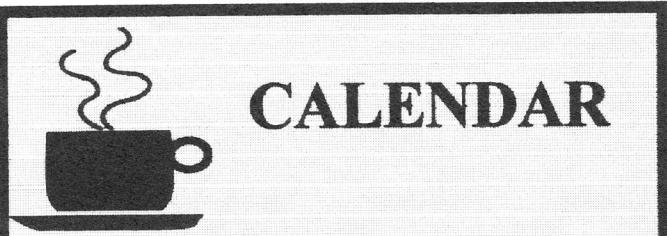




# PAARAGraphs

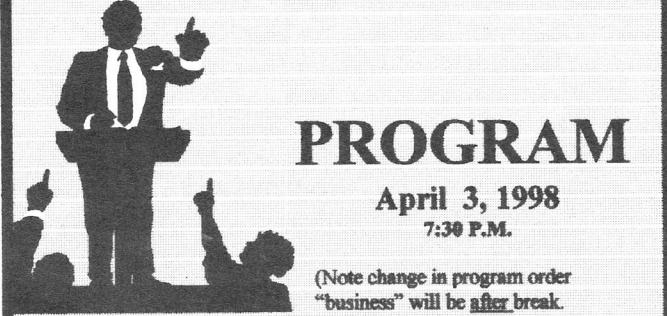
Celebrating 61 years as a *real* ham radio club—*Since 1937*

Newsletter for the Palo Alto Amateur Radio Association, Inc.



## CALENDAR

Apr	3, PAARA Meeting, 7:30, "Home Brew Night" Menlo Park Recreation Center 700 Alma Street, Menlo Park 7:30-9:30 PM
Apr	8, PAARA Board Meeting, 7:30 Bakers Square Rest., 949 Veterans Blvd., Redwood City (Temporary until Red Cross building repairs flood damage)
May	1, PAARA Meeting, 7:30
May	6, PAARA Board Meeting, 7:30
June	5, PAARA Meeting, 7:30
June	10, PAARA Board Meeting, 7:30

## PROGRAM

April 3, 1998  
7:30 P.M.

(Note change in program order  
"business" will be *after* break.  
See VEEP, next column)

## "Home Brew Night"

&

Robin McClish will be laminating radio licenses  
bring yours

PAARA Radio NET every Monday evening at 8:00 P.M., local time  
on the 145.230 -600 MHz repeater, PL tone off

## MESSAGE FROM THE VEEP

Our April 3 meeting will be our Homebrew Night. Be sure to bring any projects you have built yourself, even if they are kits. During the break, **Robin McClish** will laminate amateur radio licenses while people vote on which project is the best. After the break there will be a regular meeting, and following the meeting, the results will be announced. The top three projects will win 300, 200, and 100 QSL cards, courtesy of **Andreas (KF6NEB)**



**Dave Bailey WS6W**  
Vice-President & Program Chairperson



## PAARA PONDERINGS

de VIC BLACK, AB6SO

Join me in thanking **Bill McElhinney KA6LZI** for all the tireless work he has done as PAARA's Database Manager. Bill will be leaving the area to be closer to relatives in Paso Robles and has resigned from his PAARA position. In addition to printing the PAARAGraphs mailing labels, Bill printed labels for vendor spots at the PAARA Foothill Flea Markets and forms used during the Autumn Auctions. In the PAARA spirit of cooperation, **Donald Trask KF6JMQ** has volunteered to take over the Database Manager's position. Let's welcome Donald to his new post and wish him well as we start our new activity year.

Remember that one of our Special Interest Groups (SIG) is for producing PAARAGraphs. If you like to write or do clerical stuff, get in touch with PAARAGraphs Editor **Wally Porter K6URO**. He'd like to share ideas with you about improving the club's newsletter.

On March 3, PAARA Secretary and Webmaster **Andreas Junge KF6NEB** passed his General Class test so he's now **KF6NEB/AG**. Andreas has upgraded very quickly and has

*(Continued on page 30) Ponderings*

# Miscellaneous Dates

**Flea Market at Foothill** (info at: <http://joslin.com/FleaMarket>)  
 Mar. 14 Silicon Valley Emergency Communications Society (SVECS)  
 Apr. 11 West Valley Amateur Radio Association (WVARA)  
 May 9 Palo Alto Red Cross  
**Jub. 13 Palo Alto Amateur Radio Association (PAARA)**  
 Jul. 11 San Jose Red Cross  
 Aug. 8 Santa Clara County Amateur Radio Association (SCCARA)  
 Sep. 12 Southern Peninsula Emergency Communications Society (SPECS)  
 Oct. 10 Electronics Museum Amateur Radio Club (EMARC)

**PAARA** Palo Alto Amateur Radio Association  
 meets 1st Friday 7:30 each month, Net 145.230 each Monday 8:30,  
 contact: Dave Bailey, WS6W 408 730 5215  
**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 PM,  
 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: Joe KB6OWG.

