



Inside this month's QRO...

PVARC upcoming meetings.....	2
It's not always that simple with VHF/UHF simplex frequencies, by Kirk Beasley, KN6UMV	3-6
Moving to Zoom, more topics	7
Upcoming events; ordering club badges, jacket, patch.....	8
About us.....	9
October 2023 calendar	10
Astron PS for sale by PVARC member.....	11
Magnetic loop antenna free to PVARC member.....	12
Upcoming PVARC ham license classes	13
PVARC new membership & renewal form.....	14

All QRO monthly issues since 2007 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.

Solar Cycle 25 and HF Propagation

Carl Luetzelschwab, K9LA

7:30 pm, Thursday, October 5, 2023

In-person at Fred Hesse Community Park,
29301 Hawthorne Blvd., Rancho Palos
Verdes...and online via Zoom

*Hesse Park meeting room opens at 6:30 pm
Zoom meeting room opens by 7:15 pm*

Also this month:

PVARC HF Enthusiasts Group meeting
Saturday, October 7, 10:00 am-Noon at
Palos Verdes Library main branch Purcell
Room

PVARC EmComm Interest Group virtual meeting Saturday, October 21, 10:00 am -
11:00 via Zoom – this month with a focus for
newer ham operators

PVARC upcoming monthly meetings

At our **October 5th** hybrid monthly meeting **Carl Luetzelschwab, K9LA** (also ARRL Central Division Director covering Indiana, Illinois, and Wisconsin) is presenting an update on Solar Cycle 25 propagation. He'll be speaking from his QTH in Ft. Wayne, IN, to follow-up his Cycle 25 forecast presentation at our June 2018 monthly meeting.

Carl retired in 2013 after 41 years as an RF design engineer with Motorola and Raytheon (formerly Magnavox) where he specialized in solid-state RF power amplifiers. A ham since 1961, he's also a recognized observer on Solar Cycles and propagation going back to his college days at Purdue University where he earned BS and MS degrees in Electrical Engineering. Carl holds ARRL's DXCC Top of Honor Roll designation for having worked/confirmed all current DXCC entities.

Also an author, Carl was Editor of the ARRL's National Contest Journal magazine from 2002-2007 and has written many articles on solar propagation.



Above: Carl Luetzelschwab, K9LA, at his home station. PHOTO: K9LA

The PVARC's **November 2nd** meeting features **Joe Moell K0OV** discussing transmitter hunting (both pedestrian and mobile.) Joe is a noted T-hunt expert living in Orange County who last spoke at the PVARC in 2014. He also frequently speaks at hamfests and ham conventions.

On **December 14th** the PVARC holds another virtual-only "Holiday After-Dinner" event with our usual "door prizes" and a speaker rumored to be your club president. Bring an optional beverage and dessert to your computer, tablet, or smartphone. A sit-down holiday dinner as we knew them before COVID would have been nicer but escalations in meal prices and service charges now make this kind of event uneconomical for many members.

PVARC's **HF Enthusiasts Group** meets in-person at the Palos Verdes Library main branch's Purcell Room on the 1st Saturday this month, October 9, from 10:00 am-Noon...all members are welcome. In October and November 2023 our HFE meetings will be on 1st Saturdays due to Library scheduling conflicts. For 2024 we've reserved the Purcell Room for all 2nd Saturdays at 10:00 am.

PVARC's **EmComm Interest Group** meetings continue via Zoom on 3rd Saturdays at 10:00-11:00 am. This month's EmComm meeting on October 21 will have a different format devoted to newer hams—answering any ham operating or technical questions in a friendly manner instead of a "roundtable" discussion. Newer hams (i.e., licensed less than four years) are especially encouraged to attend but the meeting is open to all PVARC members regardless of experience.

It's not always that simple with VHF/UHF simplex frequencies

By Kirk Beasley, KN6UMV

(**QRO** Editor's note: PVARC member Kirk Beasley also has experience with VHF/UHF simplex in Washington State where he owns a mountain cabin. As one quickly learns, crossing state lines can entail changing not only time zones and speed limits, but ham transceiver VFO tuning steps as well.)

