

# PAARAgraphs



The Official Newsletter of the

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

Celebrating 81 years as an *active* amateur radio club—*Since 1937*



**January 5, 2018**

## Annual Home Brew Meeting

The January PAARA meeting is our annual HOME BREW meeting. Do you have any projects at home? Bring them and share your handy work. Bring completed or works in progress. This is a way to show what you can do. See you all there. Marty, W6NEV

## Upcoming Events

- |         |                                    |
|---------|------------------------------------|
| Jan 5   | PAARA General Meeting, 7:00 PM     |
| Feb 2   | Cubberly Community Center, Room    |
| March 2 | H-6, 400 Middlefield Rd, Palo Alto |
| Jan 17. | Board Meeting, 7:00 PM             |
| Feb 21  | Everyone welcome!                  |
| Mar 21  | Location: Marty, W6NEV, QTH        |



## President's Corner

January 2018

The year is at an end, and that means we have another fun-filled year of PAARA activities and excitement ready for 2018. I have some sad news to tell you about this month, but there was also some good news. Let's get into it.



In late November PAARA lost a very special member - Rick Huisman, N6DQ. Rick was a special person and an incredible supporter of our club. I've known him for quite a while, but I didn't know him all that well until he invited me and Joanna, K6YL (K6YRU at the time), to operate CQP together in 2010. This was before Rick and Joanna were seeing each other. I had never operated CQP seriously before and this sounded like a great challenge. Rick rented an RV, as he always did, and we set up in a cabin in Lewiston, CA. The bands weren't great and I

had a massive migraine part way through that zapped me for the rest of the contest, but it was the beginning of something special. Watching Rick and Joanna, I knew that there was something special there, so I wasn't surprised when they became an 'item' later that year. It turned out that we set a low-power record for Trinity County despite all that. We made plans for 2011, deciding that more power meant more fun, and were back at the same cabin with amplifiers the next year. This time the setup was a grand production, and Rick's crazy genius, along with a careful application of the Friss transmission equation, allowed us to get more stations on the air. There was coax all over the cabin and we took power from two separate RV hookups. We started our tradition of a steak dinner the night before the contest and having a group photo taken. Then it got even bigger in 2012, with huge spools of RG-6 for a set of receive antennas that were a 1/4 mile away. Then we truly were on multiple bands, but that wasn't good enough for Rick yet. The next year the triplexers and filters were added. I have to say that I was skeptical, but Rick was confident, and sure enough they, along with the Friss equation, really did the trick. We were on multiple bands and modes simultaneously now, and we set a high power

*(President — Continued on page 5)*

## **Building the Perfect Amateur Radio Station**

**KE5NWY, Richard Hatch**

Preface: So you want to build the perfect Ham Radio Station. What follows are the elements of completing that task and enjoy your radio hobby for as long as you can. There are quite a large number of elements that need to be explored before you start the building the station. Everyone has different needs and this will hopefully take you through identifying those needs. There are some things that are common to all good stations. What we are going to do is review things that are common to all good stations and add your personal elements to come up with the perfect plan.

WHAT NEEDS TO BE CONSIDERED IN ADVANCE? The first question that comes to mind is what kind of Ham are you? What is so great about this hobby is that it breaks down any and all social barriers you might encounter in your world. No matter who you are, where you are, whether you are well known or not, whether you are rich or not, whether you are young or old, all people enjoy the encounters known as the QSO. This sort of reminds me of a picture someone put on their facebook page. It was a big Grizzly Bear, sitting at a picnic table with a fork in one hand and a knife in the other. It was captioned "Black, White, Big, Small, Male, Female, Catholic, Jew, Gay, Straight.....all tastes like chicken to me."

I particularly enjoy DX work, which is the practice of making contacts a great distance away. Technology has so greatly enhanced what you can do on the air. My Uncle, who inspired me into this hobby was a one of my personal heroes. He was a WWII Medic in the Pacific that went unarmed to the beach of every major landing that was done. God preserved him and allowed me to learn so much from this kind and gentle Ham. I remember how I felt when I was invited to spend the night and the first thing I wanted to do is sit at his desk and listen to him check in on the Army MARS Net. He even was Net Control a few times. He was operating a Johnson Viking Tx and the often paired Ham-

