

**W6OTX****W6ARA****PAARA NEWSLETTER**

VOLUME 59, NUMBER 2, February 2009

**K6OTA****K6YQT**

# PAARAgraphs



Celebrating 72 years as an *active* ham radio club—*Since 1937*  
The Palo Alto Amateur Radio Association, Inc.



## CALENDAR



- |     |    |   |
|-----|----|---|
| Feb | 6, | <b>PAARA Meeting, 7:00</b><br>Menlo Park Recreation Center<br>700 Alma Street, Menlo Park |
| Feb | 4, | <b>PAARA Board Meeting, 7:00</b><br>Red Cross Bld., 400 Mitchell Ln., Palo Alto           |
| Mar | 6, | <b>PAARA Meeting, 7:00</b>  |
| Mar | 4, | <b>PAARA Board Meeting, 7:00</b>  |

## NEXT MEETING

FEBRUARY 6, 2009  
SPEAKER  
AND  
PROGRAM



**Ed Fong – WB6IQN**

U.C. Berkeley Graduate instructor in RF design, Principal Engineer of HF & Microwave circuits at National Semiconductor

### “New Designs for Broadband Baluns”

Today's integrated circuits are no longer limited to HF. Improved semiconductor technology lets integrated circuits now to exceed 5GHz frequency bandwidths, but other major innovations had to be introduced for full system performance. One of these is the improvement in Balun technology. Ed will review the theory behind baluns which hams are familiar with, and discuss new configurations allowing VHF to 3 GHz performance in a single balun. Ed will also demonstrate them a 3 GHz time domain spectrum analyzer design for radar signal processing, the heart of which is a 10 bit 3 Gigasample ADC designed by a team at National Semiconductor.

Ed Fong was first licensed in 1968 as WN6IQN. He later upgraded to Extra Class with his present call of WB6IQN. He holds BSEE and MSEE degrees from U.C. Berkeley and his Doctorate from the Univ. of San Francisco. A Senior Member of the IEEE, he has 9 patents and over 30 published papers and books in the area of communications and integrated circuit design. Ed is presently a graduate instructor in RF design at U.C. Berkeley and a Principal Engineer at National Semiconductor in Santa Clara working in high frequency and microwave circuits.

## President's corner

*Joel Wilhite – KD6W*

It is official, Hawaii has now shut off analog broadcast television for good and as predicted, there were still some that incredibly hadn't gotten the word yet. The call center they had set up was not deluged with calls but at one point reported to have about 500 calls in a one hour period during prime time. If you had a chance to attend our last PAARA meeting in January, I had a chance to talk about the up coming shut off. As of today there still remains some concern about the Feb 17<sup>th</sup> analog shut off date here in the continental US. As the old Chinese proverb says, "May you live in interesting times." it sure seems to be the case with DTV. Do you have yours set up yet?

By the time we go to press the winter banquet will already be in full swing and I hope everybody that wants to go has a chance to participate as it is one of the premier events in the PAARA calendar. If PAARA members can recall, we had Seth talk to us at a PAARA meeting several years ago and the reason why I can't wait to hear his latest talk and I hope to see you there. SETI has been busy over the years and Seth has also been in a couple of cameos on several recent programs on television. The SETI Institute has been growing like our expanding universe and if you wish to find out more, please point your internet browser to their web site at [seti.org](http://seti.org) where you will find many resources for information about them and their most noble search.

We are embarking on a few searches of our own. The first is a search for space. In this case a space for our "junk" as my wife likes to call it. Many years ago, PAARA operated the PAARA auction at the

*(Continued on page 13) Pres Corner*

**VE Exams**, 3rd Saturday each month, 10:30AM, 145.23– PL=100Hz  
 Redwood City Main Library, Community Conference Room  
 1044 Middlefield Road, Redwood City, CA  
 contact: <http://amateur-radio.org/> or AI, WB6IMX@att.net

**ELECTRONICS FLEA MARKET**

Sponsorship by **A.S.V.A.R.O.**  
 (Association of Silicon Valley Amateur Radio Organizations)  
 Second Saturday of month, March-October, 6am–2pm  
 Howard M. Krawetz, N6HM 650-856-9761  
 Contact: <http://www.electronicfleamarket.com/>

**LIVERMORE SWAP MEET**. Now in Robertson Park, Livermore, every first Sunday of the month. 7 am to 11:30 am. Free admission for buyers. For further info, see: [www.larkswap.com](http://www.larkswap.com) or contact Ian Parker, W6TCP at [swapmeet@livermoreark.org](mailto:swapmeet@livermoreark.org)

**PAARA** Palo Alto Amateur Radio Association  
 meets 1<sup>st</sup> Friday 7:30pm each month, Net 145.230 each Monday 8:30,  
 contact: <http://PAARA.org/> or Terry Finn, AA6T, 650-366-9111

**FARS** Foothills Amateur Radio Society  
 meets 4<sup>th</sup> Friday 7:30pm each month  
 contact: <http://www.fars.k6va.org/>

**NCDXC** Northern California DX Club  
 meets 2<sup>nd</sup> Friday 7:30pm each month,  
 repeater for member info 147.360, Thur 8:00PM  
 contact: <http://ncdxc.org/> or Mike Gavin W6WZ, (650) 851 8699

**QCWA. Chapter 11.**  
 Northern California Quarter Century Wireless Association.  
 Meets third Wednesday monthly at Harry's Hofbrau  
 in Redwood City @ 11:30 AM. Guests welcome. Saturday morning net on 146.850 MHz, PL 114.8

