



# QRO

MONTHLY NEWSLETTER OF THE PALOS VERDES AMATEUR RADIO CLUB

APRIL 2016

## Don't miss this for learning about control of EMI and RFI affecting hams

We are very pleased to have Bob Brehm, AK6R and Chief Engineer of Palomar Engineers ([www.Palomar-Engineers.com](http://www.Palomar-Engineers.com)), as the speaker at our April 20, 2016, monthly meeting. He'll be presenting "The ABC's of RFI for Hams" as an encore to his well-attended talks at HAMCON 2015.

Bob has been a ham for over 50 years with experience in contesting, RTTY, Amplitude Modulation, vintage radio restoration, boat anchors, linear amps and unique antennas. He is active on 3.870 AM and 3.895 Vintage SSB as well as other nets offering his expertise to new and old hams alike.

Bob is often asked to speak at amateur radio conventions and club meetings about RFI, antenna matching, using baluns, stealth antennas, amplitude modulation, RTTY/digital modes, ESSB, ham radio on boats, and a variety of other subjects.

Our video camera will again be available to enable viewing device details on a big screen. We hope you can attend this highly-informative presentation on Wednesday, April 20, at 7:30 pm and/or our pre-meeting dinner at the Red Onion Restaurant at 5:30 pm. ■

### "The ABCs of RFI for Hams"

**Bob Brehm, AK6R**

Wednesday, April 20, 2016,  
7:30 pm at Fred Hesse  
Community Park,  
29301 Hawthorne Blvd.,  
Rancho Palos Verdes,  
Visitors Welcome.

Optional no-host pre-meeting dinner from 5:30-7:00 pm in the Red Onion Restaurant, 706 Silver Spur Road, Rolling Hills Estates (no reservation required, order what you wish from the full menu.)

PVARC News:

# PVARC 2016 Catalina Island DXpedition happens soon ...with new QSL card at last

The PVARC's team activating Catalina Island for the Radio Society of Great Britain's Islands on the Air program departs from Los Angeles Harbor on Wednesday morning, April 27. They'll be returning on Sunday afternoon, May 1.

This year's six-member DXpedition team is smaller than previous years, which reduces our overall baggage allowance on Catalina Express ships. But Team Leader Ray Day, N6HE, has coordinated arrangements with Catalina Express, the Two Harbors campground, and all DXpeditioners to handle our radio and logistics gear needed on Catalina.

We will only set up two HF stations on Catalina this year using hexbeam antennas plus wire dipoles for 80-40-17-12 meters. There won't be any 160-meter operation and it's unlikely 10- or 12-meters will have favorable propagation.

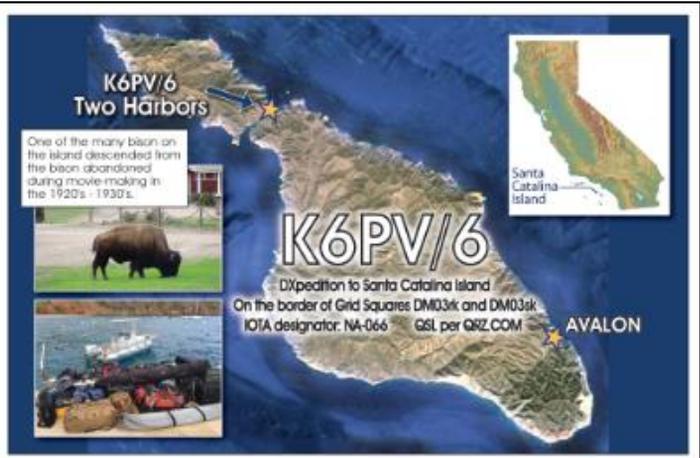
This year's team members are: Ray Day, N6HE, team leader; Bob Closson, W6HIP; Clay Davis, AB9A; Diana Feinberg, AI6DF; Mike Caulfield, AF6VT; and Steve Mandich, K6NT.

Our K6PV/6 station also has a new QSL card design (top right) which Ray, N6HE, developed with input from past Catalina participants to incorporate elements depicting our operating location and island characteristics.

The new QSL card replaces our 2008 design (bottom right) which became depleted. Our new design also retired the comical pelican holding an Astatic D-104 microphone.

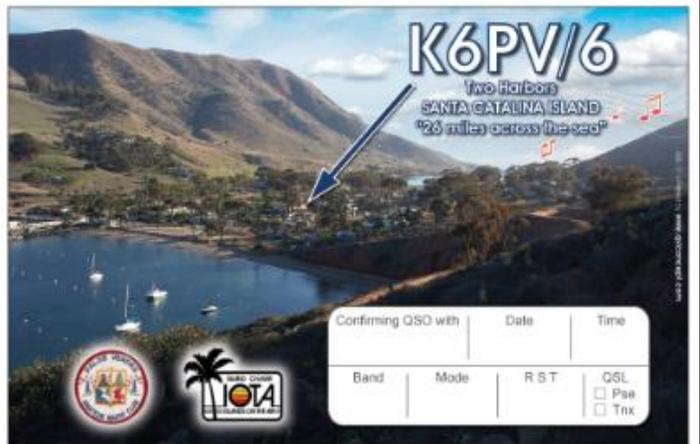
All PVARC members are encouraged to work K6PV/6 during the DXpedition. The team will monitor our K6PV repeater and advise club members about conditions and current frequencies used at Two Harbors. ■

**Previous QSL design**



Front

**New K6PV/6 QSL design**



Back

## Santa Catalina Island

# K6PV

## NA-066

### IOTA DXpedition

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**Palos Verdes Amateur Radio Club**  
K6PV

**K6PV**

Palos Verdes Amateur Radio Club  
Post Office Box 2316  
Palos Verdes Peninsula, CA 90274 USA  
k6pv@arrl.net

**Santa Catalina Island - IOTA-066**

"Twenty-six miles across the sea  
Santa Catalina is a-waiter for me  
Santa Catalina, the island of romance  
Romance, romance, romance"

Santa Catalina Island has been inhabited for over 7,000 years, was discovered for Europe by Juan Rodriguez Cabrillo in 1542, became part of the Russian and American sea otter trade in the 1770's, and has a rich history as the first safe harbor port for Los Angeles in the mid 1860's.

