SCCARA-GRAM

Santa Clara County Amateur Radio Association

Volume 10, Number 9 **September 1994**

President's Prose

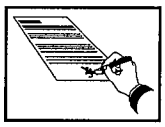
Greetings to all. We had a wonderful club picnic on August 21, it was very enjoyable to see all of you there. About 40 people showed up for thee hot dogs and hamburgers, and all the side dishes brought by our members. The weather couldn't have been better, it was a repeat of the Field Day weather we had this year. Thanks to all of you who helped out, especially Don K6PBQ and Stan WA6VJY.

More recently, on August 27, a group of SCCARA diehards got together and straightened out the Club storage lockers. The flea market locker was essentially empty, so we moved everything out of the regular locker into the former flea market locker. The flea market locker is a lot more accessible. Getting rid of the old locker will save SCCARA 40 bucks a month! Thanks to those who came down on a warm afternoon: Don K6PBQ, Harold KK6ZE, Gary WB6YRU, and Lou WA6QYS.

The September SCCARA meeting will be a dinner meeting, as it has been for the past several years. The menu this year will be: Spaghetti, garlic bread, salad, coffee, and soft drinks. Members are encouraged to bring their spouses. The meal will be served at 7:00 PM at the United Way building. The price is $5.00 per person. Come early and help out!

The SCCARA Technician License class will start this month on the 15th. This is going to be a 10 week class ending the week before Thanksgiving. We have 7 instructors this time so that no one will have to teach more than 3 nights. If you know anyone who's interested in becoming a ham, let them know about the class. There's no charge for the class, other than the price of the book.

Hope to see all of you at the dinner!



73, de Doug WN6U.

Good and Welfare

READ ME **- WHY SHOULD I RUN FOR SCCARA OFFICE?**

SCCARA has a long and illustrious history dating back to early radio. Indeed, some of those early pioneers

Calendar

9/10 Electronic flea market at Foothill
9/12 SCCARA General Meeting
9/26 SCCARA Board Meeting--(San Jose Red Cross, 7:00p, all are welcome)
10/10 SCCARA General Meeting
10/24 SCCARA Board Meeting--(San Jose Red Cross, 7:00p, all are welcome)

Next General Meeting

Day: Monday, September 12, 1994
Time: 6:30 PM
Place: United Way Building
Agenda: **Spaghetti dinner meeting!** Doors open at 6:30, start serving at 7:00, $5 per person.

The United Way Building, 1922 The Alameda, San Jose, (about one mile South West from the San Jose Air Port). From I-880: take the Alameda turn-off going South for ½ block then turn left on McKendrie. From the South: go North on the Alameda, ½ block past Hedding turn right on McKendrie. Immediately turn right into the parking lot just behind the small church on the corner. The entrance is up the steps at the South East corner of the building. There is wheelchair access at another door at the North East corner, but for security reasons, only one door is open at a time--someone will have to notify the guard if you need wheelchair access. Also, try not to be too late--the doors may be closed with nobody around to let you in.

NEW LOCATION! The San Jose Red Cross: South-West corner of North 1st St. and Plumeria Dr., San Jose. Plumeria is North of Trimble and South of Montague Expressway. From the South on I-880, take the 1st Street exit, go North. From the North on I-880, take the Montague (Trimble) exit, go West to Trimble then turn right (North) on 1st. From the South on US-101, take the Trimble (De La Cruz) exit going North, then turn left (North) on 1st. From the North on US-101, take the Montague exit going North/West, then turn right (South) on 1st.

The main entrance faces Plumeria, go straight in past the front desk. The radio room is in back of the conference room on the left just past the rest-rooms. **Board meetings are open to all.**

The *SCCARA-GRAM* is published monthly by the **SANTA CLARA COUNTY AMATEUR RADIO ASSOCIATION**. Permission to reprint articles is hereby granted, provided the source is properly credited. SCCARA is an affiliate of the American Radio Relay League.

Articles for the SCCARA-GRAM must be submitted to the editor by the last Monday of the month.

OFFICERS and DIRECTORS

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Director	Stan Getsla, WA6VJY	275-0735
Director	Gary Mitchell, WB6YRU	265-2336

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COMMITTEES

Flea Market	Gary Mitchell, WB6YRU	265-2336
Repeater	Keith Butts, KN6K	248-3849

SCCARA REPEATERS

SCCARA currently owns and operates two repeaters under the call W6UU:

2 meter:	146.385 +	PL 114.8 (none for basic use)
70 cm:	442.425 +	PL 107.2

Phone patch capability is available with a small subscription fee. The two meter repeater is located in the Mt. Hamilton foothills, Alum Rock area. The 70 cm repeater is located at the Alexian Brothers Hospital, North of 280 and 101.

