

June 76

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AMATEUR
RADIO ASSN.

MENLO PARK C.D. RADIO CLUB, K6YQT

PAARAGRAPHS is the official organ of the Palo Alto Amateur Radio Association and the Menlo Park CD Radio Club.

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Volume 20

Number 6

June 1976

**PAARA and Menlo Park CD Radio Club Officers:

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***** PROGRAM June 4

Board of Directors for PAARA

Chairperson: Good old Fred Canham, K6YT Frank Hallek of HANDAR Corp on a
Members: Andy Korsak VE3FZK/W6 telemetry project from a
Gerry Wagstaffe W6NIR polar bear thru a satellite, also
Paul Thekan WN6IJP on hand-held xcvs by HANDAR.
Terry Conboy WB6GRZ Pictures of the bear proj.,
Ed Fairbanks W6AIN demo of walkie-talkies
Jerry Tucker WA6LNV
John Gomperts WN6ATL NEXT PROG. JULY 2:
1976
communications 1776-

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OUR STRICT AND UNRELENTING POLICIES:

- 1. Membership includes PAARAGRAPHS subscription
- 2. Dues are only \$4.00 a year, pay up quick.
- 3. Our cheapo subscription rate is \$1.00 only.
- 4. Pay up on a calendar year basis or else.

SEND your cash, negotiables, and spare change to : PAARA
P.O. Box 911 Menlo Park California 94025

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New-born SSB Six-Meterer: Mike Eccles WA6LGJ
Reluctant Flea-Marketer and Archiver: Gary Giampaoli
SEND articles, clippings, news, hints, projects, etc.
TO: Rick Ferranti WA6NCX 1234 Santa Cruz Ave Menlo Park
415-324-1539

OUR NEXT MEETING: This time I won't mess up the date: It's on Friday, June 4, 1976, at 7:30 PM in the Menlo Park Recreation Center, near the Public Library and the Police Department. (Please note that the following meeting (for July) will be on the 9th, not the 2nd).

The Programme: well, this time YE Editor tried to get the dates right, but Fate rules against him, as our program director Andy is absolutely unavailable to get this month's program material. Great. So come on Friday, June 4 anyway--we had similar circumstances last month and had an excellent talk and show, right?
RAFFLE Coffee Tea Cookies Eyeball QSO's

Bring a friend -- young person or Old Timer -- Good Times
****-*****

The Board of Directors will meet on their usual, dull, same old boring Wednesday following the meeting, on Wed. June 9, 1976. This event will be mostly concerned with Field Day for 1976, for which you should make Great Plans -- its June 26 and 27, at The Hill, in Menlo Park behind Valparisio Drive. Meeting is in the infamous W60TX trailer, SRI Parking lot, @ 7:30pm.

The Wonderful and Classy PAARA NET meets every Monday nite on--I bet you're thinking I'd say two frequencies--but no --we are making the Big Push. Way back in February the PAARA B of D passed a motion that our two meter net move to the FM portion of the band and use the "mode of the day" exclusively by the end of 1976. We meant it, gang! Since then, many club members have obtained FM transceivers. SO we propose that ALL sessions starting with Monday June 7, 1976 be conducted on AM only from 8:15 PM to 8:30 PM (145.24 AM) local time, then move to FM on 147.45 MHz from 8:30 PM to when it peters out. Please read the walkathon report elsewhere for an exclusive use of FM in our club. Anyway, your early comments are necessary so we can formulate rules for our soon-to-become exclusive net shortly.

Hey -- time's running out for when Ye Noble Editor moves Back East---Two more issues until it's YOUR turn!!

I got a good one
I got a good one
one-- see p. 2

PAARA PICKIN'S ** GOOD STUFF AND NEWSY ITEMS

PAARA wants to thank muchly Brian Westfall, W6QJN for his fine presentation and excellent video tape of the WA6LET Moonbounce experiments recently conducted at SRI. This was a great programme and good ham PR.

Congratulations to Andy VE3FZK/W6 for actually winning in Foothill's recent Homebrew Contest!! Amazing!