Catalina Island was developed as a tourist destination towards the end of the 19th century by George Shatto, then the Banning family, and finally by William Whigley, Jr., the famous chewing gum magnate.

Today, 88% of the island is stewarded by the Catalina Island Conservancy, and it continues to be a wonderful place to live, visit and explore.

TO RADIO				
DATE	UTC	MHZ	2-WAY MODE	RST

PSE  QSL  TXN

## PVARC News



The “HF” is for High Frequency, not High Fructose:

The PVARC HF Enthusiasts group held its inaugural 2<sup>nd</sup> Saturday meet at the café area of Ralph’s Supermarket in RPV on April 9.

Shown clockwise from front:

Diana, AI6DF;  
Ralph, AI6GP;  
Tony, W6GEZ;  
Malin, KO6MD;  
Jerry, NG6R;  
Clay, AB9A;  
Mike, AF6VT;  
and Ray, N6HE  
(plus Kel, KK6MNS, the photographer.)

PHOTO:  
KEL VANDERLIP,  
KK6MNS

## PVARC 2<sup>nd</sup> Saturday HF Enthusiasts Group enjoys spirited first meeting...at a supermarket

The PVARC’s informal HF Enthusiasts Group held its first meeting on April 9 and generated some buzz.

Besides discussing each attendee’s individual interests the group had extensive discussion about the new Icom-7300 HF radio, essentially a software-defined transceiver with knobs costing just \$1,499. Early purchasers gave this radio consistently high ratings due to built-in waterfall and spectrum screens, extensive graphic filtering capabilities that really work, and no need for an external computer. Your **QRO** editor is already aware of at least two PVARC HF Enthusiasts who subsequently bought an Icom-7300 at the International DX Convention in Visalia during April 15-17.

A large supermarket on Saturday morning would seem the least-likely place for a ham club special interest meeting—and it was. Although the Starbucks coffee nearby was fine and nearby shoppers were friendly, it was a noisy environment. The HF Enthusiasts’ next meeting on May 14<sup>th</sup> will take place at the home of Ray Day, N6HE on RPV’s ocean side near Golden Cove Shopping Center; details to follow in our Weekly Bulletin as the date nears.

The HF Enthusiasts group evolved from our former CW group that had an irregular meeting schedule and limited focus. The HF Enthusiasts group is for any club member, whether or not currently involved with HF. All HF-related topics are welcome for discussion or assistance. ■

## Jeff Wolf, K6JW, receives “DXer of the Year” Award

PVARC member and Past President Jeff Wolf, K6JW, was honored with the coveted “DXer of the Year” Award on April 16, 2016, at this year’s International DX Convention in Visalia, CA.

The Southern California DX Club presents this award annually at the convention’s Saturday night banquet. In addition to his DXing achievements Jeff has frequently served as the International DX Convention’s Program Chair, responsible for lining-up speakers and related programs.

Congratulations to Jeff. ■



## PVARC 2016 public service event update

This year’s Ridgecrest Intermediate School 5K Run around the Peninsula’s main shopping area is a “go” for Sunday, April 24, 2016. Walt Ordway, K1DFO, now has a full team of radio operators for this event that replaced a similar run in the Peninsula’s shopping district held every October.

The September 24, 2016, 62-mile RAT Beach Bike Tour is returning to its original start/finish site: RAT Beach (otherwise known as Torrance Beach.) This bike tour’s first two rides in 2010 and 2011 staged at RAT Beach before moving to Redondo Beach’s King Harbor in 2012 and paired with the city’s annual Lobster Festival. Several factors made it impractical to continue using King Harbor as the start/finish. Stay tuned for more info. ■

◆ PVARC’s financial report is available upon request to any member.

## Palos Verdes Amateur Radio Club

*An American Radio Relay League Affiliated-Club*

### Board of Directors:

President	Diana Feinberg, AI6DF
Vice President	Laura Behenna, KK6BFI
Treasurer	Bob Sylvest, AB6SY
Secretary	Ron Wagner, AC6RW
Directors	Clay Davis, AB9A, Ray Day, N6HE
Past Vice President	Mike Caulfield, AF6VT

### Appointed Offices:

QRO Editor	Diana Feinberg, AI6DF
Webmaster	John Freeman, WW6WW
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	Diana Feinberg, AI6DF
Net Control Operators	Malin Dollinger, KO6MD, Dale Hanks, N6NNW, Bob Sylvest, AB6SY, Ron Wagner, AC6RW, Dan Yang, K6DPY

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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:

Third Wednesday (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:

Karen Freeman, KG6BNN, 310-541-6971

### To order a Club jacket or patch:

Dave Scholler, KG6BPH, 310-373-8166

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Front page photo — *The last rays of light reach the Pt. Vicente Lighthouse shortly after sunset on April 2, 2016.*  
PHOTO: DIANA FEINBERG, AI6DF

# A Matchbox Design Example

## *(A practical solution to a real-world ham radio problem)*

By Jerry Kendrick, NG6R

An antenna tuner (AT) is a very common and useful accessory for most HF ham stations. In fact, without these devices, HF operation would be quite restricted. This article deals with a practical application of the principles involved in antenna tuners, so ATs are a good place to start the discussion.

