



SCCARA-GRAM



W6UUVOLUME 5

NUMBER 12W6UW

SANTA CLARA COUNTY AMATEUR RADIO ASSOCIATION

***ORGANIZED IN 1921

SAN JOSE, CALIFORNIA***

FROM THE PREZ

We're working for a new boss this issue. Shorty Freitas, AE6Z has taken over as editor from Dick Letrich, WB6WKM, who has most ably produced the SCCARAGRAM since March, 1985. Our thanks to both.

ELECTION OF OFFICERS FOR 1987

At the November meeting you elected the following officers:

- President: Ed Rawlinson, WD6CHD
- Vice-President: Allen Levin, N6NDY
- Secretary: Carryl Pratt, N6NPQ
- Treasurer: Dan Dietz, WM6M
- Board Members:
- George Allen, WA6O (1 yr)
- Bob Richman, N6KLQ (2 yrs)
- Herb Himmelfarb, KB6ABG (2 yrs)
- Lou Steirer, WA6QYS (2 yrs)

We welcome Allen Levin and Darryl Pratt to the board, all the rest are retreads. ARRL V.P. Bill Stevens will officiate at their installation.

Dec. 8th SCCARA XMAS PARTY will be at Moffett Field CPO Club (just outside main gate. Take Moffet Blvd off Hwy 85, or watch for Moffett Field on Hwy 101). Festivities will commence (bar opens) at 6:30 pm, Dinner at 7:30 pm. We'll again have Christmas (prize) tapes, door prizes including table decorations by XYL's Hastings and Parrish), thank yous, installation, and last but not least the usual gift exchange between members and guests. Bring a wrapped gift for someone of your sex, so marked, \$5 value. Remember, this is the night you bring the XYL, so make the gifts proper. Dinner features prime rib at \$15/plate, or Poached Salmon with wine and butter sauce at \$12.50/plate. If you have not registered, please call Dan, WM6M at once on 224 9023 or Ed, WD6CHD on 264 2988. The CPO club must have the head count by 12/4.

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DUES FOR 1987 were raised to \$15 per year per member, \$20 for family membership, at the last meeting to accomodate the increased costs of SCCARAGRAM and other activities. This with money from the convention should put us on sound financial footing...as soon as you pay them!! ARRL too!

THE REPEATER COMMITTEE reported the 440 repeater operating as good as it is going to be until such time as duplexers are obtained and installed. Parts were quoted as between \$300 and \$500. Whether what we have installed to date will guarantee our continued use of the pair is questionable.

PACIFICON '87 may be held by the club as voted upon at the last meeting. The apparatus to put on another is still intact, and, more important, we know how to do it. If the application is approved, we should define our objectives as well as the program. I am reflecting the thoughts of Director Bob Richman who spoke to this at length last board meeting.

I thank the membership for the opportunity of serving as your president for '86, and your faith in continuing me in office for '87.

Merry Christmas to all
de Ed, WD6 Chile Hot Dog

SCCARA 1987 DUES PAYMENT COUPON

Remittance:..\$.....

Individual (\$15)... Family (\$20)...

Name.....

Addr.....

City.....ZIP.....

Call.....Class.....ARRL.Yes/No

Telephone.(.....)



CQ YL de W06X

By the time you receive this issue Thanksgiving will have passed, and Christmas will soon be here with all the preparations for family, club, and business gatherings, one of which will be the annual SCCARA Christmas Party at the Moffett Field CPO Club. It would be nice to see you there.

The BAYLARC meeting will be at noon on December 13 at the residence of WA6LIZ in Millbrae. This will be a combination business and pleasure meeting, with a luncheon and exchange of small gifts plus elections of new officers and executive board members. BAYLARC members should have received ballots by now. The selection is a good one, so please be prompt in mailing your ballot. Non-members interested in coming to the meeting to join in the fun will be welcome. Please let me know so that I can make the necessary arrangements.

On upgrades: it is my great pleasure to inform you that we will soon be hearing a new YL on the air. She deserves a big accolade for the reason that she went from novice to extra with a perfect score (100%) on code and written in one session! Her name is Caroline Lambert, and at test session time she had not received a novice call yet. She passed the novice test at the convention. Isn't this fantastic?

Another YL brings a smile to my face, and she is an Italian too. She is Nina, IT9JLA. Nina won the "Gold Cup" in the 1986 "DX-YL" to "NA-YL" CW and SSB contest. Stateside winner of the contest was Jane Branz, KM8E. I have worked Jane in the past, and she kindly allowed me to use the same plate for my QSL cards that she used for hers. This QSL card is very attractive and exclusive.

