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vol. 23

MAY 4 1979

# PAARA

## GRAPHS



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palo alto  
AMATEUR  
RADIO ASSN.

MENLO PARK C.D. RADIO CLUB, K6YQT

VOLUME 23 NUMBER 5

MAY 1979

PAARAGraphs is the official organ of

The Palo Alto Amateur Radio Association and the Menlo Park Civil Defense Radio Club

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Membership in PAARA is \$4.00 per calander year (payable in January) which membership includes a subscription to PAARAGraphs. Interested others may subscribe to PAARAGraphs for \$1.00. Make payment to:

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R E G U L A R M E E T I N G

FRIDAY

MAY 4, 1979

7:30 p.m.

ELECTRONIC LANGUAGE TRANSLATORS

by

Paul Heckel

A discussion of the history, current state of the art, and the future of electronic language translators with a demonstration of a programmable four-language hand held gem.

Menlo Park Recreation Center, Room 15-17

Civic Center, Menlo Park.

FUTURE MEETINGS: June 1, July 6, August 3, Sept. 7, Oct. 5.

PAST CORNER: Tom Ellison, an engineer for U. A. L., talked about the communication and navigation gear going into the new Boeing 767 being built for U.A.L. The aircraft is expected to be in operation in 1981 or 1982. The gear is all new—not military adaptations, and a first for commercial aircraft.

Slides were shown as were a number of "black boxes" which indeed they were, to show the extent of miniaturization achieved. Comparisons of weight and power consumption of old and new were made. Antenna placement was discussed. For those not there, how about the upper part of the leading edge of the fin for an antenna?

A beautiful plane with redundant communications and navigational equipment fed to the flight deck by a multiplex system.

The meeting started about 7:30 with a report on the trailer (mobile home), a discussion of Field Day by Bob, K6SEM, and later by Fred, K6YT. Terry, N6RY, relayed a request by the Western Wheelers for communication support for their June 3rd endurathon, a 100 mile bike ride from Palo Alto to Santa Cruz and back, via back roads. Jim, K7UDG, allowed that the Explorers would like to operate one of the stations.

Don, W6CFZ, showed his converted CB rig on which he worked a JA on 10 meters on his way to the meeting. Not bad.

Coffee and cookies followed the business meeting. Many a good chinfest whilst munching cookies and sipping coffee.

After Tom's talk a raffle was held with lots of things anyone would like to have gone home with. The meeting ended at 10:15.

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CUT AND PASTE PUBLIC RELATIONS CORNER: Please change, or add to, your April Roster. George's entry was wrong, Dan has moved and Andy was omitted. Carl, Nolan, Bob, Dave and Tom are new members.

George Ice	K6CMT	855 Sommerset Ct.,	San Carlos, CA	94070	593 0661
Dan Curry	WB6STW	1226 Castlemont Av.,	San Jose, CA	95128	246 4354
Andy Valencia	WB6RRU	881 Pecan Ct.	Sunnyvale, CA	94087	
Carl Nicholson, Jr.	KA6EKG	1167 Walnut	San Carlos, CA	94087	592 5287
Nolan Katz	KB6LT	1030 Silverhill Rd.	Redwood City, CA	94061	366 7286
Bob Hill	W1ARR	810 Coleman Av. #3	Menlo Park, CA	94025	327 3073
Dave Daniel		240 University Av.	Menlo Park, CA	94025	325 3347
Tom Burke	WA6KVT	1101 Fifth Av.	Redwood City, CA	94063	368 7748

Our apologies to George and Andy and welcome to the new members. To the new members: Those of us who don't know you and see you only once a month may need more than one introduction—as embarrassing as that is to us. If you enjoy the Club activities you will get known more quickly. There are a lot of us and we appreciate you won't know everyone at the next meeting. If we introduce ourselves again, and again, it is for one of two reasons. Either we don't remember who you are or we don't know why you should have remembered who we are.

