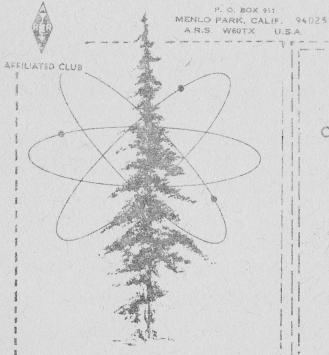
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PALO ALTO AMATEUR RADIO ASSOCIATION, INC.



AFFILIATED CLUB

STATION WEOTX

MENTO PARK

CIVIL DEFENSE

RADIO CLUB

AFAIL

MENLO PARK

KEYQT

Doc, 72

President: Fred Canham. W60WF Vice Pres: Andy Korask. VE3FZK Treasurer: Vance Wardlow. W6FLE Secretary: Les Vickery, W6AKR APFOINTMENTS

Chmn TVI Comm: Glen Baker W6UOK Member : Bob Allen Egpt Cust'dn : Ed Fairbanks CCRC Represnt: Fred Canham Refreshment & Raffle Comm

Ed Fairbanks W6AIN Lee Zalaznik WB6BJB

Chairman: Fred Canham W60WF Sect'v : Les Vickery W6AKR Member : Hal Moore W6 DEF Member : Ed FairbanksW6AIN Member : Gerry LaxsonW60PA W6WQD Member : Andy KorsakVE3FZK Member . V. Wardlow W6FLE

Telephone Comm Larry Rice W6IQT Andy Korsak VE3FZK Les Vickery W6AKR

MENLO PARK C-D RADTO CLUB Pres: Fred Canham WoQWF; Vice Pres: Glen Baker WoUOK Secty/Treas: Vance Wardlow W6FLE Property Custodian: Bob Allen W6WQD (Trustee K6YQT) Asst " " : Glen Baker W5UOK RACES RADIO OFFICER: Bob Allen W6WQD

Managing Editor: Lee Zalaznik WB6BJB Assistant Editors: Andy Korsak VE3FZK: Ed Fairbanks W6AIN; Les Vickery W6AKR; Gene Sussli WA6NVU (San Carlos Bugle); Eric Reese WB6KQX; Tom Ohlsson WB6KQZ.

POLICY: Membership includes subscription to PAARAGRAPHS. Annual dues \$4.00. Non-Subscribers will be dropped from mailing list as new names are added. Subscription \$1.00. For your APPLICATION FOR MEMBERSHIP send \$4.00 to PAARA, P.O. Box 911, Menlo Park, Ca. 94025. For info call 854 0803

#### BECOME A PARTICIPATOR

GET INVOLVED

PAY YOUR DUES

DO SOMETHING

support your club SUPPORT YOUR CLUB support your club

(See page 3 for future programs)

#### COMMING EVENTS

#### MEETING NOTICE

Fritay December 1st TIME: 7:30pm. PLACE: Menlo Park Recreation Center. PRCGAM:: Jim Lomasney will talk on "HF Back Scatter Research", Jim will describe the purpose, methods and results of this research at Stanford University and SRI. Motion pictures will illustrate the talk.

#### BOARD OF DIRECTORS MEETING

Wednesday, December 6th <u>TIME</u>: 7:30pm <u>PLACE</u>: The PARA trailar at SRI in Menlo Park, Ca.

#### CHIRSTMAS PARTY

Friday, December 15th PLACE: Sir George's For more information see the paper flier. FOR STREET AND GUESTS; BRING THE FALLY

#### OSCAR 6

The lucky launch of OSCAR 6 took place on October 15 at 1719 GMT from Vandenberg Air Force Base. The 40 pound package went up piggy-back aboard the ITOS-D weather picture satellite into a polar orbit over 900 miles high. This is known as a "sun synchronous obit", that is to say if you hear it 15 minutes before sunset today it will be the same 15 minutes before sunset tomorrow.

December 1972

#### Regular meeting November 3,1972

By Les Vickery

The meeting was held at the Menlo Park Recreation Center, with President Fred Canham, W6 WF, presiding. The meeting began with election of officers for 1973.

