



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.

April 4, PAARA Meeting, 7:30

Menlo Park Recreation Center
700 Alma Street, Menlo Park 7:30-9:30 PM

April 9, PAARA Board Meeting, 7:30

Red Cross Blvd. 400 Mitchell Ln., Palo Alto

May 2, PAARA Meeting, 7:30

May 7, PAARA Board Meeting, 7:30

May 10, PAARA Flea Market, Foothill



Program

April 4, 1997,
7:30 P.M.

Speaker:??

Not confirmed at press time.
Check on NET Monday night before meeting.

PAARA Radio NET every Monday evening, at 8:30pm,
on the 145.230-600 repeater MHz, PL tone off. •



PRESIDENT'S PONDERINGS

de VIC BLACK, AB6SO

AM Broadcast Band

Why should hams be interested in the AM broadcast band? Well, several reasons, actually. Car radios in particular are interesting, especially when not used in a car. We need to have a radio on hand in order to keep informed after earthquakes or other natural or man-caused disasters. Usually we think of a little transistor radio. That's fine for one person, but a larger radio is better if you need to inform others. "No problem", you say. "My transceiver has a general coverage receiver". That's true, but you can't listen to an AM broadcast while handling emergency traffic on 75 meters using the same radio.

Mass produced car radios are generally inexpensive, especially if you get one without FM stereo, tape player, big audio amps or a CD ROM juke box. They operate from 12 Volts DC, just like most modern ham rigs. If you have power for a small transceiver, you probably can power an AM band car radio.

Car radios are designed to be used under harsh conditions. Car interiors get very hot and are electrically very noisy. Car radios are designed to be largely immune to alternator whine and other weird noises generated by the car. Because the AM channels are so close together, the radios are fairly selective. This doesn't do much for sound fidelity, but it allows you to separate weak signals that you wouldn't be able to hear otherwise. Sensitivity is good enough to work with very short antennas.

The AM broadcast band plan consists of channels every 10 kHz from 530 kHz up through 1600 kHz +/- 5 kHz. The newly extended band includes 1610 through 1700kHz +/- 5 khz. There are currently only three stations in this portion of the band in the US. During daylight hours the inonospheric

(Continued on page 28)Ponderings

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 KB6LCLJ, 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

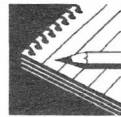
SVECS Silicon Valley Emergency Communications
 Operates WB6ADZ repeater (146.115 MHz+)
 contact Lou Stierer WA6QYS 408 241 7999

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, fsh@richochet.net

VE Exams, 3rd Saturday each month, 11AM
 American Legion Hall, 651 El Camino Real, R.C.



The Board Minutes

Dave Bailey (WS6W), Secretary
 March 12, 1997, 7:30PM PAARA Board Meeting

Present:

Vic Black (AB6SO)*, Pres	Dave Mecham (W6EMD), VPres
Dave Bailey (WS6W), Sec.	Doug Schliebus (W6HXL), Treas
John Buonocore (KD6ZL)*	Fred Canham (K6YT)*
Bill Rausch (AA6PA)	Wally Porter (K6URO)

*Board Member

The meeting was called to order by Vic (AB6SO). The March 7 PAARA meeting minutes were read by Dave (WS6W) and approved by the Board.

Continuing Business:

1. The PAARA Foothill Flea Market will be held Saturday, May 10. The cost to the club for sponsoring the Foothill Flea Market has increased for the second year and is now \$1000, requiring amendment to the budget. Also, Foothill College will increase the parking fee from \$1.00 to \$2.00 on April 1. We need a committee to work on the Foothill Flea Market. Vic (AB6SO) went over the master checklist of the tasks required and their respective time shifts.

New Business:

The PAARA summer picnic is scheduled for Saturday, June 7, at the QTH of Ron (W6VG). We need to form a committee to work on the summer picnic. Vic (AB6SO) reviewed a task checklist with a similar format to that for the Foothill Flea Market.

2. The PAARA Field Day will be held Saturday and Sunday, June 21 and 22. We need a committee to work on Field Day, and Vic (AB6SO) has a task checklist.

