

PAARAGraphs

Since 1937

Monthly Newsletter for the Palo Alto Amateur Radio Association, Inc.



Calendar

September 8, 1995 PAARA Meeting

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

Sept. 20, 1995 PAARA Board Meeting

Red Cross Bld. 400 Mitchell Ln., Palo Alto, 7:30 P.M.

October 6, 1995 PAARA Meeting

October 7, 1995 PAARA Auction

October 18, 1995 PAARA Board Meeting

October 20, 21, & 23 1995 Pacificon '95

Concord, CA contact-Richard Schulze, AA6DL
(510) 932-6125 (hotline)

November 3, 1995 PAARA Meeting, 7:30

Nov. 15, 1995 PAARA Board Meeting

December 1, 1995 PAARA Meeting, 7:30

December No PAARA Board Meeting

December 6, 1995 PAARA Holiday Banquet

January 5, 1995 PAARA Meeting, 7:30



Program

October 6, 1995

**Speaker: Bill Rausch, AA6PA "3rd
Satellite Program"**

IT'S
ALL
YOURS!



DX
Dx, ie: foreign countries, still remain available during the day on 20 meters, fone and CW. 10 meters has been open, but as far as I know, only to South America. The bands are not dead, contrary to the belief that now is the bottom of the 11 year cycle. Good phone contacts are numerous, as are CW. 40 is also open during the nights and early morning. Today for example, 3W5FM in Vietnam is on 7005, 4F2IR on 7007, BV7FF on 7008, and 2 South African stations on 14 Mhz.

Japan is very easy to contact on 40 in the early morning hours or around 4 PM our time. Working Japan on fone is a little tricky, as you must work split frequencies. The modern transceivers do have this capability. Working on split frequencies is also necessary in order to contact the DXpeditions. Usually going up in frequency 5 to 10 KHz is the norm. October starts the DX contests, fone & CW. It is easy to work many new countries during the contests, and once you try a contest you will find it a lot of fun and a real challenge.

Ron, W6VG

PAARA
AUCTION

Will Be

October 7



Miscellaneous Dates

Flea Market at Foothill (6AM - 2PM)
September 9..... American Red Cross (PA Chapter)

PAARA Palo Alto Amateur Radio Association
meets 1st Friday 7:30 each month, Net 145.230 each Monday
8:30, 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.

NCDXC Northern California DX Club
Meets 2nd Friday each month, repeater for member info 147.360
each Thursday 8:00PM, contact John Troster W6ISQ 415-854-3939.

NorCalQRP Northern California QRP Club
Meets 1st Sunday each month, contact Jim Cates 3241 Eastwood Rd.,
Sacramento, CA 95821.

Perham Foundation, contact Sy Stein WA6ROM 408-734-4453

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

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.

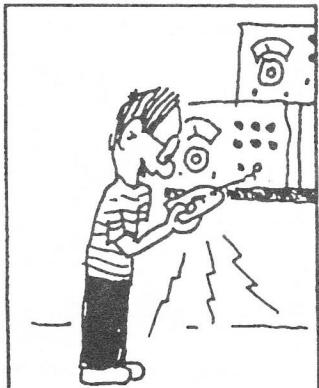
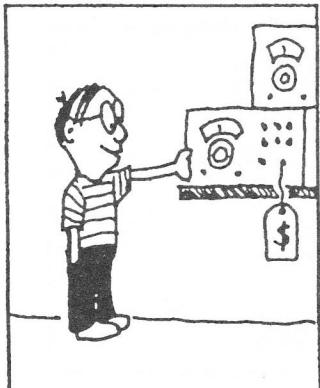
Disaster Services, Palo Alto Chapter, American Red Cross
Meets 3rd Wed. each month 7:30PM, HF, packet, BBS, ATV,
OSCAR Gateway, NASA satellite,
contact Ruth Claypool 415-688-0423.

VE Exams Ampex Cafeteria, 3rd Saturday each month, 11AM

"HAMCON '95" ARRL SOUTHWESTERN DIVISION
Convention, September 1-3,
Long Beach, CA, contact Nate Brightman (310) 427-5123

JOTA Jamboree On The Air, World wide Amatuer Radio and
Scouting event, 3rd weekend of October (Oct 21).

