



QRO

MONTHLY NEWSLETTER OF THE PALOS VERDES AMATEUR RADIO CLUB

NOVEMBER 2019



Inside this month's QRO

Upcoming monthly meeting speakers	2
PVARC's 2019 Holiday Dinner	3-4
The 15 radio mistakes at public service events, <i>by Diana Feinberg, AI6DF</i>	5
Recent enhancements to the K6PV repeater, <i>by Gary Lopes, WA6MEM</i>	6-7
PVARC's HF Enthusiasts Group meeting	8
PVARC club news.....	9-10
PVARC Calendar, November 2019.....	11
K1DFO's February 2020 ham license classes	12
PVARC membership renewal / application form	13

Amateur Radio on the International Space Station

Brian Johnson, AB6UI, and Norm Thorn, K6UU

Thursday, November 7, 2019

6:30 pm: 1) "What's Next?" group...all ham radio questions welcome, and 2) separate "DMR Basics" group

7:30 pm: Main meeting and presentation

**Fred Hesse Community Park (McTaggart Hall)
29301 Hawthorne Blvd.
Rancho Palos Verdes, CA
Visitors always welcome**

PVARC's upcoming meeting topic is "out of this world..."

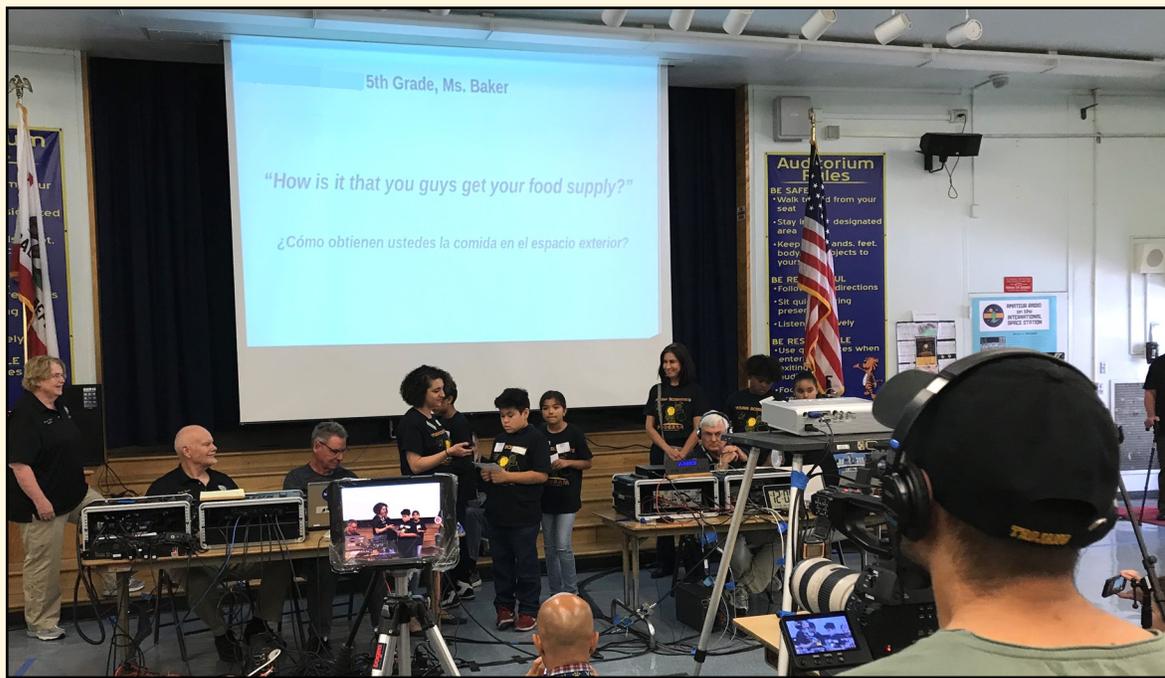
The PVARC's November 7th meeting covers Amateur Radio on the International Space Station, presented by Brian Johnson, AB6UI of Torrance, and PVARC member Norm Thorn, K6UU of Redondo Beach. Brian and Norm are ARISS Mentors in California succeeding Charlie Sufana, AJ9N, who worked with PVARC members in 2013 for an ARISS contact at Soleado Elementary School in Rancho Palos Verdes. Brian and Norm have now helped guide over half a dozen California schools and handled the technical complexities to facilitate these contacts.