BOARD CORNER: The Board of Directors met Wednesday, April 11, in the Club Mobile home. Erv, W6YHM, was absent but Fred, K6YT, was present.

The state of the Mobile Home was discussed by Shannon, K6TNY, and Bob, K6SEM, suggested he would like to have it in operating condition for Field Day.

Swede, KA6BEU, was originally made advertising manager for PAARGraphs without his knowledge, but he accepted the job graciously. Swede also took on as a back-up representative to an important intra-club organization.

Fred, K6YT, made a report of Field Day preparations, made a request that the Auction and Flea Market dates be decided and advertising for that important Club function be organized. He also relayed a request from Jim, K7UDG, that antenna equipment be loaned to the Explorers for their up-coming Scout-O-Rama. The Board made appropriate decisions.

For those who wish to know more about the goings on at Board Meetings the next will be on May 9, at 7:30 p.m. at the trailer.

Beer and skittles down the street for some.

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HAMFEST CORNER: "Nearby and always one of the best in the country" says Bushful Fresno Ham, which has more nostalgia than Bravo Foxtrot Hotel.

### 37TH ANNUAL FRESNO HAMFEST

MAY 11 — MAY 13, 1979

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Clinton & Hwy 99

An ARRL Hamfest

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TAPE AND FILMS

+ + +

EXPLORER CORNER: Once again, here's Post 599. Whatever happened to the hordes of new members we were expecting? Come on you guys, we aren't that bad. If you or someone you know would be interested in joining, call Jim, K7UDG, or Liza, WA7WXA, st 325-8309 (they're our coordinators.)

We haven't done a whole lot of exciting stuff this month. Face it we're broke. One meeting we sat around scheming up ideas to make money, some of them even legal. We desperately need anything that might be useful for our clubhouse. As Liza put it, the word is "beg." Seriously though, we would like to thank all of you who supported us by buying raffle tickets. Who knows, maybe someone out there is the lucky winner.

If Fridays are busy for you and you're not too sure about us, why don't you drop by the Scout-O-Rama May 5th where we will have a booth set up with ham gear. It will all take place on Stanford campus, and you can get some idea of what you might be getting into. We plan to camp out the night before and work some neat IX, so if you're up at 3 AM you may hear us burning up the air waves. Also planned is a 3 day trip to the Fresno Hamfest May 11, 12, and 13.

If anyone wants to drop by on one of our meetings, they are held the second and fourth Fridays of every month at 7:30. Code classes are held every Friday. We are located behind the CCD office of St. Thomas Aquinas Catholic Church on the corner of Homer and Waverly in Palo Alto. Ours is the small red shack (literally a shack) near the chicken wire fence. Tie not required.

de Sandy Large.

(ed. note: Mohamid Kerdigari  
300 Curtinor, Apt. G  
Palo Alto

recently joined the Explorers. More complete information on him next month. We hope to meet him at the May 4 meeting).

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BOOK REVIEW COLUMN: From "The Big Ear" by John Klaus.

Radio Astronomy has completely revolutionized the knowledge of our galaxy and the deep space beyond. These astronomers have opened a new window on the sky. Their first maps showed only the strongest radio sources, comparable to a geographic map with only cities of one million population. More sensitive telescopes which followed probed deeper and located larger numbers of weaker sources analogous to cities of 100,000 population. With bigger and even more sensitive telescopes resolution improved like going successively to cities of 10,000, towns of 1,000 and even villages of 100.

Radio Astronomy is a service of greatest importance to the technological advancement and service to our nation. Much vital information concerning the earth and its surrounding environment has been gained and even more important discoveries are in the process. Some of the practical benefits which have come from radio astronomy are the development of high-gain low-noise antennas and ultra-sensitive receivers which are essential for space probe communications and satellite TV relays.

