

K6YQT

PAARA NEWSLETTER
VOLUME 50 NUMBER 6 June 2001

W6OTX

PAAR*graphs*



Celebrating 64 years as an *active* ham radio club—*Since 1937*
Newsletter for the Palo Alto Amateur Radio Association, Inc.

CALENDAR



- June.....1, **PAARA Meeting**, 7:30
 Menlo Park Recreation Center
 700 Alma Street, Menlo Park

June.....6, **PAARA Board Meeting**, 7:30
 Red Cross Bld., 400 Mitchell Ln., Palo Alto

June...23-24, **Field Day**

July6, **PAARA Meeting**, 7:30

July11, **PAARA Board Meeting**, 7:30

August.....3, **PAARA Meeting**, 7:30

August.....8, **PAARA Board Meeting**, 7:30

2 m CODE PRACTICE, 2000 to 2030 PST Tues
N6NFI 145.23 repeater
 Also try 7.100 for 24 hr code
 practice

PROGRAM



June 1, 2001

Speaker:

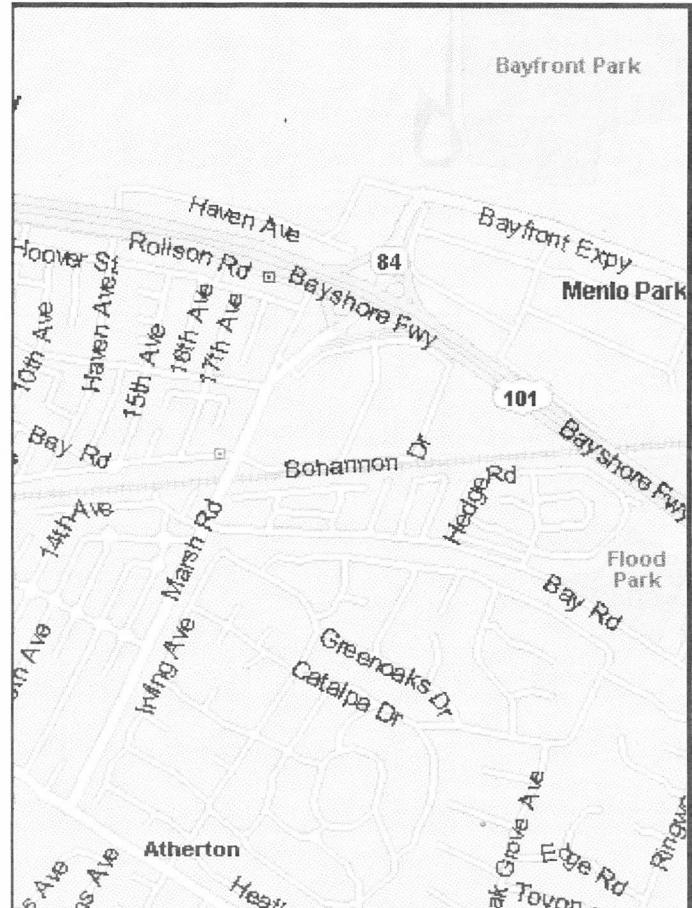
Jim Coates, KE6HPA

"Solar Panels"

Join us for pre-meeting eyeball

at Su Hong Restaurant , 1039 El Camino Real, Menlo Park
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 order and bill.

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



FIELD DAY JUNE 23-24

Bayfront Park
follow signs from park entrance

Solar panels are HOT

With the summer brown-outs coming, PAARA member **Jim Coates, KE6HPA**, brings a how-to-do-it discussion of getting a solar power system for amateur radio into operation., including a discussion of the technology, the vendors, system considerations and costs. Jim, a graduate of CSM, works for the county in radio communications and as an amateur gold miner, he knows where the good stuff is buried.

