

Backfire ant.

BULK MAIL
U.S. POSTAGE PAID
PERMIT NO. 320
MENLO PARK, CAL.

TO:

Return Requested
PAARA, P.O. Box 911
Menlo Park, Ca.
94025

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)
Meetings held first friday each month

NEXT PLANNED FUNCTION

Date: Friday 5 November 1971 at 7:30 PM (Note time)

Place: Menlo Park Recreation Building, Menlo Park
Civic Center - (Off Alma St. Burgess Park.)

(NOTE CHANGE OF LOCATION)

Program: ELECTION OF OFFICERS. (PAARA only)

A presentation on "The Design and Use of
Solid State Power Supplies" by Henry Olson,
W6GXN, Radio Physics Engineer, SRI.

Pls note early
4th week

Vol. XV
No. 11
November
1971

2
OFFICERS

ADMINISTRATIVE

Pres: Andy Korsak, VE3FZK
V Pr: Bob Allen, W6WQD
Secty: Lee Zalaznik WB6BJB
Tres: Vance Wardlow W6FLE

APPDINTMENTS
VP PR: Jerry Starkey WA6LIJ
ccrc Rep: Fred Canham W6WQF
CD Eqpt: Bob Allen, W6WQD
Asst " Glen Baker W6UOK
TVI Com: Glen Baker W6UOK

BOARD OF DIRECTORS

Chmn: Andy Korsam, VE3FZK
Secty: Lee Zalaznik, WB6BJB
Membr: Glen Baker W6UOK
" Hal Moore W6DEF
" Vance Wardlow W6FLE
" Ed Fairbanks W6AIN
" Gerry L xson W6OPA
" Fred Cañham W6QWF

Editor: Vance Wardlow, W6FLE, Ph:854 0803; P.O. Box 911 MP

SUPPORT YOUR CLUB

GET INVOLVED

PAY YOUR DUES

PARTICIPATE

BECOME A PARTICIPATOR

For an application for membership call or write. Ask for an APPLICATION FOR MEMBERSHIP, P.O. Box 911 Menlo Park, Ca. or phone

854 0803

* * * * *

FUTURE PROGRAMS

Friday 17 December: INSTALLATION OF OFFICERS DINNER. And Christmas Party for all the families. Plan ahead for this gala event. Will be held at HARRY'S HOFFBRAU in Redwood City.(El Camino N. of Woodside road overpass. Bring the family, enjoy festivities.

Friday 7 January: Joint SCARS, SCCDARC & PAARA meeting to prepare and present plan for future programs for the year 1972. Start now to prepare suggestions & potential guests for meetings.

Wednesday 10 November 1971 - PAARA BOARD OF DIRECTORS Meeting. At PAARA Trailer, SRI. All members welcome.

Welcome New Member JOIN THE CLUB Ralph W. Franks

AUCTION!

BLOOD, SWEAT AND TEARS ! ! !

All were shed in great quantities in the promotion, preparation and conduct of the PAARA auction of October 15th in the AMPEX cafeteria.

The result was a tremendously successful Fleamarket Auction and Raffle. Both the buyers and sellers came in great quantities to barter, buy and sell.

Guests of honor and very lucid promoters of a better Amateur Fraternity were "Doc"as, Gmelin, recently reelected ARRL Pacific Division Director and Al Gaetano, SCM and nominee for Assistant Director as well as Larry Reed, also nominee for Assistant Director. Larry doubled as a most effective auctioneer.

Fred Canham, W6QWF, had done an outstanding job of detailed preparation and management of the Auction. He had appointed and supervised committees for all the various functions to be performed. The result was an extremely well run and smooth operation. HE DESERVES GREAT CREDIT.

In the auctioneers spotlight were PAARA's own Jerry Starkey and Norm Gordon. Guest auctioneers Herb Brasch, WA6YDF, SARA; and Larry Reed W6CTH, SCARS, proved to be super salesmen. Assisting the auctioneers were Andy Korsak, Ed Fairbank and Fred Canham.