Plans are in the offing for the YL net. The trustee of the 146.640 repeater has been approached, and he seems to be in favor.

My last 1986 column. Where has the year gone?

!!!Seasons Greetings!!!

!!!Keep up the good work, girls!!!
73 and 33 Carla

DE WM6M, YOUR TREASURER

December. The end of 1986 is in sight and 1987 looks like another banner year for SCCARA.

Some new officers were elected at the November meeting. Some of us were re-elected for another term and we will do our best to keep the club rolling. We should have our traditional "fun" activities next year with perhaps a few surprises for all of us. I'm sure the new officers will bring some fresh ideas into the club leadership as well as new energy.

To those officers leaving their positions, thanks for giving your time and contributions! It is a privilege to serve as an officer and I feel well honored to have your confidence again as treasurer...even if we did have to raise the dues!

One further thought ... we have quite an assortment of people in our organization ... some really interesting personalities and backgrounds. At the next meeting, why not sit next to someone you don't know and introduce yourself. We all like to visit with old friends, but meeting new ones can be satisfying and just might pump some new blood in to your routine.

UPGRADES, ETC....Not many that I know of this month. I do know that Joan Hastings, KB6LFZ and Kevin Baltz, KB6LCS passed their Tech. Congratulations to you both! We should have a bunch of new novices at the end of our current class. Wally, Roy and I have the pleasure of instructing about 20 students each Tuesday evening. Already we have one who passed her novice (just couldn't wait!) and one new tech. I am told that the next novice class should form around the end of January, 1987. If you know of anyone who would like help to get that ticket, please let Wally Britten, KA6YMD know about it.

DUES ARE DUE FOR 1987.

Dues are \$15.00 for individuals and \$20.00 for families. Please send in your check with the form on page 1.

73 and Merry Christsmas to everyone
Plus my special 88 to each YL
de Dan, WM6M



PACIFIC DIVISION
DIRECTOR'S REPORT
de Rod Stafford, KB6ZV

Several of the members of the ARRL Board of Directors are lawyers including me. In January, the ARRL Board created the Legal Strategy Committee (LSC). The LSC, made up of those lawyers who are Directors and Vice-Directors, met at the ARRL Nevada State Convention in Las Vegas in early November. Several topics were discussed including the League's position on the FCC no longer maintaining the VEC question pools, various approaches to attack Covenants, Conditions & Restrictions (CC&Rs) that prohibit amateur antennas, reviewing some engineering data for use in tower cases as well as a number of other legal related amateur radio topics. In later reports, I'll keep you posted on any action taken by the LSC.

It is a good idea to take your FCC license out and check the expiration date once in a while. Be advised that there are companies that have access to FCC records for the purpose of sending notices to hams that their license is about to expire. These companies also state that for a fee they will renew your amateur license with the FCC. These notices come in 'official looking' envelopes and it would be natural for someone to think that they came from the FCC. It costs nothing to renew your ham license and if you're having trouble figuring out the FCC Form 610, ask around for a fellow ham to help you complete the form (preferably one who knows how to do it). By the way, the FCC is currently revising the Form 610 and a new version should be out around the first part of 1987.

A number of people have asked me about ARRL Life Memberships lately. Life memberships currently cost \$625. Applicants can choose to pay the cost over a two year period in eight quarterly payments. The applications can be obtained from ARRL Headquarters or from me (an SASE would be appreciated).

The 1987 ARRL Handbook is now available. Same price as last

year, \$18.00. If you can believe it, it's even bigger than the 1986 (63rd) edition. Updated sections include: amateur satellite operation, propagation, weather satellite image reception, filter design and construction, 23-cm FM television and QRP transmitters.

Another new ARRL publication that has just been released is Solid State Design by Wes Hayward, W7ZOI, and Doug DeMaw, W1FB. An excellent technical work with a lot of 'week-end' construction projects.

It is uncertain just when the FCC will release its Report & Order in the Novice Enhancement proceeding. A short time ago, it appeared the R&O would be out by Xmas. Maybe not. Due to some personnel changes we may not see the FCC Order until the end of the first quarter, 1987.

Plans for more focussed cooperation between the uniformed services and the amateur radio community came out of a meeting in Arizona in October. Chiefs of the three Military Affiliate Radio Systems (MARS), the Dept. of Defense MARS Liaison Officer and Perry Williams, W1UED, representing the ARRL, agreed on a program which should result in an increase in the number of amateur radio operators. The ARRL, working with affiliated clubs and the field organization near the military bases, will locate volunteer instructors for amateur radio courses. These will be offered to interested off-duty military personnel either on-base or in a nearby town. The program responds to a January 1986 ARRL Board motion calling for a closer working relationship with the military, via its MARS programs, with training of new amateurs a prime objective.