Miscellaneous Dates

Flea Market at Foothill (info:<<http://www.electronicsfleamarket.com>>)
SEE PAGE 53

- 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
- FARS** Foothills Amateur Radio Society
meets 4th Friday 7:30 each month,
contact: Sheldon Edelman N6RD, 650-858 2176, n6rd@earthlink.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: (408) 734 4453,
- SPECS** Southern Peninsula Emergency Communication System
meets each Monday 8:00PM on Net 145.27, 440.80 MHz, www.specsnet.org
contact: Tom Cascone, KF6LWZ, 650-688-0441 specs@sypal.org
- 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:
- 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

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) 967 7924, FSHENSLEY@NOVELL.COM
- 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.
- Swap meet**, LosPositas College, Livermore, 1st Sunday each month.
Contact: Cliff Kibbe (209) 835 6715 or Eliot Ross (925) 606 7710
(please send changes to PAARAGraphs editor: k6uro@arrl.net)

Join us for pre-meeting eyeball

QSO June 1st

gab & gobble

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 order and bill.

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



Palo Alto Amateur Radio Association, Inc.

PO Box 911

Menlo Park, CA 94026

President	Andreas Junge N6NU.....(650) 233 0843 n6nu@arrl.net
Vice President	Dick Kors, KM6EP.....(650) 965 3766 dk@ofkors.com
Secretary	Jay Melvin, WA6SBO.....(650) 726 4361 wa6sbo@arrl.net
Treasurer	Bob Korte, KD6KYT.....(650) 595 1842 RGK4U@aol.com
Membership	Vic Black, AB6SO.....(650) 366 0636 vic.black@adept.com , ab6so@smrm.com
W6OTX Station Trustee.. ?	
K6YQT Station Trustee..	Gerry Tucker, N6NV.....(650) 326 4908
Property.....	Gerry Tucker, N6NV(650) 326 4908
Badges.....	Don Trask, KF6JMQ.....(408) 251 6494
ARES Officer.....	Lily Anne Hillis, N6PGM(650) 325 5484
Club Historian ..?	
Advertising.....	Bob Korte, KD6KYT.....(650) 595 1842
Webmaster	Andreas Junge N6NU.....(650) 233 0843 n6nu@arrl.net

Board of Directors

Don Trask, KF6JMQ	(408) 251 6494 '01 trask@shell3.ba.best.com
Joel Wilhite, KA7TXV	(650) 325 8239 '01 ka7txv@qsl.net
Gerry Tucker, N6NV	(650) 326 4908 '01 gerrytucker@qsl.net
Pat Gormley, KB6HZM	(650) 369 3550 '02 patgormley@qsl.net

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

PAARAGraphs Staff

Editor.....	Wally Porter, K6URO.....(650) 494 7038 k6uro@arrl.net
Database.....	Don Trask, KF6JMQ.....(408) 251 6494 trask@shell3.ba.best.com
Columns.....	Vic Black, AB6SO.....(650) 366 0636 vic.black@adept.com

PAARAGraphs e-mail address: k6uro@arrl.net

Submit material for PAARAGraphs by the 15th

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

Techtip: HF balun

I found that 11 turns of RG-58 coax on an FT-140-43 ferrite core makes an effective 1:1 HF balun.

—Zack Lau W1VT

Want and For Sale ads in PAARAGraphs

are FREE to members

(Submit by e-mail or letter before the 15th of the month)

Contest Calendar

~Vic Black, AB6SO~

(for rules and exchanges, see www.contesting.com)

June Contests, 2001

- 1 - 4 Major Six Club Contest 2300Z, Jun 1 - 0300Z, Jun 4
- 2, 3 WW South America CW Contest 0000Z, Jun 2 - 1600Z, Jun 3
- 2, 3 IARU Region 1 Field Day, CW 1500Z, Jun 2 - 1500Z, Jun 3
- 9, 10 ANARTS WW RTTY Contest 0000Z, Jun 9 - 2400Z, Jun 10
- 9 Portugal Day Contest 0000Z - 2400Z, Jun 9
- 9 Asia-Pacific Sprint, SSB 1100Z - 1300Z, Jun 9
- 9, 10 TOEC WW Grid Contest, SSB 1200Z, Jun 9 - 1200Z, Jun 10
- 9 - 11 ARRL June VHF QSO Party 1800Z, Jun 9 - 0300Z, Jun 11
- 16, 17 All Asian DX Contest, CW 0000Z, Jun 16 - 2400Z, Jun 17
- 23, 24 Marconi Memorial HF Contest 1400Z, Jun 23 - 1400Z, Jun 24
- 23, 24 ARRL Field Day 1800Z, Jun 23 - 2100Z, Jun 24
- 23, 24 ARCI Milliwatt Field Day 1800Z, Jun 23 - 2100Z, Jun 24



PAARA PONDERINGS

de VIC BLACK, AB6SO

I was told that Ponderings is difficult to follow at times because of a lack of transition from topic to topic. I hope you understand that, because of space limitations, I opt for more content per issue rather than absolute ease of reading. Maybe it would be appropriate to change the column name to PAARA Editorial Mumblings. Anyhow, here are this month's random thoughts on various topics.

