



# PAARAGraphs

Celebrating 62 years as an *active* ham radio club—*Since 1937*  
Newsletter for the Palo Alto Amateur Radio Association, Inc.



## CALENDAR

- May.....7, PAARA Meeting, 7:30  
Menlo Park Recreation Center  
700 Alma Street, Menlo Park
- May.....12, PAARA Board Meeting, 7:30  
Red Cross Bld., 400 Mitchell Ln., Palo Alto
- May.....22, PAARA PICNIC
- June....4, PAARA Meeting, 7:30
- June...9, PAARA Board Meeting, 7:30
- July....9, PAARA Meeting, 7:30
- July.. 14, PAARA Board Meeting, 7:30
- 2 m CODE PRACTICE, 2000 to 2030 PST, Tues W6APZ 145.23 repeater



## PROGRAM

May 7, 1999  
7:30 P.M.

### Speaker:

(speaker not confirmed at press time)

—PAARA Radio NET every Monday evening at 8:30 P.M., local time—  
on the 145.230 -600 MHz repeater, PL tone off

## PRESIDENT'S THOUGHTS

—Andreas Junge, N6NU

Dear Members,

Our last speaker was Ken Silverman, K2KW, head of the DX Contest Expedition to Jamaica. Ken and his team mates went out to break the world record score for the CQWW CW contest that had been untouched for about 10 years. And they made it! I was impressed by the amount of planning. No rock was left unturned in the search for the optimum configuration. The biggest surprise to me was that only vertical antennas were used. Well, now I do not feel bad about my vertical antenna at home anymore.



I would like to thank Ron Panton, W6VG and his wife Helga for inviting us to have the annual PAARA Picnic on May 22nd at their house. Make sure to mark this Saturday in your calendar and please join us to BBQ and have fun. Maybe we will have a mini T-Hunt on the premises like we had last year (Andy: HINT, HINT).

I do not know when PAARA had the last club building project. I thought it was time to become more active in building small and useful projects. Details will be given at the next meeting and additional ideas and comments are welcome.

I hope to see you at the next meeting!

73, Andreas Junge, N6NU      [andreas@atltech.com](mailto:andreas@atltech.com)

Join us for pre-meeting eyeball  
**QSO May 7th**  
**gab & gobble**

6 pm— at Su Hong Restaurant  
1039 El Camino Real, Menlo Park  
—across from Kepler's Book Store—



## Miscellaneous Dates

**Flea Market at Foothill** (info at: <http://ioslin.com/FleaMarket>)  
 Apr 10 Silicon Valley Emergency Communications Society, (SVECS)  
 May 8 West Valley Amateur Radio Assoc., (WVARA)  
 June 12 Palo Alto Chapter, American Red Cross  
 July 10 Palo Alto Amateur Radio Assoc., (PAARA)  
 Aug 14 San Jose Chapter, American Red Cross  
 Sept 11 Santa Clara County Amateur Radio Assoc., (SCCARA)  
 Oct 9 South Peninsula Emergency Communication System (SPECs)

**PAARA** Palo Alto Amateur Radio Association  
 meets 1st Friday 7:30 each month, Net 145.230 each Monday 8:30,  
 contact: Andreas Junge N6NU.....(650) 233 0843

**EMARC** Electronics Museum Amateur Radio Club  
 meets 4th Friday 7:30 each month,  
 contact: Sheldon Edelman 650-858-2176, [Edelman@richochet.net](mailto:Edelman@richochet.net)

**NCDXC** Northern California DX Club  
 meets 2nd Friday 7:30 each month, repeater for member info 147.360, Thur 8:00PM,  
 contact: Bob Mammarella KB6FEC 408 729 1544.

**NorCalQRP** Northern California QRP Club  
 meets 1st Sunday each month,  
 contact: Jim Cates 3241 Eastwood Rd., Sacramento, CA 95821.

**Perham Foundation**,  
 contact: Jerry Tucker WA6LNV 650-961-3266

**SPECS** Southern Peninsula Emergency Communication System  
 meets each Monday 8:00PM on Net 145.27, 224.36, 440.80 MHz  
 contact: Mike Hastings KB6LCJ, 408-243-6745 or 408-249-6909.

**SCARES** South County Amateur Radio Emergency Service  
 meets 3rd Thursday 7:30 each month, San Carlos City Hall.  
 Net is on 144.45 & 444.50 (PL-100) 7:30 Monday evenings.  
 contact: Dick Collins K6ANN 650-593-8952

**SCCARA** Santa Clara County Amateur Radio Association  
 Operates W6UU repeater 146.385+ Nets: 2m, W6UU, 7:30 Mon; 10m,  
 28.385, 8:00 Thur. meets 2nd Mon each month.  
 contact: Jack Ruckman AC6FU

**SVECS** Silicon Valley Emergency Communications  
 Operates WB6ADZ repeater (146.115 MHz+)  
 contact: Lou Stierer WA6QYS 408 241 7999

**WVARA** West Valley Amateur Radio Association  
 operates W6PIY repeater 147.39+, 223.96, 441.875, 1286.2  
 meets 3rd Wed every month.  
 contact: Glen Lokke Jr. KE6NBO at 408 971 8626, or [glokke@pacbell.net](mailto:glokke@pacbell.net)

### Disaster Services,

#### PALO ALTO CHAPTER, American Red Cross

Meets 3rd Wed. each month 7:30PM,  
 HF, packet, BBS, ATV, OSCAR Gateway, NASA satellite,  
 contact: Alan Ball 650-688-0423.