SCCARA NETS

On our 2 meter repeater: Mondays at 7:30 PM, (not the second monday--it's our meeting night). Net control: Joe WA6DXP.

On 10 meters, 28.385 MHz USB, Thursdays at 8:00 PM. Net control: Wally KA6YMD. Wally usually conducts the ten meter net from the SCCARA club station: W6UW, located at the San Jose Red Cross (N. 1st and Plumeria).

Visitors welcome to join in on the SCCARA nets.

IMPORTANT TELEPHONE NUMBERS

SCCARA HOTLINE:	249-6909
ARRL CLASS HOTLINE:	971-1424
ARRL LICENSE (VEC) HOTLINE:	984-8353

were SCCARA members, some were officers. Each in his own way gave something of himself in serving SCCARA. This uniqueness has given us a varied and interesting background that reflected that person's interests, particularly his strong points. True, we are an amateur radio group, but the technology that goes along with "hamming" is only the driving force that brings us together as hams. A great deal more is necessary to make an organization *GO*! We need new "warm bodies" to reflect the programming, planning, finances, and good horse sense to keep us rolling.

We don't want the retreads who have done it before, unless there is no one else to fall back on. They have done their stint and new people are needed to provide fresh ideas. You know what you like and want in your organization. Your wants are usually our wants. Let's hear from you when the call goes out for filling our offices. Lack of technical rank should be no bar. AND we do need some volunteers from the fairer sex, particularly if we hope to attract others. So, sing out when the call goes out. Think about it now so your thoughts will be in order. Want to talk it over? Talk to me or any officer if you have any doubts.

You will never regret joining that fraternity/sorority of "old timers" that have served SCCARA!

de WD6CHD, Ed, aka "Chile Hot Dog," past president.

Meeting Minutes

Santa Clara County Amateur Radio Association General Membership Meeting, August 8, 1994

7:31 P.M. Doug, WN6U, called the meeting to order. Self introductions followed as is our custom.

Bob, KB6OHO, was welcomed back after a long illness.

This was ARRL Night. The speakers were Brad Wyatt K6WR, Jim Maxwell W6CF, and Rod Stafford KB6ZV.

Rod Stafford, KB6ZV, gave a view of the international radio and talked a little bit about IARU, International Amateur Radio Union.

Brad, K6WR, gave an overview of what's happening with amateur radio at the national level. The FCC, the 219-220 Mhz band, preferred call signs, congressional legislation. Brad mentioned that Sen. Finstien is now a co-sponsor of the joint resolution and that there was a massive reorganization within the FCC.

Jim Maxwell, W6CF, discussed why don't people join the ARRL? One reason is that new Techs are locally oriented. The primary objective of ARRL is the preservation of the amateur radio service. Dues pay for attorneys, legal and lobbyist activities in Washington D.C. $12 million income and most of that is spent on amateur radio related

activities. One of the burning questions in the ARRL is How do we get more hams to join the ARRL?

Business Meeting:

Sunday August 21, 1994 will be the SCCARA picnic at Mary Gomez Park in Santa Clara.

There will be a new class starting in September.

Ed, WD6CHD, would like to have any items of Good and Welfare given to him.

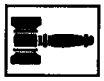
Don, KC6WMM, of the election committee says that four of the officers are not seeking re-election.

9:15 p.m. meeting adjourned.

73, Lloyd KD6FJI, Secretary

Moved and Seconded

August Board Meeting



The September meeting will be a spaghetti dinner meeting, held at the United Way Building room 107. Doors open at 6:30 and dinner will be served at 7, cost is $5 per person. Stan, WA6VJY, is in charge.

The WA6VRK estate sale has been completed and we received a thank you letter.

The board voted unanimously to purchase 2 sets of ARRL books to be donated to local libraries.

Nominations for club office are not going well; so far, we have only one candidate (Gary, WB6YRU), for the office of secretary. It seems there may be enough people to fill the director positions, but the offices of president, vice president, and treasurer are still open. Any interested members should contact Don KC6WMM or Gary WB6YRU.

SCCARA may have a local contest for club members. There have been other local contest in other parts of the country. The tentative rules are: The contest should last 2 or 3 hours on a Saturday afternoon and will cover the 10, 15, 40, and the 2 meter band. Probable frequencies are on HF: 28.385, 28.125, 21.400, 21.125, 7.285, and 7.125 MHz all +/- 5KHz; and on VHF: 144.125 (CW/SSB/digital) and 146.535 FM simplex. Credit is given for club member contacts only. General, Advanced, and Extra get 1 point for phone contacts and 2 points for digital/CW, Novice & Technician get 2 points for phone and 5 for digital/CW contacts. Furthermore, members licensed in 1994 multiply their points by 3 and those licensed in 1993 multiply their points by 2. The exchange would include the signal report and license class. There is some question as to the power limits (25 W vs 150 W) since some members reside well outside the bay area.