**NorCalQRP** Northern California QRP Club  
 meets 1<sup>st</sup> Sunday each month  
 contact: <http://www.norcalqrp.org/>

**SPECS** Southern Peninsula Emergency Communication System  
 meets each Monday 8:00pm on Net 145.27, 440.80 MHz  
 contact: <http://specsnet.org/> or Tom Cascone, KF6LWZ, 650-688-0441

**SCARES** South County Amateur Radio Emergency Service  
 meets 3<sup>rd</sup> Thursday 7:30pm each month, San Carlos City Hall.  
 Net is on 146.445 [PL 114.8] & 444.50 (PL-100) 7:30 Monday evenings.  
 contact: President Gary D. Aden, K6GDA 650-743-1265(D), 650- 595-5590 (N)  
**Web:** <http://k6mpn.org> **E-mail:** [pres@k6mpn.org](mailto:pres@k6mpn.org)

**SCCARA** Santa Clara County Amateur Radio Association  
 Operates W6UU & W6UU/R, repeater 146.985-pl  
 Nets: 2m, 7:30pm Mon; 70cm, 442.425+ (p1 107.2) Thur.  
 meets 2<sup>nd</sup> Mon each month @ 7:30 PM.  
 contact: <http://www.qsl.net/sccara/> or Clark Murphy KE6KXO 408-262-9334  
 ARRL/VEC license testing contact 408-507-4698

**SVECS** Silicon Valley Emergency Communications  
 Operates AA6BT repeater (146.115 MHz+)  
 contact: <http://www.svecs.net/> or Lou Stierer WA6QYS 408 241 7999

**TEARS.** The Elmer Amateur Radio Society.  
 Dedicated to operational training, knowledge building &  
 FCC exam testing. KV6R. repeater under construction.  
 Contact [AA6T@ARRL.NET](mailto:AA6T@ARRL.NET). Most members are Extra  
 class or VE's. See QRZ dot com/kv6r for class info

**WVARA** West Valley Amateur Radio Association  
 W6PIY six-meter repeater on 52.58MHz. Normally, six-meters is linked with 147 and 223, while 441 and 1286 repeaters are linked.  
 VHF: 52.58 (-500) 151.4 cttss UHF: 441.35 (+5.0 88.5) cttss  
 147.39 (+600) 151.4 cttss 1286.20 (-12m) 100.0 cttss  
 223.96 (+1.6) 156.7 cttss  
 meets 3<sup>rd</sup> Wed every month.  
 contact: <http://wvara.org/>, Bill Ashby N6FFC, 408-267-3118, N6FFC@Juno.com, or N6FFC@ARRL.NET

American Red Cross, **SANTA CLARA VALLEY CHAPTER**  
 contact: <http://santacalaravalley.redcross.org/> or Scott Hensley KB6UOO, (408) 967 7924  
[shensley@Novell.com](mailto:shensley@Novell.com)

*(please send changes to PAARAgaphs editor: k6uro@arrl.net)*

**PAARA Exemplary Service Award**

- Gerry Tucker, N6NV 2005  
 Rice Family 2006  
 Jim K6AK, Lisa KG6KQS, Kyle KG6MSK  
 Wally Porter, K6URO 2007  
 Vic Black, AB6SO 2008

**Palo Alto Amateur Radio Association, Inc.**

PO Box 911 Menlo Park, CA 94026

**Officers**

President	Joel Wilhite, KD6W	650 325 8239
.....	<a href="mailto:joelwilhite1@yahoo.com">joelwilhite1@yahoo.com</a>	
Vice President	Doug Teter, KG6LWE	650-367-6200
.....	<a href="mailto:dteter@wvwi.com">dteter@wvwi.com</a>	
Secretary	Rick Melrose K6RDM	1-888-725-1895
.....	<a href="mailto:k6rdm@arrl.net">k6rdm@arrl.net</a>	
Treasurer	Ron Chester, W6AZ	408-243 2221
.....	<a href="mailto:w6az@arrl.net">w6az@arrl.net</a>	

**Directors**

Director (10)	Peter Sheerin K6WEB	415 298 7383
.....	<a href="mailto:k6web@arrl.net">k6web@arrl.net</a>	
Director (10)	Rob Riley, KG6HVW (cell) 650 799-1607	
.....	<a href="mailto:kg6hvw@arrl.net">kg6hvw@arrl.net</a>	
Director (09)	Gerry Tucker, N6NV	650-326 4908
.....	<a href="mailto:n6nv@arrl.net">n6nv@arrl.net</a>	
Director (09)	Byron Beck KG6UOB ,	408-735-8604
.....	<a href="mailto:kg6uob@arrl.net">kg6uob@arrl.net</a>	