The contrast between early radio and optical astronomy was great. It was further enhanced by the revelation that there was no detectable radio emission from any star, even the brightest ones. If any object was identified with a radio source it invariably turned out to be a galaxy or a nebula or the remnant of an exploding star but never an ordinary star. The radio sky is no carbon copy of the visible

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sky. It is a new and different firmament, one which the edge of the universe stands in full view and bears tell-tale marks of a violent past.

Radio sources emit such enormous amounts of energy as to boggle the mind. They blare vehemently forth that the whole cosmos is bursting with energy though man on earth is gripped in an energy crisis. The energy emitted by one radio source in one millionth of a second could fulfill all of man's energy needs for a million years at one million times the present level. Man's energy requirements are nothing compared to the stupendous flow from any one of the cosmic sources.

de Hal, W6DEF.

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COAX CORNER: At the April meeting, Ken, WA6NYB volunteered to catalog acceptable types of RG-8 coax by manufacturer by their production number and to submit specifications for their product. Initial quoted prices will be reviewed by those who know, and the best possible buy will be recommended. Cost per 100 feet is expected to be somewhat less than free market value if it is bought in multiples of 1000 feet. The Club needs some—we all could use some. Get out your tape and measure your needs and report to Ken or Bob, K6SEM, so an idea of how much to order will be available. There is no target date yet but sometime around the first of June seems reasonable—and it will fit my needs.

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FIELD DAY CORNER: Fred, K6YT, our perennial FD Chief, has his heart set on the Club doing well in the four transmitter class this year, after an outstanding success by the Club last year in the three transmitter class.

The date: June 23 and 24. The place: the Schoof property at the Bay end of Bay Road. Several meetings will take place for organizing Team Captains and their crews to assemble equipment, and plan antenna locations, and a band planning session or two. Fred vows he won't let the Band Plan get away from him this year.

All weekends in June will be busy. Site preparation on the 2nd and 3rd, 9th and 10th and 16th and 17th, and final cleanup on the 30th. Many hands make light the work. The more there are, the more fun it is. Last year PAARAGraphs estimated more than 50 members had a hand in that successful effort.

More about FD monthly.

+ + +

FLEA MARKET CORNER: Before FD activities are resolved, planning for PAARA Auction and Flea Market are underway.

Saturday, October 6 is the date. The place is the AMPEX Cafeteria in Redwood City. Keep the date in mind.

MOBILE HOME CORNER: Shannon, K6TNY, gave a report to the Board of Directors on the physical condition of the trailer and plans to get all the pieces together to try them on for size before the May meeting. Bob, K6SEM, got into the cosmetics of the trailer's exterior and a broad-brush plan involved including wire brushing, silly putty and a marine grade epoxy paint (grey), of which Don, W6CFZ, seems to have a can or two.

The job has been estimated to take from three to four hours (optimist) to three to four weeks (pessimist). Bob, K6SEM, would like it to be finished in time to use it during Field Day.

Hollars for help will be forthcoming.

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FLEA MARKET CORNER: PAARAGraphs lists Flea Market activities in the hope that the sponsoring Clubs will list our Auction and Flea Market in a timely fashion. See Gerry, W6NIR, for missing details Chronologically, they follow:

April 22, WR6ADM, El Cerrito—talk in.  
May 6, Sacramento Valley Ham Swap,  
3081 Sunrise Blvd.  
Rancho Cordova, CA  
May 12, WR6ADO, San Mateo  
June 2, EMARC, Foothill College  
June 17, SCCARA, Quemont parking lot.  
Sept. 9, FARS, Foothill College

AND

Oct. 6, PAARA Auction/Flea Market, AMPEX Cafeteria, Redwood City.

More and update data monthly.

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BUILDERS CORNER: Bill, W6DVB, says his tape driven keyer, pg. 6, April PAARAGraphs, works the way it was shown but a 100pf capacitor from collector to ground makes it a little better. Anyone try it?

Construction articles are needed for PAARAGraphs. They don't have to be complicated (or even work) so long as they are provocative.  
cont'd pg. 6, col. 2.