An antenna tuner (somewhat of a misnomer, because the antenna itself isn't really tuned by it) is a device that connects between the transceiver (or linear amplifier if one is employed) and the antenna system (antenna, feedline and all intervening connectors). An antenna works best when it's operated at or fairly near resonance where the voltage standing wave ratio (VSWR) is low. But, resonance occurs at only one frequency for a simple fixed antenna like a dipole or yagi (unlike the SteppIR that has moving elements to electromechanically alter the antenna's resonant frequency and thus eliminate the need for an AT).

When you want to operate somewhere in the allowable frequency band other than near resonance, VSWR can rise unacceptably. High VSWR manifests as loss of transmitter power being delivered to the antenna, including power loss in the feedline.

But, worse than that, if the frequency is too far away from the antenna's preferred operating point, the VSWR can rise to such a high level that the transceiver will start to scale back its output power to preserve the safety of the transmitter's final output power stage. Some linear amplifiers will simply shut down if VSWR exceeds about 2:1.

### **What causes high VSWR and how does the AT reduce it?**

An antenna system can be modeled as an impedance  $Z$ , a complex number with a "real" (resistance) part and an "imaginary" (reactance)

part (real and imaginary being convenient terminology from Complex Algebra). The definition of resonance is when the reactance or "imaginary" part is zero. Modern amateur radio transceivers are designed to want to see 50 ohms of impedance. The typical coax feedline (such as RG-8, RG-58 or RG-213) has a characteristic impedance  $Z_0$  of 50 ohms resistive. So, when an antenna system presents an impedance to the transceiver that is other than 50 ohms resistive, a VSWR of higher than 1:1 will exist. Again, we want to hold that VSWR as low as we can, but certainly low enough that transceiver/amplifier power fold-back or output stage damage does not occur.

The AT's internal circuitry is adjusted so as to present to the transceiver a 50 ohm resistive load even though the antenna system has an impedance that may be far from 50 ohms resistive and may have a significant reactive component. In order to cover such a wide range of possible antenna system impedances, the antenna tuner employs variable components. Typical circuits are the "pi" network (a variable capacitor on each of the legs of the  $\pi$  and a tapped or roller inductor on the top of the  $\pi$ ); or a "T" network (where the two variable capacitors are on either side of the crossbar and the variable inductor is on the stem of the T).

While monitoring the VSWR or reflected power meter in the shack, the operator will adjust the three variable components so as to bring the VSWR (as seen by the transceiver) down to an acceptable level, i.e., as close to 1:1 as can be achieved with the particular antenna system. Because of the degrees of freedom of this component variability, more than one particular combination of settings of these components will yield an acceptable VSWR.

*Continued on next page* ▶

## *(A practical solution to a real-world ham radio problem)*

### ▶ *Continued from previous page*

The general principle of the AT is that through an acceptable combination of these three reactances, a good impedance can be presented to the transmitter that is low enough in VSWR to make the transmitter happy. I.E., the AT has “matched” the antenna system to the transmitter. So, “matching network” or “matchbox” is often considered a better term than “antenna tuner”. Remember that the VSWR on the feedline is still just as high as it was without the matchbox. But, now the transmitter reacts as if it is connected to an antenna that is operating near resonance and will deliver its full output power accordingly.

With this discussion as background, now consider the very practical real-world case in which an operator wants to use a particular antenna system at a specific frequency. But at this specific frequency the VSWR is unacceptably high. Sure, an antenna tuner could be employed, but the wide-ranging capability of the AT would be wasted on such a restricted case. Instead, couldn't a simple fixed circuit of the right combination of reactances be designed to match the antenna system impedance at just this single frequency? That is the case we will examine.

At an existing amateur radio station dedicated to disaster and emergency communications, we desire to operate an HF antenna at 29.5 MHz in the 10-meter band. However, at this frequency, the VSWR is approximately 3.6, too high to avoid risk of power fold-back or damage to the transceiver's power output stage. A RigExpert AA-600 antenna analyzer was used at the desired operating frequency to determine the impedance of the antenna system (as would be seen by the transceiver) to be the complex number  $Z = 32.1 - j52.1$ , where 32.1 is the “real” or resistive component, -52.1 is the “imaginary” or reactive component, and “j” is the symbol indicating the imaginary part of the complex number. So, we need a matchbox that will transform this complex impedance to  $Z = 50 + j0$ , or as close as possible thereto. The challenge is to synthesize both a circuit configuration and its component values. The classical tool for such analysis is the Smith

chart, invented by electrical engineer Phillip H. Smith in 1939 and routinely taught to all electrical engineering students thereafter. Detailed explanations of the workings and variations of this tool are available on the Internet. An excellent article about the practical use of Smith charts for impedance matching is in the **April 2016 QST** amateur radio monthly journal on page 61.

The Smith chart computer program we used for solving this problem was downloaded (demo version FREE) from:

<http://www.dxzone.com/dx30972/smith-v3-10.html> .