ELMER



TREASURER REPORT

Dave Bailey, WS6W

Revenues	APR 95	MAY 95	JUN 95	JUL 95	TOTAL 1995
Dues	354	72.00	18.00	42.00	666.00
Flea Market	0	100.00	0	129.38	1931.38
AMPEX Auction	0	0	0	0	0
Advertisements				650.00	650.00
Total	354	172.00	18.00	821.38	3247.38
Expenditures					
Stamps/Envelopes	0	0	64.00	0	96.00
DMV	0	0	0	0	43.00
State of CA	0	0	0	0	5.00
City of Menlo Park	0	0	0	0	150
Speaker's Dinner	12.00	13.00	0	7.03	42.03
Flea Market	379.47	0	0	0	1168.69
AMPEX Auction	0	0	0	0	0
Meeting Refresh	13.79				44.59
PAARAGraphs	179.78	16.99	64.03	324.53	793.46
Picnic	0	0	398.15	0	
Field Day			416.41	416.41	
Misc.	0	19.97	0	14.00	119.03
Total	585.04	49.96	943.19	761.97	2461.80

Checking \$ 4,626.57

Savings \$ 17,489.42

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, \$50full page or back cover

These fees may be reduced or waived in exchange for a valuable consideration that is given to the Association or its general membership. Such consideration must be in addition to any existing arrangements with the association.

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

Amateur tower meets utility power; ham killed!

Another Radio Amateur has died while erecting an antenna near a power line. The Dallas Morning News reported that on March 18, Ernest Rutledge, KC5CQR, of Keller, Texas, was electrocuted while helping a friend install an antenna. Don't take chances. Safety first!

from the May '95 Foundation for Amateur Radio "Auto-Call"—John Queen, KA0SEY, Editor

By Rich Regent, K9GDF



BAND GUIDE from July Dxer, courtesy Hal Godfrey, N6AN, Dxer editor and PAARA member.

This is a high frequency band guide detailing the various services throughout the HF band. Listed are such things as the SW broadcast, Amateur, Marine, Aircraft, Fixed, Mobile and CB services.

SHORTWAVE FREQUENCIES BAND GUIDE

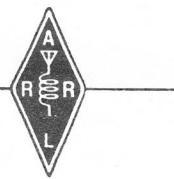
535 - 1705	LOCAL AM Broadcast	Standard North America AM
1705 - 1800	FIXED Fixed Service	Land/Mobile/Marine
1800 - 2000	HAM Amateur	160 Meters
2000 - 2107	MARINE Maritime Mobile	
2107 - 2170	FIXED Fixed Service	Land/Mobile/Marine
2170 - 2194	MOBILE Land Mobile Service	
2194 - 2300	FIXED Fixed Service	
2300 - 2495	SWBC Shortwave Broadcast	120 Meters
2495 - 2505	TIME Time Standard	
2505 - 2850	FIXED Fixed Service	Land/Mobile/Marine
2850 - 3155	AIR Aeronautical Mobile	Transoceanic Flights
3155 - 3200	FIXED Fixed Service	
3200 - 3400	SWBC Shortwave Broadcast	90 Meters
3400 - 3500	AIR Aeronautical Mobile	Transoceanic Flights
3500 - 4000	HAM Amateur	80/75 Meters
3500 - 3750	CW Amateur	80 Meter CW Extra
3525 - 3750	CW Amateur	80 Meter CW Advanced, General
3700 - 3750	CW Amateur	80 Meter CW Novice, Technician
3750 - 4000	PHONE Amateur	75 Meter PHONE Extra
3775 - 4000	PHONE Amateur	75 Meter PHONE Advanced
3850 - 4000	PHONE Amateur	75 Meter PHONE General
3900 - 4000	SWBC Shortwave Broadcast	75 Meters, Not in Region 2
4000 - 4000	TIME Time Standard	New WARC Allocation Region 3
4000 - 4063	FIXED Fixed Service	
4063 - 4438	MARINE Maritime Mobile	Ship / Shore
4438 - 4650	FIXED Fixed Service	
4650 - 4750	AIR Aeronautical Mobile	Transoceanic Flights
4750 - 5060	SWBC Shortwave Broadcast	60 Meters
5000 - 5000	TIME Time Standard	WWV
5005 - 5450	FIXED Fixed Service	
5450 - 5730	AIR Aeronautical Mobile	Transoceanic Flights
5730 - 5950	FIXED Fixed Service	
5950 - 6200	SWBC Shortwave Broadcast	49 Meters
6200 - 6525	MARINE Maritime Mobile	Ship / Shore
6525 - 6765	AIR Aeronautical Mobile	Transoceanic Flights
6765 - 7000	FIXED Fixed Service	
7000 - 7300	HAM Amateur	40 Meters
7000 - 7150	CW Amateur	40 Meter CW Extra
7025 - 7150	CW Amateur	40 Meter CW Advanced, General
7100 - 7150	CW Amateur	40 Meter CW Novice, Technician
7150 - 7300	PHONE Amateur	40 Meter PHONE Extra, Advanced
7225 - 7300	PHONE Amateur	40 Meter PHONE General
7100 - 7300	SWBC Shortwave Broadcast	41 Meters, Not in Region 2
7300 - 8195	FIXED Fixed Service	
7335 - 7335	TIME Time Standard	CHU Canada
8000 - 8000	TIME Time Standard	New WARC Allocation Region 3
8195 - 8815	MARINE Maritime Mobile	Ship / Shore
8815 - 9040	AIR Aeronautical Mobile	Transoceanic Flights
9040 - 9500	FIXED Fixed Service	
9500 - 9900	SWBC Shortwave Broadcast	31 Meters
9775 - 9995	FIXED Fixed Service	
10000 - 10000	TIME Time Standard	WWV
10005 - 10100	AIR Aeronautical Mobile	Transoceanic Flights
10100 - 10150	HAM Amateur	30 Meters CW Only
10100 - 10150	CW Amateur	30 Meters Extra, Advanced, General
10100 - 11175	FIXED Fixed Service	

