



PAARAGraphs

Celebrating 60 years as a *real* ham radio club—*Since 1937*

Newsletter for the Palo Alto Amateur Radio Association, Inc.



CALENDAR

1997 PAARA Dues,

Mail to PAARA or give \$12 check, with Call, to:
Doug Schliebus -W6HXL, Treas.

May 2, PAARA Meeting, 7:30
Menlo Park Recreation Center
700 Alma Street, Menlo Park 7:30-9:30 PM

May 7, PAARA Board Meeting, 7:30
Red Cross Blvd. 400 Mitchell Ln., Palo Alto

May 10, PAARA Flea Market, Foothill

June 6, PAARA Meeting, 7:30

June 7, PAARA Picnic

June 11, PAARA Board Meeting, 7:30

June 28-29 Field Day



Program
May 2, 1997,
7:30 P.M.

Speakers: George Hopkins (K6GL),
John Dukes (KE6UIA), Steve Muther (W6YX)
Amateur TV through local ATV repeater demonstration

In the mean time please visit
<http://w6yx.stanford.edu/~stevem/atv/>
for an idea of what's in store for us at the meeting



2-METER INTERFERENCE

At the January, 1997 PAARA meeting, **Ori Mizrahi-Shalom** (AC6AN), explained how we can get unwanted products from mixer schemes when a weak signal outside of the receive frequency squeaks by a receiver band pass filter, mixes with a desired signal and is amplified. We see something akin to this with intermodulation distortion (IMD) when a high power paging transmitter up around 152 MHz mixes with a weaker 2-meter FM signal in a receiver IF chain. Now **Paul Bennet** (N7OCS), of McMinnville, Oregon has identified another potential source of 2-meter interference: third harmonics from portable telephones, baby room monitors and 49 MHz "walkie-talkies".

As Paul Bennet states it, "The 6M Citizens' Band was specifically chosen by the FCC so that any 3rd harmonic interference would fall in the amateur 2M band and not in the nearby business/public service bands". In an e-mail message, Bennet asserts that Sony portable telephones are some of the worst offenders, but he didn't mention whether he had tested any other brands or, if so, how the tests were conducted.

Apparently, some hams are receiving strong harmonics on 2-meter simplex frequencies. These may sound like malicious jamming of the ham bands, but in reality the "jammers" don't know they're causing interference. They don't identify themselves because they aren't on the radio, as far as they are concerned. Not much can be done about it, either, since both the portable telephones and 2-meter handie-talkies are FCC Type 15 devices and must accept whatever unintentional interference they receive. (An interesting aside: it is illegal to listen to portable telephone conversations. If you hear this type of interference, promise not to listen to it).

(Continued on page 36) 2-meter

Miscellaneous Dates

Flea Market at Foothill

Mar 8 West Valley Amateur Radio Association (WVARA)
 Apr 12 Palo Alto Chapter, American Red Cross
 May 10 Palo Alto Amateur Radio Association (PAARA)
 Jun 14 San Jose Chapter, American Red Cross
 Jul 12 Santa Clara County Amateur Radio Association (SCCARA)
 Aug 9 South Peninsula Emergency Communication System (SPECS)
 Sep 13 Electronics Museum Amateur Radio Club (EMARC)
 Oct 11 Silicon Valley Emergency Communications System (SVECS)

PAARA Palo Alto Amateur Radio Association

meets 1st Friday 7:30 each month, Net 145.230 each Monday 8:30,
 contact: Vic Black, Jr. AB6SO, (415)366-0636.

PAARA Auction, 2nd Saturday of May

contact Jerry Tucker, WA6LNV 415-961-3266

EMARC Electronics Museum Amateur Radio Club

Meets 4th Friday 7:30 each month,
 contact Sheldon Edelman 415-858-2176, Edelman@richochet.net

NCDXC Northern California DX Club

Meets 2nd Friday each month, repeater for member info 147.360, each
 Thursday 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 415-961-3266

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 415-593-8952

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 R

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 415-688-0423.

SAN JOSE CHAPTER: American Red Cross

contact Scott Hensley KB6UOO, 408 249 7093, fish@richochet.net

VE Exams, 3rd Saturday each month, 11AM

American Legion Hall, 651 El Camino Real, R.C.

