

# PAARAgraphs



The Official Newsletter of the

**Palo Alto Amateur Radio Association, Inc.**Celebrating 83 years as an *active* amateur radio club—*Since 1937*

## 3D Printing For Ham Radio

**Joel Wilhite - KD6W**

3D printers are everywhere and the filament choices are vast. The question is where to begin or how to get started without heaps or frustration and burning hard earned dollars. At first glance it will appear to be very challenging and yes, there are some things to learn to be successful. But once you make your first print, you will watch it in amazement during nearly the entire print cycle. But getting a printer is only part of the story. Your mechanical skills and envisioning parts in 3 dimensions is the other skill you will need to grasp. Joel Wilhite - KD6W will present the case for dusting off your drafting skills and show some software tools for drawing and exporting and slicing parts for "3D" printing, and explain why you should never buy an antenna insulator or worry about lost buttons and knobs.

**Jan 3rd, 7:00 PM, Cubberly  
Community Center Room H-6**

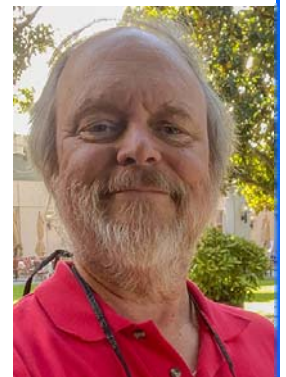
## Upcoming Events

Feb 7	PAARA General Meeting, 7:00 PM
Mar 6	Cubberly Community Center, Room H-6, 4000 Middlefield Rd, Palo Alto
April 3	
Feb 19	Board Meeting, 7:00 PM
Mar 18	Everyone welcome!
April 15	Location: Marty, W6NEV, QTH
April 11	Electronic Flea Market at Fry's in Sunnyvale.
Feb 28	FARS Winter Banquet 2020 <a href="https://www.fars.k6ya.org/banquet/banquet2020/">https://www.fars.k6ya.org/banquet/banquet2020/</a>

## President's Corner

February 2020

Those who missed the January meeting missed some wonderful homebrew presentations. Presenters included Andy, KR6DD, 2M tape measure Yagi; Greg, KE7DO, microwave spot welder; Mikko, AB6RF, RF sampler and tuner control; Bob, WO6W, programmable key 1.3 and Nixie Clock; Mark, AF6DW, 40M WSPR Transmitter; Hugo, KM6WUV, WiFi IoT device; Shri, KA6Q, Abracadabra antenna. Thanks go to all who took the effort to bring their projects to the meeting!



The January meeting also included a challenge to the members to provide input on the meeting

(President — Continued on page 5)

## Pacifcon Weekend Recap

Mikko, AB6RF

After many months of planning and preparations, the Pacifcon 2019 date finally came, and by now I can't believe it's already over. Like for many years now, PAARA plays a big part in making Pacifcon a success, we are in charge of setting up and running the W1AW/6 special event station during the weekend.

To make this happen, many PAARA members stepped up to help. Equipment needed to be brought to the site, tents were set up, antennas erected, volunteers managed the station for 48

serve a special mentioning.

Again this year, Joanna, K6YL, graciously loaned us four complete HF stations worth of gear! HF rigs, linear amplifiers, logging computers and endless list of station accessories.

Christopher, AI6KG, played a key role in planning for the event and preparing new gear to improve our antenna situation. Christopher also manned the station for countless hours, and coached a seemingly endless line of young scouts making HF contacts from the station on Saturday afternoon.

Last but not least, Matt, KK6HWP, pulled a



**Endless Line of Young People Making Contacts at Pacifcon 2019**

hours straight, and then it all had to be taken down and packed away for next year. Whew...

So many individuals lent a hand that it's impossible to name them all, but few key people de-

huge job managing the station during the weekend and also working with the scouts. I don't think he got more than just a couple hours of

*(Pacifcon — Continued on page 3)*

(Pacificon — Continued from page 2)

sleep all weekend!

All of you, and everyone else who helped out, thank you!

The whole weekend was an exciting blast of ham radio action.. It's so much fun to setup a "portable" station like we did, with the tower trailer, five operating stations, networked logging computers and all.

