



# QRO

MONTHLY NEWSLETTER OF THE PALOS VERDES AMATEUR RADIO CLUB

AUGUST 2018



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## International Lighthouse & Lightship Weekend at Pt. Vicente Lighthouse

### Friday, August 17, 2018

Set-up starts 3:00 pm,  
Radio operation 5:45 pm to 9:00 pm

### Saturday, August 18, 2018

Radio operation 7:00 am-11:00 pm

### Sunday, August 19, 2018

Radio operation 7:00 am -2:00 pm;  
Family Picnic and optional SUV  
shuttle from front gate, noon-2:30 pm  
(food serving starts 12:30 pm) **Talk-**

#### in frequency:

K6PV repeater as usual,  
447.120 MHz, - , PL 100.0

(Note: Operators inside museum will use  
K6PV in Reverse mode, listening on 442.120  
MHz and transmitting to you on 447.120 MHz)

## August 17-19, 2018, is International Lighthouse & Lightship Weekend...where hams and lighthouses have much in common

- Our HF station inside the Pt. Vicente Lighthouse Museum goes on-air as K6PV by 6:00 pm Friday, August 17, through Sunday 2:00 pm, August 19. We will operate late evenings Friday and Saturday if sufficient interest and as band conditions allow. PVARC members wishing to operate K6PV should bring an HT radio and from the lighthouse front gate use the K6PV repeater as a talk-in frequency. Advise Diana Feinberg, at [dfeinberg@att.net](mailto:dfeinberg@att.net) if you wish to operate so we can coordinate HF operators.
- Our Sunday picnic starts serving at 12:30 pm. As always, our club provides all the grilled meats, main side dishes, utensils, water, beverages, and some other items. If coming to the picnic we would appreciate that you bring a pot-luck side dish, dessert, or other item. Canopies will provide shaded eating areas.
- **The pedestrian gate into the Lighthouse grounds is no longer usable.** All visitors will enter through the vehicle gate. A SUV shuttle will take anyone between the front gate and the Lighthouse...or you may walk. We are allowed a maximum of 10 vehicles inside the Lighthouse grounds at any time.

**Now hear this:** The U.S. Coast Guard requests all PVARC members and their guests observe these rules while on Lighthouse grounds:

- Please sign the Lighthouse guest book
- No alcoholic beverages, no smoking
- No pets
- Please respect privacy of the Coast Guard families living in homes at Pt. Vicente, no car horns
- Do not venture beyond the Lighthouse, Museum, and picnic areas; please keep away from the helipad
- No access into the Lighthouse due to "environmental" reasons.

Thanks again to PVARC member Bob Closson, W6HIP, for coordinating arrangements with the U.S. Coast Guard and Coast Guard Auxiliary enabling our continued use of the Pt. Vicente Lighthouse grounds. ■



### Directions:

Take Palos Verdes Drive South exit labeled, "Pt. Vicente Interpretive Center." Park in the dirt lot outside lighthouse gate.

Wait for lighthouse gate to be opened ... you may either walk down to the lighthouse area or ride in SUV shuttle. Use talk-in frequency if needed or phone AI6DF at 310-544-2917.

Only a few vehicles (with handicapped placard or plates, or delivering supplies) may park on the grass west of the lighthouse.

Please do not go outside the picnic area or near the three Coast Guard residences.

The Pt. Vicente Lighthouse grounds.

BASE PHOTO: GOOGLE® EARTH

# International Lighthouse & Lightship Weekend is truly an “International” amateur radio event

By Diana Feinberg, AI6DF  
QRO Editor

From its humble beginnings in 1998 International Lighthouse & Lightship Weekend participation has grown substantially to further its two goals: promoting the preservation needs of these unique architectural structures and to promote amateur radio.

Those who saw AI6DF's presentation about ILLW at the PVARC's 2014 Holiday Dinner, at HAMCON 2015, or at monthly meetings of 14 Southern California ARRL-affiliated clubs heard that lighthouses and amateur radio have much in common. Both provide free public services, both use “towers” with radiating devices on top; both use electricity to transmit pulsed signals, and more.

Both lighthouses and amateur radio have also seen their original missions change due to newer technologies. With lighthouses, it's low-cost high-definition X-band radars that made many lighthouses obsolete unless a ship's electrical system fails. For hams, other forms of long-distance communication via internet and cellular have changed wireless and long-distance communication. But lighthouses and hams still share one vital commonality: both are here to serve when all else fails.

Today many lighthouses have extensive deferred maintenance...and some lighthouses have been sold for private residences during the past 15 years. But the architectural grandeur of many lighthouses makes them worthy of preserving...and International Lighthouse & Lightship Weekend furthers that cause while promoting amateur radio.

Unfortunately some countries cannot participate in ILLW because of difficulties amateur operators have to obtain lighthouse access. Many lighthouses in other countries have military or coast guard radio stations and other sensitive assets.

The PVARC is fortunate to have access to Pt. Vicente Lighthouse in Rancho Palos Verdes. Please join us in celebrating International Lighthouse & Lightship weekend. ■

## 400+ Lighthouses Registered for 2018 ILLW

Listings as of 8/15/2018

Argentina	9	Netherlands	13
Australia	49	New Zealand	9
Barbados	2	Northern Ireland	5
Belgium	2	Norway	2
Brazil	3	Panama	2
Bulgaria	1	Poland	1
Canada	20	Portugal	6
Chile	2	Puerto Rico	4
Croatia	1	Scotland	19
Cuba	10	South Africa	14
Cyprus	1	Spain	4
Denmark	11	Sri Lanka	1
England	28	Sweden	14
Finland	6	Switzerland	2
France	6	Taiwan	2
Germany	61	Trinidad / Tobago	1
Gibraltar	1	Uruguay	2
Iceland	1	United States	51
India	2	Wales	10
Ireland	6		
Israel	6		
Italy	5		
Latvia	2		
Malaysia	6		
Mexico	1		
Namibia	2		

## A few of the 400+ lighthouses registered for amateur radio's 2018 International Lighthouse and Lightship Weekend

### Gibraltar

#### Europa Point Lighthouse



Lighthouses have unique architectures worth preserving, ILLW hopes to foster that goal