PAARA is starting to shape up for Field Day 1976, which will be at the Hill this year in Menlo Park behind Valparisio Drive in Menlo Park, on June 26 and 27. We will have the same setup as we did last year with two stations on SSB, one on CW, and one on Novice bands. This is a great location, which we have used for several years. Ed Johnson, WB6CFW, and Terry Conboy WB6GRZ will be in charge of the OSCAR station this year. In addition to the mode A contacts he will be attempting mode B QSO's on 432 up and 146 downlink.

BE SURE to plan to come and join the fun with PAARA!!!

NOVICE CLASS NOVICE CLASS has started in Sunnyvale at the Lockheed Amateur Radio Club. Both code and theory classes will be taught. For further information, call Lockheed, ask for the club info and Bill Meyer, WB6KQU, at extension 3-0456.

MORE People have paid their dues: (have you??) These are: WN6ION, WN6JFN, W6ISQ, WA6LUI, and W6DEF.

Captain John Ellison, W6AOI, author of many QST, Ham Radio, etc. articles, became a silent key on May 3, 1976. He lived 20 years in Menlo Park, was an active member of many clubs in the area, and was a wonderful gentleman.

Although this is too late for publication, many club members participated in the Sequoia Centennial Century 100-mile bikeride, providing communications (with FM gear of course) on Sunday, May 23, 1976. Although the ride is for sheer enjoyment, the bikers nonetheless traverse the path from Hell to Breakfast, with PAARA's help.

Ye Editor received a nice letter from Hal Moore, W6DEF, our former EC and still a good PAARA member in Auburn, California. Many are now able to talk to him via the 25/85 machines (RACES), with his 8 element beam and 5/8th wave groundplanes. He's also got an 50 watt afterburner on his fine Comcraft rig.

Hal has also put up a 20 meter dipole and the first station he worked was Auburn, Michigan! He's also got a sked Wed mornings at 0900 local with Fred Wickman on 3740.

Hal has nine boxes of old ham magazines which he'll donate to the club for our flea market and auction sales.

I think we all join in with the Red Cross, Sequoia Region who recently expressed their appreciation to Hal for two decades of service be presenting him with a very nice plaque. Congratulations and thanks for the note!

Wanna send messages for free around the USA?? Drop them to Larry W6KZJ (593-9150) 1601 Arroyo Ave, San Carlos, 94070. We welcomes traffic -- so go to it!!

Well, well--ye Noble Editor has still got his beautiful NC-183 National Radio receiver, which is in mint condition and works flawlessly. All metal tubes, two RF stages, incredibly massive 4-gang tuning capacitors for main tuning and bandspread, covers broadcast band to six meters with bandspread calibrated for 80-6 meters, has crystal filter, BFO, AVC which works on CW/SSB and AM. With manual. Looks like new inside and out, perfect ham/general coverage receiver.

-----Only \$75.00, can you pass it up?? Call Rick Ferranti, WA6NCX, at 415-324-1539 or 246-1400 rm1001.

For Sale: Heathkit 'scope, 15 MHz, OS-102\$50.00
 Knight 2 mtr AM xcvr, model TR-108, w/145.24 \$60.00
 SLR-F Receiver, 1.9-20 MHz, works, stable 5.00
 Call Mike Eccles, WA6LGJ, at 494-3267 eves or 738-2661 days.

For Sale: Tennelec MS-1 Memory Scanner receiver. 30-50, 150-170, 450-470 MHz, programmable. \$150. Call Gary at 408-297-3576.

The Shadow Revisited

Mike Eccle's recent talk on his involvement in the continuing attempts to receive extraterrestrial radio signals from intelligent beings beyond our own galaxy, reminds us of a startling phenomena which shocked the radio world before Mike was born. This was known as the "Eleven Weeks of the Shadow," commencing October 1, 1935 and ending December 14, 1935.

Almost simultaneously throughout the civilized world, a strange signal was heard in receivers of various countries. QST described it as a "gargly A.C. signal," in the 12 to 15 MHZ (then MC) range. It would be heard during daylight hours, remain for twenty or thirty minutes on one frequency and then abruptly the frequency would be changed up or down a few hundred KHz for another half hour or so. The 20-meter amateur band was not singled out for this QRM; it is recorded that Navy high-frequency ship to shore, R.C.A. overseas radio telephone, the A.T.&T. and coastal ship to shore traffic (the latter at Cape Cod) were subject to severe interference.

