

# PAARAgraphs



The Official Newsletter of the

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

The Friendliest Club Around

Celebrating 86 years as an *active* amateur radio club—*Since 1937*

<http://www.paara.org/>



## Elecraft updates with Q&A

**Eric Swartz, WA6HHQ**

Eric Swartz will join us in person to bring us up to speed on what's new at Elecraft. This meeting is always a highlight of the year.

### Bio:

Eric Swartz, WA6HHQ, is Elecraft's Chief Operating Officer, a co-designer of Elecraft's K4, K3S, K2, and other Elecraft products. He co-founded Elecraft in 1998 with Wayne Burdick, N6KR. Licensed for over 51 years, his early interest in Amateur Radio led him to a career in electronic design and management. He received his B.S. in Engineering and Applied Science (Electronics) from Yale University in 1979 and has been involved in a number of successful Silicon Valley startups. Prior to Elecraft, Eric was co-founder and President of Verisys, a test equipment manufacturer of high-performance protocol analyzers for the computer and mass storage market.

Wayne and Eric also jointly received the ARRL's Technical Excellence Award in 2001 for their Elecraft radio designs.

**This meeting will be a  
Hybrid Meeting  
Zoom and In Person**

Time: Dec 1, 2023 07:00 PM Pacific Time

Please check <https://www.paara.org/> for  
Zoom Details

## Upcoming Events

Dec 1*** Jan 5 Feb 2	PAARA General Meeting, 7:00 PM *** Zoom and In Person Meeting
Jan 17 Feb 21	Board Meeting, 7:00 PM. Everyone welcome! Zoom Meeting, eMail President for details!



## President's Corner

December 2023

What's on your Ham Radio Christmas list? With Christmas fast approaching I hope you included something fun on your list. It doesn't have to be something new. It could be something that's used or vintage but new to you. It doesn't even have to



(Pres — Continued on page 5)

## Dream to Reality Raffle Update

Normally, in December we have the Dream to Reality Raffle. As everyone knows, we are still having "fun" with state filings that need to be resolved before we can hold any raffles. There is progress on this front as the DOJ cashed several checks meaning, they processed the paperwork I submitted. However, they still haven't given us the green light to hold raffles. If you read the board minutes, you'll know that the board approved the purchase of another Elecraft KX3. Once cleared for raffles again, we'll announce what month the "delayed" Dream to Reality Raffle will be held.

**Question of the month:** What is the 2M National calling frequency?

This question will be answered at the December meeting.

### Election

We are nearing the date for the December PAARA meeting and that means we will have an election for the PAARA Officers and Directors. As it has been for as long as I have been Election Chair it is a fiercely contested event. There is a single person battling it out for each post so be sure to come to the meeting (in person voting only) otherwise who knows what sort of Officers and Directors we'll end up with. Voting requirements are you are at the meeting and a current member of PAARA, a pulse and ability to make an "X" mark are helpful but not strictly needed).

I'd like to thank the other members of the Election Committee:

- Frank Fox AF0XX
- Mikko Sannala AB6RF

Election Slate for the PAARA board election for 2023:

#### President

Jim Thielemann K6SV

#### Vice President

Rob Fenn KC6TYD

#### Secretary

Ric Hulett N6AJS

#### Treasurer

Margaret Cooper K6WEK

#### Director 2 Year

Bob Riddenour KN6YGN

#### Director 1 Year

Doug Teter KG6LWE

#### Director 1 Year

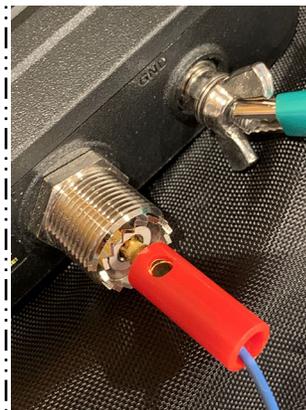
Darryl Presley KI6LDM

Clark Martin, KK6ISP  
 Election Committee Chair

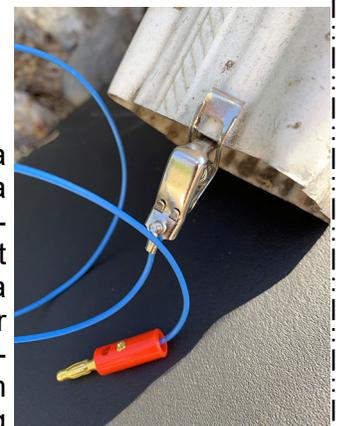
## Gutter Radio

**Connie Stillinger, W6EFI**

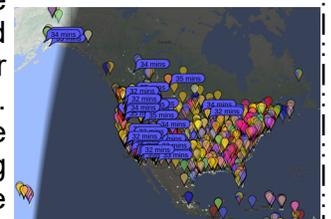
A few weeks ago I was sitting out in my tiny backyard by one corner of my house with my feet up, enjoying a cup of coffee and diligently supervising the cats chasing bugs and each other around the lawn. It was an absolutely beautiful Silicon Valley autumn day, upper 70s (F) and cloudless blue sky. The one thing that would have made it perfect would have been to have a mic in one hand and a radio tuning knob in the other....



I brought out my portable rig, shoved one end of a short wire into the center of the tuner antenna connector, clipped the other end to my downspout, and made sure I had metal-to-metal contact. Then I threw a



wire out into the yard for a counterpoise. It took a while to get the counterpoise settled given that the cats regarded it as a primo toy. However, after extracting the counterpoise several times from the cats, and distracting them with another toy, I powered up a whole 10 watts and checked the bands. 40m sounded good. I heard lots of clear activity across the band. After whiling away a little time on FT8, checking PSKReporter to see where I was being heard (see map with pins), I picked up the mic and had a very nice chat with someone in Milwaukee. They gave me a 5-7 despite my mere 10w. At that point the cats decided it was time to get into some other mischief so I had to put the mic down and pull them out of a tree, but by then the downspout antenna experiment had proved itself a success.



I've tried various things as antennas. Some things work better than others. Personally I have

(Gutter Radio — Continued on page 3)

*(Gutter Radio — Continued from page 2)*

not had great luck with metal things directly attached to the ground (defined here as the big round thing we walk on), whereas metal things with some separation from the ground seem to work better, as long as I have some sort of counterpoise. My downspouts don't have direct contact with the ground and they are screwed directly to my metal gutters; which, someone pointed out to me, may constitute an adequate inverted -U antenna built right into my house.



You just don't really know until you try. (QRP advised so you don't present a danger to people or critters.) I now keep my wire with clip lead on one end and banana plug on the other along with a counterpoise in my portable kit just in case fortuitous opportunities to work some other forms of "gutter radio" present themselves. Maybe someday we'll have a gutter-to-maple-tree QSO, who knows? Happy hamming!

## Early 523 Happenings

By Rich, W6APZ

SPARK, the South Peninsula Amateur Radio Klub, was the ham club of Ford Aerospace Corporation (FAC). Several of the fellows heard about repeaters and purchased PC boards from Hamtronics to build a repeater. I was a late-comer to the group, so I did not participate in the actual build, but I did realize that we would need to apply for a repeater call from the FCC.

I agreed to handle the paperwork, which resulted in the FCC issuing the club the call: WR6AIS. It was the FCC's idea that all repeaters would start with a WR call sign to show that the transmission was coming from a repeater, as opposed to an individual ham. Somehow, we got the frequency pair 13/73 which is what the SPARK builders put into the Hamtronics boards. The repeater was initially installed on the highest FAC building in Palo Alto.

At the time I was using a Motorola Handie Talkie which was anything but handy. The unit used pencil vacuum tubes in the RF section and tran-

sistors in the IF and Audio sections. The Handie Talkie measured approximately 3" wide x 9" high, by about 11" long. It consisted of the top section which had all the RF gear and the bottom section which used a heavy Ni-Cad battery and transistor converter to supply the voltages needed.

I would ride my bike to work with this radio slung over my shoulder so I could talk to my fellow SPARKies to/from my way to work. But there was a problem: Sonoma Mountain had a repeater on 13/73 that reached our area with a strong signal. What to do? At first, I used a short sub of wire as the antenna with a 50 Ohm resistor on the antenna terminal. Since I lived only a mile from work, that worked so I could talk through our repeater to local hams and not interfere with the Sonoma Mountain machine.

Then we heard about ARCC, the Area Repeater Coordination Council. (I think it had a different name back then.) We filled out their paperwork and were assigned a clear channel of 145.230 MHz, -600 KHz.

The repeater trustee at the time was Gary Hendra, W6NOE. At one SPARK meeting, he announced that he was not interested in continuing as trustee of the repeater. He asked, who would like to take over. Silence. Nobody wanted the responsibility. Finally realizing that we needed the repeater as a club asset, I raised my hand. By that time, the FCC rule had changed so that the call of the trustee was the call the repeater used. Therefore, the 523 machine became known as W6APZ for the next 18 years.