*The reason we make a long story short  
 is so that we can tell another.*  
 —Sharon Shoemaker

## PAARA MONDAY NIGHT NET

8:30 PM 145.230-600 MHz repeater  
 PL tone off

Latest news between monthly issues of PAARAGraph

## Palo Alto Amateur Radio Association, Inc. PO Box 911 Menlo Park, CA 94026

President.....	(vacant)
Vice President.....	Dave Bailey, WS6W.....(408) 730 5215
Secretary.....	Andreas Junge KF6NEB (650) 233 0843
Treasurer.....	Doug Schliebus, K1DIT ... (650) 851 0727
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Club Historian.....	Steve Stuntz, K6FS.....(650) 322 4952
Advertising.....	Bob Korte, KD6KYT.....(650) 595 1842
Webmaster .....	Andreas Junge KF6NEB...(650) 233 0843

## Board of Directors

Charles Grandjean, WD6FAF .....	98
John Buonocore, KD6ZL.....	(650) 366 1658 '99
Terry Conboy, N6RY.....	(510) 944 5388 99
Steve Stuntz, K6FS.....	(650) 322 4952 '99
Vic Black, AB6SO.....	(650) 366 0636 Past Pres

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

## PAARAGraphs Staff

Editor.....	Wally Porter, K6URO.....(650) 494 7038
Database.....	Don Trask, KF6JMQ.....(408) 251 6494

**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/>



## PROGRAM NOTES:

March 6, 1998  
**PAARA Program,**

— Steve Stuntz, K6FS

Our speakers were Michael "Mike" Allison, KN6ZT, and Richard "Rich" Harrington, KN6FW, from Newark. The subject was "Fox Hunting" - on 2 meters, without the belling of hounds, red ("pink") coats, stirrup-cups, view-halloo or "Yoicks!" The foxes of interest were hidden - sometimes clandestine - 2 meter transmitters, the hunt being an increasingly sophisticated technology in the location thereof.

As Mike and Rich revealed, this facet of amateur radio appeals to many interests: first (and often foremost) is the challenge of competition among hunters to be the first to locate the "fox". Second is the design and construction of specialized antenna and receiving systems to expedite detecting and locating the wily critter; third is devising means to minimize false "identification", and fourth utilizing state of the art techniques for navigating to the hidden transmitter. Finally, besides opportunities to develop new operating skills, the experience of "T hunting" can provide new understanding of RF propagation (at VHF's that is).

In his opening remarks, Rich referred to the book, *Transmitter Hunting*, available both at flea markets and HRO. He rec-

(Continued on page 32) Program

## WEB WANDERINGS

de Vic Black, AB6SO



Recently, Steve Stuntz K6FS asked for help with an on-air problem. He planned to keep a schedule on 20 meters with a long time friend in Three Rivers, South Africa. He needed to know the Great Circle beam heading and also wanted to know the distance from Menlo Park to Three Rivers. I knew exactly where to find that information. It also reminded me that if I could have only one ham radio Web page available under my bookmark icon, it would be easy to decide which one it should be. I'd go to <http://pw2.netcom.com/~ac6v/index.html>. Hang onto your hats, gang. This baby's HUGE. It features 70 pages and over 2,000 links to DX and Ham Radio. But, wait, there's more!, as they say on TV. Many of those links have links of their own---one with over 2,700 ham radio links. The main index alone is nearly three pages long.

Attaching PL-259 connectors to coax can be a big chore. Now Shakespeare, the fishing pole people, have introduced an innovative solution, the Centerpin PL-259 Connector. To install the connector, cut the cable flush, push the coax into the connector housing, squeeze piercing fingers into the braid using pliers and thread the cover over the piercing fingers. There's no stripping and shaping of insulation or braid, there's no soldering, heat or tinning and no more melting the dielectric. Check it out at: <http://www.shakespeare-ef.com/electron/centerpin.htm>.

This is a good time to plan for this year's contests. Go to <http://www.contesting.com> for contest calendars, projected magazine dates for results, claimed scores for recent contests, computer logging, rules and other contest related information.