WARNING WARNING WARNING WARNING WARNING  
Some new model cars have reverse polarity in the cigarette lighter because it is not important for that function. Non-diode protected equipment can be put out of business in a hurry if the polarity is wrong. Check it out before you plug in your rig—and certainly before you flip the switch.

WARNING WARNING WARNING WARNING WARNING  
+ + +

ADVERTISERS' CORNER: Swede, KA6BEU, has taken the bit in his teeth and will expose retailers to PAARAGraphs with an eye to having them advertise in the paper. Each of us can help by identifying ourselves as a PAARAGraphs reader. Visit our advertisers and those listed on page 7 and 8 of the April Roster. It will make Swede's job easier.

If you can lead Swede to a prospect, do it. But remember, gas is getting expensive; better, get the ad and the copy to Swede or Bob.

Advertising copy should reach your editor early in the month so the paper can be built around it. Rates: \$13.00 per page per month. Twelve months for the price of 11. Parts of a page, parts of \$13.00 except a minimum of \$2.50. Advertiser supplied insert up to 8 1/2" x 14", one side or both for \$5.00 per issue.

Boy Howdy! as the Texans among us say. Think of all that can be put on both sides of an 8 1/2" x 14" sheet. And if it is reduced by a factor of .75 the sheet enlarges to 11" x 17". Boy Howdy, yip yip yip!

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NOVICE CORNER: Carl, KA6EKG, has lost the initial fear of keying his 6L6 final and has begun to operate like an old pro. Swede, KA6BEU, plans to "loan" him Dave's, WB6JFH, HW-100 to give him more versatility and power.

Meanwhile, Swede is nearing the WAS project he started last autumn. He almost has it on 15 and isn't far behind on 40.

Doug, KA5DQR, is locked into 8 to 10 p.m. operating time because of work and ship traffic time. Times vary from 0200 to 1800Z depending on what time zone he is in. He works mostly around 21195kHz and will pass through Gibraltar at 1400Z April 28.

GENERAL CORNER: It takes a new member to add life to this section. Nolan, KB6LT.

ADVANCED CORNER: No takers again. Watsamata. No code exam...just a little more theory.

EXTRA CORNER: Jock, N6YV, has been quietly working Europe on 20 meters with 5 watts.

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NEW

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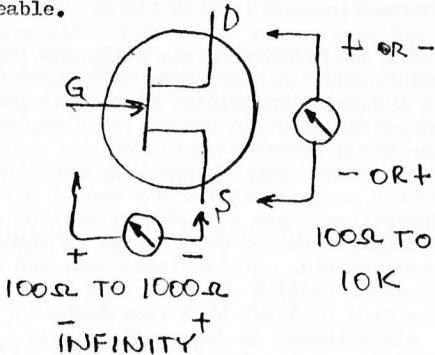
QSL CARD CORNER: The penny Post Card is back—without prepaid postage. The response to the offer of cheap QSL cards was so great last month that the demand is probably over. In case you are still interested, if you want cards, they come for the card stock and a cup and a half of paint thinner—and you work the press. If you want your editor to do the chasing around for the materials and do the grut work, a charge of \$1.00 per 100 will have to be made. For non-members a charge of \$4.00 will be levied, but with that you get a chance to be elected into PAARA and with it, a right to receive PAARAGraphs for a whole year.

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NAME TAG CORNER: Fred, K6YT, goes to a little trouble to order name tags for those who want them or for those new members who might not even want them. He orders five or six a month and frequently worries about them. If your name is John and you go by Jack, he has no way of knowing. When you are due for a tag get your name to him the way you want it. His phone: 948 9238. If that's out of your area try one of the Board Members. Failing that, see him at the meetings.

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cont'd from pg 5 col 2.

So your FET circuit doesn't work? it doesn't happen very often, but if you suspect the FET itself, here is a simple ohmmeter check to see if the device is still serviceable.



Also, if you don't know which lead is which, a series of tests will enable you to identify the leads.

