



PAARAgraphs

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



CALENDAR

- June.....4, **PAARA Meeting**, 7:30
Menlo Park Recreation Center
700 Alma Street, Menlo Park
- June.....9, **PAARA Board Meeting**, 7:30
Red Cross Bld., 400 Mitchell Ln., Palo Alto
- June..26-27, **FIELD DAY**
Help Set Up Friday 26th (see *Ponderings* page 54)
- July.....9, **PAARA Meeting**, 7:30
- July.....14, **PAARA Board Meeting**, 7:30
- August...6, **PAARA Meeting**, 7:30
- August.11, **PAARA Board Meeting**, 7:30
2 m CODE PRACTICE
2000 to 2030 PST, Tuesday evenings W6APZ 145.23 repeater



PROGRAM

June 4, 1999
7:30 P.M.

Speaker:

(Speaker and subject 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

FIELD DAY

June 26-27

at

Cooley Landing

In East Palo Alto-take
Bay Road to the East **end**

Help Prepare Staging Area Friday 26th

(see *Ponderings* pg 54)

Contact Gerry Tucker, WA6LNV or check in on Monday Night Net

VOICE & ALL CW SPEEDS

Visitors and Novices Welcome

News from the Nation's Capital

I am now settled in the Washington, DC, area and am enjoying my new job at Booz-Allen and Hamilton. In the past two months I learned a lot about C++, Visual Basic, and Microsoft Outlook forms. I live in the city of Falls Church, VA, and I am near the Beltway, Tyson's Corner, and the West Falls Church Metro station (Orange line). In addition, one of my co-workers is a ham. His name is **Jim Ayers (K3JLA)**, and he is involved in the Charles County (Maryland) Amateur Radio Club. Their meetings are a little far for me to attend regularly, but I hope to visit their club this month.

Here are my address, phone number, and e-mail:

Dave Bailey (WS6W)
2042 Peach Orchard Dr., Apt. 213
Falls Church, VA 22043
(703)356-8804
ws6w@hotmail.com

2 m CODE PRACTICE

2000 to 2030 PST —Tuesday evenings — W6APZ 145.23 repeater

Miscellaneous Dates

Flea Market at Foothill (info at: <http://joslin.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

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

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, fish@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

Contests, 1999 Vic Black, AB6SO

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

June Contests

- 5,6 IARU Reg 1 Field Day, CW 1500Z, Jun 5-1500Z, Jun 6
 12,13 ANARTS WW RTTY Contest 0000Z, Jun 12-2400Z, Jun 13
 12,13 TOEC WW Grid Contest, SSB 1200Z, Jun 12-1200Z, Jun 13
 12 Asia-Pacific Sprint, SSB 1230Z-1430Z, Jun 12
 12-14 ARRL June VHF QSO Party 1800Z, Jun 12-0300Z, Jun 14
 19,20 All Asian DX Contest, CW 0000Z, Jun 19-2400Z, Jun 20
 19 Kid's Day Contest 1800Z-2400Z, Jun 19
 20 West Virginia QSO Party 1800Z-2400Z, Jun 20
 26,27 Marconi Memorial HF Contest 1400Z, Jun 26-1400Z, Jun 27
 26,27 ARRL Field Day 1800Z, Jun 26-2100Z, Jun 27

Palo Alto Amateur Radio Association, Inc.

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Menlo Park, CA 94026

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Membership*	Vic Black, AB6SO.....	(650) 366 0636
Trustee/Property/Badges	Fred Canham, K6YT	(650) 948 9238
ARES Officer	Lily Anne Hillis, N6PGM	(650) 325 5484
Club Historian	Steve Stuntz, K6FS.....	(650) 322 4952
Advertising	Bob Korte, KD6KYT.....	(650) 595 1842
Webmaster/Andreas Junge AD6FQ.....	(650) 233 0843