#### SAN JOSE CHAPTER, American Red Cross

contact: Scott Hensley KB6UOO, 408 249 7093, [fsh@richochet.net](mailto:fsh@richochet.net)

**VE Exams**, 3rd Saturday each month, 11AM, 145.23- PL=100Hz  
 American Legion Hall, 651 El Camino Real, R.C.  
 contact: Al Montoya at [WB6IMX@worldnet.att.net](mailto:WB6IMX@worldnet.att.net)

## May Contest Calendar, 1999 Vic Black, AB6SO

(for rules and exchanges, see [www.contesting.com](http://www.contesting.com))

- 1,2 MARAC County Hunters, CW 0000Z, May 1-2400Z, May 2
- 1,2 10-10 Int. Spring Contest, CW 0001Z, May 1-2400Z, May 2
- 1,2 Massachusetts QSO Party 1800Z, May 1-0400Z, May 2 and 1100Z-2100Z, May 2
- 1,2 ARI International DX Contest 2000Z, May 1-2000Z, May 2
- 8,9 VOLTA WW RTTY Contest 1200Z, May 8-1200Z, May 9
- 8 FISTS CW Club Spring Sprint 1700Z-2100Z, May 8
- 8,9 CQ-M International DX Contest 2100Z, May 8-2100Z, May 9
- 15 EU Spring Sprint, CW 1500Z-1859Z, May 15
- 21-24 Major Six Club Contest (6m) 2300Z, May 21-0300Z, May 24
- 22,23 Texas QSO Party 1400Z, May 22-0500Z, May 23 and 1400Z-2000Z, May 23
- 22,23 Baltic Contest 2100Z, May 22-0200Z, May 23
- 29,30 CQWW WPX Contest, CW 0000Z, May 29-2400Z, May 30

## Palo Alto Amateur Radio Association, Inc.

### PO Box 911

### Menlo Park, CA 94026

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\*New Committee 12/98

### Board of Directors

Charles Grandjean, WD6FAF (408) 739 5185 '00 <a href="mailto:wd6fafwebtv.net">wd6fafwebtv.net</a>
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Terry Conboy, N6RY (510) 944 5388 '99 <a href="mailto:terry.conboyairtouch.com">terry.conboyairtouch.com</a>
Steve Stuntz, K6FS (650) 322 4952 '99 <a href="mailto:k6fs@arrl.net">k6fs@arrl.net</a>
Doug Schliebus, K1DIT (650) 851 0727 '00 <a href="mailto:schliebus@aol.com">schliebus@aol.com</a>

(see "Calendar" for Board meeting times, visitors welcome)

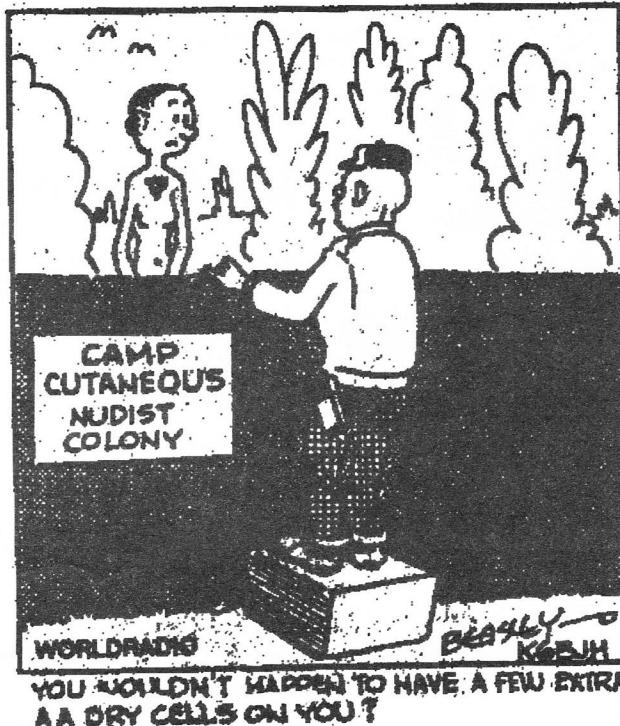
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### PAARAGraphs e-mail address: [wmporter@aol.com](mailto:wmporter@aol.com)

Submit material for PAARAGraphs by the 15th

**PAARA Website** <http://www.qsl.net/paara/>



## WEB WANDERINGS

de Vic Black, AB6SO



I asked Jim Reid KH7M to write a guest column this month on his unique method for increasing CW copying speed and especially learning to copy code in your head rather than on paper. This one's worth reading and re-reading. Refer to it often as you improve your CW skills. It really works. (*This was excerpted with Jim's permission from the web site <http://qth.com/ka9fox/index.html> by Scott Neader KA9FOX.*)

—Vic Black, AB6SO.