+++  
UNCLASSIFIED CORNER:

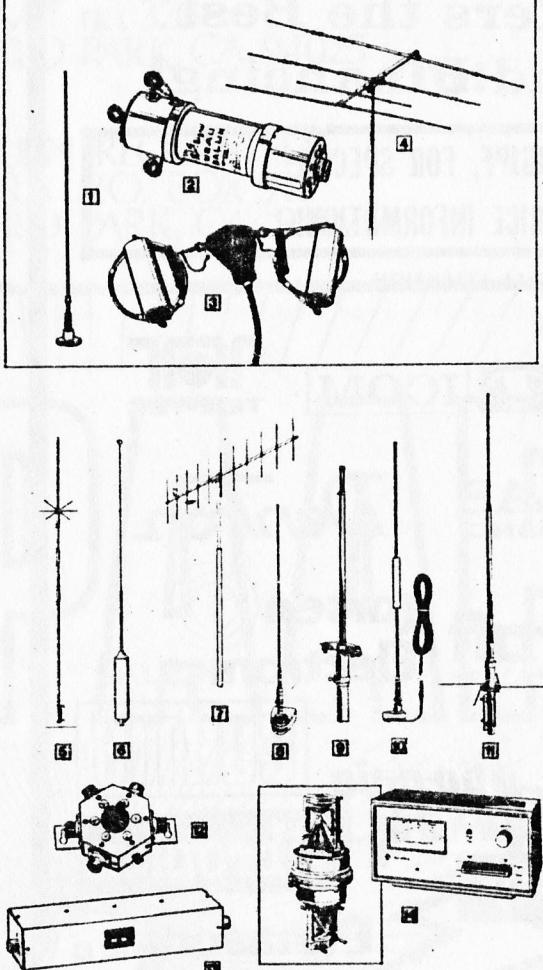
WANTED: Heathkit SB 640 (remote VFO)

FOR SALE: Prop pitch motor, \$25.00  
See Dan, WB6STW at the meeting, phone 246 4354

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LAST CORNER: Typed whilst listening to sole swishing 2 minute and 50 second renditions by Dorsey, Goodman, Herman and Miller.

## new Antennas and Balun



### RG-8/U 52-Ohm Coaxial Cable with Connectors

(Not shown). For use with antennas and accessories on this page. Maximum coverage superflex RG-8/U coax by Columbia Electronic Cable. 11-gage center foam polyethylene dielectric. 92% copper braided shielded flexite jacket with PL-259 connectors both ends.

HDP-3620, 100-ft. with conn.	Shpg. wt. 11 lbs.	24.95
HDP-3621, 50-ft. with conn.	Shpg. wt. 6 lbs.	14.95
HDP-3622, 3-ft. with conn.	Shpg. wt. 1 lb.	4.95