Last month I mentioned that the Internet was in line for major changes because of the recent downturn in Internet based companies. The World Wide Web isn't very old. **Timothy Berners-Lee** is credited with inventing the Web in 1989 while at the European Center for Nuclear Research. In the first couple of years there were only about 50 web sites, worldwide. Then the growth became explosive. At first the sites were mostly educational and governmental. Businesses got involved because they saw an opportunity to make money without much in overhead costs. Unfortunately, most of the 450 companies that recently became defunct had negative cash flow since they depended heavily on advertising for income. That income wasn't enough to pay all of the bills. Many didn't actually have services or products that were in demand.

Other companies, such as Metricom (Ricochet), needed to build a very large customer base before they could ever be profitable. Their income was about \$800 per customer per year with yearly expenses of nearly \$19,000 per customer. Unfortunately, they are running out of cash before they can build their infrastructure. Still others made tactical marketing errors and tried to sell products that consumers like, but are unwilling to pay for. This practice has resulted in customer accounts being churned as consumers subscribed, became disillusioned and then unsubscribed to the services. It also led to higher and higher new customer acquisition costs. In the meantime, the service providers have tried to raise rates in order to squeeze more revenue out of each customer. It will be a hard sell to start charging layers of fees for services that were previously free. Do you really want to spend \$100 per month to download garbage TV programs faster?

Entire industry segments have become so ingrained that they can't keep up with changing conditions. An example is the paging industry, which is losing out big time now that so many people have cell phones and don't use pagers anymore. Some products and services are simply not needed. I once worked for a well-known high tech company that probably had the first building in "Silicon Valley" while it was still called the "Valley of Heart's Delight". We made what I called "Gee Whiz" products. We built many of the products on speculation and showed them at trade shows. Show attendees would look at them and exclaim, "Gee Whiz, that's great!" Then we'd ask if they'd like to buy one and the answer was nearly always, "Nope. But that sure is a neat product".

Now several well-known Amateur Radio sites are soliciting donations in order to keep afloat. **Al Waller**, who operates

QTH.NET as a volunteer reminds us "Many of us take for granted the things we find of interest on the Internet. Although they appear to be 'free', be certain that somewhere someone is paying the bills." Monthly QTH.NET expenses include telephone bandwidth (\$1000 per month), electricity and both software and hardware server maintenance. The wolf is constantly lurking just outside the door of Amateur Radio Newsline, which brings us interesting radio news. AC6V.com has started selling books on his web site in order to pay the bills. One of my pet peeves about many of these sites is that they often show a photo of a product along with a price, but absolutely no other information. Many of the search engines used to provide free information. Now they are more likely to tell you where you can buy the information by subscription or by mail order. By and large, Amateur Radio operators still use the web as it started out, sharing information freely in order to advance the state of the art in radio.

Amateur Radio is still one of the prime sources for free information, and especially software, on the Web. Amateur Radio manufacturers have been accused of selling less than cutting edge technology. Keep, in mind, though, that what is offered to us continues to be available at lower and lower absolute prices, nearly always works well and is practical for the average operator to use.

Even though we're at the height of a solar cycle, and therefore we would normally expect to see more HF activity, another UHF record was set on April 11. Well known Swedish EME operators **Carl Mohlin SM3AKW** and **Karl-Gosta Forssen SMS5QA** reported what is assumed to be the world's first Amateur 23-centimeter auroral contact. Both stations transmitted on 1296.200 MHz, but were receiving on 1296.205 because of a 5 kHz Doppler shift. They both ran 500 watts into high gain antennas. Signal reports were 33 both ways with the typical "hollow" wavy sound of signals reflecting from auroras. The aurora was the result of record X class solar flares that have caused HF blackout conditions off and on during the spring months of 2001. Flare activity can be bad for HF communications, but it can actually enhance conditions on VHF and higher. Auroral effects are more likely to be felt in Europe than in North America since most of our population lies either along or south of the Canada/US border and doesn't experience auroras as often as the northern Europeans do. In fact, most microwave experimentation, and recent technical innovation in general, has occurred in Europe where a lot of work is being done on microwaves, high-speed packet, PSK-31, digital voice, and especially LF and VLF experimentation applying weak signal techniques.