#### PHOTO CREDITS:

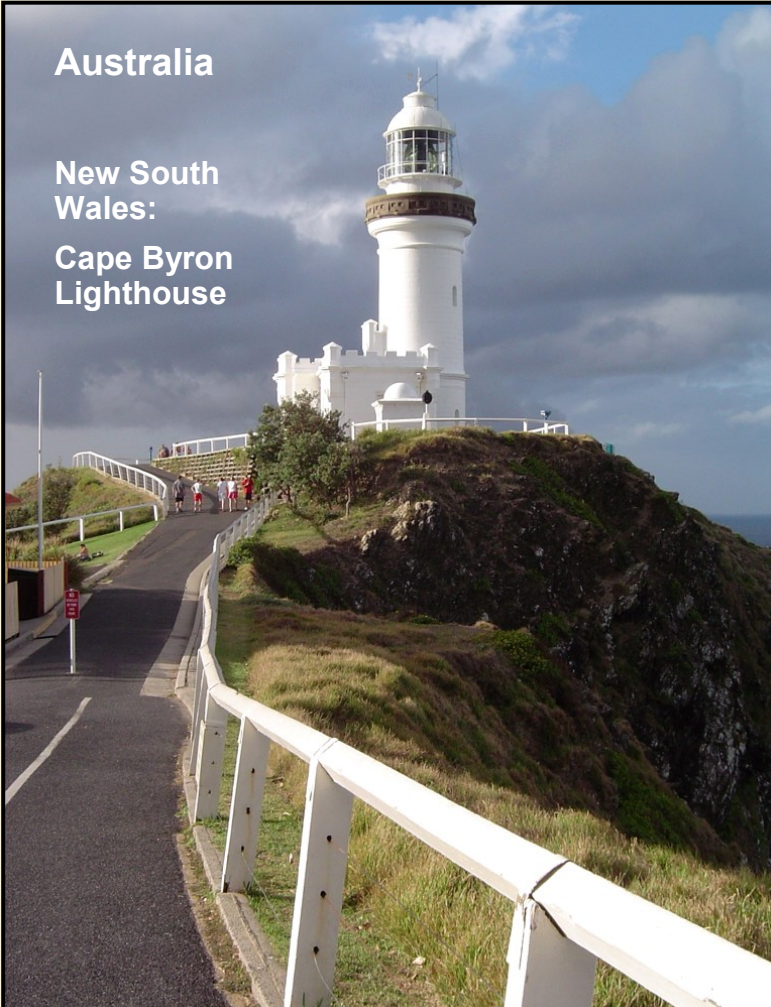
**Left:** Allie Caulfield, Creative Commons from [https://upload.wikimedia.org/wikipedia/commons/e/ec/Europa\\_Point\\_Lighthouse\\_and\\_cottages.jpg](https://upload.wikimedia.org/wikipedia/commons/e/ec/Europa_Point_Lighthouse_and_cottages.jpg)

**Bottom left:** Andres Villalobos (villaocho) - Own work, GPL, <https://commons.wikimedia.org/w/index.php?curid=1065327>

**Bottom right:** [Remi Jouan](#) from Creative Commons at: [https://en.wikipedia.org/wiki/Jaffa\\_Light#/media/File:Jaffa\\_Phare.JPG](https://en.wikipedia.org/wiki/Jaffa_Light#/media/File:Jaffa_Phare.JPG)

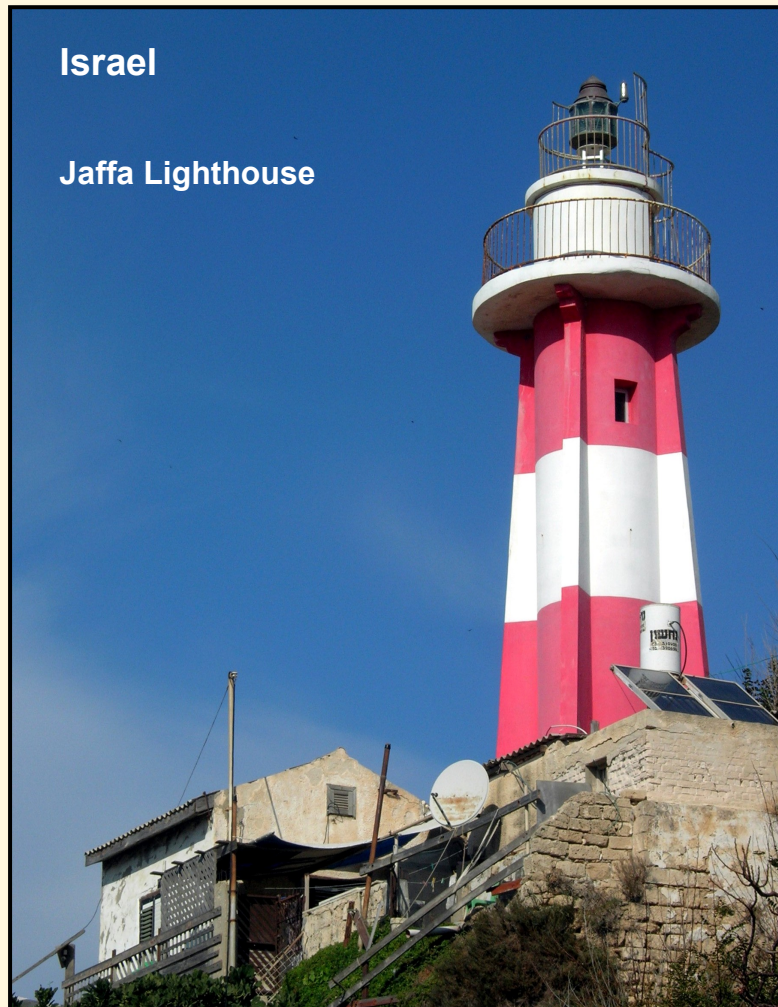
### Australia

#### New South Wales: Cape Byron Lighthouse



### Israel

#### Jaffa Lighthouse



## PVARC's upcoming meeting topics...

Our September 6th meeting speaker is Tim Coker, N6WIN, on "The Reverse Beacon Network" which many contesters and DXers use to check propagation conditions. RBN hams throughout the world leave their radios continuously monitoring using "Skimmer" software that decodes all call signs heard in CW (and now RTTY) then posting that information onto the RBN website. So...if a RBN station in the L.A. area reports hearing a station there's a good chance you will too. RBN is currently studying whether to also post FT8 spots as these would greatly increase demands on RBN's servers.

Our October 4th monthly meeting topic is:

# Show Us Your Shack

Giving short "Show Us Your Shack" presentations will be PVARC members Peter Landon, KE6JPM; Clay Davis, AB9A; Jerry Kendrick, NG6R; Ray Day, N6HE; and Jeff Wolf, K6JW.

Would you like your "Show Us Your Shack" presentation filmed at your home to show at our meeting? Diana, AI6DF, is glad to bring her video camera and simply let you present. No need to create a PowerPoint presentation or bring equipment to Hesse Park (unless you wish.) ■

## Other PVARC upcoming dates in 2018

- ◆ **PVARC monthly meeting at Hesse Park, McTaggart Hall**  
1st Thursday each month, 7:30-9:30 pm, except in August and December
- ◆ **HF Enthusiasts Group meetings at Palos Verdes Library, Peninsula Center (Purcell Room)**  
2nd Saturday each month, 10 am to Noon
- ◆ **Walt Ordway, K1DFO, amateur radio license classes at Hesse Park**  
Up next: Saturdays, November 3 and 10; license exam November 17
- ◆ **International Lighthouse & Lightship Weekend at Pt. Vicente Lighthouse**  
Friday-Sunday, August 17-19; PVARC Family Picnic at the Lighthouse, Sunday, August 19, 12:30 pm
- ◆ **Public service events:** Conquer the Bridge Run/Walk, September 3; Palos Verdes Half Marathon, November 17. (No RAT Beach Bike Tour this Fall.)
- ◆ **PVARC Holiday Dinner: Los Verdes Golf Course, Rancho Palos Verdes**  
Thursday, December 6. Guest speaker: Manhattan Beach schools K-5 science teacher Joanne Mitchell, KM6BWB, on high-altitude balloon projects with Kindergarten through 5th grade students. ■

## 2000-watt Swan antenna tuner donated to PVARC in 2016 finally gets its renovation...is ready for our HF operating events

We are grateful for the family of Torrance ham George Lee, W6IOW, donating to the PVARC in late 2016 a 1970's Swan ST-2 antenna tuner rated at 2,000-watts. Better late than never, we finally gave this tuner a "tune-up" last month.