The continuous signal was heard world-wide, with QSL's from the West Coast, England, Egypt, India and Australia.

The press reported the phenomenon; and physicists and astronomers entered the act. Coincidentally, the ten-meter activity was approaching a zenith, solar activity was way up, and British observatories had just announced isolation of strange whistles as emanating from outer space.

An imaginative Reuters reporter dubbed the mysterious signal "The Shadow", and world-wide, these hypotheses as to its nature and origin were released to an alarmed public; (1) (from Washington) it was the new military "death ray"; (2) (from Las Vegas) it was the voice of the new giant turbine at Hoover Dam; (3) (from England) astronomers suggested it was the bursting of a nova, and the frying noise might increase in broadness and intensity to wipe out all radio communication for a thousand years!

The experts did not fail to use the best means of analysis then at their command to locate the geographic origin of the signal.

(mysteriously buzzed onto the next page...)

The Shadow....con't

Direction finder bearings taken throughout the world were totally inconsistent and failed to provide any fix. Oscilloscopes were used to analyse phase and wave form in this country and abroad; there was a remarkable inconsistency, and more remarkable, routine exchange of information in that day prior to computer and tape recorder, now proved that The Shadow was not one but many signals.

Uneasiness about all this and its possible military overtones, even reached officialdom, and the U.S. Navy, then a prestigious organization, was assigned to track down the Shadow. Naval Reserve Nets (the predecessors to Navy Mars) were given the job of country-wide field-reports. In Boston, the Navy called on Harvard itself to help, and its Radio Laboratory had a fancy d-f truck, equipped with loops and oscilloscopes. The latter identified one of the signals as Boston-based, and others as skipping in from an unknown but considerable distance.

Now in 1935, "Inductotherm" machines had just been invented and produced in large numbers, somewhat in the manner of the whole-body scanner which this year will be developed and simultaneously placed in a number of hospitals. But forty years ago, the "Inductotherm" machine has not total medical acceptance, but was produced and sold to athletic clubs, gyms, and college athletic departments. These were, of course, diathermy transmitters, with tank circuits of 12 feet of insulated cable, coiled around the injured athlete's thigh or calf. Marketed to coincide with the football season, with instructions that the treatment should last no longer than half an hour, the frequency was lower with the tank wrapped around a beefy tackle's thigh and somewhat higher when the same length of cable was coiled around a quarterback's arm.

Harvard, some eleven weeks after the start of the mystery, discovered the first offending machine in a Boston athletic club, reportedly at the time easing the pain of a fullback's charlie horse. The diathermy machine had 500 watts input, raw A.C. applied to the plates of a parallel fed high frequency oscillator, with the tank coil of 12 feet of flexible insulated cable.

(blasted over to the next page...)

(The Shadow concluded)

The Harvard sleuths keyed the machine with a CQ wheel (apparently none of the Harvard scientists possessed a hand key or knew the code), and the Navy listeners reported RST 581 in Philadelphia, Great Lakes, Norfolk, Washington, and Bellvue. Oh yes, the antenna was the A.C. wiring system, from the device to the entry panel of the building.

"Inductotherm" machines were located in Seattle, Charlotte, N.C., and other places, with one penthouse gymnasium in an office building producing the most DX.

The FCC promptly enacted new regulations outlawing the "Inductotherms," requiring shielding and filtering, a DC plate supply, and even more interesting, requiring operation in the 11-meter band only.

The "Shadow," or rather the whole collection of "Shadows," was a solved mystery, and no more. No, not quite no more. Tune in on the CB 11-meter band today, and in the background on more than one of the raucous 23, you can hear the "gargly AC" (as QST called it) of a surviving "inductotherm" machine.

That's a big 10-4, First Moma, and not the bronx cheer of a critical Democrat.