marlund q-101 Receiver. I was 6 or 7 years old and would sit in a simi high chair listing and I would be wearing his old dress uniform jacket with all of those medals. Aunt Elsie was not a giant fan of the Ham Radio, but was a loving Aunt and Wife and understood what joy it brought to us. About half way through the net, she would bring us a slice of her warm homemade pound cake and a glass of cold milk. How good was that. His antenna was an 80 meter dipole antenna known as Windom. Stranded copper launched into two tall pine trees with a sling shot and fishing line. I say all of this to introduce you to the first set of considerations. (1) What kind of Ham Operator are you? Are you using SDR or are you a Classic Station fan? Is your equipment gigantic or the size of a cell phone? I am more of the higher tech equipment, although I have great respect for those that keep the museum gear working. Where do you like to operate? For me 2 meters and 70 centimeters and some high end 10 meters USB. I also like to use Echolink. I have a radio friend in England that is a London Taxi Cab Driver. He has an HT that he takes to work and I can key the London repeater and have a great QSO free from the problems of HF interference. Clear, static free consistent communications all over the world. I am going to start collecting the "All" certificates from ARRL. (2) Where will your station be located? Will it be in a public area of your home or consigned to the bowels of the basement? Will it be admired by all who visit or kept out of sight. Is your spousal unit happy with your hobby or does she object to the interference in normal family life? The station I am building is in a visible part of our home in what was once a Study. That is sort of the best of both worlds. Easy to access but can be quickly silenced when it is time for normal conversation. Dawn, my loving wife for 32+ years is normally quite tolerant. The one and only thing she asked is please NO WIRES all over. Great. I can do this. (3) Access to the sky, outer wall near the homes grounding system. Perfect. (4) Make it comfortable and inviting so guests will enjoy being there. Let it inspire the interests in friends and

*(Perfect Station — Continued on page 3)*

*(Perfect Station — Continued from page 2)*

neighbors. Ask your next door neighbor to come help log and listen to the nets. That way they won't complain about it when you fling that dipole up. A lot more later about antennas. The room is beautifully decorated. Hardwood floors, 12 foot ceilings, two magnificent G Harvey paintings and a few other little things on my wall of fame. Comfort is very important. I purchased a high back leather judges chair made by Serta with memory foam. Oh, was that ever a great move. I can sit up, sit back, sit down, practically set it in any position I want. For those long contest nights, this is my choice. There are two leather side chairs with a table and lamp behind me and a large winged chair table and lamp to my side. There is a closet in

this room you can walk in. All exterior penetrations are made in that closet. All cables (wires) are trunked in behind the console using PVC. There is a printer and my WIFI is also in that closet. I have a nice wool rug and the entire space is very manly. The leather smell abounds. Now tell me, what could be better than the smell of leather, coffee and running radios. I am so in heaven. Now for the CONSOLE. Go and Google "Ham Radio Console Designs" and look at the images. You would not believe some of the .....not so pretty

consoles. You will also see some consoles that were re-purposed from their days as 911 centers. Always try to research and avoid re-inventing the wheel. I promise there is a physical design out there that meets your needs. My console is custom designed for this space. I found a high quality furniture maker in Houston. This console looks more like a Pipe Organ Console rather than a 911 dispatch. It is made of Oak and is stained ebony and has twelve coats of varnish for a high gloss finish. It is NEO-CLASSIC my wife says, whatever that means. The router work on the end panels is an art

form. The bays were specifically laid out to accommodate the equipment I am going to install. Take a hard look at those designs on Google and notice some have the transceivers at eye level. That creates a wire issue with the mic cords. In my case first level is a three inch high level that is used to house the main power switches, wireless keyboard, code key and a legal pad. The second level goes from the three inch top of the first level to 10 inches. Radios are on that level. Third level goes to 27 inches and holds 3 20 inch computer monitors. Ergonomics are important for comfortable operating. The monitors are at my eye level. There is a top that goes the 70 inches of width and on top of that top is a 50 inch HD Sony Television. I can watch the game or direct HD Radar to it or



just plain music. The three monitors will be for Weather, RTL-SDR receiver and ECHOLINK any of which can be directed to the 50 Inch. I have attached some pictures and you can see the console is broken into bays. The bays are designed to accommodate a particular mode. Example, to the right of the console is my vhf/uhf/marine/weather station/scanner. The weather station is an APRS station broadcasting on the internet. It is a high end AcuRite unit wireless to the collections module. The RF components are the Yaesu Ft-991A, a full

*(Perfect Station — Continued on page 4)*

*(Perfect Station — Continued from page 3)*

spectrum RTL-SDR receiver, a Uniden UM415BK with weather and one other ICOM 2300H. I have some HTs and I may put in another HF rig if I find the right one. The scanner is a Whistler WS1098. A big part of my Ham life is listening. But I do talk a lot too. I come from an Air Traffic Control background and Houston is really fun to listen to especially when we have weather in the area. Also influenced by my background is the installation of Blue Lights for night operations. It really reduces eye fatigue and helps with night vision. All equipment positioned perfectly in this great beautiful console and you just never want to go to bed.

