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Official Publication Of

PALO ALTO AMATEUR RADIO ASSOCIATION  
(PAARA)

W6OTX

Palo Alto Amateur  
Radio Ass'n

Affiliated  
Clubs

K6YQT

Menlo Park C-D  
Radio Club

ORGANIZED FOR  
PUBLIC SERVICE, SCIENTIFIC, EDUCATIONAL AND  
SOCIAL BENEFITS TO AMATEUR RADIO OPERATORS.  
(A non-profit organization; Incorporated 1956)

NEXT PLANNED FUNCTION

Date: Friday 7 April 1972, 7:30PM;

Place: Menlo Park Recreation Bldg, Civic Center.

Program: (Note: The Amateur TV is delayed to later)

PROJECT MOONRAY I - Which is scheduled  
for Apollo 17. Nick Marshall, W6OLO will  
describe the present status and give us  
an insight into some of the technical

(see Pg.4) problems involved in this AMATEUR proj.

Vol. XVI  
No. 4  
April '72

W6OTX K6YQT

2  
OFFICERS

ADMINISTRATIVE -

Pres. :Fred Canham, W6QWF  
V Pres :Andy Korsak VE3FZK/6  
Sect'y :Les Vickery W6AKR  
Treas :Vance Wardlow W6FLE

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Chmn TVI Com. Glen Baker W6UOK  
" Publicity-Larry Rice W6IQT  
" Membership-Hal Moore W6DEF  
Eqpt Custodian-Ed Fairbanks W6AIN  
CCRC Rep- Fred Canham W6QWF  
Refreshments & Raffle Comm:  
Ed Fairbanks W6AIN  
Lee Zalaznik WB6BJB

BOARD OF DIRECTORS

Chmn :Fred Canham W6QWF  
Sect'y :Les Vickery W6AKR  
Member :Hal Moore W6DEF  
" :Ed Fairbanks W6AIN  
" :Gerry Laxson W6OPA  
" :Bob Allen W6WQD  
" :Andy Korsak VE3FZK

Telephone Committee:Larry  
Rice W6IQT,Andy Korsak VE3  
FZK;Les Vickery W6AKR

MENLO PARK C-D RADIO CLUB

Pres. Fred Canham W6QWF; Vice-Pres: Glen Baker W6UOK  
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RADIO OFFICER: Bob Allen

Editor: Vance Wardlow W6FLE; Ph. 854 0803; PO Box 911 MP  
POLICY: Membership included subscription to PAARAGRAPHS.  
Subscription rate \$1 per year. Non-subscribers will be  
dropped as new names are added to mailing list. For your  
APPLICATION FOR MEMBERSHIP send \$4 to PAARA, PO Box 911,  
Menlo Park, Ca. 94025. For information phone 854 0803.

support your club  
SUPPORT YOUR CLUB

BECOME A PARTICIPATOR

GET INVOLVED

PAY YOUR DUES

DO SOMETHING

FUTURE PROGRAMS

Wednesday 12 April-PAARA BofDir. Mtg. Trailer SRI 7:30PM  
Friday 5 May: San Carlos Radio Club will host the meeting  
at the Veterans Memorial Bldg, Redwood City, 7:30PM  
Tentative program is a travelogue with slides of a  
trip thru Africa by Larry Reed, W6CTH.

NEW MEMBERS

WELCOME ABOARD FELLOW PAARA PARTICIPATORS

Bob Mager, WA6DVI from Los Altos Hills brings to the Club a wealth of experience as an ex. W5, W8 and WØ. Hope we can utilize your phone experience on Field Day Bob!

Barry Lar Rieu, WA6UIM, of Menlo Park relaxes from his hectic occupation with the stock market by searching out DX contacts. Nice going Lar.

K6WD

Preston Hotz, ~~WB6VXY~~ lives in Menlo Park and surveys the geological features of our terrain. This may explain his expertise in getting QSO's. Has WAC and DXCC. Lets use tha on Field Day Eh? Pres.

David Harper, WB6JFH from Redwood City is right in there pitching for those DX contacts. His big project is to get his Dad qualified for the Novice license. Twist his arm Dave and we will get him in as a PARTICIPATOR!