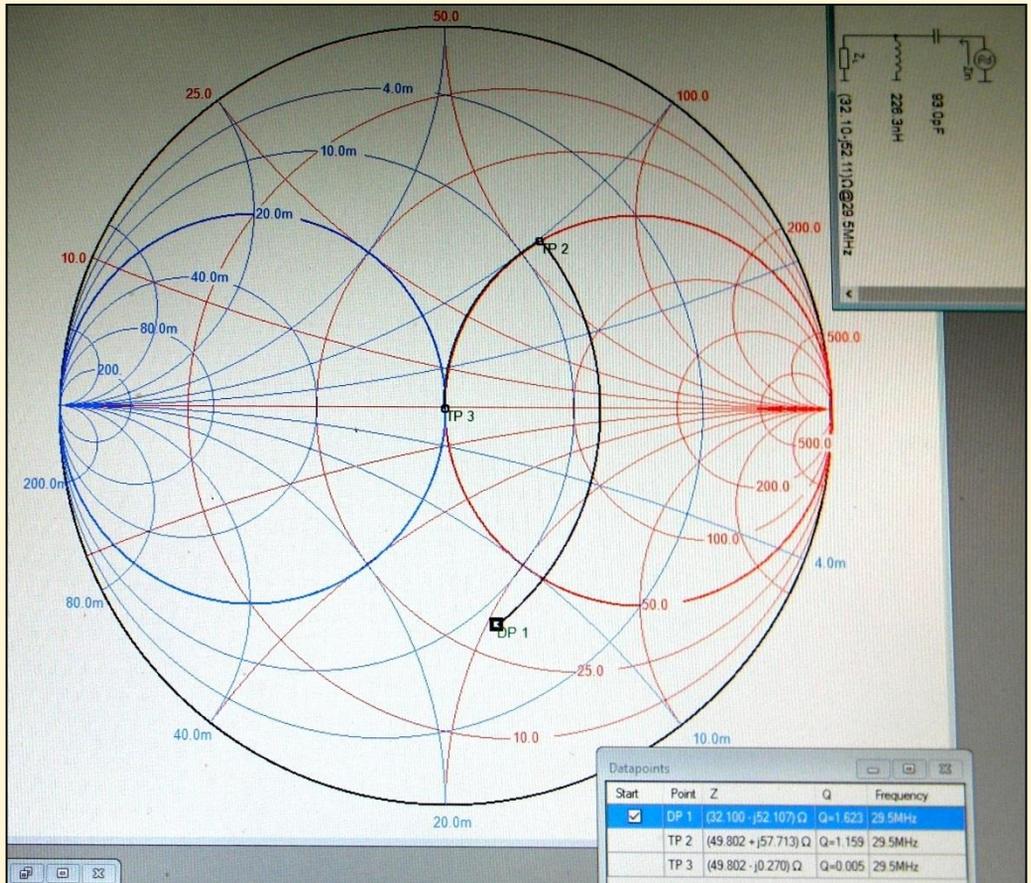
The program allows for selecting reactive components, one at a time, and then adjusting the values of those components to move the cursor along “trajectories” on the Smith chart. The objective is to go from our starting impedance ( $32.1 - j52.1$  ohms) to the center of the chart at  $50 + j0$  ohms. But, this can be done only along known trajectories constrained by choice of components. Inductors (positive reactance) will move along a particular trajectory and capacitors (negative reactance) will allow movement along a different trajectory. Through experimentation, we learned that only two trajectories, as indicated in Figure 1, would be needed to make the transformation from the initial impedance to the goal of 50 ohms resistive in the center of the chart. First, the starting complex impedance is placed on the chart ( $32.1 - j52.1$  and is assigned the designator DP1 by the computer program). Then, after choosing a particular component (say, shunt inductor), you “drag” the cursor along a constrained “inductance trajectory” until the cursor arrives at a position such that the next component choice (a series capacitor) will allow the cursor to finally arrive at the center along a “capacitance trajectory.” With only a modest investment of time, one can not only choose the appropriate order of components, but where one trajectory ends and the next trajectory begins determines the component value (that can be read directly from the program). *Continued on next page ▶*

# (A practical solution to a real-world ham radio problem)

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**Figure 1:** Smith chart computer program plot for this matchbox design problem; note the two trajectories, from DP1 (32.1 – j52.1) to TP2 using a shunt inductor; from TP2 to TP3 using a series capacitor and ending at the center at (very nearly) 50 + j0 ohms; intermediate stops are called “test points” by the program and designated TP followed by a #.

PHOTOS:  
JERRY KENDRICK,  
NG6R



Note from the upper-right inset in Figure 1 that only two components—a shunt inductor of approximately 226 nanohenries (nH) and a series capacitor of 93 picofarads (pF), configured in an “L” circuit—are needed to transform this antenna system impedance of  $Z = 32.1 - j52.1$  ohms (with its VSWR of 3.6) to  $Z = 50 + j0$  ohms (with a VSWR, as seen by the transceiver, of 1.0), **AT LEAST IN THEORY**. Now, can we build a practical matchbox circuit and test this theory?

In transitioning from theory to practice, we hams first look to our resources close at hand: the Internet and the junk box! Figure 2 shows the circuit that was synthesized by the Smith chart program, assembled in a pill bottle. (An in-line coaxial, non-metallic, container was desired and the hard plastic medicine vial seemed an appropriate choice.)



**Figure 2:** Pill bottle houses capacitors and inductor for matchbox design

In our junk-box stock of high-voltage capacitors, several 66 pF caps were found. How to configure them for ~93 pF? Two 66 pF capacitors were placed in series (resulting in 33 pF, based on how caps in series combine); then, this series pair was placed in parallel with another 66 pF capacitor, for a total of 99 pF—close enough to the 93 pF requirement.

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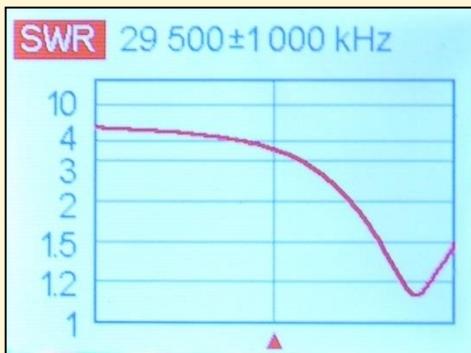
## (A practical solution to a real-world ham radio problem)

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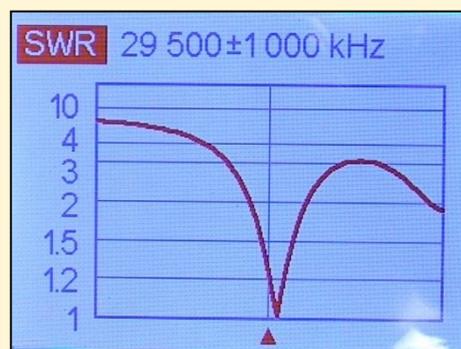
The inductor is to be about 226 nH or 0.226  $\mu$ H. An on-line inductance calculator was used to design this air-gap coil. (See just one of several available on-line inductance calculators at <https://www.easycalculation.com/engineering/electrical/inductance-air-core-coil.php>). Three parameters determine the inductance. Invoking the practical advice to keep the diameter of the coil and the length of the coil more-or-less the same, we wrapped 4 turns of #18 solid copper wire (from the junk box) around an available dowel of diameter 0.6 inches (left over from a woodworking project) and a coil length of approximately 0.4 inches to produce an inductance of about 0.22  $\mu$ H. The calculator enables one to enter different combinations of number of turns, diameter and length before settling on a practical configuration.