The club's regular storage locker (39 sq ft, $40/mo) is slightly smaller than the flea market locker (40 sq ft, $45/mo) and not as easy to enter, (the flea market locker has drive-way access to a large roll-up door, while the other just has a regular door in a hall way). We were going to stop renting the flea market locker at the end of August; however, the board decided to keep it as the new club storage locker and cancel the smaller one instead. The move is to be made August 27th.

Flea Market

With one exception, all the stuff we had for sale at the August flea market was the picked-through left-overs from last time. The locker was about 1/3 full. Despite the low value and small quantity, I managed to squeeze $71.35 out of roughly half of it. A couple of club members stopped by for a few minutes each, but other than that, this was another one-man show.

The remaining dregs won't be worth the cost of keeping the locker one more month for the flea market in September and I'm not willing to accept a bunch more stuff with only one more flea market to go. (Recall: the club voted to stop this activity, so anything not sold next time would have to be "dealt with" somehow.)

At the August club picnic, I managed to talk a few people into taking about 1/3 of the remaining stuff and I hung on to a few things of what was left (I will have my head examined later ☺). Most of the rest got recycled.

The flea market locker is now empty and will not be renewed next month. If you still have something to donate to the club's flea market effort: it's too late now, you're on your own. (Other non-flea market donations to the club are of course quite welcome.) If you want to take something down to the flea market yourself and aren't sure how to best go about it, I'd be happy to offer a few pointers.

There will be a flea-market summary in the next SCCARA-GRAM issue, then that will be it, (except for reports of special "one-time" trips to the flea market).

73, Gary WB6YRU

Election Committee

Would you like to see the club move in a new direction, start a new project or activity, or just take on a slightly different "feel?" Here's your chance to make a difference. Get involved--run for club office! There are a few director positions open as well as president, vice president, secretary, treasurer, and station trustee.

The time of club elections will be here before you know it! We need at least one candidate for each position before the elections in November. There usually isn't a problem filling the director positions, but most of the officer positions are still completely open. So far, there hasn't

exactly been a stampede of candidates--there is only one each for secretary and station trustee, but none for president, vice president, or treasurer.

If you think you *might* want to run for office or just have some questions, please contact me or Don KC6WMM.

73, Gary WB6YRU

Packet Pieces

Downloaded from the packet network:

Editor's Note: The SWR saga continues... here is the second part of that long packet article on antenna matching:

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Date: 13 Jul 94 20:54
From: AA2KH@WA2UMX
To: HINTS@ALLUS
Subject: SWR, BALUNS, ANTENNAS, PART 2

FIRST, ANTENNAS OF NON-RESONANT LENGTH:

Quit worrying about them. Some 4000 commercial radio broadcast stations (and a few hams) use antennas with non-resonant dimensions. The broadcast station must operate with specified radiation pattern and efficiency, reach the greatest possible number of patrons with out causing interference to other broadcast stations. The antenna height required to do such a specific job is seldom a resonant height, which means that the antenna is invariably non-resonant, but it is generally fed with 50 ohm coax... how do they do that? ...a "transmatch."

A transmatch is what you'll find in that little house at the tower base. Just like any other transmatch, its input looks like 50 ohms to the coax and its output is adjusted to the complex antenna impedance. The circuit used is generally a "T" or "PI" network, just as in currently-available ham tuners...except that, since the broadcast station uses only a single frequency, the network is "fixed-tuned."

Closer to home, most of us who are mobile on 2 meters use a 5/8 wave whip and find it more effective than a 1/4 wave whip, but the quarter-wave is a resonant length and the 5/8 is not! However, our 50 ohm coax sees a proper load, thanks to matching at the base, so our transmitter happily dumps optimum power into an antenna SYSTEM, which includes a non-resonant antenna that efficiently radiates all the power delivered to it. These are just a couple of examples demonstrating why you don't have to worry about antennas of non-resonant length. You just need a resonant antenna SYSTEM, consisting of antenna, feed-line, and a matching device.