About that time Ford, FAC, assigned me to the Blue Cube in Sunnyvale to read telemetry data from prior satellites we had launched. While everyone wanted to work the standard 9 - 5 shift, those of us who pulled the "wrong straw" had to work at night. One night I was driving home at about 3 AM and I decided to see who I could hear on 523, so I gave out, what I thought was an innocent CQ on 523. Suddenly the frequency came alive.

Fellow SPARKies asked me what my problem was. I did not realize that one of the early FCC rules about repeaters was that someone had to monitor the repeater output 24/7. What hams did in those days was to go to bed with their radio on, but squelched expecting no activity at

*(Happenings — Continued on page 4)*

*(Happenings — Continued from page 3)*

night. I got verbally chewed out because I had awakened about 3 of my fellow SPARKies with my innocent call.

The FCC eventually changed that rule. Yes, the group that put up a repeater was responsible for ensuring proper operation, but the FCC was reasonable about taking a machine off the air if it malfunctioned. Fortunately, technology came to our aid, and repeaters generally operated for years with only routine maintenance.

The Stanford Research Institute (SRI) Amateur Radio Club wanted a repeater and realized that they could join forces with SPARK and offered a site on a hilltop overlooking the Bay Area. This seemed like a win-win situation. SPARK would get a much better location with much better coverage of the Bay Area, while the SRI essentially got a local repeater that their club could use. There was plenty of time during any day for both clubs to use the machine.

We moved the repeater to their site and since power up there was not always assured, we acquired liquid Ni-Cad batteries through contact with Walt, W6ASH, (SK) as backup power when PG&E went down. While I had official responsibility for 523, SRI and SPARK hams worked together to improve the repeater and keep it on the air.

These were the days before cell phones, so I made the autopatch available to members of both clubs. They could call Fire, Police, or even call home. The Hospital Net asked permission to use 523 as a backup means of communicating between hospitals in the Bay Area. At one point we signed a Memorandum of Understanding with that net giving them priority in the event of an emergency. This seemed like an appropriate use of ham radio.

One day in 1989, when the Baseball World Series was just getting started, I happened to leave work at 5 PM exactly, instead of working late as was normal. I was standing in my backyard when a few minutes later I felt the earth shake. I could see my beam antenna on a 30 ft push-up mast, well guyed, but it was shaking like the letter "S".

Immediately after the shaking stopped, I went inside and heard many hams getting off work who wanted to assure their family that they were OK, so I put through many phone patches for the

next ten to fifteen minutes till the Hospital Net came on frequency and we vacated in favor of their net.

Once again, ham radio helped the community.

Many hams wanted to know how well they were making the machine, so Rolf, N6NFI, designed and calibrated an "S-Meter" circuit that would read the incoming signal strength and read back a relative S-Meter reading when the incoming signal stopped transmitting.

Initially commanding the machine and uploading QST messages for the repeater to transmit was done over the phone line supplied by SRI. Knowing that the phone connection sometimes went out, we wanted a backup means of controlling the repeater.

I acquired a 400 MHz receiver for which we set up a 440 MHz antenna on the repeater site. The output went to the repeater controller so we could command the repeater without the phone line.

One day N6NFI and I were working on improving the 440 antenna when Rolf asked: "How does one become the repeater trustee?" I told him the story of how I got the job and asked if he was interested, to which he replied that he was. I checked with SPARK and SRI and there was no objection to Rolf taking over. That left the Repeater Coordination Council. To our surprise, they had no objection as long as the coverage of our repeater would not change.

With all those "ducks in line," 523 became the N6NFI repeater. SPARK gave me a plaque commemorating the 18 years that I served as trustee.



*(Pres — Continued from page 1)*

be something large, like a big antenna. Maybe it's not even hardware but something involving learning more about the hobby or advancing your license class. Whatever it is, I hope you receive and enjoy it. As for me, I'm still looking for that "perfect" traveling radio to replace my IC7100. I still haven't found it but there's always hope.

Looking back on 2023, I hope you enjoyed all the club activities this year. We started and ended the year with two successful PAARA in the Park events. I hope you attended at least one of them. Regardless of whether you attended one of them or not, be sure to mark April 20, 2024, on your calendar. We'll be holding our 3rd PAARA in the Park event. I'm sure it will be another great opportunity to have an eyeball QSO, get that burning question answered, meet new people, and learn more. Remember the event is open to everyone regardless of being licensed or club affiliation.