The ARISS program is a competitive selection process for schools worldwide to propose special science and space education programs in conjunction with contacting an astronaut aboard the International Space Station via amateur radio. The most recent ARISS contact in California was October 28, 2019, at Vermont Elementary School about a mile from the University of Southern California campus. The photos below cannot convey the excitement this event created for Vermont Elementary students, who also learned quite a bit about amateur radio. ■

Right photo: 10 selected students at Vermont Elementary School near USC each asked two questions of Space Station commander Luca Parmitano, an Italian astronaut, during an ARISS contact on October 28, 2019.

Bottom left: Nearly 300 students eventually assembled for their school's Space Station contact by ham radio.

Bottom right: ARISS mentors Brian Johnson, AB6UI (foreground), and Norm Thorn, K6UU (standing) make final equipment checks before Vermont Elementary's ISS contact.



PHOTOS: DIANA FEINBERG, AI6DF



Don't miss out on the PVARC's December 12th Holiday Dinner

It only happens once a year: the PVARC's 2019 Holiday Dinner on December 12 at Los Verdes Golf Course replaces our December monthly meeting. We need to supply our guest count by December 2, so please RSVP by using the form on the next page or at our November 7 monthly meeting or via PayPal. We've kept the price the same as last year.

This year's dinner will again have a multi-course buffet where no one goes home hungry, accompanied by our usual holiday cheer and ham radio door prizes. Everyone attending receives one free door prize ticket—none will be sold—enabling everyone to have an equal chance of winning. Some of our prizes will definitely exceed the cost of your dinner.

We always aim for a speaker with an interesting presentation appealing to both hams and non-hams. Occasionally it's difficult getting a speaker's schedule to match ours, especially during the holiday season. So this year on December 12 our after-dinner presentation is, "The Lighter Side of Amateur Radio for Today... and Tomorrow" by your **QRO** Editor, Diana AI6DF. She has given this presentation at 2017-2018 holiday dinners of the W6TRW Radio Club, Antelope Valley Amateur Radio Club, and the Tri-County Amateur Radio Association—but never to the PVARC. So do come for an amusing ride.

Worried about our Holiday Dinner decorum? We aren't the stressful "corporate" or "law firm" holiday party where everyone obsesses about their image, social standing, or future career prospects. It's OK to come solo or with your spouse or companion. Dress as you wish...business casual or anything holiday-festive is just fine. We don't have the situation of needing to impress the Managing Partner's wife (if you know what that means.)

We look forward to having you at Los Verdes on December 12 for a wonderful time wrapping-up our 2019 year. See you there.



Right: A partial view of our 2018 Holiday Dinner at the Los Verdes Golf Course.

PHOTO: RAY DAY,
N6HE



Please Join Us at the Palos Verdes Amateur Radio Club 2019 Holiday Dinner

Los Verdes Golf Course
7000 W. Los Verdes Drive, Rancho Palos Verdes, CA
Thursday, December 12, 2019; Meet and Greet beginning at 6:30 pm,
Dinner at 7:00 pm, followed by Program and Prizes

Reservation deadline: Monday, December 2

Dinner Buffet:

Garden Salad with choice of two dressings

Spinach Salad with Feta Cheese and Pine
Nuts

Fresh Fruit Platter

Fresh Baked Salmon with Sauce

Slow-Roasted Tri-Tip Beef with Mushroom
Merlot Sauce

Red Roasted Potatoes

Seasonal Vegetables

Warm Rolls and Butter

Plenty of Dessert Cake: Chocolate Layer and
two other types of Cakes

Coffee, Decaf Coffee, Hot Tea, Iced Tea, and
Water

Palos Verdes Amateur Radio Club 2019 Holiday Dinner

Los Verdes Golf Course, Rancho Palos Verdes
Thursday, December 12, 2019

Price per person: \$45

Number of people attending: _____

I would like to also donate:

\$5 ___ \$10 ___ \$15 ___ Other amount _____

Total amount enclosed: \$ _____

Please make check payable to:

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

Or pay via **PayPal** to: **PVARC90274@gmail.com**
(List name and number attending in Message to Recipient)

(All donations are applied towards club expenses for the evening.)

The 15 radio mistakes at public service events

By Diana Feinberg, AI6DF
QRO Editor

“Professor Nathaniel Burke” at the “University of Farmers” has reminded us in television commercials since 2010 how insurance covered the cost of unusual misfortunes: “We know a thing or two because we’ve seen a thing or two.”

So it almost goes for amateur radio public service: We know many of the likely glitches because many of us have seen or heard them. But the only insurance for ham operators is having some radio operating knowledge. In that vein a new amateur radio club in Orange County recently asked me to speak about the 15 radio mistakes hams typically make in EmComm or public service—not to be critical, but to be aware.

I’ve served—often multiple times—as net control or a field operator for 18 different public service events (including as lead net control operator for the Los Angeles Marathon since 2015) plus for L.A. County Disaster Communications at numerous locations. I can honestly say I have “seen a thing or two.”

Here are 15 public service communication glitches I’ve noticed multiple ham operators encountering:

- 1) Showing up without a fully-charged radio battery (on most HTs less than 6.8 volts lets you still receive but there’s not enough power to transmit; also, re-chargeable radio batteries need periodic replacement.)
- 2) Showing up without a spare battery (bad idea) or showing up late (even worse).
- 3) Accidentally turning-on Yaesu’s WIRES repeater linking (too-easy to activate; to turn it off on FT-60 push Zero button and watch for “atomic” symbol in display to disappear.)
- 4) Unknowingly turning off the repeater shift...you will be on simplex and never heard by most.
- 5) Having the wrong PL set (not every repeater uses PL 100.0).
- 6) Allowing Yaesu FT-60 speaker mic connector to slightly disengage (due to no positive seating), sending radio into “stuck open mic” situation.
- 7) HT radio sits on your belt when transmitting (signal barely gets out).
- 8) Not knowing how to program a new frequency (ask for help).
- 9) Not seeking a clear signal path away from buildings to reach your repeater (know the repeater’s location relative to you).
- 10) Operating an HT radio inside your car without an external antenna.
- 11) Shouting into the microphone (distortion necessitates repeats).
- 12) Unknowingly setting the radio’s squelch too high (you won’t hear much)
- 13) Being long-winded when communicating—the more you talk the faster your battery runs down, plus net control gets exasperated.
- 14) Not getting an incident’s exact address and nearest cross-street.
- 15) Not having an earpiece...unable to hear over the crowd noise when net control calls you.



Above: It happens...Yaesu FT60 four-conductor combined plug for earpiece and PTT mic doesn’t have a secured seat in its jack—when it comes partially out (top) the PTT is closed, radio goes into transmit.

Yes, we know a thing or two because we’ve heard a thing or two—or maybe not. ■

PHOTOS: DIANA FEINBERG, AI6DF

Our K6PV repeater gets some enhancements to benefit users

By Gary Lopes, WA6MEM

During the past three weeks the PVARC repeater, K6PV, has received two upgrades that enhanced radio performance and added remote controlling options allowing the repeater to be more flexible in how it is used.

