

PAARAgraphs



The Official Newsletter of the

Palo Alto Amateur Radio Association, Inc.Celebrating 82 years as an *active* amateur radio club—*Since 1937*


Using Piezoelectric Material as a Radiating Element for VLF Communications

Mark Kemp

VLF transmitters have been successfully used for many decades for long-range, over the horizon communications. However, producing a portable transmitter is very difficult because the scale of the transmitter is several orders of magnitude smaller than the electromagnetic wavelength. As part of the DARPA AMEBA program, SLAC, SRI, and Gooch and Housego are working to apply a piezoelectric material as a radiating element. This concept allows the transmitter and antenna to be resonant at the acoustic wavelength and therefore no external impedance matching elements are necessary. Further, an ultra-low loss single crystal of lithium niobate is used as the piezoelectric, and Qs up to 600,000 are demonstrated. Finally, we demonstrate a bandwidth 83x beyond the Bode-Fano limit by dynamically modulating the crystal resonant frequency. This talk will discuss the concept, recent experiments, and next steps for the program.

Mark Kemp is a Senior Staff Scientist at SLAC National Accelerator Laboratory. He is the PI of several early stage R&D programs funded through DARPA, DoE, and DHS. He was the project manager for the baseline power modulator for the International Linear Collider. He invented a technique for a self biasing pulsed depressed collector for high power vacuum electronics as well as an ultra compact neutron generator using piezoelectrics. He was the technical and general conference chair for the IEEE International Power Modulator and High Voltage Conference. He received his BS, MS, and PhD in Electrical and Computer Engineering from the University of Missouri.

Upcoming Events

Aug 2 Sept 6 Oct 4	PAARA General Meeting, 7:00 PM Cubberly Community Center, Room H-6, 4000 Middlefield Rd, Palo Alto
Aug 21 Sept 18 Oct 16	Board Meeting, 7:00 PM Everyone welcome! Location: Marty, W6NEV, QTH 

President's Corner

August 2019

I'm in recovery right now from late nights and early mornings in Newington. It was hot and humid in that East Coast way. But the seafood was really great. All in all the second 2019 ARRL Board Meeting was a great success.



For once I had a smooth pair of flights into Bradley International, and was whisked away to the Windsor Marriott. This hotel has become very familiar to me now. It's where we hold the ARRL Board meetings twice a year. This time, however, I arrived early, on Tuesday night, to attend committee meetings. The Board meeting doesn't really start until Thursday evening. On Wednesday morning I got up for the 7:30 AM shuttle to ARRL HQ, but ended up riding instead with New England Division Vice Director Mike Raisbeck, K1TWF. I was headed to the Logbook Of The World Committee meeting. It was my first time meeting some of the staff in person. We had a healthy discussion of

(President — Continued on page 5)

Volunteerism

One dictionary description of volunteerism is, *“the practice of doing work for good causes, without being paid for it.”* Another is, *“the practice of providing time and skills for the benefit of other people and causes rather than for financial benefit.”* Society views volunteerism as *“enriching our society, bringing us together as a community, and helps keep businesses and organizations afloat”*.

Bringing us together as a community and keeping organizations afloat has a direct correlation to clubs as well. Without volunteers to fill the needs of the club, the club dies. The challenge is to garner the interest of enough members to do the work of the club so a small percentage of the members don't end up doing all the work of the club and in turn, the club thrives.

How does PAARA fare? Currently, there are 218 members. Of them, there are roughly 24 volunteers or 11% of the member's volunteer. These numbers don't include all the members and non-members that help during Field Day but do include the leadership team of Field Day. Not bad one might say but one needs to factor in that there are roughly 100 volunteer activities that the 24 volunteers cover! That averages out to roughly 4 activity per volunteer! One also has to consider that currently there are 9 activities that don't have a volunteer and another 5 that are in need of a new volunteer. Eliminating the 9 open activities from the total leaves 91 that are currently filled to one degree or another bringing the average per current volunteer to 3.78 activities each.

Averages are fine but the reality is a bit different as the number of activities covered by those 24 volunteers ranges from 1 to 14! Currently, there are 8 members (3% of the total members who cover 4 or more activities). They are covering 56 of the activities (61% of the 91 covered activities) of the club for an average of 7 per volunteer! That's a sizable number of activities covered by a very small number of volunteers.