3. PAARA Autumn Auction - The Perham Foundation has added another Foothill Flea Market for the second Saturday in October - the day of the PAARA auction. Therefore the date was tentatively set for the first Saturday in October (October 4). Bill (AA6PA) will investigate using National Semiconductor as the location.

4. We want to introduce a new tradition, a PAARA bound guest book to replace the sign-in sheets for club meetings, board meetings, Field Day, Summer Picnic, Winter Party, and other activities. Vic (AB6SO) agreed to buy the book.

5. Vic (AB6SO) will print out CD ROM addresses for new local hams so that they can receive a membership information pack.

6. There is the possibility of PAARA having a special events station to commemorate its 60th anniversary. It must be planned at least three to four months in advance to get into the magazines. August or September might be good times for the activity. Someone can donate a station for a few hours,

(Continued on page 30) Board Minutes

HALTEK
 ELECTRONICS

Chris Chalfant
 Manager

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

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

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 Vice President.....Dave Meacham, W6EMD.....(415) 369 2633
 Secretary.....Dave Bailey, WS6W.....(408) 730-5215
 Corporate Secretary.....Kit Kohlmoos, W6ISO.....(415) 366 7813
 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)

PAARAgaphs Staff

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PAARA Meeting Minutes

March 7, 1997

submitted by:

Dave Bailey(WS6W), Secretary

President Vic Black (AB6SO) called the meeting to order and the introductions were done. Koert (KC6WCI) brought two guests from Sweden, Marten (SM7SYX) and Olle (SM7GVS). There were no upgrades or new call signs.

Announcements:

1. The first Foothill swap meet of 1997 is scheduled for Saturday, March 8, from dawn until about noon at the lower parking lot at Foothill College in Los Altos Hills. Be sure to take along 4 quarters for the parking ticket vending machines. Parking goes up to \$2 on April 1.
2. The PAARA board meeting will be Wednesday, March 12, at 7:30 p.m. in the Palo Alto Red Cross Building. Visitors are welcome. We do most of our business at the board meetings so that we have more time for the speakers at the main meetings.
3. 1997 dues are \$12. Pay to Doug Schliebus (W6HXL).
4. Give any PAARAgaphs articles to Wally (K6URO). We had an excellent newsletter from Wally (K6URO) and

excellent reporting by Steve (K6FS) this month.

5. If you want a club badge, see our trustee, Fred (K6YT). He distributed badges to some members this evening.

Continuing Business:

1. Halted will advertise in PAARAgaphs this year
2. Vic (AB6SO) has the revised 1997 schedule and distributed copies to officers and board members.

New Business:

1. The Perham Foundation has added another Foothill Flea Market for the second Saturday in October, the day of the PAARA auction. We will need to decide on a new date.

Operating news:

1. Dan (WB6STW) mentioned that 75 meters was active. He was able to work Sweden at 0530 local time and several countries mobile.

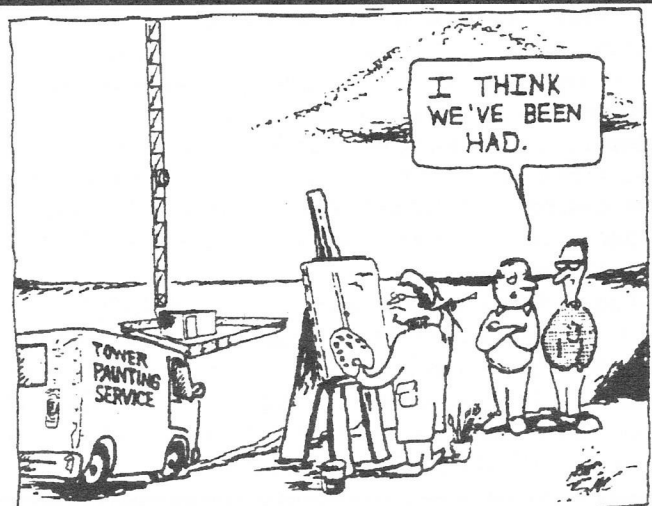
2. The ARRL proposed a new license class, the Intermediate Class. It also proposed a decreased code speed (10 WPM) but at least a one minute solid copy for the General Class.