For an on-line Ham Radio news service, go to <http://kb8uyz.com>. "Your Amateur Radio News Source on the Internet" is updated weekly so you may want to bookmark it and check it often. Contents include News, Features, Downloads, Links to other sites, and Weather. The weather Fast Forecast section allows you to type in your city and it will provide a quick run down on your local weather. You can click on one of the links and place ADD TO LIST in the e-mail message that pops up. Then you will receive the KB8UYZ News by e-mail about once a week.

Curtis Sanders N3TLJ of Harrisburg, PA maintains his Web site at <http://www.paonline.com/csanders/n3tlj.htm>. He includes a world map so you can click on the continent you want Ham Radio links for. This is a good idea and a time saver when browsing the links since nearly 5,000 amateur radio links are listed. I clicked on North America on the world map. Then I clicked on the W6 area. A list of California clubs came up along with a separate list of individual ham Web pages listed in alphabetical order by callsign. If you work someone on the air, you can search for a home page here and find out more information about the operator. There's lots of

information on this Web page.

If you enjoy homebrewing ham equipment, you won't want to miss a fascinating Web page I stumbled across from Sweden. Harry Lythall SM0VPO has a Web page at <http://user.tninet.se/~acz732k/use/cavity.htm> with a VHF/UHF band pass filter made from coffee cans, garbage cans or whatever. By attaching an antenna and putting a diode in the output line, it becomes a receiver. The output then is routed to the input of an amplified speaker (like a computer speaker or stereo). Yep, it's a UHF crystal set! He has dimensions for all ham bands from 6 meters through 1.2GHz.

Harry also has some very interesting projects including conversion of a \$15 AM Radio Shack Flavor Radio, or similar, to receive HF SSB/CW and a SSB transmitter made from 11 NPN transistors and parts swiped from one of the little Radio Shack AM radios. There are about 50 simple, fun, but effective, projects here.

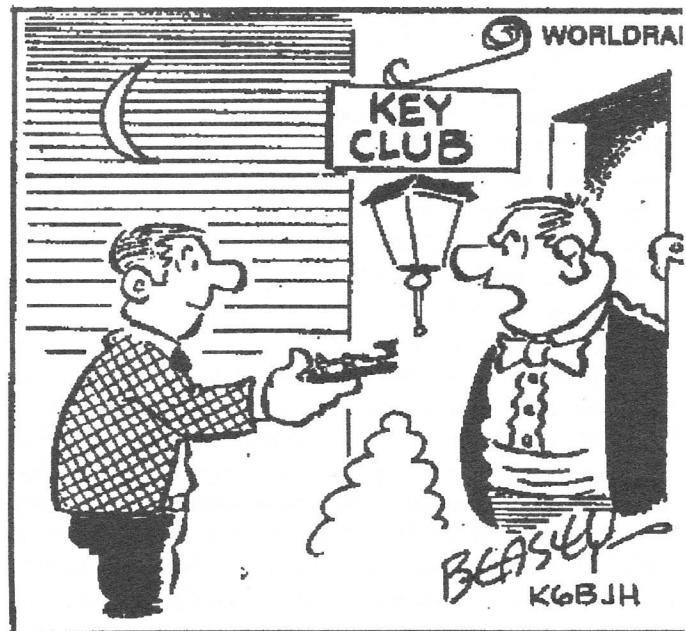
In order to satisfy all tastes, he also included a section on homebrewing homebrew (booze, that is). Titles include "Brewing Beer, Wine and Mash Can Be Fun." "Distilling Spirits Can Be More Fun." "Making Liquors Can Really Impress the Tax Man." Yes, Harry is an entertaining writer who obviously enjoys his hobbies.

Web Wanderings has been added to the PAARA Web site. The Web sites I've reviewed are underlined so you can point your mouse and click for instant access to the information you want. This is a little different from most Web pages that just list the links. I hope you find this a valuable time saving service since you can now read about the sites before clicking on them. ☺☺☺

—Vic, AB6SO

*I never think of the future. It comes soon enough.*

—Albert Einstein



THAT'S THE WRONG KINDA KEY, MAC

(Continued from page 27) *Ponderings*

already been on a DXpedition to Germany operating as **DU/KF6NEB**. Congratulations, **Andreas**!

DXpedition of the month is **JT1Y**. This is an expedition by seven Italian hams to Ulan-Bator, Mongolia where they will operate from **JT1KAA**, the club station of The Mongolian Radio Sports Federation (featured in a PAARA talk three years ago). They plan to keep at least two stations on the air around the clock for one week starting April 7 in order to make maximum use of band openings. All HF bands, maybe including 6 meters, will be activated on CW, RTTY, SSB and possibly satellite. QSL via **I0SNY (Nicola Sanna, Str. Gualtarella 8/M, 06132 S. Sisto-PG, Italy)**. If conditions continue to improve on 15, 10 or 6 meters there may be a chance for Tech-Pluses to work a fairly rare country (only a half dozen resident hams licensed in the country!).