Talking about the antennas, for 10/15/20m bands we again used the KT-34A, and wire dipoles for 40m and 80m. The tribander worked great, but even with Christopher's new common mode chokes, and bit more physical separation between the dipoles, we still had some interference issues when trying to run all the stations simultaneously. The 40m transmitter was getting into 80m and 20m RX, and it was a bit of a bummer to not be able to keep using the 40m station while the scouts kept the 20m station busy. And at night time, we couldn't effectively run 40 and 80 at the same time. For next year we'll have to move the 40m antenna further away from the tower, and the great presentation by K9YC in the November club meeting gave us more ideas on how to improve the isolation between the stations.

We also had couple little hiccups with the logging laptops. One of them gave the infamous "blue screen of death" a couple of times. Looked like the the battery pack in that laptop was overheating, and that caused the laptop itself to overheat. Running the laptop without the battery kept it going reliably for the remainder of the weekend.

Initially on Friday we setup SSB/CW stations for 15m, 20m, 40m and 80m, and a FT8 station on 17m. I was thinking the 15m station might not get much use, and we'd use it mostly as a backup station in case we have equipment failures elsewhere. But as it turned out, 15m was open on Saturday and the other stations kept running fine (for the most part) so we made some QSOs even on 15m.

And on that note, probably the coolest thing to see all weekend was watching a handful of

young hams operate the 15m and 40m stations on Saturday afternoon. The (licensed) kids were making QSOs on their own like total pros, not quite running a pileup, but pretty close. If you think there aren't new young hams getting into the hobby, you obviously weren't there on Saturday :-)

The FT8 station was also very popular. Several visitors were specifically interested in learning more about FT8, how it works, and then to try their hand on the mode. As popular as FT8 appears to be, there are still many hams who haven't taken the plunge to try it, maybe we should expand this area of the station for the next year.

Later Saturday night the special event station tent turned into an impromptu "PAARA party tent". It was great to see so many happy faces there, tell stories and make new friends while sharing an adult beverage or two. Unofficial word on the street is that our tent was the most fun place at Pacificon to hang out that night!

On Sunday when it came time to tear down the station, I was at the same time relieved and sad. It was great to wrap up a successful Pacificon weekend and go home and sleep, but it was also sad to put an end to such a fun weekend. The consolation of course was that we started right away to make new plans for the next year.

And while the special event station is a weekend of letting the people to have fun on the HF, and not a contest, here are the QSO numbers from the weekend. In grand total we made 1305 QSO, 949 on SSB, 39 on CW and 317 on FT8.

## FARS Winter Banquet 2020

**February 28th, 2020 - 6:00PM-10PM**  
**Living Dangerously: Building a 100-Year-Old Electronics Startup in California**

Heathkit is known worldwide as the iconic largest, oldest kit manufacturer in the United States. Dr. Cromarty relates some of the challenges in building an electronics product manufacturing company today and some of the history of Heathkit and where they are now.

## Jan 2020 Board Meeting Minutes

The meeting was held Wednesday, January 15, at the home of Marty, W6NEV. The meeting began at 7:09 pm. Present were Jim Thielemann, K6SV (President), Marty Wayne, W6NEV (Vice President), Bob Korte KD6KYT (Treasurer), Ric Hulett N6AJS (Secretary), and board members Walt Gyger K6WGY, Doug Teter KG6LWE, and Darryl Presley, KI6LDM. A quorum was present.

### President's Report:

Jim Welcomed us all to the January board meeting, the first of the new year, and the first with some new board members.

At the January PAARA meeting, Jim issued the 'President's Challenge': For the members to suggest ideas for improvements to our monthly meetings. This is an ongoing quest: The members should talk to the board (and the board to the members) about their suggestions. Already some interesting ideas have been proposed. See more information under New Business

### Secretary's Report:

As of January 2020, we have 209 club members. Of that total, 104 have renewed their membership for 2020 and beyond, including life members. 35 members renewed in December and 20 in January. Of our membership, 46% hold Amateur Extra class licenses, 5% Advanced, 28% General and 19% Technician. We have two members without callsigns.

We also welcomed new members: Daniel Curry K6DLC, Marc Harper NV6L, Rod Stafford W6ROD, Bryan Hood KN6CPY and Jeff Berkman WB6IQL.

### Treasurer's report:

The treasurer reported that income in December and January were in line with previous years.

### Vice President / Program Chair report:

In coming months, we will have some interesting meeting presentations, including: Joel KD6W on 3D printing, David K6DAJ, topic TBD, and Shri KA6Q, on "The Magic of Radio", Hiro AH6CY will present at a date TBD.