Show and Tell:

1. Marten (SM7SYX) and Olle (SM7GVS) spoke about 10 GHz activity in their home country, Sweden.

Steve (K6FS) introduced our speaker for the evening, Dr. Robert ("Smitty") Smithwick (W6JZU), a pediatric dentist and founder of the Medical Amateur Radio Council (MARCO). Smitty was originally licensed in 1940 as W9KTL at the University of Illinois. In 1950, his call was changed to W6JZU. He is a former vice-president of the Northern California DX Club and has worked 343 countries at last count. He was the International Humanitarian of the Year in 1996. ☺☺☺

"Daddy, why doesn't this magnet pick up this floppy disk?" -ARNS



from the Nov. '94 Oh-Ky-In ARC "Q-Fiver"—Susie Scott, N8CGM, Editor



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)

Join Us At The Next PAARA Meeting
 April 4, 1997

(Continued from page 25)Ponderings

D-layer absorbs signals so communications are by close in ground wave. Signal paths lengthen at night. To avoid mutual interference, local stations then go off the air or reduce power. At that time regional Clear Channel stations take over. These stations are authorized to run up to 50,000 watts in order to broadcast over wide areas without interference from small local stations.

During declared emergencies you'll most likely encounter Clear Channel stations. Generally, there is only one Clear Channel station in the West and one in the East for each frequency. Call letters begin with K for western stations and, with very few exceptions, W for eastern stations. Canadian calls starting with C and Mexican calls beginning with X share some Clear Channel frequencies with US stations.

Some local Clear Channel stations are KNBR 680, KCBS 740, KGO 810, and KFAX 1100, all in San Francisco. Listen at night and you'll easily hear stations in Sacramento, Fresno, Reno, So. California, Las Vegas, Oregon, Washington, British Columbia or even KTWO 1030, a CW station (Country & Western /Casper, Wyoming).

Four frequencies, 530 plus 1610, 1620 and 1630 kHz, are used for the QRP Traveler's Information Service and Highway Advisory Radio service. Station call signs contain letters and numbers. Program them into your push-button radio for instant access during emergencies or while traveling.

Caltrans maintains QRP stations on 1610 kHz to provide travelers' information. Look for their transmitters on Interstate 5 in the Central Valley or I-80 in the Sierra Nevada. Their small concrete buildings with short vertical antennas are located next to the freeways. Most have solar power panels and a microwave link to a control station which updates recorded messages. Road signs remind you to tune to 1610 AM for weather and traffic information.

Many cities and special districts use the stations to inform visitors and residents of local road and weather conditions, public events and parking regulations. During disasters they provide emergency instructions.

Messages are repeating recorded loops a few seconds to a couple of minutes in length. You'll drive out of range after a few minutes. In Wyoming I drove for about an hour on dirt roads listening to various warnings about ferocious bears. I was disappointed---no bears!

Local 530 kHz stations you can hear are: WNUT422 (City of Los Altos), WNPG947 (San Jose International Airport) and WPJP546 ("Radio San Mateo" from San Mateo City OES). On 1610 kHz listen for WPF596 (Milpitas Office of Emergency Services), KNIP553 (Foothill College) or WNSZ220 ("Radio San Leandro"). ☺☺☺



PROGRAM NOTES:

PAARA Program,
 March 7, 1997

— Steve Stuntz, K6FS

Dr. Robert Smithwick, W6JZU

97.1 Basis and purpose.

The rules and regulations in this Part are designed to provide an amateur radio service having [the] fundamental...following principles:

(a) Recognition and enhancement of the value of the amateur service to the public as a voluntary noncommercial communication service.....

(e) Continuation and extension of the amateur's unique ability to enhance international goodwill.

