

W6OTX

W6ARA

PAARA NEWSLETTER  
VOLUME 69, NUMBER 7, July 2018

K6OTA

K6YQT

# PAARAGraphs



The Official Newsletter of the  
**Palo Alto Amateur Radio Association, Inc.**  
 Celebrating 81 years as an active amateur radio club—Since 1937  
<http://www.paara.org/>



The speaker at the July 6th meeting is:

**Joel Wilhite ~ KD6W**

## The New ATSC 3.0 Standard for Hams

The US broadcast industry is in the midst of major sweeping changes and a technology refresh with cutting edge technology to launch new business models. Joel Wilhite, KD6W will recap the results from the FCC auction and will further present parts of the new ATSC 3.0 specification for broadcast television, now launching in the US. The presentation will highlight many of the new features and capabilities currently not possible in the current system and provide some insight into how these changes will potentially impact our hobby. Joel is a broadcast systems designer and the ATSC standards committee representative for Harmonic Inc, and has been a licensed amateur radio operator since 1982 and a PAARA member since 1994.

## Upcoming Events

July 6	PAARA General Meeting, 7:00 PM
August 3	Cubberly Community Center, Room H-6, 4000 Middlefield Rd, Palo Alto
Sept. 7	
July 18	Board Meeting, 7:00 PM
August 15	Everyone welcome!
Sept. 19	Location: Marty, W6NEV, QTH



could feel the heat as I loaded up my car on Saturday morning to arrive at the site at 9:30 with gear for 2 stations and the filters and triplexer. My car was full as I drove across the Dumbarton Bridge, with things moving around as I made turns. Listening on N6NFI, it sounded like there was some issue again with U-Haul, but Doug, KG6LWE, was handling it. As I got past the Facebook campus, I could see our antennas up on the ridge. It was a beautiful sight. Pulling into the park brought back memories of all those past PAARA Field Days, and of some of the people who have become SKs over the years. In particular, I missed Rick, N6DQ.

I dropped off the triplexer at the B stations, and then went to the A side of the site. Just as I pulled in, Gary, KI6HIG, pulled my van into place, the table was put inside, and I started putting gear into place. CW-A went together without a single issue, so that I had Rick, N6RK, ready to go almost 40 minutes before the contest started. I'm used to working until just before 11. Everything started off just fine, though propagation was not that good. It seemed like 15 meters was underperforming, despite a good sunspot number and solar flux index. I had to leave to start visiting other sites, but then I heard there was a problem with the Phone B station, so I went down to look at that. Then a power supply broke on CW B. It wouldn't be FD without some problems.

## President's Corner

July 2018

As I write this Field Day 2018 has just wrapped up and I'm still recovering from sleep deprivation. There's still a bunch of equipment lying around my house, still in boxes and bags, and my radio is not reconnected. I just crashed as soon as I got home after another unforgettable 30 hours of radio fun and adventure.



It was a hot Friday followed by a hotter Saturday. I

(Continued on page 4)

## A New Way of Modulation

by Joel Wilhite - KD6W

The next generation of television is starting to roll out. The standard was developed by the ATSC who developed the current set we have today. The next set of ATSC specifications were recently developed and published for use as the next generation broadcast television system to replace the current one we have today. The current specification was drafted nearly twenty years ago and has become rather dated in our mobile “wireless” world of today. Many of us know all the flaws and pitfalls of the current system using over-the-air reception to watch TV. The motivation was clear from the beginning, the change in broadcast television was all about transitioning the industry from analog to digital. The promise of better pictures was the enticement to get us to buy a new TV as the industry was not about to limp along selling cheap converter boxes. Even still, there were cries from the public about how we were about to disenfranchise grandma and leave her in the dark without a way to see the new signal. So, the government stepped in to spend millions of dollars and gave us a 40-dollar coupon so we could all afford a converter box. It was said there were millions of people who were not able to buy a new TV. I was recently told there is a warehouse in Illinois filled with those boxes to this day so needless to say, they are still waiting to hear from those millions.