Old timers will remember the Panoramic Panadapter, which resembled a small oscilloscope. It was a receiver accessory that would display a portion of the radio spectrum. That way you could tell if there were any signals on the band in the days before receivers routinely scanned for signals. Other models were made by Heathkit (Model HO-13 "Ham Scan") and Kenwood (Model BS-8). Many modern transceivers now have built in "spectrum scopes" to perform a similar function. **Pete Corp K2PC** from Fort Edward, NY reports using the freeware

(Continued on page 51) PAARA PONDERINGS



WEB WANDERINGS

de Vic Black, AB6SO

A new Internet based club, Live Wires, maintains a site at <http://www.wireservices.com/livewire.html>. Members describe themselves as "Amateur Radio operators who enjoy experimenting with creative and simple antennas using 'Yankee Ingenuity' (Use what you have, with a survivalist spirit), often in portable/outdoor settings. Examples include antennas in the following forms (but not limited to): Kite-lifted; loops; long wires; long wires suspended from small aircraft; a tree; aluminum stepladders; aluminum canoes; rain gutters; screen doors; abandoned telegraph lines; or anything that resonates. Also encouraged are a mix and match between creative antennas and creative counterpoises. Such counterpoises could be, for example: Tall cranes; abandoned railroad tracks; lakes; the sea; rivers; highway guardrails; a metal fence; farmer's windmills; a steel highway bridge, etc."

In the group's first PortaVenture on-air, non-contest special event activity, described as a "Poor Man's DXpedition", **Bonnie Crystal KQ6XA** worked 20 stations after loading up the Golden Gate Bridge for use as part of her HF antenna. The web site lists SSB calling frequencies as: 3.955, 7.245, 14.285, 18.155, 21.355, 24.955, 28.355 and 50.155 MHz. Popular rigs include Kenwood TS-50S, Elecraft K-2, Icom IC-706 MkII, SGC SG-2020 and Yaesu FT-817. While chasing and photographing trains in the desert I have often seen abandoned telegraph lines. Some are up to a mile in length before the next break in the line. I've often had the urge to connect to one to see how it would work as an HF antenna. It's important to be able to ground the wire first, though, in order to discharge static buildup. Part of the original Trans Continental railroad line is abandoned near Niles Canyon. The single remaining rail might make a good counterpoise. Read other people's experiences at the Live Wires web site.

On his web site at <http://www.qsl.net/w3ff/jan2000.htm> **Budd Drummond W3FF** says, "In January of 2000, I began experimenting with a 'walking-portable' Ham station. Since then, hundreds of stations have been worked on 10, 12, 15, 17, and 20 Meters. In June of 2000, I traveled to the Baltic States and worked over 55 countries in two weeks from Riga, Latvia and Vilnius, Lithuania. Worked All States came early last year. Well over 100 DXCC Countries have been worked, and I had a great day early in January, 2001 when all the continents in the world (except Antarctica) were worked with 50 watts and my hand-held antenna in one day with one battery charge because of super conditions on the 12 and 15 Meter bands." Budd travels all over Northern California working 'pedestrian mobile HF'. There's enough interest in this new portable aspect of Amateur Radio that Maldol Antenna has designed a selection of telescoping HF antennas with BNC Connectors for the YAESU FT-817. Check them out at http://www.cometantenna.com/maldol_antenna.htm.

Cort Richmond KA5S from Rohnert Park, CA works pedes-

trian mobile with his new FT-817 and a modified Radio Shack CB antenna. When I pointed out a small CW paddle for sale, he immediately bought it and a few minutes later had it Velcroed to the top cover of the FT-817 so he can send CW while walking. You can often hear him calling "CQ HFpack" on the upper HF bands using SSB and CW. The HFpack web site at <http://groups.yahoo.com/group/hfpack> describes HFpack as "High Frequency Portable transceivers and antennas. HF SSB/CW/Data. Amateur, commercial, marine. Handhelds, backpacks, personpacks, manpacks. Pedestrian and Human Powered Mobiles. Manual and automatic antenna tuning. Telescopic, tape, folding and collapsible antennas. Battery, solar, crank, alternative energy power supplies. Compact, lightweight miniature equipment. Handsets, headsets, microphones, earphones, keyers. Low power TX/RX techniques. Portable amplifiers. Hiking, camping, bicycling, kayaking and expeditions." The HFpack Hall of Fame maintains World Records for Pedestrian and Human Powered Mobile. The group, founded in November 2000, now boasts more than 700 members worldwide.