A receiver preamp has been installed to improve the repeater receiver sensitivity. The AngleLinear model 442GN pre-amplifier has a measured performance of 16.3 dB of gain with a 0.6dB noise figure at 442.120 MHz. When installed and tested, the repeater FM mode squelch opened at just 0.1 μ V. This enhanced performance should allow many operators on the fringe of the K6PV service area to be able to access the system more easily in either FM or DMR.

Our Hytera repeater has the ability to control a number of system functions via an I/O port located on the back of the repeater. The individual pin functions are assignable using the programming software application provided with the repeater. As a side note, this software is very much like the software we use to program our DMR handheld radios. When the I/O pins are assigned a specific function, like placing the repeater in FM only, the I/O pin is configured to complete the command by taking the pin state to low. I.E., when you connect the pin to ground the repeater switches to FM only. When the ground is removed (high state) the repeater reverts back to the default mixed operation mode. Additional repeater functions were assigned I/O pins and configured in the same way.

Repeater control is accomplished by using a Raspberry Pi 3 model B+ and a three channel relay expansion board that mounts directly to the Raspberry Pi. For those who are unfamiliar with the Raspberry Pi, I encourage you to investigate this amazing little piece of technology. For as little as \$35 you can purchase a miniature computer with all the capability of a lower-cost laptop.



Left: Enabling remotely controlling the K6PV repeater mode (into Analog Only, DMR Only, or Mixed Mode) is the Raspberry Pi 3 Model B+, shown alongside a Mont Blanc pen to illustrate comparative size.

PHOTO: GARY LOPES, WA6MEM

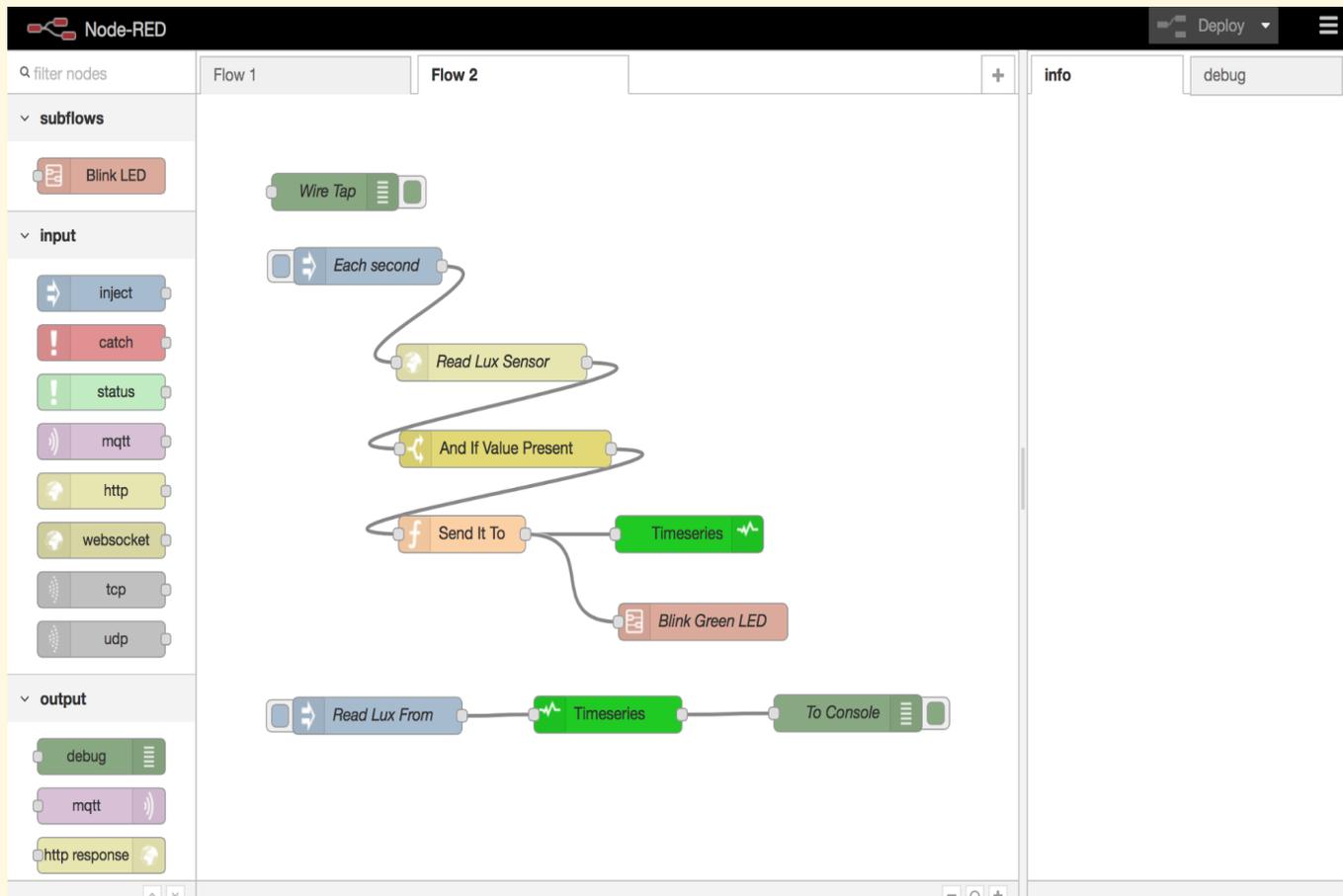
The control software selected for this project is a flow-based application used for visual programming originally developed by IBM for connecting and controlling different types of sensors, hardware, and applications. **Node-Red** allows the developer to program using preconfigured modules which are then

