# Palos Verdes Amateur Radio Club



PVARC Meets Every third Wednesday at 7:30 p.m, Hesse Park, Hawthorne Blvd., Rancho Palos Verdes



# IOTA RECAP

Ray Day, who led this year's IOTA, will give a slide show with all the details. His talk will probably be punctuated by comments from the rest of the IOTA crew in the audience.

You know they had a great time! Find out what you missed.





# The President Paces Himself

# Joe Pace, NZ6L

Last Saturday morning was looking to be another blustery day at Two Harbors, working wall-of-sound DX pileups and the NA-CQP RTTY contest. It was a typical early morning on the island, with both stations operating and the mess crew considering breakfast, when the routine was broken by one of the K6PV crew reporting the news of the 8.8 earthquake in Chile, and the detection of a tsunami wave by deep water buoys

(see inset showing tsunami wave energy prediction).

So, with a collective realization that our encampment sat at a few feet above sea level, in an isthmus with a southern exposure, our comfortable morning shifted into a frenzy of activity to obtain information on the radio, via the Internet, and from the local authorities.

The Pacific Tsunami Warning Center forecast looked to be fairly benign, just under three feet, however this was enough to elicit evacuations along the Hawaiian coastline, and the local authorities at Two Harbors requested that residents head to high ground in the event that the wave was amplified.



Fortunately, though dramatic to observe, the waves remained within the high-tide level of the harbors, and caused only minor damage to boats and moorings due to the rapid cycling of the tide.

The deep water buoys of the Pacific Tsunami Warning System continuously monitor the pressure of the water column above them using a deductive method to sense waves meeting tsunami criteria and feed their data to real-time computer models that use ocean floor and coastline contour maps to estimate the size, period and time of arrival of these powerful, low frequency waves (see insets).

Tsunami waves have a long wavelength in the neighborhood of 500km (4/10,000ths Hz), and travel at a rate of about 450Mph, which gives them some very interesting properties.

Tsunami waves are of a low enough frequency that breakwaters, such as the Los Angeles & Long Beach Harbor breakwater, are nearly transparent to these waves, and more than 85% of their energy will pass through them. Unlike with normal waves, these breakwaters offer no significant protection.

As we observed, the forecast was quite accurate. The size of the waves and time of arrival was within a few minutes of the prediction at Two Harbors, and over the period of a couple of hours, the waves did amplify to about twice their size according to a marine service person I spoke with who was tending boats at Catalina Harbor.

Our local sea floor topology is such that we don't have to worry too much about Tsunami wave infiltration, but just up the coast in the San Luis Obispo coastal area, this is not the case, and thanks to the Amateur Radio operators of SLOECC (ARES/RACES), there is a regularly trained communications support team ready to assist. 73s



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As I sit here trying to write a few intelligent words of introduction I am beginning to realize

de the VP

Hal Lazar, KI6SPB

that as a rank novice the fewer words the better.

I graduated from UCLA with a BS in engineering a long, long time ago. Worked for GE for about 15 years, first at their Electronics Research Lab, and later in the Space Craft Division. That's about all the honest engineering that I did. While I was at the Electronics Lab, I got the amateur radio bug. Just about everyone at the Lab was an amateur radio operator. But I never did master CW. And between work, grad school, and raising a family, amateur radio went on the back burner.

After GE, I went to work for Xerox as a program manager. Lots of interesting programs, including "Star," which brought us the mouse, Ethernet, and the graphical user interface...too soon and too expensive.

After Xerox, I started my own company, Lazar Associates, Inc. We developed custom application software for the insurance business and for manufacturing. The world of custom application software lasted until about the turn of the century, and that's about when I retired.

A couple of years ago the police chief of PVE, Dan Dreiling, got me interested in disaster preparation for the city. So I "volunteered" to be one of his 6 District Coordinators. That's how I met Bryant Winchell W2RGG. My interest in amateur radio was rekindled. Now that CW is no longer required, I got my technician license about 14 months ago. Joined the club soon after that. And,

as they say, the rest is history.

Bill Harper WA6ESC talked me into "volunteering" to be club VP, so I'm supposed to arrange for the monthly speaker. He assured me that he will help (maybe a program on antennas?), and I'll get plenty of help from the "old hands." Well, he did help me build a dual band, Jpole that really works. So he's a man of his word.

This month's program was already planned. It will feature Ray Day N6HE and his cohorts telling us all about their recent adventures on Catalina. So far so good.

Jeff Wolf, K6JW gave me a list of half a dozen suggestions from which I should be able to book someone interesting for next month, and maybe beyond. But I could use some more help.

