

P
A
A
R
A

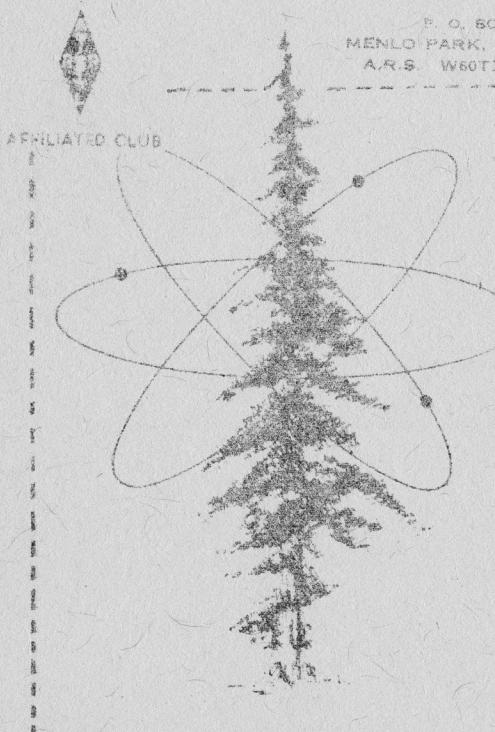
Q
S
D
G
J
U
V

Vol.
XVII
1973

U. S. Postage Paid
Permit No. 320
Menlo Park Cal.

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

PALO ALTO AMATEUR RADIO ASSOCIATION, INC.



P. O. BOX 911
MENLO PARK, CALIF. 94025
A.R.S. W60TX U.S.A.

STATION W60TX

AFFILIATED CLUB

MENLO PARK
CIVIL DEFENSE
RADIO CLUB



CITY OF
MENLO
PARK

K6YQT

~~Stamps~~ Feb. 73

ADMINISTRATIVE

2 OFFICERS

President: Fred Canham, W6QWP
Vice Pres: Bob Baum, W6BPH
Secretary: Gene Reynolds K6QOM
Treasurer: Vance Wardlow, W6PLE
(Trustee W6OTX)

BOARD OF DIRECTORS

Chairman: Fred Canham, W6QWP
Sect'y : Gene Reynolds K6QOM
Member : Hal Moore, W6DEF
Member : Ed Fairbanks W6AIN
Member : Andy Korsak VE3FZK
Member : Vance Wardlow W6PLE
Member : Paul Thekan WN6DQU
Member : Tom Ohlsason WB6KQZ

MENLO PARK C-D RADIO CLUB

President: Fred Canham, W6QWP
Vice Pres: Eric Reese, WB6KQX
Secretary/Treasurer: Vance Wardlow, W6PLE
Property Custodian: Bob Allen, W6WQD (Trustee K6YQT)
Asst Property Custodian: Steve Montoya, WN6DQT
RACES Radio Officer: Bob Allen, W6WQD
Asst RACES Rdc Off.: Vance Wardlow, W6PLE

PAARAGRAPHS

Staff

Managing Editor: Lee Zalashnik, WB6BJB
Assistant Editors: Andy Korsak, VE3FZK; Gene Reynolds, K6QOM;
Eric Reese, WB6KQX; Tom Ohlsason, WB6KQZ; Gene Sussli,
WA6NVU (San Carlos Bugle).

- PALO ALTO AMATEUR RADIO ASSOCIATION, INCORPORATED, POLICY:
1. Membership includes subscription to PAARAGRAPHS;
 2. Annual dues \$4.00 per year
 3. Members will be dropped upon non-payment of dues;
 4. Subscription to PAARAGRAPHS \$1.00 per year; non-subscribers will be dropped from mailing list as new names are added.

APPLICATIONS FOR MEMBERSHIP

Send \$4.00 dues to PAARA, P.O. Box 911, Menlo Park, Cal. 94025
For info call 854 0803

JOIN THE CLUB

BECOME A PARTICIPATOR

CAN TRUST YOU

Page 3

February 1973

COMMING EVENTS

MEETING NOTICE

Friday February 2, 1973 TIME: 7:30 pm PLACE: Menlo Park Recreation Center. PROGRAM: Ron Rasmussen, W6GXK of San Carlos will speak of his adventures as a hot air balloonist. Ron will have slides to prove his feats and will be glad to answer any questions about this exciting hobby. To top off the evening we will have the usual comraderie (That's a stuffed shirt word for eyeball QSO's).