Additional nomination those presented by the Nominating Committee were opened for each office. There were no new nominations from the floor, therefore motions were made, seconded, and approved that each office be closed for further nominations. Hal Moore moved that the nominees be declared unanimously elected. The motion was seconded and approved.

Offices for the Menlo Park Civil Defense Club were opened for additional nominations. There were no new nominations added to those presented by the nominating committee. It was moved, seconded, and approved that the Menlo Park C. D. officers be declared unanimously elcted.

Fred Canham thanked everyone for attending and supporting the PA $^{1}$ RA auction on October 13th. The financial returns to the club were better than last year.

Andy Korsak gave technical committee reports on current TV and 2-meter projects.

Plans for the Christams party were discussed. Asuggestion by Gene Sussli that the party be held at Sir George's this year was adopted after much discussion and consideration. Gene offered to act as committee chairman.

The program was given by Mr. Al L. Clark, founder of Interstate Flectronics. He discussed the design features of the Mini-Mitter and its capabilities for communications on 80 & 40 meters; and Its use in Alaska by surey teams and oil companies.

#### REPORT OF NOMINATING COMMITTE

The following slat of officers and committee members where elected on November 3, 1972:

#### PALO ALTO AMATEUR RADIO ASSOCIATION

President: Fred Canham, W60WF Vice President: Bob Baum, W6BFH Secretary: Gene Reynolds, K600M Treasurer: Vance Wardlow, W6FLE

Board of Directors
Hal Moore, W6DEF
Ed Fairbanks, W6AIN
Andy Korsak, VE3F'K
Vance Wardlow, W6FLE
Paul Thekan, WN6DQU
Tom Ohlsson, WB6KQ

Special Assignments Equipment Custodian Ed Fairbanks, W6AIN

CCRC Representative Fred Canham, W6QWF

Menlo Park C-D Radio Club

President: Fred Canham, W6 WF
Vice President: Eric Reese, WB6KQX
Secrectary/Treasure: Vance Wardlow, W6FLF
Property Custodian: Bob Allen, W6WQD (Trustee K6YQT)
Asst. Property Custodian: Steve Montoya, WN6DCT

Committees
TVI- Glen Baker, W6UOK

Refreshments & Raffle Ed Fairbanks, W6AIN Lee 'alaznik, WB6BJB

Technical Projects
Andy Korsak, VE3F K
Bjorn Fosberg, SM5UR/W6
Eric Reese, WB6KCX
John Cameron, (NC)

Telephone
Larry Rice, W610T
Andy Korsak, VE3F K
Les Vickery, W6ARK

#### CODE PRACTICE SKEDS

The code practice from W6QIE has been running several years, and is a continuation of the K6USN code practice back in the 1960's at the present only one frequency (3590) is keyed, but plans and equipment is rapidly shaping up to add more. The first will be 7129 KHz. All frequencies used are coordinated with W6 RJ's code practive, ARRL bulletins, and W6OWP's ARRL qualifying runs. TIME: 8:00-9:00 PM daily except Mondays. FREQUENCY: 3590 KHz.

SPEEDS: 8:00-8:05 call tape
8:05-8;20 5 WPM
8:20-8:30 8 WPM
8:30-8:40 11 WPM
8:40-8:50 14 WPM
8:50-9:00 17 WPM
9:00-9:10 20 WPM
9:10-9:20 25 WPM
9:20-9:30 30 WPM

Thursdays
7 PM
Mento Park Rec. Cent
(from CCRC Circle)

#### ATTY REPEATER

A new FM repeater serving the Bay Area RTTY stations has just been announced, according to Tom Nelson, W60GN. Using 2125 mark/2975 space tones at 60 wpm, it has an input of 147.93 MHz and an output of 147.33 MHz.

The new repeater is a joint effort of WA6EU and WB6IMP and will temporarily operate under the latter's call. It will be an open repeater and all amateurs are invited to paticipate. Although presently installed as a COR (carrier) access direct audio device, future modifications will provide signal regeneration, automatic date/time entries, and other special features. (from CCRC Circle)

#### NOVICE PRIVILEGES TO TECHS-MAYBE?

It si interesting to note that W8VR has petitioned the Commission to grant Novice privileges to Technicians, duplicating a number of others already on file. The reference is RM-2043. (from CCRC)

#### CECAL

scar has been shut down due to excessive battery drain by use of high powered transmitters on input. Will be turned on a again November 17th 0000 GMT.

