each month.** Northrop Grumman, North Redondo Beach
 - ◆ **PACIFICON 2021 / ARRL Pacific Division Convention**, Oct. 15-17, San Ramon Marriott, San Ramon, CA 94583; www.pacificon.org ■

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
Dennis Lau, K5LAX
Larry Waldstein, KC6PCC

PVARC Calendar of Events

September 2021

Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1 PVARC DMR weekly net on K6PV repeater 7:30-7:55 pm	2 PVARC Monthly Meeting 7:30-9:15 pm Webex: Dealing with HF noise and finding causes	3	4
5	6 PVARC public service event: Conquer the Bridge Run/ Walk across Vincent Thomas Bridge	7 PVARC analog weekly net on K6PV repeater 7:30-7:55 pm	8 PVARC DMR weekly net on K6PV repeater 7:30-7:55 pm	9	10	11 PVARC HF Enthusiasts Group Meeting, Webex, 10:00 am-Noon
12	13	14 PVARC analog weekly net on K6PV repeater 7:30-7:55 pm	15 PVARC DMR weekly net on K6PV repeater 7:30-7:55 pm	16	17	18 PVARC EmComm Interest Group Meeting, Webex, 10:00-11:00 am
19	20	21 PVARC analog weekly net on K6PV repeater 7:30-7:55 pm	22 PVARC DMR weekly net on K6PV repeater 7:30-7:55 pm	23	24	25 (Non-PVARC) W6TRW Swap Meet, Northrop Grumman in North Redondo 7:00-11:30 am
26	27	28 PVARC analog weekly net on K6PV repeater 7:30-7:55 pm	29 PVARC DMR weekly net on K6PV repeater 7:30-7:55 pm	30		

For sale by PVARC member: Kenwood TS-590S

Kenwood TS-590S: Serial number: B4500267

This is an HF + 6 meter all mode transceiver. Power Output: adjustable from 5 to 100 watts SSB/CW/Digital; 25 watts AM.

Included with the radio: Original hand microphone, original + two copies of the owner's manual (with schematics), power cable, and original carton. Firmware is upgraded to current version. The radio also has the optional VGS-1 Voice Guide and Storage (recorder) unit installed.

Unit was purchased new in 2014. I am the original owner and a nonsmoker. Its primary purpose was to serve as a backup radio in the shack and has had only a few hours of use.

Condition: Near mint.

Price: \$550 Cash or PayPal. Local pickup in Rolling Hills Estates.

Contact: Jeff, K6JW at k6jw@arrl.net or by telephone at 310-373-5970.



Electronic fill & save PDF version of this form is at:

http://www.n6rpv.net/n6rpvpage/pvarc/membership_form.pdf



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

MEMBERSHIP FORM	
New <input type="radio"/>	Renew <input type="radio"/>

Date _____

Last Name _____ First _____ Spouse _____

Street Address _____

City _____ State _____ Zip _____

Home Phone _____ Work _____ Cell _____

Email address _____

(Unless otherwise noted, emails will be sent to the applying member only)

License Call _____ Class _____ ARRL Member?

Other amateur radio groups you belong to _____

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

Last _____	First _____	Call _____	Class _____	ARRL? <input type="checkbox"/>
Last _____	First _____	Call _____	Class _____	ARRL? <input type="checkbox"/>
Last _____	First _____	Call _____	Class _____	ARRL? <input type="checkbox"/>

Membership fees are waived for 2021

Membership (\$20 Individual, \$25 Family) \$ _____

(Optional) donation to support PVARC activities \$ _____

TOTAL \$ _____

Paypal to recipient
PVARC90274@gmail.com
Go to www.paypal.com

Cash

Check made payable to
Palos Verdes Amateur Radio
Club

Check # _____

Please email completed form to PVARC.Membership@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>.