If you have any suggestions for a speaker, please email them to me at hal.lazar@cox.net.

# Welcome! New Members

Walter Lang, KJ6CAS	RPV
Clay Davis, KJ6FHN	PVE
Saraj Cory, KU6F (She's going to have drive to get to our Wednes	Santa Rosa e a heck of a day meetings!

# Sunday, March 21st

Two Opportunities To Grab Your HT, Get Some Sun, And Enjoy Yourself **Ridgecrest Middle School 5K** 

It starts and ends at Ernie Howlett Park on Hawthorne Blvd. The run is totally on horse trails. We will have radio operators at several locations.

walt.ordway@yahoo.com

L.A. Marathon - the new route will go from Dodger Stadium to the Santa Monica Pier, and will include Beverly Hills, Hollywood, and major studios. Registration is on-line at:

http://www.doitsports.com/volunteer/in fo.tcl?job id=488

# Treasurer's Report

Diana Feinberg, AI6DF **March 2009** 

**PVARC** Balance \$3,033.41 John Alexander Fund: \$1,043.00 Repeater Fund: \$1,130.66 Total Bank Balance \$5,207.07 Special Fund (included in PVARC <u>\$ 188.52</u> Balance) Membership 2009 129 Renewals 2010 91

We had 129 members in 2009. So far in 2010, 88 members have sent their renewals and three new members have joined, bringing our current roster to 91 members. If you haven't renewed yet, we hope you will. Please send your dues to our address shown on the membership form at the end of this QRO issue. You may also renew at our next club meeting on March 17th.

## **Board of Directors**

President Joe Pace, Vice President Treasurer Secretary Past President Director (1) Director (2)

Hal Lazar KI6SPB Diana Feinberg, AI6DF Chuck McCown, K6CTM Ginger Clark, KG6TAU Mel Hughes, K6SY K6JW Jeff Wolf,

# **Appointed Offices**

QRO Editor Asst to Editor QRO Proofreader Web Page Editor Club Librarian VE Coordinator VE Liason LAACARC Rep

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## Contacts

QRO Editor WebMaster 310-378-7894 310-541-6971

### **Congratulations to the New Board**

President: Joe Pace, NZ6L

Vice President Hal Lazar, KI6SPB

Treasurer Diana Feinberg, AI6DF

Secretary Chuck McCown,K6CTM



Need a Club Badge? Karen Freeman, KG6BNN 310-541-6971 Need a Club Patch? Or a Club Jacket? Dave Scholler, KG6BPH 310-373-3816





NZ6L

# S-METERS: FACT AND FANTASY Jeff Wolf, K6JW

(Regular contributor K6JW, who's also the author of a science fiction book, writes a bit about fantasy and S-Meters

The function and utility of S-meters, and of how S-meter function relates to signal reporting is often misunderstood by newer hams and sometimes even long-term hams. So, in order to try and bring some clarity to what may be confusing here it is: S-meter and signal reporting 101

To begin, let me make a bold assertion: the S-meter on your radio is its most overrated and misunderstood feature. If it weren't there, your signal reporting wouldn't be affected at all! Now, you are probably thinking I've lost my mind, but bear with me as we go back to fundamentals and a bit of history.

Remember the RS(T) system? It's the conventional way of giving someone a signal report. The "R" stands for signal readability and is graded on a five point scale, with one being the least readable (i.e., unreadable) and five being completely readable. The "S" stands for signal strength, and is graded on a nine point scale, with one being the weakest and nine being the strongest of signals. Finally, the "T" is there for CW operation and refers to the tone of the CW note, from rough and broad to smooth and pure (unmodulated). The critical point here is that there is nothing in the RS(T) system that makes any reference to S-meters or S-meter readings! Let me repeat. There is absolutely no relationship between signal reporting in the RS(T) system and the S-meter reading on your radio. Yes, I know this may come as a shock to you, but it's true.

GHALLEVEL

So, what is the S-meter's function? In fact, its only real utility is that it allows one to compare the relative strengths of two or more signals being received. Let's go back to square one about S-meters so you'll understand why this is so.

The first thing to grasp is that, although

there is a recommended technical standard for HF S-meter calibration (for the curious, it's -73 dBm for S9 with 50 microvolts at the receiver's 50 ohm impedance input and 6 dB between S units), the S-meter readings for standard reference signals will vary be-

tween brands of radios and may even do so between "identical" radios of the same brand. Ideally, this would not be so, but manufacturers calibrate their S-meters according to their own particular standards, and it's a fact that circuitry and response characteristics may vary between brands. Even within brands and models of any particular radio there may be some individual differences in S-meter calibration as units leave the factory. What this means is that, side by side, your radio and mine may give different S-meter readings for the same signal even if they're the same brand and model!