### Old Business:

Board members are encouraged to solicit articles from the membership. If you have an interesting discussion with a board member, suggest that as an article topic: "That would be a great article!" And, remind the members about their articles.

### Walt, K6WGY:

Back-country weekend is the end of April. This is also a good intro to ham radio for newbies. Contact Walt for more information.

### Field trip:

Marty, W6NEV, confirmed we will be treated to a tour at the Hiller Aviation Museum. The tour is scheduled for May 17, 10:00 AM. This is a great site, with plenty of free parking. Price will be approximately \$35 per person, including lunch. Thanks go to Walt K6WGY for arranging this trip.

### PAARA owned equipment:

PAARA owns some radio equipment, donated by members over the year. Proposed and accepted, that we will try to offer one rig for auction at each monthly PAARA meeting. We will establish a minimum bid, and may have a silent auction.

Doug KG6LWE proposed that we can provide loaner stations for beginning HF operators. We would provide a member with a transceiver, some antenna help, and elmer help to get on HF. This would be for a limited term, say 6 or 9 months, with a written contract, some reimbursement for damage, theft, or loss. We agreed to discuss this further at a later meeting.

### Raffle:

Rob Fenn KC6TYD, Shri, KA6Q, are the new raffle wranglers. We plan to reduce the number of prizes to five. Perhaps a radio as the top prize.

Jim has issued the Secretary / Membership Chair responsibilities list. The other board members President, VP, Field Day Chair, Flea Market Chair, Treasurer, Field Day Food Chair are

*(Minutes — Continued on page 5)*

*(Minutes — Continued from page 4)*

requested to provide same.

### **New business:**

The President's introductory letters on the PAARA website have been updated along with the club roster.

The club has been subject to multiple 'Phishing' attacks. Members are cautioned not to respond to any unusual e-mails, specifically requesting money. If there are any questionable e-mails or requests for money, don't take any action until you speak to the requester directly.

The board discussed the delivery of PAAR-Agraphs as a PDF file, by e-mail, as a membership option. This was considered to be a good idea. The board voted on and approved: Beginning with the next meeting, members can choose to receive a printed copy, or a color PDF. Ric, N6AJS, will update the database to reflect PDF / mail choice. There will be a sign-up list for the February meeting. Also, we will e-mail blast the membership with the offer

### **Club Meeting Member Suggestions:**

The club members were challenged at the January meeting to make recommendations for any changes to the meeting. We received some useful input: 1) Reorder the meeting so that we have the technical presentation first, general meeting business last. This was mentioned by multiple club members. 2) Club should maintain a formal list of Elmers: Who can help with what, on the website, or a list. Jim will add this to the President's letter. 3) Reverse the order in which the raffle tickets are pulled. Allow the first prize winner to pick a lower prize. 4) A short, written description of the presented homebrew devices. We should identify the person and project in the following PAARAgaphs. Jim will add this to the President's letter in the Feb PAARAgaphs. 5) Consensus is for August as a second Homebrew night. 6) The first part of the meeting should be shortened. Skip ARRL news, drop propagation report, for example. (The board feels that we should continue to pass the mike, and recognize new members, visitors, new hams, license upgrades, operating news). 7)

Start meeting at 7:15. 8) The chat part of the meeting should remain as a ½ hour. 9) Consider a conversation starter: Words of wisdom from seasoned operators.

Jim K6SV will work to shorten the beginning of the meeting. For now, will stick to the format from January. Jim will run the meeting as the January meeting for a month or two, and we will re-evaluate then. We can try a flipped format for a couple of months. It's the sequence that may be moved to as a trial after we continue with the January format which has the break around 8:00 ~ 8:30 followed by the presenter. In the altered sequence in a month or two, we'd have the pass the mic, presenter, break, etc.

FARS banquet is February 28. We will note the banquet information at the meeting, and in PAARAgaphs.

Meeting was adjourned at 9:21

Respectfully submitted,

Ric Hulett  
N6AJS, Secretary.

*(President — Continued from page 1)*

format moving forward. The board members received some interesting ideas that we discussed at the board meeting. I will continue challenging the members to provide additional input at the next few meetings as not everyone was at the January meeting. Look at the board minutes for the ideas the board discussed.

