PAARA NEWSLETTER

K6OTA



VOLUME 62, NUMBER 7, August 2012

PAARAgraphs

The Official Newsletter of the Palo Alto Amateur Radio Association, Inc.

Next Meeting August 3, 2012

W6ARA

Ken Dueker KD6BPM Palo Alto Mobile Emergency

Operations Center

Ken's talk will include what triggers an Emergency Operations Center (EOC) activation, the steps activate the EOC and what actually happens when the EOC is activated.



President's Corner

August 2012

W6OTX

Welcome to the August issue of PAARAgraphs. It's already mid-summer and many important events are behind us. We still have a few fun PAARA events ahead of us to look forward to, though. I want to take a moment to apologize for



there not being a July issue of PAARAgraphs, but our editor Bob, K6RWY, has been rather

busy during this time of the year, so it became impossible for him to edit the newsletter last month. This month Jim, KI6KVW, will be putting out the issue since Bob will still be busy, so we all owe Jim a big thanks. Please take a moment to thank him at the next meeting.

I'm writing to you from a flight to Tokyo from San Francisco, since on one of my periodic trips to Asia, and I'm not entirely sure where I'll end up, but time will tell. I think I'll be going to the western coast of the main island of Japan, Honshu, this time. It's very pleasant and rural there, and a big change from the hustle and bustle of Tokyo. As usual, I can't sleep at all. *sigh* but is does give me a chance to write the President's Corner, now doesn't it. I'm also hoping to get a chance to go to Akihabara while I'm in Tokyo, and check out the ham radio stores to see what's new. I'll take lots of pictures.

As many of you have no doubt heard, we had a great ARRL Field Day this year out at Bedwell Bayfront Park in Menlo Park. Doug, KG6LWE, and his crew put on a magnificent show with lots of aluminum high up in the air. Despite an incident with a snapped cable on one of the crank up towers, in which thankfully nobody was hurt, we had an incredibly successful effort. That tower kept one of our main antennas too low during the first few

(Continued on page 2)

Breaking news: Regrettably due to circumstances beyond our control, the PAARAshoot has been canceled

(Continued from page 1)

hours of the contest, but we were able to raise it up to a reasonable height later on. Despite all of this we make about 1000 more Qs than last year, and certainly made more bonus points than we did last year. All of our main HF stations stayed active during the entire 24 hours, and the Q rate was guite high at times. We even worked a few DX stations. Propagation was only moderately good on the highest end of the bands, with few 6m F openings, and 10m not really productive, but 15m was really great with pileups on the CW station much of the morning. The GOTA station also had a great setup and working stations from there was no struggle at all. I know that made the experience more fun for the new operators. I coached a few GOTA QSOs, and watched more than one person make their first HF contact. It was wonderful to see. We had a great time overnight too, and Rick, K6RDM, kept us well supplied with coffee. I want to thank everyone who worked on Field Day, and particularly Doug and the station captains Rebar, N6DB, Rick, N6DQ, Marty, W6NEV, Joel KD6W, and Rob, KI6INR. I'd also like to thank our bonus points captain Jake, K6MP, our PIO Jim, KI6KVW, and our network wrangler David, KI6ZHD. I know there are many more to thank, and I'm sure Doug will thank each of you in turn. It was the best PAARA Field Day yet. Let's do it even better next year!

The next bit of exciting news I have for you (if you didn't attend the last PAARA meeting you might not already know this) is that, after many years of being in Menlo Park, the PAARA general meetings are moving back to Palo Alto. Yes, the Palo Alto Amateur Radio Association is finally back in the city for which it is named. We will be meeting in the Cubberly Community Center probably starting in September. We still need to finalize that date, so stay tuned to the website and the repeater for details.

On a somber note, I heard that Arv Hammer, WA6UUT, long time FARS member, and one of the founders of the 9AM Talk Net became a silent key. I am deeply saddened by this news. Please keep Arv and his family in your thoughts and prayers.

Well, that's about all that I have space for this month. I hope to see you all at the Elaine Gibbons Memorial PAARAshoot at the San Jose Field Sports Park on July 29th. I'm not sure if you'll get PAARAgraphs before or after the event, but I thought I'd mention it regardless. And don't forget that CQP is coming up soon. I'll CU when I get back from JA.