"PREVUE OF COMING ATTRACTIONS"

Ultra-sonic "X-ray" machine demonstration, developed at SRI to display living organs without radiation danger.

Amateur TV in living color by hams in the Bay Area.

PAARA 2 METER NET GETS UNDERWAY

By Fred Canham, K6YT

Two meter activity has been picking up among PAARA members lately. Starting at 7:30 pm Monday nights, the following calls can be heard on 145.49 or 145.24 mHz; W6BFH, W6UOK, W6FLE, WA6LIJ, W6DEF, VE3FK and K6YT. Now if we could get W6AIN and WB6BJB on the air we could have a good start with the long sought after PAARA net. Anyone else wishing to join is urged to do so.

PRESIDENT OF PAARA FRED CANHAM IS K6YT

No we do not have a new member of PAARA Fred Canham our present member has a NEW CALL he got it last month. He is now Ex; W6QWF and his new Call is K6YT. Good luck with the new call Fred.

CUURENT EVNETS

By Les Vickery

Regular Meeting January 5, 1973

The meeting was held at the Earthquake Research Center, of the U. S. Geological Survey, at 800 Menlo Ave. Menlo Park. Bob Wallace, K6OL =, Chief of Earthquake Research, discussed the objectives and methods of research, which were illustrated with slides and photographs. Incidentally, Bob has been in amateur radio for 45 years, so is a real "OLD TIMER" in spite of his youthful appearance.

Signals from 170 locations are recorded at the Menlo Park Center most of them are along the San Andreas Fault. The three main areas of the research program are: 1. Earthquake Prediction. 2. Earthquake Control. 3. Land Use and Planning.

Major damage from some recent earthquakes was due to liquefaction of the sand on which buildings were constructed. The Managua earthquake, so far as is known, was shallow, with the epicenter in the downtown area of the city. Had the earthquake been deeper, the disaster area would have been greater.

Most earthquakes occur at depths of 1 to 15 kilometers, the majority at a mean depth of about 7.5 km.

John Van Schaack discussed the equipment and instrumentation on the display table. There are two basic types of seismographs; the moving coil, and the moving magnet types. The seismic signals may have a level from 5 microvolts to few millivolts, and at frequencies from 0.1 to 30 Hertz. These signals are amplified filtered, and multiplexed onto telephone lines to the Research Center. A telephone line can carry up to 8 seismic signals.

When an earthquake occurs, the primary or compression wave arrives ahead of the secondary or shear wave. The elapsed time between these waves is used by various observing stations to plot the location of the earthquake. The Research Center has a continuous record of "microearthquakes", mainly along the San Andreas Fault in order to relate any major earthquake to its activity.

Membership of PAARA

By Vance Wardlow

The following have been dropped from membership in PAARA. Most have moved from the immediate area and we do hope they find a new affiliation inwhich they can participate to their greatest enjoyment. PAARA regrets the loss of these members and we hope they will each visit and maintain contact with the Group and its members.

Loren Chan, WA6ENC
Norman Gordon, WA6NFM
Clyde Griffin, WA6CBW
Don Lopez, WB6TPX
Paul Mezzapelle, WA6NLJ
George Raven, K6CG
Jesse Sadler, W2UZF/6

Our special kudos to our old and valued member AL Stainback, WA6GVP. Having become greatly involved in the commercial pilots organization Al found he had very little time for his amateur radio hobby. The result was lack of participation and scheduled to be dropped from membership. A nice note from Al saying "Fine business when a guy can get kicked out of an organization on the weak excuse he doesn't pay his bills !!" We agree Al- there ought to be a law!! And our sincere thanks for the check for dues through 197⁴. You are now a full fledged reinstated member.

WELCOME NEW MEMBER

Herbert G. Sussman, WA6OXH. Herb is a 2 meter man presently. Is a CW operator from away back. Nice to have you aboard. Will see you at SET.

Simulated Emergency Test (SET)

It is great to see the response to SET. Mike Bach, WB6FFC is getting together with Andy Korsak, VE3FZK to put up a 5/8 wavelength vertical dipole on the steam plant next to the Trailar at SRI. This should assure excellent 2 meter coverage for our whole area.