### Learning High Speed CW

by Jim Reid KH7M

You can become a high speed CW operator! How? Practice. What kind of practice? Read on, if, and only if, you really WANT to become a good QRQ (high speed) CW operator; that is, one who is comfortable working DX at 30 to 40 wpm, and want to try to compete in contests with the real ops who whistle along at 40 to 50 wpm, and sometimes even faster. Nose, KH6IJ, could accurately read calls during contests sent above 75 wpm, so it is said. Tree, N6TR, reports that to be a good SPRINT CW contest operator, you had better be comfortable in a CW rag-chew at 50 wpm! And a lot of ops score pretty high in the CW Sprints.

What is the best, most efficient way to get up to those operating speeds? How best to use the practice time? First, let's assume you are at least at around 13 wpm now, and licensed as either General or Advanced. Both classes of license have access to the same CW bands in all nine of our HF bands. The Extras have some 25 kHz more spectrum on down to the lower end of "only" four of these nine bands: 15, 20, 40, and 80; pretty good incentive for upgrading, should DXing and contesting be of motivating interest to you. So, here is how, and how much, to practice.

#### Practice Methods

1. Experience on the Air. Lots of CW QSOing outside of contest times works wonders. Put the microphone away for several weeks. Put SSB, SSTV, digital mode operation, or whatever else out of your mind for the same time period. This is to be a time of pure CW skill improvement.

Contesters use computer logging programs which do most of the transmitting for them, as well as the log tasks and duplicate checking. Some programs do even more! But to use them efficiently to contest, you'd better be a pretty good keyboard operator as well, and also know the use of the function keys, without using crib notes or key overlay guides during the 'test. In what follows, both CW and keyboard skills will be addressed.

2. QRQ Receiving Practice. While waiting to acquire and set up some of the practice programs, do on-the-air receiving practice. Find QSOs in progress at a speed you can comfortably pencil/pencil copy. Now, put the pen/pencil down, and just

start listening. Yes, try to recognize the letters as they come along, and group them into words on your mind's "blackboard". Not easy to do? Well, keep trying anyway. It is going to take awhile, maybe even three or four weeks before you can follow these easy speed QSOs in your head without writing everything down! Jot down the call, the op's name, QTH and report, while just listening to the rest.

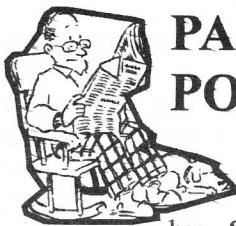
While doing this, if you can find a willing friend, there is a way to augment this sort of practice completely away from CW. Have your friend spell words from a story or newspaper article to you! He is to read the story to you, not the word sounds, but spelling the words to you out-loud. This is what is going on when you are "reading CW in your head"; words are being spelled to you "out-loud", and you must form these spelled words into meaningful thoughts. Start at one letter/word space every second sounded by your helper. Have a letter spoken every tick of the clock. This is a speed of 12 wpm (at the Paris standard of 100 letters/word spaces per minute equaling 20 wpm CW speed). Tune in WWV to get exact beats every second if you like.

When you have no trouble forming the thoughts of the article in your mind as the words are spelled to you at this rather slow pace, then have your friend double the rhythm, that is, two letters/word spaces per second spoken two per tick. This, of course, doubles your word reading rate to 24 wpm. A big jump for CW, but not for learning to read words spelled out to you in clear, plain English!! When you know the story comfortably at this rate, your actual in the head CW reading speed should be close behind, and you may be well on your way to QRQ operation.

At QRQ, you will be receiving letters/word spaces at 3 per second at a 36 wpm CW rate. Maybe your friend can get the rhythm going at 3 letters/spaces per clock tick, and you will know exactly what 36 wpm CW sounds like. This is a typical QRQ DX and contest operation speed. Of course, using a musician's metronome would allow you to exactly set the number of beats per minute; 20 wpm being 100 beats, 36, 180 per minute, 50 wpm, 250 letters/spaces, etc. My mechanical metronome has a highest beat rate of 208 per minute, or a bit over 41 wpm. The best RUFZ scores are being posted up around the 450 plus letters/numbers/spaces per minute! Of course, call signs only are being sent, and these guys already know all the prefix CW sounds! You will learn more about the RUFZ call sign/typing practice program below.