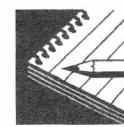
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The Board Minutes

Dave Bailey (WS6W), Secretary

April 9, 1997, 7:30PM PAARA Board Meeting

Present:

Vic Black (AB6SO)* Pres

*Board Member

Dave Bailey (WS6W) Sec.

Dave Mecham (W6EMD) VPres

Charlie Grandjean (WD6FAF)*

Doug Schliebus (W6HXL) Treas

Steve Stuntz (K6FS)*

Fred Canham (K6YT)*

Bill Rausch (AA6PA)

Gerry Tucker (WA6LNV)

Wally Porter (K6EURO)

The meeting was called to order by Vic(AB6SO). The April 4 PAARA meeting minutes were read by Dave (WS6W) and approved by the Board. Doug (W6HXL) gave the treasurer's report. Last month we had an \$197 income and \$405 expenses. Wally (K6EURO) gave the PAARAgraphs editor's report and mentioned that Halted will most likely be advertising in PAARAgraphs.

Old Business:

1. The PAARA Foothill Flea Market will be held Saturday, May 10. The Board reviewed the sign-up list from Friday's meeting and filled in the task checklist given at the last Board meeting by Vic (AB6SO)

New Business:

1. Bill (AAGPA) said that the AMSAT launch was delayed to mid to late September and that there is a \$150,000 to \$200,000 shortfall. The West Valley Amateur Radio Association donated \$300 to help cover the cost, and Bill wanted PAARA to donate some money also. Steve (K6FS) moved that we donate money to AMSAT, and Charlie (WD6FAF) seconded the motion. The motion was approved by the Board. Charlie (WD6FAF) moved that the amount donated be \$150, and Steve (K6FS) seconded the motion. The motion was approved by the Board.

2. The PAARA summer picnic is scheduled -for Saturday, June 7, at the QTH of Ron (W6VG) and Helga Panton. Vic (AB6SO) reviewed the checklist and will circulate a sign-up sheet for volunteers at the next meeting.

3. Field Day is scheduled for June 28-29. Several members who came last year will not be able to come this year. Gerry (WA6LNV) is Field Day manager and wants to meet with operating teams before Field Day. Fred (K6YT) will confirm the site, and then the insurance will be sent to Albert H. Wohlers. We need a new radio and a new tower, which could be a three section 60-foot total tower (20 feet per section) costing \$3000. We want to boost our CW effort on Field Day also. Since we are just coming out of a sunspot low, we want a big signal on 40 meters, so 2 CW stations on 40 would be a good idea.

Other Business.

1. Autumn Auction: Bill (AA6PA) is still investigating National Semiconductor. The contact person there is WB9AJZ. The Shriner's Hall in San Mateo (last year's QTH) might also be available. The meeting was adjourned..

Submitted by Dave Bailey (WS6W)

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

President.....Vic Black, Jr., AB6SO.....(415) 366-0636
 Vice President.....Dave Meacham, W6EMD.....(415) 369 2633
 Secretary.....Dave Bailey, WS6W.....(408) 730-5215
 Treasurer.....Doug Schliebus, W6HXL.....(415) 851 0727
 Trustee/Property/Badges..Fred Canham, K6YT(415) 948-9238
 ARES Officer.....Lily Anne Hillis, N6PGM(415) 325-5484
 Club Historian.....Steve Stuntz, K6FS.....(415) 322-4952

Board of Directors

John Buonocore, KD6ZL (415) 366 1658 '97
 Fred Canham, K6YT (415) 948 9238 '97
 Charles Grandjean, WD6FAF '98
 Steve Stuntz, K6FS (415) 322 4952 '97

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

PAARAGraphs Staff

Editor.....Wally Porter, K6URO.....(415) 494 7038
 Database.....Bill McElhinney, KA6LZI.....(415) 325 9808
 Advertising.....Bob Korte, KD6KYT(415) 595 1842

e-mail Address: wmporter@aol.com



PAARA Meeting Minutes

April 4, 1997

submitted by:

Dave Bailey(WS6W), Secretary

President Vic Black (AB6SO) called the meeting to order, and the introductions were done. Clint Hancock (HD6H) brought a guest, John Coley. There were no upgrades or new callsigns.