SECOND, LINE ATTENUATION:

If we are going to use a non-resonant antenna, obviously there will be some standing waves and reflected power to manage. The point here, though, is that on the HF bands it is usually much less of a problem than we think it is. To evaluate this statement, we need four ingredients:

1. The frequency.
2. The type of feed-line.
3. The length of the feed-line.
4. The feed-line attenuation.

To demonstrate how these ingredients are used, let's go back to Jim Fisk. Remember, he said that 100 feet of RG8U, at 4MHZ, feeding an antenna with an swr of 10:1 resulted in less than 1dB more loss, compared to a perfectly matched line. He got this information from two readily-available sources:

1.) The coax manufacturer's specs showed him that RG8U, at 4 MHz, feeding a perfectly-matched load, will suffer a loss of 0.3dB per 100 feet.

2.) Using this information, he consulted a graph on page 82 of the ARRL Antenna Book (page 3-12 in the newest edition). This graph shows increased loss with SWR, compared with loss into a perfect match.

Jim took the 0.3dB, which appears at the bottom of the graph, along the horizontal axis, and projected vertically to intersect the 10:1 SWR curve. From this point, he projected left to the vertical axis, where he read "additional loss" of just under 1dB.

A much more informative chart will give you the above in more comprehensive fashion if you have available the December, 1974 QST, containing Chapter VI of Walter Maxwell's seven-part series, "Another Look At Reflections" plus, it will properly explain the manner in which "re-reflection" takes place. This phenomenon seems to be one of the difficult things to understand... and believe. But, until you do understand it, you will remain puzzled as to why all of that reflected power isn't lost.

So far, we have considered only coax, it is quite important to this discussion that we also cover balanced open-wire line. This category includes 600 ohm bare line, plastic-coated ladder-line and 300 ohm twin-lead, all featuring three advantages:

1. Much less loss...as little as 10% of that with coax.
2. Handles much higher voltages without breaking down.
3. Tunes the antenna system over a much broader frequency range.

Let's look at that third advantage. I will use, as an example, an 80 meter dipole, resonant at 3750 KHz (the middle of the band):

If I use coax, a transmatch will allow me to cover all of the 80 meter band, presenting 50 ohms to the transmitter on any frequency from 3500 to 4000 KHz, but for coax, that's about the limit. If I tried to use this same antenna on 40 meters, it would not be unusual for the 80 meter antenna to present an impedance of 4000 ohms. Using coax, I would find the SWR by dividing 50 into 4000, indicating an swr of 80:1! The transmatch could not handle this, nor could the coax, which would be subjected to abnormally high voltages and high attenuation losses. Maybe you have found that your transmatch, when using coax, would not tune a particular antenna or frequency...now you can see why. But don't give your transmatch away, that's not the problem. Let's take that same antenna with the 4000 ohm impedance and see what happens with balanced twin-lead (say, 450 ohm ladder-line): Now, the SWR is 4000/450, or less than 9:1, which any good transmatch can handle very easily. What is even more important, attenuation losses are negligible and voltage breakdown is no longer a problem. The result is that you can use your 80 meter dipole, not just for 80 and 40 meters, but on all the HF frequencies. Of course, as you go higher in frequency, an 80 meter dipole will become more directional, forming a cloverleaf pattern as you get up to 20 meters and, finally, becoming more directional off the ends of the dipole as you get up to 10 meters but these patterns are not all that clearly defined and you will be surprised at the DX you can work up there.

THIRD, THE TRANSMATCH:

Before we get into the transmatch proper, let's review that part of basic AC theory which says that when the internal impedance of the generator is equal to that of the load, maximum power will be transferred from the generator to the load.

Your final amplifier is an AC generator (tube or transistor) which, in order to transfer maximum available power into a load, must see an impedance we call the optimum load impedance (not the sam as internal impedance). The network in the output circuit of your transmitter is actually a limited range transmatch, built within the transmitter for the purpose of matching the amplifier to the load.

Actually, the PI network will tune the amplifier to other impedances when working into a feed-line that presents something other than 50 ohms, just tune for a plate dip (using low power) and when that dip is as deep as possible, you are matching the rig to the antenna and transferring maximum power to the antenna.

So, the PI network serves as a transmatch and, if it cannot match some widely-differing feed-line impedance, then the transmatch you use externally is simply extending the range of the transmatch in your rig. Many of the older rigs had all of this included inside, because back in "BC" (before coax), there were many more antennas with widely varying impedances for the transmitter to look at (the Zepp, for example). In either case, all we're trying to do is match the generator to the load.

MYTH #1: "a transmatch just fools the transmitter." If you were using only the PI network inside the transmitter to do the matching, would you say: "the transmitter is just fooling itself?" Your rig's high-impedance microphone is connected through a transformer, would you say: "the transformer is just fooling the mic?" In each case we are talking about the same thing: impedance matching.