*New Committee 12/98

Board of Directors

Charles Grandjean, WD6FAF	(408) 739 5185 '00
John Buonocore, KD6ZL	(650) 366 1658 '99
Terry Conboy, N6RY	(510) 944 5388 '99
Steve Stuntz, K6FS	(650) 322 4952 '99
Doug Schliebus, K1DIT	(650) 851 0727 '00

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

PAARAgaphs Staff

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Submit material for PAARAgaphs by the 15th

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



VE

VE session was held on this sunny, warm May 15th, 1999. Guess the weather was too nice for exams as we had a very light groups show up. As usual, the session was held at the American Legion Hall in Redwood City. The head man is Al Montoya WB6IMX, on hand to help were Dan Curry, whose call is now his initials - K6DLC, Bill Sooman WB6UVO, Joe Horne Sr KB6OWG, and Ron Pantan W6VG.

—Ron, W6VG



ARRL Online

From ARRL Letter, May 21:

The FCC's Riley Hollingsworth, K4ZDH, exhorted a standing-room-only crowd at the Dayton Hamvention to "read over the basis and purpose of Amateur Radio and the rules in Part 97" and to operate as if youngsters and overseas stations might be listening in. He made the remarks Friday during the first of two FCC forums in Hara Arena.

Calling Amateur Radio "an American institution," Hollingsworth momentarily assumed the mantle of the ham radio evangelist. Ham radio, he said, is "not about the First Amendment, it's not about slandering somebody you don't like, it's not about ridiculing somebody who's operating 10 kHz away, it's not about jamming or obscenity." Nor, he said,

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WEB WANDERINGS

de Vic Black, AB6SO

Finding DX QSL addresses is frustrating. The alphabetical 4th edition QSL Pipeline Directory lists over 3000 addresses for stations active during 1998. Find missing routes & catch up on your QSLing. QSL Pipeline Directory is \$8.00 for either paper or ASCII disk version by direct mail. Send check, MasterCard or Visa to "The 59(9) DX Report", P.O. Box 73, Spring Brook, NY 14140. Visit <http://members.aol.com/the599rpt/dx.htm>. QSL managers for more than 1500 stations active recently are at <http://www.dailydx.com/qslmanager.txt>. Use your browser's EDIT/FIND function to search for callsigns. Also try the callsign search function at <http://www.dailydx.com/search.html>. For a language translator, try <http://babelfish.altavista.digital.com>. Translate short messages from English to French, German, Italian, Portuguese or Spanish & vice versa to add a personal touch to your QSLs to ensure a higher return rate.

See <http://setiathome.ssl.berkeley.edu> for the SETI @ Home screen saver, a scientific experiment, which will Internet-connect hundreds of thousands of computers in the Search for Extra-Terrestrial Intelligence (SETI). Data from the world's largest radio astronomy telescope in Arrecibo, Puerto Rico is overseen by a UC Berkeley group of SETI Institute scientists. Analysis involves searching 4,000,000 combinations of frequency, bandwidth and frequency drift. To avoid the expense of a super computer for data analysis, distributed computation is done by participants using home computers, Internet provided data and the screen saver program. It works as an ordinary screensaver while analyzing SETI data or runs in the background as your computer does other tasks. Sponsors and technology partners are The Planetary Society, Sun Microsystems, Paramount Pictures, Fuji Film Computer Products, Informix, Engineering Design Team, Friends of SETI @ Home and the SETI Institute. Who knows? You may be the one to find evidence of long delayed radio communications from a far away star's planet. Then again, maybe not.

In Jan, 1997 PAARAgaphs I reported how to find No. California repeaters. With the club's new hams, it's time to republish the info. The "Spectrum Hogs' Amateur Repeater Coordinating Kouncil" at <http://www.sharkk.com> lists No. California FM repeaters for 30, 50, 144, 220, 440 and 902 MHz, as well as 1.2 & 2.4 GHz. I counted SHF repeaters as an area activity indicator. 1997 saw 55 repeaters on 1.2 & 3 repeaters on 2.4 GHz. Now there are 78 repeaters on 1.2 GHz & 4 on 2.4 GHz. VHF/UHF repeaters were too numerous to count. Print the file for a hard copy. Repeater coordination is by the Northern Amateur Relay Council of Calif (NARCC). Their Home Page at <http://www.narcc.org/index.html> lists repeaters and band plans.

