

W6OTX**W6ARA**PAARA NEWSLETTER
VOLUME 63, NUMBER 4, April 2013**K6OTA****K6YQT**

PAARAgraphs



The Official Newsletter of the

Palo Alto Amateur Radio Association, Inc.Celebrating 76 years as an *active* amateur radio club—Since 1937<http://www.paara.org/>

The Youth DX Adventure

Steven Olson, KI6MYE

The Youth DX Adventure was launched at the end of the 2009 CQWW SSB contest. Don, N6JRL; Dave, KB8OCP; Todd, KD4YHY; Jim, AB8YK, and Keko, TI5KD, had operated the contest at TI5N, a DX vacation villa that Keko operates in Costa Rica. The purpose of the adventure would be to introduce youth operators to the world of DXing at a young age and early moment in their ham radio careers. They would do this by bringing youth operators from all over the country on a non-contest weekend to Costa Rica allowing them the opportunity to create the pileups. This would give the youths a chance to see what it feels like to be "on the other end."

Steven, KI6MYE, is an Extra Class radio operator living in Los Altos, California. He currently serves as President of the Southern Peninsula Emergency Communication System and is an Assistant Emergency Coordinator for Los Altos Amateur Radio Emergency Services. Prior to the Youth DX Adventure, his HF experience was limited to contacts in Hawaii, Idaho, and Florida with a homemade balun and an OCF dipole hung from a swing set.

April 5, 2013**7:00 pm****Cubberley Community Center****Room H-6****4000 Middlefield Road****Palo Alto, CA 94303**

President's Corner

Spring is finally here - sort of. At least the calendar says so, but there is little rain and the weather is still cold. I've just returned from my first visit to Radiofest, and had a great time. The W6T team has received an award, and the Spring contest season is well underway, despite subpar sunspots. I've also been fixing amplifiers for extra fun!



Radiofest in Monterey on March 23rd was a wonderful event sponsored by the Naval Postgraduate Amateur Radio Club, K6LY, at the Moose Lodge in Monterey, CA. I had never been there before. It was like a smaller version of Pacificon, with a series of talks through the day, and vendors indoors. There was also a small flea market outside. One of the highlights was the ARRL booth with PAARA member Leigh, WA5ZNU, signing editions of the newly published Ham Radio for Arduino and PICAXE book. Darryl, KI6LDM, found that one of the QR-codes in the book did not resolve properly. We reported this to Leigh, and he fixed it on the spot. Now that's customer service! We set up a PAARA table and had a number of fun conversations with friends and potential PAARA members. A few people had heard about our great field trips and wanted to know where we

(Continued on page 5)

Two Clandestine Radios of WWII – Update

Hiroki “Hiro” Kato

AH6CY

Last Part

First printed in Electric Radio, March, 2013

Continuing Saga of the Paraset

In my last article, I noted an unverified comment on the type of antenna that was used at a receiving and transmission site of the SOE headquarters in England. Since then I came across the following posting on the Internet by Gary Giles (KF9CM).

“The base stations in the UK, were usually a 250 watt transmitter with a 15 KW backup. The antenna array was a large curtain array for receive and a half wave doublet high in the air for transmit. With this system, the Parasets had no problem transmitting and receiving. The operator would transmit up to 75 code groups and then have to wait till the code people deciphered the message and send back the "message OK" signal. The field operative would have to wait up to an hour, sometimes more with his or her sidearm at the ready, looking down the road for the DF people. Then if everything was received and decoded successfully, the base station would send back the OK. If not the field operative would have to try to send it again. We're talking a lot of stress.”¹

I have not independently established the accuracy of the information contained in this posting. My effort to reach Gary to find out the source of his information was not successful. The advent of the Internet has vastly expanded our ability to do research on practically everything, including information on historic radios. However, the ease of disseminating information and so-called democratization of media (i.e., anyone at any time can create, duplicate or circulate information, correct or false, at a minimal of cost and effort) have created many perils for authenticat-

ing the reliability and accuracy of information. So much information floating in the cyber space has no reference to the source or offers a way of independently verifying its accuracy. Thus, we sometimes see a “manufactured fact” or a fruit of someone's imagination masquerading as a fact and being repeated again and again. We have earlier seen a mention of the antenna used at the SOE transmitting base was rhombic, but now we have different information as you have just seen.

