

Inside this month's QRO...

| PVARC upcoming meetings: K6PV Field Day2 |
|--|
| 2023 K6PV Field Day band/mode QSOs2 |
| K6PV "traditional" Field Day scores in perspective3 |
| AllStarLink connectivity–the easy way, by Jerry Kendrick, NG6R4-7 |
| In Memoriam: Herb Clarkson, KM6DD (SK) |
| Short news items |
| Upcoming events; ordering club badges, jacket, patch10 |
| About us11 |
| July 2023 calendar12 |
| Upcoming PVARC ham license classes13 |
| PVARC new membership & renewal form14 |
| All QRO monthly issues since 2007 are on the PVARC website at www.k6pv.org under the "Newsletter" tab. |

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

2023 Field Day at K6PV...and other area FD sites

Ray Day, N6HE, and Rocco Lardiere, N6KN

Thursday, July 6, 2023

PVARC monthly meeting in-person at Hesse Park and virtually via Webex

6:30 pm: Hesse Park room opens 7:15 pm: Webex online room opens

7:30-9:15 pm: Meeting

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

Also this month:

PVARC HF Enthusiasts Group meeting Saturday, July 8, 10:00 am-Noon at Palos Verdes Library Purcell Room (no Webex)

PVARC EmComm Interest Group meeting Saturday, July 15, 10:00-11:00 am via Webex

PVARC upcoming monthly meetings

Our **July 6** hybrid monthly meeting at Hesse Park and online via Webex focuses on photos, video, and members reviewing PVARC's Field Day (June 24-25) operations. A few other Field Day sites will

also be shown. The principal speakers will be our Field Day Chair Rocco Lardiere, N6KN, and our Vice President, Ray Day, N6HE—with others discussing their FD operation too.

This was our first "traditional" Field Day since 2019. Overall, the PVARC's K6PV achieved a very good score as a Class 2A station...comparable to many pre-COVID Field Days when we were often the highest-scoring 2A station in the Los Angeles Section (or sometimes 2nd place.) But in 2023—instead of focusing on maximizing our score—we sought opportunities for more members to operate or participate.



We won't hold a monthly meeting in August which is usually a low-attendance period reflecting member travels. In pre-pandemic times the PVARC instead operated at Pt. Vicente Lighthouse for International Lighthouse and Lightship Weekend (this year on August 19-20.) A water line break about 19 months ago resulted in no restroom or running water on the lighthouse grounds but we learned the Coast Guard might have the line fixed soon.■

K6PV 2023 Field Day Overview

This year's K6PV Field Day at Soleado Elementary School focused heavily on 40 and 20 meter operation...plus 15 meters as band conditions allowed. More info at our July 6 meeting on what we did, but for the record here's K6PV's 2023 Field Day Band/Mode contact breakdown as we filed with ARRL.■

| 2023 FD BAND | CW QSOs | DIGITAL QSOs | PHONE QSOs | |
|--------------|---------|--------------|------------|--|
| 160m | - | - | - | |
| 80m | 27 | - | - | |
| 40m | 165 | 145 | 125 | |
| 20m | 366 | 129 | - | |
| 15m | 156 | 89 | - | |
| 10m | - | - | - | |
| 6m | • | - | - | |
| 2m | - | - | 12 | |
| 1.25m | | - | 16 | |
| 70cm | - | - | 16 | |
| TOTAL | 714 | 363 | 169 | |