The two component types were arranged in the pill bottle, secured to the two PL-259 connectors and placed inline with the antenna system. The inductor length was adjusted slightly to alter the exact frequency (for minimum VSWR) using the antenna analyzer. Here are the before and after VSWR results within 1 MHz of the desired operating frequency of 29.5 MHz:

**Before:** No matchbox



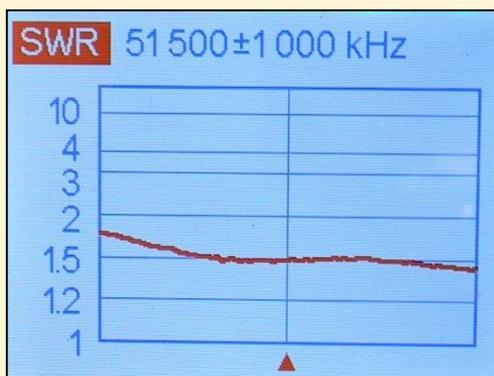
**After:** With inline matchbox



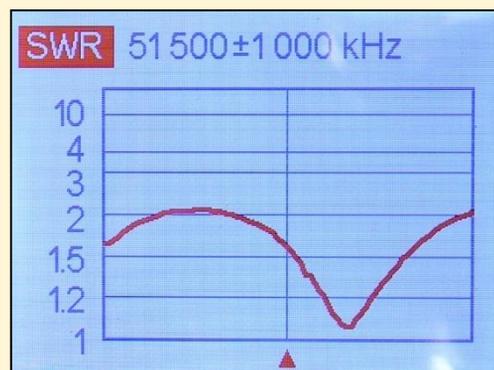
As can be seen in the right photo, further tweaking of the component values could pull the minimum-VSWR frequency even more accurately in to 29.5 MHz. But, a VSWR of 1.2 at the desired operating frequency is quite acceptable.

Another consideration of this project was that this antenna system is dual band—10m and 6m. So, it was important to make sure that the VSWR performance at the desired 6m operating frequency of 51.5 MHz was not unduly penalized by keeping the 10m matchbox in place during 6m ops. If so, the 10m matchbox would have to be removed when operating on 6m. But, fortunately, that was not the case. Here are the before and after photos of the VSWR in the region of the desired 6m operating frequency: *Continued on next page* ►

**Before:** No 10m matchbox



**After:** With 10m inline matchbox



## (A practical solution to a real-world ham radio problem)

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Although the 6m VSWR scan profile was altered by the matchbox, the performance was not adversely affected and is virtually the same at the operating frequency of 51.5 MHz with or without the 10m matchbox in place, namely 1.5 - 1.6. We got lucky! Further tweaking of the 10m matchbox component values (to make the 6m VSWR performance acceptable), or even removal of the matchbox during 6m ops, will not be necessary.

Here is a photo of the finished product during final testing (just prior to applying heat shrink wrap):



**Figure 3:** Pill bottle matchbox (prior to applying heat-shrink wrap) undergoing final testing; attached to antenna coaxial feedline on the right and to the RigExpert AA-600 antenna analyzer on the left. PHOTO: JERRY KENDRICK, NG6R

The application for this kind of antenna system matchbox is more common than one might think. An antenna tuner with its wide ranging capabilities, able to accommodate many different antenna configurations and frequency bands, may not be necessary for someone with a single dedicated antenna operating over a narrow portion of one frequency band. Examples include Summits-on-the-Air (SOTA) portable transceiver operators who frequent a small range of frequencies for CW (or phone) ops and use the same antenna on each deployment.

Note how simple and lightweight this device is. The design is ideal for low-power and portable QRP operations. Obviously, one dealing with high power operations of hundreds of watts would carefully consider power handling and current levels for all components. ■

### PVARC's Field Day permit approved

The PVARC has received permission to again use Ridgecrest Intermediate School's soccer field for the 2016 ARRL Field Day on June 25-26. Our approved permit from the school district requires us to observe various rules for facility usage that we will communicate to all Field Day participants. We plan to again operate as a category 2-A Field Day station. More info to follow.

## PVARC Short News Items

### The PVARC's upcoming meeting topics...and beyond

Our Past Vice President Mike Caulfield, AF6VT, and current Vice President Laura Behenna, KK6BFI, have lined up an interesting mix of meeting speakers for our upcoming monthly meetings in 2016.

The PVARC's **May 18, 2016**, meeting speaker is our member Ron Wagner, AC6RW, presenting his scalar network analyzer project—at last. Ron's program had been slated for presentation at our "Show Us Your Project" January and March 2016 meetings. But after the preceding speakers finished there wasn't sufficient time for Ron's presentation.

Our **June 15, 2016** speaker will be Ray Day, N6HE, presenting the PVARC's late-April 2016 DXpedition to Catalina Island. This year's Islands on the Air DXpedition has a new date, different atmospheric conditions, smaller team, and a different operating plan while on the island. We also plan having more video segments depicting the DXpedition—so look for a new presentation compared with previous years.

Lined up for our **July 20, 2016** meeting is PVARC member Chris Storey, KA6WNL, discussing the Los Angeles County Fire and Sheriff radio communication system.