CU ON THE BANDS ES 73 DE K6WX

18 July 2012 PAARA Board Meeting

The Board Meeting was held at the Palo Alto Red Cross building, commencing at 7:20 PM on the 18th of July, 2012. Attending were Marty Wayne W6NEV (VP), Rick Melrose K6RDM (Sec, Database), Ron Chester W6AZ (Treas), Rob Riley K16INR (Dir), Larry Rebarchik N6DB (Dir), Byron Beck KG6UOB (Dir), Gerry Tucker N6NV (Property Manager), Joel Wilhite KD6W (Technical Coordinator) and Jake Whiting K6MP. A quorum was present.

President's Report: Kristen K6WX was unable to attend due to travel. VP Marty Wayne W6NEV presided over the meeting and relayed Kristen's comment that the July 6th General Meeting was very well attended and that the presentation by Lance Ginner K6GSJ, who was involved with the original design and construction of the first Orbital Satellite Carrying Amateur Radio (OSCAR, 1967) and seven that followed, was received with considerable enthusiasm. Kristen also asked Marty to remind the board and the general membership that we are very interested in publishing your submissions in upcoming issues of PAARAgraphs. Any projects, technical articles, hints n kinks, DX, on the air experiences that might be of interest? Write them up!

Secretary's Report: Rick K6RDM reports that the minutes of the 20th of June Board meeting had been previously submitted and approved and that there were two new members July 6th meeting.

Vice President's Report: Marty W6NEV reported on our presentation schedule (with the exception of November at this point) is booked through the end of the year.

Palo Alto Amateur Radio Association, Inc.

PO Box 911 Menlo Park, CA 94026

Officers

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Appointed Positions

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Chaplain	0	
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Station Trustee K6OTA	. Ron Chester, w6Az	•
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HistorianPosition	. Position Vacant	
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Future PARRA Meeting Dates

- - - - -

Sep 7th, Oct 5th, Nov 2nd, Dec 7th, Jan 4th

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 AI, 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.electro

PAARA — Palo Alto Amateur Radio Association

Meets 1st Friday 7:00pm each month at Menlo Park Rec. Center; Net 145.230 - PL 100Hz Mondays at 8:30. See our website at <u>http://www.paara.org</u> 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.k6ya.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.nord alarn ora

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) E-mail: pres@k6mpn.org Web: http://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 2nd Mon each month @ 7:30 PM.

Contact: <u>http://www.gsl.net/sccara</u> 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@A

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.

- While 44 F and 1266 repeaters are linked.

 VHF: 52.58 (-500) 151.4 ctcss

 147.39 (+600) 151.4 ctcss

 223.96 (+1.6) 156.7 ctcss

 1286.20 (-12m) 100.0 ctcss

 Meetings are 3rd Wednesday of every month.

 Contact: http://wara.org, Bill Ashby N6FFC, 408-267-3118, N6FFC@Juno.com, or

N6FFC@ARRL.NET

American Red Cross,

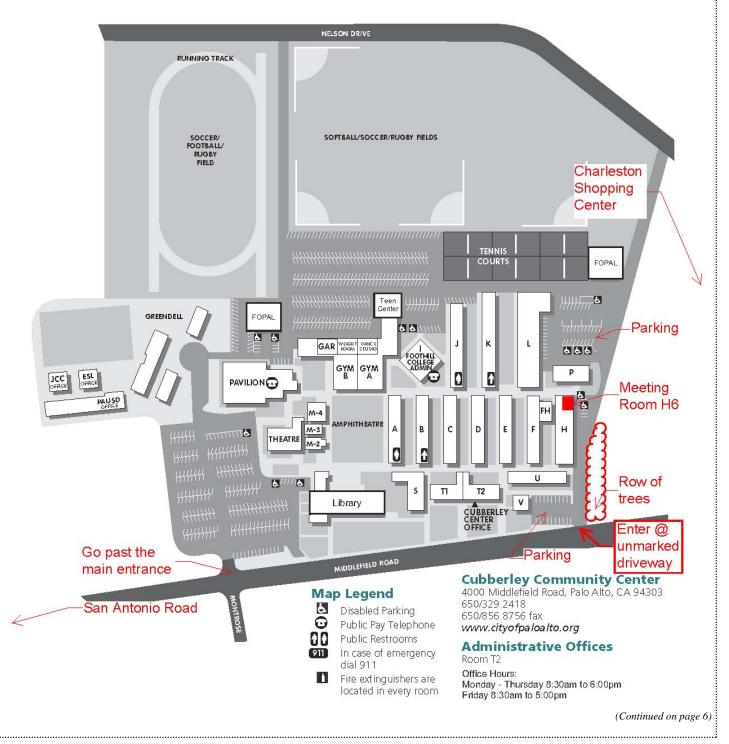
Santa Clara Valley Chapter Contact: http://santaclarava v.redcross.org or Scott Hensley KB6UOO, (408) 967 7924 fshenslev@Novell.com