FOR SALE

Heathkit 5-inch scope Model IO-12 for general purpose and TV trouble shooting, plus Heathkit EF-2 on separate chassis for use of scope. Both in excellent condition with manuals including large study guide on "How to Use An Oscilloscope". Fifty dollars (\$50) or best offer. Original cost kit form \$95. For more information contact: Larry Dail W6KZJ 1601 Arroyo Ave. San Carlos, Ca. or Telephone Number 593-9150.

WANTED

S Sideband transceiver, 12volts DC power supply and mobile antenna must be capable of semibreakin on CW. Call Fred Canham K6YT at 948-9238 evenings.

FOR SALE

A 1kw linear amplifier without power supply. Very rugged with vacuum condensers throughout, wired for K400 final, well metered. Rack mounting panel. \$150. Call W6GAQ 327-8207.

SAROC

~~SAC TIME~~

The 1973 SAROC convention will be held January 4 th thru 7th at the Flamingo Hotel Convention Center in Las Vegas. For details write to SAROC, P.O. Box 73, Boulder City, Nevada, 89005.

Civilization is a system under which a man pays a quarter to park his car so he won't be fined a dollar while spending a dime for a nickel cup of coffee.

(From ACTIVE KEYS)

Pay your dues,

JOIN THE CLUB
- best in the WEST

Pay your dues

PARTICIPATE
- it's fun

AMATEUR RADIO PUBLIC SERVICE CORPS

By Hal Moore W6DEF

I am the trustee and the ONLY operator of K6OTR. On special occasion I can pursuade Elmer Snow W6FEK or Bob Barnes K6UKF to give a half hour or so but NOT on a schedule, week after week. The history goes way back to the 1950's when the Executive Secretary approached me shortly after the Red Cross had moved into their new Building at 3540 Middlefield Road in Menlo Park. Before that they had been located on Broadway in Redwood City and we used to go there on Monday nights and use our own calls into the County Civil Defense. The Executive Secretary asked if we could do the same thing at the new building. I could see no reason why we couldn't form an organization and get a call. I approached a half a dozen fellows and I got their support and the Red Cross approved and so K6OTR came into being. We have a six meter and a ~~two~~ meter Gonset Communicators. For about ten years or so I had a crew of High School fellows. They were from the Menlo Atherton High School, in fact over the years I'd have several different crews. We became affiliated with RACES by way of the County of San Mateo. We help the Redwood City Races with the various parades. I attended the County meetings representing the Sequoia Region, Golden Gate Chapter. I was able to get my Brass Ponders medallion by way of the Grey Lady Chairman at the Sequoia Hospital. With her help I was able to originate over a hundred messages into the National Traffic System for four months straight. We used to take one of the stationwagons out on Monday evenings and participate in CD Drills. It was fun with interesting things to do. We had a power generator also we'd warm up. We never operated medium frequencies except that sometimes the High School fellows would bring their own gear in. I ran out of a team a number of years ago and keep the station alive with occasionally operating from there on Monday nights. It is awfully cold and lonely over there by myself though. I check into the Redwood City Net. Specs net on 146 MHz and the county repeater, K6QFO. I am out of there and on my way home by a quarter after eight usually.

I'd like to handle more traffic such as birthiays greeting, etc. I'm usually home from work at 4:00pm and NCN meets at 7:00pm. My phone number is 368-0444.



"Red" Johnson

440 PEPPER

PALO ALTO, CALIFORNIA.

ELECTRONICS

326-6085

NEW
Specials →
Specials ↘

Tantalum Capacitor Specials ↗

33 MFD. - 10 VDC - 30¢

47 MFD. - 6 VDC - 25¢

68 MFD. - 20 VDC - 85¢

Impulse Counter

6-Digit
110 VDC.