One has to wonder what's going on with these 8? Why are they volunteering so much? Do they feel compelled to cover important activities of the club that another volunteer can't be found to cover? Are they getting something out of volunteer-

ing that the other members don't see or don't know they could enjoy? Is the volunteer's enjoyment of PAARA and amateur radio so much stronger than the non-volunteer? All great questions with many different answers for each volunteer. If you're at all interested in finding out the answers, might I suggest talking to one of the 8? If you don't know who they are, ask as it's not hard to figure out who they are.

Being a member of a club to keep your interest in the hobby alive, share you experiences with others, or to learn from others different aspects of the hobby is a great reason for joining. Without a doubt, amateur radio has so many avenues to explore with respect to bands, modes, methods, antennas, radios, contesting, Ecom, DX and many more. Being a member of a club that doesn't specialize in any one of the areas opens one's eyes to other opportunities to explore within the hobby. Additional gratification can be garnered by volunteering for an activity for the good of the club.

Why do you come to the meetings? To meet new people or see old friends? To learn something new? To get that challenging question answered? Do you go away from a meeting feeling a little more energized with a bit of skip in your step? The similar thing happens when you volunteer for one of the activities of the club. The only difference is, the skip you give is to other club members and yourself. You're impacting the whole club and its members with your volunteerism! Consider joining the force of the few. Believe me, the force is stronger when there are many hands making light work of things! There is a wide array of activities that need a volunteer champion each with varying degrees of effort required. Many of the activities could use a second volunteer to share the workload or to cover for the other volunteer.

Speaking as one of the 8, we look forward to increasing the numbers of volunteers through your participation. PAARA is a very strong club that has a great reputation amongst others in the ham community. This reputation didn't happen by accident but through the hard work of a few dedicated volunteers. Please consider volunteering, the club needs your support.

73 K6SV

(Volunteer Lists follow)

PAARA Elected Positions	
Activity	Elected
President	Kristen K6WX Position opening up
Vice President	Marty W6NEV
Secretary/membership database	Jim K6SV
Treasurer	Ron W6AZ Position opening up
Director	Joel KD6W
Director	Walt K6WGY
Director	Larry (Rebar) N6DB
Director	Darryl KI6LDM

Volunteer Positions	
Activity	Volunteer
Assistant to the treasure	Bob KD6KYT
ASVARO rep	Clark KK6ISP
Election Chairman	Position appointed before elections
PIO (Public Information Officer)	Position open
Photographer	Position open
Mail P/U	Vic AB6SO
New Ham Mailing List	Darryl KI6LDM
Coffee/Cookies at Meetings	Ric N6AJS, Mikko, AB6RF
PAARAgaph Editor	Bob K6RWY
PAARAgaph Backup Editor	Jim K6SV
PAARAgaph Generate Mailing Label	Jim K6SV
PAARAgaph Mail Issues	Ric N6AJS
PAARAgaph Editorial Board	Bob, K6RWY, Ron, W6AZ, Joel, KD6W, Kristen K6WX, Vic AB6SO
PAARAgaph Advertising	Walt W6WGY
PAARAgaph Member Profiles	Diana KK6YGM
PAARAgaphs Technical Tips	Vic AB6SO
Station Trustee W6OTX, K6YQT, W6ARA	Gerry N6NV
Station Trustee K6OTA	Ron W6AZ

Activity	Volunteer
Property Manager	Gerry N6NV — Position opening up
Property Storage	Gerry N6NV, Doug KG6LWE
Flea Market Sales	Gerry N6NV, Joel KD6W — Position opening up
Chaplain	Rick K6RDM
Badge Coordinator	Doug KG6LWE
Historian	Position open
Historical Document Scanning	Greg KE7DO
Historical Document Storage	Kristen K6WX, Gerry N6NV
Raffle Coordinator	Jim K6AK — Position opening up
Webmaster	John K6MM
Technical Coordinator	Joel KD6W
Repeater Maintenance	Joel KD6W, Jim K6SV
PAARA Net Coordinator	Doug KG6LWE
QSL Manager	Marty W6NEV
Speaker Coordinator	Marty W6NEV
PAARA Merchandise	Marty W6NEV
Field Trip Coordinator	Marty W6NEV
Meeting Room Use Filing	Marty W6NEV
Pacificon Special Event Station Captain	Mikko Sannala, AB6RF
PAARApLink Coordinator	Kristen K6WX
PAARApLink Food	Position open
Amtech Day Like Event Coordinator	Position open