Our Board member Gary Lopes, WA6MEM, got the ST-2 repaired in about an hour at his test bench. After removing the metal cover and front plate Gary found the innards completely clean. Neither of the two large variable air capacitors nor the roller inductor showed any burn marks indicating arcing—a very good sign.

Gary had to tap new screw threads into several plastic and metal pieces that engaged with the tuning controls. Once that was done, a quick cleaning, and presto...we have a 2-KW tuner suitable for our Catalina Island DXpeditions or matching any unusual antenna at Field Day or Lighthouse Weekend.

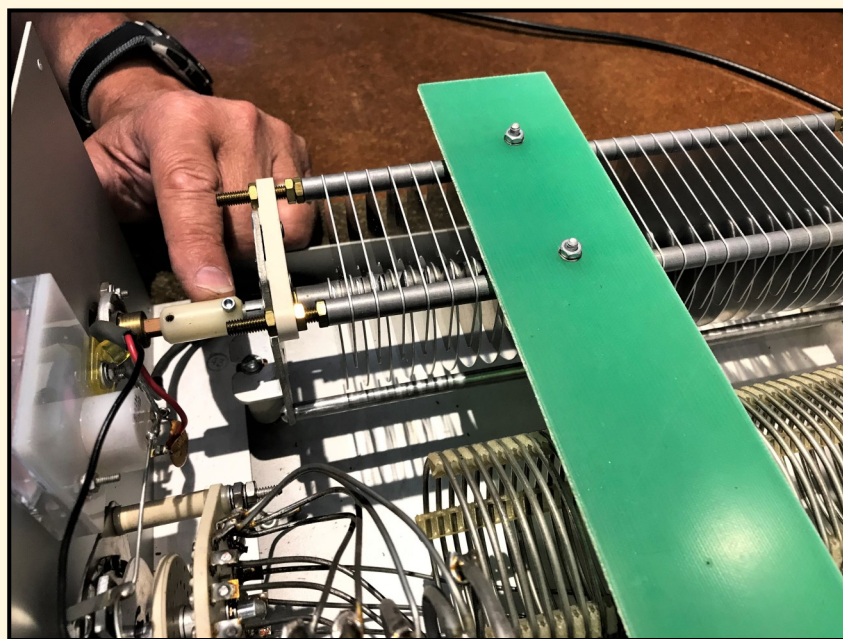
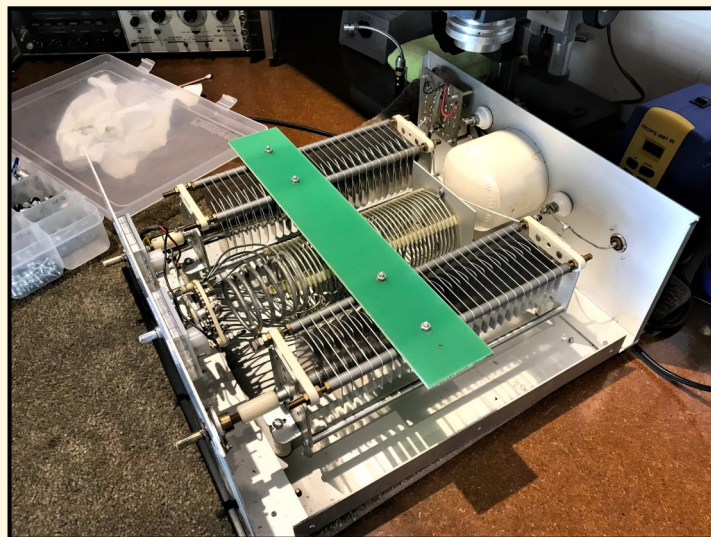
The Swan ST-2 is a manual tuner that easily matches to 50 ohms any antenna with up to a 9:1 SWR...and it is believed capable of matching even a 12:1 SWR antenna. Of course, when high SWRs get tuned to 50 ohms the effective output power is somewhat reduced.

Internal antenna tuners in most modern HF transceivers can only match up to a 3:1 SWR. We will really appreciate having the Swan ST-2 tuner available for future operations. ■

**Top:** The Swan ST-2 front panel is removed on the WA6MEM test bench.

**Center:** Totally clean inside, a view of the long variable air capacitors on the left and right sides, the inductor in the middle. No indications of any arcing were found.

**Left:** Gary, WA6MEM, points to screw needing new threads tapped to hold plastic bushing in place over air capacitor turning shaft. A slightly larger screw size was used.