11175 - 11400	AIR Aeronautical Mobile	Transoceanic Flights
11400 - 11650	FIXED Fixed Service	
11650 - 12050	SWBC Shortwave Broadcast	25 Meters
12050 - 12330	FIXED Fixed Service	
12330 - 13200	MARINE Maritime Mobile	Ship / Shore
13200 - 13360	AIR Aeronautical Mobile	Transoceanic Flights
13360 - 13600	FIXED Fixed Service	
13600 - 13800	SWBC Shortwave Broadcast	New WARC Allocation
13800 - 14000	FIXED Fixed Service	
14000 - 14350	HAM Amateur	20 Meters
14000 - 14150	CW Amateur	20 Meters Extra
14025 - 14150	CW Amateur	20 Meters Advanced, General
14150 - 14350	PHONE Amateur	20 Meters Extra
14175 - 14350	PHONE Amateur	20 Meters Advanced
14225 - 14350	PHONE Amateur	20 Meters General
14350 - 14995	FIXED Fixed Service	
15000 - 15000	TIME Time Standard	WWV
15010 - 15100	AIR Aeronautical Mobile	Transoceanic Flights
15100 - 15600	SWBC Shortwave Broadcast	19 Meters
15600 - 16460	FIXED Fixed Service	
16460 - 17360	MARINE Maritime Mobile	Ship / Shore
17360 - 17550	FIXED Fixed Service	
17550 - 17900	SWBC Shortwave Broadcast	16 Meters
17900 - 18030	AIR Aeronautical Mobile	Transoceanic Flights
18030 - 18780	FIXED Fixed Service	
18780 - 18900	MARINE Maritime Mobile	Ship / Shore
18900 - 19680	FIXED Fixed Service	
19680 - 19800	MARINE Maritime Mobile	Ship / Shore
19800 - 21000	FIXED Fixed Service	
21000 - 21450	HAM Amateur	15 Meters
21000 - 21200	CW Amateur	15 Meters Extra
21025 - 21200	CW Amateur	15 Meters Advanced, General
21100 - 21200	CW Amateur	15 Meters Novice, Technician
21200 - 21450	PHONE Amateur	15 Meters Extra
21225 - 21450	PHONE Amateur	15 Meters Advanced
21300 - 21450	PHONE Amateur	15 Meters General
21450 - 21850	SWBC Shortwave Broadcast	13 Meters
21850 - 22000	AIR Aeronautical Mobile	
22000 - 22720	MARINE Maritime Mobile	Ship / Shore
22720 - 23200	FIXED Fixed Service	
23200 - 23350	AIR Aeronautical Mobile	
23350 - 24990	FIXED Fixed Service	
24890 - 24990	HAM Amateur	12 Meters Shared with above Fixed Sve.
24890 - 24930	CW Amateur	12 Meter Extra, Advanced, General
24930 - 24990	PHONE Amateur	12 Meter Extra, Advanced, General
25000 - 25000	TIME Time Standard	
25010 - 25330	INDUST Petroleum Industry	
25330 - 25600	GOVERN Government Freq.	
25600 - 26100	SWBC Shortwave Broadcast	11 Meters
26100 - 26480	MOBILE Land Mobile Service	
26480 - 26950	GOVERN Government	
26950 - 26960	FIXED International Fixed Sve	
26960 - 27410	CB Citizen's Band	Channels start at 26965 by 10
27410 - 27540	MOBILE Land Mobile Service	
27540 - 28000	GOVERN Government	
28000 - 29700	HAM Amateur	10 Meters
28000 - 28300	CW Amateur	10 Meter Extra, Advanced, Genral
28100 - 28200	CW Amateur	10 Meter Novice, Technician
28300 - 28500	PHONE Amateur	10 Meter Novice, Technician
28300 - 29700	PHONE Amateur	10 Meter Extra, Advanced, General
29700 - 29800	INDUST Forestry Service	
29800 - 29890	FIXED Fixed Servic	
29890 - 29910	GOVERN Government	
29910 - 30000	FIXED Fixed Service	