Field Day	
Field Day Coordinator	Doug KG6LWE
Field Day Coordinator assistant	Marty W6NEV
Laptop Maintenance	Larry (Rebar) N6DB
CW A Captain	Kristen K6WX
CW B Captain	Ric N6AJS
Phone A Captain	Larry (Rebar) N6DB
Phone B Captain	Marty W6NEV
VHF/Satellite Captain	Joel KD6W
GOTA station Captain	Christopher AI6KG

GOTA station Captain	Christopher AI6KG
Receive W1AW Bulletin	Position open
Thursday & Friday Overnight Watch	Position open
Publicity/Bonus Points	Bob KD6KYT
Safety Officer — Primary	Rob KC6TYD
Safety Officer — Backup	Jim K6SV
Network	Daniel K6SEE
NTS traffic	Pink K7ILA— Position opening up
Pictures	Kristen K6WX, Jim K6SV
Public Info Table	Jim K6SV
Food and drinks	Jim K6SV
FD Log Dupe Report	Larry (Rebar) N6DB
ARRL Report	Jim K6SV
Flea Market	
Flea Market Coordinator	Kristen K6WX
Ticket Sales (2:30 AM start)	Clark KK6ISP
Pickup of supplies from ASVA-RO locker (Friday)	Doug KG6LWE, Jim K6SV
Generator	Doug KG6LWE
Storage of trailer overnight	Darryl KI6LDM
Trailer transport to the Flea Market site (5 AM)	Jim K6SV
Purchase drinks & coffee additives	Jim K6SV
Setup food tent at 5:30 AM	Jim K6SV, with others
Fill Coffee Water Jugs	Jim K6SV, Darryl KI6LDM
Cash box	Bob KD6KYT
Order/Pick-up Donuts	Marty W6NEV
Brewed Coffee 5:30 AM	Darryl KI6LDM
Sell coffee, drinks, and donuts (3-4 people)	Positions open
Monitor Venders through the Event	Kristen K6WX, Darryl KI6LDM
Close out cleanup crew	Position(s) open
Pack ASVARO supplies, transport to locker	Doug KG6LWE, with others

Club Calls

Hi - nice club web site. I noticed the comment there that you weren't sure just how far back the club had W6OTX. We had W6OTX and K6YQT back in 1967-1968. We were in an RV trailer in (as I recall) Menlo Park and had a yellow Gonset Communicator with a CD decal on it, a two-meter beam on the trailer, and an old WW-II surplus ART-13 that had not yet been set up to work (although it was fascinating to watch all the servo motors run around, HI). I don't remember what else was in there. That's a LONG time ago now. I lived on Bellair Way in Menlo Park, which is West of the Alameda on the road up into Sharon Heights. I started out with WW-II surplus stuff, and ended up with a used Heathkit DX-100 with an SB-10 sideband adapter I got from Quement Electronics in San Jose. I got my Tech in May '67, General in August '67 and Advanced in December '67, all at the FCC S.F. Field Office. I was able to get us some surplus Western Union teleprinters, and when I had to move back East in '68 I donated all that and some antennas, etc., to the Club. I hope someone was able to use it.

Our PAARA Field Days were up on top of the Coastal Range, with that RV trailer, surplus generators on skids, and other stuff. It was quite an operation. The nighttime view was beautiful with the whole Bay Area in view. I assume we made a good many 2 meter AM contacts with that Gooney Box, but I honestly don't remember at this point.

I got my Tech in May '67, Gen. 8/67, Adv. 12/67. My call then was WB6WLH. I was in PAARA '67-'68, - had to move East when my Dad was transferred. He was the Director of Engineering for Sierra Electronics '60-'68 (it was a subsidiary of Philco/Ford) and was transferred to the Apollo effort at Goddard Space Flight Center (GSFC) Greenbelt MD in Fall 1968.