DXpedition of the year may turn out to be the excursion of the Lunar Prospector. On March 5, NASA announced that telemetry from the moon shows solid evidence of water ice at the north and south lunar poles. PAARA members **Clint Hancock KD6H** and **John Kohli KF6KYL** worked as ground controllers for the Lunar Prospector launch with **John** working especially on telemetry. Based on an average usage of 100 gallons of water per person per day for drinking, food preparation, bathing and washing, there appears to be enough lunar water to support 2,000 people for 100 years. Do you know anyone you'd like to send to the moon? Who will install the first 2-meter lunar repeater? (It's line of sight!!). What's the callsign prefix for the moon?

In his ARRL Pacific Division Update for March, 1998, Pacific Division Director **Brad Wyatt K6WR** announced that the Valley of the Moon ARC is holding its annual hamfest Saturday, April 25, 1998, at the Sonoma Veteran's Memorial Bldg., 126 First St. West, Sonoma, CA. Talk in 145.35 (-) PL 88.5, Contact **Darrel Jones WD6BOR** at [wd6bor@aol.com](mailto:wd6bor@aol.com) or (H) (707) 996-4494. This is one of the smaller Northern California hamfests that deserve our support. The Pacific Division Update was forwarded by **Jim Maxwell W6CF**, Pacific Division Vice Director. Jim won a door prize at the Monterey Winterfest on February 21. It was a course to obtain a No-Code Technician license. Jim, an Amateur Extra Class licensee, had no use for the course and graciously donated it to the Monterey Troop 131 Boy Scouts for their use. Good choice, Jim!!

**Brad Wyatt** sends the following report: "For many years efforts have been underway to secure US participation in the European CEPT agreement that permits licensed hams in European member countries to operate in other member countries without receiving prior, individual approval. Approval of the US request to participate came in late January at a meeting of the CEPT Radio Regulatory Working Group (WGRR), in Groningen, The Netherlands. What this means, is that US amateurs also will not need to apply for reciprocal licenses in order to operate during short visits to most European countries. Similarly, most European hams visiting the

US no longer will have to submit FCC Form 610A. Under the arrangement, a US Technician license will be recognized as a CEPT Class 2 (VHF-only) license, with full privileges above 30 MHz. Holders of Tech Plus through Extra tickets will be given a CEPT Class 1 license, with full privileges on HF and VHF. Novice licensees would not be eligible for a CEPT equivalent license since most CEPT countries don't offer a license of this type. The time schedule for final implementation of the agreement hasn't been announced. Watch QST, the ARRL Letter, and ARRL Pacific Division Update for further developments".

**Pat Kilroy WD8LAQ** from Bowie, Maryland asked, "Do you know either a young ham of note or an outstanding student who is interested in a college scholarship? Then check out <http://garc.gsfc.nasa.gov/~simsat/sscholarship.html>."

Have you been getting your share of the band openings that are becoming more and more common? On February 22, **Rich Mulvey AA2YS** reported, "Conditions on 10 meters were incredible here in upstate NY this afternoon. I worked 23 states at 3 Watts in about 2-1/2 hours. Rather a nice change from the past few years".

The ARRL International DX Phone Contest on March 7 and 8 brought out several PAARA members for lots of fun. Some club members who were heard on the 10, 15 and 20 meter bands were: **Kit Kohlmoos W6ISO**, **Dave Rice W6NUC**, **Dan Curry WB6STW**, **Jon Zweig KF6OLA**, **Andreas Junge KF6NEB** and **Vic Black AB6SO**. DX stations were only allowed to contact stations in the contiguous 48 states and 8 Canadian provinces. US and Canadian stations were only allowed to contact DX. That meant that each of us was sought after rare "DX-For-A-Day". All continents were booming in. **Dave, Dan, Andreas and Vic** operated mobile and still managed to work 20 to 30 countries each.

**Andreas** has recently developed a method of using modern computer and printing technology to custom print QSL cards for a few cents each. This service will be available to club members as a membership benefit in the near future. The first batch of production cards will be awarded to the winner of the Home Brew Night contest at the April PAARA meeting. Be sure to show your projects and maybe you can win the first batch of cards.