On November 7, the FCC released an Order which allows credit for the written part of an examination in a VE session. After December 15, 1986, you'll be able to take the written portion of any examination including Extra Class and receive a Certificate of Successful Completion if you pass. Then, within a year, take the code portion of the exam. Until now, you were required to pass the code portion first.

The Equipment Column,
by: Eric, N6NMZ

Hello Everyone. I am enjoying my new job in Sacramento, though I miss my old friends in San Jose. I want to thank Mike Hastings, KB6LCJ for the following letter:

Kenwood TS430

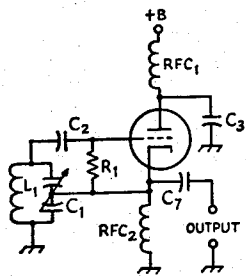
I was out looking for a rig starting on the day I passed my novice exam. Some primary concerns were: physical size since I had a limited area for my ham shack, portability because I planned to adapt it to our RV and ruggedness. My work is in electronics, but I have little time to tinker in the off hours, so I needed something that works every time, all the time.

So what makes this rig any better than say the Yaesu FT757? Really not much. The features are nearly identical between the top brands. For me, I knew several friends with trouble-free Kenwood products, liked the looks and feel of the TS430, but the biggest plus was the 3X5 card on the Qument bulletin board. That card led me to a ham that was moving up to the TS940 and wallah "I had my first rig".

Here are a few features that I appreciate:

- * Handles all bands from 10 to 160.
- * Will continuous tune from 150 KHz to 30 MHz in either 10 Hz or 100 Hz increments. You can tune in KGO AM if you want.
- * Step switches allow moving from band to band or in 1MHz increments through the band.
- * The unit has 8 memories. You can scan all eight or scan between frequencies stored in positions 6 and 7. This is nice if you want to tune say between 7.225-7.350 continuously.
- * The RIT (receiver incremental tuning) is great. It allows you to stay on transmit frequency but tune up a drifting receive signal. Not everyone runs TS430s. (Hi Hi).
- * Unit puts out a solid 100 watts of power.

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* Has a lock that keeps the rig on frequency if it is accidentally bumped.

* Unit has VOX and QSK.

* The unit runs on 12VDC. If you run on house current, a 20 Amp Power supply is needed.

There are many more features but this should give you a taste of what this fine rig has to offer.

73s Mike KB6LCJ

Thanks again Mike. I am sure that this will be useful information for a lot of club members. I also own a Kenwood HF rig, the TS180S. I would recommend Kenwood HF gear to anyone.

Somewhere else in this issue of the SCCARAGRAM is the beginning of a series of reprinted material from "73 Magazine". I felt that the article was so informative that we couldn't afford to miss it.

Next month I hope to write a little about coaxial cable, a subject for everyone. Write in and let me know what you want for Christmas. See you at the Christmas dinner.

73's Eric Homa, N6NMZ

The FCC recently used a 50-ton bulldozer to crush about 200 illegal CB radios with a value of about \$65,000. Part of a nationwide campaign to crack down on equipment capable of causing harmful interference.

Mike Osborne, WA6VLY has an ICOM O2-AT and an ICOM O4-AT for sale. Included in the deal is various batteries, and accessories for the transceivers. Mike did not give me a list, nor did he quote prices. You may reach Mike on (408) 736 2960 for details and negotiations.

NEXT MEETING WILL BE THE CHRISTMAS PARTY AT MOFFETT FIELD. DETAILS ELSEWHERE IN THIS ISSUE.

A Walk Through the UHF/VHF Spectrum
(by permission of "73 Magazine")

Part 1

In this article I'll try to provide a brief but concise overview of the amateur spectrum space above 50 Mhz. In doing so, I'll try to answer questions such as: (1) How many frequencies do we have up there? (2) Who's using them? (3) How can I (the reader) better use them? (4) Who makes equipment for those bands anyway? (5) You mean I can actually work England and South America on 6 meters?

Actually, we in the amateur service are quite fortunate with our spectrum allocations. The only group with access to more spectrum space is the U. S. government itself! Yet, much of this spectrum space lies largely dormant, either due to ignorance or just laziness. As time marches on and pressure mounts from groups outside the amateur service, we'll be hard pressed to justify retaining these privileges unless we make better use of them, for as you know "possession is nine-tenths of the law".