I am a '67 grad of WHS . I ended up working at NASA GSFC also (not for Philco/Ford) on Communications for Apollo 13/14/15. Even met Neil Armstrong there when he came by one day to

(Club Calls — Continued on page 5)

(Club Calls — Continued from page 4)

thank everybody. I moved to Florida in late 1971, and went on USN active Duty January '72 on Bahrain (reciprocal call MP4BJP - THAT was fun!). Considering the alternative at the time, Bahrain was a great place to be. I'm now KD4SR near Orlando. ARRL/AMSAT LM. Always loved PAARAgaphs.... Haven't been back to California since we left in 1968, although I came close once - I flew a Cessna 172 from Orlando to the Grand Canyon, then on to Las Vegas, then back to Orlando in 1982 - wonderful trip...

Great to see the Club doing so well.

Vy 73,
Joe

Joe Lewis KD4SR ex WB6WLH WA3LRS
WB4WPP MP4BJP ex PAARA

(President — Continued from page 1)

the state of LOTW, followed by some thoughts on how to get more resources for improvements. We talked about what might be done in the future, as well as how to implement some best practices that the software industry uses. The meeting went until mid afternoon, after which we went back to the hotel. The evening was spent with some of the Board members who were there early and with whom I speak frequently. I had some great sea scallops - the kind that New England is famous for. And of course we went to the bar afterwards.

Thursday was another early morning meeting, this time for the Programs and Services Committee. This is the committee responsible for proposing changes to contests and awards. It also handles all of the programs that the League is well known for. We met on the second floor of W1AW in what is called the "club room". I didn't even know such a thing existed. It was very special to be in there. We spent the day talking about feedback we got from the Contest Advisory Committed and the DX Advisory Committee to decide whether to recommend changes or not to the full board. We also made decisions about the various annual awards from a pool of candidates. In the middle

of this, I was called to a lunch with the Electromagnetic Compatibility Committee to discuss wireless power transfer (WPT) and how it might affect our bands. I was drafted to work closely with a few others on WPT for cars. We are going to try to understand the state of the industry and the technology. After lunch I spent some time with Ed Hare, W1RFI, in the ARRL Lab and heard some great stories about the shelf full of projects displayed there. Ed is a great guy and fun to listen to. After a few more hours in the PSC, we all headed back to the hotel for the informal start of the Board meeting. We had some important issues to discuss around issues before the FCC. Then we went to the bar.

Friday morning the real Board meeting started at 9 AM. The agenda this time seemed not too long. Before long we were deep into the various motions up for discussion. Things were going fairly quickly, with some of the most difficult issues out of the way early on. Before I knew it, it was 5 o'clock and the meeting was adjourned for the day. We had a nice dinner in the hotel, followed by a trip to the bar.

Things resumed Saturday morning, but quickly were bogged down in minutiae that took a lot of time. We slowly slogged through the Director's motions before finally finishing around 4:30. The meeting basically runs until the agenda is complete, so I was relieved that we made it before 5. In the middle of this I stepped outside to feel the 97° heat - yuk! A bunch of us went to dinner at an Indian restaurant in Springfield Massachusetts, where we were served by a close friend of an Indian ham who recently became a silent key. Getting back to the hotel, we of course, went to the bar where we talked and drank until midnight. As you can see, this is an important part of these Board meetings.

I had a horrible flight back that took about 15 hours. My luggage was lost for a day. But who cares. I had a great time trying to make ham radio better for you and everyone else. I am really honored to be representing you all in Newington and hope to continue doing so. CU SOON DE K6WX