Ed Fairbank was ably assisted in directing guests from the parking lot to the cafeteria, as well as assisting with hand trucks where heavy loads were encountered, by PAARA's own John Cameron III, Paul Theken, WN6DQU and SCCDARC's Eric Bach WN6MSD. Thanks fell-

Les Vickery was assisted by Hal Moore, Gene Reynolds and Vance Wardlow at the registration table and Raffle sales. Vance Wardlow collected the money and paid off the sellers.

OUR THANKS TO RAFFLE DONATORS

RED JOHNSON \$10.00

RADIO SHACK 24 Dictionaries

U-Do Electronics .12 Flashlites

HALTED SPECIALTIES . . . \$40.00

PHIL COOMS K6OEJ . . . \$10.00

Raffle prizes were drawn each hour for four hours.

AUCTION (Contd)

Fred had set up his own PA equipment - it worked to perfection. In fact everything went fine until the automatic sprinklers came on just as the electronic gear was being lugged into the Sales arena! Andy Korsak sounded the alarm and an alternate route was found until the sprinklers were turned off.

Andy Anderson displayed his super salesmanship in an outstanding manner at the PAARA rummage table. These tables turned out to be one of the most attractive items to the great majority of the guest buyers.

And to top it all off Bob Baum made up some of the most tasty coffee ever served on the Peninsula. With the fine selection of doughnuts it made the evening just about perfect. Thanks for all the hard work Bob.

As a final touch of superior planning Fred supervised the cleanup party after the affair was over. AMPEX found their cafeteria in as good or better condition next AM.

CONGRATULATIONS FRED FOR A VERY FINE JOB WELL DONE.

REPORT OF MEETING 9/1/71

The question of whether to hold a joint meeting of SCARS, SCCDARC & PAARA for elections was voted down.

Some discussion of the upcoming Auction Committees appointed.

Andy reported on the OSCAR exercise and the design of a hi-gain antenna for TV which will bring in channel 49 from Fresno (Broadcasts 49er and other local games).

The speaker of the evening, Al Gaetano, W6VZT, ARRL SCM, was introduced. Al gave us a fine rundown on what to look for in buying a receiver. He pointed out that a hi-gain front end may actually be a detriment if the noise level is raised above the signal. He advised that the building of a receiver is a major project in which personal pride is the only real advantage. The basic requirements are Sensitivity, Selectivity and Stability. If the noise goes down when the antenna is disconnected the Sensitivity is adequate. Stability is essential on SSB. This is usually dependent greatly on the weight of the equipment. He gave several examples. Thus Selectivity is the major design job.

MEETING 9/1/71 Contd

Al pointed out that in Ham band only receivers the main condenser is fixed and the tuning condenser very small, thus stability is improved. He also pointed out that the dial alone might cost as much as \$100.

Al's main thrust was that buying a receiver is to be approached with very well ideas of what you need.

THANKS AL FOR A FINE AND INSTRUCTIVE DISCUSSION.

* * * * *

PAARA BOARD OF DIRECTORS MEET

10/13/71

1950 - Meeting open. 12 members present.

Bob Allen accepts nomination as Radio Officer.

Norm Gordon suggests a single Club for the three areas now covered by SCARS, PAARA and SCCDARC. Some discussion. Matter tabled.

Nomination of officers was discussed. A slate was made up for presentation to the Nominating Committee. It was decided to not publish the slate before the next PAARA meeting.

Andy discussed the 2 meter project. He will use a conventional oscillator to replace the PLL he now has.

Bob Allen is working on the PAARA ATV equipment.

Norm Gordon donated two boxes of QST and CQ to the Club. Gerry Laxson will check the Atherton library to see if they will accept back issues of these magazines.

Hal Moore and Gene Reynolds

were appointed to the Committee to arrange for the Installation and Christmas party.

Bob Allen points out the costs involved in the phone calls and other activities of preparing PARAGRAPHS and suggests the Club should bear the expense. Some discussion.

Vance Wardlow says he spends from \$10 to \$50 per month on various Club activities and cannot visualize the Club

bearing such expenses. He also points out that Club members should accept some costs to themselves in supporting the Club and not expect monetary compensation for every activity in which they participate.