Virg Barta, K6QNH checks in from Los Altos where he has a ham layout that really gets out to the ends of the earth. Virg has WAS, WAC, RCC & OT. A real PARTICIPATOR eh Virg?

NEW MEMBERS

(Contd)

Elmer Shapiro WA6MPC calls Menlo Park home. He is a home-brewer on the bands above 10. Really hits it on 2 & 6. Now if we can get Elmer together with Andy we may get that 2 meter project off the ground! Give Andy a goose Elmer and lets see what happens Eh?

Héy! Did you notice that I had to change Pres Hotz' call to K6WD? Well it just goes to show what joining PAARA will do! Pres no sooner joined than his new call came through! ! With his EXTRA license and his new 2 letter call Pres will now demonstrate what a real PARTICIPATOR can do! ! !

\* \* \* \* \*

Speaking of new members I am reminded that I have had a couple of calls regarding classes for novices and the required exams.

The SAN CARLOS RADIO CLUB runs an excellent class for those going up to higher type licenses including Novices. Jack McEnnerney, W6LII is the principal instructor helped by Jack Pierce WA6CCH.

Call Jack McEnnerney in San Carlos on 591 8526 for more info on class schedules and type of instruction.

# FOR SALE

Hammarlund HQ-170 SSB-CW-AM ham band receiver and converter. Covers 2 through 160 meters. \$160 for all, will consider your offer. Phone Milt W6MFN on 326 1232.

\* \* \* \* \*

Transmitter, Heath DX-100, 160 thru 10 meters, 180 Watts CW & AM, w/manual . . \$65.00

Receiver, National NC303. Ham Band, 160 thru 10 meters (6,2 & 1 1/4 meters with converters), SSB, AM, CW w/manual \$175.00

Converter, AMECO CN-144, 2 meters, w/power supply AMECO PS-1& instructions . . \$30.00

Preselector, RME DB23, Ham Band 80 thru 10 meters with instructions . . . \$20.00

Crystals, MARS and WWV frequencies for Drake equipment . . . . . \$3.50ea.

Contact Ray Allustiarti, W6JOV, 1812 El Verano Way, Belmont, Ca. 94002 or call 591 1995.

\* \* \* \* \*

RG8/U, 200 feet; a transistorized Varitrol compressor amplifier \$10; a 2 meter ONE kilowatt power amplifier; MAKE OFFER to Irv Wolfe W6HHN phone 327 5363

\* \* \* \* \*

JOIN THE CLUB

Tristao Model HWS-65354G self supporting tower with Telrex Model 20M-326B, Hy-Gain Model DB-1015, Hy-Gain Model 2BDQ, Hy-Gain Model GPG-2 rotator, indicator, clock, all cables & controls - all equipment is heavy duty & has performed excellently with only minor maintenance

493-8069

\* \* \* \* \*

NCX-5 Transceiver with AC power supply. 10-80 meters - like new - must sell \$275.00 Alfred Garcia 111 Circle Rd., Redwood City, Ca. 94062 or phone 368 9784.

\* \* \* \* \*

Model TDE surplus Navy Xmtr converted to a pair of 813's in final for 1KW output. Low level modulation, suppressed carrier AM. 160-20 Meters. Room for installation of hi freq bands with switching. Call Vance W6FLE 854 0803 \$50 and U-Haul it away.

\* \* \* \* \*

## PATRONIZE OUR SUBSCRIBERS

TELL THEM U SAW  
IT IN PAARAGRAPHS AND  
THAT YOU  
ARE A REAL PARTICIPATOR

JOIN THE CLUB  
PAY YOUR DUES

NEXT MEETING - don't miss it! or off as necessary. Primary control will be the Arecibo station with it's 1000-foot dish and multi-megawatt output capability. It will only be used in case of emergency or during any unexpected malfunctions of the repeater.