July Raffle Winners

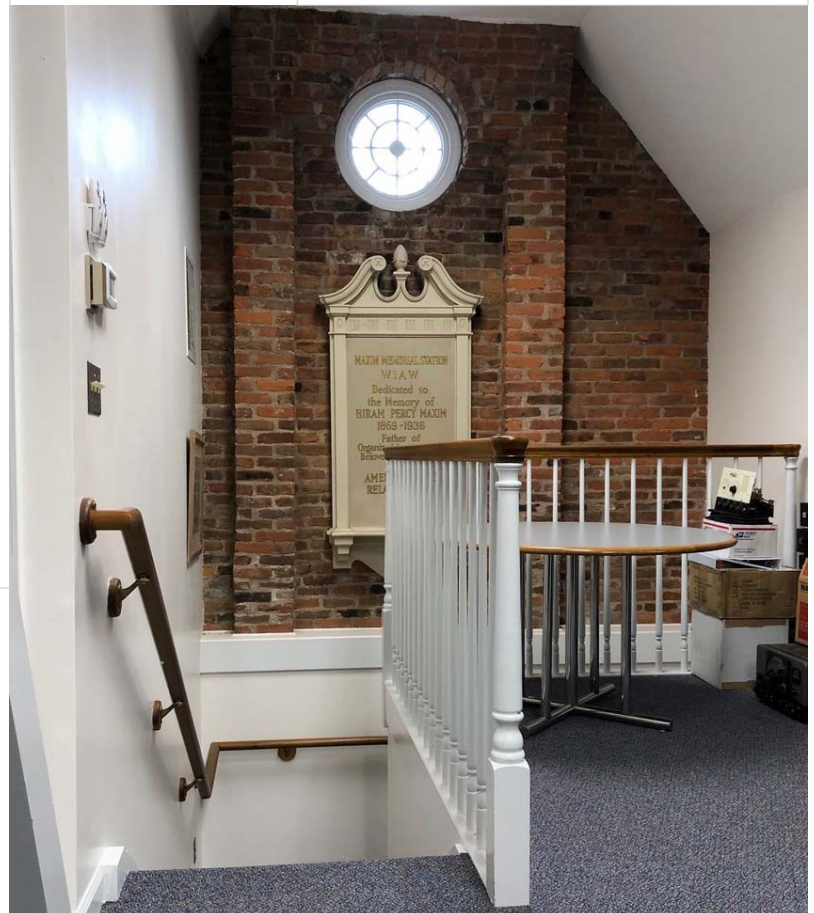
Front to Back, Left to Right

- 5th 49'ers Baseball Hat, Kristen, K6WX
- 7th Dummy Security Camera, Kristen, K6WX
- 1st Baofeng Dual-Band HT, John, KF6YXN
- 6th External 5.1 Sound Card, Marty, W6NEV
- 3rd Midland Weather Alert Radio, Joel, KD6W
- 2nd Arrow II Split-Boom, Dual-Band, Hand Held Yagi, Bob, KD6KYT

Not Shown:

- 4th Coast Emergency Area Light, Steve, WB6KIO

Below: ARRL "Club Room"
 Plaque reads in part:
 MAXIM Memorial Station
 W1AW
 Dedicated to the Memory of
 HIRAM PERCY MAXIM
 1869—1936



Palo Alto Amateur Radio Association, Inc.

PO Box 911 Menlo Park, CA 94026

Officers

President	Kristen McIntyre, K6WX kristen@alum.mit.edu	510-703-4942
Vice President	Marty Wayne, W6NEV w6nev@arrl.net	408-234-8023
Secretary	Jim Thielemann, K6SV thielem@pacbell.net	408-839-6815
Treasurer	Ron Chester, W6AZ ron@taxhelp.com	408-243 2221

Directors

Director ('18-'20)	Joel Wilhite, KD6W kd6w@arrl.net	408-839-5948
Director ('18-'19)	Walt Gyger, K6WGY walt@tradewindsaviation.com	408-921-5901
Director ('19)	Larry Rebarchik N6DB n6db@arrl.net	650 465-8210
Director ('19)	Darryl Presley, K16LDM ki6ldm@arrl.net	650 255-2454