Hal Moore will ascertain correct procedures for the appointment of a C-D Radio Officer. It was pointed out that a very important facet is the proper conduct of all C-D business with the City of

Menlo Park. The Club should have definite procedures set up and followed in every case.

Meeting adjourned 2130

RED JOHNSON
ELECTRONICS

440 PEPPER STREET

PALO ALTO, CA.

PHONE: 326 6085

HAPPY HOLIDAYS

Enjoy Your Thanksgiving

And Remember

YOU NEVER GET A TURKEY

at

Red Johnson's

COME IN AND SEE OUR EXTENSIVE DISPLAY OF EXCEPTIONAL PARTS

LET US SHOW YOU HOW TO BEAT THE COST

OF LIVING INDEX

SEE

RED JOHNSON ELECTRONICS, 440 Pepper St., Palo Alto, Ca.
Hours 8AM to 8PM mon thru Fri. Sunday 10 to 2

EMERGENCY

Hal Moore W6DEF, our Emergency Coordinator, ARRL, points out that September issue of QST, page 72 gives traffic handlers a new precedence. Health and welfare inquiries INTO a disaster area will now have a precedence designator of "Q". (Was P2) Those coming OUT will continue to carry "P" for priority.

Inquiries re friends and relatives INTO a disaster area should be referred to the Red Cross or other agency. The originating amateur op can offer his services to the welfare agency and handle many such messages as "book" msgs. The ARRL numbered radiogram text "ARL Nineteen" can be used. And MOST IMPORTANT such "book" message can be addressed from one Welfare agency to another in the disaster area.

This appears most business-like. Receiving station need not locate every addressee and need only deliver the "book" to the Red Cross. Other more important business can be taken care of, and if needed a priority message in "book" form can be sent using "ARL Three, ARL Four or ARL Six".

Thanks for the tip Hal.
We must all prepare.

Hey !! Have you gotten your FREE subscription to QST yet? Get in touch with Lee Zalaznik, WB6BJB, phone 325 1168 or write him at 1735 Woodland Ave., Palo Alto Ca., 94303. You pay \$6.50 for ARRL membership and \$.50 of that goes to PAARA to help buy doughnuts or whatever. A REAL BARGAIN - GET GOING

* * * * *

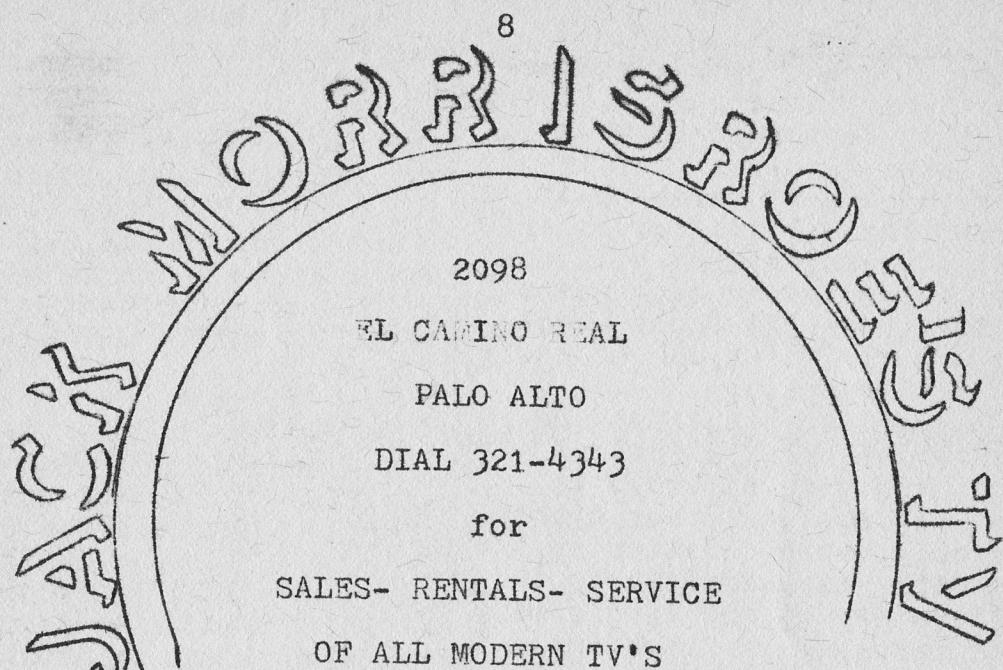
How many of you caught that fine picture of Sharon Schepke WB6FME in the Oct. issue of QST page 98. Sharon has an outstanding record of PARTICIPATION in amateur affairs along the Peninsula. We are proud to call her a friend and hope she continues her outstanding record of real and meaningful accomplishment and PARTICIPATION. 73 & 88 Sharon.