Hal, N6AN

PAARA Field Day results: Courtesy Gerry Tucker, WA6LNV

do not write above this line

**Field Day**1. Field Day Call Used W6OTX 2. Club or group name Palo Alto Amateur Radio Assn.3. Field Day location End of Bay Road - East Palo Alto, CA4. Check if you began set-up prior to 1800 UTC Saturday. 5. Number of people participating in this operation. 41 6. Number of transmitters in simultaneous operation. 27. ARRL/Canadian Section SCV

11.

CW		PHONE	
QSOs	Power Output	QSOs	Power Output
160		160	
80	110 90	80	147 90
40	108 90	40	100 90
20	393 90	20	499 90
15	45 90	15	5 90
10		10	
6		6	
2		2	5 5
Other		Other	4 40
Other		Other	38 40

Nat.
Power
SRT.
VHF

9. Power source

- Generator Battery
 Commercial mains Other

10. Call sign of Novice/Technician station KC6SDE
(class 2A and above)12. Total CW QSOs 682 × 2 = 1364Total phone QSOs 862 × 1 = 862Total QSO points 2226

656	CW QSOs	798	PHONE QSOs
26	Novice CW QSOs	64	Novice PHONE QSOs
682	Total CW QSOs	862	Total PHONE QSOs

13. Total QSO points 2226 × Power Multiplier (5 W or less, ×5; 150 W or less, ×2; over 150 W, ×1) 2
equals Claimed Score (less bonus points) 4452

14. Bonus points

Attach proof required for all bonus points claimed. All bonus points will be added at ARRL HQ.

- 100% Emergency power Message to SM
 Media Publicity W1AW Field Day message
 Location in Public Place Messages handled (no.) _____
 Information Booth Satellite
 Natural Power
 Packet Radio
 VHF/UHF
 Other _____

15. This certifies that the station whose call appears above was operated in accordance with the current Field Day rules and that, to the best of my knowledge, the points and scores set forth in the above summary are correct and true. This station was operated in accordance with FCC rules and regulations. I agree to be bound by any decision of the ARRL Awards Committee.

Date 13 July 95 Signed Gerry H. Tucker Call WA6LNV signature/call of club president
Field Day Chairman

16. Full mailing address (please print):

Name G H TuckerAddress 1112 Ramona St.Palo Alto, CA 94301

Hamming it up—with a serious goal

Amateur radio operators have a field day and prepare for emergencies

by Janice Kim

Sugar, sugar. This is whiskey . . . 2 Alpha, Santa Clara Valley," the amateur radio operator announced into his handie-talkie.