K6PV scores for "traditional" Field Days in perspective

| Field Day | K6PV points | National Rank | SW Division Rank | LAX Section Rank |
|-----------|-------------|---------------|------------------|---------------------|
| 2023 | 5,256 | TBD | TBD | TBD |

| 2023 | 5,256 | ופט | ופט | ופט |
|--|---|--|--|---|
| Field Day Year * FD operations disrupted by lawn sprinklers overnight | (A) K6PV (2A Station) Total Points | (B) K6PV Rank Nationwide of all Field Day stations (all classes) | (C) K6PV Rank of all 2A stations in ARRL Southwestern Division | (D) K6PV Rank of all 2A stations, ARRL LAX Section |
| 2019 | 5,284 | 178 th of 3,112 (top 6% of all FD stations) | 1 st of 27 | 1 st of 7 |
| 2018 | 4,288 | 305 th of 2,902 | 3 rd of 24 | 1 st of 8 |
| 2017 | 4,238 | 338 th of 2,965 | 3 rd of 28 | 2 nd of 10 |
| 2016 | 4,742 | 243 rd of 2,696 | 2 nd of 31 | 1 st of 9 |
| 2015 | 5,780 | 193 rd of 2,270 | 4 th of 27 | 3 rd of 9 |
| 2014 | 4,932 | 252 nd of 2,686 | 4 th of 32 | 2 nd of 9 |
| 2013* | 4,248 | 331st of 2,548 | 5 th of 26 | 1 st of 5 |
| 2012 | 5,188 | 259 th of 2,617 | 5 th of 24 | 1 st of 8 |
| 2011* | 4,492 | 341st of 2,632 | 6 th of 24 | 1 st of 5 |
| 2010 | 5,468 | 219 th of 2,617 | 5 th of 31 | 1 st of 8 |
| 2009* | 3,930 | 391st of 2,603 | 9 th of 27 | 3 rd of 7 |
| 2008 | 4,160 | 332 nd of 2,409 | 4 th of 27 | 1 st of 9 |
| 2007 | 3,216 | 511 th of 2,331 | 6 th of 28 | 2 nd of 7 |
| 2006 | 5,242 | 223 rd of 2,169 | 4 th of 30 | 2 nd of 5 |
| 2005 | 6,216 | 162 nd of 2,199 | 3 rd of 32 | 2 nd of 8 |
| 2004 | 7,118 | 126 th of 2,242 | 3 rd of 30 | 2 nd of 7 |
| 2003 | 6,192 | 126 th of 2,079 | 4 th of 37 | 3 rd of 8 |
| 2002 | 6,246 | 194 th of 2,099 | 3 rd of 28 | 1 st of 7 |

◄ Historic data reprinted from December 2019 QRO.

We especially remember our soakings that disrupted 2009, 2011, and 2013 Field Day operations when the lawn sprinkler systems unexpectedly turned on between midnight and 4 am.

By Jerry Kendrick, NG6R

AllStarLink (ASL) is a network of amateur radio repeaters, remote bases and hot spots accessible to each other via Voice over Internet Protocol (VoIP). [1] ASL is hams talking with other hams and repeaters over the Internet. In that sense, it's similar to Echolink, DMR and other digital voice modes. ASL uses existing analog FM repeaters, specially retrofitted and configured for ASL, as its primary means of enabling QSOs.

AllStarLink runs on a dedicated computer (often a Raspberry Pi) that is the host at a home QTH, a repeater site or a computer center. The basic unit in the network is called a node and generally consists of a means for a voice audio signal to be converted into a digital bit stream, and vice versa. That digital bit stream is injected into the global Internet, intended to be intercepted by the node at the other end that has been designated to receive it. The software for effecting this conversion is Asterisk, an open-source VoIP platform. Nodes from around the world can link with other similarly-constructed nodes. Currently there are over 28,000 nodes around the globe and the number is growing. The United States and Europe have the most.



Figure 1. Current global distribution of AllStarLink nodes [2]

One of the appealing features of AllStarLink is the ease with which an existing analog FM repeater (such as open **W6TRW** repeater here in the South Bay) can be configured with an ASL node. This feature thus enables anyone with a home or portable node to connect into an ASL-equipped repeater just as if they were keying it up and communicating directly with their handheld FM transceiver. As long as the FM repeater has this ASL node technology, any ASL node can key up the repeater and carry on QSOs. You can sit in your living room at home and key up a repeater in London or Paris as readily as keying up your local repeater. Conversely, if you're on vacation in Paris, you can relax at that special sidewalk café you frequent (provided it has wifi) and check into your favorite repeater network in the South Bay as easily as if you were still sitting in your living room at home.