* * * * *

ARE YOU UNEMPLOYED?

Position as radio technician to work in FAA radio service shops in Malta or Nigeria. Must have Phone 2nd. Should be familiar with DC3, DC4-6. Facilities for families. Excellent schools.

Contact Earl Kochenderfer
Phone: 591-4140 (work)
591-8078 (home)
Openings immediately.



2098

EL CAMINO REAL

PALO ALTO

DIAL 321-4343

for

SALES - RENTALS - SERVICE

OF ALL MODERN TV'S

SINCE 1953

WE OFFER A RENT-TO-OWN PLAN

RCA SYLVANIA ZENITH SONY COLOR TV

MAKE YOUR CHRISTMAS SELECTION

PAY LATER

USE YOUR BANKAMERICA CARD OR MASTER CHARGE CARD

LET OUR SERVICE DEPARTMENT ADVISE

ON

THE VERY BEST TYPE OF TV FOR YOUR LOCATION AND NEEDS

JACK MORRISROE'S TV
2098 EL CAMINO REAL, PALO ALTO, CAL. PHONE: 321 4343

BY-LAWS MENLO PARK C-D CLUB - Cont'd
ARTICLE VII DURIES OF OFFICERS

The President shall preside at all regular and special meetings of the club with the assistance of the other officers. He shall appoint committees and designate committee chairman of each committee. He shall approve all official matter to be published by the club, and shall endeavour to assume leadership of the club at all times.

The Vice-President shall preside at all meetings of the club in the absence of the President. In the event of death, resignation, or removal of the President, the Vice President shall assume the duties of the office for the unexpired term.

The Secretary-Treasurer shall keep a full and accurate record of the proceedings of all business meetings of the club. He shall advise each applicant of membership of his election or non-election. He shall send out calls for special meetings as directed. He shall carry on and maintain a file of correspondence of the club. He shall keep a record of all funds collected from club members and maintain an accurate record of all club expenditures. He shall fulfill any other duties not above specified, but usually incumbent upon that office.

The Property-Custodian shall file and maintain in a current status an F.C.C. Amateur Radio Station License to allow the club to carry out its primary objectives. He shall insure the maintenance of all property in a continuous state of readiness for emergency usage. He shall maintain an accurate record of all property in his custody. He shall prepare reports and recommendations for additions to club properties to permit the continuous and active progress of the club.

ARTICLE VIII MEETINGS

The membership shall designate the day or days of the

HALLITED SPECIALTIES

1690 PLYMOUTH AVE., MOUNTAIN VIEW

PHONE: 969 0510

THE LOWEST PRICES IN THE AREA

HOURS: 9 AM to 5 PM

CLOSED SUNDAYS

HAPPY HOLIDAY

We do hope you will enjoy your thanksgiving dinner and look to meeting you at our headquarters so we may assist you in selecting those special items you may have planned for for the near MERRY CHRISTMAS SEASON