Interest is really developing nicely for the Monday Night PAARA Net. Net Control Station **Dave Bailey WS6W** is doing a super fine job of attracting check ins from the North and East Bay as well as the South Bay and Mid Peninsula Areas. Word is growing among the **W6APZ** repeater users and even big rig truck drivers from the East Coast regularly check in as they pass through the area. Check in at 8:30 p.m. local time on Mondays at 145.230 MHz. PL is turned off for the net so you can access the repeater with older equipment. ☺☺☺ —**Vic**

---

*Few things are harder to put up with  
than the annoyance of a good example.*

—Mark Twain

## PAARA SIG's (Special Interest Groups)

If you would like to start or join a Special Interest Group, please indicate your interest(s) below. Some possible groups are listed—or suggest your own.

Group	Your Name/Callsign
T-hunting	
Packet/APRS	
Special Events	
Lad's Group	
Satellites	
VE	
Young Hams	
VHF	
DX	
CW	
QRP	
Contesting	
Ham Internet	
HF Mobile	
Field Day	
Antenna Design	
PAARAGraphs	
Club Station	
Meeting Speakers	
Flea Market	
Handi-	
Wannabe's (hams)	
Homebrew	
Other (specify)	
Other (specify)	



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    Email, lynn@lyntec.com

## 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 only.

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).
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.

The PAARAGraphs editors reserve the right to reject any ad deemed to be not in the best interest of the Association. All fees are for "scanner-ready" copy or text-only ads.

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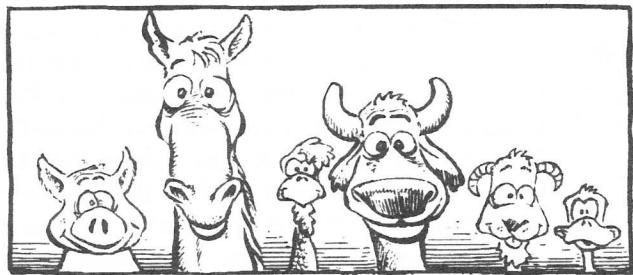
**Chris Chalfant**  
Manager

1062 Linda Vista Avenue • Mountain View, CA 94043  
Telephone (415) 969-0510 • (408) 744-1333 • FAX (415) 964-6973

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

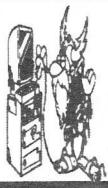
Club meetings are on the first Friday of each month, 7:30pm at the Menlo Park Recreation Center, 700 Alma Street, Menlo Park, CA. • Radio NET every Monday evening, at 8:30pm, on the 145.230-600 MHz repeater, PL tone off. • Membership in PAARA is \$12.00 per calendar year which includes a subscription to PAARAGraphs. • Make payment to the Palo Alto Amateur Radio Association.

Permission is hereby granted to reprint from this publication with appropriate source credit.



Join us for pre-meeting eyeball  
**QSO April 3rd  
 gab & gobble**

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



## PAARA WEB SITE

check it out

<http://www.qsl.net/paara/>  
 webmaster: Andreas Junge KF6NEB

## HOME BREW NIGHT

April 3rd  
 enter PAARA Home Brew Contest

### PRIZES

info page 27



## PAARA PRIDE wear your PAARA Badge

to

meetings, picnics, field days, winter parties, ham fests,  
 flea markets, Pacificons...  
 (if you need one, contact Fred, K6YT)

## PAARA MONDAY NIGHT NET

8:30 PM 145.230-600 MHz repeater  
 PL tone off

Latest news between monthly issues of PAARAGraph

### Eric Edberg, W6DU, SK

Noted Dxer and contester Eric B. Edberg, W6DU of Los Altos, California, died January 19, 1998. He was 79. First licensed as W2FQW in 1933, he became W6JWD after moving to California in 1950.

Edberg was a long time ARRL member and DXCC Honor Roll member. He was a past president and secretary of the Northern California DX Foundation, past president and secretary of the Northern California DX Club, a member of the Northern California Contest Club and a member of the First Class CW Operators Club (FOC). In posting word of Edberg's passing on the Internet, Rusty Epps, W6OAT, called Edberg "a wonderful friend whom I and many others will miss greatly." A Dxpedition to Palmyra, Kingman and Howland was to be dedicated to the memory of W6DU.

—Rusty Epps, W6OAT; Brad Wyatt, K6WR  
*(QST April 1998, pg 80)*

Eric was also a long time member of PAARA. This is from the April 1980 issue of PAARAGraphs:

"Articles of Incorporation, filed March 2, 1956

Initial Corp Directors:

Parker M. Robinson,	Jr. Richard A. Fisher
<b>Eric Edberg</b>	William Luebke
Robert J. Turner	Robert G. Slick"

Eric was PAARA Vice President in 1980, Bob Wheeler was President, Jerry Tucker was Secretary. Steve Stuntz was ARES Officer and Terry Conway was on the PAARA Board. Names sound familiar?