Do you use a Palm Pilot? Hand size Personal Digital Assistants are becoming popular as competition drives prices down. In Nov, 1997 PAARAgaphs I wrote about **Ken Harker's**

Univ. of Texas station RF Safety survey web site. **Ken KM5FA** has a page dedicated to PalmOS ham applications at www.cs.utexas.edu/users/kharker/palm-ham.

Programs include greyline projection, real time list of the last, current & next NCDXF/IARU HF beacons, distance between any 2 points on the globe & world time zones, sunrise/sunset times for any QTH plus resistor color code conversions. There's a callsign prefix & DXCC countries list. Practice Morse code to 80 wpm or practice for Novice/Technician license tests. Access packet with Palm Pilot terminal emulators and an HT. A Palm Pilot "pocketAPRS Information Page" is at <http://webusers.anet-stl.com/~mcmusick>.

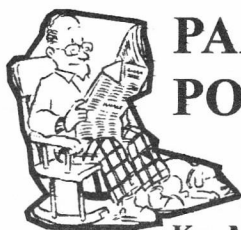
May PAARA speaker **Bob Fabry N6EK** reports PocketBeacon freeware for PalmOS by **Chris Terwilliger, AA7WD**, is available for download at <http://personal.mia.bellsouth.net/~aa7wd/pocketbeacon>. PocketBeacon displays a real-time list of the previous, current and next beacon scheduled to transmit on each selected band and updates the list every ten seconds as the transmitting station changes. Station information includes the callsign, short path distance in kilometers, and short path beam heading.

Receive a FAX without a FAX machine over a free, secure Internet connection. Go to www.efax.com for info. A person can send a fax to you by dialing your unique eFax number and pressing send. The eFaxes may include text, graphics or both. The fax goes to an eFax Service Center, is compressed, protected with your personal security password, then forwarded to your email address. It's available for Windows 3.1x, 95, 98, or NT and Mac or UNIX systems.

Look for Mutiny on the Bounty descendants at scheduled times. Between 3:30 and 5:00 PM PST (2330 to 0100 UTC) Tuesdays, talk to **Tom Christian VP6TC** on Pitcairn at 21.348 MHz, or 14.181 MHz if conditions are poor on the primary frequency. At 9:00 AM PST (1700 UTC) Fridays, look for **Tom Christian VP6TC** at 21.348 MHz. At 9:00 AM PST (1700 UTC) Wednesdays, contact **Betty Christian VP6YL** at 21.325 MHz. Between 3:00 and 4:00 PM PST (2200 to 2300 UTC) most days, talk to **Dave VP6DB & Clarice VP6CB Brown**, who frequent a net on 14.226.5 and 14.247 MHz. Other active Pitcairn hams are: **Meralda Warren VP6MW**, **Shawn Christian VP6SC**, **Dennis Christian VP6DR**, and **Pitcairn ARC VP6TY**. For info about Pitcairn Island and its inhabitants, visit <http://www.visi.com/~pjlaureau/pitc1.html>. Since May 1998, Pitcairn call signs use prefix VP6. The former VR6 is now assigned to China.

In April, 1997 PAARAgaphs I described AM Broadcast Band DXing and the Highway Advisory Radio/Travelers' Information Service. BC Band DX info is at <http://members.aol.com/bcblogbook/main.htm>. You'll find radio buttons next to frequencies. Click a button and a list of U.S. AM stations on that frequency will appear with callsigns, QTH, antennas, power, and other info. Go to <http://www.erols.com/wharms/tis> for TIS/HAR stations sorted by frequency, callsign, location,

(Continued on page 55) Web Wanderings



PAARA PONDERINGS

de VIC BLACK, AB6SO

Congratulations to 11 year old new Tech **Ken Mallory KF6VSC**. Ken visited PAARA's W6OTX entry in the ARRL International DX SSB contest with **Dad Seth KF6UZX** and got excited enough to earn his new Ham privileges. **Dan Curry** is also pleased with his new vanity callsign **K6DLC** (Dan's initials) to replace his old call **WB6STW**.