See the calendar for Board meeting times. **Visitors are welcome.**

**Appointed Positions**

Membership	Vic Black, AB6SO	650-366 0636
.....	<a href="mailto:ab6so@smrn.com">ab6so@smrn.com</a>	
Database	Rick Melrose K6RDM	1-888-725-1895
.....	<a href="mailto:k6rdm@arrl.net">k6rdm@arrl.net</a>	
Chaplain	Rev. Rick Line, KG6TMD	650 323 8544
.....	<a href="mailto:kg6tmd@arrl.net">kg6tmd@arrl.net</a>	
Station Trustee	W6OTX, K6YQT, W6ARA....Gerry Tucker, N6NV	
Station Trustee	K6OTA...Ron Chester, W6AZ	
Property Manager	Gerry Tucker, N6NV	
Fund Raising Coordinator	Bob Korte, KD6KYT	408 396 4745
.....	<a href="mailto:bob@rgktechsales.com">bob@rgktechsales.com</a>	
Badge Coordinator	Doug Teter, KG6LWE	650-367-6200
.....	<a href="mailto:dteter@wvwi.com">dteter@wvwi.com</a>	
Historian	Christopher McIntyre, KG6SVI	
Raffle Coordinator	Jim Rice, K6AK	650-851-2274
Ticket Master	Kyle Rice, KG6MSK	
Field Day Coordinator	Doug Teter, KG6LWE	
ASVARO Rep	Rolf Kliibo, N6NFI	650-856-2748
.....	<a href="mailto:n6nfi@arrl.net">n6nfi@arrl.net</a>	
Webmaster	Peter Sheerin K6WEB	415 298 7383
.....	<a href="mailto:k6web@arrl.net">k6web@arrl.net</a>	
Technical Coordinator	Joel Wilhite. KD6W.....	650-325-8239.
.....	<a href="mailto:joel.wilhite@gmail.com">joel.wilhite@gmail.com</a>	
QSL Manager	Rob Riley, KG6HVW (cell) 650 799-1607	
.....	<a href="mailto:kg6hvw@arrl.net">kg6hvw@arrl.net</a>	
Speaker Coordinator	Joel Wilhite, KD6W	650 325 8239
.....	<a href="mailto:joel.wilhite@gmail.com">joel.wilhite@gmail.com</a>	

**PAARAgaphs Staff**

Editor	(open)	
Editorial Board	Joel Wilhite KD6W,	Vic Black AB6SO,
.....	Ron Chester W6AZ,	Peter Sheerin K6WEB.
Advertising	Terry Finn, AA6T	650-366-9111
.....	<a href="mailto:aa6t@arrl.net">aa6t@arrl.net</a>	
News	Terry Finn, AA6T	650-366-9111
Member Profiles	Terry Finn, AA6T	650-366-9111
Technical Tips	Vic Black, AB6SO	650-366 0636
.....	<a href="mailto:ab6so@smrn.com">ab6so@smrn.com</a>	

**PAARA 2009 meeting dates: 1/9 ,2/6, 3/6,4/3, 5/1, 6/5, 7/10, 8/7**

## The Chaplain's Corner

During the holiday season I received many cards, letters and calls from friends and relatives near and far. As nice as it is to send cards, it is even nicer to get some back. I like to hear from folks and find out how they are doing. This put me thinking about the importance of two-way communications. Amateur radio is about communicating, isn't it?

It doesn't matter what form of communications you are using, code, voice or data, or whether it is on an AM, FM or microwave signal. The desired result is that your transmission will find a receiver. That you can share some information with them and they back with you in return. It can be very rewarding to send a message and get an answer back.

Have you ever tried to answer someone back but couldn't get through because they were not available, or there was just too much going on, too much traffic? I have occasionally wanted to catch someone but found they were too quick to get off the frequency. They were in too much a hurry and missed my call back even though I heard them and tried to respond.

I realize that sometimes I do this in my spiritual communications. My prayers are broadcast but I don't seem to get an answer. At times it's because I'm unavailable and don't listen or watch for one. Other times I let the noise of the world drown out any heavenly answers. And then there are the times I'm in a rush and unwilling to wait on an answer. But then there are times that I hear an answer loud and clear!

I hope all of your communications are loud and clear and that you have an "ear to hear" this year.

God Bless You,  
 Rev. Rick Line, KG6TMD  
 PAARA Chaplain

### LIFE MEMBERSHIP

Awarded by Action of the PAARA Board

Steve Stuntz, K6FS Dec 2007  
 Ron Pantan, W6VG SK (12 07 2007)  
 Joe Gomes, KB6HDC SK  
 Leslie Vickery, KB6HDC SK

(Continued from page 11) Pres Corner

Ampex cafeteria. Those events predated EBay and the current flea markets at DeAnza/Bluecube/Foothill. The flea market scene is working good but we are getting stuck with high levels of less than desirable stuff as the desirable material is picked out. If we held auction lots where the undesirable is mingled with the desirable material in one lot, we wouldn't have this issue. We need a place to hold this event so we are seeking a corporate sponsor to allow us to hold our annual event.

We are also paying for storage to hold the big green trailer which currently holds our field day aluminum towers. If we get rid of the trailer, we then need secure place(s) to store the towers. Our towers represent real value as some are very custom, one of a kind and very expensive to replace. We can't afford to loose these assets and why we spend so much effort locking them up. Over the next month we will be looking for the immediate storage for our rare fleet of towers. The old big generators are also taking up space but not as big a problem. But they too need to evaporate since we can save so much in fuel costs running on the fleet of portable generators distributed amongst the members.

We are also searching for writers to take on certain subjects, documenting the general meetings, etc. If you are interested in helping, please let me know. I hope to see you all at the Winter Banquet and at our meetings. 73 de KD6W

FCC Form 660 Rev. June 1956		UNITED STATES OF AMERICA		EXPIRES
STATION CALL SIGN		FEDERAL COMMUNICATIONS COMMISSION		3 a. m., e. s. t.
K N 6 U R O		WASHINGTON, D. C.		10-15-57
		AMATEUR RADIO LICENSE		
Fixed transmitter location: (and remote control position when authorized)				
NOT TRANSFERABLE	SAME AS BELOW			
	Licensee and P. O. Address:			
	WALLACE M. PORTER			
	3183 SOUTH COURT PALO ALTO, CALIF.			
(This license issued subject to conditions shown on reverse side)				
Operator Privileges	Issuing Officer	Effective Date		
Class NOVICE (C)	C. B. Plummer	10-15-56		
Class				
SEE UPPER RIGHT CORNER FOR EXPIRATION DATE				

2009 Membership DUES

## **PAARAgaphs as we know it today.**

by: Terry Finn. AA6T.