Appointed Positions

Membership	Vic Black, AB6SO ab6so@smrn.com	650-366 0636
Database	Jim Thielemann, K6SV thielem@pacbell.net	408-839-6815
Chaplain	Rick Melrose K6RDM K6RDM@yahoo.com	408-341-9070
Public Affairs	<i>Position Vacant</i>	
Station Trustee W6OTX, K6YQT, W6ARA....	Gerry Tucker, N6NV	
Station Trustee K6OTA ...	Ron Chester, W6AZ	
Property Manager	Gerry Tucker, N6NV	
Asst. to the Treasurer....	Bob Korte, KD6KYT bob@rgktechsales.com	408 396 4745
Badge Coordinator	Doug Teter, KG6LWE dteter@wvci.com	650-367-6200
Historian Position	<i>Position Vacant</i>	
Raffle Coordinator	Jim Rice, K6AK	650-851-2274
Field Day Coordinator ...	Doug Teter, KG6LWE	650-367-6200
ASVARO Rep.....	Clark Martin, KK6ISP kk6isp@comcast.net	
Webmaster	John Miller K6MM webaron@gmail.com	
Technical Coordinator ...	Joel Wilhite, KD6W kd6w@arrl.net	408-839-5948
QSL Manager	Marty Wayne, W6NEV	408-234-8023
Speaker Coordinator	Marty Wayne, W6NEV	408-234-8023

PAARAgaphs Staff

Editorial Board		
	Bob Van Tuyl K6RWY	Kristen McIntyre K6WX
	Ron Chester W6AZ	Vic Black AB6SO
	Joel Wilhite, KD6W	
Editor	Bob Van Tuyl, K6RWY rrvt@swde.com	408 799-6463
Back Up Editor	Jim Thielemann, K6SV thielem@pacbell.net	408-839-6815
Advertising.....	Walt Gyger, K6WGY walt@tradewindsaviation.com	408-921-5901
Member Profiles	Diana Lloyd, KK6YGM dianalloyd76@gmail.com	650-988-8882
Technical Tips	Vic Black, AB6SO ab6so@smrn.com	650-366 0636
Photographer.....	<i>Position Vacant</i>	

VE Exams

Redwood City Main Library, Community Conference Room, 4th Saturday 10:30 am each month and De Anza Park, Sunnyvale, 2nd Saturday 10:30 am each month except November and December. See website for details and exceptions: <http://amateur-radio.org> or Contact Al, 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-September, 6am-12 noon
 Contact: <http://www.electronicfleamarket.com/>

PAARA — Palo Alto Amateur Radio Association

Meets 1st Friday 7:00pm each month at Room H-6, Cubberley Community Center; Net 145.230 - PL 100Hz Mondays at 8:30. See our website at <http://www.paara.org> for more information or contact: Joel Wilhite KD6W, KD6W@ARRL.NET, 650-325-8239

FARS — Foothills Amateur Radio Society

Meets 4th Friday each month at 7:30pm
 Contact: <http://www.fars.k6ya.org>

NCDXC — Northern California DX Club

Meets 3rd Thursday 7:30pm each month,
 Repeater for member info 147.360, Thursday 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 are welcome. Saturday morning net on 146.850 MHz, PL 114.8

50 MHz & Up Group

Meets 1st Thursday each month at 7pm in the Texas Instruments Building E conference room in Santa Clara.
 Contact: <http://50MhzandUp.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 3rd Thursday 7:30pm each month, Belmont EOC, Belmont City Hall, One Twin Pines Lane, Belmont CA 94002. 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

SCCARA

Santa Clara County Amateur Radio Association

Operates W6UU & W6UU/R, repeater 146.985-pl
 Nets: 2m, 7:30pm Mon; 70cm, 10M (28.385) 8PM Thur.
 Meets 2nd Mon each month @ 7:30 PM.
 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
 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 ctcss UHF:
 147.39 (+600) 151.4 ctcss 441.35 (+5.0) 88.5 ctcss
 223.96 (+1.6) 156.7 ctcss 1286.20 (-12m) 100.0 ctcss
 Meetings are 2nd Wednesday of every month except July, August and December.
 Contact: <http://wvara.org>, Bill Ashby N6FFC, 408-267-3118, president@wvara.org

American Red Cross, Santa Clara Valley Chapter

Contact: <http://santaciaravalley.redcross.org> or Scott Hensley KB6UOO, (408) 967 7924
shensley@Novell.com

(Please send changes to PAARAgaphs editor)



James Farrey
 Sales Manager

James Electronics Ltd
 1355 Shoreway Road, Belmont, CA 94002
 Tel: 650•592•6718 x 350 Fax: 650•802•1520
 Direct: 650•802•1511 jfarrey@jameco.com