Announcements:

1. Daylight Saving Time starts a 2 AM Sunday. Be sure to set your clocks ahead one hour.
2. The Livermore swap meet is scheduled for Sunday from 7 AM until about 11 AM in the parkmg lot at Las Positas College in Livermore.
3. The PAARA Board meets at 7.30 PM next Wednesday, April 9, in the Palo Alto Red Cross Building, 400 Mitchell Lane, Palo Alto (near the Cal Train station in downtown Palo Alto). Visitors are welcome.
4. The Foothill swap meet is scheduled for Saturday, April 12, from dawn until about noon in the lower parking lot of

(Continued on page 38) Meeting Minutes

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)

TREASURE'S REPORT

Doug Schliebus, W6HXL

INCOME:	Yr 1996	Jan.'97	Feb.'97
Dues	\$600	\$564	\$192
Flea Market	6,116	0	0
Auction	3,336	0	0
Advertisements	600	0	5
Holiday Dinner	0	449	0
Other	529	0	0
Total Income	\$11,181	\$1,013	\$197

EXPENSES:

Postage	\$64	\$40	\$32
DMV	43	0	43
State of CA	10	10	0
Rent	300	150	25
Speakers Dinner	132	11	24
Flea Market	1,737	0	0
Auction	200	2,041	0
Refreshments	92	17	12
Newsletter	2,446	166	196
Picnic	87	0	0
Field Day	377	0	0
Holiday Dinner	0	669	0
Radio Class	155	0	0
Misc.	782	56	73
Total Expense	\$6,425	\$3,160	\$405

SUMMARY:

Income	\$11,181	\$1,013	\$197
Expenses	\$6,425	\$3,160	\$405
Net Return	\$4,756	(\$2,147)	(\$208)

Comments:

Looks like we can expect a shortfall of income for 1997, as many members have not paid their 1997 dues. The 1996 net return was really \$2715, as a 1996 expense of \$2041 was not paid until 1997. *W6HXL*



PROGRAM NOTES:

PAARA Program,
April 4, 1997

—Steve Stuntz, K6FS

Once in a while you have to wing it: the anticipated show-and-tell session on Amateur Television (ATV) being suddenly unavailable, our April program was distinguished by several "firsts".

Vic (AB6SO), our unstoppable president, introduced a new Guest Book to be circulated at each meeting for the signatures of any and all present, to become a durable record of who's who for PAARA's next 60 years. Along with that, a sample banner heading for PAARAGraphs celebrating our "60 years as a real ham club" was circulated for the edification and comment of all present. By means of a little typographic legerdemain, our redoubtable editor, **Wally Porter (K6URO)** devised an eye-catching W-60-OTX which will ennoble the cover of our monthly news-letter during the remainder of AD 1997.

Former president **Bill (AA6PA)**, gave a detailed rundown on the status of the next proposed launch of a space-vehicle to carry amateur radio capability. In need of additional funding, the event, scheduled to occur early next year at the latest, from France's Space Center in French Guiana, northeastern South America., will enable multimode communication among amateurs worldwide. More later...

Show'n'Tell: Steve (K6PS), unpacked his aluminum suitcase full of MFJ 20-meter QRP SSB transceiver, "mating tune everything from 6 element monobander to we t noodle" tuner/SWR meter, 4 AH gelcell, smart charger, and dipole antenna. Best reported DX to date: **VK6ACY**, near Perth, Western Australia, 9000+- miles, and **DL9ZOG/MM**, in the Tasman Sea between Tasmania and New Zealand, 6500 miles give or take.

Event of the evening was the debut presentation of PAARA's new 20-inch TV receiver/monitor and VCR. To celebrate this significant event, **Kit Kohlmoss (Y6ISO)**, introduced and ran the videotape made of the past year's World Radiosport Team Competition, showing not only the fiercely-competitive C1 and SSB 2-operator teams from around the world, working in Bay Area hams' stations, but

some of the social gatherings preceding and following, crowned by presentations of awards at the Stanford Faculty Club. The 15-minute tape, by the way, was the work of a three-man professional team from TV station **WJET**, Erie, Pennsylvania, owned by **John Kancius (K3MTP)**.