Have you ever wondered how a radio club newsletter gets produced and published? I know that the thought has crossed your mind occasionally, especially when you look forward to receiving it in the mail and then read it cover to cover in one sitting every month. At least, that is the way it has been expressed to me over the years by many regular readers of this fine publication known as PAARAgaphs.

Rather than getting into the boring details of how one man has been able to publish this monthly newsletter by himself for the last fourteen years, allow me to take some of your valuable time and describe the man who has successfully produced our radio club newsletter on a monthly basis since 1995.



### **THE WALLY PORTER, K6URO, STORY.**

Our very own Wally Porter, K6URO, editor and publisher of PAARAgaphs, has elected to step down from this time consuming and stressful executive position so he can spend more meaningful time with his wife, sons and grand children.

Please note that Wally will be turning 83 years young in February and really deserves a little rest from PAARAgaphs.

Wally was born 'Wallace Milburn Porter' on February 26, 1926, in Siloam Springs, Arkansas. His siblings included brothers Kenneth and Morris and sisters Dorothy and Alice.

Wally's father, Alexander Porter, was born in 1881 and spent much of his early life in Hayes County, Kansas. During his twenties, 'Alex' as he was called by his friends, worked as a real cowboy in west Texas and New Mexico for the XIT Ranch. He later took a job with a freight and drayage company known as American Express (not to be confused with today's financial company by the same name). The services offered by American Express were later taken over by the U.S. Post Office. Alex traveled to Fort Worth, Texas to take the new job which had him riding a railway mail car over various lines, sorting mail for small towns and actually kicking it off of the mail car as the train came through the area. In some cases, Alex would have to put on his six guns to protect something valuable that they were transporting. He ended up working for the Post Office in this capacity for fifty years. One of his other brothers went to work in the steel mills of Pueblo, Colorado, while the other also worked for the Post Office in Albuquerque, New Mexico.

Wally's mother, Edna Stubblefield, was born in 1888 in Mayfield, Kentucky, on a tobacco farm. She had a brother by the name of Tanty Stubblefield, who was an early radio experimenter and actually built a spark coil and made what they thought was the first radio broadcast over the air. They soon learned that it actually went through the ground. Edna met Alex in Texarkana, Texas, while Alex was working with horses on a large ranch in the area. Alex and Edna were married about 1916 in Texarkana and moved to Siloam Springs, Arkansas, in 1924.

Wally was actually the youngest of the five children and remembers that although the family lived in a small house in the town of Siloam Springs, they also spent a lot of time on a small farm just outside of town. It should be noted that this was just before the great depression which effected the whole Country. On the farm, the family raised pigs, chickens, cows and horses. They also grew, cut and bundled a lot of hay for animal feed and much of that was taken to a nearby farm where his Uncle was employed. The feed was given to the many Clydesdale horses that were being raised on that farm. Wally can remember that the family did so well in selling the feed that his father was able to purchase a 1926 Chrysler automobile that they owned and operated for many years.

As the depression took its toll across the Country, Wally's father Alex, and two other men, decided to split the one job they each had as a railway postal clerk into three. That way, each of the three could retain the job with the paycheck and none of them would have to be laid off. This system worked well for the three men on the railway line of about 200 miles between Siloam Springs and Texarkana. They took turns and worked out a schedule that suited them well for several years.

In 1931 the family moved to Stamford, Texas, just north of Abilene, so Wally's father could take a full time railway mail clerk position. The depression was really taking its toll on people in that geographical area. However, Alex and Edna were able to keep the family together and no one starved.

In 1933, they moved again for a much better, similar, full time job for Alex, in Carlsbad, New Mexico. The train on that route ran from Carlsbad to Amarillo, Texas. It should be noted that helium was produced and stored in huge underground bunkers in the Amarillo area. The United States Government had taken a position of not providing helium to some foreign Countries as it was considered a rather valuable resource. You may recall the fatal crash of the German Airship, the Hindenburg in New Jersey. That aircraft did not have helium inside its tanks to make it lighter than air, it had a highly flammable substance. Even today, the helium production and storage is considered restrictive and thoroughly controlled by the Government.

Wally can also remember a Mexican commercial radio station located in Amarillo with the call sign XELO. For a few years it was allowed to transmit from this American location a very powerful radio signal to cover the northern portion of the United States and many parts of Canada. It was eventually shut down by the United States Government.

About 1940, when he was in the 8th grade, Wally remembers building a radio crystal set receiver at home. He specifically re-

*(Continued on page 15) Wally*

*(Continued from page 14) Wally*

calls using a round, cardboard, oatmeal box to wrap the wires around for the coil.

In 1944, at age 18, Wally graduated from the Carlsbad High School in New Mexico. He had already enlisted in the U.S. Navy Air Corp in February (his birthday month), but was allowed to complete his high school diploma and ordered to report for duty in July. His training base was known as V5, located in Albuquerque, New Mexico. He was in pre-flight training during 1944 and 1945. The war was finally over in the fall of 1945 and Wally was honorably discharged in December 1945 without ever getting to fly a Navy aircraft.