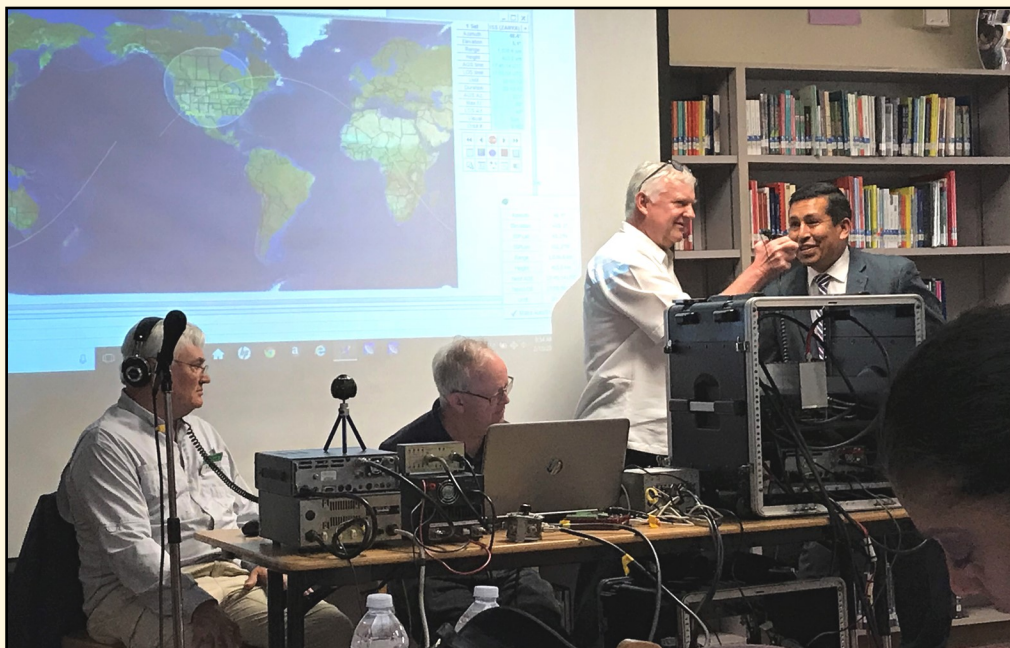
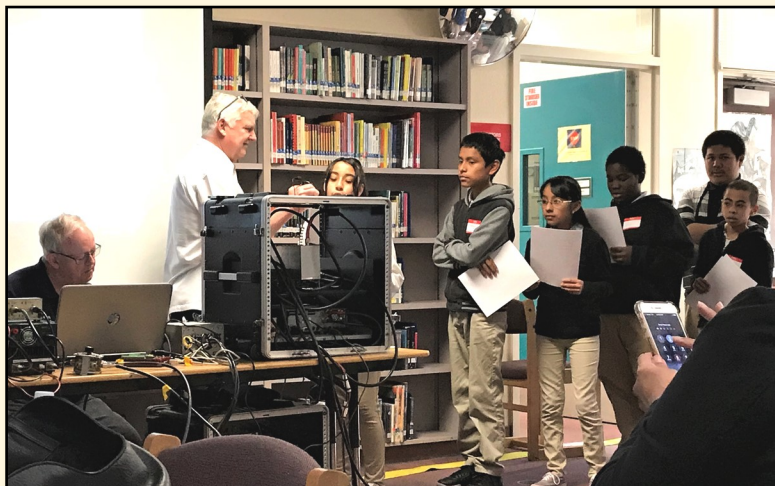
## Norm, K6UU, becomes SoCal Technical Mentor for school contacts with Space Station

PVARC member Norm Thorn, K6UU of Redondo Beach, along with Brian Johnson, AB6UI of Torrance (both members of the Hughes Amateur Radio Club) recently became Technical Mentors in Southern California for the Amateur Radio On The International Space Station (ARISS) program.

Norm and Brian succeed Charlie Sufana, AJ9N, who mentored a PVARC team in 2012-13 facilitating Soleado Elementary School's International Space Station contact with Canadian astronaut Chris Hadfield. Charlie, AJ9N, recently moved to Florida.

On February 15, 2018, Norm and Brian were with Charlie for an ISS contact (pictured here) at Los Angeles Academy Middle School on E. 56th Street in southeast Los Angeles. The Hughes ARC installed the special antennas and coax lines as well as providing back-up radios for LAAMS's ISS contact. This middle school covers a very economically-disadvantaged area but the students' excitement and interest in amateur radio for their ISS contact were genuine. Your **QRO** Editor was there representing the ARRL.

Norm and Brian are next mentoring an ISS contact scheduled during the week of Sept. 4-7 at Santa Ana's Mendez Fundamental Intermediate School. ■



**Top photo:** Norm Thorn, K6UU, speaks with students at Los Angeles Academy Middle School after the February 15, 2018, ARISS contact concluded.

**Middle photo:** Students at Los Angeles Academy Middle School line up to ask their questions via amateur radio to Astronaut Joseph Acaba aboard the International Space Station during its pass over Southern California.

**Lower photo:** Principal Ruben Hernandez (right) asks the final question just as the International Space Station nears its trailing azimuth over Los Angeles. Standing and holding the microphone is retired LAAMS science teacher Darrell Warren, KA6OSC, who started a ham radio club at the school. Seated in center is ARISS Technical Mentor Charlie Sufana, AJ9N, who subsequently moved to Florida.

PHOTOS: DIANA FEINBERG, AI6DF

# PVARC's July HF Enthusiasts Group had a lively (and timely) discussion

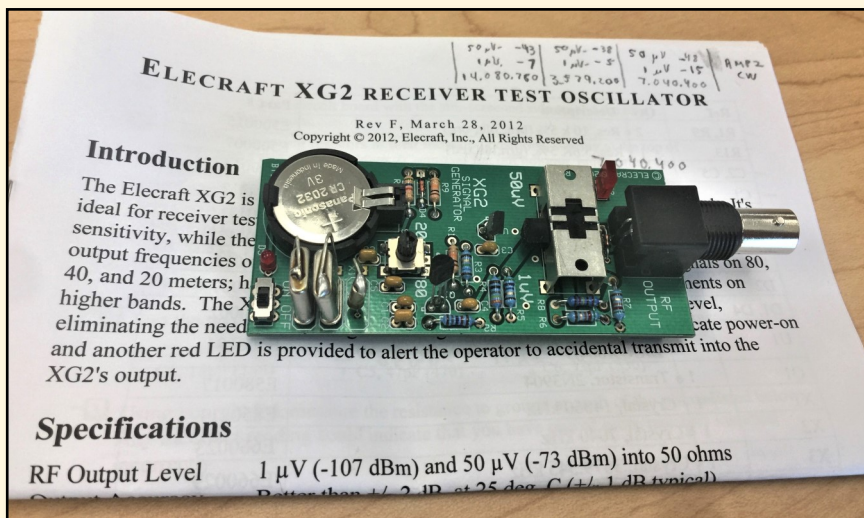
Our July 14th (Bastille Day) HF Enthusiasts meeting at the Palos Verdes Library main branch was well attended, with 16 hams participating.

Among the interesting items shown Rick, KM6GXZ, brought back his HH:MM:SS clock comprised of three analog meters but now with simultaneous digital readouts of date and time. (You never want to be without the time in amateur radio.)



Carlos, WD6Y, showed an Elecraft XG2 receiver test oscillator for 80-40-20 meters and discussed his uses for it.

Other discussion focused on the new Flex 6400-6600 SDR radios and Elecraft KPA-1500 amplifier. There was extensive commentary on wire antennas following the July 5th PVARC monthly meeting when Bob Brehm, AK6R, presented "The Secrets of End-Fed Wire Antennas."