(Please send changes to PAARAgraphs editor)

PAARA Meeting Location Change

First meeting at the new location *may* be our next meeting on September 7, 2012. Please check the PAARA web site and listen to N6NFI the week before the September meeting to learn which meeting site will be used.

PAARA had the opportunity to relocate its meeting place back into Palo Alto, the city where the club originally was organized. This has several benefits for our club. It is centrally located with easy access from Hwy's 101 and 280. Also from Alma/Central Expwy and El Camino. We will be more closely associated with the Palo Alto community the club's namesake, along with a reduced financial burden for meeting room costs.



Clamp-on Ammeter Calibration by: Gary Barnes

I worked in calibration laboratories for many years before retirement. Most people do not understand what a calibration represents. They think they are paying for a report and calibration sticker only. Each instrument is checked for proper operation for each function and range. Purchasing a new piece of test equipment does not guarantee proper operation. Calibration pricing includes setup charge plus an amount per test point.

Before any instrument is calibrated, the Instrument Under Test (IUT) specifications are checked against the standard's uncertainty. Good engineering practice would require the ratio to be 1:10 or the accuracy of standard to be 10 times better than the IUT, but good calibrations can be performed with accuracy ratio as little as 1:4. This calculation is done at every test point for each range and function of any instrument. A better method or standard is necessary if the accuracy ratio is less than 1:4 or the IUT tolerance limits will be reduced. This is called guard banding. The calibration report should list any test point that has less than 1:4 accuracy ratio.

One day I received five clamp-on ammeters to calibrate. I made a data worksheet for these new instruments. The data worksheet list the test points, a place for the instrument indication and the tolerance for each test point. I normally check each current range at several different points to check the linearity of the IUT. One range of this clamp-on ammeter was from 0 to 1000 Amperes at 60 Hertz. The clamp-on ammeter was in tolerance up to 750 Amperes, but was out of tolerance above 750 Amperes, and the error increased as the test current was increased, above 750 Amperes.

The normal way to check the accuracy of a clamp-on ammeter is to supply a known test current to a coil of wire. This coil would have either 1, 2, 5, 10, 20 or 50 turns of copper wire. A test current of 20 Amperes would yield 1000 ampere-turns with the 50-turn coil. This method had been used for decades to test clamp-on ammeters without any problems. I would set the calibrator for an output current of 19 Amperes which would provide 950 Ampere-turns for the IUT.

A clamp-on meter is used to check current flow in a single wire, so I connected to #00 AWG welding cable to the source of 1000 Amperes of current through the single wire. This wire was hung from the ceiling. The IUT displayed the same problem when the test current was increased above 750 Amperes. The welding cable is only rated for about 400 Amperes of current. I was only using this setup for a short period of time so the wire did not get too hot. All five clamp-on meters had the same problem. I returned the five clamp-on ammeters to the manufacturer for repair, but they never corrected the problem.

I talked to the manufacturer's test engineer about the out of tolerance problem. The test engineer asked me if I was measuring the voltage across my test coil. I do not understand why anyone would need to do this. Another problem is the jaw opening is only 0.75-inch but the diameter of wire that would carry 1000 Amperes is about 2-inches in diameter.