Footnote 1: copies of the 1996 WRTC tape can be purchased from **Bruce Sawyer (N6NT)**, 15430 Bohlman Road, Saratoga, CA 95070, for ten bucks.

Footnote 2: the next WRTC will be hosted by the radio amateur organization of Slovenia in the year 2000: the 1996 event here was attended by a large and enthusiastic contingent of hams from S5. Slovenia, by the way, is reputed to have the largest per-capita population of hams in Europe. Anybody want to count?

Footnote 3: QSL cards for every contact made by WRTC stations are in final preparation, and will be distributed via call-area QSL bureaus. Approximately 70,000 cards are in the works, according to **Rusty Epps (W6OAT)**. If you worked any (or all) of the 1x1 contestants, and want cards, be sure to send an envelope to your bureau: for instance, Sixth District QSL Bureau, Box 1460, Sun Valley, CA 91352. ☺☺☺ -30-

(Continued from page 33) 2-meter

In general, portable telephones produce very weak signals. Usually they won't cause problems. What happens, though, if the third harmonic comes up on a repeater input? If the repeater doesn't require a sub-audible PL tone, we may all hear the conversation. If a particularly strong telephone signal falls on a repeater output it may create noise on the repeater channel. I made a chart of portable telephone base and remote (handset) frequencies and their third harmonics in MHz to check for potential interference.

The chart highlights standard 2-meter FM frequencies which could be affected by the harmonics. Other frequencies on the chart might possibly cause intermod distortion depending on the construction and the IF frequencies used in the ham repeaters. Some telephone remotes have harmonics which fall directly on repeater input frequencies. This could become a problem for a repeater located on top of a tall, high occupancy building (such as an apartment building) where people use portable telephones.

(Continued on page 37) 2-meter

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(Continued from page 36) 2-meter

Channel	Base Freq.	Base 3rd Harmonic	Handset Freq.	Handset 3rd Harmonic	Affected 2-meter Frequency
1	43.72	131.16	48.76	146.28	146.88 (-) rep. input
2	43.74	131.22	48.84	146.52	Simplex
3	43.82	131.46	48.86	146.58	*Simplex
4	43.84	131.52	48.92	146.76	146.76 (-) rep. output
5	43.92	131.76	49.02	147.06	147.06 (+) rep. output
6	43.96	131.88	49.08	147.24	147.24 (+) rep. output
7	44.12	132.36	49.10	147.30	147.30 (+) rep. output
8	44.16	132.48	49.16	147.48	Simplex
9	44.18	132.54	49.20	147.60	147.00 (+) rep. input
10	44.20	132.60	49.24	147.72	147.12 (+) rep. input
11	44.32	132.96	49.28	147.84	147.24 (+) rep. input
12	44.36	133.08	49.36	148.08	Intermod source?
13	44.40	133.20	49.40	148.20	Intermod source?
14	44.46	133.38	49.46	148.38	Intermod source?
15	44.48	133.44	49.50	148.50	Intermod source?
16	46.61	139.83	49.67	149.01	Intermod source?
17 (B)	46.63	139.89	49.845	149.535	Intermod source?
18 (C)	46.67	140.01	49.86	149.58	Intermod source?
19	46.71	140.13	49.77	149.31	Intermod source?
20 (D)	46.73	140.19	49.875	149.625	Intermod source?
21 (A)	46.77	140.31	49.83	149.49	Intermod source?
22 (E)	46.83	140.49	49.89	149.67	Intermod source?
23	46.87	140.61	49.93	149.79	Intermod source?
24	46.93	140.79	49.99	149.97	Intermod source?
25	46.97	140.91	49.97	149.91	Intermod source?

*Note: 146.58 is in the 2 meter simplex band, but is not a standard 15 kHz "channel". It could sound like a station that is slightly off frequency. Portable telephone channels 1 – 15 were authorized June 5, 1995 and the original channels were renumbered 16 – 25. Low power handie-talkies and baby room monitors use the handset frequencies marked A – E.