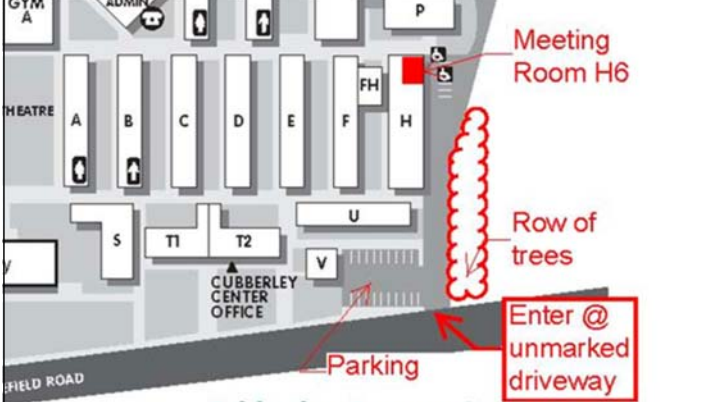
www.jameco.com

PAARA Weekly Radio Net

Info and Swap Session
 every Monday evening at 8:30pm
 on the N6NFI 145.230 MHz repeater

Week	Control Operator
1 st	Joel KD6W
2 nd	Doug - KG6LWE
3 rd	Jack - W1VSL
4 th	Rob - KC6TYD
5 th	Rob - KC6TYD

If you're interested in trying out at Net Control,
 Contact Doug, KG6LWE. It's good practice,



Cubberley Community Center
 4000 Middlefield Road, Palo Alto, CA 94303
 650/329.2418
 650/856.8756 fax
 www.cityofpaloalto.org

**Meeting Location — Middlefield Road
 between San Antonio and Charleston in Palo
 Alto. 4000 Middlefield Road**

Your grandfather told your father and your father told you.
 If he had invested his money in real estate he would be a rich
 man today — what will you tell your children?

Whether to invest or reap the rewards of having invested in
 Real Estate, Call **KARL DRESDEN**, KJ6GUK, full time Realtor
 since 1976 — BRE#00525686

Terrace Associates, Inc., 777 Woodside Rd., Suite B, Redwood
 City, CA 94061; Office Ph: 650-369-7331,
 Fax Ph: 650-369-7339,
KARL Cell Ph: 650-274-8155 General License KJ6GUK
Email: KARLDRESDEN@juno.com

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 Room H-6, Cubberley Community Center.

Radio NET & Swap Session every Monday evening, at
 8:30pm, on the 145.230 –600 MHz repeater, PL 100Hz.

Membership in PAARA is \$25.00 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

Permission is granted to reprint from this
 publication with appropriate source credit.




THE SKY IS NO LIMIT!

**SCHEDULE YOUR
 INTRODUCTORY
 FLIGHT LESSON TODAY**

AT



**Your One Stop Shop For
 Aviation Services**

- > Flight Training
- > Aircraft Rental
- > Pilot Supplies
- > Maintenance
- > Aircraft Sales

Contact
Maya and Walter Gyger
 1-408-729-5100
 mail@tradewindsaviation.com

Address
 2505 Cunningham Ave, San Jose, CA 95148

Information
 www.tradewindsaviation.com

Opening hours
 Monday-Friday: 8 AM – 7 PM; Saturday-Sunday: 8 AM – 6 PM



ARV'S, WA6UUT (SK)
WEDNESDAY
HAM RADIO
LUNCHEON
 Our 11th year!
 - Since May 2, 2007 -
BLACK BEAR DINER
Sunnyvale, California
 415 East El Camino Real
 (Just "North" of South Fair Oaks
 Avenue on El Camino Real)
11:30 AM ~ 3:00 PM
 Website: www.blackbeardiner.com


Many food choices available from the breakfast, lunch or dinner menus. Ample parking is available. Walk in & "bear" left for our location in the restaurant!

NOT A CLUB, CLOSED GROUP OR CLIQUE; AMATEUR RADIO OPERATORS AND FRIENDLY PEOPLE ARE ENCOURAGED TO ATTEND!

PAARA Badges

You can order a \$20 badge from the PAARA web site or at a meeting through Doug Teter, KG6LWE, and usually pick it up at the next meeting.

This space is available.