The manufacturer's test engineer said they use a 1000-turn coil of #28 AWG wire. Therefore, a test current of 1 Ampere will provide 1000 Ampere-turns. They used a variable auto-transformer to adjust the test current, and an analog ammeter to monitor the coil's current. I do not know what cause the error in the manufacturer's setup, but it might be due to the analog ammeter and the 1000-turn coil and the inductive reactance of 90 ohms and DC resistance of 84 ohms. The network impedance of the 1000-turn coil is about 124 ohms at 43 degrees.

PAARAgraphs—August 2012
Celebrating 75 years as an active ham radio club—Since 1937

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I was using a Fluke Calibrator that supplies AC and DC voltage, AC and DC current, and resistance. The maximum output voltage is 1100 volts and the maximum output current is 19.9999 Amperes, and the maximum resistance is 10 Megaohms. The worst case AC current specification is $\pm 0.07\%$ of setting from 50 to 1000 Hertz. The IUT's specification is $\pm 2\%$ of reading.

In this case, the customer got a bill and report but no calibration sticker.

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The new location is at the Cubberley Community Center, 4000 Middlefield Road, Palo Alto CA 94303. Please note that the driveway that directly leads to the meeting room is between the main entrance to the community center and the Charleston Shopping Center.

There is a small parking lot at the beginning of the driveway between building V and Middlefield Road, directly adjacent to building H, and beyond building H behind building P. It is a short walk from all of these lots to the meeting room. Please refer to the maps for details. If you accidently go to the Menlo Park Recreation Center, there will be directions available to get you to the new location.

If you have any questions, please contact Marty Wayne at w6nev@arrl.net or 408-246-7531. You may also contact any of the board members.

From San Francisco

101 South toward San José Exit San Antonio Road South, Los Altos Turn RIGHT onto Middlefield Road Turn LEFT at first traffic light into parking lot, opposite Montrose

... or take 280 South Exit Page Mill Road East (Page Mill becomes Oregon Expwy) Cross El Camino Real and drive through underpass Turn RIGHT onto Middlefield Road Travel approximately 2 miles past East Meadow and past Charleston Turn RIGHT at first traffic light into parking lot, opposite Montrose

From San Jose

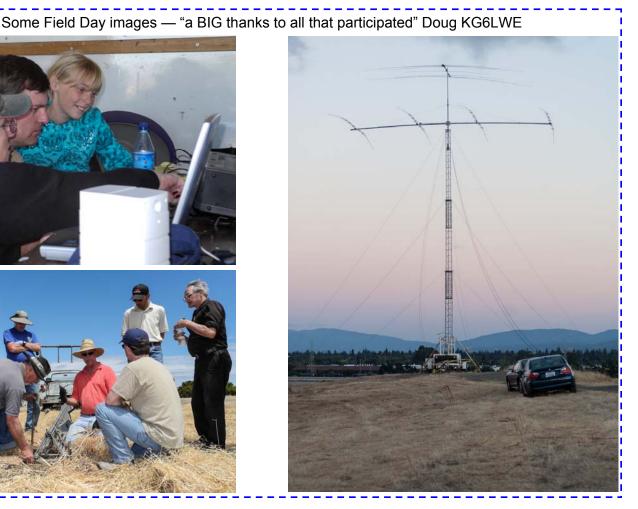
101 North toward San Francisco Exit San Antonio Road South Turn RIGHT onto Middlefield Road Turn LEFT at first traffic light into parking lot, opposite Montrose

... or take 280 North Exit at El Monte Road, towards Los Altos Turn LEFT onto Foothill Expressway Turn RIGHT onto San Antonio Road Turn LEFT onto Middlefield Road Turn LEFT at first traffic light into parking lot, opposite Montrose









Winners of June Raffle From left to right: Vick Black AB6SO DBJ-1 J-Pole. Dale O'Harra NX6S — NARCC Repeater Directory Jim Rice K6AK— **Raffle Coordinator** Unknown — Bongo Ties Merrit Yee KG6TNO -Alinco DJ-V57T HT, Pat Sullivan W6ABA — Alpha Delta two position coax switch Rob Clothier KJ6POG —West Mountain /COM Speakers Not in picture, Joe Castellano W6SNV - MFJ Giant LCD clock

PAARA Members and Visitors: THANK YOU FOR YOUR SUPPORT of the exciting monthly raffles! Since (Feb. 2003), 239 Radios, including Five Elecraft K3's, a Yaesu FT-847, an Icom 706 MK IIG, a Yaesu FT-897D, and TWO Elecraft KX1's have gone to Fellow Hams, THANKS TO YOU!