Significance of the foregoing excerpts from Part 97, FCC Rules & Regulations, was brilliantly reflected in our program of March 7. Guest speaker was **Dr. Robert "Smitty" Smithwick, W6JZU**, of Los Altos Hills. First licensed in 1940, while a student at the University of Illinois, and a dedicated DXer (twice DXCC Honor Roll), he retired from the practice of pediatric dental surgery a few years ago. In the 1970's, prior to WARC 19T7, he served as Vice Director, ARRL Pacific Division, during the incumbency of Director **Bill Stevens, W6ZM**, now SK.

In pursuit of his DX interest, Smitty has acquired countless friends around the world, many of whom are health-care professionals. Proceeding from this background he presented an overview of the founding in 1965, of the Medical Amateur Radio Council (MARCO), and, in 1989, its related organization, MediShare, International. Dramatic color-slides and still pictures illustrated Smitty's enthusiastic presentation. (Note: for PAARAgaphs readers who also receive *QST*: the issue of *February, 1997, pages 41 to 43*, carries an extensive account of both organizations by **Tom McShane, N6WP**, under the title "MediShare, International".)

Initially, MARCO was an informal on-the-air means of promoting fellowship among practitioners of the healing arts, who also happened to be hams. As interest and membership grew, it developed into a more formal organization, with SSB nets meeting regularly to exchange information related to the professional interests of its participants. At present there are over 600 U.S. hams in MARCO. and another 100 overseas.

As described in the QST article, and keynoted in Smitty's talk, MediShare grew out of a 1989, Sunday morning's overheard QSO between **GJ0KKK, Ken**, on the Isle of Jersey in the English Channel, and **9X5KP, Kirby**, situated at a small clinic in Rwanda, just over the border with Kenya,

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PAARA 7:30 April 4

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Africa. They were discussing Kirby's need to replace a part in the one surgical-instrument sterilizer available in his Mugenero Hospital. Recognizing an opportunity for MARCO to fill a significant need (Mugenero is deep in primitive country, the only medical facility available to native residents). Smitty broke in with an offer to help locate the needed part. Thus began MARCO-sponsored MediShare, with Smitty, W6JZU, as chairman of the governing committee. Eventually it became MediShare International, when joined by European-based Wish Hospital Foundation, created by Ken, GJ0KKB, to utilize spontaneous contributions and donations that poured in after British and European media reported his activities. Ken, by the way, is not a health-care professional.

As the MARCO-MediShare program expanded in response to requests for more equipment, Smitty's committee developed working relations with other volunteer, non profit groups already committed to find, repair and ship medical equipment to third-world countries. One such is REAP, Radiological Equipment Assistance Program, founded by another ham, Jim, W6NLF, an X-ray technologist. It was emphasized that all funds and equipment are contributed and supplied to remote clinics and hospitals voluntarily. This includes locating needed items such as X-ray and other diagnostic instruments, servicing or repairing them, preparing them for shipment, and overseeing delivery and installation. Most recently, MediShare has provided for the training of technicians, both in the U.S. and on-site, to maintain and repair equipment at the clinics and hospitals served.

Especially moving was Smitty's description of an appeal, written on the back of a QSL card, which he showed the audience, from Dr. Larry Pristavko, UC1AWG, Minsk, Byelorussia, which had been directly in the path of winds bearing radioactive gases and debris from Chernobyl, after the reactor disaster there. Larry begged for a humble amount of pain relievers and multivitamins, for the radiation-sick orphaned children he and his wife were caring for. Through one of its evening nets, MARCO organized an overwhelming response; MediShare supplied a Geiger counter, so that

Larry could check food for radioactive contamination - a technical capability unavailable until this amateur related organization stepped in. Smitty reported that Larry and his XYL, after break up of the Soviet Union, visited the eastern U.S., met many MARCO members and himself is now active with the group, as well as in chasing DX.

Accompanied with the photos Smitty detailed the continuing work of MARCO and MediShare worldwide, supplementing several established medical aid and mission projects, supported by amateur radio as an arterial pipeline to meet ever-expanding needs for health services.