This is a hybrid operation blending computer technology and traditional RF technology and half way in between. The YAESU 991 A is perhaps the best of the best. It is a "Shack in a box" 160m through 70cm makes it very versatile. It is a perfect traditional RF operation. Echolink runs on one of the four monitors and is the computer technology and the RTL-SDR is the somewhere in between. Normally I run local Doppler WX Radar (myRadar) on monitor three because bay 3 is where the Weather Station is located. Monitor 2, in the center, is for whatever I am currently involved with be it Echolink or SDR. If I am actively listening on the SDR, I move Echolink to Monitor 1 and SDR on 2. Monitor 4 is on top of the console and is a 50 inch monitor/television. I can watch the big game with surround sound or a movie or monitor Houston Air Traffic Control on a program called [flightradar24.com](http://flightradar24.com). Playing with that is [liveatc.net](http://liveatc.net). Putting that through the surround sound is incredible. You can see the airplanes and hear the ATC transmissions. This place at night is over the top. Blue lights, Air Traffic, you think you are in Houston Center. Then when I am working on my computer writing an agenda for a board meeting of the Texas Navy, monitor 2 is displaying Microsoft Word. In the closet (walk in) behind the console is a blue tooth printer/scanner/copier from HP and all the supporting WIFI gear for the house. When installation is complete, this will be a

magnificent Ham Radio Station. The VHF Marine radio in Bay 3 is here because we live on Lake Conroe and there are quite a large number of boats with Marine Radios. Also the Coast Guard Auxiliary is active on the lake and from time to time needs a little assistance relaying a message. It also has the wx broadcasts from Weather Service.

Antennas .....wow what a lot of research. First, is your HOA friendly to Hams? My HOA is not so friendly so my antenna solutions need to be sort of out of sight. My attic has a tall apex that runs from the front of the house to the back. It will accommodate a half wave 80 meter dipole. Perpendicular to the 80 meter antenna will be a 10 meter dipole. Outside hidden behind a tree and the chimney will be one mast of galvanized pipe that will have a 10 meter vertical, and a 2 meter/70 centimeter vertical, a marine antenna and the weather station unit. It is all totally invisible to everyone except one next door neighbor, who loves the whole thing. Everyone has to work through some issues with antennas until the law changes. (Soon, I Hope) Grounding, a subject I have learned a great deal about from Kristin McIntyre, (K6WX) and her YOUTUBE videos. Strongly recommend getting input on this and any other areas (amps drawn) from a reliable informed source. Kristin is one source with a world of knowledge. How do you say and explain a Raspberry Pi in Japanese? She knows. All equipment is grounded to a common grounding bar that is featured in [QRZ.com](http://QRZ.com) or go to [georgiacopper.com](http://georgiacopper.com). They are a total COPPER solution. My common ground is behind the console and is connected to a separate grounding rod near the Homes master ground.

As I said, this is a work in progress and extremely fun to plan, source and put together. I encourage you to ask first the question, "What kind of Ham am I" and build the Dream Station that works perfectly for you.

73's and enjoy the journey.

Richard B. Hatch  
 KE5NWX

(President — Continued from page 1)

record for Trinity. Then we switched to Alpine County the next year and did the same thing, setting another record. Rick had this down to a science - a science that also was applied to PAARA Field Day. Everything came in bins that contained one station's worth of gear, all the antennas were pre-marked, and everything was tested in advance. Alpine was much closer, so it made setup and teardown much easier. Our final CQP journey was in 2015 for the 50th running of the contest, when Joanna asked me if I wanted to operate solo, alongside the rest of the team. The idea was to pursue the YL award. This was even more technically challenging because we had to keep 4 stations on the air for the larger team, and keep me going too. I had to be band agile to be able to be competitive. This meant we had to use the same band \*and\* same mode simultaneously. We planned the locations carefully for the antennas to get enough separation. It wasn't perfect, but it worked well enough. We put both W6O and W6L on the air simultaneously from two cabins in the same place. I was fortunate to be able to take not only the YL award, but the top single-op county expedition as well. It was the pinnacle of Rick's pursuit of simultaneous operation. I'll never forget how pleased he was with the setup. He used to say, "I don't need to operate. I just love setting things up. We're here to have fun." That was him in a nutshell. And he was a great contest operator too. CQP aside, Rick gave his all to PAARA, particularly during Field Day and was extremely generous. Looking back over my pictures of him as I write this, I miss him greatly. Please keep Joanna in your thoughts and prayers in this time of loss.