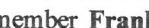
Computer aided CW training programs are available. They will send code groups, random words, text and typical QSOs. They are advertised, nearly monthly, in the ham magazines. Morse Academy (MA) is good, as is Code Master V (CM V). All of the included CW tests which come with MA can be sent by the computer at very high speeds, not just the speeds intended. Of course, they don't last long at high speed, but are very helpful for in-the-head CW reading practice. Using Code Master V, you can input via the keyboard, or text (.txt) file input, kilobytes of text for very long high speed CW listening practice runs. I have taken lots of long text files directly from

(Continued on page 45) Wanderings



# PAARA PONDERINGS

de VIC BLACK, AB6SO

 Congratulations to new PAARA member **Steve Jeffrey** who earned callsign KF6SLS then was issued vanity callsign **W9ABZ**, on February 10. **Saeko Izuta** (Rausch) upgraded from Tech Plus to General Class on February 20. Good show, **Saeko!** Also congratulations to new member **John Bruckner KE4FNB** for his upgrade to Tech Plus on March 20. Finally, congratulations to new member **Frank Bower W2LND** on his new vanity call (originally **KD6HXS**).

Next time you're at a PAARA meeting take some time to thank **John Buonocore KD6ZL** for the excellent job he does very quietly at every meeting. You don't know what he does? He's the "Stealthy Brewer" who misses a good portion of each meeting preparing coffee and cleaning up after the social break. Our meetings wouldn't be the same without the monthly dedication of a few PAARA Personalities like **John**.

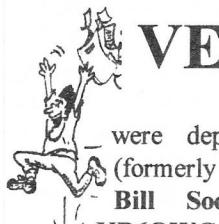
In order to protect the innocent I won't mention any names, but one of our new ham members gave a listen to 15 meters one evening while driving home from work. Since the band was "dead" he decided to turn the power down to below 5 watts into a Hamstick so he could practice sending Morse code while driving. Immediately a UAØ came back and gave him a 579 report. He thought UAØ must be a new mid western call-sign (maybe even Colorado) and was amazed when he found out that he was working Siberia! That's a sure sign of improving propagation. Only 99 more countries to go for DXCC!!

You may recall that two months ago PAARA entered a team in the FYBO (Freeze Your Butt Off) QRP Winter Field Day. Scoring multipliers were based on low power and low operating temperatures. We confidently challenged the other multi op teams as follows: "The PAARA FYBO team, W6OTX, will donate a box of California Sun Dried Raisins for every Member of the FYBO multi op team with the least points!"

Well, umm, err, it seems we get to eat our own raisins! Nearly 30 PAARA members and visitors braved torrential rain, howling winds and temperatures plunging dangerously down to 50 degrees F. Club President **Andreas N6NU** was taken off the air when the tarp he was under became overloaded with rainwater. It dumped several gallons of cold water right on his rig which would then send only a string of dits.

Although we struggled bravely against overwhelming odds to make 26 QSOs for a magnificent score of 6,656 points, we were no match for the Minnesota QRP group who "cheated" by working in 17 degree wx to make 187 QSOs for a staggering 341,088 points! Also, congratulations to single operator ABØGO whose 29 QSOs at 950 milliwatts at 20 degrees F netted 34,800 points for third place overall, sorted by temperature. Sending CW while shivering represents some serious dedication to having fun. Thanks, as always, to **Cam Castillo HP1AC** who strained in the steamy forests of Panama to hear

our 5 watt signal radiating from a car top Hamstick. Cam worked us in 87 degree conditions (no multipliers there) for the lowest individual score, sorted by temperature. This has the potential for being a new record FYBO QSO (i.e. Lowest multi-op scorer to lowest individual scorer, two-way QRP: the stuff legends are made of).



**VE** session of May 17, 1999. Weather was so beautiful we expected no applicants to show up, and indeed, the turnout was indeed sparse. On hand were dependable **Daniel L. Curry K6DLC** (formerly **WB6STW**), **Al Montoya WB6IMX**, **Bill Sooman WB6UVO**, **Joe Horne Sr. KB6OWG**, & **Ron Panton W6VG**. I think we had more VEs there than applicants. Band conditions are improving, but still no change in the licensing situation. Maybe the "FCC enforcer" (ie: **Riley Hollingsworth**) will push the changes thru.

—W6VG Ron Panton

**PAARA MONDAY NIGHT NET**

8:30 PM 145.230-600 MHz repeater

PL tone off

## Latest news between monthly issues of PAARGraphs

The Board voted to make club speakers one year Honorary Members as an added incentive to get them to speak. Also, it gives us some famous members for one year and they may renew after the year. Club members who speak (N6RY, for instance) get a one year membership extension.

## Honorary Member, 1999

**Kenny Silverman K2KW**

## **NEW PAARA MEMBERS**

A. W. Russell W6TFT

**Frank Bower W2LND**

John Bruckner KE4FNB

—Thanks to Vic, AB6SO

(Continued from page 43)Wanderings

various Internet sites and copied it directly into a CM V text file for this sort of high speed practice. I edit out a lot of punctuation marks from the text. I don't want to learn or know the code for quotation signs, semicolons, etc.!