Nick Marshall, W6OLO and K2SS will give us a complete rundown on PROJECT MOONRAY. To help you follow Nick's outline with complete details here is a brief summary of MOONRAY: It will be a Thermo-nuclear-powered (5-Watt DC output) Plutonium 235-fueled unit with a half-life of 87 years. It will power a 5 Lb. electronics repeater package having a 432 MHz. receiver (uplink) and a 1296 MHz  $3\frac{1}{2}$ W output transmitter (downlink). The repeater will accept all modes of modulation at the input and will linearly translate these to the downlink transmitter. In addition to it's function as a free-access repeater, MOONRAY I will contain several interesting amateur experiments; a laser receiver, a slow-scan color TV system that will give gross cloud-cover pictures of the earth several times daily and a 32-channel telemetering link that will transmit a wide variety of experimental and housekeeping data. The call sign SS in morse code will be used as the identifier and has already been allocated and approved by the FCC. NASTAR's Ground-station K2SS is to be a secondary control link to turn the repeater on

Nick will also bring us up-to-date on OSCAR VI, the satellite for amateur communications world-wide on 2 meters.

Nick is exceptionally well qualified in this type of experimental project. Built his 1st crystal set in 1924 (age 10) and has been an avid experimenter ever since. Got both his amateur and first class commercial tickets both the same day in 1936. He has experimented on all the ham bands, now mostly on 432 and 1296 MHz.

His professional career has seen him with Lockheed, Aerospace and others doing projects from flight recorders, oil exploration, sun position indicators to Missile-borne TV.

He has authored over 200 papers and has numerous patent applications to his credit. He is now working in Oceanographic (deep-water) instrumentation. He was Technical Director and one of the founders of Project OSCAR. He helped design, develop, test and check out OSCARS I, II, & III.

DON'T MISS NEXT MEETING

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BY THE ITEM, THE POUND OR IN ANY QUANTITY - WE SERVE YOU

TELETYPEWRITERS

POWER CONTROL PANELS

TRANSISTORS DIODES INTEGRATED CIRCUITS METERS TUBES

CONTROL DEVICES

TEST EQUIPMENT

OUR SELECTION OF ITEMS IS SO EXTENSIVE THEY CANNOT BE LISTED

LOOK OVER OUR AMATEUR RADIO DISPLAY

SEE OUR STOREROOM OF HYDRAULIC CONTROLS, UHF EQUIPMENTS

SAY HELLO TO JIM AND GEORGE

HALTEK ELECTRONICS

1690 PLYMOUTH AVE., MOUNTAIN VIEW, CAL.

PHONE: 969 0510

OUR TRAVELLING TROUBADOURS

Ed Fairbanks W6AIN, and his Beautiful Wife are right now exploring the intricacies of the inland passageway from Florida north on the east coast. They both love to travel by small boat and find the freindly atmosphere aboard thes working boats very stimulating. We do hope they get their share of the fine fishing down that way and enjoy the wonderful vistas along the many waterways.

\* \* \* \* \*

Gerry Laxson WA6OPA and his lovely XYL have just returned from a trip through Mexico. They went through Mexico City and south to many of the exotic cities of Old Mexico. They explored the Aztek ruins - Doc even found a small artifact which appears to be many hundred years old. Our hex on the old "Montezuma Curse" didn't work too well. However I'm sure things would have been worse without it! ! Doc has fully recovered and enjoys the memories of the very fine trip.

\* \* \* \* \*

JOIN THE CLUB AND SEE THE WORLD  
(At least talk with the world)  
PARTICIPATE

Friday a week ago my phone rang. It was Sam Graf WA6OBC in Atherton with a phone patch to Andy Korsak VE3FZK/6. Andy was mobile going over the Pacheco pass east of Gilroy. It was a fine QSO but Andy had to QRT when the autos behind him started to blow thier horns - Andy was navigating cautiously with the QSO going. After a fine QSO Andy proceeded south to Disneyland, back thru Mt. Pines where they enjoyed some snow sliding, thence home to spend some time in the garden. He and his Wonderful Wife, Rosa, seem to really enjoy their very nice family, Casey and Kathy. They all load into the Camper and take off at a moments notice. Andy QSO's and Rosa cooks and sews - a fine family activity! ! !

\* \* \* \* \*

As reported last month Hal Moore and his BW are taking off for Japan to visit their daughter, Suzi, who is teaching there. They left last friday the 24th and will be back monday 3 April. Suzi tells them its cold in Japan so they are going prepared for winds and snow! ! We will look forward to a review of the trip from Hal when we next see him. Hope he has some pictures.