When I moved to Palo Alto (1953), my back yard connected to Eric's yard. We both had 3 year old sons. Eric was most generous as an Elmer. He held my fist as I made three attempts for the 10wpm at SF/FCC. He continued to talk me into saving money by staying CW. My first di-pole was between our houses. A lot of TVI but there were six hams in the block. Eric, like many of our CW'ers, set the example for the rest of us.

—Wally, K6URO, ed.

### Submarine Memorial Radio Reactivation

On April 25 and 26 the radio rooms on as many as 23 memorial submarines will come alive with ham activity. This year's lineup will include the *Torsk* in Baltimore, the *Cod* in Cleveland and the *Growler* in New York City. The frequencies will be 3.843, 7.243, 14.243, 21.343 and 28.343 Mhz. QSL information will be available on the air. For more information e-mail Jim Flanders, W0OOG, at [jaf@sprintmail.com](mailto:jaf@sprintmail.com). QST

(Ask Steve Stuntz K6FS, about his special interest in this event. ed.)

spaced one wavelength apart, Rich demonstrated a popular direction finder ("DF") approach, bulky but usable in mobile operation, showing how a signal source could be localized by scanning a circular field to arrive at a relative bearing from the hunter's receiver, identified by a sharp drop in signal strength (preferably a null), at which the "fox" is presumably situated. He pointed out problems with reflected signals using this procedure, noting that multi-path and terrain shielding effects can lead to false source "detections". This method, he noted, notwithstanding its faults, is widely used in search-and rescue work and in pinpointing suspected interference sources, and is especially effective when used from an elevated site, either atop a pole or preferable from a hilltop (or even an airplane!).

As a side note, Rich described and showed the effect of body shielding: holding a transceiver tuned to a distant transmitter's (the fox's) frequency against the chest while turning slowly, listening for the headings of loudest and softest signal. Conclusion: a crude way to get an approximate direction in which to search, not recommended, except when you get close to the transmitting "fox".

Using overhead projected graphics hamsomely designed to illustrate their points, both Rich and Mike covered the development of transmitter locating techniques from the widely used Yagi type beam, useful over a plus-minus 20 degree scan aperture, to a doppler system of their own design.

Another popular technique uses a pair of 1/2 wave verticals spaced 1/2 wave apart, the attached fox hunter's receiver being electronically switched between them; as the two antenna array is swung across a line to the fox's signal, the phase difference between the two helps establish a relatively narrow angle centering on the line of bearing to the fox. HOWEVER, as Rich emphasized, the two antenna system cannot distinguish between a "true" heading and its reciprocal - that is, the hunter could wind up searching in the exact opposite direction.

A sophisticated development of this approach was displayed and demonstrated: eight 1/2 wavelength verticals, arranged in a circle 1/2 wave in diameter, are switched electronically by a solid state system, rapidly scanning a full 360, then indicating a TRUE relative bearing from its own location to the hidden transmitter, within a very narrow angle. Since the scan rate can be adjusted over a wide range, greater precision is possible with this system than the others described.

"Rule number one in transmitter hunting: after getting a bearing on the fox, draw a line on your (AAA) map, then stay on the original bearing. Rule number two: GET BACK ON THE ORIGINAL BEARING - that is, if you have to make turns enroute...!"

Summing up, both Mike and Rich mentioned that various government services - including police agencies, Coast Guard and militarys search and rescue organizations - have shown interest in adapting the last approach to their own needs.

-30-Steve K6FS



## VE

VE session oVE session on Saturday, March 21 was very active. On hand we had Mr. VE, Gordon Girton filling in for Joe Horne. Also doing their usual fine job, Bill Soommann WB6UVO: Gene Irazarry KK6KO: Dan Curry WB6STW, & Ron Panton W6VG.

We were also helped very much by the assistance of Al Montoya WB6IMX. We did start a little early, and were really not in full readiness. However, I am happy to report that once again, we had an applicant ace the extra class questions. Sunspots keep increasing, and band conditions are improving. Dan Curry is certainly taking advantage of present conditions.