PAARA had a remarkable year in 2011! If you aren't a member, please join PAARA now, and experience fun 2012 events with the "friendliest club around." - K6AK Jim

20 June 2012 PAARA Board Meeting

The Board Meeting was held at the Palo Alto Red Cross building, commencing at 7:40 PM on the 20th of June, 2012. Attending were Kristen McIntyre K6WX (Pres), Marty Wayne W6NEV (VP), Rick Melrose K6RDM (Sec, Database), Ron Chester W6AZ (Treas), Rob Riley KI6INR (Dir), Larry Rebarchik N6DB (Dir), Darryl Presley KI6LDM (Dir), Doug Teter KG6LWE (Field Day Coordinator), Gerry Tucker N6NV (Property Manager). A quorum was present.

President's Report: Kristen K6WX reported that the presentation at the June 1st meeting by Dean Straw N6BV, with our Field Day warm-up and his QSO handling expertise was timely and enjoyed in anticipation of this year's fast approaching Field Day. Our July meeting will feature Lance Ginner K6GSJ who was instrumental in getting the first Orbital Satellite Carrying Amateur Radio (OSCAR 1, as well as 7 other OSCARs) built and launched on December 12, 1961, barely four years after the launch of world's first satellite, Sputnik 1, in 1957. This is one not to be missed!

Kristen also reminded the board and the general membership that there is still space available in upcoming issues of PAARAgraphs to publish your submissions. Projects, technical articles, hints n kinks, DX, on the air experiences, any such make fine content to be shared with your fellow hams, so please do!

Secretary's Report: Rick K6RDM reports that the minutes of the 16th of May Board meeting had been previously submitted and approved and that there were 2 new member and 3 renewals at the June 1st meeting.

Vice President's Report: Marty W6NEV reported that our presentation schedule is essentially booked through the end of the year.

Doug Teter KG6LWE, Field Day Coordinator briefed the board in considerable detail on the points of coordination, scheduling and logistics for Field Day, which at the time of this board meeting, is only three days away. Work parties at his shop over the last several weekends have gotten all of our antennas cleaned up, refurbished as needed, tuned and kitted up and ready to be transported and set up at the site. That operation will be followed by the interconnection of the logging network and setting up each of the phone, CW, GOTA and VHF stations.

.....

Station Captains need to set up their box-van operating positions and make sure their schedules of operators and loggers are in good order and ready to go at 11 AM on Saturday. Other factors such as general layout, logistics, food, Public Information, Bonus Points, propagation conditions etc. were discussed at some length. It appears to the board that Doug and his crew have matters commendably well in hand, which should minimize (but perhaps not entirely eliminate) the gremlins that gratuitously insinuate themselves into the best laid plans of mice and men, giving us much to talk about in the days that follow. Moreover, we PAARA troops mean to rack up a score that will once again surpass our previous year, so let the adventure begin!

The meeting was adjourned at 8:50 PM.

There were two new members at the June meeting:

Masayuke InoueK1GI San Jose

Roderick Bacon TBD Sunnyvale

(Continued from page 2)

The membership is reminded that this year's PAARAshoot at the Santa Clara County Field Sports Park on Metcalf Road is set for the 29th of July, 9 AM to 4 PM. It will be a pot-luck as before and non-PAARA club member guests are welcome.

It having been announced at the July 6th meeting that PAARA General Meetings will be returning to Palo Alto, the board decided that first meeting at the Cubberly Community Center at 4000 Middlefield Road, Room H6, will likely be held on September 7th. Please listen to N6NF, check the PAARA web site or read PAARAgraphs to be sure where the meeting will be held. Maps and information will be in PAARAgraphs and handed out at upcoming meetings as well as posted on PAARA.org.