Dialogue like that could be heard for 24 hours running at the Amateur Radio Field Day Contest one day late last month. Radio operators or "hams" in the Palo Alto area were among those all over North America taking part in the event on June 24. The goal: to make the greatest number of communication contacts in the nation.

Organized by the American Radio Relay League, the local site for the contest was the Palo Alto Boat Works in East Palo Alto. Participants set up transmission stations near the water, a propitious open area to maximize the strength of the radio signals. A couple of tents, a trailer and several transmitter towers covered the dirt ground.

The local Boy Scouts, working on their radio merit badges, operated a novice station tent with a few frequencies. Palo Alto Amateur Radio Association members licensed by the Federal Communications Commission managed the satellite and Morse code stations.

As part of the event, radio operators send out a call on the shortwave band either through a "handie-talkie" transmitter by voice or by Morse code, and then wait for a response.

"It's kind of like fishing," explained Vic Black, secretary of the Palo Alto club. "You don't know what you're going to get."

Upon receiving a contact, they exchange the number of transmitters operating at one time and the name of their district. Another method of operation involves satellite stations, which relay the signal to other radio satellites circling the Earth.

Although the object of the national event is to perform higher than other divisions and provide an enjoyable social setting, amateur radio also serves a serious and significant purpose.

"We're exercising our ability to react in an emergency situation," said Black. "In the event of an earthquake, California's (standard electricity) lines are shut down, and police cars in Los Angeles cannot communicate with police here because they operate on a different frequency. Ham radio makes that possible."

The amateur radio emergency service groups most recently assisted local authorities in providing communications during the Oklahoma bombing, when communication circuits were overloaded.

Aside from emergency aid, amateur radio improves international goodwill by providing a common means of communication and a shared interest. There are about 450,000 licensed hams in the United States, with many more around the world, particularly in Japan. The activity also encourages experimentation with electronics.

And it's not only for men. "It's a fairly male-dominated hobby," said Lily Anne Hillis, first female president of the club. "I hope to have paved the way for more females by showing females they actually can do this."

Hillis took up ham radio 10 years ago with an interest in disaster preparedness and emergency situations.

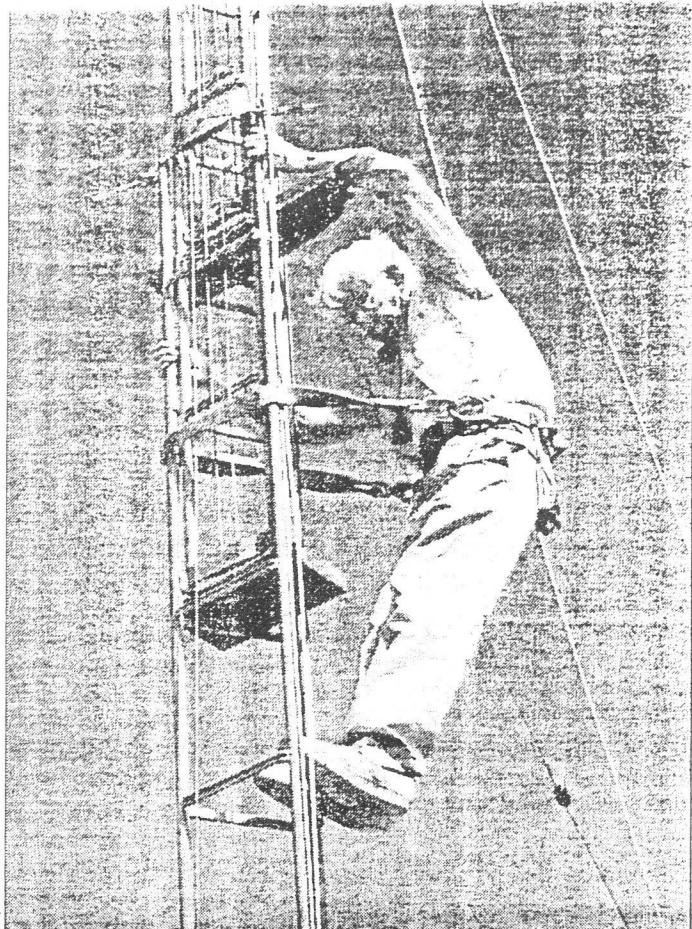
Some hams participate as a challenge to determine how many countries or how great a distance they can achieve. Others simply consider it a hobby. "It's what we call 'rag chew,'" said Black. "Some use it as a party line."