A man couldn't tell his two horses apart. He tried cutting the tail of one and the mane off the other-but this didn't work because soon grav back. Then he had a blinding inspiration! He measured them the black horse was two inches taller then the white one:

( from The MODULATOR)

#### CRU

Most of the C signals have an affirmative answer when used with a question mark. But the answer to CRU? is negative. Among traffic operators especially, we've heard this one murdered many times. CRU? does not mean "Are you clear of traffic?" and the affirmative reply does not mean "I am clear of traffic". It means "Do you have any messages for me?" and the answer means "I have no messages for you." So if someone gives you CRU? and you answer affirmative (not R!), he might tell you to g.a. with your traffic. Usually, however, both parties use the signal incorrectly. We're about to turn grey from hearing NCS's say RU?, ansered C by the net station, where upon the NCS says NX. (from October '72 OST)

#### CPERATION NOVICE ASSIST

A request has been made on behalf of the Bay Area novices to have hams givecrystals they are no longer using, and which can be used by novices, to a group which is organizing a crystal bank. Crystals will be made available to new novices to enable them to operate on more of the allowable frequencies. Crystals should be mailed to Ron Jones N6PWT: Box 2012, San Mateo, Ca. 94401 (from CCRC Circle)

## REDISON

#### ELECTRONICS

440 PEPPER STREET, PALO ALTO, CALIF. PHONE: 326 6085 open hours
Monday thru friday: 8AM to 8PM; Saturday 8A-6P; Sun 10-2

Merry Christmas and a Happy New Year



#### FOR SALE

Portable 900 Watt A.C. Alternator, gas driven, commercial, like new 115 V. A.C. at 60 cycles. Good for campers or ham operators in field. \$100.00 or offer.

Smith-Corona portable typewriter like new and excellent condition \$35.00 or offer.

RCA Victor 3 speaker stero recorder player, all speeds, portable, in excellent condition \$30.00 or offer.

To 15CV @ 10 amps. A.C. Volt-Amp Meter \$7.00 or offer

Farmer Electric Scanner (Electirc eye) to Relay Model PE#3 new \$25.00 or offer.

GE AC Load Visualizer (Power Factor) to 600 V. @ 50 Amps like new \$35.00 or offer.

- 2 chain around bumper antenna mounts \$5.00 ea. or offer.
- C. P. Clare 10 contact 3 banks stepping relay Mod. 36 with power supply indicator lights. \$15.00 or offer.
- 3 Potter-Bumfield KRP 14 A 3 pole double throw octal plug in 115V.ac Realys New 33.00 each or offer.
- 5 Potter-Bumfield KRP 11 A 2 pole double throw octal plug in 115 VAC Relays New \$3.00 each or offer.
- 2 Frost Engineering Sensing relays ER 10-5 & EF 105P octal plug in 115 VAC @ 5 Amps New \$3.00 each or offer.

Field Strength meter \$5.00 or offer

Q-Beam Acme movie lite new \$10.00 or offer. Contact Charles L. Carpenter K6HPP 786 Coleman Ave. Apt. K Menlo Park, Ca. 94025 Telephone # 325-4845

#### NEW REPEATER DIRECTORY

The latest ARRL Repeater Directory is a 35 page 6x9 free booklet which users will find very handy particularly when you plan to travel. Send a large S.A.S.E. with 24 cents postage.

