



# The READOUT

Year 16

Number 3

March 1994

The Official Newsletter of the Stanislaus Amateur Radio Association

## Amateur operators may be forced to comply with RF radiation safety guidelines

**T**he Federal Communications Commission is considering new rules that could require radio amateurs (and other FCC licensees) to show that they comply with guidelines for radio frequency radiation safety recommended jointly by the American National Standards Institute (ANSI) and the Institute of Electrical and Electronic Engineers (IEEE).

This FCC proposal raises extremely complex engineering and public health issues; compliance could cost broadcasters and other commercial licensees millions of dollars. Industry groups have been frantically gathering data about the possible effect of this proposal on their businesses — but the proposal could also have a huge effect on radio Amateurs.

For about 10 years the FCC has required many of its licensees (such as radio and television stations and many other commercial services) to prove that their operations would not expose their employees or the public to RF radiation in excess of the ANSI guideline, then designated as C95.1-1982. However, up to now radio amateurs have been categorically exempt from having to meet the ANSI guideline.

In the current proceeding, the FCC proposes to change the rules in several ways. First, the FCC proposes to replace the 10-year-old ANSI C95.1-1982 guide-

line with the new and much stricter ANSI C95.1-1992 guideline. Second, the FCC proposes to eliminate the categorical exemption for radio Amateurs, which could result in Amateurs having to prove that their transmissions do not expose anyone to RF radiation in excess of the 1992 ANSI guidelines.



In the past, the FCC has required many commercial licensees to provide engineering calculations or measurements (or in some cases, both) to show that their transmissions did not create RF fields exceeding the ANSI guideline as part of the environmental review of their license applications.

In Docket 93-62, the FCC has not explained how Amateurs would be expected to prove that they meet the new ANSI standard. Nor did the commission explain how it would handle the huge amount of paper-work that would result if 600,000 Amateurs are required to submit detailed engineering reports comparable to those now required from some commercial licensees.

The FCC also left open the question of whether amateurs would merely have to meet the ANSI guideline for exposure in places where everyone is aware of the RF fields, (this is commonly thought of as the standard for occupational exposure) or the much stricter ANSI standard for expo-

See "RF Safety Standards" page 10

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## Special SARA meeting program April 19, 1994

Tom Hora, FCC Inspector from the Livermore FCC monitoring station, will be the speaker at the SARA April meeting. We are very fortunate to get Mr. Hora as our speaker, so please plan to attend this meeting.

In addition, following this presentation, our ARRL Section Communications Manager, Mike Siegal, KI6PR, from Merced, will speak on ARRL matters.

This will be a very interesting program. Plan to be there at 730 PM.



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Elizabeth Eyre, KD6GIW  
667-5299

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523-5140

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545-5491

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##### SARA VHF Net

Thursdays @ 8 P.M.

(Except Holidays)

2 meters 145.39 MHz WD6EJF

220 Band 224.14 MHz WD6EJF

10 Meters 28,440 kHz USB

Tuesdays at 730 P.M.

ARES Net Wednesday 800 P.M.

Contributions to *The READOUT* are always welcome and may be submitted to the editor by mail or via packet at KD6JZZ-2 BBS on 144.97 MHz, or directly at my PBBS, WA6ZLO-1 on 144.97 MHz. The deadline for articles is the 15th of the preceding month. Articles regarding religion or politics are not accepted.

##### Editor

Bob Pinheiro, WA6ZLO  
1221 Mist Flower Ct.  
Modesto, CA. 95355  
209-523-5880

*An ARRL affiliated club!*

ARRL membership may be paid through SARA with the club retaining a \$2.00 commission. Please send your ARRL membership form along with your check made payable to SARA. We will deduct the \$2.00 and send a check to the ARRL.

## Radio waves haunt neighbors

**I**t seems that two neighbors of New Jersey Amateur Tony Marino, KT2W, are charging him with trespass, inflicting severe emotional distress, causing a continuing nuisance, invasion of privacy and breaking zoning laws.

Michael and Marlene Morris say Marino's ham radio transmissions come through their home electronic equipment - even their telephone and door chimes on a daily basis. Another neighbor, Robert Schnabel has now joined in the civil suit.

The Morrisses claim Marino has a license to operate "But he doesn't have a license to come into my home." They see no difference between Marino physically or electronically breaking into their home.

Motions in the suit were heard on Dec 3rd and a court date is now likely for early 1994. According to the newspaper article, the complainants have bills totalling \$30,000 for attorneys and electronics experts. The Morrisses and Schnabel are claiming nearly \$100,000 in damages which includes property value lost, legal and expert fees, appraisal fees and court stenographer costs.

Marlene Morris says she considered selling their home "...but found we would have to inform prospective buyers about the interference. 'We are not in any way contesting his license,' Schnabel said. 'What we are saying is he's on top of us with a 64 foot radio

tower and we want him to pay damages."

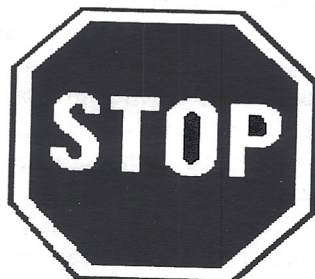
This case could set a precedent. It will probably be the first electronic interference case that goes to trial based on the concept of electronic trespass and invasion of privacy.

The Federal Communications Commission inspected Marino's ham station in 1990 and determined that he is in full compliance with the Rules. The FCC contends that the problem is with the neighbor's equipment. "It wasn't shielded properly when it was manufactured." As far as the Commission is concerned, it is the responsibility of Marino's neighbors to retrofit their equipment to filter out the transmissions.

That is not the way the Morrisses and Schnabel see it. They would like to see a law passed that puts responsibility where they believe it belongs - on the ham radio operator not to trespass on or to interfere with the lives of neighbors.