When I first jumped into Simplex recently, I needed to figure out what frequencies I could use. I quickly found lots conflicting information on frequencies and channel spacing online. I needed better guidance, because I didn't want to end up transmitting on someone's repeater frequencies or worse.

I assumed ARRL would be the only place I needed to reference on this. I went to their website and quickly found their Band Plans (www.arrl.org/band-plan) which for 2 meters had two entries for Simplex: 146.4 – 146.58 MHz, and 147.42 – 147.57 MHz. That seemed simple enough. I thought all I had to worry about was whether channel spacing was 15 or 20 kHz wide.

Thus my initial attempts at programming my radio looked like the two lists below. I programmed both into my radio and started scanning. As you can see below, I rapidly found repeaters on my Simplex frequencies. Something wasn't right. *Continued on next page ►*

Simplex Frequencies (ARRL)			Simplex Frequencies (ARRL)		
FM			FM		
Band	FREQ MHz	Comments	Band	FREQ MHz	Comments
2 Meter 15 kHz Channels	146.400		2 Meter 20 kHz Channels	146.400	
	146.415			146.420	
	146.430			146.440	
	146.445			146.460	
	146.460			146.480	
	146.475			146.500	
	146.490			146.520	National (2M)
	146.505			146.540	
	146.520	National (2M)		146.560	
	146.535			146.580	
	146.550			146.600	
	146.565			147.400	
	146.580			147.420	AA6RJ Rancho Palos Verdes
	146.595			147.440	
	147.405			147.460	
	147.420	AA6RJ Rancho Palos Verdes		147.480	
	147.435	K6MWT Lake Forest, Santiago Peak		147.500	
	147.450	W6NUT Los Angeles, Contract Point		147.520	
	147.465	W6VLD Huntinton Beach, Boeing		147.540	W6CPA Writewood, Blue Ridge
	147.480			147.560	
	147.495	AA6TL Glendale, Mt Lukens		147.580	
	147.510				
	147.525				
	147.540	W6CPA Writewood, Blue Ridge			
	147.555				
	147.570	W6HRO Anaheim, HRO			
	147.585				

It's not always that simple with VHF/UHF simplex frequencies

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With more research, I found out ARRL is responsible for overall Band Plans as guidelines, but they delegate to local area managers for specific plans. For SoCal, there are three local plan managers:

2M: TASMA <https://www.tasma.org/2022/11/tasma-band-plan-update/>

70cm: SCRRBA <https://www.scrba.org/BandPlans/BandPlans.htm>

220: 220 SMA <https://www.220sma.org/bandplan.htm>

For 2 meter Simplex, TASMA uses 15 kHz channels and lists specific frequencies as well as two ranges of unchannelized regions. For 1.25 meter Simplex, 220SMA uses 20 kHz channels with a smaller list of frequencies. For 70 cm, SCRRBA also uses 20 kHz channels but only lists three Simplex frequencies for 440 – 450 MHz. SCRRBA has a separate Band Plan for 420 – 440 MHz but I don't see any FM Simplex. All of this led me to program my radio as follows for Simplex FM frequencies in SoCal:

2M FM (TASMA)		220 FM (220 SMA)		70cm FM List (SCRRBA)	
15 kHz channels		20 kHz channels		20 kHz channels 440-450	
144.310 - 144.375	Unchannelized	222.120		446.000	National Calling
144.405 - 144.490	Unchannelized	222.140		446.500	
145.510		223.400		446.520	
145.525		223.420			
145.540		223.440			
145.555		223.460			
145.570		223.480			
145.585		223.500	National Calling		
145.600		223.520			
145.615					
145.630					
145.645					
145.660					
146.445					
146.520	National Calling				
146.535					
146.550					
146.565					
146.580					
146.595					
147.510					

My goal is to program my radio with a standard set of Simplex frequencies, and verify they work and I know how to use them. I think it would be good for HAMs to be ready and able to use their radios for non-repeater based communications in case it's ever necessary or desired. I think occasionally adding some Simplex communications into PVARC FM and/or DMR nets would be a fun and good thing to do. *Continued on next page* ►

It's not always that simple with VHF/UHF simplex frequencies

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If anyone wants to try Simplex, there are two regional Simplex Nets I've found that welcome guests. The Hughes Amateur Radio Club (HARC) hosts its weekly Net on Wednesdays at 1930 on 146.550 MHz. The Net starts as FM, but then transitions to Simplex. Net Control is normally in Gardena so a HT may work depending on your location. See w6ha.org.