The 6 Meter Band

For starters, consider the lowest frequency allocation: 6 meters. This band occupies from 50-54 Mhz and is a rather unusual animal. For example, although it is truly a VHF band based on spectrum position, it often behaves like an HF band owing to different types of propagation that may occur. The most common is sporadic-E, Es for short. This condition is prompted by sunspot activity and results in sporadic ionization of the E layer of the ionosphere. (Typical HF propagation occurs in the F layer of the ionosphere.) When this happens, contacts may be made with stations located thousands of miles away, often with low power levels. Severe thunderstorm cells frequently accompany this phenomenon, which has been extensively researched over the years.

A type of propagation that occurs less frequently nowadays on this band is F2 layer propagation, similar to that which occurs on the lower fre-

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-quencies. Right now the sunspot cycle has bottomed out but is climbing up again; so in about five years F2 propagation will be at its peak on this band. Here the possibilities are greater for DX: It's quite common to work into Japan from the West Coast or into England or Africa from the East Coast. One fine example of what F2 can provide is a contact made by Mike Crawford, WA2VUN from his home in N. J. to a ZL in New Zealand, running 80 watts to a single seven-element yagi.

Many 6-meter fans have WAC certificates, largely due to F2 propagation. Now that amateurs in Great Britain have received 6-meter privileges (although somewhat limited) it will be possible to make the W2-G2 path more readily when the sunspot cycle peaks out. Many stations have already worked the British Isles via Es, which occurred several times last summer, forming paths from the Atlantic Coast states 3,000 miles across the sea to England. With the eventual abandonment of TV channel 1 in Europe in favor of UHF color channels, most of the continent should receive the 50 Mhz allocation in time for the next sunspot peak, providing new DX enjoyment for 6-meter types.

Aside from these modes, another popular form of DX that takes a considerable amount of skill is Meteor Scatter, which involves use of ionized meteor trails to reflect 50 Mhz signals over several-hundred-mile paths. It takes a lot of patience and repetition to make a scatter contact since most of these meteor "bursts" or "pings" are very short in duration and occur during the early morning hours or during intense meteor showers.

Normal 6-meter propagation is on the order of a few hundred miles at best. You can detect enhanced propagation by watching TV channels 2, 3, or 4 for distorted, breaking-up video beats as another distant signal is received. Often during Es, the distant signal will replace the local station completely for a few minutes,

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and you'll have the pleasure of watching a Mini weather report on your screen in Cleveland. (Neighbors who know you're a ham will blame you for this condition by attributing it to TVI!).

For the average station, 50 to 100 watts and a single five-to-seven-element yagi will do the trick for SSB/CW work. The higher your antenna, the better. (This also helps to reduce possible TVI, as the increased vertical spacing between your 6-meter antenna and the nearby TV yagi also increases the attenuation of out-of-band overload products.) Most transceivers made for 50 Mhz could stand the help of a good, well-designed MOS-FET preamplifier with 12-16 db of gain. Some of the transceivers available (like the ICOM 551/551D series) make provision for such a preamp.

Don't let TVI scare you away from the band, either. In many areas, the penetration of cable service has all but eliminated this problem (assuming the system operator runs a clean shop!). Most often TVI is caused by using high-gain yagis and placing them at the same height as most of the neighboring TV antennas, which is just asking for trouble. Get it up in the air as high as you can! Of course, there's no reason why you can't go 6-meter mobile or portable with horizontally polarized antennas as well, and take advantage of the nearby hills to chase DX on the 50 Mhz band.

Another mode of operation that has achieved some popularity on the band is FM operation. Although there aren't many 6-meter repeaters distributed throughout the United States that can be accessed with a few watts from a portable or mobile rig. When Es is present, you can have quite a time with FM, working through repeaters hundreds of miles away! Unfortunately there aren't many mobile rigs being made these days by the major manufacturers, so you'll have to dig around to see what you can come up with used. The 50 Mhz band is a valid allocation in Japan;

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so, when the sunspot cycle was at its peak, we were flooded with all sorts of 6-meter radios: portables, mobiles, and multimode base stations. They're still around at flea market for a good price.