Generally, the load presented to the transmitter by the feed-line is not a purely resistive 50 ohms. It is a combination of resistance and either inductive or capacitive reactance. Inductive reactance adds an "imaginary" component to the resistance (a "J factor"); therefore, inductace in the feed-line is not purely 50 ohms. For example, the impedance in an antenna and feed-line with inductive reactance might be, in the vernacular of feed-line mechanics, "100 plus J50".

The transmatch matches the antenna load to to the signal source and maximum power is transferred to the antenna SYSTEM. Of course, when maximum power is transferred out of the amplifier, minimum power remains to be dissipated internally bringing us to...

MYTH #2: "Reflected power gets back into the amplifier, overheating the tubes etc." NOT SO! Heating is the result of an impedance mismatch, with less than optimum power getting out of the amplifier and too much power REMAINING IN THE AMPLIFIER (dissipated as excessive heat). All the amplifier wants is a proper impedance match. It wouldn't recognize SWR or reflected power if you introduced them!

MYTH #3: "...but look at all the power I'll lose in that transmatch." A transmatch is a box containing one large silver plated coil and two large wide-spaced air-dielectric capacitors--no resistors to consume power. Since the actual ohmic resistance in the transmatch is negligible, you lose very little power.

In the popular "T" circuit transmatch, the circuit consists of two air-variable capacitors in series with a variable coil connected between the junction of the two capacitors and ground. The antenna feed-line is connected to the free end of one of the capacitors and the transmitter is connected to the free end of the other capacitor.

Manipulation of the transmatch is simple: First, set both capacitors halfway open. While listening to the receiver, adjust the variable inductor for the strongest received signal, this puts you in the ball park. Then, applying low power, alternately juggle the two capacitors back and forth, exactly as you juggle the "plate" and "load" controls on your rig, until you see maximum power output and minimum SWR at the same time, both being measured between the rig and input to the transmatch. It is important that you use the minimum amount of inductance necessary to assure maximum efficiency.

After getting tuned up like this, what have we

done? Remember, (using the previous example) the tuner output is looking into "100 plus J50". Therefore, if we were to disconnect the feed-line and put a bridge on the output terminals of the transmatch we would measure "100 minus J50", the conjugate of the feed-line impedance. Now reconnect the feed-line to the transmatch. With conjugate impedance looking at each other, the plus and minus J factors cancel, leaving only 100 ohms, resistive. But the transmitter wants 50 ohms, resistive, so the input capacitor combines with the shunt inductor to perform an impedance match, bringing the 100 ohms down to 50.

Of course, since the shunt coil is shared by both input and output capacitors, there will be some interaction and both capacitors must be juggled alternately for optimum tuning. This is all much simpler than it sounds and takes less time to accomplish than I have taken to tell about it. When you have become accustomed to your transmatch this all happens in a few seconds. Also, you should log the transmatch settings for favorite frequencies. Tuning is fast thereafter.

FOURTH, THE BALUN:

If you have transmatch that includes a good husky balun, and if you plan to use balanced open line, you have no problem. If you are using coax, no transmatch, a balun at the antenna, and are staying well under 2:1 SWR, with modest power, there's still no problem. But let's take the fellow who has an 80 meter dipole, cut for the middle of the band (3750). He tried it first without a balun: SWR is low at resonance, but around 7:1 at the extreme band edges. Next, he puts a 1:1 ferrite core transformer type balun up at the feed-point of the antenna...What happens? His SWR comes down to 1.5:1 at the band edges. Boy, that balun really solved the problem, right? WRONG! In this case, if his rig would load up (or if he used a transmatch) he would be much better off without a balun. You see, the antenna hasn't changed at all. The SWR is still just as high as ever. He only thinks his SWR came down. The meter is reading less reflected power all right, but only because the high reactive currents on both sides of resonance are being absorbed in the balun's ferrite core. That means that both radiated and reflected power are down, making the meter read lower in the reflected power mode. This fellow could carry this a step further: He could replace the ferrite balun with a 50 ohm resistor...as Walter Maxwell says: "low SWR can kill you!"

This is not a blanket condemnation of transformer type baluns. Used correctly, they are often helpful and necessary, but you need to know how basic types of antennas should work, so that when you run into one such as I have described here, you don't rejoice and assume that you got something for nothing. Instead, worry about what's wrong!

There are two considerations when using transformer baluns:

1. Operate them well within their power ratings (there are some ferrite transformer baluns rated at 3KW, 5KW and even higher).
2. Don't operate them in the presence of high SWR.

To operate all the way across several bands, handling widely-varying impedances and SWRs, you need either the husky balun provided in a good transmatch or, even better, a well-designed coaxial balun.