The next HF Enthusiasts Group meeting will be Saturday, September 8, at 10 am in the Palos Verdes Library. (A report on the August 14th HF group meeting will appear in the September QRO newsletter.) ■



**Top:** Rick, KM6GXZ, enhanced his analog clock made from three meters to include digital readouts of date and time.  
PHOTO: RAY DAY, N6HE

**Center:** The Elecraft XG2 receiver test oscillator.  
PHOTO: RAY DAY, N6HE

**Bottom:** Group photo while discussing wire antennas.  
PHOTO: DIANA FEINBERG, AI6DF



## Another Matchbox Design Example

### Actual Field Day Scenario: 80m Dipole Resonance Shifting from SSB to CW

By Jerry Kendrick, NG6R

It's 3:00 AM, you're operating Field Day (FD) solo in PVARC's CW tent. The 20m band has long since closed (as have the other high bands, 15m and 10m, if they were ever even open, considering the low-sunspot era we're experiencing right now!). You've had a pretty good run on 40 meters—and there's still some activity—but you're not hearing many new stations anymore. The computer tells you when you've already worked a station on a given band. You've tried "running," in which mode you're the one calling CQ and hoping you get calls from new stations. And, you've also done "search and pounce" (S&P), in which you troll up and down the band listening for CQs and calling any station you've not worked on that band (40m). But, your stations-worked-QSO-rate has tapered off to a mere trickle—40m band has pretty much been played out. And, there's still several more hours before 20m opens up around sunrise. (Remember that the sun will have been up on the east coast for three hours at our west coast sunrise, so there'll be plenty of new stations to work on 20m if you can just keep the airwaves busy for another 3 hours until 20m begins to open.) Meanwhile, how to get the QSO rate up?!

You're still connected to the 40m antenna, but you briefly listen on 80m CW and hear brisk activity. Even if some of the call signs sound familiar, you're still allowed to rework them because it's a new band. Your hope for a big jump in QSO rate is reenergized. So, you pull the 80m dipole coax cable over to the CW tent. (You might even have to negotiate with the SSB operator in the adjacent tent if you're time-sharing a single 80m dipole antenna and they're still on 80m; but they agree to work 40m instead, so you're all set.) You attach the 80m antenna coax connector onto the transceiver with its built-in antenna tuner (AT), dial in a CW frequency just above the bottom of the band—maybe around 3.55 MHz—and hit the "TUNE" button on the transceiver. Since the transceiver has a built-in antenna tuner, you fully expect that within a few seconds the Standing Wave Ratio (SWR) meter will plummet and settle somewhere around 1:1. But, to your surprise, the SWR meter doesn't drop at all. The built-in AT is clearly struggling and, after a couple of retries, you realize that the transceiver AT simply will not accept this antenna. But, why not?! Then, you remember that the antenna was constructed to resonate around 3.85 MHz, thus favoring the SSB portion of the wide 80m band. The antenna SWR down at the bottom of the band (near 3.5 MHz) may be 10:1 or higher and out of range for the built-in transceiver AT.

The options now are to 1) abandon 80m and go back and continue working 40m (re-negotiate with the SSB operator—oops, sorry about the miscue!); 2) quickly drive home and bring back a more robust and forgiving external antenna tuner (Why didn't I bring one along, just in case?!); or 3) do the unthinkable (in the chilly breeze, darkness and early morning mist) and attempt to lower the dipole antenna and extend the wires another 5 feet on each of the dipole halves (thus moving the dipole resonant frequency down to the CW portion of the band). This article focuses on yet a fourth option: install between the transceiver and the coax cable a small and exceedingly simple "resonance shifter" that will translate the antenna system resonance frequency to approximately 3.55 MHz from 3.85 MHz, the frequency it had been constructed to best support.

The theory behind this unique approach was presented in a previous **QRO** newsletter article along with an example applicable for 10m (page 5 of <http://n6rpv.net/pvarc/2016QRO/QROApr2016.pdf>). This little matchbox would emulate the essential function of an antenna tuner. It would place an appropriate complex impedance [in the form  $Z = R + jX$  with a real part R, resistance, and an imaginary part X, reactance] between the transceiver and the antenna system.

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## Another Matchbox Design Example

### Actual Field Day Scenario: 80m Dipole Resonance Shifting from SSB to CW

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Now, in our FD scenario we want to move the resonant point from 3.85 MHz to approximately 3.55 MHz, just like a more elaborate antenna tuner would do. But, there's an important difference: we're not attempting to be so exact that we actually substitute this box for the AT. We'll still use the transceiver's AT. But, we just want the transceiver's built-in AT to see an SWR in the CW portion of the 80m band that is considerably lower than the SWR it would see without this device. So, instead of seeing an SWR of, say, 10:1, it'll see an SWR like 4:1 or less across the entire CW portion of the band. The discussion that follows outlines the procedure for designing this device and shows the result that could have been achieved had it been available for our 2018 FD CW operation.

Figure 1 shows a temporary deployment of the 2018 FD 80m dipole, borrowed from Rocco N6KN. The dipole is deployed in an inverted V configuration with the two leg lengths the same as they were at FD (so approximately the same resonant frequency). However, this test deployment differs from the FD deployment in several respects: the height is 24 feet, considerably lower than at FD; the dipole legs are about 100 degrees apart (in azimuth) compared to 180 degrees at FD; the location at the author's QTH is obviously different and the effect of this factor is unknown.



**Figure 1.** The “inverted V” 80m dipole is temporarily deployed for testing using a 24' mast secured using a front-vehicle-installed trailer hitch. Despite appearances, the antenna is clear of the trees. The mast is bent due to the ~100 degree azimuth angle between dipole legs.

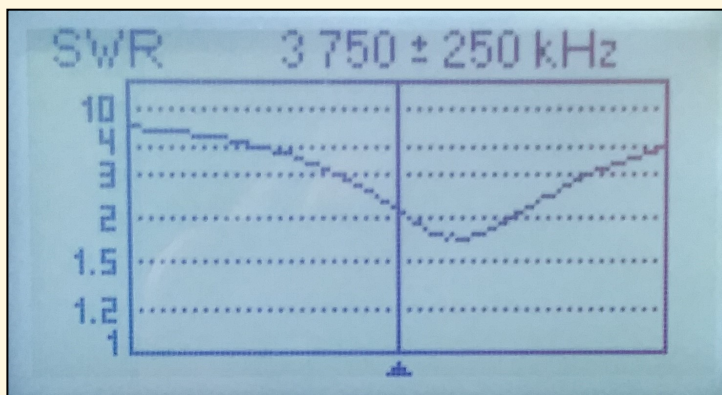
An SWR sweep of this dipole test configuration over the entire 3.5-4.0 MHz 80m band is shown in Figure 2. Note that the SWR low point, signifying resonance, is between 3.8 MHz and 3.85 MHz resulting in an easy task for the transceiver built-in AT to tune this antenna for SSB operation. Note that the minimum SWR is higher (between 1.5 and 2.0) than you'd expect. But, the low antenna apex height and other aspects of this test configuration likely account for this minimum SWR not being closer to 1.0. Also, note that the apparent SWR at 3.5 MHz is not quite as high as 10:1. But, again, the low height and other factors flatten this curve relative to its likely performance in the real FD deployment.

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## Another Matchbox Design Example

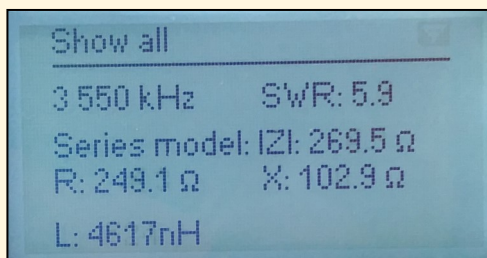
### Actual Field Day Scenario: 80m Dipole Resonance Shifting from SSB to CW

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**Figure 2.** SWR sweep of the entire 80m band shows a resonance between 3.8 and 3.85 MHz, favoring the SSB portion of the band. SWR at the CW portion of the band is much higher. The curve is flatter with a less dramatic resonance dip than would have existed for the actual FD deployment, due to height difference and other factors.