This chart is based on standard 15 kHz wide channels for 2 meters. If the channels are either fewer in number and wider, or narrower but more numerous, then there are even more chances for interference. Some parts of the US (Southeast and Pacific Northwest) use a 20 kHz channel spacing on 2 meters. This allows more spectrum for out of tolerance third harmonics to interfere. The new IARU Region One standard, to be phased in over several years, is for 12.5 kHz channels in order to fit more channels into a given piece of spectrum. This is being implemented immediately in the UK. This may be the way of the future in the US also. It might provide more channels for potential third harmonic interference.

Notice that this chart assumes that the consumer products are operating exactly on frequency, at specified power, with low harmonic output and with the original antenna and power supply. A channel 6 handset operating at 49.07 (i.e. 10 kHz low) might function marginally for its intended purpose but its third harmonic would then come up on the output of a 147.210 repeater. If a consumer replaces the antenna or battery on a portable telephone in order to increase range, then the effective radiated signal will be stronger. There's room for lots of combinations and permutations to create havoc. It gets even more complicated if you look at other services which can interact to cause interference. This shouldn't be forgotten by the "Little LEO" Personal Communicator Service (PCS) industry which claims to believe it can use very sensitive satellite receivers and still share the bands with other services.

Maybe this isn't all bad, though. I believe that adversity should be viewed as an opportunity. Or, as Arthur D. Little once said, "Research serves to make building-stones out of

(Continued on page 38) 2-meter

ARES/RACES

Palo Alto ARES would like to encourage hams who live in Palo Alto to become ARES/RACES certified in Santa Clara County so they can participate in and contribute to our local RACES effort. To volunteer, please check in to the SPECS net 145.270/- Mondays 2000 Local Time and the local checkin 145.230/- during that net and/or contact: **Rich Hyde, AEC, KD6WYK, 858-2829 Home, 813-6787 Xerox PARC, Rich@adoc.xerox.com**

We need your name, call, address, phone, email and your capability and availability for staffing a school, firehouse or other strategic locations in town in a communications emergency. 73,

**Ken Allen AEC WB6BCV
(krallen@townsend.com)**



Wanted

A Sturdy

Tower

for

PAARA Field

Days

and other

Club activities

(like tower climbing practice)

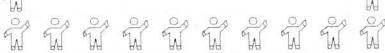
60ft ±

aluminum

contact

**Fred Canham (K6YT)
415 948 9238**

(Donations kindly accepted)



PAARAGraphs May 1997
Celebrating 60 years as a real ham radio club—Since 1937

(Continued from page 35) Meeting Minutes

Foothill College in Los Altos Hills. Be sure to take along quarters for the parking ticket vending machines. Parking went up to \$2 on April 1.

5. If you want a club badge, see **Fred Canham (K6YT)**.
6. The club has a new golden Guest Book for use at club activities.

Continuing Business:

1. The PAARA Foothill swap meet is scheduled for May this year. A sign up sheet for volunteers was circulated. Shifts are a couple of hours each. The Foothill swap meet is our biggest fundraiser, bringing in \$3000-\$4000 a year.

New Business:

1. A PAARA special events station is planned for the fall to commemorate 60 years as a real ham club.

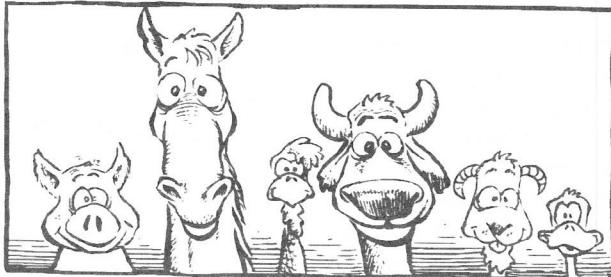
Other Business to be brought up at the Board Meeting

1. **Bill (AA6PA)** reported that there is a delay in the launch of Flight 502 carrying the AMSAT satellite. This will add \$150,000 to \$200,000 to the cost of the launch, which is now scheduled for mid to late September. The added cost includes rent, shipping to Washington, DC, transportation to Paris and then French Guyana, fueling, and integration with the launcher. **Bill** was able to receive a donation from the West Valley Amateur Radio Association , to help cover the costs, and he wants PAARA to donate some money also.