SUBSCRIBE TO PAARAGRAPHS

MORE FOR SALE

There are a few unsold items titled "Learning From Emergencies" from the estate of W6CAA;

There are two 45 or 50 ft triangular steel towers, one on the ground and the other up supporting a fairly recent tri-band beam rotated by a CD AR-22 rotator and including all the coax lines and fittings, control cables etc.

The Collins 75A4 with 3 filters in good condition, serial number 1549;

A clean KWS-1, a Heath reflected power meter, two surplus frequency meters, BC-221AJ and TS 174U, both complete with calibration charts. Large file of QST's etc.

Phone Irv Wolfe, W6HHN for details, prices etc. 327 5363

\* \* \* \* \*

CIVIL DEFENSE

Hal Moore reports that Dick Collins of the Redwood City Civil Defense organization called a meeting to discuss preparations for a potential emergency. Dick was concerned about Identification Cards for RACES members to assure availability of manpower to operate emergency circuits in case of disaster. He also, together with Fire Chief Keller, discussed the possibilities of an unannounced Drill to test preparations.

The March issue of 73 mag-

azine had a fine article on C-D outlining many of the lessons to be learned from an actual emergency. For instance we assume we can pick up the phone and call anyone at any time. This is fine except that the phone is one of the first things to go out in a real emergency - and what service is available immediately becomes swamped with emergency traffic.

Also we must recognize that each individual will care for his own family first - when that is done he may be available to assist in manning a communication circuit. We amateur provide a true PUBLIC SERVICE on a volunteer basis. All basic planning is done by the local community officials - it is THEIR RESPONSIBILITY. It is not the responsibility of the amateur to do this planning and we cannot make decisions regarding the welfare of the community. We must be ready and willing to provide a PUBLIC SERVICE on a volunteer basis. In doing this we must be very much aware that we will be judged and our services utilized on the basis of our prior preparation to meet such emergencies. If we cannot do the job we become no more than another problem for the local officials.

While we all hope and pray that no disaster occurs, we must each prepare. See Bob Allen who is our RACES Radio Officer.



AN OLDTIMER HEARD FROM

Hal Moore was trying out his new transceiver on the County repeater during the C-D drill a couple weeks ago and Santa Rosa checked in. At the mike was our old friend, neighbor and PAARA member Paul Mezzapelli WA6NLJ ! ! ! Haven't heard from Paul in a long time - its nice to know he alive and kicking. Hope we hear more of him in the future - we miss his participation in all our activities. 73 Paul ! ! !

Hal tells us he has put about 125 messages in N. Cal & S. Cal NTS regarding the QSL Bureau. All of us should get our envelope to the Bureau to assist that gang of dedicated volunteers.

\* \* \* \* \*

NOTICE TO NONSUBSCRIBERS

PAARAGRAPHS is sent to 3 categories:

1. PAARA members;
2. Paid subscribers;
3. Nonsubscribers whose names have appeared in lists indicating they are active hams in the area.

The mailing list to the 3rd category, nonsubscribers, is under continuous change. New names are added as they become available - such as newly lic-

ensed hams in the Peninsula area. Since distribution of PAARAGRAPHS is necessarily limited due to costs, it is necessary to drop a number of names each month from the 3rd category.

Next month there will be thirty or more names dropped. If you want to continue to receive PAARAGRAPHS either:  
1. JOIN THE CLUB; or  
2. Subscribe.

Drop a line to PAARA, P.O. Box 911, Menlo Park, Ca. 94025 and let me know what your desires are.

And be sure to remember that this paper is for your enjoyment and education. If you have any items of interest to other hams send it in - I will be most happy to publish.

The address label on your copy of PAARAGRAPHS gives your status and the date you are delinquent. Of course all nonsubscribers are continuously delinquent and freeloading.