We have no club meeting in August. Instead, we expect to hold our annual family picnic on the grounds of Pt. Vicente Lighthouse in conjunction with International Lighthouse & Lightship Weekend (subject to U.S. Coast Guard approval.)

In the meantime, PVARC members Ray Day, N6HE, and Mike Caulfield, AF6VT, are speaking in Signal Hill about the HF digital modes PSK31 and JT65 at the Associated Radio Amateurs of Long Beach monthly meeting on Friday, May 6. Ray and Mike originally gave these talks at the PVARC's September 2015 monthly meeting. ■



### Need a PVARC patch?

If you want a PVARC logo patch for a hat, shirt, jacket, soft-side bag or whatever we have a new batch with higher-resolution stitching.

New patches are available for \$4 each at all our meetings or by contacting Dave Scholler, KG6BPH, at 310-373-8166 (or email him at: [jdavidscholler@hotmail.com](mailto:jdavidscholler@hotmail.com) . ) If you order a PVARC club jacket one patch is sewn onto the jacket's left front and included in the cost. These jackets may also be ordered through Dave Scholler. ■

## PVARC News Items

### Dues for 2016 finally due...

PVARC dues for 2016 are now due, the cost unchanged at \$15 for a single membership, \$17 for family membership. Our annual dues continue to be the lowest of all radio clubs in the southern half of Los Angeles County that are not employer- or school-affiliated.

We hope you find value in your club membership and being affiliated with the PVARC. If not, please let us know what we could do better.

Our membership renewal form appears on page 12 of this month's **QRO** issue. You may also renew at our April 20 club meeting. ■

### Free foam windscreen for certain Heil headsets

PVARC Director Ray Day, N6HE, has an extra foam mic windscreen for a Heil ProSet (won't fit the Heil ProSet+) that he is offering free to any club member who can provide a good home. First-come, first-served: contact Ray at 310-541-7557. ■

### Rare 220 module for the Kenwood TM-942 offered

Dick McKay, K6VGP, has a rare 220-MHz module available for the discontinued Kenwood TM-942 multi-band radio. Contact him at Dick@McKay.org to discuss price and other aspects. ■

### Have a ham radio item for sale or donation?

If you wish to sell an amateur radio device or donate it to another club member please advise your **QRO** Newsletter editor. We'll list your item free of charge. ■

### WELCOME NEW MEMBERS OF THE PALOS VERDES AMATEUR RADIO CLUB

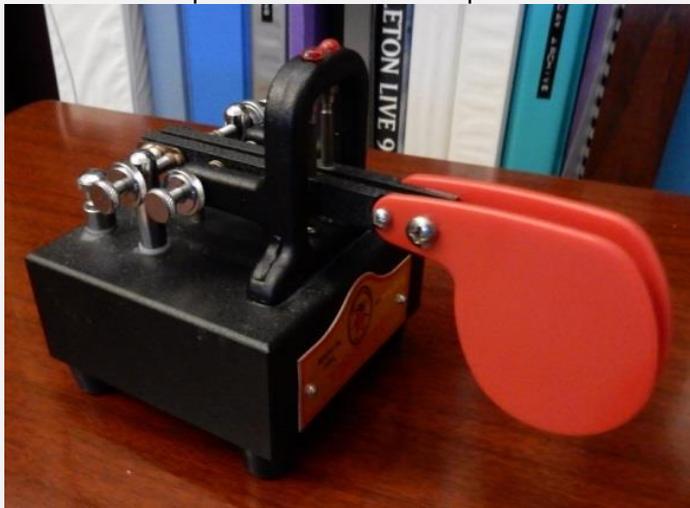
IN 2015-2016

GARY FORISTER, N6HMR  
 TREVA FORISTER, N6HMS  
 PATRICK GARVEY, K6PDG  
 DAVID HARMON, KE6OJN  
 JOHN JENSEN, KK6CYU  
 JAMES NADAL, WA6RYA  
 ENDAF BUCKLEY, KG6FIY  
 DARIN JAMES, KK6QLW  
 ANTHONY BURNS, KK6SPH  
 KATHY HAYNES, KK6SPG  
 ROBERT MILLARD, KE6JI  
 DAISY MILLARD, (XYL) KE6JI  
 J. BRANDLIN, KK6TXM  
 THOMAS BACALJA, KK6ULM  
 GREG LUND, AI6IV  
 CANDACE KAWAHARA, KK6ULN  
 TIM MEADOWS, KK6ULL  
 JOHN CASHEN, W5UG  
 (RETURNING MEMBER)  
 INGO WERK, KK6EWB  
 JONATHAN GREEN, KK6VWK  
 SAEHUI HWANG, KM6BCO  
 MARK CHILDIR, KM6BCL  
 DALE GEHR, KM6BCI  
 ROMYLEEN MITRA, KM6BCJ  
 NICHOLAS KOWALCZYK, KM6BCN

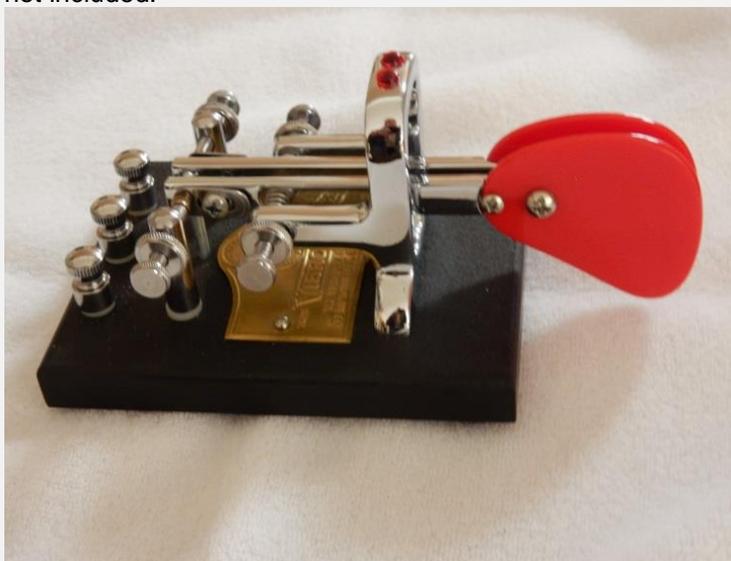
*For Sale by PVARC Member***FOR SALE: VIBROPLEX VIBROCUBE IAMBIC PADDLE: SN 401390**