\$200



Veeder-
Root

HAYDON Timer

27 VDC.
 $1\frac{1}{2}$ - $2\frac{1}{2}$ Min. (Adj.)

DROP IN-
LOOK AROUND

M-F: 8AM-8PM,
Sat.: 8AM-6PM
Sun.: 10AM-2PM

Adjustable Delay Line

$Z = 1000 \Omega$
 $T_d = 0$ to $0.4 \mu\text{sec}$

\$500

TECHNICAL TOPIX de W6NCX

CONVERSION OF THE AN/PRC-10 FM TRANSMITTER-RECEIVER

The PRC -10 is on the little FM rigs to appear on the surplus market. It covers 38-55 mHz transmit and receive, with about 0.9 watts output over the entire range. In the tradition of the good old IRC-5 transmitters, the transmitter-receiver is VFO'd throughout and the transmitter is "track-tuned" i.e., you just set the frequency and forget it --the tuning capacitor follows with the oscillator and maintains resonance, and hence, uniform output from 38-55 mHz. As if that isn't enough, there is a very accurate 100 kHz crystal calibrator in the unit. Now all the solid-state proponents will scream--it is a tube rig--(say,dad, What's a vacuum tube?). Most of you are envisioning a monster twice the size of the W60tx trailer--or even one of Andy's "TV" transmitters, but no,--the whole works is hardly larger than a 2-meter CE, er... FM rig.

Converting the PRC-10 is a matter of building power supply for it -- as with most of the conversions I do, I dislike trying to rip everything out of a surplus radio set, and call the much-modified remnants a "conversion". The unit has sixteen tubes with 2 RF stages and five I.F. stages, a squelch (of course) and the regular reactance modulated oscillator-- amplifier transmitting set-up. As previously mentioned, the output is about 0.9 watts, but, liking whole numbers, I goosed it up to 1 watt by running a little more voltage on the final you can get away with that with a 5A6 tube final.

The schematic runs on for pages (6, to be exact) so I've only shown the pin connections for the usual esoteric, impossible-to-find, connector on the back of the rig's case. I removed the plug and soldered a 6-conductor cable to the pins, then replaced the protective cover. This resulted in a neat, strong assembly. The other end of the cable was terminated with a male (safety first--don't use a male connector for the output of the supply) octal-type plug with cover.

(cont to Page 14)

COMMITTEES-FOR 1973

At the Januray 10th Board of Directors Meeting. The following committees were appointed for 1973 :

TVI: Glen Baker, W6UOK

Refreshments and Raffle:

Ed Fairbanks, W6AIN

Lee Malaznik, WB6BJB

Paul Thekan, (NCO)???

Bob Baum, W6BFH

Technical Projects

Andy Korsak, VE3FZK/6

Bjorn Fosberg, SM5UR/W6

Eirc Reese, WB6KQX

John Cameron, (NC)

Entertainment

Andy Korsak, VE3FZK/W6

1973- PLANNED MEETING OF PARA AND SCCDARC

January 5th, MP Rec. Center Bob Wallace Detection & Prevention of Earthquakes.

January 10th Board of Dir. Meeting

January 27-28 Simulated Emergency Test

February 2nd MP Rec Center Hot air Balloonists

Feb. 7th Board of Dir Meeting

March 2nd San Carlos Host

March 7th Board of Dir Meeting

April 6th MP Rec Center FCC Exan Competition KGEI
(cont to page 11)

(cont from page 10)

Page 11

- April 11th Board of Dir Meeting
April 22st Pot Luck and Games
May 4th San Carlos Host
May 9th Board of Dir Meeting
June 1st MP Rec Center Eccles Ham Developments in England
June 6th Board of Dir Meeting
June 23-24th Field Day
July 6th Tours: Dual Tour Redwood City Weather Bureau A-J July 6
K-Z July 7
July 4th Redwood City Parade
July 11th Board of Dir Meeting
July 17th Mexican Day Parade, Redwood City.
August 3th Tour of Oakland Air Traffic Control Center ← Phil Green
August 8th Board of Dir Meeting
September 7th San Carlos Host ← Recommend Pyramidal Radar
October 5th MP Rec Center Nomination of Officers, Andy Korsak Color TV
Demonstration ← here ↓ Eccles?
Oct. 10th Board of Dir Meeting
Oct. 19th PAARA Auction
November 2nd MP REC Center Election of OFFicers Technical Talk
November 7th Board of Dir Meeting
December 7th MP Rec Center Technical Talk ← Bill Johnson?
Dec. 12 Board of Dir Meeting
Dec. 14 th Christmas Party Inauguration of Officers.
- ↑
(see card) R77Y2

ARRL OFFICIAL BULLETINS

#402 November 30

The Arrl Intruder Watch has completed eight years of operation. This volunteer service has materially aided in having intruders removed from the amateur bands. Continuing vigilance and additional work are necessary. The Intruder Watch welcomes additional volunteers with several years amateur experience and good receiving equipment who can spend at least two hours a week logging the calls of nonamateur stations in the amateur bands. Volunteers please write Intruder Watch, ARRL, 225 Main Street, Newington, Connecticut 06111.