JOIN THE CLUB

BECOME AN ACTIVE PARTICIPATOR

SUPPORT YOUR LOCAL CLUB

BE PREPARED FOR ANY EMERGENCY

ATTEND MEETINGS

# RED JOHNSON

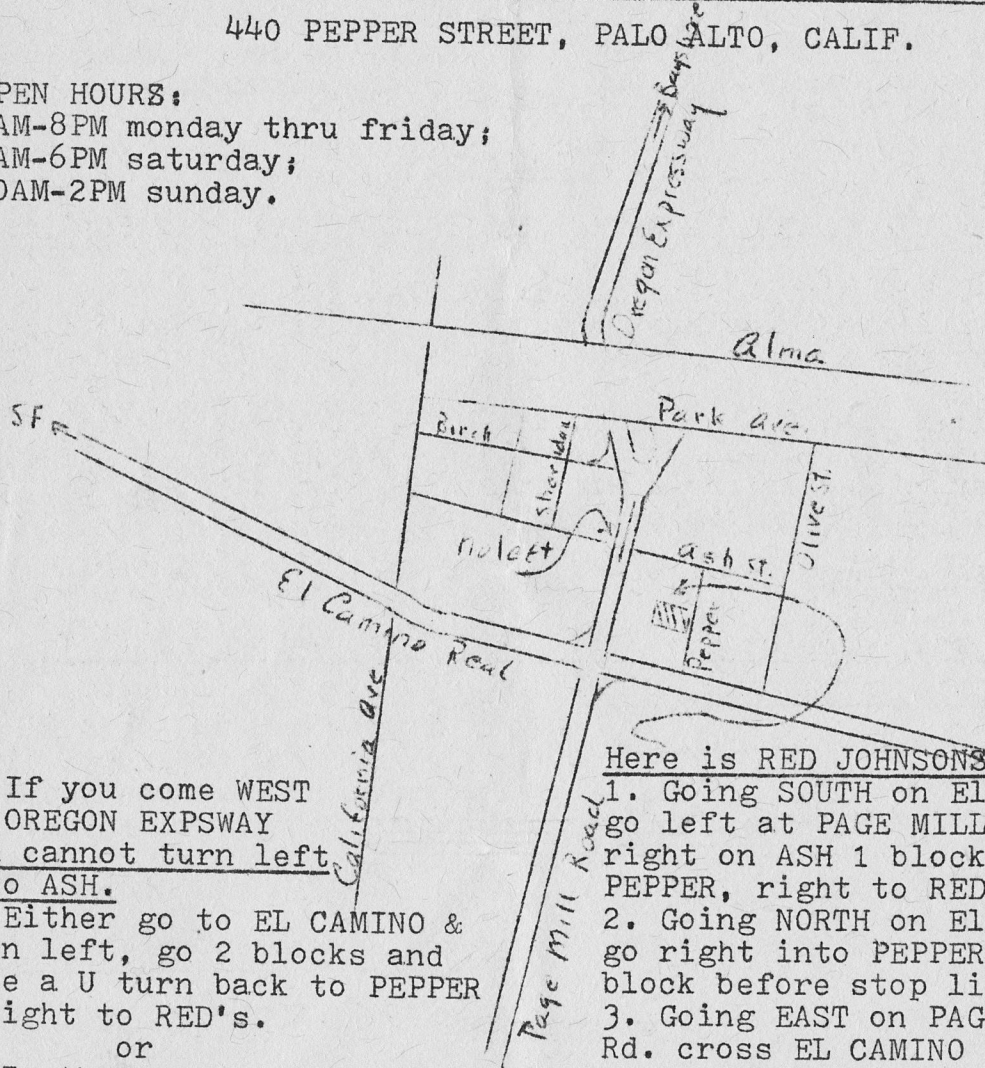
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8AM-6PM saturday;

10AM-2PM sunday.



4. If you come WEST  
on OREGON EXPSWAY  
you cannot turn left  
into ASH.

Either go to EL CAMINO &  
turn left, go 2 blocks and  
make a U turn back to PEPPER  
& right to RED's.

or

In the underpass turn right  
to BIRCH, right on SHERIDAN  
to PARK to OLIVE r to ASH r to RED's.

Here is RED JOHNSON'S

1. Going SOUTH on El Camino  
go left at PAGE MILL Rd.,  
right on ASH 1 block to  
PEPPER, right to RED's.
2. Going NORTH on ElCamino  
go right into PEPPER 1st  
block before stop light.
3. Going EAST on PAGE MILL  
Rd. cross EL CAMINO and  
turn right on ASH, 1 block  
to PEPPER - right to REDS.