#### FIELD DAY 1972

Here is the listing of our neighbor clubs and some that we have dealings with, in the order thay appeared ing ST:

Call	Name	Xmts	Points
#6V T/6	Four H Minus One Club	2117	1886
W6LUC/6		2	1708
	West Valley ARA	2	1526
W6T0/6		2	539
K6FB/6		3	2814
60TX/6		3	2264
W6HS/6		3	1628
WB60HL/6	"Worldradio" Staff ARA	3 3 3 3 3	1250
W6AK/6	Sacramento ARC	3	952
W6IF /6		4	4746
W6PW/6		4	2668
- 1/6 IAE/6	Westinghouse ARC	4	2086
WB6PC0/6		4	1882
W6 B/6	San Leandro ARC	4	1816
W6PMK/6	North Peninsula Electronic	4	1702
	Coastside ARC	4	1542
W60T/6	Oakland RC	4	1212
	San Carlos CD ARC	5	3862
WA6GFY/6		5	2464
6JBT/6	Citrus Belt ARC	5	1989
K6BJ/6	Santa Clara County ARA	5	1746
W6SG/6		5	1023
K60E /6	Ampex Employees ARC	6	4782
W6MLK/6	Hi-Frequency Amateur Mobile	6	1352
W6CX/6	Mt. Diable ARC	7	4012
K6IS/6	North Hills RC	7	1765

Join the Code class - Get Your License - Go Up - Call Paul 369 4034 Thursday Mites

#### ARRL OFFICIAL BULLETINS

#391 September 21

Attention DXers. Announcement is hereby made of the additions to the ARRL Countries List of Mellish Reef. Mellish Reef is territory telonging to Australia located at approximately 17 degrees 25 minutes south latitude and 155 degrees 52 minutes east longitude. This addition to the Countries List is made under Point 2 (a) of the criteria detailed on page 131 of the October issue of CST. Submissions for DXCC credits for Mellish may be made starting Novermber 1. Confirmations received before Novermber 1 will be returned without credit. With this addition, the last postion in the Honor Roll will be 312 deleted. DXCC participants who can make the 312 deleted total may make submissions for Honor Roll credit during December.

#### #393 October 2

FCC has now acted in the matter of Docket 19162, regarding phone band expansion. Effective November 22, 1972, ther will be 25 KHz more on 75 meters, a move down to 3775 KHz, and 50 more on 40 meters, down to 7150 KHz. There will be no expansion 20, 15, or 10 and no change in the 25 CW segments for extra. Voice sub-bands available exclusively to extras will be 3775-3800 and 21,250-21,270 KHz. Voice sub-bands available to advance and extra will be 3800-3890, 7150-7225, 14,200-14,275, 21,270-21,350 KHz and 50.0-50.1 MHz. Novices stay at 3700-3750, move to 7100-7150 and at 15 meters reduced to 21,100-21,200 KHz, They lose 145-147 MHz privileges entirely but will get CW privileges from 28.1-28.2 MHz. The novices requirement for crystal control is to be deleted. Full information will appear in the November issue of ST.

#### #394 October 12

FCC has issued a policy statement easing compliance with the repeater Docket #18803. All amateur applications filed on or after October 17,1972, must comply with the new rules. A station operating as a repeater station, and/or one authorized for remote control, whose license (cont. to Page 12)

(cont. from Page 11)

was granted as a result of an application filed prior to October 17, 1972, should comply with the new rules to the extent possible after that date, but must fully comply by no later than June 30,1973. Applications for such stations received prior to October 17, 1972, will only be granted authorization for operation through June 30, 1973. These station and any other atation whose license must be modified to comply with the new rules may file an application for modification for the balance of the original license term without payment of additional filing fees. If a renewal or additional privileges are requested, normal filing fees will be required. Applications for station license madification filed after April 30, 1973, may not be processed in time to permit continuity of operation. The granting of waiver requestes except under the most exigent circumstance are not contemplated. The report and order and the rules speak of limiting repeater station coverage to intra-community amateur radio communication. In consonance with the rules limiting to two the number of repeater station operating in tandem, intra-community is considered the maximum area covered by such a network. Beginning October 17, 1972, a license issued for a repeater station will authorize a call sign having the prefix WR followed by the number of the applicable FCC district. The suffix will be three letters assigned systematically starting with AAA.

#395 October 12

More from FCC. Effective December 1, Docket 19245, the so called Eyebank matter, has been concluded by amendment fo section 97.39 to remove the words quote nor for its use unquote. Third party traffic is prohibited if it involves material compensation, either tangible or intangible. Direct or indirect to a third party, a station licensee, a control operator, or any other person. A new rule forbits the use of amateur radio in connection with any illegal activity. December OST will carry the full text. FCC has also issued a new notice of proposed rule makeing concerning possible limited compensation for control operators at club stations and possible relaxation of the logging for third-party communications. Text in December OST.