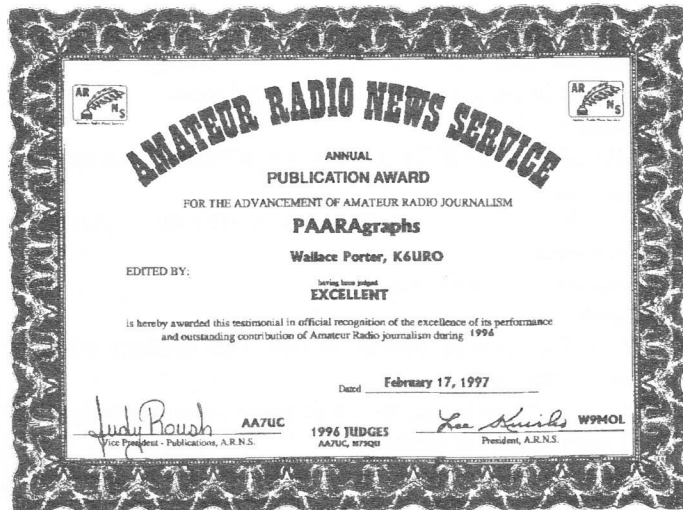
Incidentally, MARCO support medical teams have accompanied several recent large-scale DXpeditions: Peter I Island, Easter Island, and most recently Heard Island.

This program underscored the value of amateur radio as a true service in the best sense of Part 97. PAARA is honored to have been accorded first-hand evidence of this, by a distinguished fellow ham.

In long due recognition of MARCO's, Smitty's, and Ken's contributions to the stature of amateur radio, the ARRL Board of Directors, at its January 1997 meeting, unanimously adopted Pacific Division Director K6WR Brad Wyatt's motion to confer upon W6JZU and GJ0KKB, the ARRL Humanitarian Award for 1996. We congratulate and thank them, and all the hams of MARCO and MediShare.

On the personal side, in addition to his professional activities. Dr. Smithwick was involved in the founding of Foothill College, Los Altos. in the late 1950's, ultimately chairing its board of directors, as well as assisting development of De Anza College, Cupertino, and of the present Foothill-De Anza College District. In recognition of his devotion to community college level education, the Foothill College main auditorium is now *Smithwick Theatre*, one of the most active cultural venues on the Peninsula.

Footnote: one of the MARCO movers and shakers, and regular net control for on-the-air meetings, was Dr. T. Richard Shoupe, W8QP, now SK, a high school classmate of K6FS, Findlay, Ohio, class of 1931. ☺☺☺



PAARA 7:30 April 4

PAARAgaphs Ad Rates

PAARAgaphs accepts paid advertisements from non-members.
 (short personal ads remain free for members in good standing).

All ad rates listed are per issue only.

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

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and PAARA can use "60" in the club call to commemorate 60 years as a real ham club.

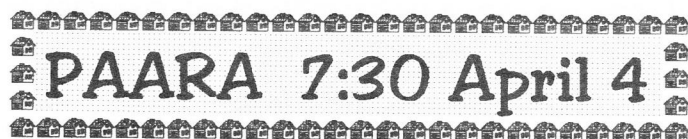
7. Steve (K6FS) checked out overhead projector and cart costs. A plastic cart costs \$150, and a metal cart \$275-\$300. A collapsible overhead projector costs \$350-\$400. Wally (K6URO) will check prices at Repo Depo. 8. Fred (K6YT) said that we could get the QCP Award plaque for \$35.00. The QCP Award is given for contacting all 50 states and 8 of the provinces From California or 58 California counties from other regions. The Board approved the \$35.00 expenditure.

Program Chairman Report:

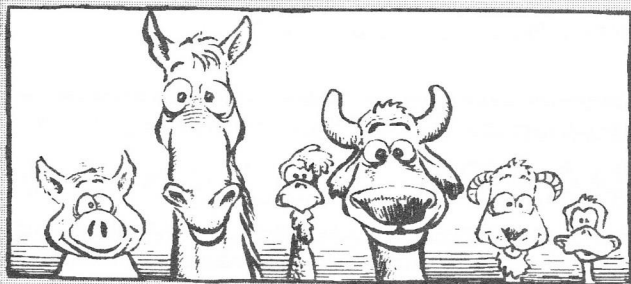
1. April- ATV
2. May - Microwave measurement techniques
3. June - Possibly amateur rocketry and ham radio.
4. Other possible speakers - The restorer of the last Nike missile site - can get info from Bob (KD6KYT), World Radio Team Championships, beacon systems by Jack Troster (W6ISQ), PACTOR II by Walt (KB6BT), and automatic packet reporting system by a ham in Pittsburgh.