3. Using the Computer for Practice. The apparent purpose by the authors of MA and CM V is to teach the code, from A on up to text speed, assuming you want to use the keyboard to copy what is rcvd. So if you really want to write down what is being rcvd, then by all means use these programs to build up your keyboard skills, ear to key stroke response, to copying behind. These programs can do that for you just fine! But I will show you how to use them to get up to 50 wpm, copying in your head. Now that you have CM V or MA, or another, here is how to use it to become QRQ qualified. We are still talking about methods to read the code mentally, not writing or typing anything down as you receive it. That comes later.

With lots of CW text available in the computer program, you are ready to begin. Once you have determined your present 100% comfortable hand copying speed using pencil or pen, set your computer program to send clear text at about 5 wpm faster than your hand copying speed. Turn on the sending of the text at this speed, sit back, and just listen for 30 minutes, twice per day. First you will only be catching a letter every now and then. When you do, and you will without effort, congratulate yourself. While this happens, you will miss the next several letters! But keep at it. Soon you will get all the letters of a single word. Again, congratulations, as you say the word to yourself, and, again, a lot of letters/words go on by unrecognized! But you are making progress. In a couple of weeks or so, especially if you were able to get a friend to spell the words of stories/text to you, you will be understanding the text being sent. As soon as you do, up the speed another 5 wpm. Keep it up, and in 3 or 4 months, you may be up to 40 or more wpm! Try it. It works, and you will be amazed.

At some point, you must add in the typing and contest program use practice. The RUFZ program already mentioned will send the call signs of the world to you at ever increasing speed. You must enter them correctly via the keyboard to score. PED is a CT simulating pile-up training program. Both TR and NA logging programs have simulator programs built in for training in the use of the program. As I said, PED does the same for CT. These programs you may download at no cost from other sites listed at the KA9FOX web page (for example, from the VE7TCP web site). PED411.zip is available at oak.oakland.edu in the SimTel\msdos\hamradio file. All four of these programs will improve your contest typing skills.

4. CW Sending Practice Helps Loads. Don't practice sending using the keyboard for these practice ideas! Use a bug, or preferably an electronic iambic keyer and paddle set up. The electronic keyer sends "perfect" CW characters, spacing and rhythm, a big help in your mental training activity. Adjust the paddle to very light action. You don't want to be slapping the key all about the table top! Good paddle keys are heavy for this reason. Put it on a mouse pad also to help keep it put.

Now begin practice to send FAST. This sending practice also

works wonders on the way to becoming a QRQ operator. Why? Because, now you must form words to express ideas in your mind, while simultaneously sending the thoughts out as CW. This inverts what has been going on in your mental processes to receive CW. As you increase your speed ability, you will not even be thinking "letter to CW" translation, but will be mentally and automatically sending CW as if it were another language with which you have become quite comfortable. Your mind will be training on CW in such a way that when it can send fast, it will use the same subconscious patterns to also receive fast. KE7TV has told me he raised his QRQ speed to 55+ wpm (275 letters/word spaces per minute) using this method specifically!

There is more to encourage you to practice. Once you are going QRQ mentally, and sending QRQ, and typing accurately to a contest logging program, you may want to also practice clear text copying to the keyboard, and copying behind many, many words. Certainly, both MA and CM V are designed to teach just that skill. And then your QRQ mental rate will increase even more, and you can then be a competent, competitive CW Sprint Contest op! All by accomplishing Tree's 50+ wpm rag chew rate.

Have fun, keep the practice up daily and hold daily CW QSOs. You will get there. I'm still working on it and I'm probably older than 90% or more of you reading this!

73 and Good Practice. Jim, KH7M  
 on the Garden Island of Kauai, Hawaiian Islands.  
[jreid@aloha.net](mailto:jreid@aloha.net).



#### CHANGE:

To:  
 Dave Bailey, WS6W  
 2042 Beach Orchard Drive #213  
 Fall Church, VA 22043

Phone (703) 356-8804

## Maidenhead Grid Squares

by Vic Black, AB6SO

You'll need to know your grid square in order to give the proper exchange in VHF/UHF contests. It's becoming common to provide the grid on all VHF/UHF simplex contacts, whether in a contest or not, since many operators will want this information for the VUCC Award (VHF/UHF Century Club) for working 100 or more grids. Add it to QSL cards, as well.

Maidenhead designators are a combination of two letters (the field) plus two numbers (the square). The grids are named for the small village of Maidenhead, near London, where Hams invented the system in 1980. It's much easier to give a location in the Maidenhead system than in longitude and latitude, especially while operating CW. Local SF Bay area grid squares include CM87, CM97 and CM88, each covering an area of about 70 by 100 miles. The grids are slightly larger near the equator and smaller near the poles since the lines of longitude converge at the poles.