It is beyond the scope of this talk to cover coaxial baluns properly, but whatever kind of balun you use for balanced open line should be 4:1 or higher. It is quite practical to put the balun just outside the shack, terminate the balanced line there, and come into the unbalanced transmatch input with 10 feet or less of coax. This is convenient and simplifies switching antennas.

Now we have discussed the four ingredients:

1. Antennas of non-resonant length.
2. Line attenuation.
3. The transmatch.
4. The balun.

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... Stay tuned for the third and last part! 73, Gary WB6YRU

ARRL Pacific Division Update

September 1994

Update on ARRL July Board Meeting:

A meeting of the ARRL Board of Directors was held in Newington July 15 and 16. I and Vice Director Maxwell attended. Full details will be contained in the minutes of the meeting, to be published in September QST.

It was a very productive meeting. Among other actions, by my motion, the Board voted to ask the Spectrum Committee to develop a census or inventory of ALL current and planned activity from 420 MHz to 300 GHz so we will be prepared for future spectrum challenges like the NTIA spectrum reallocation plan. Also by my motion, the Board commended the ARRL staff for responding extraordinarily well to the NTIA plan and the FCC docket on the NTIA plan with very short turn around times and for supplying interested members with data to support their own comments.

Vice Director Maxwell developed and the Board adopted new Terms of Reference (guidelines) for the newly created RF Safety Committee.

Update on effort to save the 13 cm band:

The big news is that on August 10, the FCC released a 32-page report to the Secretary of Commerce regarding the NTIA Preliminary Spectrum Reallocation Report as required by the 1993 Omnibus Budget Reconciliation Act. The Act requires that the report analyze the public comments, along with any comments or recommendations the FCC deems appropriate. The content of the report is summarized in an ARRL Bulletin due to be released early in the week of August 15. Portions of that ARRL Bulletin follow here.

The August 10 report means that ARRL's effort to protect Amateur frequencies in the 13 cm band from reallocation is a step closer to success. The report strongly supports continued Amateur Radio presence in the band and disagrees with NTIA's preliminary recommendations that large portions of the band be reallocated for other uses.

The frequencies that NTIA had identified for possible reallocation consist of 2300-2310 MHz, 2390-2400 MHz and 2402-2417 MHz, which have been shared by Amateur Radio on a secondary basis with Government services.

While the FCC report praised NTIA for its efforts, it stated that the NTIA proposals require modification. FCC cited concerns in the Amateur community that reallocation would disrupt Amateur operations in the band, and that NTIA failed to meet the statutory requirement that it attempt to determine the extent to which the band could be shared with the Amateur service. The report noted that "the largest factor affecting the future use of these bands is their existing availability for use by the Amateur service."

The important contributions to this 13 cm effort made by West Coast hams were recognized by ARRL President George Wilson, W4OYI. Wilson stated "While we're not out of the woods on this one yet, it is beginning to look like the comments filed by knowledgeable West Coast hams combined with the League's Washington effort may well succeed in carving out territory for continued Amateur development in the microwave bands." Way to go, gang!

Scott Hensley, KB6UOO, new SCV SM:

Thanks to Scott Hensley, KB6UOO, who has volunteered to step into the position of interim Section Manager for the Santa Clara Valley Section as of July 1, 1994. As most of you know, Steve Wilson, KA6S, retired as SM as of June 30, 1994. Information on nominations for the election for the position of SM in Santa Clara Valley was in the July and August QST for the term starting Jan. 1, 1995. Many thanks, Steve, for your years of service as SM and your continued service as Public Service Advisory Committee member for the Pacific Division; and, thanks to Scott for volunteering to serve as SM for the next 6 months!

FCC proposes HF digital changes:

On June 13, 1994, the FCC proposed to amend the amateur rules to allow automatic control of digital stations under certain conditions on the HF amateur bands. The Notice of Proposed Rule Making in PR Docket 94-59 was released June 23 with a comment deadline of Oct. 1, 1994, and a reply comment deadline of Nov. 1, 1994. See the ARRL Letter of June 24, 1994, for the announcement details. QST for August 1994 on page 71 carried all the details of the proposal. Please review this material and send me your thoughts as soon as possible so they can be factored into the ARRL comments by Oct. 1.

Preferred call signs, latest news:

At the ARRL National Convention and at a later meeting, FCC officials indicated that the vanity call implementation should occur by the end of the year or early 1995. The basic outline of the ARRL Comments filed on FCC Docket 93-305 by the April 21 deadline is contained in the June 1994 Update. The latest news is that Congress has decided to change the $7 per year fee for the licenses to a ONE TIME application fee of $150. It was the judgment of Congress that this change was "revenue neutral" and would ease the burden of billing and collection on the FCC. Also, it would get the dollars up front which is an advantage to Congress and the Administration.