Our objective is now to shift the resonance frequency to about midway the typical CW portion of the 80m band, in the range of 3.5 MHz to 3.6 MHz. In order to create the complex impedance to effect this shift in resonance, we need to know the antenna impedance at the desired resonance point. Because impedance is a complex number, we need to know both R (real, resistance) and X (imaginary, reactance) components. So, we use the RigExpert antenna analyzer to determine impedance at 3.55 MHz as shown in Figure 3.



**Figure 3.** Antenna analyzer data taken at 3.55 MHz shows an SWR of 5.9, a resistance R component of antenna impedance of approximately 250 ohms and a reactance X component of antenna impedance of approximately +103 ohms, i.e.,  $Z_a = 250 + j103$  ohms. These are the data we'll use to design a matchbox that will shift this antenna impedance at 3.55 MHz to approximately  $Z_a = 50 + j0$  (i.e., to 50 ohms resistive with no reactance).

As discussed at length in the previously cited *QRO* article, an on-line automated Smith chart application is used. A different but equally good (and also FREE) on-line application is employed here to determine the simple circuitry that will shift an antenna impedance of  $Z_a = 250 + j103$  ohms to approximately  $Z_a = 50 + j0$  ohms. The on-line application used for this example is SimSmith and is available for free download from:

[http://www.ae6ty.com/smith\\_charts.html](http://www.ae6ty.com/smith_charts.html)

Even though quite intuitive, several YouTube tutorials are available to enable a steeper learning curve.

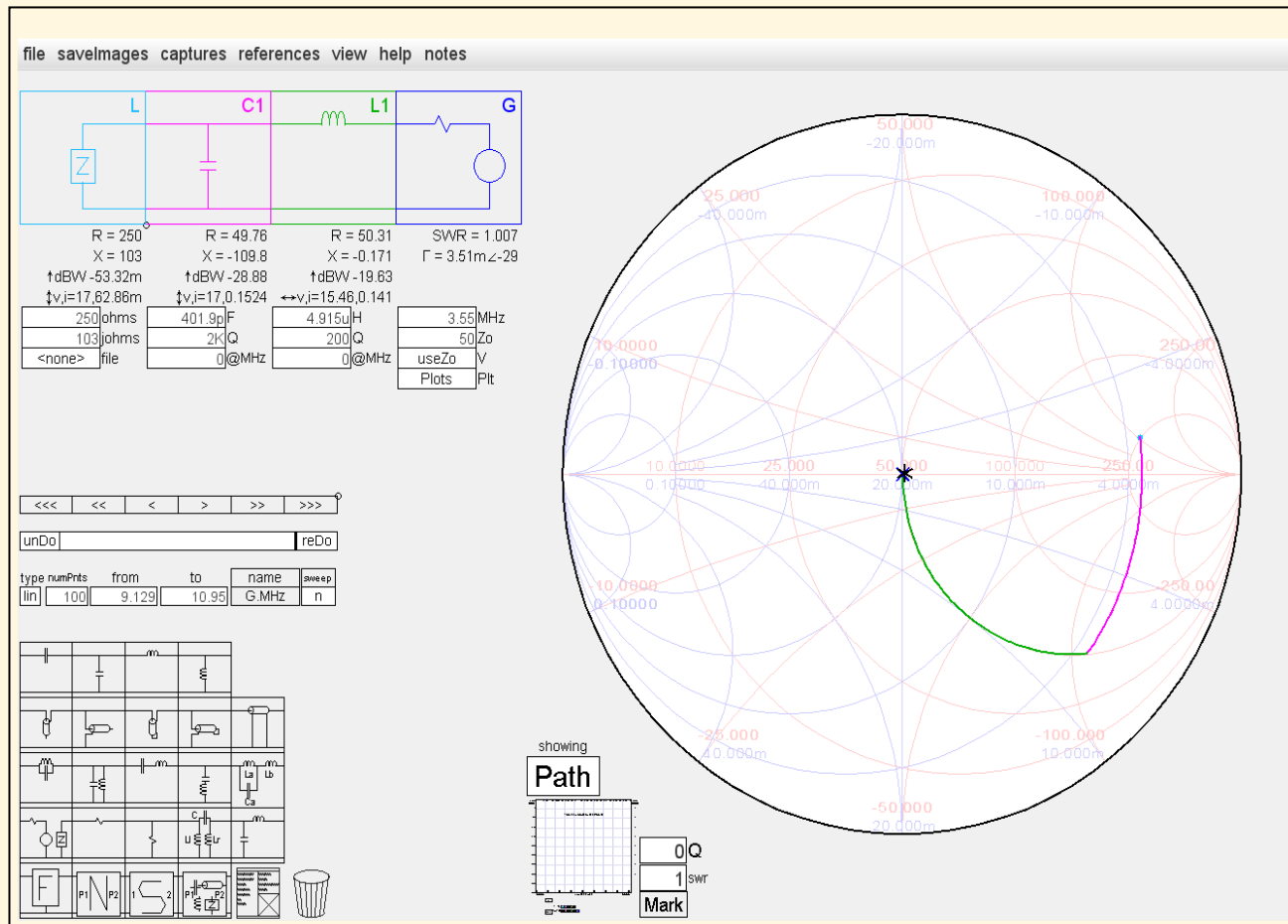
Please refer to Figure 4 for this discussion. Using the antenna (labeled Z) values of R=250 and X=103, an initial starting point on the Smith chart is established (highest point on the pink curve). Our goal, of course, is to select as few components as we can between the source (transceiver, labeled G in the figure) and the load (antenna, labeled Z in the figure) so as to move steadily (only on permissible contours) toward the center of the Smith chart (which represents 50 ohms resistive with zero reactance).

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# Another Matchbox Design Example

## Actual Field Day Scenario: 80m Dipole Resonance Shifting from SSB to CW

► *Continued from previous page*



**Figure 4.** Screen shot from SimSmith simulation showing the complete trajectory from  $Z = 250 + j103$  at the top of the pink curve (with the pink curve representing the effect of adding a shunt capacitor of approximate value 402pF), followed by the green curve (representing the effect of adding a series inductor of approximate value 4.9μH) and terminating at the center of the Smith chart, representing impedance  $50 + j0$  ohms.

Generally two energy-storage components are sufficient to translate any arbitrary impedance to the center of the Smith chart—one capacitor and one inductor. Only the order of selection and whether the component is shunt or series [four total possibilities] needs to be determined. So, the result of this exercise using an on-line Smith chart calculator for our situation shows that just two components (a shunt 402pF capacitor and a series 4.9μH inductor), when inserted between the antenna and the transceiver, can transform the antenna impedance at the CW sub-band midpoint from approximately  $Z = 250 + j103$  to an impedance of approximately  $Z = 50 + j0$ .