Operating news:

1. **Dan (WB6STW)** worked South Africa on 15 meters.
2. **Vic (AB6SO)** worked Hawaii with 10 watts on 80 meters.
3. **Steve (K6FS)** worked Japan with 5 watts, He also talked to **DL9ZOG** maritime mobile between Tasmania and New Zealand on 20 meters. He talked to him again when

**Join us for pre-meeting eyeball
QSO May 2nd**



gab & gobble

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

DL9ZOG was in the Bahamas. **Steve** mentioned that putting a /QRP at the end of your call increases the likelihood of contact.

Show and Tell:

1. **Steve (K6FS)** has a new portable MFJ 20 meter SSB rig with a 4 A-hr gel cell and smart charger
2. **Bill (AA6PA)** showed his GPS receiver - Street Atlas 4.0, a complete street atlas for North America. It operates under Windows 3.1 or Windows 95, and Bill demonstrated it on his laptop computer. He also mentioned AAA's Map and Go 2.0, which has listings of restaurants and motels in major North American cities.

3. **Vic (AB6SO)** mentioned that the world's smallest GPS is under \$200 and has an accuracy of 30 to 40 feet

Other Business:

1. **Gerry (WA6LNV)** mentioned that there are only two more meetings after this until Field Day.
2. **Dave (WS6W)** gave an update on the net and reminded everybody that anyone who checks in at least 20 times per calendar year receives an award.
3. **Wally (K6EURO)** said that there were extra PAARAGraphs up front for those who did not receive their copies this month.

After the 10-minute break, **Kit (W6ISO)** showed a video about last year's **WRTC**, a contest among the top amateur radio contestants in the world. This video was produced by television station **WJET**. **W60TX** (Field Day site) participated, as did **Kit's** house. Calls were assigned to stations in the last 30 minutes before the contest. The top teams were able to make 100 contacts per hour on 40 meters and 300 contacts per hour on 20 and 15 meters. Anyone who wants a copy of the video should send \$10 to:

**Bruce Sawyer (AA6KX)
15430 Bohlman Rd.
Saratoga, CA 95070.**

submitted by **Dave Bailey (WS6W)**

(Continued from page 37) 2-meter

stumbling blocks". Perhaps by pulling the frequency a bit, amplifying the third harmonic, and filtering out the fundamental it might be possible to make a good FM T-hunt transmitter from a discarded portable telephone handset. Will you be the first to try it?○○○

AB6SO

NEW HAM RADIO VOLUNTEER SERVICES BILL

During the week of March 9, **Rep. Anna Eshoo** (CA, 14th Dist.), along with 21 cosponsors, introduced the Amateur Radio Volunteer Services Act of 1997 (HR 1013) into Congress. This bill, if enacted, would place volunteers in the Examination Program and the Amateur Auxiliary under the protections of the Federal Tort Claims Act by affording them the same legal protections as employees of the Federal Government while they're carrying out such volunteer duties. The full text of the bill can be found in the Thomas section of the Library of Congress web site.

—from March '97, EMARC RELAY



ARRL Online

From ARRL Headquarters:
April 15, 1997

Contests

Ten-Ten International Net Spring CW Contest, sponsored by Ten-Ten International, from 0000Z May 3 until 2400Z May 4. Single op only, CW and RTTY, 10 meters only. Contacts must be in CW subband. Send call, name, state and 10-10 number (if member). Score 1 pt/QSO w/ nonmembers and 2 pts/QSO w/members

ARRL Field Day Period: From 1800 UTC Saturday until 2100 UTC Sunday, June 28-29, 1997.

ARI International DX Contest, sponsored by the Associazione Radioamatori Italiani, from 2000Z May 3 until 2000Z May 4.

MARAC County Hunters CW Contest, sponsored by the Mobile Amateur Radio Awards Club, from 0000Z May 3 until 2400Z May 4.

Texas QSO Party, sponsored by the Texas DX Society, from 1400Z May 3 until 2200Z May 4.