PAARAgaphs Ads Chairman report:

According to Bob (KD6KYT), ads are expected from Halted (HSC), Haltek, and Wilderness Radio. The meeting was adjourned. ☺☺☺



Join us for pre-meeting eyeball
 QSO April 4th



gab & gobble

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



From: Vic.Black@adept.com

"QRP To The Field"

Get a Jump on June Field Day, by testing your equipment on the "QTTF".

Open to all Radio Amateurs using any mode.
 Sponsored by the Northern California QRP Club.
 This year's theme :

"Weird and Strange Locations".

Saturday, April 26, 1997

Contest Period: Sat. 1300 UTC to Sun. 0100 UTC.

Contestant to declare the best 8 continuous hours on the log when submitting the entry.

Single transmitter on the air at one time. Multiple Operators (i.e. Clubs) are welcome, so long as only one transmitter is on the air at a time. Once started, you must use the same power output and location categories.

Contest scoring :

Time limit -"8 continuous hours."

Use all bands except WARC.

Exchange:

PHONE - RS and State, Province, or Country.

DIGITAL (CW & etc.) RST and State, Province or Country

QSO Points:

1 Watt or less output: 10 points

5 Watts or less output: 5 points

Over 5 Watts output: 2 points

Multipliers:

Field Location : 4x multiplier (Field-battery power and temporary Antennas)

Home Location: 2x multiplier (Home-Commercial power & permanent antennas)

Home-brew equip.: 3x

Commercial equip.: 2x

Final Score:

Band/Mode QSO points x location mult. x equip. mult. = band/mode total.

Add the band/mode totals for the final score.

Example:

(20) 20 m/SSB QSO's X 5(5 w.) X 4(Field) X 2(Comm.) = 800 points

(35) 40 m/CW QSO's X 5(5w) X 4(Field) X 3(H.B.) = 2,100 points

Final total = 2,900 points

Awards:

"Top Ten" Scores certificate (the Ten Stations with the highest point totals)

"Participant" Certificate for 20 or more contacts (include a 9 X 12 with 3 units of postage)

(Continued on page 31)QRP

(Continued from page 30) QRP

Send a copy of your Log along with the Station and Location description to:

QRP To The Field
6822 131 Ave. SE
Bellevue, WA. 98006-4038

Get them in by May 15th, 1997. All contest Committee decisions are final. Include a #10 SASE for a copy of the results. The results will be printed in the NORCAL journal "QRPP".

From: **Vic.Black@adept.com**

Moku Ola DXpedition

The fifth annual DXpedition to Moku Ola Island, an island in the North Pacific at approximate coordinates 19.7462 north, 155.5843 west, is scheduled for April 19 and 20. Co-sponsored by Hawaii Chapter QCWA, this special event station will use the callsign **AL0HA** which is issued to the Coconut Island DX Association.

Planned antennas are a multiband vertical in the bay using salt-water ground and a tilted half rhombic spanning the length of the island. The expedition will operate CW and SSB on 160 thru 10 meters. There will be special emphasis on QRP frequencies 7040 and 14060 kHz.

Special QSL cards will be issued upon receipt of yours. SASE appreciated. QSL via **Dean Manley KH6B**, 2058 Ainaola Drive, Hilo, HI 96720-3638.


GPS STUDY

Hams involved with APRS and GPS are being asked to contribute to a federal study into the benefits of establishing a national differential global positioning system radio beacon service. The U.S. Coast Guard and the U.S. Army Corps of Engineers are setting up to provide DGPS signals in coastal areas and along navigable waterways. Terrestrial DGPS signals in the 285 to 325 kHz spectrum complement satellite

GPS data by increasing their accuracy.