Be on the lookout for special callsigns to commemorate the New Scottish Parliament. This is the first convening of the Scottish Parliament in 300 years. Between 6th May and 31st July, 1999 Scottish Amateurs may use special prefixes 2S in place of GM, 2A in place of MM and 2T instead of 2M (Novices). Likewise, at the same time Welsh amateurs will use prefixes 2C, 2W, and 2X in place of GW to commemorate the new Welsh Parliament.

In February I announced that Canada had assigned new prefix VY0 to the newly formed Territory of Nunavut effective April 1. An unexpected hitch has developed with addresses there. The current two letter postal code for Nunavut is "NU" which is French for naked. The bilingual (French/English) Canadian Post is scrambling for a replacement abbreviation.

The annual ARRL Field Day is scheduled for Saturday and Sunday Jun 26 & 27. Preliminary setup will begin on Friday, Jun 25. Help is needed for set up, operating, logging, food preparation, and cleanup and tear down. Although it's conducted like a contest, Field Day is actually an event to test how well amateurs can assemble an emergency communications field station and make as many contacts as possible in twenty-four hours. It's also intended as a showcase to the general public on the capabilities of amateur radio. Think of the aftermath of a major earthquake with no commercial power, very little water, food, shelter or outside help. With other communications links inoperative it would be just the ham community providing the only communications to the rest of the country and Canada. You can be proud of similar work being done recently by hams in the Midwest following several devastating tornadoes.

Field Day is a fine opportunity to hone your operating skills. Whether you're an old timer, Novice, Tech or Tech Plus it's a chance to help build and operate a VHF/UHF, HF, or even satellite, station and make lots of contacts. Novices and Tech Pluses are needed for a Novice station including 10 meters phone. In past years, several operators have upgraded their licenses after working a full weekend of CW at Field Day. If you're not licensed, you too can join the fun and operate so long as a control operator is present. Everyone is important in an emergency and everyone is important to a successful Field Day operation. Come out and enjoy yourself. W6OTX always fields a competitive station with fine transceivers and some of the best antennas around.

PAARA members live and work in a technological hot spot.

How do you feel about the state of the art as applied to ham radio? Does your employer consider you to be a part time employee if you work only 40 hours per week? Are you beginning to get burned out by working 10 to 16 hours per day and then going home to do the same thing for a hobby? **Ed Hare W1RFI** wrote from the ARRL labs: "As much as we love CW and SSB, the future of radio seems to be in the digital area and I fear that instead of leading the way as we once did, hams are falling behind the times".

Vic Rosenthal K2VCO responded from Fresno, CA: "I submit that our hobby of amateur radio is something entirely different from radio as a practical communications medium. I think that the Internet is a far better medium for keyboard to keyboard communication than any digital ham radio mode can possibly be. So I meet my need for communicating 'content' on the net. But my true avocation is CW, sent by hand and received by ear (keyers are OK but I draw the line at keyboards). No computer-mediated communication will ever be as sweet to me as hearing a polar flutter modulated signal sending **my** call letters!

Obviously, insofar as hams need to maintain the ability to provide emergency communications, they will have to learn about and develop capabilities to use whatever means are most efficient to get the message through. That's fine. I even own a couple of 2-meter HTs in case I need them. But in my general operating I honestly don't care what the **most efficient** mode is! I do this radio stuff for fun, not to be 'efficient' by some standard that's appropriate for cellular systems or whatever".

Finally, here's some Haiku, or Japanese poetry, from **Kazuhiro Sunamura JF1OZL** for your moments of deeper thoughts and enjoyment:

With headphone, with baby. Headphone makes it possible to operate in the same room with the weeping baby.