A good way to understand the Maidenhead system is to visualize a world map with the equator across the middle dividing north from south and the prime meridian (zero degrees east-west) dividing the map vertically down the middle. From Northern California we could say that we're in the north west quadrant. To make the description more meaningful, the hams who invented the Maidenhead system started at the south pole and international date line and further divided the world into smaller grids.

The first 20 degree by 10 degree rectangle from 180 to 160 degrees west and 90 to 80 degrees south was called "field AA". Eighteen fields were then designated northerly in 10 degree steps through AR to reach the north pole. Then they moved over 20 degrees east to 90 degrees south and 160 east to 140 degrees east and named the fields BA through BR northerly. This was continued on around the earth for a total of 18 fields south to north and 18 fields west to east, ending in field RR. Starting in the south west corner of each field, the fields were then divided into 2 X 1 degree "squares" (0 - 9 easterly and 0 - 9 northerly with longitude listed first, followed by latitude). An excellent explanation with charts is at <http://www.bridge.de/~tom/maiden.htm>.

### There are several ways to determine your grid designator:

1. Use a GPS (Global Positioning System) personal navigation receiver to find your position. Most will indicate your location in the Maidenhead system, or you can easily convert from longitude and latitude yourself.

2. Use a grid square map. ARRL sells a grid square map of the US for \$1, available at HRO. You'll also need a local map with longitude and latitude to pinpoint your location so you can convert to grid squares. On the San Francisco Peninsula, CM87 includes the area from 124 to 122 W and 37 to 38 North. Neighboring CM97 extends from 122 to 120 W and 37 to 38 N. Most road maps don't indicate longitude and latitude, but USGS topographic maps or atlases by Rand McNally, Benchmark and De Lorme show them. Many of these maps are now marked "GPS Grids Shown", or something similar.

The "Buckmaster World Wide Ham Call Server", searchable by callsign, is at [http://www.buck.com/cgi-bin/do\\_hamcall](http://www.buck.com/cgi-bin/do_hamcall) and lists longitude/latitude and grid squares. The QRZ! Web page for "The World Radio Amateur Directory", also searchable by callsign, lists only longitude/latitude for the center of the postal ZIP code area. It's located at <http://www.qrz.com/wrad/directory.cgi>.

3. Use a computer or Internet grid square converter. Try the interactive web-based converter "Amsat Grid Square Converter" at <http://www.amsat.org/amsat/toys/gridcon.html>. Enter decimal degrees or degrees/minutes/seconds to convert to grid squares. If you enter a grid square, it will convert to longitude and latitude at the center of the grid. The ARRL Grid Locator requires only the longitude and latitude in degrees to convert to a 4-digit grid square. If you also enter minutes and seconds, it will convert to the more accurate 6-digit grid square designator (the "cell") which is used on the microwave bands and corresponds to a grid of approximately 3 X 4 miles in the continental US. It's located at <http://www.arrl.org/locate/grid.html>.

4. You can easily convert from longitude and latitude to grid squares yourself using this simple method:

### Calculating Your Grid Square

Here's a sample using the location of the PAARA Club meetings in Menlo Park. The Recreation Center is located at approximately 122 degrees, 11 minutes West longitude and 37 degrees, 26 minutes North latitude.

Start with the longitude.

1. Divide the minutes portion of the longitude by 60 to convert from minutes to decimal. ( $11/60 = .18$ )
2. For locations of West longitude, subtract the longitude from 180 degrees. For locations of East longitude, add 180 degrees. ( $180 - 122.18 = 57.82$ )
3. Divide this value by 20. ( $57.82/20 = 2.89$ )

The whole number result (don't round up) determines the FIRST character of your grid, as follows: 0=A, 1=B, 2=C, 3=D, 4=E, 5=F, 6=G, 7=H, 8=I, 9=J, 10=K, 11=L, 12=M, 13=N, 14=O, 15=P, 16=Q, 17=R, 18=S.

Choose 2=C for the FIRST character of the grid.

4. For the THIRD character of the grid, multiply this last number by 10.

( $2.89 \times 10 = 28.9$ ). The number immediately BEFORE the decimal point is the THIRD character of the grid.

Choose 8 for the THIRD character of your grid.

**Now use your latitude.**

1. Divide the minutes portion of the latitude by 60 to convert from minutes to decimal. ( $26/60 = .38$ )

*(Continued on page 47) Maidenhead*

(Continued from page 46) Maidenhead

2. If the latitude is north, add 90. If the latitude is South, subtract the latitude from 90. ( $90 + 37.38 = 127.38$ )
3. Divide this number by 10. ( $127.38/10 = 12.73$ ). The whole number result (don't round up) determines the SECOND character of your grid as follows: 0=A, 1=B, 2=C, 3=D, 4=E, 5=F, 6=G, 7=H, 8=I, 9=J, 10=K, 11=L, 12=M, 13=N, 14=O, 15=P, 16=Q, 17=R, 18=S.