Mike Murphy (WU2D), an enthusiast of WWII era equipment who built his own Paraset replica, wrote to me and related the following incredible story.

“...[operating my own Paraset replica on] Feb.



Mike Murphy's Paraset replica

27, 2009, when I boldly made a CQ on 3520 kHz at 10:30 PM and DL1EV, Bruno came back from Germany. I was using a 120 ft inverted L and we had a clear frequency. We QSO'd for about 20 minutes. It turned out that he was a radio operator in the Wehrmacht in WWII and actually hunted Parasets with his DF Van.”

(Continued on page 3)

(Continued from page 2)



German Mobile DF Radio Van used in hunt for Paraset Radios



German DF Radio

Another interesting story he relates is when Mike was on a business trip to London in 2003, he

“...[had] an exclusive dinner at the very exclusive Special Forces Club... This place was amazing. All of the agents who were in the SOE had pictures on the wall and a story of how they had been

operatives, captured, tortured [and] let go and recaptured by the Gestapo etc... most of the pictures on the wall were of women. Upstairs in the bar, there were a few actual agents, little old ladies, to be sure from WWII.”

One of the SOE agents' photos on the wall is that of the famous “spy princess,” Noor Inayat Kahn, a brilliant Indian-French woman, who was captured in France and tortured and perished in the Nazi concentration camp in Germany. She was known to have the best “fist” among the SOE agents who studied Morse code with her in the spy training school in England and without doubt the Paraset she carried on her mission in France was most efficiently operated.²



Noor Inayat Khan, SOE agent

The Canteen Paraset --- The Ultimate “Retro” QRP transceiver?

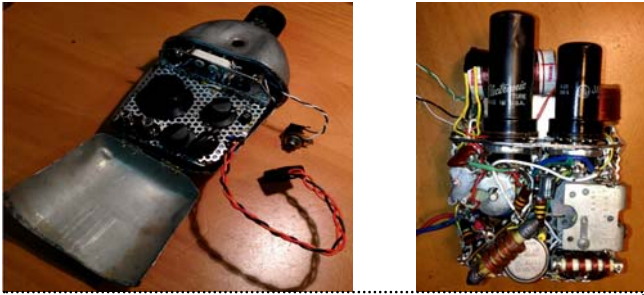
When I was building a replica of the single-tube canteen receiver I noticed how cavernous the water canteen was and wondered if it would be possible to build a two-tube transceiver inside a canteen.

Unlike what the POWs in the Philippines faced, procuring the necessary parts or using a workbench with a drill press and a metal cutting tools was not a great problem for me but containing all the WWII era size components inside a canteen did turn out to be a much greater challenge than I had expected. Nonetheless, after a few months of tinkering, I now have a working two-tube canteen transceiver. In terms of the circuitry, it is sort of a hybrid of the original canteen receiver and the transmitter section of the original Paraset. The tube complement is a 12SK7 and a 12A6 (12 v heater equivalent of the 6V6). This transceiver is tunable for the 40 meter band only at the moment, but it is possible to make it useable for both the 40 and 80 meter bands by adding (and finding a place for) a switch to add 100 pf capacitor parallel to the

(Notes — Continued on page 4)

(Continued from page 3)

variable capacitor for the tank circuit.



Author's two-tube canteen transceiver

Instead of using two flashlight bulbs like the original Paraset, one as a tank tuning indicator and the other as an aerial matching indicator, I decided to use one bulb for the tank tuning only. I learned while operating my Paraset replica that a tank tuning indicator can also serve as the antenna tuning indicator. By tuning the capacitors for both to obtain the spot where the bulb shines the brightest you can tune both the tank circuit and match the antenna impedance. I operated this transceiver for the Straight Key Night, January 1, 2013. My signal has slight chirp, but the radio was perfectly useable.