We also hosted the first Electronics Flea Market (EFM) in roughly a year. The event was held at a new location that was well-suited for such an event. Plenty of room for vendors, parking for visitors, and even flush bathrooms! Thanks go to all of the PAARA members and friends of PAARA who assisted in hosting the event and with the food tent. The positive outcome of the event made it possible to fund Field Day and PAARA in the Park. Make sure to mark your calendars for April 14, 2024, when we'll once again be hosting the EFM and need lots of volunteers. We'll need some new volunteers as several of us who usually cover some of the activities will not be in town that weekend. I'll start soliciting volunteers earlier than last year so keep your eyes open.

June 23~25th found us back at Bedwell Bayfront Park for the 1st time in 3 years. Thanks go to Doug, KG6LWE, for plowing through the red tape so we could once again have the event there. A big thanks go to everyone who assisted in making this event the big success that it was! The ARRL finally released the scores. We made 1,229 contacts, had 64 participants, and a total score of 3,110. In the 2A class, that put us 76th out of 308 entries. Of note, two members listed PAARA as their club, Randy, K8TR, scored 1,393 points, and David, K6NIA (using his Canadian call VA3NIA), scored 510 points. Thanks go to the two of them who listed PAARA as their club! Next year's event will be on June 28~30. Hopefully, next year we'll have enough volunteers so we can once again be in the 4A class.

We had our 1st field trip in at least 3 years. Rob,

KC6TYD, put together a wonderful day at the Hiller Aircraft Museum. The event was well attended and highly enjoyed by everyone. Some of the group had lunch at the Sky Kitchen. All in all, a great time was had by everyone. We are currently looking for a Field Trip destination for 2024. Please let Rob know of a destination that would be of interest.

Lastly, we successfully hosted the W1AW/6 Special Event station at Pacificon. Thanks go to Mikko, AB6RF, and Christopher, AI6KG, for making it all happen. I witnessed the many smiling faces of attendees who either worked a station, in some cases for the 1st time, or just watched and socialized. Thanks to Christopher's efforts, there were quite a few Boy Scouts who earned their Radio Merit badge. Happily, Pacificon will be held next year on October 18~20th. Make sure to mark your calendars and consider assisting in one way or the other with the Special Event Station.

As we stand in the middle of fall on the precipice of the holiday season, one might start thinking of what the first activity of 2024 will be. For me, it's Quartzfest from January 21 to the 27th. For those who haven't attended, it's a wonderful time of camping in the desert, socializing, meeting new and old friends, and learning, with a bit of HF thrown in for good measure. I hope you'll consider joining those of us who make the trek to the desert about 8 miles south of Quartzsite, AZ. More information can be found here: <https://quartzfest.org/>. As I did last year, I plan on attending the King of the Hammers off-road race in Johnson Valley from January 18th to February 3rd. I will be volunteering as a Course Marshal thus have an opportunity to use my business band radio again. You can find more about the event at: <https://kingofthehammers.com/>.

Make sure to attend the December meeting. Besides the elections conducted by Clark, KK6ISP, we will once again have Eric Swartz, WA6HHQ, from Elecraft who undoubtedly talk about their new radio.

I'll be making a presentation you will not want to miss. We may have a few other tricks up our sleeves but you'll have to be at the meeting to find out what they are.

I look forward to seeing a room full of smiling faces at the December 1st meeting. It will be both an IRL and Zoom meeting.

73, Jim K6SV

Get on the air to keep the airwaves alive!

## November Board Meeting Minutes

Present were President Jim Thielemann K6SV, Vice President Rob Fenn KC6TYD, Secretary Ric Hulett N6AJS, Treasurer Margaret Cooper K6WEK, Directors Darryl Presley KI6LDM, Doug Teter KG6LWE, Joel Wilhite KD6W. Bob Ridenour KN6YGN also attended. The meeting was called to order at 7:06 pm. A quorum was present.