Choose 12=M as the SECOND character of the grid.

4. Multiply this number by 10. ( $12.73 \times 10 = 127.3$ ). The number immediately BEFORE the decimal point is the FOURTH character of the grid.

Choose 7 as the FOURTH character of the grid.

In this example, your grid is CM87.

*(The above is formatted in single column for ease in following text and to avoid break up of web sources. Ed.)*

## ARRL Online

From ARRL Pacific Division: May 1999

### Foundation for Amateur Radio Scholarships Available:-

The Foundation for Amateur Radio, Inc., a non-profit organization with headquarters in Washington, D.C., plans to administer sixty-six (66) scholarships for the academic year 1999 to 2000 to assist licensed Radio Amateurs. The Foundation, composed of over seventy-five local area Amateur Radio Clubs, fully funds ten of these scholarships with the income from grants and its annual Hamfests. The remaining fifty-six (56) are administered by the Foundation without cost to the various donors. License Radio Amateurs may compete for these awards if they plan to pursue a full-time course of studies beyond high school and are enrolled in or have been accepted for enrollment at an accredited university, college or technical school. The awards range from \$500 to \$2500 with preference given in some cases to residents of specified geographical areas or the pursuit of certain study programs. Clubs are encouraged to announce these opportunities at their meetings, in their club newsletters, during training classes, on their nets and on their World Wide Web home pages.

Additional information and an application form may be requested by letter or QSL card from the following address.

FAR Scholarships  
Post Office Box 831  
Riverdale, MD 20738

Applications must be postmarked prior to April 30, 1999. Thanks, FAR.

### Dayton Amateur Radio Association Scholarships:

The Dayton Amateur Radio Association is accepting applications for its annual scholarship awards. The DARA Scholarship Program is open initially to any Amateur Radio operator graduating from high school in 1999. There are no restrictions on course of study, nor does the student need to be pursuing a four-year baccalaureate degree, but schools selected must be accredited. Awards are made on a nondiscriminatory basis. Selection criteria include financial need, scholastic achievement, contributions to Amateur Radio, and community involvement. Decisions of the DARA Scholarship Committee are final.

Maximum individual awards are \$2000. For an application and full details, send an SASE to DARA Scholarships, 45 Cinnamon Ct., Springboro, OH 45066. Application deadline is June 15, 1999.

Thanks, Stan Kuck, NY8F.

### ARRL Foundation Scholarships Available:-

There are many scholarships available from the ARRL Foundation. Information and applications can be obtained from the ARRL web site at [www.arrl.org](http://www.arrl.org), by e-mail to [foundation@arrl.org](mailto:foundation@arrl.org), or by letter to the ARRL Foundation at ARRL HQ, 225 Main St., Newington, CT 06111-1494.

### Wireless Privacy Bill (HR 514) Passes House:-

The Wireless Privacy Enhancement Act, passed the US House on a vote of 403 to 3 (with 28 not voting). The bill passed by a similar margin last year, but the Senate never acted on it. But for one line, HR 514 is identical to the amended version of last year's HR 2369. The new line, the product of a floor amendment, clarifies that if one "discloses" protected communication without being aware that it was illegally obtained, one cannot be held culpable under the law. HR 514 was introduced by Rep Heather Wilson of New Mexico and co-sponsored by Rep. Eshoo, (CA 14<sup>th</sup>). It now goes to the Senate.