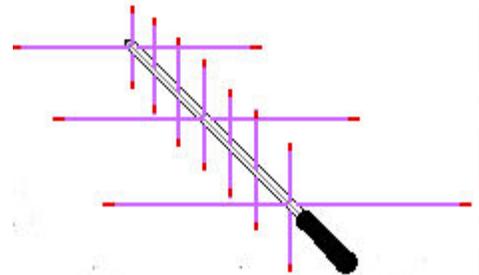
On the better side of things, I'm pleased to tell you that we had a very successful Dream To Reality Raffle, and we have our 2018 Leadership Team in place. We're working on another PAARApLink soon as well. Please stay tuned for another great year. Even though it might be late, I want to wish you a very Merry Christmas and Happy Hanukkah, and a very healthy and prosperous New Year. CU IN SKN ES HNY DE K6WX

## January Raffle Prizes

- 1<sup>st</sup> BTech UV-25x4 VHF/UHF Transceiver
- TX/RX 136-174MHz, 220-260MHz, 400-520MHz
  - RX 68-108MHz FM band
  - 25/5 Watt Output
  - PC programmable w/200 memories
  - Operates on 13.6 VDC ±20%



- 2<sup>nd</sup> Arrow 2m Yagi Antenna  
3 Element VHF / 7 Element UHF / Max Gain



- 3<sup>rd</sup> CS-201A Daiwa Coax Switch



- 4<sup>th</sup> Lido LM801 EXP HT Cup Holder



*You'll have to be present at the meeting to learn what other great raffle prizes will be there for the winning*



## Dream to Reality December Raffle Winners

- |           |  |
|-----------|--|
| 1st Prize | Will Hatzer KM6EUV — Elecraft KX-3   |
| 4th Prize | Karen Misenhimer, KK6NGA — Diamond X-50 vertical (donated by AB6SO)                      |
| 2nd Prize | Robert Mix, KF6ABC — GP5 SSB Receiver (donated by Nick Cassarino, N6VOA)                 |
| 3rd Prize | Michael Wimble, KM6WP — GP5 SSB Receiver (donated by Nick Cassarino, N6VOA)              |
| 5th Prize | Lawrence Rebarchik, N6DB — Super antenna SW1 Super whip (donated by Wayne Burdick, N6KR) |
|           | Kristen McIntyre, K6WX — President   |
|           | James Rice, K6AK — Raffle Master   |

## Palo Alto Amateur Radio Association, Inc.

PO Box 911 Menlo Park, CA 94026

### Officers

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Director ('18-'19) .....	Walt Gyger, K6WGY walt@tradewindsaviation.com	408-921-5901
Director ('18).....	Larry Rebarchik N6DB n6db@arrl.net	650 465-8210
Director ('18).....	Darryl Presley, K16LDM k16ldm@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	
Fund Raising Coordinator.	Bob Korte, KD6KYT bob@rgktechsales.com	408 396 4745
Badge Coordinator .....	Doug Teter, KG6LWE dteter@wci.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	
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QSL Manager .....	Marty Wayne, W6NEV	408-234-8023
Speaker Coordinator .....	Marty Wayne, W6NEV	408-234-8023

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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](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.k6va.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 1<sup>st</sup> 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 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, 442.425+ (pl 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 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](#))



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 Sales Manager

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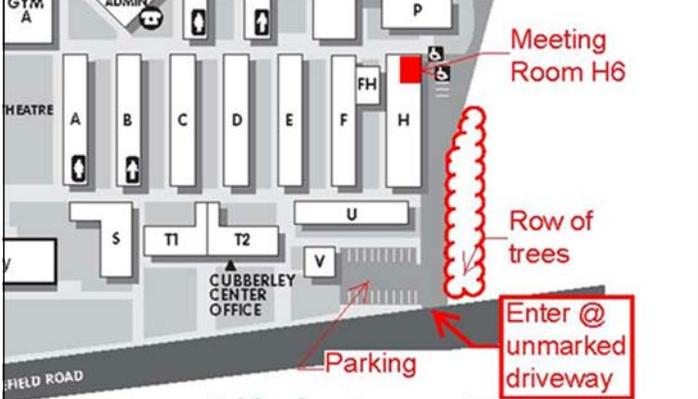
***Badges are ready for pickup.***

If you would like to order a badge, see **Doug Teter, KG6LWE.**

**PAARA Weekly Radio Net**  
 Info and Swap Session every Monday evening at 8:30pm on the N6NFI 145.230 MHz repeater

<u>Week</u>	<u>Control Operator</u>
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, and lots o' fun! Give it a try.



**Cubberley Community Center**  
 4000 Middlefield Road, Palo Alto, CA 94303  
 650/329.2418  
 650/856.8756 fax  
[www.cityofpaloalto.org](http://www.cityofpaloalto.org)

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

<http://www.foto.mail.ru/list/shkurkin>

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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, 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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440 – 444.475 up 5 MHz	DMR
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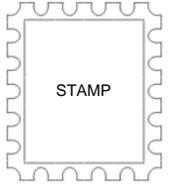
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# PAARAgaphs — January 2018

Accept no substitutes. Produced and printed in California USA



Palo Alto Amateur Radio Association, Inc.  
 PAARAgaphs Newsletter  
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