# ELECTRONICS

PHONE: 326 6085

IF YOU NEED HIGH AMPERAGE POWER

## HERE IS THE SOLUTION

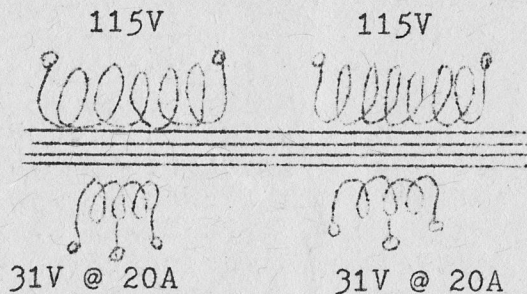
A DUAL 31V CT 20A TRANSFORMER: JUST LOOK AT THE POSSIBILITIES!

PRIMARY:- 115V single winding with isolated 115v output;  
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or the 2 115V windings in series for 230V input.

SECONDARY:-2 separate 20A circuits, each CT and each 31V;  
or in parallel the 2 windings will give 40A @ 31V;  
or in series the 2 windings will give 62V @ 20A;  
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THESE TRANSFORMERS ARE 5.75" wide x 6.75 long x 6.50 high.

They are available at the EXTRA SPECIAL price of \$20.00 !!



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MEETING 3 March 1072

Fred Canham, W6QWF, called the meeting to order at 7:40. New members were announced and introduced. The CCRC Circle report on SET was read. All were asked to patronize our subscribers. It was announced that member Steve Kaidler, K6TV, was in need of blood for an operation. Gene Sussli WA6NVU, volunteered to coordinate a blood bank for Radio Club members.

Fred reported on CCRC activities. WB6AUH is publishing a new Radio magazine; non-technical - excellent job. The Field Day Plaque will be presented to the local winner as determined by handicaps to be announced.

All present introduced themselves.

Andy Korsak called for volunteers to assist in setting up the ATV station in the trailer. Bill Jackson volunteers connections for the coax cable.

Fred Dietrich W6MOH, the speaker for the evening was introduced. He started by defining some of the terms he would use:

Antenna - A device to direct radio into a transmission line. (Receiving).

Array - An assembly of antennas.

Balanced Antenna - One which can be divided in half with a ground plane symmetry.

Balun - A contraption to transform an unbalanced to a balanced situation.

Radiation Resistance - A terminal resistor for absorbing energy. The normal antenna does not have a matching resistance. The shorter the antenna with respect to frequency the lower the matching resistance.

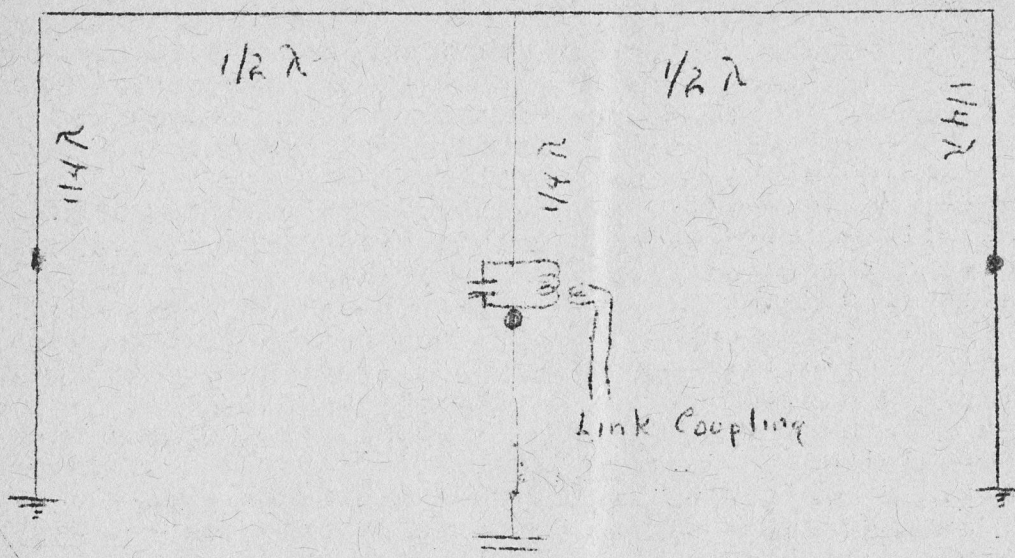
Parasitic Antenna - One which gets energy from another antenna.