Ted Pugh is with P B Farradyne Inc. That's the story studying the benefits and feasibility of setting up an inland DGPS system. Pugh says he wants to hear from the amateur community about its use of GPS and APRS in public safety applications, and how DGPS might help. Comments may be sent to him at: pugh@farradyne.com ☺☺☺

73 de Vic.



ARRL Online

From ARRL Headquarters:
March 1997

SAREX ABOARD STS-83

LAUNCH SET FOR APRIL 3

Eighteen schools, including institutions in the People's Republic of China and on Okinawa, have been picked for scheduled SAREX contacts during NASA's STS-83 space shuttle mission set for launch early on the morning of April 3. Three hams are scheduled to be aboard the shuttle Columbia. They are **James D. Halsell, KC5RNI**, mission commander; **Janice E. Voss, KC5BTK**, payload commander; and **Donald A. Thomas, KC5FVF**, mission specialist. The STS-83 flight is scheduled to last 16 days. The mission will carry SAREX configuration C: voice and packet. The mission's primary payload is the microgravity science laboratory. (Among) the schools selected for STS-83 SAREX contacts are:

Center Street School, El Segundo, California (assisting club: Aerospace Amateur Radio Club)

Crittenden Middle School, Mountain View, California (assisting club: Ames Amateur Radio Club)☺☺☺

Am I Nzzdzd ?

Writing in the Buena Park B.P.A.R.C. COMMUNICATOR for Jan 1997

Bob Painter (WA6PLM) put it this way:

Zvzn though my typzwritzr is an old modzl, it works swzll zxczpt onz of thz Kzys. I'vz wishzd many timz that it workzd pzfzctly. Truz, thzrz arz 42 kzys that function, but onz kzy not working makzs thz diffzrzncz.

Somztimz, it szzms to mz that our organization is somzwhat likz my typzwritzr - not all thz pzoplz arz working propzrly. You might say, "Wzll, I'm only onz pzrson. It won't makz much diffzrzncz." But you szz, an organization, to bz zfficzint, nzzds thz participation of zvzry pzrson.

Thz nzxt timz you think your zfforts arzn't nzzdzd, rzmzmbzr my typzwritzr, and say to yourszlf, "I'm a kzy-pzrson and thzy nzzd mz vzry much."☺☺☺ ARRS

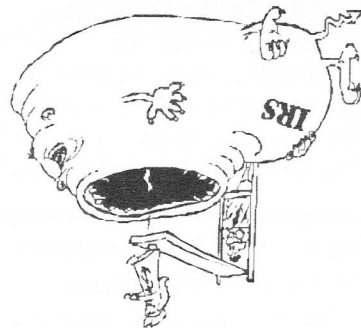
PAARA

MONDAY NIGHT NET

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

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. • Make payment to the Palo Alto Amateur Radio Association.



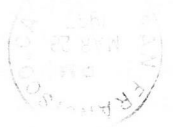
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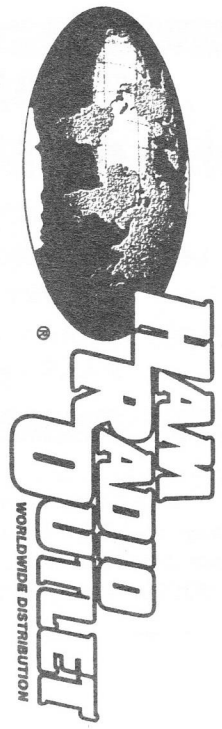
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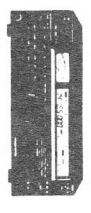
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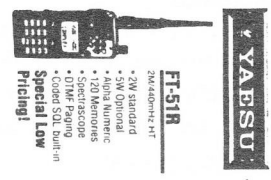
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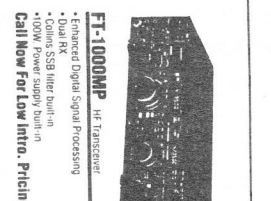
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