Have you discovered us?
 Silicon Valley's favorite brick'n'mortar for components and supplies for prototyping
 (408) 727-3693

Anchor Electronics 2040 Walsh Ave, Santa Clara
 Download our Price List PDF
www.anchor-electronics.com

PAARA W6OTX DMR Repeater Frequencies

144 – 144.9625 up 2.5 MHz	DMR—NOR CAL Brandmeister Network
440 – 444.475 up 5 MHz	DMR
1.2G – 1284.15 down 12MHz	Off line
1.2G – 1249.15 half duplex	Off line



PowerFlare® safety lights:
 Ultra-rugged 360 degree LED beacon for your emergency kit, car, home ...
www.powerflare.com

Silicone
RESCUE TAPE
NO ADHESIVE! NO STICKY RESIDUE!
8,000 V 500° F
 ELEC. INSULATION HEAT RESISTANCE

The highest quality coax sealing tape on the market!

ENTER YOUR SPECIAL COUPON CODE TO GET THE PAARA DISCOUNT
 Order online at www.rescuetape.com - (702) 953-0968

Submit items to **PAARAgaphs** by the 3rd Wed to: rrvt@swde.com
 Text: .doc, .rtf, or .txt
 Photos: jpg, png or tiff

Subscription Problems? Contact Database Manager: Jim Thielemann, K6SV,
 408-839-6815, thielem@pacbell.net

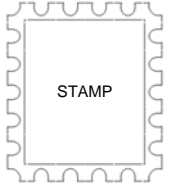
PAARAgaphs Ad Rates

PAARAgaphs accepts paid advertisements from non-members. (short personal ads remain free for members in good standing). **All ad rates listed are per issue.**

- 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 per issue).
- For Profit organizations and/or individuals: \$5-business card size, \$14.00-quarter page, \$25-half page, \$50 full page or back cover per issue. 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. All fees payable in advance by the year with "scanner-ready" copy or text-only ads. **Give payment and copy to Walt Gyger, K6WGY.**

PAARAgaphs — August 2019

Accept no substitutes. Produced and printed in California USA



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

FIRST CLASS MAIL

HAM RADIO OUTLET

MULTI-STORE BUYING POWER!

ICOM



IC-7610
All Mode Transceiver



IC-7300
HF Transceiver



IC-7100
All Mode Transceiver



ID-5100A Deluxe
VHF/UHF Dual Band Digital Transceiver



ID-51A Plus2
VHF/UHF D-STAR Portable

KENWOOD



TS-590SG
HF/50MHz Transceiver



TM-D710G
2M/440 Dualband



TM-V71A
2M/440 Dualband



TM-281A
2 Mtr Mobile



TH-D74A
2M/220/440 HT

YAESU
The radio



FT-991A
HF/VHF/UHF Transceiver



FTDX1200
100W HF + 6M Transceiver



FT-450D
A100W HF + 6M Transceiver



FTN-400XD
2M/440 Mobile



FT-70DR
CAR/M/FM 144/430 XCV

5 Weeks to Ship!

- RETAIL LOCATIONS - Store hours 10:00AM - 5:30PM - Closed Sunday
- PHONE - Toll-free phone hours 9:30AM - 5:30PM
- ONLINE - WWW.HAMRADIO.COM
- FAX - All store locations
- MAIL - All store locations

HRO is family owned and operated by active hams!

ANAHEIM, CA (800) 854-6046	OAKLAND, CA (877) 892-1745	PORTLAND, OR (800) 765-4087	PHOENIX, AZ (800) 559-7288	MILWAUKEE, WI (800) 558-0411	WOODBRIDGE, VA (800) 444-4799	PLANO, TX (877) 555-8750
BURBANK, CA (877) 892-1746	SAN DIEGO, CA (877) 520-9823	DENVER, CO (800) 444-5476	ATIANTA, GA (800) 444-7827	NEW CASTLE, DE (800) 644-4476	SALEM, NH (800) 444-0447	ONLINE STORE WWW.HAMRADIO.COM

©2019 HRO. All rights reserved. Details, 54-line shipping chart, photo and contact. Call will be routed to the nearest store. All prices are in US dollars. All items are sold as-is. No return policy. All items are sold as-is. No return policy. All items are sold as-is. No return policy.