73, Ron, W6VG

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## ARRL Online

From ARRL Pacific Division: March 1998

### House of Representatives Passes Scanner Bill:-

HR 2369, the Wireless Privacy Enhancement Act of 1998, has passed on the floor of the House of Representatives by a vote of 414 to 1 with 15 members not voting. The bill that was voted on included a report from the House Commerce Committee with the following language, worked out in cooperation with ARRL: "The Committee does not intend to prohibit amateurs from modifying linear amplifiers after purchase, as permitted by Commission rules nor does the Committee intend for Section 2(a) to be interpreted in a manner that would discourage manufacturers or dealers of amateur equipment from providing amateur licensees with information about permissible modifications to enable them to transmit and receive on Military Affiliate Radio Service and the Civil Air Patrol." Thus, it is very clear that Amateur Radio interests have been well protected by a substantial, friendly ARRL interaction with Congress.

The full report and bill as amended and passed may be found at:

<ftp://ftp.loc.gov/pub/thomas/cp105/hr425.txt>

Thanks, Steve Mansfield, N1MZA, ARRL Legislative Affairs Manager.

### Coming Events:-

**Livermore Swap Meet** - 1<sup>st</sup> Sunday of each month at Las Positas College in Livermore, CA, 7:00 AM to noon, all year. Talk in 147.045 from west, 145.35 from the east. Contact Noel Anklam, KC6QZK, (510) 447-3857 eves.

**Fair Oaks swap meet** (near Sacramento) -- Bella Vista High School, 8301 Madison Ave., on Madison Ave. east of Sunrise Blvd., Apr 18, 1998. Sponsored by River City ARCS 6:00 AM to noon. Contact: (916) 483-3293.

**Placerville**, every third Sunday, 3970 B Missouri Flat Rd #3 Placerville. 7:00 AM to 11:00 AM. Talk-in on 146.865 - PL 142.2, 440.700 + PL 88.5. No fee, free parking. Hwy. 50 East take Missouri Flat off-ramp. Go over Hwy. to 2<sup>nd</sup> light, into shopping center in front of Radio Shack. See [http://www.inforum.net/h&h/radiosw\\_ap.html](http://www.inforum.net/h&h/radiosw_ap.html); e-mail [jwilson@inforum.net](mailto:jwilson@inforum.net), Jason Wilson KE6BUU.

**The Valley of the Moon ARC** is holding its annual hamfest Saturday, April 25, 1998, at the Sonoma Veteran's Memorial Bldg., 126 First St. West, Sonoma, CA. Talk in 145.35 (-) PL 88.5, Contact Darrel Jones, WD6BOR at [wd6bor@aol.com](mailto:wd6bor@aol.com) or (H) (707) 996-4494. CA

### The International DX Convention,

sponsored by the Southern California DX Club: Holiday Inn, Visalia, CA, May 1 - 3, 1998. Admission is \$55 by Apr. 15 and \$60 at the door. Make checks payable to "International DX Convention" and send to Don Bostrom, N6IC, 4447 Atoll Ave., Sherman Oaks, CA 91423. Call (818) 784-2590. Or contact Rick Samoian, W6SR, (714) 993-0713 or (310) 616-3912.

### Watsonville Fly-In and Airshow

Rick Paige, the Emergency Services Unit Director, of the annual West Coast Fly-In and Airshow at Watsonville, California needs volunteers with special skills to assist its charitable program on Memorial Day weekend including 20, 21, 22, 23, 24, and 25 May 1998.

The event features many aerobatic performers as well as displays of antique, warbird and experimental aircraft. This year's team is "Flying Circus". There will be multiple aerobatic acts in the air at the same time. Many of the best air show performers will be present.

Air Show volunteers are offered free admission and parking. We will have the best seat in the house, along with the ability to meet experts in the field of aviation, and receive free souvenirs. Expenses incurred while performing this volunteer duty are considered deductible as a donation to a non-profit, charitable organization.

As a member of an emergency services volunteer group, you have the skills we need. Areas of assignment include: Command, Operations, Logistics, Safety and Security, Medical, Communications, Aircraft Recovery, Situation Status, and Admin Support. Both SIMS and ICS are used for management of the event and includes local Watsonville and Santa Cruz County agencies.

Your assistance is needed at various times beginning on Wednesday, 20 May 1998 to 25 May 1998. A minimum commitment of 5 hours on any one day is requested and more is encouraged.

**AMATEUR RADIO:** Assists in the operation on the mobile communications facility. Provides alternate communications to airshow staff, local and Federal agencies, ie: shadow, deadline, tower, Air Boss, Ground Boss, Rover's, Rover's, Medical, Fire, Police, etc. **MINIMUM QUALIFICATIONS:**

Must hold a Technician or higher level amateur licence. Must be a member of a recognized ARES/RACES/ACS organization. Watsonville EC, Bob Wiser will be your supervisor. Contact Rick Paige at 707-468-7466 or by E-Mail to [mesafc@pacific.net](mailto:mesafc@pacific.net), for an application. He will need your contact info to mail you the application.