----------**-----**

REPORT OF THE MARCH OF DIMES WALKATHON de WA6NCX
On May 8, 1976, from about 8 AM to 5 PM, the Bay Area Chapter of the March of Dimes had their walkathon, a 20-mile course from Redwood city to Woodside to San Carlos and back again. About 700 kids started and 550 made it through (including a rather proud 5 year old girl)--the rest being picked up by National Guard pick-up trucks. (after riding in one of those things as the radio op, Y.N. Editor thinks the pooped out kids were better off lying at the side of the road!). AS you may gather, PAARA did a great job of participating, on .52 Simplex (not everyone had .45) and on .25/.85, the RACES machine. ALL FM! Lovely Nina Mulle, the chairman, said this is the smoothest one of many she ran--because of our flawless radio communications set-up!

The people who participated were (let me know if I missed (sprained onto the next page.....))

(Walkathon notes con't)
 anyone): Fred K6YT, Rick WA6NCX, Bob K6SEM, Ed W6AIN, Dave WB6JFH and his dad Walt, Terry WB6GRZ, Joanne WA6WZB, who came from Concord, Lee WB6BJB from Livermore, Jerry WA6LIJ, Jerry W6OCP and Jean WB6LSN, Rich and Rich WA6FXP and W6KMW, motorcycle mobile. Andy VE3FZK/W6 came for a short while in the morning, but when he discovered his Two'er wouldn't quite work on .52 simplex FM, a strange sadness overtook him and he disappeared shortly thereafter.

The exercise went very well--one motorcycle accident not connected with the event was reported plus numerous aching feet.

THIS SETS a PRECEDENT!! It was all done with solid state FM gear--all made easily portable/mobile, all reliable, sensitive, stable, easy to operate. When we had to, the repeater picked up weak signals and all went well. SO--get on the ball and go FM--all our future exercises will undoubtedly use this mode. You'll be amazed how well it works compared to AM and drifting receivers--I was!

Do your memory cells recollect the fine article and talk from Mike Eccles on Project Starquest? Well, Nick Marshall gave me a copy of their bulletin, and it has some interesting info (Nick, a club member, is W6OLO). "StarQuest started as an effort to group together interested individuals who would participate in a revival (on a small scale) of Project OZMA by assembling a state-of-the-art design "listening post," dedicated to the continuation of the search for radio signals of extra-terrestrial origin. This "station" was to be constructed and assembled at some suitable Bay Area location using donated equipment and/or STARQUEST member-owned equipment. Volunteer labour during spare hours will implement this program. Target objective is to have an operational station within one year of the first formation meeting."

The STARQUEST group has meetings both in person for Bay Area people and on 20 meters for worldwide communication and correlation of their activities, since many of the members are hams. The schedules are : (next pg....)

STARQUEST Data:

Meets every 3rd Tuesday of the Month (next meeting is on June 15, 1976) at 7:30 PM in the Foothill College Observatory Utility Room.

If you want to listen or participate in the STAR-Quest NET, it's on the first Sunday of the Month, at 1900 GMT, on 14.280 MHz USB plus or minus 5 KHz for QRM, so join 'em and talk about Extraterrestrial Communications.

_**

Portola Exploratorium Report de W6AIN

Our club is getting notoriety. We were called upon to demonstrate ham radio at the Portola Grade School in Los Altos on May 7th. And it's the last time we will do it at that school. Not that we did a bum job (we were threatened with requests at other schools) but the school ceases operation after the summer.

Clarence W6AAE, Jim WA1UFR/6, and Ed W6AIN set up the gear to operate on 7.2 MHz. Ben W6MOY of the Santa Clara relay Society demonstrate 2 meter repeater operation via WR6ADE from his flashy red Datsun. He phone patched through the repeater, and was beseiged with "call my mom". The kids and the demonstrators, who also set up a little code oscillator and had them send their names, enjoyed the day.