Fred pointed out that you must know the current in the elements Voltage can be insulated. All calculations are based on current flow. Current is zero at the antenna ends. It is essential to get the greatest current into the antenna.

Adding elements to an array does not increase power in direct proportion. The basic principle is that the larger the antenna the more gain you can get. Log periodics will not have as much gain as a Yagi of the same physical size.

Fred went on to describe many experiments he had conducted. The presentation was very instructive and helpful to we who have need for criteria in the setup of our "skyhooks"

Thanks very much Fred. We all gained something. 73



Above is the design of a vertically polarized antenna of very simple dimensions which will give a gain of about 7db. Fred Dietrich W6MOH, explained it's functions at our last meeting. The upper sections of  $\frac{1}{2}$  wavelength each act as feeder lines to the two  $\frac{1}{4}$  wave end sections. The center  $\frac{1}{4}$  wave section carries twice the current of the other two  $\frac{1}{4}$  wave sections thus increases the power radiated. The link coupling provides a high voltage- low current coupling to the center  $\frac{1}{4}$  wave section.

Fred pointed out that the overriding factor in the setup of a ham antenna is location. The best antenna in a poor location cannot be expected to give optimum results. With room for a full wave antenna the above design will provide an excellent solution to the problem.

If any of you fellers out there have the opportunity to try out this antenna (or have a favorite you have had good luck with) please write it up and let the rest of us know about it.

Antennas remain the item most likely to cause loss of effective power output from the great majority of our ham stations. We all need more effective solutions.

FIELD DAY

Now is the time to start our preparations for FIELD DAY. We have tentative approval of use of the same site we used last year - the old mansion site in Sharon Heights, Menlo Park.

Anyone with an alternate site in mind should get in touch with Fred Canham.

Fred is getting together the list of potential operators. If you are going to participate get your name to him with your desires as to mode and times. He particularly needs TEAM CAPTAINS - give him a hand. Call him on his home phone 948 9238 or write to 691 Casita Way, Los Altos C. 94022.

\* \* \* \* \*

BOARD OF DIRECTORS MEETING  
8 March 1972

The PAARA Board met at the trailer. Les Vickery, Secty read minutes of last meeting.

Treasurer made report of receipts, expenditures and the bank balance.

Andy Korsak reported on the progress of the ATV. There was some discussion of the financial support to be given such projects by the Club treasury. No decision.

The donation to the Club by Ken Kerwin of approximately \$1883.48 in used TV equipment

was approved by the Board.

A new signature authorization card for the bank account was signed by the new President and the Treasures and Secretary.

Hal Moore outlined arrangements being made for phonepatches for the POWDERPUFF DERBY.

Fred suggests more activity by the membership committee.

Andy reported on the OSCAR activity in progress.

Lee Zalaznik, WB6BJB was appointed chariman of the PAARA WAS COMMITTEE.

Fred reported coordination with Carolyn Curreans, W3GCT on POWDERPUFF DERBY communications problems. Members will be canvased for PARTICIPATION.

Under New Business Les Vickery questioned the loan of code tapes and records to non-members. Decision - Members have priority.

Bob Allen complained that PAARAGRAPHS is delivered late to him. Suggests earlier mailing date. It will be mailed 10 days before the next meeting.

Fred suggests that the new frequency assigned to the Club, 145.24 be used as a Wednesday night Net. The purpose will be to exchange Club news and activities. Any member interested see Lee Z.

## TECHNICAL TOPICS de Andy VE3FZK

### TV PROJECT - W60TX/TV IS ON THE AIR

Hoorah! We finally got the W60TX/TV on the air with about 2 watts output and successful video QSO's. Last issue we reported having video modulation problems. We found the trouble to be inverting switches inside the transmitter not correctly positioned and after some tweaking of the cathode tuning of the ART-26 transmitter we managed to put out a reasonably watchable but snowy picture at the QTH of Elmer Shapiro, WA6MPC. Elmer has a padded down UHF converter and an indoor antenna, and he is a bit under 1 mile from W60TX. I borrowed his converter, took it home, and hooked it up to my 7 foot dish with a preamp at the feed, and WOW! I copy an S9 / / picture on my TV. It sure makes a difference with a good antenna system. This is the antenna I use to pick up Fresno and Tulare-Visalia, and I was surprised that the dish and preamp worked down to 440 MHz.