Right now, the choices for new 50 Mhz radios are somewhat limited to the ICOM 551D, ICOM 505, and YAESU FT-726R with 6-meter module installed. You can go the transverter route with Microwave Modules MMT-50-28 or 50-144 units, the new Mutek TVVF-50 transverter, or with SSB Electronics and Hamtronics used radios that the bill includes the Kenwood TS-600, Drake TR-6, Heath SB-110, YAESU FT-690. Kenwood and YAESU also make transverters to match their HF radios, which you can often purchase very reasonably. Antenna Manufacturers include KLM, Hy-Gain and Cushcraft. Sources for amplifiers are somewhat limited. Mirage is the only U. S manufacturer making a 100 watt solid state unit at this time, perhaps more will come on the market as the sunspot cycle approaches its next peak.

Thanks to Peter H. Putnam and "73"
Next Month: The 2-meter Band

REPEATER COMMITTEE NEWS

The repeater committee reports that they are studying various duplexer possibilities for 440. (Ed. note: It is reported that the committee made an excellent engineering report on the duplexer proposal at the last board meeting-- good work committee). 440 is fully on the air, but is using a limited receive antenna on account of no duplexer action yet. (Ed. note: I receive it well, but can't access it from my location. Sounds better than 2-meters with far less local trouble from stray signals at my location).

YL's don't forget that Carla requests your presence at the next BAYLARC meeting.

EDITOR'S CORNER

You should know by now by one means or another that you have a new editor. WB6WKM was having difficulty carrying on his job requirements and edit the newsletter, so somehow or other I wound up as editor. For those still uninformed: I am Shorty Freitas, AE6Z your new editor.

+++++

Of course I have my editing policies and here is an outline of what they are. Anyone objecting to the procedure has just volunteered to be editor. I am not thrilled at being your editor, but someone has to do the job.

The first thing that I learned when undertaking cutting and pasting is that I was born right-handed with ten left thumbs. Cutting and pasting is not my bag as the saying goes, and furthermore I hate it. I do, however, have a computer on which my fingers fly. It is a useable computer, not a Commodore toy, so I have come up with the policy that I will re-type everything received and place it in the format that I have used on this letter. I shall outline the remainder of my policy below, and may alter it in the future as I gain experience.

DEADLINE FOR PUBLICATION WILL BE 1800 ON THE SATURDAY PRECEDING THE SATURDAY THAT IS TWO DAYS BEFORE MEETING MONDAY. I would prefer that you get your copy in to me as soon as possible rather than wait until the last minute. I can then put it into my computer and cut and paste the final version by means of the computer.

I am interested in receiving material from anyone. It can be typed or scribbled, as long as it is readable. You can send it by modem on the telephone line, by CW, by flashing light, or by sounder, however, smoke signals bother my eyes. I will not take communication by any voice means. I can't read my writing.

I am interested in bits and pieces of info about ham radio. From any source. Also interested in material like I have published in this issue, but not limited to the present contributors.

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My computer doesn't like misspelled words, so, unless there is some reason for the misspelling, correction will be made.

Expect to have your material condensed, if you have been too windy. There is a better use for space than filling it with unneeded words. Don't be alarmed; most of the material today went in as received.

Please feel free to contribute. I will try to make use of it. Maybe not at once, but sooner or later.

Please don't include material like save the whales or be kind to your downtrodden fellows. That material belongs in your religious or social club letters. This letter will be devoted to ham radio as long as I am editor.

This letter has not gone out easily. I have had to get on the same wavelength with my computer. We are together now.

As convention chairman I am reporting that the committee will be turning over twelve hundred dollars to the club treasury. This is a return of the approximately three hundred dollars that we received from the general fund to add to the remainder of the divided convention money to give us a thousand dollars to start. The rest of the convention money will be used for seed money for "PACIFICON '87". All the gains from the next convention will be for the club treasury.

I am seeking persons in the area who are experimenting with spread spectrum and with coherent CW. I am interested in talks on the subjects at the next convention.

Gave rest of my space away, 73 de AE6Z

P. S. de Chile Hot Dog

There will be a box for charity donations of canned goods, etc. at the Christmas party.

NO BOARD MEETING IN DECEMBER

PAY 1987 DUES NOW

PRESIDENT.....Ed Rawlinson, WD6CHD / 264-2988
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Ed Rawlinson, WD6CHD, Mailman, / 264-2988

CLUB REPEATER: 146.985 in/146.385 out - 447.425 in/442.425 out -- a simultaneously keyed open repeater. Net monday night except on regular meeting nights.

REGULAR MEETINGS, are held the second Monday of each month. Meetings start at 7:30PM Local and are held at the COUNTY SERVICE CENTER 1555 BERGER DRIVE, BLDG. #2, San Jose. Visitors are always welcome.

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SANTA CLARA COUNTY
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