Cool operation with foreign language. In Japan when we operate with domestic stations 7MHz SSB we sometimes happen to be called by Korea. In such cases, the man who can operate with Korean language is very cool.

Easy operation with car conditioner. Car expedition is easier than foot expedition. Not only transportation, but also air conditioning!

BY stations require direct. BY stations require us to QSL direct. But every time they send us their cards via the buro. I cannot know the reason of it.

SSB 3 times than AM. SSB signal can reach three times farther than AM.

CW 3 times than SSB. CW signal can reach three times farther than SSB.

Is UTC different from GMT? I cannot understand why the name of the international time standard was changed.

Can coffee helps the eyeball. When I made the local expedition on the hill, somebody visited me with the can of coffee. Thank you!

With fever we can operate. When we have a slight fever, we cannot work in the company, but we can operate in our shack!

Get well Art Bolton, NM6K. Your our living history

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is it intended to be a talk show or an “electromagnetic forum for hate groups” or “an audio version of The Jerry Springer Show.”

Hollingsworth called the on-air activities of some hams “childish and stupid” and said the hobby does not always present its best face to the world. He also said hams need to understand that demand for HF spectrum in countries outside the US is increasing.

“Too many in our service take the allocations for granted,” he said. “Some of the Third World countries would love to have 75 meters as a national telephone system,” he said. What does transpire on some amateur frequencies “is often an international embarrassment,” he said.

“What kind of service is it when you’re afraid to leave on the radio in the house or the car?” he asked. Hollingsworth said he even knew of a young Extra class amateur whose parents won’t let him on 75 meters.

He asked law-abiding hams to not retaliate against hams who are offensive on the air or who break the law but to shun them instead. He also challenged each ham to recruit one newcomer into the hobby or to help another licensee to upgrade. Hollingsworth especially encouraged recruiting young girls into Amateur Radio. He delivered similar remarks during two other Dayton forums and received an enthusiastic reception—including a standing ovation.

In response to a question from the audience, Hollingsworth revealed that FCC officials on May 14 had attempted to visit the station of **Glenn Baxter, K1MAN**, in Belgrade Lakes, Maine. Baxter heads the American Amateur Radio Association; his on-the-air talk and news transmissions have been the subject of some controversy within the amateur community. Hollingsworth said that, although **Baxter’s** station was on the air, no one came to the door, and the building appeared to be locked.

Hollingsworth and an FCC field office team from Detroit spent several hours doing enforcement work at the Hamvention itself. The field office personnel attempted, without success, to determine the sources of intentional interference on the Hamvention’s 2-meter talk-in frequency. At least one source appeared to be mobile.

FCC personnel also cited or verbally warned several vendors about violations related to the sale of amplifiers.

MULTIPLE CLUB STATION

The FCC has set aside 14 recently granted club station call signs and 12 recently granted club vanity call signs held by an individual trustee. The FCC’s **Riley Hollingsworth, K4ZDH**, took the action May 11 in a letter to **Motoaki Uotome, W9BO**, of Honolulu, Hawaii. Uotome is the trustee for 35 club station call signs in various cities in the continental US as well as in Hawaii, the Marianas, Guam, and Alaska.

The action in the **Uotome** case is the first of several Hollingsworth said he expects to take, and it could have implications for other holders of multiple club station call signs. “They’d better have legitimate clubs or they’re coming back to

us,” Hollingsworth told the ARRL. “We’re getting a lot of complaints that people are scarfing up these call signs.”

Hollingsworth said the FCC is not concerned about a single club station call sign used by a club or a DX or contesting group, but he emphasized that the FCC will not tolerate abuse of the system. He indicated similar letters soon would go out to other licensees who serve as trustees for multiple club station call signs.

Hollingsworth told **Uotome** that the FCC was setting aside 14 call signs granted within the last 30 days “pursuant to Sec 1.113 of the Commission’s rules.” In addition, Hollingsworth said the FCC was setting aside 12 vanity call signs issued to **Uotome** in the last 30 days.