- **President's Report** — At the first board meeting of the year, I challenged the board to raise PAARA activities to 'normal' levels. We had two PAARA in the park events, sponsored the Electronics Flea Market, had a great field trip and excellent speakers. Meeting attendance was up. We're doing well, as a club.
- **Secretary's Report** — Members: PAARA memberships expire on 12/31. If you haven't renewed your membership yet, please do so now: You can renew by visiting the "Membership" tab at PAARA.org, or by sending your check to PAARA, PO Box 911, Menlo Park CA 94026. Several members have already renewed, thanks!
- **Treasurer's Report** — Our check deposits are done on a mobile app now, but cash deposits are still in person. I am preparing the spreadsheet for the accountant, for the year-end summary. In coming months, we will be scanning our records for online storage.
- **VP / Program Chair Report** — December presenter is Eric Swartz WA6HHQ, one of the founders of Elecraft. He'll speak about new rigs from Elecraft. The Dream to Reality raffle is still TBD, pending approval from California DOJ. Door prizes are a possibility for December meeting.

**Homebrew night:** We could do this in January, it was held in April last year. If we have homebrew night in January, we need to decide now. Rob will contact Kristen K6WX: If she's available we will have Kristen as our speaker in February

### Old Business

- **PAARA members:** We have an ongoing need for article submissions for PAARAgaphs. These articles are the 'secret sauce' that makes our newsletter unique. If you have a ham story or experience, please write a few paragraphs and send to our editor!  
We received an e-mail from a member who has moved to Oregon, letting us know how much he enjoys receiving our newsletter from PAARA. You can make this happen!
- **Education Committee** — We discussed having a 'question of the month' in PAARAgaphs, and discussing the answer at the meeting. Look for the first QOTM in this issue!
- **PAARA new ham flyer:** Rob will amend our exist-

ing flyer so we can give handouts at local Volunteer Exam (VEC) sessions.

The Secretary has a list of new hams in the area: Rob will send invitations to PAARA to these people.

- **Radio loaner program:** We have not had any inquiries, we will revisit this topic at the next PAARA meeting.
  - ◆ The board discussed inventory control for PAARA owned equipment. In addition to Field Day equipment, we own three radios, a few power supplies, and laptop computers. N6AJS will buy some PAARA inventory tags.
- **PAARA Website:** More back issues of PAARAgaphs were sent to our webmaster KA6Q, and there are some small tweaks to the website.
- We discussed sites for a PAARA Field Trip next year, but did not decide on a venue. Suggestions include the Computer History Museum and the Winchester Mystery House.
- **PAARA in the Park, 2024:** We have reserved Cupertino Memorial park for April 20, 2024.
- **Electronics Flea Market:** PAARA is scheduled to sponsor the EFM on April 14. We need to organize leadership and volunteers for EFM.
- **Dream to Reality raffle:** 20 pages of paperwork were submitted to the DOJ on 10/2, and the checks have been cashed. No definitive answer yet on whether we can hold a raffle for the December meeting.

### New Business

- The board voted not to hold a December board meeting. This may change if there is urgent business
- The board decided not to purchase a new PAARA banner at this time. We will revisit this depending on the condition of our existing banners.
- We discussed the issue of purchasing 150 PAARA badge blanks. After cost discussions, we determined that no price increase was needed. We also voted to proceed with the purchase of the 150 badge blanks for \$650.
- As the last item, Jim K6SV acknowledged Joel's KD6W contribution to PAARA and the Board over 20 years. As we voted to not hold the December board meeting, this was his last board meeting as a Director. We commend him for all his insight and support of PAARA over the years and the establishment of the Repeater site.

The meeting was adjourned at 9:15 pm.

Respectfully submitted,

Ric Hulett N6AJS  
 PAARA Secretary

## Palo Alto Amateur Radio Association, Inc.

PO Box 911 Menlo Park, CA 94026

### Officers

President .....	Jim Thielemann, K6SV	408-839-6815
	thielem@pacbell.net	
Vice President.....	Rob Fenn, KC6TYD	650-888-9060
	kc6tyd@gmail.com	
Secretary.....	Ric Hulett, N6AJS	408-332-4593
	n6ajs@arrl.net	
Treasurer .....	Margaret Cooper, K6WEK	
	k6wek@arrl.net	

### Directors

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	walt@tradewindsaviation.com	
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	dteter@wcwi.com	
Director ('23) .....	Darryl Presley, KI6LDM	650 255-2454
	ki6ldm@arrl.net	