Oregon QSO Party, sponsored by the Central Oregon DX Club, 0000Z May 10 to 2400Z May 11.

Nevada QSO Party, sponsored by the Frontier ARS, 0000Z May 10 until 0600Z May 11.

ARRL VHF/UHF Spring Sprint, 50 MHz. Armed Forces Day.

EU Spring Sprint, CW. May 24-25

ARCI QRP Hoot Owl Sprint, CW, sponsored by QRP ARC International, from 2000 until 2400 local time May 25.

→Buy a Pentium 586/90 so you can reboot faster.

→ $2 + 2 = 5$ for extremely large values of 2.

—W6ISO



Ideas from Other Clubs

Net Neglect? —Richard Randolph (KT4OR)

I have noticed that all of the local club nets are geared for the 2-meter band. So, intentional or not, we are not serving the amateur community like we should.

Have we forgotten the Novices, or are they not worth considering? How can we say the club is open to anyone having a genuine interest in Amateur Radio on one hand; then say you have to have a Technician or higher license to participate on the net?

As Net Director, I feel the JCARA should be the first step forward and correct this. I would like to start conducting one net each month on the 10-meter Novice phone band. If we do this, the JCARA will show that it is for all amateurs. We set up a Novice station at Field Day and then wonder why we don't have any Novices to run it. I don't know about you, but if I only counted for two days a year, I wouldn't join a club either. So please let me know how you feel about having a net on 10-meters each month. If you have any other suggestions or complaints about the nets, please let me know.

—from "Net News" column in JCARA Feedline, Ed Engraham (WX4S), editor

—ARNS

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

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 payable upon submission of copy or text.

3. Copy and Fee should be given to Bob Korte (KD6KY) or Doug Schliebus (W6HXL) by the 1st of the month prior to publishing.

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.

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.

112 Store Buying Power!

Look for the
HRO Home Page
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http://www.harmradio.com



WORLDWIDE DISTRIBUTION

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COME VISIT
THE STORE
NEAREST YOU:

KENWOOD

ALINCO

DJ-65T 2M/440
 • 200 Mems Clonable
 • Dual Rx (V/V or U/U)
 • Built-in CTCSS
 • Auto-Decoder memories
 • Channel Scope
 • 4.5W w/optional battery
**CALL NOW FOR
 LOW INTRO PRICE!**

DX-70T HF Transceiver
100W 160-10 Mtrs • 10W 6M. Genov Rx
Full OSK 100 Meters • Compact Removable
Dual VFO 12VDC • 6.2 lbs

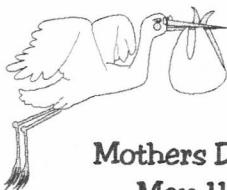
FT-1000MP HF Transceiver
Enhanced Digital Signal Processing
Dual RX
Collins SSB filter built-in
100W Power supply built-in

May 1997

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

A circular library stamp with "UNIVERSITY OF ILLINOIS" around the top edge and "URBANA SPRINGFIELD CHAMPAIGN" around the bottom edge. In the center, it says "LIBRARY" at the top, "APR 24" in the middle, and "1956" at the bottom.

FIRST CLASS MAIL



Mothers Day
May 11

Celebrating 60 years as a real
ham radio club Since 1937

Andy Korsak VE3FZK 97
504 Lakemead Way
Redwood City CA 94062-3919

PORTLAND, OR 97223
11705 NE 5th Street, Portland, Hwy
(800) 538-0555
604-6146
Eari, K70A, Mgr.
Toll-free 800# from Hwy 5 & 211
DENVER, CO 80211
8400 E. 11th Ave., #9
(303) 745-7373
(800) 444-9476
Dir. KOBDA, Mgr.

IN THE LOCATION!!

PHOENIX, AZ 85021
1535 W. Dunbar Street
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(800) 444-9476
Gary WBTSY, Mgr.
1 mi. east of I-17

- Digital automatic notch • Digital LPF and HPF
- OSK, Digital CW filter • Built-in AC supply
- Twin PBT • Dual watch

CALL NOW! For The Ultimate Radio!

A graphic element featuring the letters "USA" above the number "32", all contained within a stylized American flag design.