Several club station call signs granted for more than 30 days will remain in the FCC database for now, but Hollingsworth asked **Uotome** to “provide justification within 30 days as to the need for each of these call signs.”

Hollingsworth said that he wants to know names, addresses, and telephone numbers of club members, meeting times and dates within the past year, proposed meeting times and locations within the coming year, and copies of minutes, if any,

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licensed agency, etc. The US Federal stations list helps you prepare for travel to a national park or federal area. QSL routes are provided (yes, many confirm listeners’ reports). As with the QSL managers list, use your browser’s EDIT/FIND function to search for a location name, for instance. There are more than 730 US TIS stations. Most use 530 and 1610 kHz. 620, 840 (Dumbarton Bridge), 1620 and 1630 kHz each support 10 or more stations nationwide. The FCC TIS site is at <http://www.fcc.gov/mmb/asd/bickel/tis/freqtis.html>.

New Tech **Allen Downs KF6VGC**, is hiking the Pacific Crest Trail from Mexico to Canada with a Yaesu HT. At 20 miles a day he expects to finish his adventure in five months. **Steve Stearns KF6OIK** reports daily updates and photos at <http://www.dvpratt.com/downs>.

Online logs, popularized by DXpeditions, allow operators who have worked you to confirm that they’re in your log by accessing your logs online. **Don Trask KF6JMQ** found the free Electronic Logbook Hosting Service at <http://www.logsonline.com>. Logs Online lets you create searchable logs, custom response pages and search forms for your website.

PAARA member **Andy Korsak VE3FZK** is famous (infamous?) for carrying duct tape for portable and mobile rig repair. **Terry Conboy N6RY** discovered good justification for this practice. Go to <http://antwrp.gsfc.nasa.gov/apod/ap990501.html> for Dec 1972 Apollo 17 moon DXpedition photos. The moon’s surface rocks were pulverized to a talcum powder consistency by meteorites. The lunar rover’s fender, damaged on landing, allowed moon dust “rooster tails” to create a minor dust problem. The astronauts quickly made a repair described by NASA as “an ingenious application of spare maps, clamps, and a gray strip of duct tape”. As journalist **Dave Barry** would say, “I’m not making this up”.

Towers

Steve Morris-K7LXC, Champion Radio Products

(This appeared in the April 1999 (electronic) edition of "Sunspots", the newsletter of the Redwood Empire DX Association, Steve Bertsch-WA6YFD Editor. Copyright Steve Morris. ARNS)

After working on over 100 amateur radio tower and antenna systems over the last 15 years, I have seen many problems and failures that could have, and should have, been avoided. By not making these mistakes, you can make your tower and antenna system safer and more reliable. It'll even let you sleep nights better.

1. Not following the manufacturer's specifications - Commercially manufactured towers have to comply with current standards for wind loading and structural integrity. Licensed Professional Engineers (PE's) design the towers and make the calculations to make them safe. If you don't follow their specs at a minimum, the tower will not take the stresses and loads that it is subject to. In other words, it'll probably fail.
2. Overloading - This is the most common reason for amateur tower failure. The first thing you need to know to plan and build a tower and antenna system is what the wind speed rating for your county is. Next, you need the manufacturer's specifications for that wind speed. Then you must not exceed the wind load rating based on those factors. This is even more important for crankup towers. Refer also to number 1.
3. Underestimating wind forces - Wind pressure on a tower and antenna system can be tremendous. Unless you've been up on a tower during a windstorm to feel the pressure and the forces, it's difficult to appreciate how significant they are. Increases in wind pressure are not linear, they are geometric.
4. Not building to the wind speed rating for the county - While many counties in the US are only rated for 70 MPH winds, many other counties have ratings much higher, up to 115 MPH. Find out what the wind speed rating is for your county, or your specific location, and use that as the minimum design parameter for your tower and antenna system. See also number 1 and 3 above.
5. Using the wrong mast for the job - Medium to large sized HF beams can put huge stresses on your mast. Know the difference between pipe and tubing as well as the pressure that your antenna system will put on the mast (tubing is generally acceptable, pipe is not). Then you can make sure that your mast will not bend or break in a big windstorm.
6. Not having the guy wires tensioned properly - Proper guy wire tension is a critical part of a tower's ability to handle wind stresses. Having the wrong tension can be like driving your car with over or under-inflated tires; it is potentially dangerous and is not the proper specification from the manufacturer. Find out the proper tension for your installation and tension them correctly.
7. Not having a proper ground system - A good ground system is necessary not only for lightning protection but also for minimizing RFI to adjacent electronic devices.
8. Not doing an annual inspection - Your tower and antennas system is in a constant state of deterioration. While it may be a slow process, it is going on continually. The best way to find and fix small problems before they grow into big problems and