At the April PAARA meeting **Dr. Frances Winslow KC6THM**, Director of Emergency Services for the City of San Jose, presented "The Role of Amateur Radio in Civil Emergencies". Most ARES/RACES officers want Amateur Radio operators to join their groups and be fully trained before being assigned to emergencies. In fact, Workmen's Compensation insurance rules require Disaster Services Worker (DSW) registration in order for you to be assigned to official duty during an emergency. Frances touched on that, but her main emphasis was on what the average Ham can do during and after emergencies to help without full commitment to an organization. This approach has the potential to involve a lot more people than the traditional approach does. **Richard Tidd KE6HNY**, Deputy Chief RACES Officer, San Mateo County Sheriff's Office of Emergency Services / Search & Rescue maintains two web sites of interest for emergency communications. Try <http://www.quickbase.com/db/6sa4rmya> (N. Cal ARES/RACES/ACS/SAR/VIP Frequency List) and <http://www.quickbase.com/db/6tmn5jwa> (N. Cal Fire Station List) for databases of frequencies to monitor during emergencies.

Howard Calif KE6PWH directs our attention to <http://www.irlp.net> where you'll find the Internet Radio Linking Project (IRLP). Howard reports, "I have used the 1.2GHz-to-Internet Linked system to talk with a Ham in Australia using my T81A from the middle of a Soccer Field in Sunnyvale. There are 70-80 repeaters linked at any one time. Check it out." The local linked repeater **K6UB** operated by **Raoul Carlson** in Saratoga has been active since March 12, 2001 at an elevation of 2100 feet in the Santa Cruz Mountains. The frequency is 1287.500 with 88.5 PL. IRLP Designer **David Cameron VE7LTD** said, "The aim of this project is to link radio systems separated by long distance without the use of expensive leased lines, satellites, or controllers. IRLP uses Voice-Over-IP software and the power of the Internet to link your radio site to the world. IRLP runs a large network of dedicated servers and nodes to offer the very best in voice communications. The heart of the IRLP is its Amateur Radio network which reaches hun-

(Continued on page 52) WEB WANDERINGS



Thoughts The Band's Always Open to Texas

by Rick Ferranti WA6NCX
(remler@juno.com Copyright 2001)

When I was a kid in the 1960's, I used to sell mail-order Christmas cards to my gullible relatives around the SF Bay Area, earning me geeky goodies like an electronic build-it set or a telescope. One year I sold enough cards to get a pair of CB walkie talkies, those early 11-meter radios with the shiny diecast front grill featuring a 4-transistor superregenerative transceiver, and what seemed like a 25-foot long telescoping antenna.

Though lacking in the selectivity department, these little radios did a fine job of hearing most of the nascent Citizen's Band all at once. In the wintertime, it was a fascinating pastime to eavesdrop on the 11-meter denizens "working skip," an activity illegal even back then. I'd often wonder why everyone sounded like they came from Texas, and in fact, they often gave their location as Houston or Dallas or Austin. Indeed, the CB band was my introduction to the rhythms HF skywave propagation, as the skip mysteriously disappeared in the evenings and during most of the summer. But I learned one thing: if 11 meters is open, it's always open to Texas.

Not too many years later I got interested in shortwave radio and got my amateur radio license. Because I was a poor high-school and later college student, my HF operating was confined mostly to working 10 and 15 meter stations, where my lousy antennas and cast-off CW transmitter had half a chance of getting out of the backyard. Strangely enough, when the sunspot gods smiled on WA6NCX's wayward signals, there were always a bunch of Texans on the bands ready for a gentlemanly QSO. And not too many years after that, when I moved to the Boston area and tried for two decades to talk to friends in California with my equally lousy antennas, it always seemed that if I could hear a W6 at S-2, I was sure to hear plenty of W5's at 20 over S-9.