This paddle consists of the standard mechanism of the Vibroplex iambic paddle mounted on a heavier than standard base to prevent it from sliding around on the desk during sending. The paddle weighs in at a hefty six pounds and definitely stays put, even with a heavy-handed sender. The paddle is in good condition, has a nice feel, and has been thoroughly evaluated and tested on the air by me (K6JW).

This particular paddle originally belonged to a ham who, due to advancing age and inability to operate, has asked me to dispose of it for him. The paddle sold new for \$200. **Asking \$125, including cable.**

**FOR SALE: VIBROPLEX IAMBIC STANDARD PADDLE**

The paddle has been modified for better ergonomics by replacing the standard feet with shorter ones and by replacing the standard finger pieces with those designed for Vibroplex by K6JW. If desired by the buyer, the original feet and finger pieces can be restored. Retail price with K6JW finger pieces is \$185. **Asking \$140 for paddle as shown, or \$125 with original feet and finger pieces (choice of red or black).** Cable not included.



Contact Jeff, K6JW at [k6jw@scdxc.org](mailto:k6jw@scdxc.org) to purchase or for further information.

# Update on ARRL efforts for H.R. 1301 and S. 1685 to allow reasonable antennas where restricted by CC&R's

From the ARRL website

02/12/2016

On a voice vote, the US House Subcommittee on Communications and Technology has sent the Amateur Radio Parity Act, H.R. 1301, to the full House Energy and Commerce Committee with a favorable report for further consideration. The measure was among three bills the Subcommittee considered during a February 11 "markup" session. The Subcommittee is chaired by Rep Greg Walden, W7EQI (R-OR).  
*(Note: As of April 19, 2016, the full Energy and Commerce Committee still had not voted on this measure.)*

"I'm optimistic that we can put the finishing touches on these bills in the weeks ahead and once again produce important, bipartisan legislation that protects consumers, small businesses, and access to the latest communications services," Walden said after the hearing.

During the markup session, Walden and the bill's sponsor, Rep Adam Kinzinger (R-IL) made impassioned statements in favor of the legislation. Kinzinger said that while he can appreciate some of the concerns expressed by those who do not agree with his bill, he believes that the time has come to adopt a "reasonable accommodation standard" with respect to the erection of outdoor antennas in neighborhoods governed by private land-use restrictions.

Walden agreed. "You don't necessarily need to have a giant tower blocking everybody's view," he pointed out to the Subcommittee. He suggested that more modest antenna systems often are sufficient. He and Kinzinger noted that there is common ground between proponents and opponents of the measure and that "it's important to get this done." Rep Anna Eshoo (D-CA) also spoke to recognize the work all parties have been doing to ensure the bill's passage in the House.

At a Subcommittee hearing on H.R. 1301 last month, Walden called it "a commonsense bill" and urged his colleagues' support. Kinzinger also spoke in favor of H.R. 1301 at the January 12 hearing, saying that his bill's "reasonable accommodation standard" would not mandate placement, size, or aesthetics regarding an outdoor antenna, leaving ham radio operators and homeowners associations to decide those issues.

H.R. 1301 would direct the FCC to extend its rules relating to reasonable accommodation of Amateur Service communications to private land-use restrictions, such as deed covenants, conditions, and restrictions. The bill has attracted 120 cosponsors from both sides of the aisle. An identical US Senate measure, S. 1685, has attracted three cosponsors. It cleared the Senate Committee on Commerce, Science, and Transportation last November. ■

Right: Screenshot from ARRL website, <http://www.arrl.org/amateur-radio-parity-act>

**ARRL Legislation**

**Show Your Support for  
The Amateur Radio  
Parity Act of 2015**

**HR 1301 – S 1685**

▶ **Learn More**

The Amateur Radio Parity Act of 2015  
S 1685 ■ HR 1301

The graphic features a circular seal with a blue and red border. Inside the seal is a white dome, likely the US Capitol, set against a blue sky. The text "The Amateur Radio Parity Act of 2015" is written around the top inner edge of the seal, and "S 1685 ■ HR 1301" is written around the bottom inner edge. The background of the graphic is a dark blue grid pattern.

# Palos Verdes Amateur Radio Club

## 2016 Calendar

### 2016 Major Contest Dates

■ ARRL    ■ CQ Magazine and Other

- Jan. 29-31: CQ Worldwide 160-Meter (CW)
- Jan. 31-Feb 2: ARRL January VHF Sweepstakes
- Feb. 12-14: CQ Worldwide RTTY WPX
- Feb. 19-21: ARRL DX (CW)
- Feb. 27: North American RTTY QSO Party
- Feb. 26-28: CQ Worldwide 160-Meter (SSB)
- Mar. 4-6: ARRL DX (SSB)
- Mar. 25-27: CQ Worldwide SSB WPX
- May 27-29: CQ Worldwide CW WPX
- Jun. 11-12: ARRL June VHF Contest
- Jun. 22-26: ARRL Field Day
- July 9-10: IARU World Championships
- July 16-17: CQ Worldwide VHF
- July 16: North American RTTY QSO Party
- Aug. 6-7: ARRL UHF Contest
- Sept. 10-11: ARRL September VHF Contest
- Sept. 23-25: CQ Worldwide RTTY DX
- Oct. 1-2: California QSO Party
- Oct. 28-30: CQ Worldwide SSB DX
- Nov. 5-6: ARRL Sweepstakes (CW)
- Nov. 19-20: ARRL Sweepstakes (SSB)
- Nov. 25-27: CQ Worldwide CW DX
- Dec. 9-11: ARRL 10-Meter Contest

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### PVARC Meetings & Meals

Meetings 7:30 pm **3rd Wednesdays** except August and December at Fred Hesse Park, 29301 Hawthorne Blvd., Rancho Palos Verdes. Guests welcome.