### Appointed Positions

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	N6AJS@arrl.net	
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Station Trustee K6YQT	Doug Teter, KG6LWE	650-743-7892
Station Trustee K6OTA	Ron Chester, W6AZ	
Property Manager .....	Doug Teter, KG6LWE	
Badge Coordinator.....	Doug Teter, KG6LWE	650-743-7892
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Raffle Coordinators .....	Rob Fenn, KC6TYD,	rtyd@aol.com
	Shrikumar, KA6Q	
	shri.paara@enablers.org	
Field Day Coordinator.	Doug Teter, KG6LWE	650-743-7892
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	kk6isp@sonic.net	
Webmaster.....	Shrikumar, KA6Q	
	webaron@gmail.com	
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QSL Manager.....	Marty Wayne, W6NEV	408-234-8023
Speaker Coordinator...	Rob Fenn, kc6tyd	650-888-9060

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Member Profiles .....	<i>Position Vacant</i>	
Technical Tips.....	Ric Hulett, N6AJS	
Photographer .....	<i>Position Vacant</i>	

## VE Exams

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>

## Electronics Flea Market (ESM)

Sponsorship: Association of Silicon Valley Amateur Radio Organizations (ASVARO)  
 The Electronics Flea Market is seeking a new location. Until that is resolved, the EFM is on hold. Website: <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 website at <http://www.paara.org>. For more information. 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 7:00pm at Covington School, Los Altos. Website: <http://www.fars.k6va.org>

## NCDXC — Northern California DX Club

Meets 3<sup>rd</sup> Thursday 7:00pm each month, Repeater for member info 147.360. Contact [president@ncdxc.org](mailto:president@ncdxc.org). Website: <http://ncdxc.org>. YouTube content: "The Northern California DX Club Official Channel". Cohost of the International DX Convention.

## The 50MHz & Up Group of Northern California

This organization specializes in vhf + wak signal and microwave activities. Meetings are held on the first Tuesday of each month. Time is usually 5pm for in person meetings, and 7pm for Zoom only meetings. In person meetings are held Sports Basement, 1177 Kern Ave, Sunnyvale. Always check the website, <http://50MhzandUp.org>, for correct information. Zoom information is also there.

## San Mateo Radio Club W6UQ.ORG

Meets, 3<sup>rd</sup> Friday, January through November.  
 Tuesdays & Thursdays, [Directed] Net, 7pm, N6ZX 145.370Hz, -600KHz, PL107.2Hz  
 Contact: [SanMateoRadioClub@gmail.com](mailto:SanMateoRadioClub@gmail.com), Website: <http://W6UQ.org/calendar>

## SPECS

### Southern Peninsula Emergency Communication System users Group

Meets each Monday 7:30pm and 8:00pm.  
 See: <https://specsnet.org/monday-night-net> for more info.  
 Contact: <https://www.specsnet.org/contact> or [board@specsnet.org](mailto:board@specsnet.org)

## 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+)  
 Website: <http://www.svecs.net> or contact: Lou Stierer WA6QYS 408 241 7999

## WVARA — West Valley Amateur Radio Association

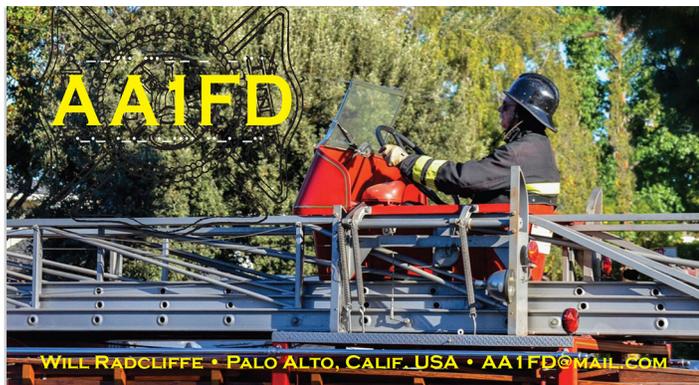
W6PIY six-meter repeater on 52.58MHz. Normally, six-meters is linked with 147 and 223, while 441 and 1286 repeaters are linked.

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.

Website: <http://wvara.org>. Contact: [info@wvara.org](mailto:info@wvara.org)

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



### 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>	Doug - KG6LWE
2 <sup>nd</sup>	Doug - KG6LWE
3 <sup>rd</sup>	Ric - N6AJS
4 <sup>th</sup>	Rob - KC6TYD
5 <sup>th</sup>	Rob - KC6TYD

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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  
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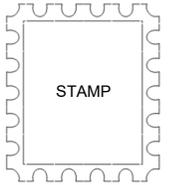
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