During a training exercise in 1945, Wally had to jump into a pool of water filled with lots of debris, to simulate jumping off of a ship into the ocean. He accidentally struck his head on what was believed to be a piece of wooden log. He sustained a severe injury which basically caused him to suffer from nasty headaches for the next fifty years. As a result, the Navy transferred him to a Navy medical facility near Corona, California, for his recovery.

Now, Wally could not have been that badly injured, because he met a girl on the dance floor of the hospital who quickly helped him recover and subsequently was partially responsible for his plans and actions over the next fifty plus years. That young lady was Joan Jenks and she is still the one and only Mrs. Wally Porter. It should be noted that Joan's father owned and operated a hardware store in Corona, so Wally spent a lot of time there with both of them during his recovery period. Wally remembers that the Navy Hospital attracted a lot of entertainers of the period who would come by the Hospital and put on a performance before they traveled over to the nearby U.S.A.F. base at March Field near Riverside, California.

Upon discharge from the Navy, Wally returned to the Albuquerque area and entered the University of New Mexico to work on his degree in Math. He continued his long distance relationship with Joan who was taking classes at San Diego State University in interior design. She ultimately graduated with her BA in 1947. Wally and Joan had written letters to each other about every day while they were separated. They got married in June 1948 and Wally earned his BS degree in math and graduated in June 1949.

Wally took a job teaching high school math in Albuquerque for the 1948 - 1949 school years. He then moved to Carlsbad, New Mexico and taught the 5th and 6th grades during the day and at a local junior college at night. He really enjoyed teaching math, finance and physics. He stayed there for four years, however during the summer months, he came to California to take classes at Stanford which allowed him to earn a counseling credential.

In 1953, Wally was offered a job as a school counselor in Palo Alto, California. He taught at Wilbur Junior High School, (now called JLS for Jane Lathrop Stanford middle school). Over the years Wally has worked in counseling and math or physics education at Terman Junior High School; Jordan Junior High School; Palo Alto High School and Foothill Junior College. Wally taught school in our geographical area for 40 years !! He finally retired from regular teaching duties in 1993.

Wally and Joan successfully raised three boys in the Palo Alto area. Ben, N7NAG, born in 1950, is a Federal Attorney with the U.S. Attorneys Office. Robert, born in 1955, is a Vice President of the Bank of America. Kenneth, born in 1964, is a technical researcher & librarian for a software company known as Symantec.

Before his retirement, Wally actually worked summers and week ends at several odd jobs simply to keep up his ability to communicate and have something to do that would keep him busy. He worked on an assembly line for Hewlett Packard where his job was to test the new oscilloscopes and volt meters as they were built. He also sold high end camera's at the Keeble Photo Shop in Palo Alto for some time and had the opportunity to process 35 mm color film in a Kodak facility. Clearly, Wally is a multi talented person and a very interesting guy.

In 1956, while teaching at Wilbur Junior High School, Wally set up a school ham radio class and club. They actually built a Heathkit DX-40 receiver and a CW transmitter. Wally then took the FCC radio test and earned a Novice license with the call sign of KN6URO which was issued on 10-15-56(Page13). Less than a year later, Wally took the next series of tests and up-graded his license and of course the FCC took off the N in the call sign. So, Wally still has and uses his original call sign.

Wally started attending PAARA in 1956 and came to many of the meetings because there were usually good speakers and programs that were of great interest to the club members.

He took over the job of newsletter publisher from Chuck Johnson in 1995. Over the years, this publication known as PAARAgaphs, has become the best monthly newsletter of any radio club. PAARA itself has become known as the friendliest, premier, state of the art radio club in Northern California. There is no doubt that we can attribute this growth and recognition to several actions or activities

of the club. However, Wally's ability to consistently create such a work of art that includes news, operational suggestions, advertising and technical opinions on a regular basis is, in my humble opinion, the real reason our club has done so well and is recognized by so many in our hobby and the amateur radio service in general.

I have worked closely with Wally for many years in preparing articles for this newsletter. I can tell you with no reservations that PAARAgaphs would not exist today, as we know it, without Wally and his unique ability to edit and publish the document and massage the various personalities that submit material for inclusion. I believe that every member of our little radio club should thank Wally personally for the work that he has done and the time he has donated. He is truly a class act. I, for one, will miss working with him.

Thank you, Wally. PAARA really appreciates what you have done for the club and the membership.

*~73 de AA6T. Terry Finn.*

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Don't forget, the NEW YEAR is here -- 2009!  
 If you haven't already done so, it's time to renew your membership in PAARA and to verify your information in the club roster.

Rick, K6RDM, will be at a table in the back of the room to enter any changes in your listing, classification, call sign, or contact information and to renew your membership. The dues for 2009 are \$20.00 through December 31<sup>st</sup>.

We also want to introduce some new members:

Jack Pines	W1VSL	Palo Alto
Michael Gregg	KF6WRW	Mountain View
Ethan Frantz	KI6NVN	East Palo Alto
Alan Gellar	K6ADG	Redwood City
Lloyd Thiverge	KG6CXS	Redwood City
Tim Dolan	K6OM	San Carlos
Perry Eckhoff	KI6OPZ	East Palo Alto
Joe Horne	KB6OWG	Mountain View
Paul Petach	KI6QXV	Cupertino
Joseph Krensavage	KI6THO	Menlo Park
Umesh Ghodke	K6VUG	Fremont
Frank Wiley	KJ6FEW	Palo Alto
Bob Marston	K6TR	Fremont

Welcome aboard!  
 Rick Melrose K6RDM  
 Secretary & Memberships

The following is a list of PAARA badges, ordered and paid for, that we have been holding for over a month, some much longer than that. If yours is on the list, come to a meeting soon and pick it up!