# SURPLUS ELECTRONICS



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AND A BRIGHT

AND HAPPY

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#### CURRENT EVENTS (CONT FROM Page 4)

BOARD MEETING November 18, 1972

The meeting was held at the club trailer, with Fred Canham presiding. Minutes of the previous board meeting were read and approved. The treasurer's report detailed income and amounts paid out dring October and November.

Andy Korsak gave technical committee reports. A memo from Ed Fairbanks reported on the Auction refreshments, and details what will be referred to for the next auction.

It was decided that PAARA will join the CCRC for 1973 and the \$6.00 dues were approved; Fred Canham and Jerry Starkey will be delegates.

Jerry Starkey will act as Christams party chairman for PAARA and will work in close cooperation with Gene Sussli to formulate plans and arrangements. Les Vickery will assist.

Civil Defence plans for presenting to the City of Menlo Park were discussed at lenght. Further study and development will follow under the leadership fo Bob Allen.

#### NEV MEMBERS DURING THE PAST MONTH

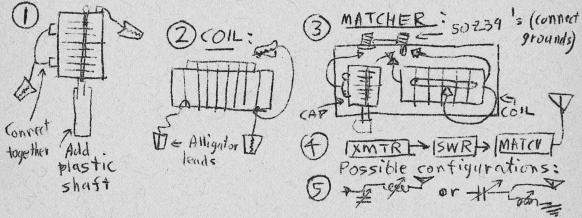
Howard M. eidler W6WMC 881 Embarcadero Palo Alto, Ca. 94303 323-1712

Charles E. Cary 940 Arbor Road Menlo Park, Ca. 94025 323-6401

## TECHNICAL TOPICS A SIMPLE ANTENNA MATCHER By: RICHARD FERRANTI, WN6NCX

If you like to operate on all tands with a minimum of expense, have a decent junkbox, lots of wire, and a cardboard tube about 3 inches in diameter 8 inches in length, you might want to try this matcher. I've used it for over a year at my home station with a 40 meter dipole with 1:1 SWR and more recently at the station at the U. of Santa Clara, with WB6DOA operating 20 phone and 40 C.W., near 1:1 SWR, and contacts from Hawaii to Maine. The antenna there is just 135 feet of wire; we used about 180 watts.

Take an old broadcast-band variable capacitor, rip out the trimmers on the side, and connect the two sections together to obtain close to a 500-pf variable, good to 200 watts C.W. or P.E.P. S.S.B. ZNow wind some 14-16 gauge wire around the tube, pushing a pencil under the windings so a clip can connect to the stripped, raised portion as a tap. 20-25 turns is about enough for a coil. Just solder leads with alligator clips to the capacitor connections, and the ends of the coil, with one extra lead as a shorting clip at one end of the coil. You're essentially finished—glue or screwthe coil and capacitor to a wood board and add S0-239s. Be sure to ground the coax going in and out of the matcher. 73 es Good Luck!



### THE CLUB'S TWO-METER PROJECT de Andy VE3FZK/W6

FM RECEIVER BUILT BY JOHN ELLISON

As I mentioned previously, John Ellison, W6A0I, has been developing a new FM receiver design in his "garage workshop".

A few months back I asked John to help us come up with a suitable receiver for club members to be able to copy, as I was having trouble trying to come up with a design that worked consistently and was reproducible. John design phase went through the usual "ups and downs". He was having lack of gain in his second mixer (JFET), then when he raised the oscillator voltage dring it he too many strong birdies. Finally, he licked the problem by going to a dual-gate MOSFET second mixer stage just like his first mixer.