#404 December 14

ARRL is pleased to announce the establishment of a new award. The Satellite DX Achievement Award recognizes Two-way communications via Oscar 6. To qualify, 1000 points must be accumulated. Each new contact via the satellite counts 10 points, each new country 50 points and each new continent 250 points. Confirmations must clearly indicate two-way contacts via Oscar 6, contain a date of December 15, 1972 or later, plus usual information. Photocopies of QSLs are not acceptable. Only one contact per station, regardless of mode. Details page 58 December QST. Application forms are available from ARRL 225 Main Street, Newington, Connecticut, 06111.

BULLETINS AND CODE PRACTICE

W6ZRJ Cupertino, California

Thursday 7:30 pm 3590, 7129 kHz CW 15-20
8:30 pm 3815, kHz SSB phone
9:00 pm 3615 kHz RTTY 60 speed

W6QIE South San Francisco, California

Code practice Tuesday-Sunday 8:00 pm 3590 kHz 5-30 wpm.

Danger

How is it possible to expect mankind to take advice when they will not so much as take warning. CCR C Circle

J&H outlet

591-7113

SURPLUS electronic parts & equipment

largest stock on the peninsula

brass • copper • aluminum
stainless steel

■ INTEGRATED CIRCUITS—TRANSISTORS
■ TUBES—DIODES

■ OPEN mon. thru sat. 10 a.m.-6 p.m.

When you buy the rig, be sure to get the H-66 P/T handset that goes with it--otherwise you'll go nuts trying to wire a carbon mike and 600-ohm headset with PTT switch to that audio connector.

The unit is NOT a transceiver--if you are clever, you can put trimmers on the receiver section to offset its frequency from the transmitting section--hence a good repeater station. They would go on the last three gangs of the main capacitor, in series or parallel depending on whether you want up-or down-offset.

These things are really cheap and would be ideal for simplex net operations around your area or just to talk to your friends across town on the relatively dead band called 6-meters. Noise free-Fm.

One last word on the price--I got mine for \$19.95 from Fair Radio in Lima, Ohio. The handset was \$5.98. The unit was in perfect condition, worked the first time I tried it, and although sold as "used", looked brand new. I've seen them sell for as high as \$39.95 so look around before you buy one. Also, have it shipped UPS.

CORRECTION

A correction concerning PARAGRAPHS Xmas gifts. The Low Pass Filter was donated by San Mateo Electronics and NOT by Bill's Quality Electronics.

Here's something interesting brought to my attention--The ARRL must believe in having dummy operators instead of dummy antenna as neither the Handbook nor the Antenna Handbook tells how to build up a dummy antenna.

(From CCRC Circle)

TECHNICAL TOPICS de VE3FZK/W6 Andy Korsak

TWC-METER PROJECT This is a very important project of our club which was begun way back in March 1970, with the purpose of coming up with a prototype 2-meter transceiver (solid state and portable) so all club members could easily build one and we could then be always prepared for an emergency communications requirement. Also, we could obviously benefit greatly, as individuals and as club members-- e.g. regular QSO's on the Mon. nite CD nets or any time, using repeaters, etc. Well, it's been longer than I ever dreamed it would take, but we're gradually coming to a point where a first prototype FM-only transceiver will be completed. I'm a bit ashamed to, but I will now quote myself from the March 1970 issue of PAARAGRAPHS, in which the first article of this series appeared: "--we don't want to spend years on experiments. The object is to present a prototype by mid 1970, hopefully by field day." Well, I don't feel too awful bad about this--after all, what did the last two Presidents say abot^u the Viet Nam war way back, etc. etc. ! You can never tell how long it takes to get a job done sometimes.

Transmitter Prototype As I wrote last month, Bob Baum W8BFH copied the club's prototype I have working now (designed for us by Cliff Buttschardt W6HDC and he was having trouble getting any output from it beyond the 72MHz stage. I rewound his coils a bit more closely with Cliff's specifications, took care of some other minor bugs, and it was singing sweetly like a bird. Bob will have to buy the proper set of transistors for it, though. Those I gave him out of the club's supply just don't hack it at 144MHz. Paul Thekan etched a couple more p.c. boards for this tx at Lenkurt Labs and Rick Ferranti WNGNCK took one from him at the last meeting and will build another copy of the prototype--can't put it on the air till he gets his advanced ticket in the mail (he just passed the exam, congrats, Rick!)