Treasurer's Report: Ron W6AZ reported that sales of club-owned equipment and materials at the Ham Flea Markets have been doing very well. As our ARRL Field Day report coordinator, Ron is assembling all the data of our statistics and pre-

(Continued from page 8)

paring them for submission. We made over 5300 contacts so it's looking pretty good.

Technical Coordinator Joel Wilhite KD6W gave the board an update on the status of our W6OTX D-STAR repeater. It is completely operational and we are officially coordinated on 2M, 440 MHz and 1.2 GHz, however, we are still working on arranging a suitable location for a permanent installation. The board wishes to again thank Howard Califf W6HOC for providing the machine and voted to commend Joel for the excellent work in getting the entire system tuned up and operating. The membership is requested to advise Joel of any possibilities for acquiring an elevated location for installation of the repeater.

The meeting was adjourned at 9:15 PM.

There were two new members at the July meeting:

Tim Penner KJ6VTR Sunnyvale

Nicole Penner KJ6WOY Sunnyvale

New Badges waiting for pick up

-Art, KI6GYY, San Jose
-Chuck, KF6SRD, Palo Alto
-Jon, K6WV, Cupertino
-Francis, KG6QKN, Palo Alto
-George, K6TSR, Portola Valley
-Joani, N6JCY, San Jose
-Sreenidish, KJ6GBE, Redwood city
-Kali, KG6QKO, Palo Alto
-Mark, K6FTF, San Jose
-Lee, AG6GH, Redwood City
-Vincent, K6VVK, Palo Alto
-Josh, KJ6PVN, Castro Valley
-Matt, N6MLK, Cupertino
-Ninit, K6XOX, San Jose
-Xainde, KJ4SGT, Campbell



June 2012 PAARA Raffle Prize Winners

1st Prize: Vic Black / AB6SO / Yaesu FT-2900R / 75W / 2m Transceiver
 2nd Prize: Joel Wilhite / KD6W / Arrow VHF / UHF Backpack Yagi Antenna
 3rd Prize: Emily Stemmerich / KJ6SBS / Battery Tender Junior / 12V Charger
 4th Prize: Daniel Rahamim / KJ6SEE / Two FRS / GMRS Radios
 5th Prize: Pat Sullivan / W6ABA / NARCC Repeater Directory
 6th Prize: Orval Chadsey / N6OZI / PL-259 Coax Connectors
 7th Prize: Don Rodoni / KE6CFX / Two Antenna Insulators



James Farrey Sales Manager

James Electronics Ltd 1355 Shoreway Road, Belmont, CA 94002 Tel: 650•592•6718 x 350 Fax: 650•802•1520 Direct: 650•802•1511 jfarrey@jameco.com

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BONICS

Badges are ready for pickup.

If you would like to order a badge, see Lynn Gentry, KG6JPV.

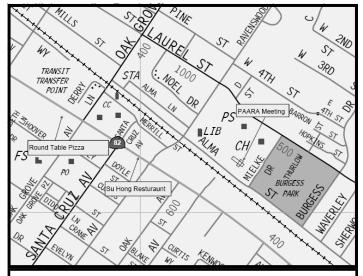
PAARA Weekly Radio Net

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

Week Control Operator

- 1st Michael N6MEB
- 2nd Doug KG6LWE
- 3rd Jack N1VSL
- 4th Marty W6NEV
- 5th 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.



Directions to PAARA meeting: http://paara.org/meetings/



Food will be served at **6:00** sharp, so guests will be on time for the PAARA meeting. Those arriving late will be responsible for their own food order.

5:30 pm—at Su Hong Restaurant 1039 El Camino Real Menlo Park

across from Kepler's Book Store on El Camino Real Walking distance from Caltrain!

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 Menlo Park Rec Center, 700 Alma Street, Menlo Park, CA.

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 PAARAgraphs \$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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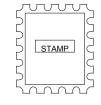
PAARAgraphs Ad Rates

PAARAgraphs accepts paid advertisements from non-members. (short personal ads remain free for members in good standing). All ad rates listed are per issue. 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 — August 2012

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FIRST CLASS MAIL