To make matters worse, the baseline Smeter reading you'll see at any given time is a function of band noise as well as received signals, including such unwanted internally generated noise and "stuff" as 3rd order intermodulation products. To take a couple of examples, consider a very quiet 15 meter band in the morning



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with just a few signals audible. You might tune to a voice signal that registers S3 but sounds "strong" and fully readable because there's little band noise and no other interference. Compare this with 75 meters in the evening with an S8 noise level, rampant intermod, and several audible voice signals spread through the band in the noise. What is the "pure" S-meter reading of any one of the voice signals in this latter case? In fact, just sitting in front of your radio, you can't tell because the S8 reading is a combination of all the band noise plus the desired signal, and it's difficult if not impossible to sort out the strength of each of the various components accurately. And, for the record, even that S3 signal "in the clear" on 15 meters isn't really pure, as there's always some band and internal circuitry noise present.

From this, it becomes apparent that the only useful function of the S-meter is to compare the relative strengths of received signals with respect to one another. In fact, regardless of actual calibration, the ugly truth is that S-meter readings, being based upon dBm with reference to a standard signal input, are nothing more than ratios with no associated "hard" units. Put another way, there is simply nothing absolute about Smeter readings at all! Whether you're listening with preamplification or attenuation, and whether your S-meter is affected by their settings, makes no difference. There just is no firm rock upon which to base a signal strength assessment using an S-meter except in relative terms as compared to other signals, and external and internally generated noise.

Where does this leave us, then? Well, we can fall back on the venerable RS(T) system and recognize that *signal strength reporting by you in your shack is totally subjective*. If a voice signal is fully readable and standing well above the noise, it's a "59" regardless of the S-meter reading. If the signal is perfectly readable but copy is not as if the other operator is sitting in your lap, you might downgrade the report to 56 or 57, but it's a judgment call. And, of course, if the signal is mostly readable but with considerable difficulty because it's down in the noise or repeatedly fading, you might give it a 33, even if the Smeter is reading S9 because of the additive effects of signal, band, and internally generated noise.

Now, as you listen to other operators, you'll often hear them report S-meter readings to their contacts as a sort of signal report. "You're S9 here, old man." Or, "You're booming in at 40 over 9 in the clear." What do these "reports" mean? Actually, very little. The 40 over 9 report is simply an S-meter reading for a contact that might be over a two block or two hundred or two thousand mile distance, the noise level minimal or huge, and the only relevance of the report might be in comparison with another ham's signal on your radio and under similar band conditions. So, what *should* the signal report for this "40 over S9 armchair copy" signal be? 59. Period.

So, finally, to sum up, there is no right or wrong way to set the radio's preamplifier options or attenuation control with a view toward some "correct" way to run the S-meter. Don't give signal reports based upon S-meter readings. Instead, give them according to the subjective RS(T) system. That system, by the way, probably has too many gradations of strength and tone between on it's 9 point scale (a three or five point system would do just as well) but it has been historically, and it remains today, the *de facto* system that we use for giving signal reports on the air.

Bottom line: It's fun to watch your Smeter, but don't use it for giving signal reports unless you're telling another station how strongly he's being received in comparison with others on the band and as heard *on your radio*.



### ARRL Southwestern Division Director: Richard Norton, N6AA, <u>n6aa@arrl.org</u>

#### Proposed San Diego Restrictive Antenna Ordinance Progress

After three hours of testimony from city staff and the public this morning, the San Diego City Planning Commission voted unanimously to recommend that the City Council reject a proposed anti-Amateur Radio antenna ordinance because they believed it was too restrictive. Theplanning commission recommended that city staff work with the Amateur Radio community to produce something more acceptable.

The proposed ordinance attempted to effectively ban antennas over 30 feet high in most parts of the city, and required an \$8000 initial fee to initiate an approval process, with no limit on the total fees permitted.

Only two La Jolla residents, upset over over one particular antenna in their neighborhood, testified in favor. Over 80 amateurs signed up to speak against the proposal. The San Diego DX Club, which had previously attempted to work with the city to produce a reasonable ordinance, led the opposition. An overview was provided by DX Club attorney Felix Tinkov. SDDXC members attorney Larry Serra, N6NC, Jim Price, K6ZH, and Arnie Lewin, W7BIA were primary spokespersons in opposition.

In spite of today's outcome, the city council can still hold hearings and consider the proposed ordinance. The team of concerned San Diego amateurs will continue to follow the situation and respond appropriately.

#### Initial Palm Springs Hamfest and Established Yuma Hamfest Both Successful

The inaugural Palm Springs Hamfest was well attended. Congratulations to the Desert RATS club for putting this successful event together.