Continued on next page ►

Our K6PV repeater gets some enhancements to benefit users

► *Continued from previous page* ►

connected together. The picture below shows a typical Node-Red flow used to collect data from a sensor and send the information to a console.



The Node-Red flow for controlling the K6PV repeater is more complex than the flow noted above but was developed using the same standard Node-Red modules to control the opening and closure of three relays. These relays individually switch the selected I/O pin to low (ground) or high (open) to complete the requested command.

Repeater control commands are sent to the Raspberry Pi via the internet, which provides for a more secure and robust control system. K6PV can now be placed in FM only, DMR only, and mixed mode during special operations depending on the requirement. Additional hardware control and software enhancements will be made in the future to further expand the K6PV capabilities.

A special thanks to PVARC member Michael Vulpillat, KJ6RVU, for providing his Node-Red and Raspberry Pi expertise and guidance. ■

Thank you Gary, WA6MEM

We are very grateful to Gary Lopes, WA6MEM, for donating his time, expertise, and microprocessor parts to provide K6PV with these enhancements.

Gary's work adding a pre-amplifier creates a noticeable improvement in the reception of weaker signals, especially benefitting our members in canyons, with only HT radios, or in hard-to-cover areas.

K6PV users will also appreciate that our repeater can now be remotely switched and locked into either Analog-Only or DMR-only modes as needs require. ■

Next HF Enthusiasts Group meeting at PV Library is November 9

The PVARC's HF Enthusiasts Group meets next on Saturday, November 9, from 10:00 am to Noon, at the Palos Verdes Library's main branch (701 Silver Spur Rd / 650 Deep Valley Dr.) in the Purcell Room behind the Reference Desk. Free parking is available on the Library roof, in a parking structure on Deep Valley Drive, or inside a small parking area accessed from Silver Spur Rd.