The ham who's planning to construct a node can apply for an ASL node number. Application is free. The node number assigned to the author is **59409**. All 28,000+ nodes are listed on a website and details of any one node can be identified by entering the node number of interest. [3] **Continued...**

...Continued

A node can be very inexpensive to construct. An inexpensive Raspberry Pi (RPi) computer, a sound card and a cheap HT transceiver can be assembled for less than \$100 to create a home QTH node. The node transceiver (modified for reduced output power) is programmed to a selected simplex frequency and PL so that a roving local HT set to those same values can effect communications in each direction—transmit and receive. Figure 2 shows such an inexpensive DIY node, and is similar to the version currently being assembled by the author. [4]



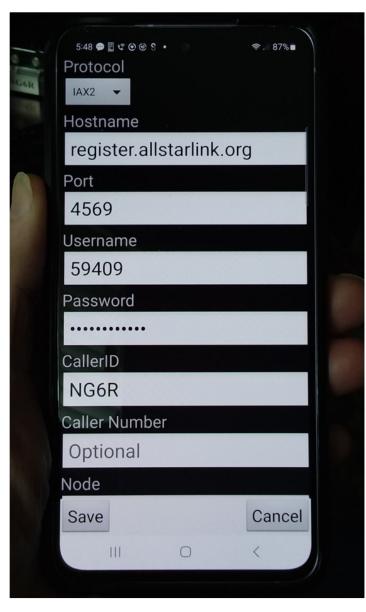
Figure 2. Interior construction of an inexpensive DIY ASL node. Note the key components of a Raspberry Pi Linux-based computer (bottom), the attached and modified soundcard USB dongle, the stripped down inexpensive Baofeng BF-888s transceiver (top) and the small buck converter (left) for converting the input wallwart 12V DC down to 5V needed for the RPi and 4.3V needed for the transceiver. PHOTO CREDIT: https://all-starsetup.com/allstar-mini-node-construction-details

It is intended that a later **QRO** article will describe the construction, operation and performance of a node such as the one shown above. As mentioned, this node would enable its ham-owner to walk around locally with an HT and communicate (via this node, nearby at the home QTH and configured with an Internet connection) with another similarly-equipped node (perhaps located at a repeater site) anywhere in the world.

**Continued...*

...Continued

However, the crux of this article is that there is another way—a much easier way—to connect to ASL-equipped repeaters without requiring such a tedious construction effort. And that is to download an app called DVSwitch for Android phones or RepeaterPhone for Apple iPhones. Two PVARC members have done this and have experience bringing up repeaters and enjoying on-air repeater QSOs using just their smartphones, i.e., without using radios at all: Jerry, NG6R with an Android phone and Ray, N6HE with an Apple iPhone. Figure 3 shows the setup page and dashboard for the Android DVSwitch application. Similarly, Figure 4 shows the setup and dashboard for the iPhone app.



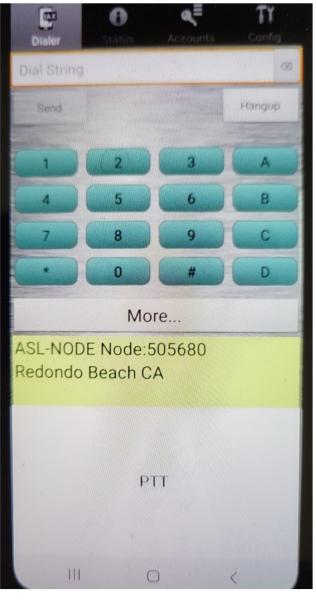


Figure 3. Setup (left) and dashboard (right) for Android phone application called DVSwitch (from the Google Play Store) showing connection to W6TRW repeater. The node number for W6TRW repeater (505680) is entered via the keypad and a "Connect" button is pushed; the large PTT button at the bottom of the screen is toggled for push-to-talk. When the PTT is toggled off, the repeater output will sound a courtesy beep so that anyone monitoring the repeater output will know that the user has released the PTT. To disconnect entirely from the repeater, simply hit the "Hangup" button. **Continued...**