An engineering education and access to the internet led to many sessions at the computer, modeling HF propagation using programs like MiniProp and VOACAP. Inevitably, if there's a band opening anywhere west of Boston or east of California, the computer model says it's got a nice big lobe down to Texas.

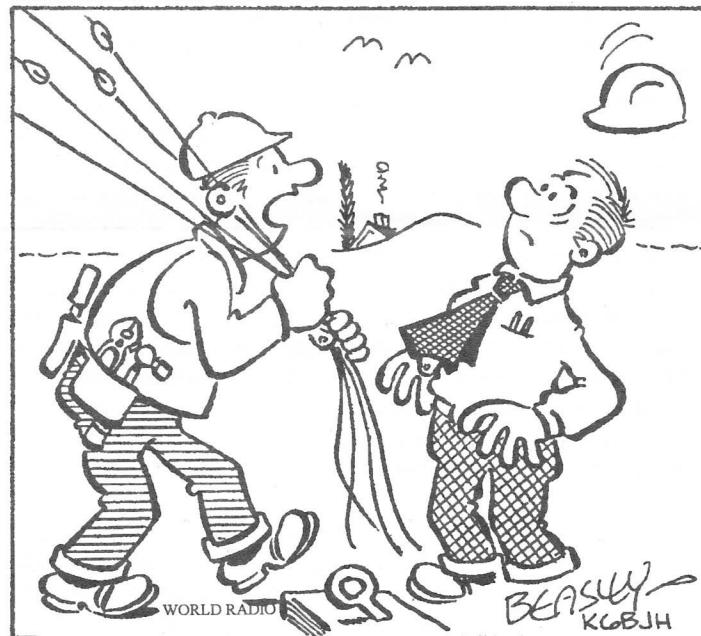
I returned to the SF Bay Area two years ago, and still don't have any HF antennas, lousy or not. Nonetheless, when the band's hopping, I listen in to the 10 meter AM hams up near 29.0 MHz using a variety of old analog shortwave portables with their whip antennas. Until recently becoming a silent key, W5PYT's station dominated the band, operated by Ozona Bob (hint: Ozona is a town in Texas). And at the bedside is a wonderful Sanyo RP-8880 analog shortwave portable, mostly used for those pre-dawn 75-meter DX listening sessions when I can't seem to get back to sleep. Inevitably, there among the occasional W0 or W9 drifting in near 3880 KHz, is a whole dawn chorus of W5's, fading in and out with their vintage AM trans-

missions.

I don't know whatever happened to the chromed supergenny walkie-talkies that I had so laboriously earned in the 1960's and listened to with such fascination. Today there are a few other vintage CB HT's in my collection, dating from that same era. If I pull up their long shiny antennas and fire up an old Philmore or Johnson or Midland or Lafayette walkie any sunspot-laden day, I'll surely hear, in amongst all the heterodynes and cacophony, a big, big signal quieting the band. Funny thing; it'll have that same twangy drawl blaring the decades-familiar phrase, "Breaker, breaker, y'all got a copy on this lil' ol' Sodbuster, come on!" Yep, the band's still always open to Texas.

-Rick, WA6NCX

Field Day June 23 & 24



IT'S MY NEW IDEA--- PUT ALL THE GUY WIRES JUST ON THE UPWIND SIDE!

(Continued from page 49) PAARA PONDERINGS

"Digipan" to display a portion of the spectrum to find weak CW signals. This is a clever adaptation of Digipan, which is used normally with a computer sound board as a tuning indicator during PSK-31 digital operation.

Finally, the Radiocommunications Authority of Great Britain (their FCC) has announced a fifty-pound service charge for neighbors who complain about TVI if it turns out that their own equipment is at fault. The charge will be waived only if it is determined that the interference is caused by faulty or illegal equipment outside the plaintiff's premises. Sounds good to me!

-Vic, AB6SO

New State Solar Grant program

The State of California has a new grant program for solar thermal systems and for the batteries used for PV systems. Palo Alto Municipal Utility customers and others are eligible for these grants. The program is described below and at <http://www.consumerenergycenter.org/solaranddg/index.html>

The State of California has a new grant program for solar thermal systems and for the batteries used for PV systems.