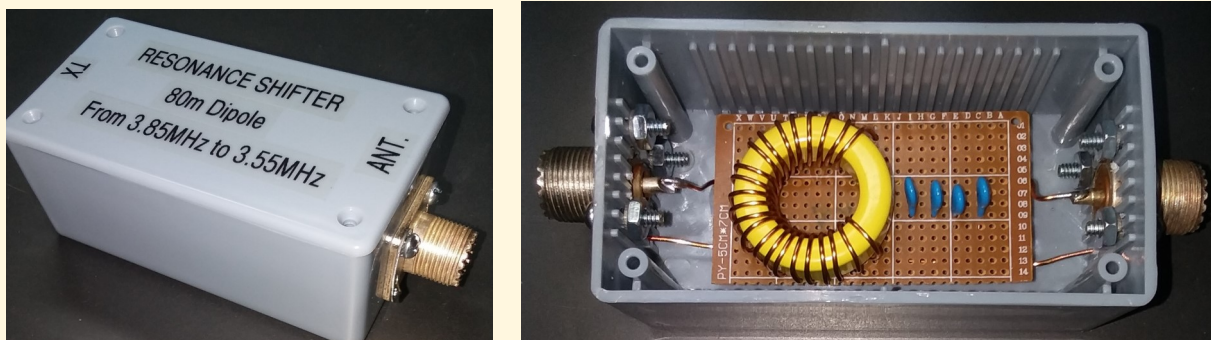
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## Another Matchbox Design Example

### Actual Field Day Scenario: 80m Dipole Resonance Shifting from SSB to CW

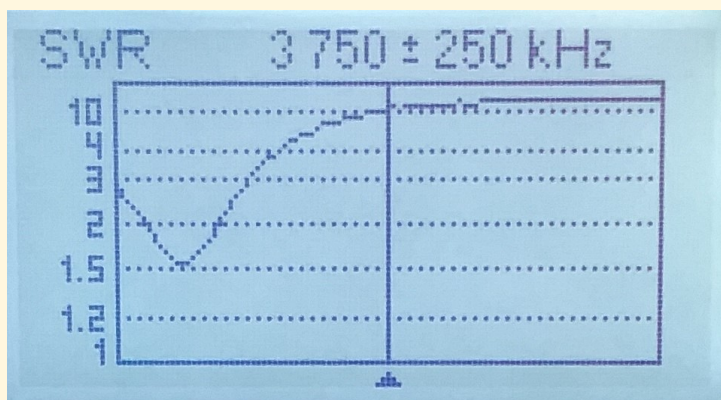
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This pair of components was soldered into a small component enclosure configured with SO-239 connectors shown in Figure 5. Four 3kV capacitors in parallel of 100pF each and 23 turns of #18 enameled wire around a 130-6 toroid (on-line inductance calculator for this toroid: <http://toroids.info/T130-6.php>) yield the two components for this matchbox. Figure 5 shows the exterior and interior views of this simple device.



**Figure 5.** Exterior and interior views of the resulting matchbox that transforms the 80m SSB antenna to an 80m CW antenna

A new SWR sweep of the 80m band after inserting this matchbox into the coax line at the transceiver is shown in Figure 6. The resonance is now centered about 3.55 MHz and is sufficiently wide that within the typical FD CW sub-band of 3.5 – 3.6 MHz, the transceiver’s built-in AT will have no difficulty at all in “tuning” the antenna system for excellent SWR, approaching 1:1.



**Figure 6.** SWR sweep of the entire 80m band with inserted matchbox now shows an antenna system resonance in the region of 3.55 MHz, near the midpoint of the typical FD CW operational sub-band. Compare this curve to the original SWR sweep in Figure 2.

This design activity raises the question of just how accurate and robust can this synthesis result really be. No exhaustive sensitivity analysis has been done to see if this matchbox would work under the real FD site conditions (higher antenna apex, different dipole leg azimuth angle separation, no trees around, metal fence and other antennas in the vicinity, etc.) It would be very interesting (if this same antenna were to be used next year in the same location and general configuration as in 2018) to see if this little matchbox would yield a suitable SWR for CW as demonstrated above. Whether this particular device turns out to be useful in the future isn’t so much the point as the principle that there are applications in which a very simple circuit will suffice for modifying antenna and other system impedances; a more robust, costly and elaborate external antenna tuner just might not be necessary. ■

## PVARC Club News

### No RAT Beach Bike Tour this year

There won't be a 62-mile RAT Beach Bike Tour in September 2018. The PVARC had provided radio communication along the 62-mile route through 11 cities since the event's inception in 2010. This bike tour was sponsored by the South Bay Sunrise Rotary Club which undertook an enormous volunteer effort staging this event to raise funds for local charitable organizations. ■

### Embroidered PVARC patches available at our meetings



PVARC club patches will be available at our monthly meetings for \$4 each. You may sew these onto any cap, jacket, shirt, or fabric bag. ■

### Amateur Extra license course in Long Beach during October

It's rare to find classes for the Amateur Extra license. But if you can spare four Saturdays this October and engage in several months of advance self-study there's such a course at the American Red Cross building in Long Beach.

Mark Chung, MD, KK6SMD, will teach this Extra course on Saturdays October 6, 13, 20, and 27 from 8:00 am to 5:00 pm each day. The \$75 fee includes handouts covering all 712 Amateur Extra questions, breakfasts, coffee, snacks, and cost for using the Red Cross facility. Mark KK6SMD is our ARRL Los Angeles Section Asst. Section Manager—Education. To register send your name, address, and check to:

Mark Chung, MD  
Box 575  
13337 South Street  
Cerritos, CA 90703

Questions?  
mchung@prodigy.net ■

## 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	Peter Landon, KE6JPM
Secretary	Ron Wagner, AC6RW
Directors	Clay Davis, AB9A Gary Lopes, WA6MEM
Past Vice President	Mike Caulfield, AF6VT

### Appointed Offices:

QRO Editor	Diana Feinberg, AI6DF
Webmaster	Kel Vanderlip, W6KCV
Club Librarian	Bryant Winchell, W2RGG
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:

QRO Editor: 310-544-2917, [ai6df@arrl.net](mailto:ai6df@arrl.net)

Webmaster: 310-742-6123, [kelvinvanderlip@gmail.com](mailto:kelvinvanderlip@gmail.com)

Email us: [k6pv@arrl.net](mailto:k6pv@arrl.net)

Website: [www.k6pv.org](http://www.k6pv.org)

### Mailing Address:

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

### Monthly Meetings:

1<sup>st</sup> Thursday (except August and December) 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"):

Club: K6PV, 447.120 MHz (-), PL 100.0, CTCSS  
"PV-West": K6IUM, 449.980 MHz (-), PL 173.8, CTCSS

### To order a Club badge:

Gary Lopes, WA6MEM, [gary@wa6mem.com](mailto:gary@wa6mem.com)

### To order a Club jacket or patch:

Dave Scholler, KG6BPH, 310-373-8166

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Front page photo — Pt. Vicente Lighthouse seen from Pelican Cove about 30 minutes after sunset on August 9, 2018—a "dog day of summer." PHOTO: DIANA FEINBERG, AI6DF

## PVARC Club News

### Something new...

#### “What’s Next?”– no-stress, no-pressure help for our newer hams

Did you recently obtain your amateur radio license and wonder what to do next? Or you’ve had your license for several years and want to know more about avenues in amateur radio? Come to the PVARC’s “What’s Next?” gatherings at Hesse Park anytime from 6:30-7:20 pm just prior to our regular monthly meetings and ask for help with any question. We’re here to assist in a no-stress manner—and no ham radio-related question is considered “dumb” to ask.