...Continued

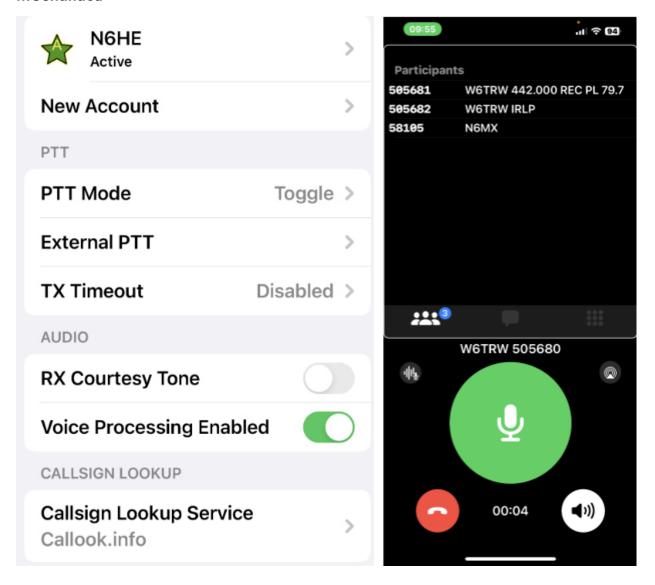


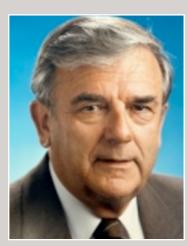
Figure 4. Setup (left) and dashboard (right) for Apple iPhone application called RepeaterPhone from the App Store; PTT shown toggled on

AllStarLink offers a significant advantage to clubs or other organizations wishing to keep their members or interest groups connected even when direct RF connection to a repeater is not possible. Discussions are underway within the board of directors of the PVARC to add ASL capability to our own K6PV club repeater. Such a feature would enable club members who are not able to have line-of-sight viewing of the repeater to be able to check in to regular analog FM nets and enjoy repeater QSOs by using only their smartphones, provided they have an Internet connection (Ethernet, wifi or cellular). Likewise, members who are traveling or are otherwise away from their home or usual check-in location would have the option to connect into K6PV using just their smartphones. What a great addition to the FM and DMR capabilities that already exist on K6PV! Stay tuned for further developments in applying this technology to our own amateur radio club repeater.■

References

- https://allstarlink.org/
- 2. https://stats.allstarlink.org/maps/allstarUSAMap.html
- https://www.allstarlink.org/nodelist/
- 4. https://allstarsetup.com/allstar-mini-node-construction-details/

Herbert (Herb) Clarkson, KM6DD (SK)



Herb Clarkson, KM6DD (circa 1995)

PVARC member Herb Clarkson, KM6DD, became a Silent Key on May 25, 2023 at age 90 after a fall at his assisted-living facility. He was remembered at a memorial service in Rancho Palos Verdes on July 1, 2023, and preceded in death by his wife of 52 years Dodie, KF6EXV (SK), in 2011.

Herb came to amateur radio following early-retirement from Hughes Aircraft at age 57 after 31 years there as an electrical engineer. He joined Hughes immediately after graduating from Worcester Polytechnic Institute in Massachusetts with a Bachelor's degree in Electrical Engineering. Prior to seeking his degree he enlisted in the U.S. Air Force during the Korean War and performed electronic maintenance on reconnaissance aircraft. His work at Hughes supported maintenance and development of Air Force radar systems, training simulators, and other radar programs. Herb also earned a Master of Science degree in Industrial Engineering from USC while employed at Hughes.