Solar energy and distributed generation grant program The California Energy Commission is now accepting applications on a first-come, first-serve basis for funding under its Solar Energy and Distributed Generation Grant Program. This funding program was developed pursuant to Senate Bill 1345 <sb_1345_bill_20000919_chap.html>, as codified in Public Resources Code sections 25619 and 25620.10, and provides grants to California residents to help offset the cost of purchasing and installing new solar energy and distributed generation systems.

Who is eligible? California residents who are purchasers, sellers, owner-builders, or owner-developers of eligible solar energy or distributed generation systems are eligible to apply.

How much money is available? Up to \$750 is available for eligible solar energy systems except swimming pool heating applications, which are eligible for a maximum of \$250 per system. Up to \$2,000 or 10 percent of the total system cost, whichever is less, is available for eligible distributed generation systems. A maximum of \$750 is available for battery storage systems for Emerging Renewable Buydown Program participants. Under certain conditions, funds may be reserved for eligible solar energy or distributed generation systems. A reservation may be requested for funding of the following: three or more eligible solar energy systems; single systems that serve three or more single-family dwellings or business units; eligible distributed generation systems. Multi-unit systems serving five or more single family dwellings or separate business units that meet the Program eligibility requirements are eligible for up to 50 percent of the maximum amount available on a per dwelling/unit basis.

What systems are eligible? For solar energy systems, the following systems are eligible for Program funding: Solar Domestic Water Heating Systems, Solar Swimming Pool Heating Systems, Battery Backup (Electricity Storage) for Photovoltaic Systems. For distributed generation systems, the following technologies are eligible for Program funding, provided that they meet certain efficiency and environmental specifications: Microgeneration, Gas Turbines, Fuel Cells, Reciprocating Internal Combustion Engines, Electricity Storage (other than for eligible solar energy systems). In addition, all solar energy and distributed generation systems must be as follows: Owned or leased by a California resident and operated within the State Purchased and placed in service on or after January 1, 2001, Installed and operated in compliance with the approved Program guidelines and all applicable laws, Covered by a three-year warranty.

How much funding is available under the program? At this time, a minimum of \$750,000 is available to fund eligible solar energy or distributed generation systems. Funds will be awarded on a first-come, first-serve basis until the available

funds are exhausted. Of this amount, no more than 20 percent of the funds (up to \$150,000) may be used for solar swimming pool heating systems, and no more than 20 percent of the funds (up to \$150,000) may be used for battery backup or electricity storage systems.

When are applications due? Applications may be submitted to the California Energy Commission at any time before the close of business on June 29, 2001, or until funds are exhausted, whichever comes first. However, since applications will be processed and funding awarded on a first-come, first-serve basis and only until the available funding is exhausted, applicants are encouraged to apply as soon as possible. Application must be complete and submitted with all required documentation in order to be processed. Applications submitted on or after June 29, 2001 will not be processed and are not eligible for funding.

How can I get an application or information on this grant program? Application forms and information on how to apply for funding under this Program are provided in three separate Guidebooks that are available on the Energy Commission's Web Site. You may also request a printed copy by phoning the Renewable Energy Call Center at (800) 555-7794 or (916) 654-4058 (outside California). Go to Documents and Forms page <documents.html>. These contain information on eligible systems, copies of the necessary applications, instructions for completing the applications, and an explanation of the California Energy Commission's process of evaluating and issuing funding awards.

Questions? Questions concerning this Program should be directed to: Melinda Merritt, California Energy Commission, 1516 Ninth Street, MS 45, Sacramento, CA 95814. Phone: 800-555-7794, E-mail: mmerritt@energy.state.ca.us

Thanks to Lindsay Joye, P.E., Marketing Engineer, City of Palo Alto Utilities, for passing this information to PAARA.

(Continued from page 50) WEB WANDERINGS

dreds of towns and cities across North America, linking them all with a full dynamic range, telephone quality sound."

Nino Porcino **IZ8BLY** offers free software at <http://ninopo.freeweb.supereva.it>. Vox Recorder, a Windows utility, allows recording sound from an audio source only when an audio signal is present. The software was designed especially for radio scanner hobbyists. Leave your computer connected to a scanner at home while you are at work. Vox Recorder compresses a day's worth of monitoring onto a single .wav file. Potential applications include monitoring 6-meter DX openings and recording repeater abuse. You can probably think of other uses.