Another Simplex net I found is held monthly by <https://gotahams.com> on 146.580 MHz. The Net is fun and has a simple scoring system for everyone to rate the quality of the signals they hear from others. Participants act as relays for those not being able to reach Net Control directly. Net Control is normally in Norco which is ~50 miles from my home in Manhattan Beach. With my AnyTone 578 at 45 Watts with a roof mounted Comet antenna, I can reach Net Control clearly, but I can't hear all the participants.

Although I started the effort of researching Simplex frequencies with ARRL, it's important to note that isn't where Band Plans really start. Worldwide frequency management starts with the International Amateur Radio Union (IARU) <https://www.iaru-r1.org/about-us/organisation-and-history/re-gions/>. The world is divided into three regions, and the Americas are in Region 2. This flows down to ARRL for USA, and from there to one or more state-level Band Plan Coordinators.

In this write-up, I reference the three Plan Coordinators for SoCal. If you want to see the Band Plans for NorCal or any other state, go to: <https://w2xq.com/bm-repeaters.html>. The website certificate is currently out of date, but the link is safe to navigate to.

What's next? I've only been a ham for 1-1/2 years. Year one was learning dual-band FM, and for the past six months I've been learning DMR. What I'm currently working on is trying to figure out Simplex frequencies for DMR. From reviewing the three SoCal Plan Coordinators data, it's not clear to me where DMR Simplex should be. From what I read online, there are different opinions as to whether the various forms of Digital Voice (DV) should each have their own Simplex frequencies, share them with other DV formats, and even whether to share with FM Simplex frequencies.

The most common DMR Simplex information I find online are the six frequencies in the table below. For now, I'm going to program these in my radios for scanning purposes.

DMR	
TG 99, TS1, CC1, TP Always	
145.510	
145.790	
441.000	
446.500	
446.075	
433.450	

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It's not always that simple with VHF/UHF simplex frequencies

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I've traced these frequencies back to page 8 of the 2015 DMR-MARC document: https://www.dmr-marc.net/media/Amateur_Radio_Guide_to_DMR_Rev_I_20150510.pdf Note these are "recommended" frequencies, and I don't see evidence of the three SoCal Plan Coordinators supporting this. I've also learned PAPA uses 441.0 MHz for DMR Simplex communications.

Simplex

On the professional side of DMR, *Talk-Around* refers to operating simplex on a repeater output channel. This allows a direct communication while still being able to hear the repeater. This allows users to directly contact other users listening on the repeater output frequency. Amateurs typically use dedicated simplex channels so as not to interfere with repeaters. The amateur DMR community has published a list of recommended simplex frequencies to be used instead of operating simplex on repeater outputs:

UHF 1) 441.000 2) 446.500 3) 446.075 4) 433.450

VHF 1) 145.790 2) 145.510

[Use TG99 / CC1 / TS1 / Admit Criteria: Always / In Call Criteria: TX or Always]