_**

WEIRD HINTS DEPT. FROM VARIOUS CONTRIBUTORS

"Keep them cards and letters comin'"

Ever want to get a nut started on a reachable-by-one-finger-only screw stud? Put a little Elmer's contact goop on your finger and slap on the nut--it will stay long enough to get it started. Don't use that super glue stuff or you'll be stuck to the inside of your transmitter for the rest of your life, which is most socially unacceptable. (WA6NCX)

Do you have a Cantenna or similar? Then use mineral oil, not transformer oil. Mineral oil is much healthier for you, and only causes a slight loss in power handling. To be properly horrified, read what K4CFG has to say on pg. 43 QST Apr. '76 (no joke) (W6AIN)

MORE HINTS, KINKS, AND OTHERWISE WONDERFUL GONK

Run a $\frac{1}{2}$ to $\frac{1}{4}$ inch lucite rod thru your transmitter panel to a point close to your final amplifier. Now you can monitor the color on the tube plate by looking at the end of the rod. Hint: cover the rod with tape (except ends). If the rod shows black or blue, you've really bruised your tube. (Apr. '41 QST)

****_***

Ever want to see if that 9V transistor radio battery was really shot under load, or if the $67\frac{1}{2}$ V monster in your old photoflash still has enough oomph to blast your next victim??

Here's a battery test table, lifted from an old issue of Popular Electronics, which you can paste on your VOM, batteries, or anywhere else you like:

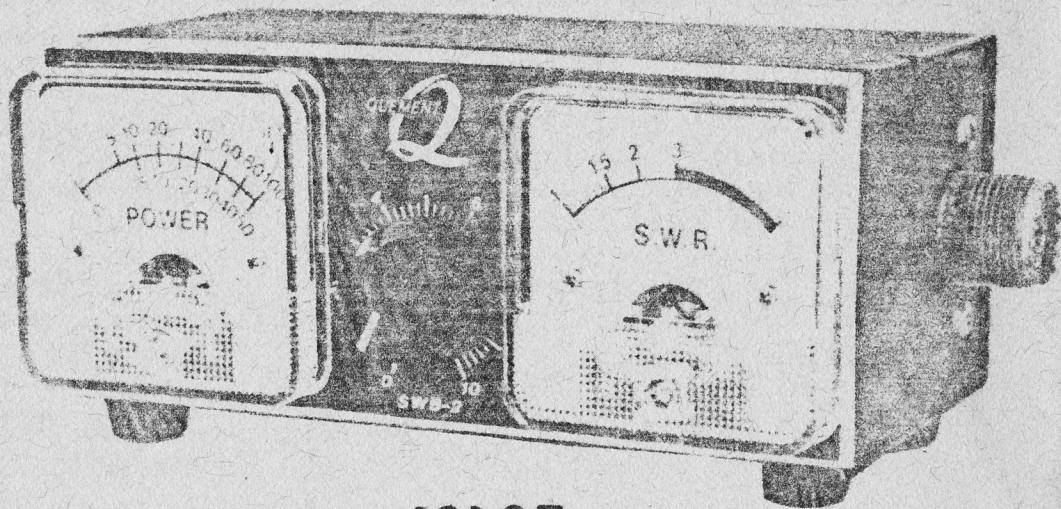
Battery Rating (Volts)	Shunt (Ohms)	Discard (V)
1.5 (C, D)	13	1.27
1.5 (AA)	130	1.27
3.0	300	2.55
4.5	430	3.70
6.0 (not auto batts.)	620	5.10
7.5	820	6.40
9.0	1000	7.70
10.5	1100	8.90
12.0 (not auto batts.)	1200	10.20
15.0	1600	12.70
22.5	2200	18.70
30.0	2700	25.50
45.0	3900	38.10
67.5	5600	57.50
75.0	6200	64.00
90.0	7500	76.50

Just put that value shunt resistor across the corresponding battery for a short while whilst measuring the voltage across it with your VOM. If it's higher than the above Discard V., keep it! (Tnx to Dave WB6JFH)

_**

This issue typed whilst liltng about with Susato's Renaissance Dance music and a bit of Telemann, on Saturday, May 22, 1976, after attending the EMARC Flea Mkt.

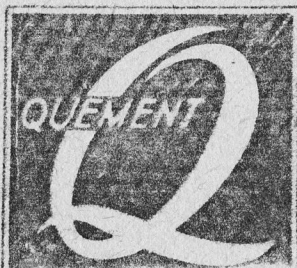
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