- Don, AE6PM
- Jaime, AI6ER
- Mike, K4AZY
- Mark, K6FTF
- George, K6TSR
- Chuck, KF6SRD
- Francis, KG6QKN
- Kali, KG6QKO
- Horacio, KI6EEX
- Art, KI6GY
- Jason, KI6NOV
- Tanya, KI6TAR
- Joani, N6JCY
- Michael, N6MEF (2 badges)



## Technical Tips

By Vic Black AB6SO

### What is the Best

#### Mobile/Portable Antenna?



There is no such thing as a BEST antenna. All antennas are compromises. When you emphasize forward gain, you sacrifice other parameters such as front-to-back ratio, band width, half power beam width, size, weight, cost per dB, take off angle, etc. The Zuni Loop Expeditionary Force once put up a 7 element wire yagi hanging on a nylon catenary at 95 feet. They worked Field Day using QRP (5 Watts). They bored a hole through Kansas from Southern California, but couldn't work anything a few degrees off their main beam direction. It would be OK for casual DX operation, but you can't rotate yagis fast enough to make them work well in contests.

For a world wide DX Contest the best antenna may be a vertical, omni directional antenna since you can't rotate a yagi fast enough to handle calls coming in rapidly from all directions at once. Maximum performance comes from operating with the base of the antenna a few feet above salt water.

The biggest bang for the buck comes when you go from a dipole to a 2 element yagi (3dB). That's only about 1/2 S-unit at the receiving end. In order to get another 3 dB to raise your signal a whole s-unit, you must double that antenna (ie. to 4 elements). If you double that (8 elements) you gain only another 3 dB (1/2 s-unit). In order to get another whole s-unit gain, it's necessary to double that antenna to 16 elements. You get into diminishing returns really fast. Don't believe all of the gain claims in advertisements. The theoretical maximum gain for a yagi is the number of elements squared (Uzkov limit). So 3 elements will give a max gain of 3 squared, or 9 to 1, which is less than 10 dB, for instance.

## Column: Spidey's Web of Technology

### Title: Symbols for Equipment—Part 1:





You've seen them your whole life—all those symbols, icons, and pictograms on equipment of all kinds. From the pause, play, and fast-forward symbols on your music player to the symbols on your car's dashboard and controls to the ubiquitous  and  symbols for on and off. Sometimes their function is clear and you know what will happen when you press a particular button. Other times you will only learn the relationship by trial-and-error. Or you may even activate the control multiple times without being able to discern its true function.

But where do they come from? And how do you find out what their meaning is supposed to be? Answering these questions is important for both those using and those designing equipment and software—anything with a button, control, or display. Unfortunately, in my experience, very few engineers or designers know the correct answer to these fundamental questions.

This lack of knowledge means the engineers and designers will either guess at what the symbols mean and which one they should use, ask a colleague whom they think will know the answer, invent a whole new symbol when one already exists, use plain or abbreviated text—or worse—unknowingly use a symbol that already exists but which has a completely different meaning than what they are using it for.

And to those who say text labels are better anyway, aside from text labels making life difficult for non-English speaking users, the greater variety in the shape of symbols and the larger size (as compared to the much smaller size of any particular letter when multiple letters are crammed into the same space as one symbol) can make them recognized more quickly and from a greater distance.

The result of using the wrong symbol on devices we use is always confusion, a longer learning curve, and frustration for the user. Sometimes, it can be dangerous. Why should I have to learn different symbols for the control and alternate keys on PC and

Macintosh keyboards? Why do I see the  icon on keychain remotes, telephones, and computer keyboards, when its clear definition according to its developer, the International Standards Organization (ISO), is “rearward moving machine alarm” (ISO 7000-2104), yet none of these devices has (or needs) a backing up alarm? Why can't their designers have used  (panic alarm system), , (speakerphone), and  (loudness), respectively, instead? Because most of today's engineers, designers, and product managers don't read standards or specifications. This was a maxim I theorized during the decade I spent as the technical editor of a leading computer-aided design magazine, and confirmed during the two years I spent as a technical marketing manager at a leading graphics card company, and talking to many, many product managers and engineers over the years.

In my humble opinion, there is no good excuse for causing this kind of grief for the end-user. But in my long experience in the tech industry, and especially by the recent research I've been doing on the topic, I have found many reasons for this sad state of affairs.

## The Origins of Symbols

Symbols, icons, and pictograms seen in everyday life are typically developed by one of a handful of international technical organizations. The International Electrotechnical Commission (IEC), International Standards Organization (ISO), and the International Telecommunication Union (ITU) are the three primary organizations, and each has many committees and subcommittees that are tasked with developing and publishing symbols. They sometimes work together and reference each other's standards, but not often or closely enough, based on the quality of the standards I have purchased from these groups. IEC and ISO have the closest linkage, via their Joint Technical Committee 1: Information Technology Standards (JTC 1), and their collaboration on a common online database of “Graphical Symbols for Use on Equipment” (symbols from the ISO 7000 and IEC 60417 standards, found at <http://www.graphical-symbols.info> [subscription required]).