→Richard Tidd

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# April 1998

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



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 • 10W 864.0GHz  
 • 10W 865.6GHz  
 • 10W 867.2GHz  
 • 10W 868.8GHz  
 • 10W 870.4GHz  
 • 10W 872.0GHz  
 • 10W 873.6GHz  
 • 10W 875.2GHz  
 • 10W 876.8GHz  
 • 10W 878.4GHz  
 • 10W 880.0GHz  
 • 10W 881.6GHz  
 • 10W 883.2GHz  
 • 10W 884.8GHz  
 • 10W 886.4GHz  
 • 10W 888.0GHz  
 • 10W 889.6GHz  
 • 10W 891.2GHz  
 • 10W 892.8GHz  
 • 10W 894.4GHz  
 • 10W 896.0GHz  
 • 10W 897.6GHz  
 • 10W 899.2GHz  
 • 10W 900.8GHz  
 • 10W 902.4GHz  
 • 10W 904.0GHz  
 • 10W 905.6GHz  
 • 10W 907.2GHz  
 • 10W 908.8GHz  
 • 10W 910.4GHz  
 • 10W 912.0GHz  
 • 10W 913.6GHz  
 • 10W 915.2GHz  
 • 10W 916.8GHz  
 • 10W 918.4GHz  
 • 10W 920.0GHz  
 • 10W 921.6GHz  
 • 10W 923.2GHz  
 • 10W 924.8GHz  
 • 10W 926.4GHz  
 • 10W 928.0GHz  
 • 10W 929.6GHz  
 • 10W 931.2GHz  
 • 10W 932.8GHz  
 • 10W 934.4GHz  
 • 10W 936.0GHz  
 • 10W 937.6GHz  
 • 10W 939.2GHz  
 • 10W 940.8GHz  
 • 10W 942.4GHz  
 • 10W 944.0GHz  
 • 10W 945.6GHz  
 • 10W 947.2GHz  
 • 10W 948.8GHz  
 • 10W 950.4GHz  
 • 10W 952.0GHz  
 • 10W 953.6GHz  
 • 10W 955.2GHz  
 • 10W 956.8GHz  
 • 10W 958.4GHz  
 • 10W 960.0GHz  
 • 10W 961.6GHz  
 • 10W 963.2GHz  
 • 10W 964.8GHz  
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 • 10W 972.8GHz  
 • 10W 974.4GHz  
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 • 10W 979.2GHz  
 • 10W 980.8GHz  
 • 10W 982.4GHz  
 • 10W 984.0GHz  
 • 10W 985.6GHz  
 • 10W 987.2GHz  
 • 10W 988.8GHz  
 • 10W 990.4GHz  
 • 10W 992.0GHz  
 • 10W 993.6GHz  
 • 10W 995.2GHz  
 • 10W 996.8GHz  
 • 10W 998.4GHz  
 • 10W 1000.0GHz  
 • 10W 1001.6GHz  
 • 10W 1003.2GHz  
 • 10W 1004.8GHz  
 • 10W 1006.4GHz  
 • 10W 1008.0GHz  
 • 10W 1009.6GHz  
 • 10W 1011.2GHz  
 • 10W 1012.8GHz  
 • 10W 1014.4GHz  
 • 10W 1016.0GHz  
 • 10W 1017.6GHz  
 • 10W 1019.2GHz  
 • 10W 1020.8GHz  
 • 10W 1022.4GHz  
 • 10W 1024.0GHz  
 • 10W 1025.6GHz  
 • 10W 1027.2GHz  
 • 10W 1028.8GHz  
 • 10W 1030.4GHz  
 • 10W 1032.0GHz  
 • 10W 1033.6GHz  
 • 10W 1035.2GHz  
 • 10W 1036.8GHz  
 • 10W 1038.4GHz  
 • 10W 1040.0GHz  
 • 10W 1041.6GHz  
 • 10W 1043.2GHz  
 • 10W 1044.8GHz  
 • 10W 1046.4GHz  
 • 10W 1048.0GHz  
 • 10W 1049.6GHz  
 • 10W 1051.2GHz  
 • 10W 1052.8GHz  
 • 10W 1054.4GHz  
 • 10W 1056.0GHz  
 • 10W 1057.6GHz  
 • 10W 1059.2GHz  
 • 10W 1060.8GHz  
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 • 10W 1064.0GHz  
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