WE HAVE A TREMENDOUS STOCK OF VARIOUS ITEMS

HYDRAULIC LINES - POWER SWITCHING EQUIPMENT - FINE TEST SETS

TELEPHONE SWITCH BOARDS

OSCILLOSCOPES

TELETYPEWRITERS

POWER CONTROL EQUIPMENT - TUBES - AIRCRAFT INSTRUMENTS - IC's

FOR ALL YOUR RESEARCH AND DEVELOPMENT PROJECTS SEE OUR BIG STOCK

BUY IT BY THE POUND OR THE ITEM

HALTED SPECIALTIES

WE ARE LOCATED CENTRALLY NEAR THE BAYSHORE HIGHWAY

NEAR MOFFETT FIELD

COME IN ON STIERLIN ROAD TO PLYMOUTH STREET. TURN LEFT AND GO TO
END OF STREET - WE ARE ON THE RIGHT

SEE OUR HAM GEAR

A SPECIAL DEPARTMENT SET ASIDE FOR ALL SORTS OF USED HAM GEAR

SELECT THE ITEM YOU NEED AND WANT

LET US HELP YOU MAKE THE RIGHT SELECTION

WE WILL TRADE FOR YOUR PRESENT GEAR OR HELP YOU FINANCE THE NEW
COMPLETE YOUR STATION

11
FROM OUR FINE SELECTION OF TRANSMITTERS & RECEIVERS
GET YOUR TEST GEAR HERE AND COMPLETE THAT TEST BENCH OR NEW PROJECT
OUR SELECTION OF IC's AND TRANSISTORS

PROVIDE THE FULL RANGE OF YOUR NEEDS FOR EXPERIMENTS

OUR PRICES CANNOT BE BEAT OR EVEN APPROACHED FOR ALL YOU NEEDS

COME ON IN

TO
HALTED SPECIALTIES, 1690 PLYMOUTH AVE., MT.VIEW, CAL. PHONE 969 9510

12

ARTICLE VIII MEETINGS MENLO PARK C-D CLUB Cont'd

month on which all meetings are to be held.

Special business meetings of the club may be called at the discretion of the President, upon notice setting forth the business to be transacted.

The meeting held during the last month preceding the end of the fiscal year shall be designated as the annual business meeting.

ARTICLE IX CHANGE IN BY-LAWS

A proposal may be submitted at any business meeting of the club, to make additions, cancellations, or amendments to these by-laws. Such proposals shall be discussed at that meeting and then tabled until the next business meeting of the club, when it shall be voted upon. To be adopted it must be passed by a majority of the qualified voters.

END

* * * * *

Notes:

The MENLO PARK C-D CLUB is an integral part of the RADIO AMATEUR CIVIL EMERGENCY SERVICE (RACES). The Club Radio Station call is K6YQT. RACES is controlled by Civil Defense, an agency of government at various levels. The local C-D Director appoints a RACES Radio Officer, upon recommendation of the local C-D Radio Club, who must be holder of an amateur license. The RO must be certified to FCC by the C-D Director.

FCC does not issue operator licenses or authorizations for RACES. This is done at the local level by the C-D Director, upon recommendation of the Radio Officer. Thus the Civil Defense Director issues "certifications" to those enrolled in local C-D whose FCC operator licenses make them eligible to operate in RACES.

The safety and welfare of the population in the event of the ultimate disaster is the purpose and aim of RACES.

HERE IS A SPECIAL EVENT - 6 Nov.

FOOTHILLS AMATEUR RADIO SOCIETY (FARS) ANNUAL AUCTION 8AM
at

PHILCO Cafeteria on Fabian Way, Palo Alto. (Take San Antonio Road off Bayshore, right into Charleston, right on Fabian Way. Pass buildings 101, 58 and 56(2 story). Right to parking lot near cafeteria.

FREE REFRESHMENTS SWAP TABLE JOIN THE FUN

* * * * *

Here is a tip by W6JBT, Ed of THE CITRUS BELT AM RDO CLB MODULATOR

Note to users of HAM-M ROTATORS open the Control Unit. Simply

If your rotator has slowed down or has failed to operate don't start climbing the tower before you have checked the motor capacitor which is located in the Control Unit.

The rotator motor has two windings, and the 31 volts from

8 wire cable from the rotator. To substitute another capacitor it is not necessary to disconnect wires 4 and 8 and connect them to the tow sides of an AC electrolytic capacitor of the proper voltage and capacity, and let it lie on the table behind the Control Unit.