Here are a few of the topics discussed at the October 12th HFEG meeting with nine attendees:

- Jeff, K6JW, reported SteppIR work still in progress, demonstrated his MFJ Rig-Pi remote access unit.
- Jerry, NG6R, is prepping to tutor a student in AP Calculus! He even corrected the author re an error he found....who does that?
- George, AJ6JG, worked the California QSO Party in Imperial County with Bob, NC6Q. Pleased with results, 99% CW.
- Don, WG6E, passed around a HP-45 "antique" calculator and a slide rule for nostalgia's sake.
- Carlos, WD6Y, showed two pieces of gear for his 432 MHz EME station he's putting together.
- Ray, N6HE, announced our 2020 Islands On The Air DXpedition to Two Harbors is back on the calendar (2/26 – 3/1).
- Don, NA6Z, reported having fun tracking down RFI sources at home.
- Clay, AB9A, has a Palomar end-fed available to borrow and has been doing DMR.

Hope you can make it to the next HFEG meeting— all are welcome. ■

Jeff, K6JW, demonstrated his Rig-Pi remote unit on an iPhone.

PHOTO: RAY DAY, N6HE



PVARC Club News

Consider being an ARRL member

Please consider joining the American Radio Relay League (ARRL) if not currently 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 being an ARRL-affiliated club requires at least 51% of club members also be ARRL members. Annual ARRL membership costs \$49 and includes the monthly QST magazine as well as access to numerous web-based materials and assistance with ham radio issues. Visit: www.arrl.org/ then click "Join/Renew." ■

PVARC badges await pickup at next monthly meeting...or another time

Gary Lopes, WA6MEM, has the following PVARC badges ready for distribution at our November 7, 2019, monthly meeting at Hesse Park or by special arrangement.

- K6MU
- KI6YMD
- NJ6I

To make special arrangements with Gary (or to order a badge) contact him at: wa6mem@cox.net. ■

Embroidered PVARC patches available at monthly meetings

PVARC club patches are available at our monthly meetings for \$4 each. They may be sewn on 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.) ■



Palos Verdes Amateur Radio Club

An American Radio Relay League Affiliated Club

Board of Directors:

President	Diana Feinberg, AI6DF
Vice President	Ray Day, N6HE
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Directors	Clay Davis, AB9A Gary Lopes, WA6MEM Bob Sylvest, AB6SY
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Appointed Offices:

QRO Editor	Diana Feinberg, AI6DF
Webmaster	Kel Vanderlip, W6KCV
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	Malin Dollinger, KO6MD; Dale Hanks, N6NNW; Bob Sylvest, AB6SY; Ron Wagner, AC6RW; Dan Yang, K6DPY

Contacts:

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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 Meetings:

1st Thursday (except July and December in 2019) at 7:30 pm at Fred Hesse Park, 29301 Hawthorne Blvd., Rancho Palos Verdes, CA. 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 after sunset on October 23, 2019. High winds had blown open the lantern room door.
PHOTO: DIANA FEINBERG, AI6DF

PVARC Club News

PVARC upcoming dates in 2019

- ◆ **PVARC monthly meeting at Hesse Park, McTaggart Hall**
1st Thursday each month, 7:30-9:30 pm, except in August and December. 6:30-7:25 pm, "What's Next?" group for newer hams and "DMR Basics".
In 2019 only: No monthly meeting on July 4 due to Independence Day; special meeting August 1.
- ◆ **HF Enthusiasts Group meetings at Palos Verdes Library, Peninsula Center main branch**
2nd Saturday every month, 10 am to Noon in the Purcell Room.
- ◆ **Walt Ordway, K1DFO, Technician and General amateur radio license classes at Hesse Park**
Saturdays, November 2 and 9, 2019; license exam, November 16.
- ◆ **Public service events in 2019:**
Palos Verdes Half Marathon-10K-5K, Nov. 16.
- ◆ **PVARC 2019 Holiday Dinner:** Dec. 12, Los Verdes Golf Course, Rancho Palos Verdes.

Non-PVARC Events of Note:

- ◆ **W6TRW Swap Meet:** last Saturday of each month, Northrop Grumman Space Park, North Redondo Beach, 7:00-11:30 am. ■

PVARC team finalized for 2019 Palos Verdes Half Marathon radio coverage

The PVARC's final 2019 public service event is the Palos Verdes Half Marathon/10K on Saturday, November 16.