Congressional Legislative Report:

The big news is that HJR 199 has been added to HR 4522, the FCC Authorization Act of 1994, as part of that bill. HJR 199 no longer exists on its own. This "bundling" is a favorite tactic in Congress to get various bills which mutually support each other tied together. All House Committees have been passed by the FCC Act although amendments on the floor are technically possible, but not likely. The FCC bill has now been placed on the "consent calendar" (non-controversial bills) to be passed in one big vote by the House.

Before merging, HJR 199 had 246 co-sponsors in the House for a majority of members. Gary Condit of the CA 18th District was the latest co-sponsor from the Pacific Division. We now need to start the "thank you process" for all House members who signed on as co-sponsors.

The identical resolution in the Senate (SJR 90) now has 46 co-sponsors. CA Senator Diane Feinstein is the latest co-sponsor from the Pacific Division. We still need 5 more for a majority. What will happen to this bill is as yet unclear, but it may become part of the FCC bill when it arrives in the Senate from the House. We still need to continue to try to convince California Senator Boxer and Nevada Senators Reid and Bryan to become co-sponsors. Hawaii is 100%!

It now appears that we have the best chance in years of getting some basic Amateur Radio support legislation to become law. The long term result should be better

enforcement activity and more material to help with the antenna ordinance and similar problems!

HR 2623 (Amateur Radio Volunteer Service Act) has 81 co-sponsors in the House (Congressman John Doolittle from the CA 4th District has now become a co-sponsor) so we have 2 in the Pacific Division. The bill has not yet been introduced in the Senate. Late-breaking information suggests that no action will be taken on the bill this year.

Massive FCC Reorganization:

On Monday, Aug. 1, 1994, literally all the top Civil Service officials in the FCC changed jobs as part of a massive reorganization. While the end result of this change is difficult to forecast, there is hope for better enforcement activity and support for Amateur Radio in the long term. ARRL President George Wilson, W4OYI, and the ARRL Washington Staff continue to call at the top of the FCC (Commissioners and Civil Service Staff).

Other FCC matters, Processing new licenses:

I have learned of several cases recently where new licenses have been received from the FCC in about 6 weeks from the time for the examination. This is down from the 12-14 weeks recently experienced. FCC apparently has applied additional resources and the new computer equipment to the process.

Unfortunately, there is still a backlog of some 6,000 applications, going back to April, that require correction or questions. Some will be returned, others the FCC may be able to clear in house. There is no indication as to when, or how, these will be addressed.

Looking to the future, expect electronic filing of 610s. The procedures are now being worked out in collaboration with some VECs. The FCC plans to try some test downloads with the VECs in the fall of this year. If all goes well, the FCC could be fully on-line with the new 610 process by December 31.

Scholarships and Awards:

There are many scholarships covering a wide range of situations available to licensed Amateurs. The ARRL Foundation, The Dayton Amateur Radio Association, The Foundation for Amateur Radio, to name only a few, will be announcing their dates for applications for their 1994 scholarships. Watch QST and other amateur radio publications for details. The Pacific Division and ARRL each give many awards for outstanding service. Included are awards to clubs (by sizes), Ham of the Year, Volunteer of the Year, Ham Recruiter of the Year, and Certificates of Merit. These awards will be made at Pacificon'94. Please give serious thought to nominations. Drop me a note for the details.

Coming Events:

- Livermore Swap Meet - 1st Sunday of each month at Las Positas College in Livermore, CA, 7 AM to Noon, all year. Talk in 147.045 from west, 145.35 from the east. Contact Noel Anklam, KC6QZK, (510) 447-3857 eves.
- Foothill Swap Meet - 2nd Saturday, through September. Foothill College, Los Altos, CA.
- Sonoma County Radio Amateurs, Inc. flea market, Sept. 17, 1994 at Holy Ghost Hall, 7960 Mill Station Rd., Sebastopol CA. Talk-in 146.13/73. For further information, write SCRA, Box 116, Santa Rosa, CA 95402.
- 1st National Hamfest, Oct. 7 - 9, Costerisan Lake, Bakersfield, CA. Contact KCCVARC, P. O. Box 473, Bakersfield, CA 93302.
- Pacificon'94, Hilton Hotel at Concord CA, Oct. 21 - 23, 1994. For more information contact Lauren Styles, WA6CIE, 1910 Sunshine Dr., Concord, CA 94520, or call the MDARC/Pacificon Hotline at (510) 932-6125.