The February meeting will continue with the same format as the January meeting. That is, start at 7:15 PM, or as close to that as possible, have the introductions, general comments, visitors, and operating news. Take a 30 minute, or thereabout, break at 8 PM followed by the presentation. After the presentation, a few new items will fill the time before the raffle. We'll see how that format works before making any other changes. The time after the presentation before the raffle may have different items as time goes on based on comments from members.

One suggestion the board received is to create a formal Elmer list that we publish on the web

*(President — Continued on page 6)*

*(President — Continued from page 5)*

site. The idea being that amateurs can contact an Elmer from the list for assistance a topic of interest. The web list would include any specialty a given Elmer can help with such as FT8, EME, DX, station setup, getting on the air the 1st time or whatever. If you haven't had the joy of assisting another ham to learn something new, you don't know what you're missing. I encourage all members to talk to any board member and get your name and area of interest added to the list.

I'm pleased to announce that Rob Fin, KC6TYD, and Shri, KA6Q, volunteered to share the raffle master duties. Going forward, one or both of them will conduct the raffle at each meeting. Please thank them for stepping up to cover this important meeting event. Also, please thank Marty for covering the December and January raffles. In order to keep the raffle prizes relevant, please don't hesitate to let one of them, or a board member, know if there's something which would be of interest that should be included in an upcoming raffle. One of the hardest parts of being the raffle master is coming up with the great items to raffle off.

In checking the calendar, I noticed that PAARA is scheduled to conduct the April 11th Electronics Flea Market (EFM) at Fry's in Sunnyvale. Please let a board member know if you're interested in assisting with this important money-making effort which helps offset the cost of Field Day. Next month I'll be working on the list of volunteers and can use your help in space ticket sales, setup, cleanup, setup and operating the doughnut, coffee, and soda sales as well as making the Costco run to pick up the items needed for the event. It would be great to get some new participants in helping PAARA host this event.

I just returned from assisting in one of the ways PAARA assists other hams or non-hams. I'll almost bet that a sizeable percentage of members don't know that members of PAARA assist others with the erection or dismantling of towers, antennas and stations. This is a prime example of Field Day skills being put to use for the betterment of others. In this case, a non-ham purchased a house that had a 50' telescoping tubu-

lar tower with a large 3 band antenna on top. The tower and antenna were already there when the previous owner, who was a ham, purchased the house. The general consensus was the installation was done over 50 years ago! Doug, KG6LWE, assembled Gerry, N6NV; Gary, KI6HIG; Rebar, N6DB; Christopher, AI6KG; Clark, KK6ISP; and myself for the decommissioning. All went reasonably smoothly owing to some preplanning and luck. I encourage all members to join in this type of activity with the club. We're not always taking down or putting up towers but assistance is always welcome. Talk to any board member and they'll get you pointed in the right direction.

I look forward to seeing everyone at the February meeting and learning what adventures in amateur radio everyone has experienced lately. Hopefully, a few of you participated in this year's Winter Field Day on January 25th – 26th and have stories to share.

73, Jim K6SV

## Raffles

### Rob Fenn KC6TYD

Myself and Shri, KA6Q, were recently asked if we'd like to run the raffle during the monthly meetings and we have accepted. Shri and I hope to bring some new excitement and flair making the raffle an entertaining event. This will be a work in progress so be patient with us. We will also be looking at new products to raffle off. But we would like to get ideas from you what you think would be worthy enough to drop a few, or more, bucks down with the hopes of winning. More radios? Tools? Drop me a note at [kc6tyd@gmail.com](mailto:kc6tyd@gmail.com) or hit one of us up at the meeting. Keep in mind that we don't have a huge budget. Sorry, I won't be able to come up with KX3's every month. I would also like to remind you that there has been some new rules that were recently implemented:

1. To be eligible to win raffle prizes, all ticket stubs need to be in the drum by 9:30. This

*(Raffles — Continued on page 7)*

(Raffles — Continued from page 6)

may be earlier if the meeting is moving along faster than normal. It might be good practice to simply buy your raffle ticket before the end of the break.

2. You must have your portion of the winning ticket to claim your prize.

3. All winning tickets will be placed back into the ticket pool so that they are eligible for the 1st place prize.

4. You must be present to win.

We will only have 5 prizes. If you have an item you'd like to donate to the raffle please let us know ahead of time so that we can include it in the raffle line up, otherwise any additional items added will most likely go up for auction.