Personal Note

In early October, 2012, I had an opportunity to visit the Imperial War Museum in London and was able to see one of the original Parasets in person. This is a magnificent museum, excellently curated and very informative. I highly recommend that anyone visiting London to spend some time there. It is located well within easy walk from London's major touristic sites, such as the Westminster and the National Gallery. I don't know a comparable museum in the world in terms of comprehensive inclusion of artifacts and historical exhibits of one nation's history of involvement in armed conflicts from the 19th century to the present. In the section where the Paraset is exhibited, one can trace how secret communication equipment has evolved over time, including a transceiver hidden in a pen which was used during the Cold War period. (I am, naturally, tempted to replicate that one.)



Cold War Pen Radio

In November, 2012, two of my ham friends and I went camping and for outdoor QRP operating at the Jalama Beach, near Santa Barbara, Cali-



A Paraset



Author at Jalama Beach with his Paraset

(Continued on page 5)

(Continued from page 4)

fornia. One of my goals for that trip was to simulate a “real world” situation to operate my own Paraset replica. We were of course off grid. The first QSO was on 7,199.7 kc with W7UDA in Barstow, California, about 200 miles away, using only a 20 feet long thin wire antenna flung over nearby bush, invisible to most bystanders. Power source was AC generated by a Honda generator. Our QSO was done with armchair (er...picnic bench chair) copy ease. As I tapped the key I was imagining what it may have been like to operate one of those behind the enemy lines, perhaps from a little barn near the beach in Normandy. Of course, I had no fear of being hunted and arrested or worse by the Wehrmacht for my operation.

I wish to thank all those hams who wrote to me. There is no more pleasure for an author than to hear from the readers with their insights and comment.

Notes

1. Re: Paraset are (sic.) not transceivers !!! Tue Nov 6, 2007
2. For her biography, see Shrabani Basu, *Spy Princess: The Life of Noor Inayat Khan*, Omega Publications, 2007

(Continued from page 1)

are going next. It sounds like we have a bit of a reputation for going to fun places, and I was happy to inform those people that we have at least two more trips in the queue. I also gave my Maxwell's Equations talk again to an interested group of brave explorers into the world of differential geometry. The drive down and back was both fun and beautiful. It was enhanced by being Viper enabled. Those of you who know me well, know what that means.

The NCCC awards dinner was the topic of the March meeting, and members of the W6T CQP team were informed that our presence was “requested” at that event. We were awarded the top multi-multi county expedition for the 2012 California QSO Party. We were quite

pleased to be receiving our award, and now we have some lumber for the wall of the shack. This only means one thing, of course, and that's that we have to do it even better next year! Contesting has this effect; it's a never ending adrenaline rush. As we prepare, it all spills over into the PAARA Field Day effort since we all become better operators, and learn more about simultaneous operation on multiple bands. In any case, you couldn't have found six ops more proud than team W6T. In case you forgot, that would be: N6DQ, K6YL, K6RHO, N6NU, AA6XV, oh ... and me.



Team W6T (N6NU, AA6XV K6RHO, K6WX, K6YL, N6DQ) wins Top Multi-Multi County Expedition in the 2012 CQP

Photo by N6TV

The Spring contest season is happening now, so get on the air and have some fun. Don't miss it! The best propagation can usually be found around the vernal and autumnal equinoxes and that's why they are scheduled at these times. As I write this, we have the CQWW WPX Phone contest coming up, to be followed by the CW version in May. There are contests almost every weekend, though, including lots of great state QSO parties, much like our own CQP. Get out there and hand out some points to improve your operating skills, or try to actually work the contest seriously and see how you do.

I've been fixing two of my three tube amplifiers on the weekends lately. This has been a fun

(Continued on page 6)

(Continued from page 5)

exercise. I was surprised to have a fuse blow in my Ameritron AL-811H when I turned it on recently. It turned out to have a gassy tube that essentially turned into a voltage regulator. That, in turn, took out its grid resistor. I also have fixed my SB-200 from CQP, and am making some mods to improve its gain. It's very interesting to work on these amps because they are such simple devices. One has to be very careful, though, because there are definitely lethal voltages and currents in there. Gotta love the tubes, though. I'm really having fun with these amps.