Receiver Prototype Paul Thekan laid out a master p.c. board positive (black tape on clear plastic) for the FM tunable receiver designed for us by John Ellison W6ACI. Maybe by next month we'll have some boards etched and start checking John's design for reproducibility. Gene Reynolds K6QOM indicated interest in carrying on with designing an FM rx around a phase lock loop for stereo in his car. He has quite a good idea--

he wants to build a complete stereo car rx inside one of those black boxes a lot of us bought from Red Johnson a couple of years ago. I told him to make this a club project--I'm sure now we'll never fit a 2-M transceiver in one of those boxes, so why not put them to another good use?!

COUNTER BUILT BY TWO LOCAL HAMS Wayne Ryder W6URH and Bill Jackson W6COW just built a 20Hz to 50MHz counter which looks like it would be fairly easy to copy. It uses Nixies and easy to get i.c.'s on the surplus market. I have a blueprint of it, so anyone interested can write to our P.O. box or see me at one of the meetings, or contact one of the above.

COLOR TV CAMERA BUILT BY W6URH Wayne Ryder gets things done a lot faster than I do; he put together a color camera in about 3 weeks. He and I have been struggling for the last few months trying to build a color camera based on a new invention here at SRI where I work (and am typing now--what a way to spend a Saturday night!) Well, Wayne finally got frustrated and decided to just do it the conventional way, using 3 vidicons instead of one as in the SRI concept. The first results he got are pretty darn good, for a start. He's now improving color shading and other minor deficiencies. I'm planning to include a demonstration of his camera along with other aspects of ham TV at one of our coming club meetings, so watch for that one--it should be an impressive demonstration!

DONATION OF 2-METER ANTENNA TO W6OTX Today Mike Bach WB6FFC came over to SRI with a fine 5/8λ ant. for our trailer hq., which he is letting us keep so we can be heard up in Belmont! Thanks, Mike, and PAARA will be glad to accept any other such generosity! Also here today were John Cameron and Gary Perazzo K6LVJ, who helped me by holding the thick RG-17 coax so I could hack away at it and repair a badly installed connector so we could use it for an additional ant. for the SET next weekend.

UHF TV DX ANTENNA COMPLETED Steve Montoya and his dad built that huge "backfire" ant. for pulling in Fresno, which I wrote about in Nov. 1971 issue, and they now have it pulling in Channel 24 o.k. but not 30 or 47 which have most of the blacked out games. Steve is planning to build a tuned amplifier for 30 and 47 for extra gain and selectivity--just as with my 7ft. dish, he gets too much cross mod from strong local stations.

Page 17

MEETING OF PAARA BOARD OF DIRECTORS, 10 JANUARY 1973
by Gene Reynolds, K6QOM

The meeting was called to order by Fred Canham, K6YT, other members present were: Vance Wardlow, W6FLE, Jerry Starkey, WA6LIJ, Ed Fairbanks, W6AIN, Bob Baum, W6BFH, Bob Allen, W6WQD, Gene Reynolds, K6QOM and Paul Thekan(NC). Minutes of the prior meeting were not available.

The Christmas party costs were discussed. PAARA spent \$36.36 and a bill for .20.00 has been received from San Carlos. Fred will discuss sharing this expense with Larry Reed and Gene Sussli.

The 5KW generator which the Club has used in the past is being used by Oliver Sweningsen, WA6QGX, at his new QTH in Contra Costa County. At this time there is no clearcut understanding of ownership of the MG. This will need to be discussed with Oliver. There was some discussion of purchasing a MG with Club funds - no decision. It has been indicated that SRI would allow our use of the 60KW generator in the Steam Plant. Bob Allen and Andy Korsak will investigate this possibility.

A videcon tube valued at \$350 was donated to the Club by Ken Kerwin, K6UXO. He was given a receipt to allow use as a tax writeoff.

Bob Allen discussed plans for this years participation in the Simulated Emergency Test. It was discussed by all and final plans drawn up. Bob and Jerry made phone calls to various members to encourage their participation.

The pros and cons of fixing up the Club trailer were discussed. A number of leaks are showing and there is some rust on the outside panels. Fred Canham and Bob Baum will investigate further the best methods of repair.