For the PVARC Herb co-founded in 1996 with Bryant Winchell W2RGG (SK) the Palos Verdes Peninsula Unified School District's disaster amateur radio communications network. Selected personnel at nearly all Peninsula school sites were licensed through Walt Ordway, K1DFO, classes and equipment purchased through PTA funds for 222-MHz building-mounted antennas and transceivers. Several Peninsula schools with difficult signal paths required specialized high-gain antennas which PVARC member Bill Harper, WA6ESC, designed and built. The PVARC maintained this school radio system until 1998 when it was transferred to the Lomita Sheriff Station's L.A. County Disaster Communications Service unit. Today DCS continues maintaining the system at 21 public school sites and three private schools enabling them to reach the Lomita Sheriff Station, Palos Verdes Estates Police Department, or other schools through amateur radio if normal communications are out. A DCS member at the Lomita Sheriff Station until 2009, one of Herb's most unique service aspects for DCS was being on-duty in the Lomita Station's DCS room on the night of December 31, 1999, into January 1, 2000, should any Y2K issues impair local communication systems or utilities.

Herb also operated at many PVARC activities including Field Day, the Palos Verdes Marathon, Conquer the Bridge, other public service events, and International Lighthouse & Lightship Weekend. We will miss Herb and remember him fondly.■

Short news items to start July...

PVARC member Jeff Wolf, K6JW, was recently nominated and approved at League headquarters to serve as an ARRL DXCC Awards Card Checker. Jeff recently attained DX Honor Roll status with 334 confirmed entities. Congratulations, Jeff.



Team Remington this month is "The Music Man" in El Segundo. Jeff, KA6JMR, is the producer/director; Laura, KA6LJR, is producer/music director; Marlee, KA6MJR, plays woodwinds and does lighting design; and Jack, KA6JWR, plays Winthrop (he's on the left in left-most photo above.)

The United Amateur Radio Club (K6AA) in San Pedro still seeks additional licensed hams to operate K6AA's HF station in the Los Angeles Maritime Museum at the Port of Los Angeles.

The station operates from 12 noon to 5 pm
Wednesday through
Sunday with a large Yagi antenna on the museum roof plus HF radios for phone, CW, and digital modes.

Operators will need to be a URAC member (\$10/ year) and approved as a Volunteer by the City of Los Angeles.

For more information contact:

Steve Mandich, K6NT (URAC President) at s.mandich@yahoo.com

QRO has room for random accomplishments of PVARC members. Let us know.

PVARC upcoming events

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

1st Thursday each month, 7:30-9:15 pm, except in August and December

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

1st Saturday in August, October, and November, 10:00 am-Noon

2nd Saturday in July and September, 10:00 am-Noon

 PVARC EmComm Interest Group online meetings via Webex

3rd Saturday each month, 10:00-11:00 am or 11:00-Noon (time depends on other radio events that day)

 Walt Ordway K1DFO Technician and General amateur radio license classes at Hesse Park

November 4 and 11, 2023 in Fireside Room

- Volunteer Examiner license test session at Hesse Park, November 18, 2023 (Fireside Room) 10:00 am
- PVARC 2023 Holiday Dinner or virtual After-Dinner, December 14
- Public Service Events

Hills Are Alive 10K/5K, August 5, along Rolling Hills Estates trails and parks

Conquer the Bridge run/walk, September 4, across Vincent Thomas Bridge at Port of Los Angeles

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.
- Pacificon / ARRL Pacific Division Convention,
 October 20-22, San Ramon Marriott, San
 Ramon (East Bay), CA. Website: https://www.pacificon.org/

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 \$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/.

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 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.