Anyway, that's all for this month. We have lots of fun things coming up for the rest of the year, and we hope you'll join us at PAARA. Sign up for Field Day operating. Also, the PAARA sponsored ASVARO Flea Market is coming up in May. I'll be bugging you about that soon. Until then, CU ON THE BANDS DE K6WX.

March 2013 Board Meeting Minutes

The Board Meeting was held at the Palo Alto Red Cross building, commencing at 7:30 PM on the 20th of March, 2013. Attending were Kristen McIntyre K6WX (Pres), Rick Melrose K6RDM (Sec, Database), Rob Riley KI6INR (Dir), Byron Beck KG6UOB (Dir), and Larry Rebarchik N6DB (Dir). A quorum was present.

President's Report: Kristen K6WX that attendance at recent meetings has been excellent, attributable, per feedback received, to the fresh and interesting presentations featured including the presentation by Paul Ewing N6PSE on the Conway Reef Expedition at the March 1st meeting. We are especially pleased that the guests she invited from Apple felt welcomed and enjoyed the meeting and are spreading the word to their associates.

Club VP, Marty Wayne W6NEV wasn't able to make the meeting due to family commitments so Kristen reported for him on the scheduling of future General Meeting presentations including for the upcoming April 5th meeting featuring

Steve Olson KI6MYE on the TI5/KI6MYE (and his daughter Kjerstie "KJ") TI5/KI6VNG Costa Rica DXpedition. On QRZ KJ says, "I have been the President of my high school Amateur Radio Club for three years and our big highlight was placing 8th nationwide in the 2010 School Club Roundup. In the summer of 2012, I was given the opportunity to be a member of the Youth DX Adventure to Costa Rica, where I was able to do more DX'ing than I had in my entire life previously! It was a blast...!"

Kristen reported that some prospective club PAARAtrips are still in the works including a visit to the California Historical Radio Society located in the old KRE transmission site at the foot of Ashby Ave in Berkeley, and possibly including a visit to the PAVE PAWS mission at Beale AFB in Merced later in the year.

Kristen showed the Board the first articles from our project to provide Club and Field Day T-Shirts for the membership. They are very striking in both black and red versions and are very likely to be snapped up when they become available. She also mentioned that we are still looking for articles on ham projects and experiences for inclusion in future issues of PAARAgaphs. Members and associates are encouraged to take a swing at drafting up any such for a start and our editors can take it from there.

Kristen will be at the Radio Fest at the Moose Lodge in Monterey where PAARA is being provided with booth space by Linda K6GRL, next Saturday, March 23rd. Darryl Presley KI6LDM will be helping man the booth. Leigh Klotz WA5ZNU will also be there with his new Arduino project book.

Secretary's Report: Rick K6RDM reports that there were 3 new members, 3 renewals and 2 rejoining at the March 1st meeting. The membership is reminded that the April issue of PAARAgaphs is the last issue that will be sent to members who have not renewed for 2013. See PAARA.org for renewal information.

(Continued on page 7)

(Continued from page 6)

Treasurer’s Report: Ron W6AZ was unable to attend due to prior commitments. However, Rick K6RDM mentioned having met with Gerry Tucker N6NV (Property Manager) at this year’s first ASVARO Flea Market on Saturday, March 9th, at De Anza College in Cupertino, and was shown that our property sales went very well (our own club sponsored Flea Market this year will occur on May 11th). Kristen said she would request a full “state of the club” financial report for the April Board Meeting so that we can plan for financing our projects this summer and through the rest of the year.

The meeting was adjourned at 8:30 PM.

There were three new members at the February meeting:

Javen O’Neal	KF7JO	Union City
Terry Hardie	KW0RCA	San Jose
Bill Blodgett	KE6RKT	Mountain View

Badges

K6FTF	Mark	San Jose
KJ6GBE	Sreendish	Redwood City
KG6GYG	Art	San Jose
N6JCY	Joani	San Jose
KG6QKN	Francis	Palo Alto
KG6QKO	Kali	Palo Alto
KJ6SGT	Xiande	Campbell
KF6SRD	Chuck	Palo Alto
K6TSR	George	Portola Valley
K6VVK	Vincent	Palo Alto
KI6QWM	Scott	Palo Alto
K6JSH	Josh	Castro Valley
KI6JLS	Joanne	Palo Alto
K6WRU	Walter	Palo Alto