### Coming Events:-

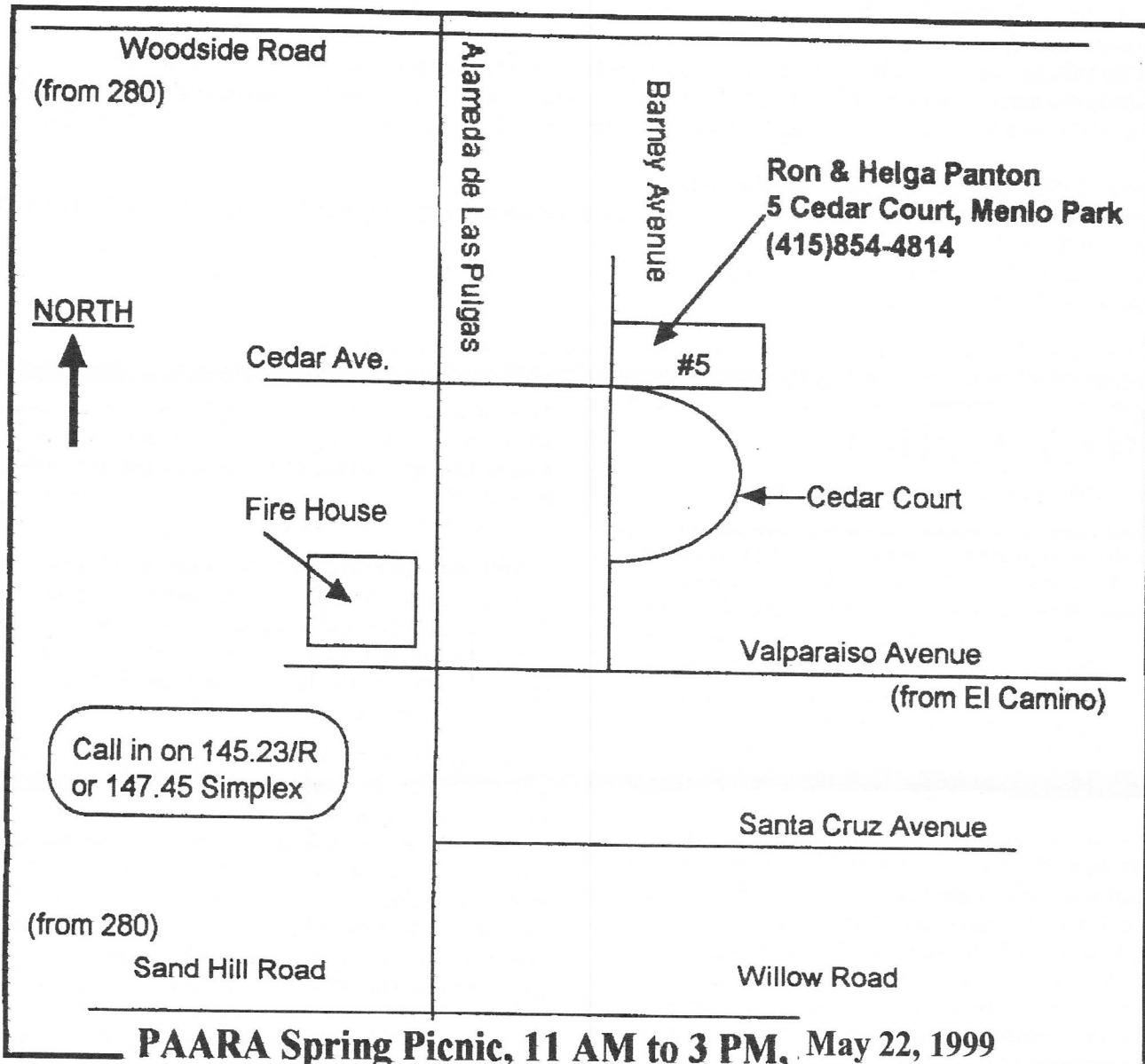
**Livermore Swap Meet** - 1<sup>st</sup> Sunday of each month at Las Positas College in Livermore, 7:00 AM to noon, all year. Talk in 147.045 from the west, 145.35 from the east. Contact Cliff Kibbe, KF6EII, (209) 835-6715, e-mail: [larkswap@hotmail.com](mailto:larkswap@hotmail.com).

**Foothill Flea Market** - 2<sup>nd</sup> Saturday of each month from March to October at Foothill College, Los Altos Hills, CA.

**Valley of the Moon ARC hamfest**, April 24, Sonoma Valley Veterans'

Memorial Building, 126 First St. W, Sonoma CA. Starts 8 AM. Talkin - 145.35 minus (PL 88.5 Hz). Contact Darrell Jones, WD6BOR, 358 Patten St., Sonoma CA 95476 Phone: (707) 996-4494.

**Western States Weak Signal Society (WSWSS)** will have their summer meeting on June 5, 10:00AM, at Baker's Square Restaurant, Harbor Blvd. And Hwy. 50.



**PAARA Spring Picnic, 11 AM to 3 PM, May 22, 1999**



# Picnic

The PAARA Annual Spring Picnic will be held, Saturday May 22 at Ron (W6VG) and Helga Panton's house from 11 AM to 3 PM. The club will supply coffee, beer, cold drinks, charcoal, and a cold cut plate. Bring your own bar-b-que goods and something to share (optional).

Friends and guests are welcome.



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2. For Profit organizations and/or individuals: \$5-business card size, \$25-half page, \$50 full page or back cover.

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.

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**PAARA** [Palo Alto Amateur Radio Association] P.O. Box 911, Menlo Park, California 94026-0911

- Club meetings are on the first Friday of each month, 7:30pm at the Menlo Park Recreation Center, 700 Alma Street, Menlo Park, CA. •  
• Radio NET every Monday evening, at 8:30pm, on the 145.230-600 MHz repeater, PL tone off. •

Membership in PAARA is \$12.00 per calendar year which includes a subscription to PAARAGraphs, \$6 for additional family members (no newsletter).

Make payment to the Palo Alto Amateur Radio Association.

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# May 1999

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

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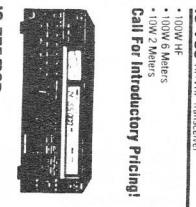
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