* * * * *

the transformer is connected directly to one winding and in series with the capacitor to the other. This causes the phase shift necessary to create a rotating magnetic field. When the control unit key is thrown to reverse the direction of rotation, the capacitor is connected in series with the opposite coil from the first instance as explained above.

The leads from the motor

Our old friend and many years member of PAARA, Hal Moore, W6DEF, recently was honored by United Air Lines upon completion of 25 years of good and faithful service. Congratulations Hal, and we do hope that Polaroid Land camera will give as good and faithful service in many exotic countries.

Windings to the capacitor come down the tower to the control unit and in Series III & IV Units are wires 4 and 8 in the

changeover from the inch-pound method of weights and measurement now used in the USA goes to Metric soon.

U-DO ELECTRONICS

1036 Castro Street

Mountain View, Calif

Phone: 968-8894

HOLIDAY GREETINGS

DO YOUR CHRISTMAS SHOPPING EARLY - SELECT THAT SPECIAL
PRESENT FROM OUR EXTENSIVE STOCK
OF ELECTRONIC DO - IT - YOURSELF KITS AND PARTS
ENJOY YOUR TURKEY THANKSGIVING

THEN

COME AND LOOK OVER OUR STOCK OF EXCEPTIONAL GIFT ITEMS
MOTOROLA HEP LINE

ULTRA HI-GAIN AMPLIFIER

RF SIGNAL INJECTOR

ELECTRONIC SIREN 4-INPUT MIXER

SELECT AN APPROPRIATE GIFT FOR THAT SPECIAL ONE

AT

U-Do ELECTRONICS, 1036 Castro Street, Mountain View, Cal.

Phone: 968 8894

TECHNICAL TOPICS de VE3FZK/W62-Meter Project

The bugs are still chirping in my IF - Squelch - Detectors p.c. board. I'm getting started rebuilding a new version with the IF and other components separated out on different p.c. board pieces so as to prevent intercoupling. The synchronous AM detector was giving the most trouble and I will try isolating it by shielding with small vertical pieces of p.c. board. Oh well, I'm slowly learning how hard radio design really is!

There is a new pair of IC's for AM and FM detection by RCA, described in OCTOBER QST. These are the CA3088 and 3089, and the latter really sounds exciting. It may be a life-saver for this project, as it has the following features: IF amp and limiter(10 μ V sensitivity), AGC feedback from its own signal level sensing, muting (squelch) built in and controllable by an external pot, FM quadrature detector requiring only single external tuned circuit, and an AF preamp putting out half a volt of audio. What more do you expect from one chip?!

I'm planning to build up an IF strip using these two new IC's as soon as I receive the free samples RCA is sending me. Meanwhile I'm still trying to get my old p.l.l. IF strip to play right. Haven't had time to get back to the transmitter board which I never finished aligning the coils on.

Stereo Decoders on One IC Chip

The OCTOBER POPULAR ELECTRONICS issue has an article on a new IC by RCA, the CA 3090Q, which has a complete stereo decoder on one chip. All you have to do to convert any FM radio to stereo is connect a single tuned circuit and the input and two outputs, and 12 V. dc. Actually, the article talks about the SK3078 IC but I just got a data sheet on the 3090 which is the same thing as far as I can tell.

Motorolla just came out with something even more interesting: their MC1310, which doesn't need any tuned circuit because it's built around a phase lock loop. I don't know any more about it yet, but it's another one-IC stereo decoder to try.

Frequency Synthesizer for the DRAKE R4

Bob Stein, W6NBI, who built us a nice tunable prototype converter for our 2-meter project, has just completed another successful design.

He designed and built a phase locking local oscillator for the R4 so he wouldn't need any crystals (except one, for reference) in switching bands. In fact, he has full coverage with it, as all he's got to do is peak up the preselector on any frequency listened to. The p.l.l. used is partly the Motorola p.l.l. and a homebrew VCO made with a varactor. He tried at first using the Signetics NE562 but it resulted in too much modulation of the VCO output by the reference signal. Anybody that wants to copy Bob's design call him at 968-1677(work) or 967-7559(home). He told me the cost would range around \$40 bucks, assuming you buy surplus parts toma large extent as he did.