New Badges

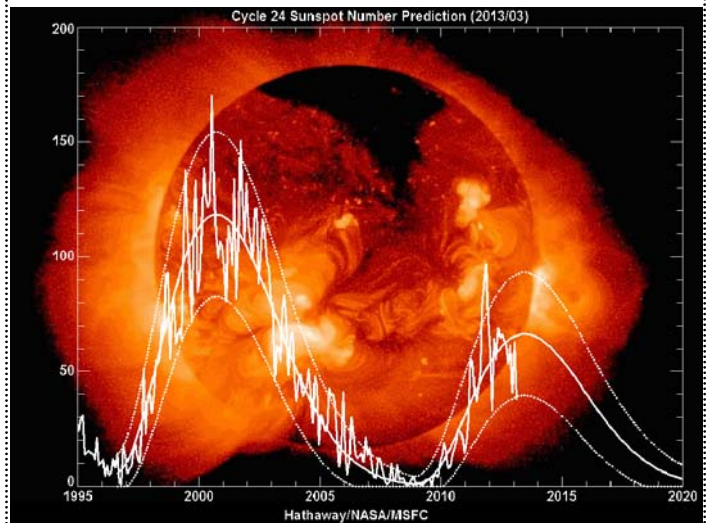
KM6WP	Michael	Sunnyvale
KK6CCJ	Nancy	Mountain View
KJ6WYO	Joe	Sunnyvale

Solar Cycle Prediction

NASA Marshal Space Flight Center

<http://solarscience.msfc.nasa.gov/predict.shtml>

The current prediction for Sunspot Cycle 24 gives a smoothed sunspot number maximum of about 66 in the Fall of 2013. The smoothed sunspot number has already reached 67 (in February 2012) due to the strong peak in late 2011 so the official maximum will be at least this high



and this late. We are currently over four years into Cycle 24. The current predicted and observed size makes this the smallest sunspot cycle since Cycle 14 which had a maximum of 64.2 in February of 1906.

Predicting the behavior of a sunspot cycle is fairly reliable once the cycle is well underway (about 3 years after the minimum in sunspot number occurs [see [Hathaway, Wilson, and Reichmann Solar Physics; 151, 177 \(1994\)](#)]). Prior to that time the predictions are less reliable but nonetheless equally as important. Planning for satellite orbits and space missions often require knowledge of solar activity levels years in advance.

A number of techniques are used to predict the amplitude of a cycle during the time near and before sunspot minimum. Relationships have been found between the size of the next cycle maximum and the length of the previous cycle, the level of activity at sunspot minimum, and the size of the previous cycle.

Among the most reliable techniques are those that use the measurements of changes in the Earth’s magnetic field at, and before, sunspot minimum. These changes in the Earth’s magnetic field are known to be caused by solar storms but the precise connections between them and future solar activity levels is still uncertain.

Read more at the NASA website.

RadioFest



Leigh, WA5ZNU, with his new book, "Ham Radio for Arduino and PICAXE."



Darryl, KI6LDM, and Peter, AF6DS, at the Radiofest PAARA-FARS table



March Raffle Winners
Michael, KI6UGV, K6WA, KG6YPH, N6DQ, N6NKT, N6PSE, KJ6IWI

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Future PARRA Meeting Dates

May 3rd, June 7th, July 5th

VE Exams

3rd Saturday each month, 10:30AM, 145.23- PL=100Hz
 Redwood City Main Library, Community Conference Room
 1044 Middlefield Road, Redwood City, CA
 Contact: <http://amateur-radio.org> or Al, WB6IMX@att.net

Electronics Flea Market

Sponsorship by **A.S.V.A.R.O.** — Association of Silicon Valley Amateur Radio Organizations
 Second Saturday of month, March-October, 6am-2pm
 Howard M. Krawetz, N6HM 650-856-9761
 Contact: <http://www.electronicfleamarket.com/>

PAARA — Palo Alto Amateur Radio Association

Meets 1st Friday 7:00pm each month at Room H-6, Cubberley Community Center; Net 145.230 - PL 100Hz Mondays at 8:30. See our website at <http://www.paara.org> for more information or contact: Joel Wilhite KD6W, kd6w@ARRL.NET, 650-325-8239