At the close of the 24-hour period, the Santa Clara Valley division had completed about 1,000 contacts by voice, 1,000 by Morse code, a couple hundred through the Boy Scout novices and four by satellite. Contacts were reached in Guatemala, Italy and Germany, in addition to those in the United States and Canada.

The Palo Alto club's ranking in the nation will not be determined until this fall after results have been compiled.

The Stanford University Amateur Radio Club also participated in the competition, with equipment set up in the hills behind the campus. The club contacted about 1,200 other stations, with more than half completed through Morse Code. Some were made through voice and digital communications, and a few through a solar-charged battery to power the radios.

The Palo Alto club holds regular meetings the first Friday of each month at 7:30 p.m. at the Menlo Park Recreation Center, 700 Alma St. Those interested in learning more about amateur radio are invited to attend. ■



Lily Anne Hillis
Fred Canham of Los Altos, a past president of the Palo Alto Amateur Radio Association, is 30 feet up in the air as he puts up a radio tower for the club's annual field day last year.

Palo Alto Weekly • Wednesday, July 12, 1995

Let me guess, Wally. You want a couple of days off now that you've put the finishing touches on this issue of the "PAARAGraphs."



from the March '95 Mountain ARC (Teller County, Colo.) "MARC Communicator"—George Hinds, N8CIX, Editor

The American Radio Relay League, Inc.

HEADQUARTERS, NEWINGTON, CONNECTICUT, U. S. A.

Charter of Affiliation AFFILIATED 50 YEARS

Whereas it is the desire of the American Radio Relay League to establish bonds of affiliation with non-commercial amateur radio organizations of kindred aims and purposes to make possible unity of action in matters affecting the welfare of Amateur Radio and lend mutual strength; and **Whereas**

Palo Alto Amateur Radio Association

has declared its sympathy with and allegiance to the aims and policies of the League in its efforts to strengthen and advance Amateur Radio Communication and Experimentation, and has expressed its willingness and desire to coöperate therein:

Now Therefore, under the policies of its Board of Directors, the American Radio Relay League as of this date hereby declares the said organization to be an affiliated body, and issues this charter in token thereof.

July 10, 1937
Affiliated

Perry Williams W4ED
Secretary

Larry E. Price
President

PAARA HISTORY

We are attempting to recover PAARA history. The above is an example of early PAARA. **Gerry Tucker, WA6LNV** was club president in 1987 and has the original certificate.

Gerry Wagstaffe, W6NIR, has loaned me some copies of PAARAGraphs back to 1973. Do You have older copies I could have or borrow?

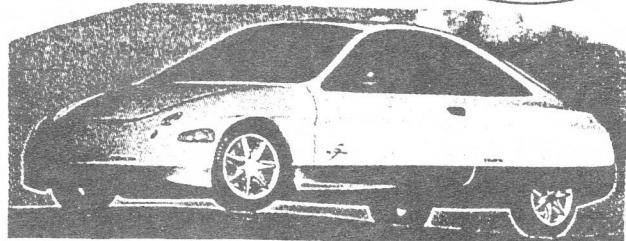
Does anyone have documents to show when the club was founded, maybe before ARRL affiliation?