But not all symbols commonly found on equipment are in this database. Some are hidden away in multiple specialized standards. For instance, multimedia controls (play, fast-forward, etc.) are in ISO/IEC 18035, and not all of those symbols are contained in the IEC/ISO joint database.

## Quality Symbol Design?

Unfortunately, not all symbols created by the IEC, ISO, ITU, and others are well-designed. So even if you obtain and read all of the standards that could be applicable to the product you are designing, there may not be an existing symbol for a control or feature you have, or the symbol that does exist isn't as easy to understand as the rest, or the mapping between a graphically well-designed symbol or set of symbols and the functions they illustrate may be convoluted.

My point here is that the international symbol standards are not the Holy Grail. They should and must be consulted when de-















*(Continued on page 18) Symbols*

(Continued from page 17) Symbols









signing even the simplest of products, but you should not assume that these standards always have the best answer. You might even be able to design a better symbol. But this should not be done unilaterally, and should not be done at all without proper testing for legibility, as described in the various IEC and ISO standards.

## Rarely seen radio control icons

Having purchased many of the IEC and ISO standards, subscribed to their symbol database, and downloaded other symbol standards, including the ITU-T telephony standards, I have found a number of symbols that clearly apply to controls and features often found on amateur radio gear, but upon which I have rarely or never seen these symbols used. Some of these are included below.

 Tuning (5045)	 RF attenuator (5044)  Automatic frequency control (5046)
 Morse key (5213)  Automatic search tuning (5439B)	 Foot-operated (1853)  Single/multiple digit selection (5446)
 Foot switch (5114)  Band selection switch (5447)	 Hand-held switch (5322)  Mono Headphones (5077)
 Speak (5210)  Stereo headphones (5078)	 Listen (5211)

Using the mono and stereo headphone symbols as appropriate would make it easier to know whether an adapter will be needed when plugging stereo or mono headphones into an audio jack, to ensure signal is delivered to both ears, or even at all.

And although no standard I have yet found describes a push-to-talk symbol, several of these symbols could be used for that purpose. A jack for an external PTT switch could use a combination of , , and  (or better yet, first combine  and  into one symbol to clarify the switch is a foot switch) placed next to the PTT jack. Or might it be better to use  and  to indicate the PTT switch toggles between talking and listening? Or should  be used for the monitor switch/button?

It is this kind of uncertainty that arises when you actually try to use these symbols on equipment that makes it clear to me that the IEC and ISO symbol committees need more skilled people to help them further develop these important efforts.

## Congratulations: January 9<sup>th</sup> 2009 PAARA Raffle Prize Winners

- 1<sup>st</sup> Prize:** Bob Shelton / K6TGR / Yaesu FT-2800M / 2m / 65W / Mobile
- 2<sup>nd</sup> Prize:** Darryl Presley / KI6LDM / Yaesu VX-150 / 5 Watt / 144MHz HT / with Charger and Ni-MH Battery
- 3<sup>rd</sup> Prize:** Bob Shelton / K6TGR / Shure 450 Series II Desk Microphone
- 4<sup>th</sup> Prize:** Elaine Gibbons / WA6UBE / Deltran Battery Tender
- 5<sup>th</sup> Prize:** Bob Golder / WA2CFN / ARRL 2008 Handbook with CD-Rom
- 6<sup>th</sup> Prize:** George Choi / AB8PQ / Iron Horse Magnetic Antenna Mount
- 7<sup>th</sup> Prize:** Phil Steffora / K6TT / CQ Amateur Radio Calendar
- 8<sup>th</sup> Prize:** Mike Pechner / KI6QNZ / NARCC Northern California Repeater Directory

**PAARA Members and Visitors: THANK YOU FOR YOUR SUPPORT of the exciting monthly raffles! Since Feb. 03, 137 Radios, including TWO Elecraft K3's, a Yaesu FT-847, an Icom 706 MK IIG, a Yaesu FT-897D, and TWO Elecraft KX1's have gone to Fellow Hams, THANKS TO YOU!**

PAARA had a remarkable year in 2008! If you aren't a member, please join PAARA now, and experience fun 2009 events with the "friendliest club around."

~K6AK Jim



## PAARA February 6<sup>th</sup> 2009 Meeting

### PAARA “The Friendliest Club Around”

Palo Alto Amateur Radio Association, Inc. [www.paara.org](http://www.paara.org)

Date and Time: Friday, February 6<sup>th</sup> at 7 p.m.

Menlo Park Rec. Center, 700 Alma St., Menlo Park, CA.

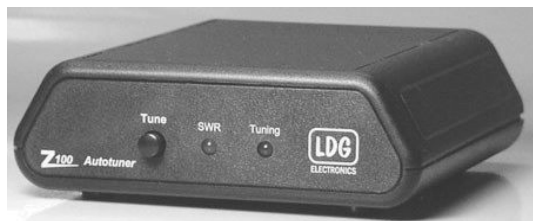
Welcome Members and Visitors / Raffle Prizes:

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THIRD PRIZE: ARRL Handbook with Bonus CD

FOURTH PRIZE: MFJ Ultralite 144-148 MHz Magnet Mount Antenna

FIFTH PRIZE: Iron Horse Flat Stake Bed Antenna Mount

SIXTH PRIZE: Sterling Deluxe Wire Stripper

SEVENTH PRIZE: NARCC Northern California Repeater Directory 2009

EIGHT PRIZE: ARRL Minilog

Since Feb. 03, 137 Radios, including TWO Elecraft K3's, a Yaesu FT-847, an Icom 706 MK IIG, a Yaesu FT-897D, and TWO Elecraft KX1's have gone to Fellow Hams.