We tried to send pictures to several ATV types in the Bay Area but nobody could copy us. One guy in Cupertino was just barely able to pick up sync bars, so we'll have to do something about that low output of two watts. The ART-26 should put out about 15 watts when working properly. But even that wouldn't be enough for what we want to do. The idea of this project is to put out ARRL bulletins and transmit club messages to our members, as well as have some fun exchanging video with other ATV buffs, so we will need some more power. We are now debating whether to build a 1/2 KW amplifier or buy an ART-28 which will put out a few hundred watts (peak sync power). We have some lead to ATV equipment for sale, if any of you want to get on the air too.

About our TV demonstration, we decided to put it off till we perfect the equipment and have some more experience with it. All interested participants are welcome. See me at the meeting or call 854-2759.





## COLOR TV CAMERA PROJECT

As noted under FUTURE PROGRAMS, page 2, the presentation of our TV project to the general membership has been delayed. When we have the bugs out we will display it.

No construction progress this month, as I was on vacation for a week and lots of other things like spring cleaning (in between working on the black and white TV getting on the air at W6OTX) kept me pretty busy. But I am still planning to build up some PLL color demodulators for picking off color subcarriers created by gratings as described in the last issue. If any of you can help, the club would appreciate it. Actually, building the color carrier demodulators will be killing two birds with one stone, as this is the same type of circuit I built for the long neglected 2-meter project. I had some IF strips working a year ago using the SIGNETICS 560

PLL, but I could never complete a reproducible design with squelch and AGC added. I am trying to do now is to go back to a simple synchronous AM demodulator circuit for the color video demodulator, which will then serve as a 2-meter IF strip as well, and maybe I can come to a successful completion of the 2-meter transceiver I started a couple of years ago.

Here's how a PLL demodulator is used for color carrier extraction: As I described in the last two issues of this paper color information in the SRI/RCA single-vidicon camera is inserted by modulating 3 carriers at, say, 3, 4 and 5 MHz with red, blue and green intensity waveforms. That is, the video signal resulting from light passed through a colored filter is superimposed on 3 subcarriers corresponding to the 3 primary colors. A good way to separate out the information on these subcarriers is to use synchronous detectors with phase lock loops because these are easily tunable and synchronous detection adds to the attenuation of interference from the other two subcarriers. I plan to use tuned circuits ahead of the PLL's to aid selectivity.

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SAN CARLOS BUGLEReport of the San Carlos Amateur Radio Club  
(SCCDARC)

The time has arrived again when we have to plan our activities for next Field Day. We spent a large part of our last meeting on how we can improve last year's score. It is amusing, last year after FD we had a critique on what we did right and what we can do to better our performance, but do you think we can still remember what it was we wanted to improve on? Heck no! ! It wouldn't be any fun fun anyway if we were perfect. However, we have appointed a FD committee which is composed as follows:

W6OWQ, Bill Jackson, Chairman  
W6JOV, Ray Allustiarti, Vice-Chairman  
W6KZJ, Larry Daily, Member  
W6NIZ, Hank Luthe, Member.

This committee of experienced contest operators will have a separate meeting to draw up the plans and present them to our membership at the next Club meeting.

We had the pleasure of having Larry Reed, W6CTH, as our guest at the last meeting. Larry volunteered to help us this Field Day since the old South County ARC is no longer in the running. We then reminded him that we would gladly accept his help as soon as he would deposit \$3.50 with our Treasurer for 1972 dues, a rule set up last year as a condition for FD participation - and guess who insisted on that rule! ! Hi Larry, thanks for your greenbacks and we are happy to have you in our fold. After the meeting Larry confided to me that this was the first time in his career that he had to PAY to participate in Field Day. By the way Larry will be the featured speaker at the Tri-City meeting on May 5 1972 and he will present his slide collection on Africa. So, everybody can bring their wives or girl friends.

Our next San Carlos Radio Club meeting, thursday April 20, promises to be a good show. We will have a live 2 way Amateur TV demo. W6OWQ will set up at the City Hall and flash X rated pictures to Menlo Park. 73 Gene WA6NVU

# QUEMENTS

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