John is now drawing ap a layout of his receiver and he has given me a complete circuit diagram and parts list. I hope to have John demonstrate it at the Dec. meeting, and if he can't make it I hope he may let me bring it for display. It works really well now, and when I went to John's place to examine the latest version, we tuned in a couple of repeaters very nicely off a 19 inch whip inside his garage. Sensitivity is under a microvolt, but I don't have the exact apecs on S/N and d6 quieting (and all that sort o f "rot"). Anyway, I think he's come up with a great idea in a receiver design, and the first chance I have I will build a copy of it, but laid out slightly longer and on a p.c. board, so the average ham would build it more easily. After all, John is not quite the "average ham - he's built an awful lot of good equipment. John is a retired Navy Captain, by the way, and some of you guys might have read articles by him in QST and possibly elsewhere.

Some advantages of Johns design"

1. Xtal controlled front end (1-st converter)

Page 17

#### for stability

- 2. Tunable 1st IF (at around 10 MHz) and tuning range so far is about 500 KHz (I will try to expand this in my prototype for the club).
- 3. All integrated circuits after 2nd mixer makes for easy building. He uses the RCA 3028 as an IF amp., the Motorolla MC 3089 as limiter, FM detector and squelch, and another IC for all the audio gain and output power.

One feature I would like to add to Joh's design is some means of AM detection so the receiver could be used for rag-chewing and on nets like the CD drill and SPECS net Monday nights. After all. there still is a lot fo us on 2 with AM rigs, and it would be a shame to have to miss all those long drawn out put you to sleep SO's. There is a lot of "old timers" especially who get on 2 every night and I enjoy listening to them without a lot of SB, CRM, nad just being able to sit back and relax. In fact, I get into some of those drawn out SO myself. Thats the nice thing about the good old AM mode. On FM repeaters, you can't get to " pour your heart out". On some of them, if you say more than a few words youre not wanted, it seems. Not that I am down on FM repeaters—they aregreat for reliable mobile communications. But for our club purposes, we need AM for club nets and FM for CD activities. Les Vickery W6ARK built a nice 14 v and 18vregulated power supply using IC's good for this project.

#### FM TRANSMITTERS AVAILABLE

Now that I got my copy of the W6HDO tx design working, Bob Baum, W6BFH built one and has all stages up to 72 MH working (at latest news). Doc Laxon came over to my garage the other day and raided the club's parts kitty for building the FM "Pip-Squeak" out of QST. Vance Wardlow W6FLE bought % 100 Mw 2-meter Fm transmitter for \$35.00 and has some left for anyone wanting to get on the air with the repeater gang right away. These are finished transmitters complete with K60FO Xtal and mike.

#### In Car of Buch

We held elections for officers at our October meeting as required in our by-laws. On Thursday, Nov. 16, 72 we held the first meeting at which our newly elected officers took over the reigns. This is our line-up for the new fiscal year:

President: Bill Jackson, Wedwa

Vice-President: Gordon Spalding, KHCHFT/W6

Bill Burris, WA6CXJ Treasurer: Hank Luthe, WCNIZ Secretary:

Congratulations to all new officers, and good luck,

This last meeting was a very lively one and we had a record turnout of about 24 members. The main items on the agenda were the Christmas party, participation at the Pacific Directors Meeting next month in San Jose and the announcement of the Field Day Results for 1972. Cur San Carlos club did just as well as we expected. Again, we placed FIRST in the State of California And we moved up to THIRD place nationwide in the 5-transmitter class. If we continue this way, we could be first in the nation next year. Bill Jackson brought up the fact that we have some FM equipment from the county for CD purposes. We will have a meeting of RACES members on Thursday, Nov. 30, 72 at the Firestation #2 to install as many of these mobile units in our cars as possible.

We also held elections for two vacant seats on our Board of Directors. This is your new Board of Directors:

Bill Jackson, W60WQ Gordon Spalding, KH6HFT%W6 Fred Heward, K6EER Bill Burris, WA6CXJ

Eugene Sussli, WA6NVU Larry Reed, W6CTH

Secretary of the Board: Hank Luthe, W6NIZ

I hope San Carlos members will turn out in force as usual for our Christmas Party at which our new officers will be formally installed. 73,

Gene, WA6NVU

## HALTEK ELECTRONICS

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FOR THE HOLIDAYS

AND MAY EACH

DAY OF THE NEW YEAR

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Merry Christmas and a Happy New Year

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