Special Thanks to Bob, Howard, Dan, Mark, and everyone at HRO for their continued SUPPORT!

~K6AK Jim

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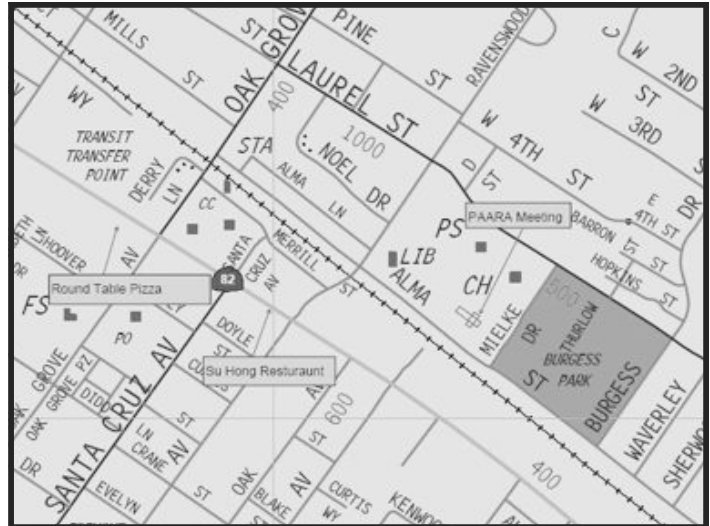
**PAARA Radio NET**

and Swap Session  
 every Monday evening  
 8:30pm local time

on the  
**145.230 –600 MHz repeater**  
 PL tone off

*control operators:*

Week	Operator
1 <sup>st</sup> Mon.	Pink Foster, KG6ILA
2 <sup>nd</sup> Mon.	Peter Sheerin, K6WEB
3 <sup>rd</sup> Mon.	Doug Teter, KG6LWE
4 <sup>th</sup> Mon.	Terry Ridgeway, N6ZAG
5 <sup>th</sup> Mon.	Doña Kerns, KI6DAR



**Directions to PAARA meeting:**  
<http://paara.org/meetings/>

**Palo Alto Amateur Radio Association**

**P.O. Box 911, Menlo Park, California 94026-0911**

Club meetings are on the first Friday of each month, 7:00pm at the Menlo Park Rec Center, 700 Alma Street, Menlo Park, CA.

Radio NET & Swap Session every Monday evening, at 8:30pm, on the 145.230 –600 MHz repeater, PL tone off.

Membership in PAARA is \$20.00 per calendar year, which includes one subscription to PAARAgaphs \$6 for each additional family member (no newsletter).

Make payment to the Palo Alto Amateur Radio Association, P.O. Box 911, Menlo Park, CA 94026-0911

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Food will be served at 6:00 sharp, so guests will be on time for the PAARA meeting. Those arriving late will be responsible for their own food order.

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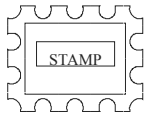
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- Not-for-profit ads by association members for ham-related items and wants. No cost for business card-size ads (additional space at \$2.50 per business card size).
- For Profit organizations and/or individuals: \$5-business card size, \$25-half page, \$50 full page or back cover.

These fees may be reduced or waived in exchange for a valuable consideration that is given to the Association or its general membership. Such consideration must be in addition to any existing arrangements with the association. The PAARAgaphs editors reserve the right to reject any ad deemed to be not in the best interest of the Association.

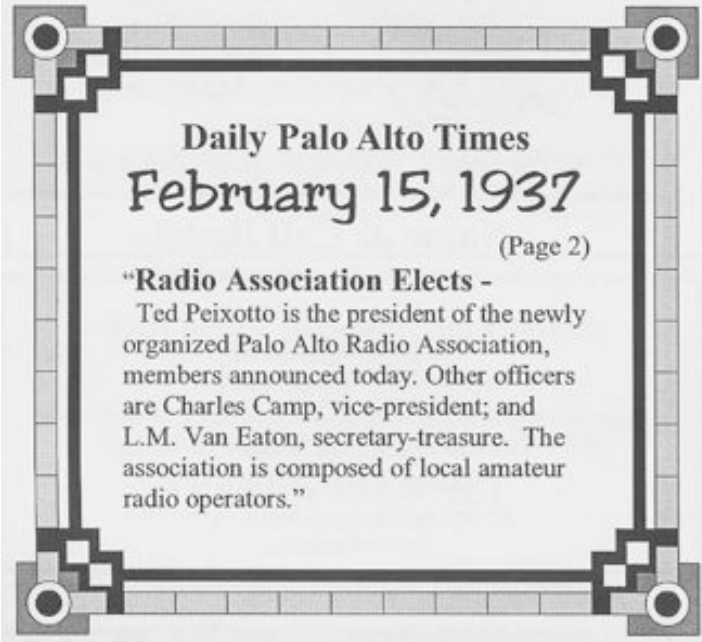
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# PAARAgaphs—February 2009

Palo Alto Amateur Radio Association, Inc.  
PAARAgaphs Newsletter  
P.O. Box 911  
Menlo Park, California 94026

## FIRST CLASS MAIL



Daily Palo Alto Times  
February 15, 1937

(Page 2)

### “Radio Association Elects -

Ted Peixotto is the president of the newly organized Palo Alto Radio Association, members announced today. Other officers are Charles Camp, vice-president; and L.M. Van Eaton, secretary-treasure. The association is composed of local amateur radio operators.”

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