### The Palos Verdes Marathon is Running on May 15

PVARC is again providing radio communications for the Palos Verdes Marathon, which this year will be during the morning of May 15. The PV Marathon is a great opportunity for PVARC members to enhance their communication skills while providing public service close to home along a scenic coastal route. Proceeds from the Palos Verdes Marathon go to the Rolling Hills Estates Kiwanis Club, which donates these funds to charities on the Peninsula and adjacent cities.

We will need 20 amateur operators. Returning operators and first-timers are both welcomed. If you are interested in being a PV Marathon radio operator this year, please contact Diana Feinberg, AI6DF, at ai6df@verizon.net or at a monthly PVARC meeting.

The Yuma Hamfest, held last weekend with attendance estimated at over 600, continues to grow.

#### **Upcoming Events**

The World-famous International DX Convention will take place April 16-18 in Visalia, CA. See <u>http://www.dxconvention.org</u>/

Also, it's not too early to block out the weekend of September 17 -- 19 in your calendars for the 2010 ARRL Southwestern Division Convention in San Diego. See

http://www.sandarc.net/Convention2010/links.ht m

Arizona has a good number of hamfests every year. In the next two months are:

March 13, Springfest in Scottsdale. See

#### http://scottsdaleamateurradioclub.ning.com/

March 27, Desert-Fest 10 in Tucson. See <u>http://tucsonhamfest.com</u>

April 10, AARC Ham-Fest in Phoenix. See <u>http://www.arca-az.org/main/calendar.html</u>

Schedule of Events		January 20 <sup>th</sup> – General Meeting	Echniser 17th – General Meeting		February 24th-28th – Catalina IOTA Trip	March 17 <sup>th</sup> – General Meeting	March 21 <sup>st</sup> – Ridgecrest 5K	April 21st – General Meeting		April 24 <sup>th</sup> – Tech Class Part 1	May 1 <sup>st</sup> – Tech Class Part 2	May 1 <sup>st</sup> – Palos Verdes Loop Trail Relay	May 8th – VE Session at Hesse Park	May 15 <sup>th</sup> – Palos Verdes Marathon	May 19 <sup>th</sup> – General Meeting	June 16th – General Meeting	June 26th-27th – ARRL Field Day!	July 21st – General Meeting	Auritet 7th – RHF 5K/10K Bun/5K Walk	August 20st-22nd – Lichthouse Weekend	Aurust 20nd - Summar Picnic at Pt Vicente			September 18-19th –Concours d'Elegance	October 20 <sup>th</sup> – General Meeting	November 17 <sup>th</sup> – General Meeting	December 15 <sup>nd</sup> – Holiday Dinner @ PVIC		OT EVENTS ZUTU
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www.palosverdes.com/pvarc







# FCC <u>"Technician"</u> course (Level One)

<u>A two session course</u> held on <u>April 24th and May 1st</u> 10:00 AM to 2:00 PM both Saturdays

FCC tests will be on May 8 (the next weekend) 10 AM to noon

Hesse Park, 29301 Hawthorne Blvd. Rancho Palos Verdes

- No pre-registration or fee required -- Taking the FCC Test is \$15 -

Optional Material - Gordon West book with FCC test questions - \$21, - Copy of my Power Point charts, \$15 -Students (thru grade 12) who take this course and get their license will be reimbursed up to \$50 by the Palos Verdes Amateur Radio Club



For more information contact Walt, K1DFO, at walt.ordway@yahoo.com



### K6PV Palos Verdes Amateur Radio Club P.O. Box 2316 Palos Verdes Peninsula, CA 90274 www.palosverdes.com/pvarc

### New Membership Application and Member Renewal Form

New:	or Renewal:	Mem	bership D	ate:	
Individual	_(\$15/Year) or House	hold and/	or Family Mer	nbership	_ (\$17/Year)
(Applying) New Me	mber Information: or Me	mber Ren	ewal: same a	s Last Year? Y	ESNO
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Phone: Home	Work _			_Cell	
Email address:	(Unless otherwise noted emails	s will be ser	nt to the applyir	ng member only)	
License Call:	License Class:	ARRL	Member (?)	Birth Date: _	(Only: Month - Day)
Member of: (DCS, I	RACES, ARES, PVAN, NART)		District _	Unit	ID #
Additional Househ	old and/or Family Members	s (if Applic	able):		
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Please make checks payable to: Palos Verdes Amateur Radio Club (PVARC)

NOTE: Dues are based on January 1<sup>st</sup> to December 31<sup>st</sup> of the calendar year.