We are approaching the decade mark since the great analog shut off of June 2009 in the US, a day in ham history where the noise level on the 6 meter ham radio band dropped to never seen before levels when all the channel 2 and 3 transmitters were ceremoniously shut down. DXers were there to record the moment when distant TV channels from another market would appear out of the noise as the local market transmitters were turned off and they knew how to turn their antennas, being a ham helped. Once all the analog transmitters were turned off, the noise level (S) on the 6 meter band dropped from a constant high of S7 down to S3 and S2 in most areas. As this is being written, it's true not all analog transmitters are off the air. Coming soon, there are some new transmitters showing up in the low VHF to re-occupy

those channels from the “Incentive Auction” ([www.fcc.gov](http://www.fcc.gov)) and “Channel Sharing” programs ([www.fcc.gov](http://www.fcc.gov)). When these new channels show up, the signal will be different from the old analog carrier. Some of these new channels may appear as the current 8 VSB digital standard or as the new standard as it begins to roll out. The new signal “ATSC 3.0” standard is flexible, unlike the predecessor. But more on that later.

The point to all this is the obvious case for innovation by making your own SDR receiver or transmitter all in software. And in this case, to receive the new 3.0 signals and develop, collaborate and integrate with other hams around the world. With all the changes happening more rapidly in the broadcast industry, it's fairly obvious which way the wind is blowing for the big TV networks so watching the trends move all workflows into a big computer, somewhere is a reality. The architects of the new 3.0 signal included some very clever mechanisms to allow a significant number of business options and choices in those conditions. As the silly saying goes, it has to make “cents” or becomes, hey brother can you spare a dime? The ATSC committee is made up of all the brand names you know and they have all graciously contributed a significant amount of work to provide the design of the new system. There has to be a use case or in this case, many of them. And yes, the new standard is NOT backward compatible with the current receivers, but so what? This is where the fun begins for those of us hams willing to try. - C U @ the meeting. 73 - KD6W

Vick , AB6SO, demonstrating WSPR to some interested onlookers.



## N6NFI Youth Net

At 7:00 pm, on Tuesdays, on the N6NFI repeater, the Youth Net takes place. The purpose of the net is to encourage kids to get on the air and talk to other kids.

During the net, I ask everyone attending the question of the day. For example, one time it was 'What is your favorite Spring/Summer activity?' It is really cool to hear what everyone thinks.

After everyone answers the question, the Social Portion of the net begins. The Social Portion is where youth and adults can ask and answer questions. An example: Where did KM6JUP build a robot that could hit a ball?

KM6JUP (Josh) is Net Control every other week. I really love doing and running the net with him. It is a fun experience, I think, for adults and kids alike to participate on the Youth Net. I hope that whoever is reading this stops by soon.

-Alexia (KM6LGG)



Old glory flying in the morning sun on the 40M tower.  
Doug, KG6LWE, driving home one of ~28 stakes that  
are holding everything up.



**PAARAGraphs — July 2018**  
**Celebrating 81 years as an active ham radio club—Since 1937**

(Continued from page 1)

Everything seemed stable by about 12:30pm so I took off to find other FD sites to visit. My first visit was the CMU West site, where I met with Bob, W6EI. I saw their mobile communications research van and heard about the first LTE phone call made on Amateur frequencies. That was amazing. Then I went to WVARA and finally saw the amazing QRP setup they have on Mora ridge in Rancho San Antonio. The antennas were very impressive, as was the number of operators and the solar panels. Then it was on to the FARS site, which is actually very close to WVARA. It was great to see many friends there. Next I went to the CARES FD site that Darryl, KI6LDM, helps run each year before coming to operate at PAARA. Sadly I got there just as they were about to leave. Next year I'll get there sooner. Lastly, I headed to the East Bay to visit SBARA, where I saw even more old friends and spent time chitchatting with everyone.

I arrived back at the PAARAsite at around 6pm and got to say hello to Pink, K7ILA, who had driven in from Arizona while I was gone. It was great to see

her. We talked and had dinner, including some forbidden items for me, like ice-cream, until it was time for me to start operating. I got into the chair at around 9:30pm, taking over for David, K6DAJ, who had done a long day of operating. He and N6RK alternated stations all day. 40m started out really great with pileups at around 11:30. It didn't last, though. At around 12:30 things really slowed down and didn't recover. It was a long, slow slog until morning. At about 7:30am 15m opened up with first weak, then strong signals to the East Coast. N6RK took over for me at about 9am, and he had a really productive couple of hours. Before I knew it, FD 2018 was over and the gear was going back into the car. It was a great time. If you didn't have a chance to join us this year, I hope you will next year. I think you'll really find it both fun and rewarding. If you want to see my pictures go to <https://k6wx.smugmug.com/Events/Field-Day-2018/>.