OSCAR FLY-BY

I fired up the club's 4-65 linear on 2, using the club's Gonset for drive, and I screamed and hollered into that flown-by transponder, but as far as I know only one station in San Jose heard me come out on 10 meters. My own 10 m. receiver was lousy and I wasn't hearing anybody except Cliff, W6HDO talking to the pilot further down the band. Of course, Cliff had a KW # as compared with a watt or so out of the transponder, so no wonder I heard him. Ed, W6AIN tried listening for me on 10 but he did not hear much before it disappeared over the horizon.

There's a rumor-- only a rumor- that NASA will ride the OSCAR package just tested in a high-flying plane, at 50,000ft. No date was given yet, but that should be a good simulation of actual satellite operation.

According to the ground net, the last fly-by had about 125 stations participating. Cliff gave more details in the FOOTPRINT of Oct.

How to Watch Blacked Out Games For Free on UHF TV

I just threw up a parabolic dish(8'') antenna for UHF TV on top of my 2-m ant. on my ar-22 rotor, and I'm picking up Channel 24 from Fresno just like a local. You can buy these wholesale at Associted Radio on Old Middlefield Rd. for about \$40, but you can also build an even better ant. out of expanded metal and get as much as 23.5 db (over a dipole) (I think). My Channel Master dish gets onle 18 to 21 db. Anybody wanting to know any more about this write to Box 911 Menlo Park or cal' me At 854-2759 or 326-6200 Ext.2853. I also pick up Channel 26 out of Visalia near Sequoia National Park! Also get 40 out of Sacramento, 14 of San Mateo College, 54 of San Jose SC, and 46 from Salinas-Monterey.

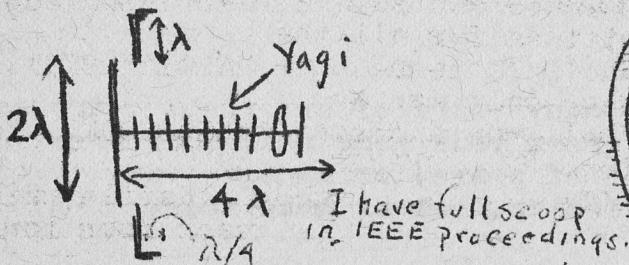
I also installed a commercial UHF antenna mounted preamp to bring the distant UHF stations up out of the noise. As you probably know, TV sets don't use an RF stage on UHF and the noise figure is terrible. If you want to build one, I just got a specially designed p.c. board at workmhere at SRI, which is for a broad band UHF amp for 20 db gain, from 500 MHz to 1 GHz. Several of these have just been built at SRI on a project and my friend who built them gave me a slightly damaged board. So if you want a copy of it let me know.

Project

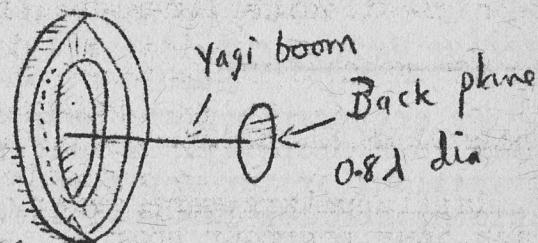
Bob Allen, W6WQD, is getting the club started on a new project-- we are planning a UHF TV Public Service Station on the 432 MHz band. We hope to locate a "studio" here at SRI up on the third floor of the Engineering Building, with an omnidirectional antenna on the roof. We figure most of the people getting this paper ought to be able to pick us up. Jim Finnell, W6DEU, of San Francisco, who is a PAARA member, offered to pitch in on this new project. Anyone else? It's going to be a lot of fun, we plan to put on ham "news bulletins" on TV and maybe even do a little ham acting! I have the guts for a KW amp on 432 so please pitch in and let's make this club famous. I also have access to a new method for transmitting in COLOR using a simple ordinary vidicon, which is a new patented technique invented here at SRI for RCA, and I was just talking about this idea with a colleague who said he'll help us set up a color camera.