Steve Collins, KI6TEQ, is again heading our radio coverage and reports all needed operator positions are filled. Separately the Half Marathon website (as of November 4) indicates runner registration is completely sold out—only 1,800 total runners are allowed and there are now registration waiting lists for the Half Marathon, 10K, and 5K.

The Palos Verdes Half Marathon is billed as "Southern California's most scenic half marathon" with most of the course—for both runners and radio operators—within view of the Pacific Ocean. ■

WELCOME NEW MEMBERS OF THE PALOS VERDES AMATEUR RADIO CLUB IN 2018-2019

Neal Pollack, N6YFM
Daniella Ward, KM6TRC
Talbot Knighton, KM6TDF
Dylan Brown, KM6TDI
Robert Cullinan, NJ6I
Ellen Tessitore, N6XJM
Michael Vulpilat, KJ6RVU
Brian Clebowicz, K6BRN
Warren Arata, KM6YGR
Chris Sundlee, N6CGS
Brad Rachielles, KC6NNV
Georgiann Keller, KM6YGM
Annalise Little, KM6YGS
Tim Couture, KM6QWA
Frank Brown, KM6YGQ
Charlie Hansen, AJ6HZ
Diana DiDomenico, KM6IQN
William McClure, W7QLI
Rick Shigio, K6RTS
David Calloway, K6DKC
Jon Kuroyama, K6LDQ
Ray Grace, WA6OWM
Robert Keller, K9BGC
Alex Marko, KD6LPA

PVARC Calendar

November 2019

Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1	2 K1DFO ham license classes, Hesse Park, 9:30 am– 5:00 pm; 2nd sessions, Nov. 9
3	4	5 PVARC weekly net on K6PV repeater & cross-band, 7:30 pm (analog); 8:00 pm (DMR)	6	7 PVARC meeting at Hesse Park: 6:30 pm: What's Next, DMR basics 7:30 pm: Main meeting	8	9 PVARC HF Enthusiasts Group, 10 am to Noon, Palos Verdes Library Peninsula Center Purcell Room
10	11	12 PVARC weekly net on K6PV repeater & cross-band, 7:30 pm (analog); 8:00 pm (DMR)	13	14	15	16 PVARC Volunteer Examiner license test session, Hesse Park, 10:00 am – Noon PV Half Marathon
17	18	19 PVARC weekly net on K6PV repeater & cross-band, 7:30 pm (analog); 8:00 pm (DMR)	20	21	22	23
24	25	26 PVARC weekly net on K6PV repeater & cross-band, 7:30 pm (analog); 8:00 pm (DMR)	27	28 Thanksgiving Day — Enjoy	29 “Black Friday” sales everywhere	30 W6TRW Swap Meet, 7:00-11:30 am at Northrop Grumman, North Redondo Beach

Tell your friends and family about our upcoming ham license classes at Hesse Park.

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 1 and 8 February 2020

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

General 1:45 PM to 5:00 PM both Saturdays

The FCC tests will be 10:30 AM to noon on 15 February 2020

At the start of the 1 February Technician course, the Palos Verdes Amateur Radio Club will give a 30 minute presentation on how to get further involved with 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 waltordway@juno.com

There is no fee for either course.

Taking the FCC test is \$15.

Optional Material (sold at cost)

Gordon West books with all the FCC test questions,

\$26 for the Technician and \$26 for the General

Paper copy of Walt's Power Point charts,

\$22 for the Technician and \$18 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
www.k6pv.org

NEW MEMBER & 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 (\$20.00) \$ _____

Household and/or Family membership (\$25.00) \$ _____

Additional 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: 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.k6pv.org or upon request.)

Signature: _____ Date: _____

Family Member Signature: _____ Date: _____

Family Member Signature: _____ Date: _____