Led by Ray Day, N6HE; Bob Millard, KE6JI; and Ron Wagner, AC6RW, we can help hams better understand how to operate their radios (and/or help purchase the best one for their budget.) We can also provide help on other ham radio subjects, whether for VHF/UHF bands or HF bands; public service or DXing/contesting, or ???

Among the most frequently asked questions by new hams are “Which radio to buy?” and “How do I program my radio?” If you have others we’re glad to help with those too. Look for Ray, Bob and Ron off to one side of our room at Hesse Park while setup is underway for the main meeting. ■

#### Helpful guidelines when submitting QRO articles

Our **QRO** newsletter welcomes articles about technical subjects and PVARC member activities.

To facilitate layout and editing please send your article as two separate files: 1) all the text as a straight Microsoft Word file and 2) any photos, illustrations, or diagrams in a second file or as separate JPEG files. If possible please keep the text portion to not exceed 800 words. ■

#### QRO’s Dept. of Errors and Omissions

We strive for 100% accuracy in each issue but if you notice any errors or omissions in **QRO** please advise your **QRO** Editor, Diana AI6DF, at: ai6df@arrl.net. ■

#### WELCOME NEW MEMBERS OF THE PALOS VERDES AMATEUR RADIO CLUB IN 2017-2018

**Bernadette Sabath, KM6SAB**

**Zvika Golan, KJ6LHL**

**Fred Cook, KE6AZB**

**Jeff Wolfe, KM6GYB**

**George Nestojko, WA6YBR**

**Irene Turner, KM6LGU**

**Dave Turner, KM6LGX**

**Don Wilt, WG6E**

**Don Putnick, NA6Z**

**George Rizkalla, KM6OXX**

**Alfred Visco, KM6OPB**

**Noel Park, KM6OPA**

**Michael Leyba, KK6KCH**

**John Tsohas, KM6OPE**

**Gregg Perkins, KM6OPD**

**Thomas Wynne, KM6QVW**

**Frank Attenello, KM6QVU**

**Debra Shrader, KM6QVX**

**Daniel Shrader, KM6QXC**

**Baldomero Fernandez, KM6QVV**

**Brian Keen, KM6QWC**

**Emanuele Rodrigues-Berardini, KM6QVZ**

**Neal Pollack, N6YFM**

**Daniella Ward, KM6TRC**

**Talbot Knighton, KM6TDF**

**Dylan Brown, KM6TDI**

**Robert Cullinan, KM5DI**

## PVARC Club News

### PVARC website re-design underway

Later this year look for a completely new PVARC website at [www.k6pv.org](http://www.k6pv.org).

The PVARC Board of Directors has been working since early this year with our webmaster Kel Vanderlip, W6KCV, to use new web tools for enhancing our website utility. We are especially focusing the PVARC's website to have easier navigation and more design congruency with our **QRO** monthly newsletter.

Other website options going forward are to provide for additional media formats such as video and audio, indexing of **QRO** articles, and easy posting of photos and technical content. We are very thankful for the work our previous webmaster John Freeman, WW6WW, provided for more than a decade before turning over the website to Kel in early 2017. In the meantime, we also greatly appreciate fellow member Dale Hanks, N6NNW, providing free hosting for the PVARC's website after we moved from the [www.palosverdes.com](http://www.palosverdes.com) hosting service in late 2016. ■

### PVARC 2019 dues renewal to have PayPal option

In response to member inquiries and practices at some other amateur radio clubs the PVARC Board of Directors has decided to initiate a PayPal option for club dues and donations starting with the 2019 calendar year.

We have some technicalities to work out, including how to factor in PayPal fees that average slightly over 4% of the transaction value. Some groups add a small incremental fee to cover PayPal transaction costs and we are exploring whether to have such an increment. Adopting PayPal will also make our Treasurer's job easier by resulting in far fewer checks needing deposit and an easier audit trail. For members an added benefit is that PayPal has a credit card payment option regardless of whether PayPal is linked to a bank account. Stand by for further details. ■

### PVARC and other operators power-up at "Hills Are Alive"

Twenty-three amateur operators provided radio communications for the 37<sup>th</sup> annual Rolling Hills Estates "Hills Are Alive 10K & 5K" on Saturday, August 11. Led by Walt Ordway, K1DFO, all went well for the operators—and the runners.

This year around 325 runners participated in the two events (10K and 5K) from Ernie Howlett Park. Good news: No runners were injured. The only downside was bad signage in the South Coast Botanical Gardens which made a few runners do a few laps instead of just one lap.

Operating at this year's Hills Are Alive were: Bob W6HIP, Mike N6DBS, Herb KO6RC, Ginger KG6TAU, Sid KF6QFH, Fran KF6QFQ, Steve KI6TEQ, Mike KK6KCH, Jeff KD6BWX, Dave K9DBA, Ralph AI6GP, Matthew N6MDC, Denzel KG6QWJ, Dale KG5TLG, Alan KM6LKO, Bob AC6RM, John WW6WW, Karen KG6BNN, Richard KJ6CBA, Dave WA6PHS, Jay KI6VFY, Melody KI6SPA, Cynthia AG6NW and Walt K1DFO. ■



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 (2<sup>nd</sup> level)

Each course is 2 sessions

The sessions will be on 3 November and 10 November 2018

**Technician** 9:30 AM to 1:30 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 17 November 2018

At the start of the 3 November 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.

**Confirm your attendance to Walt, K1DFO at [waltordway@juno.com](mailto: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 \$22 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.n6rpv.net/pvarc or 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 (\$15.00) \$ \_\_\_\_\_

Household and/or Family membership (\$20.00) \$ \_\_\_\_\_

Additional donation to support PVARC activities \$ \_\_\_\_\_

Cash: \_\_\_\_\_ or Check #: \_\_\_\_\_ Date \_\_\_\_\_ TOTAL \$ \_\_\_\_\_

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

All New and Renewal Member applications must be signed below.

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

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Family Member Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Family Member Signature: \_\_\_\_\_ Date: \_\_\_\_\_