Fred Canham reported on the last CCRC meeting. There is a need for volunteers for the upcoming hamfest.

The schedule of planned activities for 1973 was discussed and several suggestions made. It will be issued in the February issue of PAARAGRAPHS.

Meeting adjourned at 11:00 PM.

JOIN THE CLUB

BECOME A PARTICIPATOR

MEMBER HAPPENINGS

A fine rag-chew and eyeball QSO by Andy Korsak, VE3FZK, Gene Reynolds, K6QOM, Lee Zalaznik, WB6BJB, and Vance Wardlow W6FLE at the latters QTH on friday 19 January. It came about due to a minor crisis in getting the material together for this issue of the PAARAGRAPHS. Lee is particularlly worried that since he lives across the Bay he doesn't have close contact with those who have agreed to contribute certain perteions of the paper. Gene brought in his report of the Board Meeting. Lee had received the report of the last meeting from Les Vickery but had not heard from either Gene Sussli or Andy regarding their contrib- utions. Andy assured all that he would have his part in on time. Never did hear from Gene Sussli.

ALL MEMBERS ARE URGED TO CONTRIBUTE. Be sure to let either Lee or Vance know of your pet project, the trip you made, any unusual contacts made, changes in your station equipment, reaction to our Club Programs. Get the news in so your fellow Club members will know what you are doing.

Rich Ferranti, WN6NCX, has sent a couple of very fine articles. Good going Rich, and we are sure all members of the Club have benefitted.

Andy will try to coordinate a series of contributions from some of our newer members. Hopes to cover RTTY, Use of Repeaters, Development of 2 meter Sets, and his favorite - Amateur TV.

All contributions must reach the editor (Lee Zalaznik, 2503 Santa Rita St., Pleasanton, Ca. 94566) at least 2 weeks before the upcoming meeting on the first friday of each month.

JOIN THE CLUB - BE A CONTRIBUTOR - PARTICIPATE

HALTEK¹⁹ ELECTRONICS

1690 PLYMOUTH AVE., P. O. BOX 970

MOUNTAIN VIEW, CALIFORNIA 94030

PHONE: AREA CODE (415) 969-4510

* Surplus Electronic Test Equipment & Components

HALTEK

Electronics

SURPLUS TEST EQUIPMENT & PARTS

JIM TREES
969-0810

1690 PLYMOUTH
MOUNTAIN VIEW, CA. 94030

HALTEK

Electronics

SURPLUS TEST EQUIPMENT & PARTS

GEO. J. BECKER
969-0810

1690 PLYMOUTH
MOUNTAINVIEW, CA. 94030

SINCE 1933

PHONE AREA 408 294-0464

FAST SERVCE

20

QUEMENTS

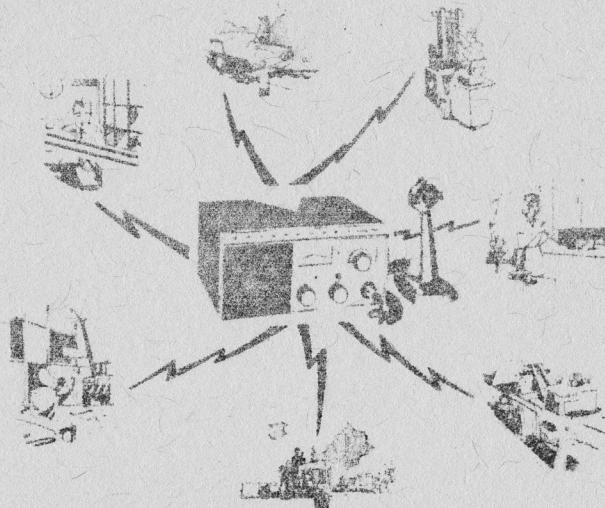
1000 SOUTH BASCOM AVE.

SAN JOSE, CALIF. 95128

NOTICE: CALIFORNIA RESIDENTS INCLUDE 5 PERCENT SALES TAX

QUEMENT ANTENNA SUPERMARKET **SAVE!**

"NATION'S TOP SELLING ANTENNAS"
OVER 100 DIFFERENT MODELS IN STOCK!
FOR TV - RADIO - CB - AMATEUR - COMMERCIAL



YOU'LL GET A BETTER DEAL AT QUEMENTS
-LETS TRADE-