potential calamities is by doing an annual inspection.

9. Not fitting the tower sections on the ground - Tower sections, new or used, may not fit easily together. It's much easier to correct alignment problems on the ground than up on the tower.
10. Using the wrong hardware - Since tower and antenna materials are in a constant state of deterioration, you should only use hardware that minimizes corrosion. Galvanized or stainless steel materials are the only ones that will survive outdoor use reliably. Using the wrong hardware includes using non-closed-eye eyebolts. Use only forged or welded eye-bolts since the wrong type can open up accidentally with disastrous results.

2 Meter Antenna

(This originally appeared in "Keyed-Up", the newsletter of the London (Ontario) ARC, and was obtained via the Ottawa Valley Mobile Radio Club "Rambler." ARNS)

Need a simple antenna that will enable good 2 meter FM communications into and out of today's brick, concrete and steel buildings? Like most projects, this one is cheap and easy to make. It is a dipole antenna cut for 2 meters, approximately 37 inches long. Remember, the same formula that works for the HF bands also works for higher frequencies, but it requires two attachments, strings, etc. to hold it. This project dispenses with the strings and such by using soft rubber or plastic suction cups, the type used to hold animals to the inside of car windows. Today, most modern buildings have an ample number of windows, many of which cannot be opened. By simply attaching a small suction cup to the end of each leg of the dipole, as well as to the centre coax feedline connection, you can stick the antenna to the inside of any window in any position or polarization. And if the window happens to be on the top floor, so much the better! Just think of the wide coverage you can get from such a location on a very low amount of power. By using a short run of coax, you can set up an effective communications centre at a comfortable distance from the window. We concede that the dipole doesn't give any gain, but you should also remember that the rubber ducky itself is only 7% efficient. Vertical antennas all need an effective ground plane in order to perform well, but the dipole inherently has its own, by design. This whole antenna and feedline can easily be coiled and stored inside a small plastic bag, making it easy to carry around with you in case you need it. ☺☺☺

PAARA MONDAY NIGHT NET
8:30 PM 145.230-600 MHz repeater
PL tone off
 Latest news between monthly issues of PAARAgaph

(Continued from page 55)ARRL

taken at meetings within the last three months.

Hollingsworth said the FCC intends to cancel all of the listed call signs if **Uotome** does not "satisfactorily respond" to his inquiry within 30 days. He also warned that any willful misrepresentation or deliberate omission in replying would lead to revocation of Uotome's Amateur Radio license. ☺☺☺



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The PAARAgaphs 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, KD6KYT.



PAARA PRIDE



wear your
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to
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Join us for pre-meeting eyeball

QSO June 4th

gab & gobble

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



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 PAARAgaphs, \$6 for additional family members (no newsletter).
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June 1999

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PAARAgaphs Newsletter
P.O. Box 911
Menlo Park, California 94026



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FIRST CLASS MAIL

FIELD DAY

June 26-27

Cooley Landing

In East Palo Alto-take
Bay Road East to the end

Help Set Staging Area Friday 26th (see *Ponderings* pg 54)

Visitors Welcome during Field Day



Korsak, Andy VE3FZK
504 Lakemead Way
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