UHF TV "Backfire" Antenna
23.5 dB gain (Patented, but you can build
one for your own use)

Side View



Pictorial View



DALTON

REALTY

230 HAMILTON AVE., PALO ALTO, CA.

WE SPECIALIZE IN PERSONALIZED SERVICES

LET US HELP YOU SELECT A HOME

ALLOW US TO ADVISE YOU ON INVESTMENTS

WE WILL PROVIDE YOU EXPERT ADVICE

BRING IN THIS AD FOR SPECIAL ATTENTION
in
OUR DEPARTMENTS

RESIDENTIAL

We are members of the MULTIPLE LISTING SERVICE. Our Residential Property Manager will give you his personal assistance and attention. Our Apartment Management Specialist will help you find that apartment to suit you.

INVESTMENT

We will make available to you advice based on many years of experience, on a very personal basis.

PROPERTY MANAGEMENT

We are prepared and have many years of experience, to manage your property. We will rent your home while you are on vacation; or for any period of years; or manage your apartment complex for your lifetime. Let us help solve your problems.

THE SAN CARLOS BUGLE

Report by the San Carlos RADIO CLUB

Election night has come and gone for another year at our club. Actually, it did not turn out to be the hotly contested affair I hoped for, but turned more into a short railroading party with all officers re-elected for another year, with the exception of the secretary. Our line-up for 1972 is as follows:

PRESIDENT	Eugene Sussli, WA6NVU
VICE PRES.	Jack McEnnerney W6LII
TREASURER	Larry Daily W6KZJ
SECRETARY	Connie Lutz WN6MNI

We wish to extend to Mike Bach, our outgoing secretary, our sincere thanks for a job well done in the past fiscal year. From past experience, I know that whenever a club has clean and complete records and minutes, you find a going and active group and our club is living proof of this. Mike has started his first Semester at San Mateo College and we wish him the best of luck in his studies and hope to still see him around in our club, because we need these active and young members and participation.

Connie--Welcome to our club and congratulations to your election as secretary. It is really nice to have a pretty girl around us and I know you will be a very valuable addition to our club.

In addition to new officers, we also had to elect a new member onto our Board of Directors to take the place of Jack Pierce, whose term just expired. I am happy to announce the unanimous election of Fred Heward, K6EER for a three year term. Fred, I'm pleased to see you on our Board, because we need a man with your experience and good ideas and together we can get some of those ideas turned into reality.

Our club also voted not to continue our membership in CCRC, because this body has not fulfilled our hopes of coordinating club activities and use it as a strong regional organization for all hams. It seems impossible to change the ways of this venerable body and new ideas fall only on deaf ears. We'd rather switch than fight.

73, GENE WA6NVU

* * * * *

FOR SAE: 2 Element, tri-band Quad for 10, 15 & 20. With
40 foot telescoping mast. All good condition. \$60.00

Mark Cherry WA6HHN, 1783 Adams, San Mateo 341 4259

QUEMENTS

"WHERE YOUR FRIENDS AND NEIGHBORS TRADE"

THE MOST COMPLETE STOCK OF ELECTRONIC PARTS IN THE WEST

BIG "Q"
at

QUEMENTS - OUR SPECIAL LINE FOR YOU

DON'T MISS THE OUTSTANDING VALUES IN THIS SPECIAL

AND

IF YOU NEED PARTS FOR ANY LINE

LOOK OVER OUR EXTENSIVE STOCK - OR LET US ORDER FOR YOU

WE REPRESENT

ALL MAJOR MANUFACTURERS IN THE USA AND FOREIGN

LET US OUTFIT YOUR LABORATORY, TEST BENCH OR RADIO STATION

AND DON'T MISS OUR STEREO AIDS

FOR THE FINEST SERVICE IN THE WEST COME AT ONCE TO

QUEMENT ELECTRONICS

at

1000 BASCOM AVE., SAN JOSE, CALIF. 95128

PHONE: 294 0464