FARS — Foothills Amateur Radio Society

Meets 4th Friday each month at 7:30pm
 Contact: <http://www.fars.k6va.org>

NCDXC — Northern California DX Club

Meets 3rd Thursday 7:30pm each month,
 Repeater for member info 147.360, Thursday 8:00PM
 Contact: <http://ncdxc.org> or Mike Gavin W6WZ, (650) 851 8699

QCWA Chapter 11

Northern California Quarter Century Wireless Association

Meets third Wednesday monthly at Harry's Hofbrau in Redwood City @ 11:30 AM.
 Guests are welcome. Saturday morning net on 146.850 MHz, PL 114.8

NorCalQRP — Northern California QRP Club

Meets 1st Sunday each month
 Contact: <http://www.norcalqrp.org>

SPECS

Southern Peninsula Emergency Communication System

Meets each Monday 8:00pm on Net 145.27, 440.80 MHz
 Contact: <http://specsnet.org> or Tom Cascone, KF6LWZ, 650-688-0441

SCARES

South County Amateur Radio Emergency Service

Meets 3rd Thursday 7:30pm each month, San Carlos City Hall.
 Net is on 146.445 [PL 114.8] & 444.50 (PL-100) 7:30 Monday evenings.
 Contact: President Gary D. Aden, K6GDA 650-743-1265 (D), 650- 595-5590 (N)
 Web: <http://k6mpn.org> E-mail: pres@k6mpn.org

SCCARA

Santa Clara County Amateur Radio Association

Operates W6UUU & W6UUU/R, repeater 146.985-pl
 Nets: 2m, 7:30pm Mon; 70cm, 442.425+ (pl 107.2) Thur.
 Meets 2nd 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
 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 1286.20 (-12m) 100.0 ctcss
 223.96 (+1.6) 156.7 ctcss
 Meetings are 3rd Wednesday of every month.
 Contact: <http://wvara.org>, Bill Ashby N6FFC, 408-267-3118, N6FFC@Juno.com, or N6FFC@ARRL.NET

American Red Cross, Santa Clara Valley Chapter

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

(Please send changes to PAARAgaphs editor)



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Badges are ready for pickup.

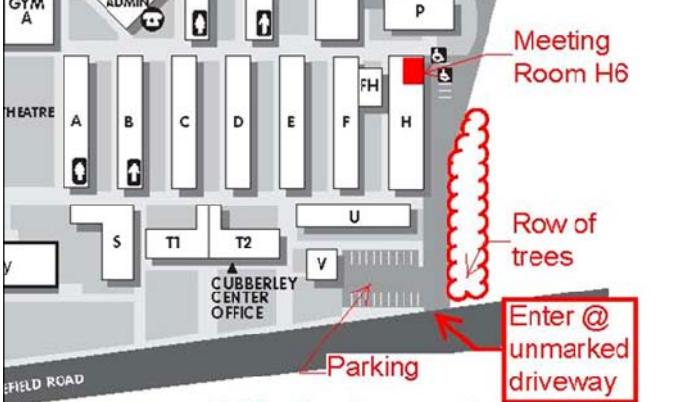
If you would like to order a badge, see
Doug Teter, KG6LWE.

PAARA Weekly Radio Net

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

<u>Week</u>	<u>Control Operator</u>
1 st	Open
2 nd	Doug - KG6LWE
3 rd	Jack - N1VSL
4 th	Marty - W6NEV
5 th	Up for Grabs!

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

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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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 P.O. Box 911, Menlo Park
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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.

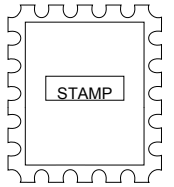
Membership in PAARA is \$20.00 per calendar year,
 which includes one subscription to PAARAgaphs
 \$6 for each additional family member (no newsletter).

Make payment to the
 Palo Alto Amateur Radio Association,
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PAARAgaphs — April 2013

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Palo Alto Amateur Radio Association, Inc.
 PAARAgaphs Newsletter
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FIRST CLASS MAIL



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