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Newsletter Notes

Remember the ELMER list we had a while back? I thought it would be a good idea to revive it, especially since SCCARA is helping to get new amateurs on line with our amateur radio class.

In recent years, before I became editor, there were reports of practically no activity for the Elmers. This isn't surprising since it was only published once in this newsletter. New amateurs (or anyone with questions) can only make use of this service if they know about it. So, in order to make it work, I plan to include it here as a new regular column (once there is a substantial list).

If you have one or more special interests or skills in amateur radio, please consider becoming an ELMER by filling out the following questionnaire. Thanks!

73, Gary WB6YRU, editor

ELMER LIST

What's an "ELMER"?

Amateurs have a very long history and tradition of helping each other out. A more experienced amateur (the "ELMER") will take a new amateur "under the wing" by giving advice and suggestions, helping set up a station the right way (experience is often the best teacher), or just by being available to answer questions. If your Elmer doesn't know the answer, chances are he/she knows someone else who does! Even old timers may take advantage of an Elmer when embarking on some new facet of amateur radio.

There's a LOT of experience here in SCCARA, that's one of the things that makes a club like this so valuable to new amateurs--but only if people can easily tap into it. This is where YOU experienced guys come in: If you consider yourself to be reasonably competent in one or more areas of amateur radio and would be willing spread the intellectual wealth around, please fill out this form (or a copy) and get it back to us (give it to any club officer or send it to the club address).

It's very rewarding to show someone the ropes and can be a godsend for those who need help to get it from someone who knows the ropes... a definite "win-win" situation!

SCCARA ELMER Survey

Name: _____

Call sign: _____

How may someone get in touch with you?

Telephone(s):
day _____

evening _____

msg _____

Packet: _____

Internet: _____

Other: _____

_____

_____

Please circle the number for each area of expertise:

HARDWARE, HARDLINE, & HARD-DRAWN:

1 – Antennas, feed-lines, tuners
2 – Lightning protection, grounding
3 – Station set-up, equipment
4 – TVI/RFI
5 – Homebrew projects, construction

BITS, BYTES, & BAUDS... OH MY!

6 – Computers (Apple, IBM PC)
7 – Packet (HF/VHF, keyboard, nodes)
8 – Packet Network (BBS, forwarding)
9 – Other digital modes (AMTOR, RTTY)

OPERATING AND TECHNIQUES:

10 – Code operating and installations
11 – Contesting & techniques
12 – DX (long distance/propagation)
13 – Emergency operating/preparedness
14 – FM (VHF/UHF, repeaters)
15 – HF operating techniques (SSB,CW)
16 – Mobile operating
17 – NTS and traffic handling
18 – QRP (HF low power, all modes)
19 – QRP (VHF/UHF low power, SSB/CW)
20 – Satellite (OSCAR, AMSAT)
21 – Television (fast and slow scan)

EDUCATION - LAW - POLITICS:

22 – A.R.R.L./national issues
23 – Classes/license upgrading
24 – Legal/FCC rules
25 – SCCARA (club inner workings)

ANY OTHER TOPICS or COMMENTS:

26 – Other, please describe:

_____

_____

_____

_____

_____

S.C.C.A.R.A. Membership Form for 1994

Name: _____ Call: _____ Class: E A G T+ T N

Address: _____ Licensed since (yr): _____

City: _____ State: _____ Zip: _____ - _____

Telephone: ( ) _____ New member: Yes No A.R.R.L. Member: Yes No

For family memberships (at the same address), please list other name(s) and call(s):

_____

Annual membership dues are payable at the first of the year and expire the following December 31.
New members joining on or after July 1, pay half the annual membership dues.

Annual Membership dues: Individual $15 Family $20 Student (under 18) $5 ..... _____
Renewing? Please help update our database: What year did you first join? _____

Send the *SCCARA-GRAM* by **first class mail** for $3.50 extra ..... _____

I want _____ *SCCARA* badges @ $3.00 each. Badge name & call: _____ .... _____

Please send the repeater Auto-Dial codes (no charge, circle one): Yes No
Please send the repeater Autopatch codes $10.00 ($15 if family membership)..... _____
A COPY OF YOUR LICENSE IS REQUIRED FOR ALL REPEATER CODES

TOTAL: _____

Give this completed form (or copy) with payment to the treasurer at any meeting or mail to:

SCCARA membership P.O. Box 6 San Jose CA 95103-0006

SANTA CLARA COUNTY
AMATEUR RADIO ASSOCIATION

P.O. BOX 6
San Jose, CA 95103-0006

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