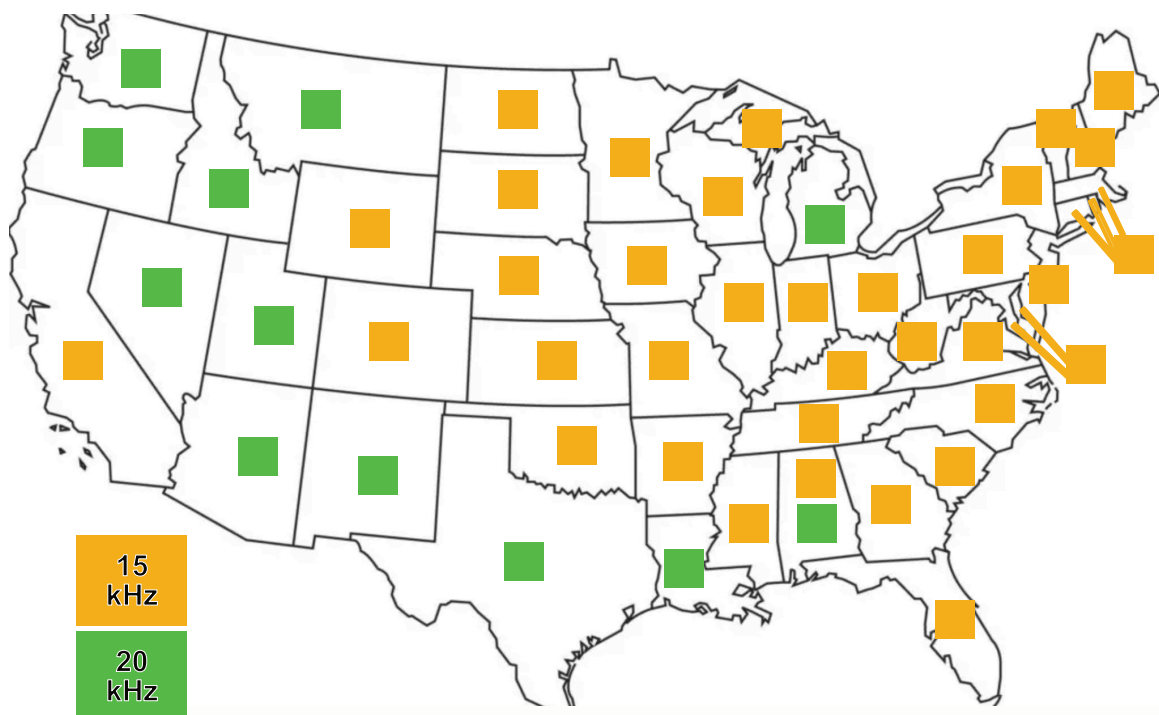
Do not use 146.520 or 446.000; they are the national analog simplex channels and operating DMR on these common analog use frequencies will just cause disharmony within the amateur community. Also, avoid repeater inputs and outputs, locally used non-DMR simplex channels, satellite sub-bands, and any other frequencies that could disrupt other amateur communications.

73, Kirk■

QRO Editor's Note:

Is it 15 kHz or 20 kHz 2-meter simplex channel spacing in your state? One map can be worth a thousand words to categorize all area ham band plans.

Two unusual 2-meter cases exist: Alabama reportedly has both 15 kHz and 20 kHz simplex width; Michigan is mostly 20 kHz channels except for the Upper Peninsula which uses 15 kHz. ■



MAP COMPILATION: DIANA FEINBERG, AI6DF, FROM REPEATER COORDINATOR WEBSITES AND ARRL REPEATER HANDBOOK

PVARC virtual meetings have moved to Zoom

We say again: Effective with our August 19, 2023, EmComm Interest Group meeting the PVARC has switched its virtual meeting platform to Zoom.



Cisco Webex worked well for us since April 2020 hosting over 120 PVARC meetings of all types. However, some Webex security enhancements complicated meetings such as PVARC's where attendees do not have individually-addressed invitations that enable validating attendee log-ins. For corporate or government virtual meetings the ability to authenticate attendees is usually a must.

As we did with Webex, we'll send PVARC members both a Zoom "one-click" meeting hyperlink for use in the Zoom app and a Zoom meeting number + meeting password to use in any browser window from Zoom's website at: <https://zoom.us/>.

Many PVARC members are familiar with Zoom from other organizations but we've learned Zoom still isn't for everyone. One PVARC member has advised that Zoom free and Zoom paid commercial service (we have the latter) are not permitted on his computers, only Zoom for Government. Information technology trade-offs between ease of access and security will likely be with us forever. ■

Short subjects also coming to PVARC monthly meetings...

Starting in October 2023 the PVARC will also present a short 2nd topic at our monthly general meetings. These presentations will cover subjects such as: a unique aspect in our club, something one of our members did/designed/learned, demonstrating an interesting concept, a new ham trend...and/or more.