A new web site has been established to promote use of the 1-1/4 meter band at <http://6mt.com/222.htm>. There's a Beacon List, Equipment for Sale, Message Board, 222 Nets, Meteor Skeds and a Tech Mods List. I've recently found older, like new, 222 MHz FM HTs for sale for as little as \$20 to \$25 at the Livermore Swap Meet. Although somewhat clunky, they were synthesized with touch pad frequency entry and PL installed.

-Vic, AB6SO

WANTED

Schematic for HTX-252, Radio Shack's 25 Watt, two-meter mobile rig. If you don't have the schematic, but know who the actual manufacturer is, that might also be helpful. I am experiencing low audio on transmit, and adjusting the mic gain control seems to have no effect. (I do have the board layout which shows which pot to tweak)

Please contact:

Rich W6APZ; phone (650-494-0128)
or email: w6apz@arrl.net.

CORRECTION: Flea Market Dates

(Wrong dates were listed in last months PAARAGraphs, 2nd Sat. is correct)

These are the correct dates:

June 9	SVECS
July 14	WVARA
August 11	PA RED CROSS
September 8	PAARA
October 13	SJ RED CROSS

SEMINAR & EXAM: AMATEUR RADIO

WHAT: Amateur Radio ("Ham") License & Communications Training Course, Sponsored by: Foster City Police Department; The City of San Mateo Office of Emergency Services; South County Amateur Radio Emergency Services (SCARES)

WHEN: Saturday, July 21, 2001 8:30am - 5pm

WHERE: Foster City Community Center, 1000 East Hillsdale Blvd., Foster City, CA

FEE: \$25.00

SIGN UP: Ross Peterson: 650-349-5349; wb6zbu@arrl.net

This course is open to the public. This one-day cram course is designed to help you obtain your Technician-Class Federal license [no Morse code] - the (EASY - 35-question, multiple-choice!) Federal exam is administered as part of the class. You can practice for the exam on the Web: <http://www.aa9pw.com/radio/exam.html>

Once you get your FCC license, you can get free training through the Amateur Radio Emergency Service (ARES)

Further information is on the Web: <http://www.belmont.gov/orgs/scares/>; <http://www.svpal.org/~specs/>; <http://www-w6yx.stanford.edu/suarez/>; <http://www.arrl.org/>

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

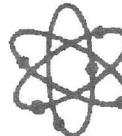
- Club meetings are on the first Friday of each month, 7:30pm at the Menlo Park Recreation Center, 700 Alma Street, Menlo Park, CA. •
 - Radio NET every Monday evening, at 8:30pm, on the 145.230-600 MHz repeater, PL tone off. •

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.

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

WØQK

ELECTRONIC COMPONENT SUPPLY
TEST EQUIPMENT • COMPUTERS



Alltronics

2300-D ZANKER ROAD
SAN JOSE, CA 95131
408-943-9773
FAX 408-943-9776



MICHAEL J. ALLISON
Principal Software Engineer

AHHA! Solutions
4429 Guilford Place
Livermore, CA 94550

510 447-5414
kn6zt@amsat.org

HSC

Halted
specialties co.

Electronics • Prototyping Supplies • Computers • Lasers

Debra Blanke
Sales
KG6UI

3500 RYDER STREET
SANTA CLARA, CA 95051
www.halted.com

PHONES: (408) 732-1573
(650) 969-1448
FAX: (408) 732-6428

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 payable in advance by the year with "scanner-ready" copy or text-only ads. Give payment and copy to Bob Korte

PAARAgaphs June 2001

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



FIRST CLASS MAIL

Inside

Map to Field Day	47
Calendar & Program	47
Miscellaneous Dates	48
Contests	48
PAARA Ponderings	49
Web Wanderings	50
Band's Open	WA6NCX
Solar Energy System Grants	51
Foothill Electronics Flea Market	Joye, P.E.
"Ham" Training Class	52
	53
	53

FIELD DAY

JUNE 23-24

Webb site for propagation information:
www.arrl.org/w1aw/prop/

Korsak, Andy KR6DD
 504 Lakemead Way
 Redwood City, CA 94062-3919

Call For Summertime Specials!