During our period of virtual meetings if you would like a patch contact Diana, Al6DF, ai6df@arrl.net and we'll find a way to get your patch to you. ■



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 Diana Feinberg, Al6DF Vice President Ray Day, N6HE Treasurer Don Putnick, NA6Z Secretary Ron Wagner, AC6RW Directors Clay Davis, AB9A Gary Lopes, WA6MEM

Past Vice President Bob Sylvest, AB6SY

Appointed Offices:

ORO Editor Diana Feinberg, AI6DF K6PV QSL Manager Jeff Wolf, K6JW K6PV Trustee Mel Hughes, K6SY LAACARC Delegate Jeff Wolf, K6JW VE Coordinator Dave Scholler, KG6BPH VE ARRL Liaison Jerry Shaw, KI6RRD Net Control Operators: 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;

Contact us:

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

Email: k6pv@arrl.net Website: www.k6pv.org

Derek Okada, K6DMO

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

QRO is published monthly by the Palos Verdes Amateur Radio Club, ©2023 all rights reserved. For permission to reprint please contact PVARC at: k6pv@arrl.net

Front page photo — Pt. Vicente Lighthouse before sunset on August 19, 2019. PHOTO: DIANA FEINBERG, AI6DF

JULY 2023 PVARC CALENDAR OF EVENTS WEDNESDAY **T**HURSDAY **F**RIDAY SUNDAY MONDAY TUESDAY SATURDAY 1 1 3 7 8 5 6 4 PVARC hybrid monthly club meeting at Independence K6PV DMR net, **PVARC HF** Day 7:30 pm Enthusiasts Group, 10:00 K6PV analog net, 7:30 pm Hesse Park am. PV Library and Webex: 7:30 pm IARU HF World Championship 10 11 9 12 13 14 15 K6PV analog net, 7:30 pm K6PV DMR net, **PVARC** 7:30 pm EmComm IARU HF World Interest Group meeting, 10 am via Webex Championship **COWW VHF** Contest 16 17 18 19 20 21 22 CQWW VHF K6PV analog net, 7:30 pm K6PV DMR net, Contest 7:30 pm 24 27 23 25 26 28 29 W6TRW Swap Meet, Northrop K6PV analog net, 7:30 pm K6PV DMR net, 7:30 pm Grumman, N. Redondo Bch. 7:00-11:30 am 30 31 **Major ham** radio contests shown in red

Two Free Amateur Radio Courses

FCC <u>"Technician"</u> course (entry level) FCC <u>"General"</u> course (2nd level) Each course is 2 sessions

The sessions will be on 4 and 11 November 2023

Technician 9:30 AM to 1:15 PM both Saturdays (bring your lunch)

General 1:30 PM to 5:00 PM both Saturdays

The FCC tests will be 10:00 AM to noon on 18 November 2023

At the start of the 4 November 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 \$25 for the General Paper copy of Walt's Power Point charts, \$29 for the Technician and \$25 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 \$50 to cover the cost of materials and the examination 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.

QRO July 2023 - 14 -



Palos Verdes Amateur Radio Club P.O. Box 2316

Palos Verdes Peninsula, CA 90274 http://www.k6pv.org

Fillable PDF form is downloadable from PVARC website at: http://www.n6rpv.net/n6rpvpage/pvarc/membership_form.pdf

MEMBERSHIP FORM

New Renew

Date _____

| Last Name | | First | | Spouse | | |
|--|--------------------|-------------------------------|-----------------------|----------------------------------|-------|-------|
| Street Address | | | | | | |
| City | | | | State | Zip _ | |
| Home Phone _ | | Work | | Cell | | |
| Email address | | | | | | _ |
| | (Unless ot | therwise noted, emails will b | e sent to the applyin | g member only) | | |
| License Call | | Class | ∨ | ARRL Member? | | |
| Other amateur | radio groups you l | belong to | | | | _ |
| Additional Hou | cohold and/or Fam | nily Members (if Applicabl | م)، | | | |
| | | | | | | |
| _ast | First | c | all | Class | _ | ARRL? |
| _ast | First | c | all | Class | _ ~ | ARRL? |
| .ast | First | C | all | Class | _ ~ | ARRL? |
| | | | | | | |
| Membership (\$20 Individual, \$25 Family) \$ | | | | | | |
| | | | | | | |
| (Optional) donation to support PVARC activities \$ | | | | | | |
| | | | | | TOTAL | \$ |
| Paypal to PVARC90274@gr Go to www.pay | mail.com | Cash | | e payable to es Amateur Radio | 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.