A no-host dinner at 5:30 pm before club meetings is held at the Red Onion Restaurant, 736 Silver Spur Road, Rolling Hills Estates.

**2nd Saturday each month:** PVARC "HF Enthusiasts Group", 9:00 am in the Ralph's Supermarket café area (Hawthorne Blvd. at Crest Road.

**3rd Sunday in August:** Annual family picnic at Pt. Vicente Lighthouse.

**December 8:** Holiday dinner, Los Verdes Golf Course, Rancho Palos Verdes.

### PVARC Public Service Events

- Apr. 24:** Ridgecrest Int. School 5K
- Aug. 13:** Rolling Hills Estates "Hills Are Alive" 5K/10K
- Sept. 5:** "Conquer the Bridge" Race
- Sept. 24:** RAT Beach Bike Tour
- Nov. 12:** P.V. Half-Marathon/10K

### Major Ham Radio Conventions

- Feb. 19-20:** ARRL SW Div. & Yuma Hamfest, Yuma, AZ
- March 12:** Palm Springs Hamfest
- Apr. 15-17:** International DX Convention, Visalia, CA
- Apr. 29-May 1:** ARRL Nevada Convention, Las Vegas, NV
- May 20-22:** Dayton HamVention
- Oct. 14-16:** Pacificon, Santa Clara, CA

### PVARC HF Operating Events

- April 27- May 1:** Islands On The Air DXpedition, Catalina Island;
- June 25-26:** ARRL Field Day;
- Aug. 19-21:** Intl. Lighthouse Weekend, Pt. Vicente Lighthouse

### PVARC Ham License Classes

Fred Hesse Park (Fireside Room), 29301 Hawthorne Blvd., Rancho P.V.

**Feb. 20 & 27; May 7 and 14;** additional dates to be announced.



Palos Verdes Amateur Radio Club  
P.O. Box 2316  
Palos Verdes Peninsula, CA 90274

[www.n6rpv.net/pvarc](http://www.n6rpv.net/pvarc) or  
[www.k6pv.org](http://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 (\$15.00) \$ \_\_\_\_\_

Household and/or Family membership (\$17.00) \$ \_\_\_\_\_

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 1<sup>st</sup> to December 31<sup>st</sup> 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: \_\_\_\_\_

## Tell your friends and relatives about the PVARC's May 2016 Technician and General license classes



Whether for emergency communication, communicating around the world, or learning a bit about electronics, there's nothing else like amateur radio (also known as "ham radio"). Amateur radio operators have long provided the communication "when all else fails" during disasters. Please tell your friends and relatives that with a short course, they can join the over 710,000 men, women, and children in the United States from all walks of life who are licensed to operate ham radios.

### Two Free Amateur Radio Courses

FCC "Technician" course (entry level)

FCC "General" course (2<sup>nd</sup> level)

Each course is 2 sessions

The next sessions are on 7 May and 14 May, 2016

Technician 9:30 AM to 1:45 PM both Saturdays

General 2:00 PM to 5:00 PM both Saturdays

FCC tests will be 10:00 AM to Noon on Saturday, May 21, 2016.

The Palos Verdes Amateur Radio Club will make a brief presentation at 9:30 AM at the start of the 7 May Technician class on how to get further involved with amateur radio.

The location is Fred Hesse Park, 29301 Hawthorne Blvd., Rancho Palos Verdes.

**Confirm your attendance to Walt, K1DFO at [waltordway@juno.com](mailto:waltordway@juno.com)**

No fee for either course; taking the FCC Test is \$15. Optional Material (sold at cost):

- Gordon West book with all the FCC test questions,

\$22 for the Technician, \$26 for the General;

- Copy of PowerPoint charts: \$20 for the Technician, \$20 for the General.

For courses sponsored by the Palos Verdes Amateur Radio Club, students thru grade 12 who also pass their examination at a PVARC 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 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.

For more information contact Walt, K1DFO, at [waltordway@juno.com](mailto:waltordway@juno.com)

## The ARRL Nevada Section Convention in Las Vegas during April 29-May 1 welcomes California hams



**WELCOME TO LAS VEGAS**  
AND THE

**NEVADA STATE CONVENTION**  
**APRIL 29-MAY 1, 2016**  
**EASTSIDE CANNERY CASINO & HOTEL**

Close to McCarran Airport and the fabulous Las Vegas Strip



**REGISTRATION**

**EARLY BIRD (ONLINE):**  
Starts Dec 7, 2015

**AT THE DOOR:**  
Starts Apr 29, 2016  
(12:00 pm)  
and  
Apr 30, 2016  
(8:00 am)

**FEATURED ATTRACTIONS**

- Featured Speakers  
*(Gordon West and Rick Roderick from the A.R.R.L.)*
- Major Equipment Manufacturers
- License Classes and Exams
- Saturday Night Banquet
- Large Tailgate / Swap Area
- Presentations and Forum Discussions
- R.V. Parking Available
- Wide Selection of Tours, Shopping, Shows and Gaming for Extended Stay/Spouses

For questions, directions and reservations please visit us at:

**NVCON.ORG**  
check frequently for updated information

**K7UGE 146.94 PL 100**  
Las Vegas Radio Amateur Club, Inc.  
[www.lvrac.org](http://www.lvrac.org)