**Feb Raffle Prize Winners  
 Left to Right**

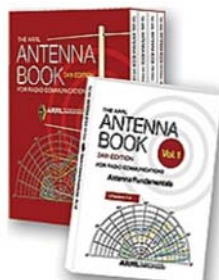
- 1<sup>st</sup> Gerry, N6NV — Joel's "Mystery Box"
  - 1<sup>st</sup> Merritt, KG6TNO — Yeasu FT-60 HT
  - 5<sup>th</sup> John, KM6SKA — Led stick-on push lamp
  - 3<sup>rd</sup> Walt, K6WGY — Ed fong Tri-band J-pole antenna
  - 2<sup>nd</sup> Walt, K6WGY — Zalman external sound card
- Not Shown**
- 4<sup>th</sup> Vic, AB6SO — Quantum LED headlight

**February 7, 2020 Raffle Prizes**

1st TYT MD-80 DMR Radio



2nd ARRL Antenna Book



3rd Heil FS-3 Foot Switch



4th QRPGuys No Tune End Fed Antenna Kit



5th 20 Bin Parts Storage Case



Storage Case

## Palo Alto Amateur Radio Association, Inc.

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### Officers

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	bob@rgktechsales.com	

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	dteter@wci.com	
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	ab6so@smrn.com	
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	K6RDM@yahoo.com	
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Station Trustee W6OTX, K6YQT, W6ARA....	Gerry Tucker, N6NV	
Station Trustee K6OTA...	Ron Chester, W6AZ	
Property Manager .....	Gerry Tucker, N6NV	
Asst. to the Treasurer....	Ron Chester, W6AZ	
Badge Coordinator .....	Doug Teter, KG6LWE	650-367-6200
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Historian Position .....	<i>Position Vacant</i>	
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Field Day Coordinator ...	Doug Teter, KG6LWE	650-367-6200
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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](mailto: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 1<sup>st</sup> 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](mailto:kd6w@arrl.net), 650-325-8239

## FARS — Foothills Amateur Radio Society

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

## NCDXC — Northern California DX Club

Meets 3<sup>rd</sup> 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 Summit Room at the Sunnyvale Sports Basement, 1177 Kern Ave, Sunnyvale  
 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 3<sup>rd</sup> 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](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, 10M (28.385) 8PM Thur.  
 Meets 2<sup>nd</sup> 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](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 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](mailto:president@wvara.org)

## American Red Cross, Santa Clara Valley Chapter

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

(Please send changes to [PAARAgaphs editor](mailto:PAARAgaphs editor))



WE ARE PLEASED TO ANNOUNCE  
THE NEXT CHAPTER FOR US:

**HSC** HAS SOLD TO

**EXCESS SOLUTIONS!**



**That's right!**

- ✦ Halted Specialties Co., Inc. has sold HSC Electronic Supply to Excess Solutions of San Jose...making the biggest surplus electronics store in the Bay Area!
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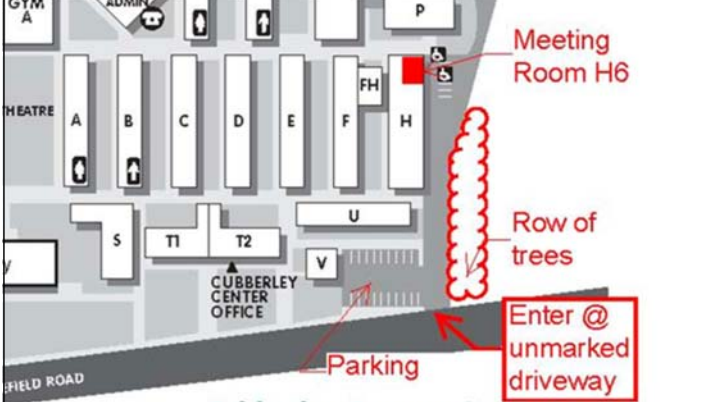
www.jameco.com

## 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 <sup>st</sup>	Joel KD6W
2 <sup>nd</sup>	Doug - KG6LWE
3 <sup>rd</sup>	Jack - W1VSL
4 <sup>th</sup>	Rob - KC6TYD
5 <sup>th</sup>	Rob - KC6TYD

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



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### 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,  
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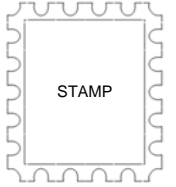
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