## Amateur Accessories

1 NEW! 2-Meter Mobile Magnetic-Mount Antenna. $\frac{1}{2}$ -wave antenna provides excellent reception on 2-meter band. 3 dB gain. Covers 145-148 MHz. Tested in excess of 90 mph. Includes PL-259 connector and cable. Rugged construction, preassembled and ready-to-use.	29.95
HDP-1472, Shpg. wt. 3 lbs.	
2 NEW! "W2AU" Balun. This world-famous balun helps you reduce TVI and improve F/B ratio. 2 kW PEP tested. Fully enclosed body with silver-plated SO-239 connector and hang-up hook, built-in lightning arrester. 600 $\Omega$ pull — no insulator needed. Weatherproof. With complete instructions including an antenna length table.	14.95
HDP-3615, Shpg. wt. 1 lb.	
3 NEW! 5-Band Trap Dipole Antenna. Pre-assembled antenna covers 80 thru 10 meters. Only 2 trap adjustments and terminations. Ready to use. Includes antenna wire, traps, 50-ft. RG-8/U coaxial cable and PL-259 connector, two end insulators, and dipole center connector. Traps weigh approx. 9 oz. each. Approx. length 110 ft. 52 ohms impedance.	64.95
HDP-3500, Shpg. wt. 9 lbs.	
4 Cascraft Tri-Band Beam Antenna. Offers the performance of a single-band Yagi on 10, 15 and 20 meters. Provides state-of-the-art antenna design with rugged construction, broad bandwidth and four active elements for super performance and outstanding front-to-back ratio on all three bands. Comes complete with low-loss, high-performance 1:1 baluns which take PL-259 connectors. Factory adjusted for 50-ohm coax feedline. Boom length, 18-ft. Longest element 32 $\frac{1}{2}$ ''. Turning radius, 18 $\frac{1}{2}$ '. For masts to 2 $\frac{1}{2}$ " O.D.	239.95
HDP-1471, Shpg. wt. 46 lbs.	
5 Master's 4-BTV vertical uses a single 50 $\Omega$ feedline, covers 10-40 meters, and is rated at full legal power on SSB & CW.	89.95
HDP-3850, Shpg. wt. 15 lbs.	
6 This 80 meter trap for the 4-BTV installs directly on top of the antenna. Adjustable between 3750-4000 kHz. Full legal power.	29.95
HDP-3850-1, Shpg. wt. 3 lbs.	
(Not shown). Same as above except only covers 3500 to 3750 kHz. Takes full legal power. Height 42 $\frac{1}{2}$ ".	29.95
HDP-3850-2, Shpg. wt. 2 lbs.	
7 Cascraft's 11 element yagi. Features 13.2 dB forward gain, a 28 dB front-to-back ratio, and gamma match tuning for minimum SWR. Feeds directly with 52 $\Omega$ coax. 146-148 MHz. Assembly required.	29.95
HDP-1470, Shpg. wt. 6 lbs.	
8 Standard gain mobile. 5 $\frac{1}{2}$ " wavelength rear deck whip. 3.4 dB gain, 1.1:1 SWR. 100 watts, 47" radiator, 17' coax, connectors.	23.95
HWA-202-3, 2 lbs.	
9 Standard gain fixed. Omnidirectional. 3.75 dB gain, 1.1:1 SWR, 135-175 MHz. 100 watts. 52 ohm feed with PL-259. Mounts to 1 $\frac{1}{4}$ " masts. Less coax. Preassembled.	29.95
HWA-202-11, 2 lbs.	
10 Super gain mobile. Phased $\frac{1}{4}$ and $\frac{5}{8}$ wave radiators. 5.2 dB gain. 200 watts; 6 MHz bandwidth; 1:1:1 SWR. Height 85". 17' RG-58U coax, connectors.	33.95
HWA-202-8, 3 lbs.	
11 Super gain fixed. 6 dB gain. 140-150 MHz. 6 MHz bandwidth. 1.2:1 SWR. 1000 watts. SO-239 connector. 117" long. 4 radials; 21" alum. rod. For 1 $\frac{1}{4}$ " mast. Less coax.	72.95
HWA-202-10, 7 lbs.	
12 Heath's HD-1234 coax switch switches up to 4 different antennas. Handles up to 2 kW PEP, grounds all outputs not in use, and has an operating range to 250 MHz. 50 ohms impedance.	12.95
Kit HD-1234, Shpg. wt. 1 lb.	
13 Solve TVI problems with this rugged low-pass filter. Provides a minimum of 70 dB attenuation and cutoff frequency is 34 MHz. For 10-160 meters. 50 ohms. Full legal power.	29.95
HDP-3700, Shpg. wt. 2 lbs.	
14 Alliance HD73 Heavy-Duty Rotator with Dual Speed Control. For antennas with up to 10.7 sq. ft. of wind load area. Has positive no-slip drive, automatic brake action. For masts 1 $\frac{1}{2}$ " to 2 $\frac{1}{2}$ " O.D. For 117 VAC, 60 Hz. Requires 6-cond. cable.	118.95
HDP-1235, Shpg. wt. 19 lbs.	

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