Wally K6EURO

PAARA AUCTION
October 7
Ampex Cafeteria

23RD ANNUAL ELECTRIC CAR RALLY

51,547 Roadworthy
Licensed in California
Feb 28, 1995



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Parking Lot Between Lockheed Blg 560 and 561

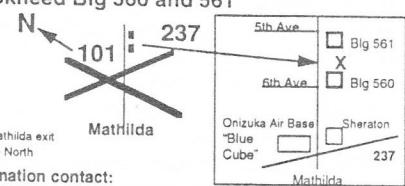
Going 237 West:
Take Mathilda ext
Right turn on to
Mathilda Ave North

Going 101 North:
Take Mathilda ext
Right turn on to
Mathilda Ave North

Going 237 East:
Take Mathilda ext
Left turn on to
Mathilda Ave North

Going 101 South:
Take 237 East exit, then Mathilda ext
Left turn on to Mathilda Ave North

For more information contact:
Lee Hemstreet (415) 493-5892 or Chuck Olson (408) 296-6944





Here & There

GET SOME SMARTS

If you were ever searching for a way to get started building equipment utilizing embedded controllers (those little computers with small brains used in everything from clocks to cars), then perhaps Motorola Semiconductor has a complete solution of interest to you. Motorola has packaged in one kit a truly complete microcontroller development system. The kit includes: a complete set of manuals for the beginner and extending to the expert, all the software necessary for a development system, i.e. assembler, simulator, etc., a hardware in-circuit emulator that also performs as the microcontroller programmer. The system connects to the parallel port of a generic 286 or better PC, permitting you to emulate the operation of the microcontroller under PC control during development, bread boarding, and debugging. Finally, the kit contains an EPROM re-programmable 8-bit microcontroller chip for use in the final system.

Purchased separately, the cost of the individual system components could easily exceed \$700. Motorola offers the whole set-up in one box for \$100. The system is available from any the Motorola distributor like Hamilton, Wyle, Future, etc. I bought mine from Wyle by telephone, charging it to my credit card and having it shipped to my home. What could be easier. The kit is called the "68HC705J1A Development Kit". Wyle's phone number is 408-725-2500.

So, if you have been considering adding some "smarts" to your next project, this is possibly the best opportunity I've seen to get started. Maybe a group of three or four from the club that would like to tackle a beginning project together. I'd be happy to help.

Dick Kors, KM6EP

kors@netcom.com

e-mail?

Interest has been expressed in adding e-mail addresses to the PAARA data bank, to be printed with the next club roster. You may send your e-mail address to me and I'll pass them on to Bill, KA6LZI.

Wally, K6URO, wmposter@aol.com

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

President.....	To Be Filled
VP.....	To Be Filled
Secretary.....	Vic Black, Jr., AB6SO(415) 366-0636
Treasurer.....	Dave Bailey, WS6W(408) 730-5215
Program Director.....	Vic Black, Jr., AB6SO(415) 366-0636
Trustee/Property/Badges..	Fred Canham, K6YT(415) 948-8238
ARES Officer.....	Lily Anne Hillis, N6PGM(415) 325-5484
Club Historian.....	Steve Stuntz, K6FS(415) 322-4952
Raffle Chairperson.....	Sy Stein, WA6ROM. (415) 967-0362

Board of Directors

Lily Anne Hillis,	N6PGM	(415) 325 5484
Koert Koelman,	KC6WC1	(415) 593 5613
Kit Kohlmoos,	W6ISO	(415) 366 7813
Dave Meacham,	W6EMD	(415) 369 2633
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Rich Stiebel,	W6APZ	(415) 494 0128
Bill Zaner,	WB6IYS	(415) 856 2089

PAARAGraphs Staff

Editor.....	Wally Porter, K6URO.....(415) 494-7038
Database.....	Bill McElhinney, KA6LZI.....(415) 325-9808
e-mail Address: wmposter@aol.com	

Submit material for PAARAGraphs by the 15th

PAARA Membership:

Dues paid.....139

Dues unpaid to date.....69

If you are not receiving PAARAGraphs check with Dave Bailey, WS6W, PAARA Treasurer. He will accept dues and notify Bill McElhinney, KA6LZI, to place you in the data base for mailing.

PAARA AUCTION October 7 Ampex Cafeteria

⇒ San Mateo OES (under Rick Reed, N6SHY) is now on the WWW:

<http://www.co.sanmateo.ca.us/oeshome.htm>

Kenneth S. Dueker, KB6BPM/1
kdueker@hulaw1.harvard.edu

¹PAARA-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 repeater Mhz, PL tone off. Membership in PAARA is \$6.00 per calendar year which includes a subscription to PAARAGraphs. Make payment to the Palo Alto Amateur Radio Association.

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

> 12 STORE BUYING POWER! <



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