Have a short subject you feel fellow members would be interested in hearing about? Contact our Vice President, Ray Day N6HE, at rayday@cox.net ■



Above: Our member Gary Lopes WA6MEM signal tests a donated ICOM HF transceiver prepared for sale to benefit the ARRL's ARES-LAX program. PHOTO: DIANA FEINBERG, AI6DF

PVARC 2023 upcoming events

- **PVARC hybrid monthly meetings online via Zoom 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 October and November, 10:00 am-Noon

- **PVARC EmComm Interest Group online meetings via Zoom**

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 virtual "After-Dinner", December 14**

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/>

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. ■

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 (example below) contact Gary Lopes at wa6mem@cox.net and he will make arrangements for your payment and sending your new badge. Badges cost \$13. ■





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, AI6DF
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:

QRO 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
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	Clay Davis, AB9A; Rick Heaston, KG6RH; Jeff
	Remington, KA6JMR; Marlee Remington, KA6MJR;
	Derek Okada, K6DMO

Contact us:

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 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, wa6mem@cox.net

Club jackets or patches: Dave Scholler, KG6BPH,
 310-373-8166

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Front page photo — Pt. Vicente Lighthouse on the afternoon of April 29, 2021. PHOTO: DIANA FEINBERG, AI6DF

PVARC CALENDAR OF EVENTS

OCTOBER 2023

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
1	2	3 K6PV analog net, 7:30 pm	4 K6PV DMR net, 7:30 pm	5 PVARC monthly meeting at Hesse Park & via Zoom: 7:30 pm, on Solar Cycle 25	6	7 PVARC HF Enthusiasts Group, 10:00 am. PV Library
8	9	10 K6PV analog net, 7:30 pm	11 K6PV DMR net, 7:30 pm	12	13	14
15	16	17 K6PV analog net, 7:30 pm	18 K6PV DMR net, 7:30 pm	19	20	21 PVARC EmComm Interest Group meeting, 10am via Zoom Scouts Jamboree OTA
22 Scouts Jamboree OTA	23	24 K6PV analog net, 7:30 pm	25 K6PV DMR net, 7:30 pm	26	27	28 W6TRW Swap Meet, Northrop Grumman, N. Redondo Bch. 7:00-11:30 am CQ WW DX SSB Contest
29 CQ WW DX SSB Contest	30	31 K6PV analog net, 7:30 pm Happy Halloween		Major ham radio events/contests shown in red		

FOR SALE BY PVARC MEMBER:

FOR SALE: ASTRON RS-35M LINEAR POWER SUPPLY

The Astron RS-35M linear power supply is a reliable, 35 amp 13.8 volt unit that has been widely used by hams in the shack for many years.

The present unit belonged to my late father, who purchased it for his station in the early 2000s. Unfortunately, his health was failing and he was unable to use it for more than a handful of hours. Although I do not have his station log, I estimate that the unit has no more than about 10 hours of run time, one of those hours attributable to me when I briefly used his station.

The unit is functional, clean and in very good cosmetic condition. New, the power supply sells for about \$275. I am asking \$150.

Contact Jeff, K6JW at k6jw@arrl.net



OFFERED FREE BY PVARC MEMBER:

- AVAILABLE TO ANOTHER PVARC MEMBER WHO COULD USE IT -

PRACOMM SML-500-1 LOOP ANTENNA

- 100 Watts PEP SSB
- Includes assembly manual and 25 ft of coax
- Some easy assembly required for PVC stand
- Free to a PVARC member.

I'll deliver at a PVARC monthly or HFE meeting.

Contact Don NA6Z at NA6Z@arrl.net



Two Free Amateur Radio Courses

FCC **“Technician”** course (entry level)

FCC **“General”** 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 no fee 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.

**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](http://www.n6rpv.net/n6rpvpage/pvarc/membership_form.pdf)

MEMBERSHIP FORMNew ☐Renew ☐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? ☐Last First Call Class ARRL? ☐Last First Call Class ARRL? ☐Membership (\$20 Individual, \$25 Family) \$ (Optional) donation to support PVARC activities \$ TOTAL \$

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Cash ☐

Check made payable to
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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>.