Don't forget that we have our July meeting coming up really soon. CU BACK AT PAARA IN JULY DE K6WX



Left, Joel, KD6W, working 6 M

Below, Clark, K6ISP working on an antenna

Below left, Rebar, N6DB waiting for the next tower tube





Top Left, Doug, KG6LWE, cranking the tower with Eric, KJ6LAY assisting.

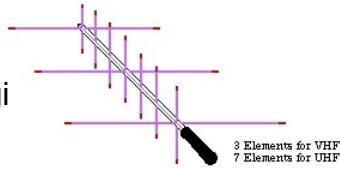
Top right, lunch under the big red awning.

Center right, Scouts working on their Radio Merit badge.

Left, Bob, KD6KYT, (with the cowboy hat) manning the public info and GOTA station.

## July Raffle

1st ~ Arrow II Model 146-437-10 Element Yagi



2nd Daiwa CS 201A Two Position Coax Switch



3rd Two FSR Radios



4th LUX-PRO 2D 320 Lumen LED Extreme Brightness Flashlight



5th Come to find out

6th Come to find out



7th Grilliput/Portable BBQ Grill



***PAARGraphs — July 2018***  
**Celebrating 81 years as an active ham radio club—Since 1937**

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**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 ('17-'18).....	Joel Wilhite, KD6W kd6w@arrl.net	408-839-5948
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, KI6LDM 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@wcwi.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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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.electronicsfleamarket.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://ncdxco.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.sci.net/scarra> 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 Sterier WA6QYS 408 241 7999

**TEARS — The Elmer Amateur Radio Society**

Dedicated to operational training, knowledge building & FCC exam testing.  
KV6R repeater under construction.  
Contact: [AAGT@ARRL.NET](mailto:AAGT@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:	441.35 (+5.0)	88.5 ctcss
	147.39 (+600)	151.4 ctcss		228.20 (-12m)	100.0 ctcss
	223.96 (+1.6)	156.7 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 [fshensley@Novell.com](mailto:fshensley@Novell.com)

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



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## *Badges are ready for pickup.*

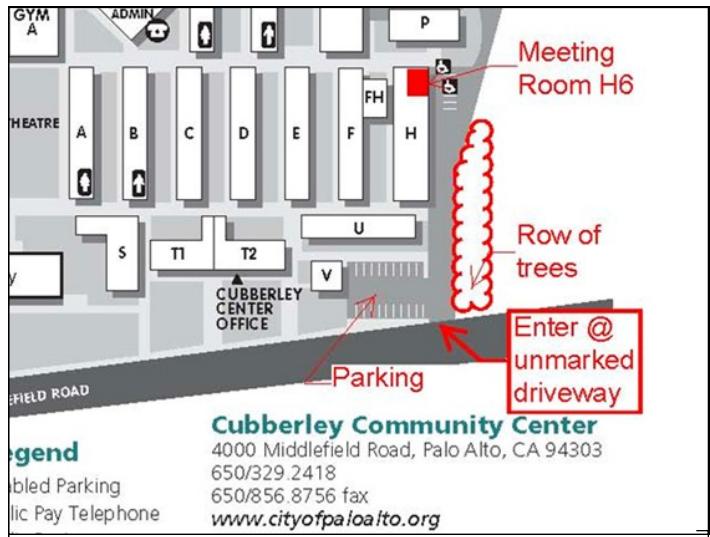
If you would like to order a badge, see  
**Doug Teter, KG6LWE.**

## **PAARA Weekly Radio Net**

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

<b>Week</b>	<b>Control Operator</b>
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.



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

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

Vladimir Vladimirovich

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English-Russian-English

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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 PAARAGraphs \$6 for each additional family member (no newsletter). Make payment to the

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# W6AZ



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**Marty is looking for someone to take over the coffee and cookies at meetings. If your interested in helping out please contact Marty.**

***Until someone is found, there will be no coffee or cookies at meetings.***

## 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

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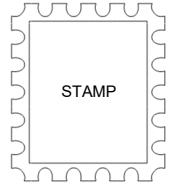
1. Not-for-profit ads by association members for ham-related items and wants. No cost for business card-size ads (additional space at \$2.50 per business card size per issue).
2. For Profit organizations and/or individuals: \$5-business card size, \$25-half page, \$50 full page or back cover per issue.

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 PAARAGraphs 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 Ron Chester, W6AZ

# PAARAgraphs — July 2018

Accept no substitutes. Produced and printed in California USA



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

# **FIRST CLASS MAIL**