Schnabel said an electronics expert found the wattage coming into their homes when Marino is transmitting at 800 watts to be 100,000 times stronger than the waves from the strongest radio station in the area. "Then you get into the electromagnetic fields and whether or not they cause health problems," said Marlene Morris. "That's a whole separate issue."

*A news release distributed by the Long Island Section of the Institute of Electrical and Electronics Engineers, Inc. (IEEE).*



## Important Notice

March is the month that we purge our roster of those people who have not paid their dues for the current year. Following the purge we ended up with 136 people from last year's roster who have paid their dues, and 69 who had not.

So, this is our last reminder. Please examine the mailing label on

the back page of this newsletter. If it says "1993", you have not paid your dues.

If you have sent in your dues and we have not recorded it, please contact the treasurer and let him know. If not, please send in your dues today. Your support is vital. Thank You!





# The last ham

By Berry Griffin, KD6TTMAA

## Frequency Cops

Joe and some of his cronies that used to hang out on the local repeater spent quite a few hours expounding their similar beliefs that all new hams were somehow, less human than they were. Once they ever suggested the way to clean up all the ham bands was to get rid of all 2 by 3 calls. They openly joked that everyone ought to own a no-code tech. When any new operator dared to try to talk to Joe or one of his buddies, they were quickly put in their place, humbled and scolded.

## Control of the airways

Joe, in his zeal to keep control of "his" airwaves, even stared monitoring the local repeater while holding his stop watch to time these interlopers just to make sure they I'd on time. If they went a little over time, he would scold them profusely. Sometimes he even harassed them when they were identifying properly, just to make sure they understood they weren't welcome. Of course Joe never gave his call when he did this, but he never thought of himself as a jammer either. He viewed himself as a radio cop, and he was just keeping the ham bands pure. When word of Joe's little endeavor got out, many others joined his cause. After all, these new no-coders were making 2 meters sound like CB! It seemed there were a lot of Joes out there.

Slowly at first, then at a faster and faster rate, the new comers started dropping out. First, out of the local clubs, then off the air completely. Joe was ecstatic. It was working, his airwaves were being saved.

## Fewer and fewer real hams

Joe noticed the number of active hams had dropped to where their number was far fewer than when he started, but he just figured that only the real hams were left so, naturally, he didn't mind at all that the call book had shrank down to the size of a comic book. Of course, with fewer and fewer hams, the political power of amateur radio had lost so much ground that the spectrum had shrank down to only a fraction of its former size. Joe

didn't mind, he only cared about 20 meters anyway. He thought it was funny that all the VHF and UHF frequencies had been sold off to commercial interests. There was no need for it. After all, it always just been a hang out for those no-coders anyway.

## FCC stopped issuing licenses

After the years passed, the FCC finally stopped issuing amateur licenses, citing that there was no longer a need for such a license category due to a lack of interest. There had been no new applicants for sometime. Joe was in heaven. And his buddies were the only amateurs left, and that was just fine. After all, they had gotten their licenses back when real hams took their tests at the local FCC district office, and not at one of those VEC jokes that allowed an applicant to take a test here and there. They spent long hours rag-chewing on 20 meters, bragging about how good thing were and pausing to note, every now and then, the passing of one of their clan into the category of a Silent Key.

## There wasn't any left

Then one day Joe sent out his CQ 20 and got no reply. He repeated this same act day after day for a week and then called via twisted pair to one of his friends to see if he could setup a contact. An elderly lady on the other end informed him that the party he asked for was no longer living. Another Silent Key! Joe looked through the old, dog eared call book he kept on the shelf above the old tube rig. Funny thing, Joe couldn't find one call he recognized as someone he had worked recently. Then it hit him. There wasn't anyone else left.

## The last day

Yep, it sure was a nice antenna. Joe started back into the house when he began to feel a little tired so he just sat down on the grass. There was a squeezing pain in his chest, and his arms hurt. He lay back on the grass and looked up at the sky, the clouds, and his antenna. Then it all went black. Joe had finally done it. He had cleaned up the air waves.

**I**t was a warm sunny day with just a little wind. Joe leaned back a bit and squinted up towards the top of his tower, admiring the 5 element 20 meter mono-bander he had built last winter. It was a massive and imposing sight, but there was just one thing wrong. It had never been used—you see, Joe was the last Ham.

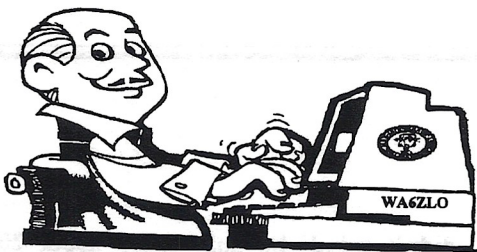
## Creation of No-Code License

Joe never really intended to be the last ham, but it just sort of worked out that way. Joe thought back to how it had all started back in the 80's when the No-Code Tech license had been created by the FCC. Joe considered the action to be the biggest blunder any government agency had ever perpetrated on the citizens of the United States of America.

"Just think of it," Joe had often said "an amateur radio license with no Morse code requirements! This means ruin for us all!" Of course not all of Joe's thoughts on this subject had been verbalized so 'nicely.'

Joe seemed to ignore the fact that the no-code license had been created to bring new blood into the hobby after the Amateur ranks had been shrinking at an alarming rate for quite a few years. He also refused to notice that after this new license category had been created, the number of active hams had increased at a dizzying rate. Joe just hated all the new hams that didn't have HF privileges. He never took into account that the No-code license was just another way of entering the amateur ranks, and that quite a few of the no-coders did in fact upgrade to higher privileged licenses. He also failed to realize that some hams simply can't have the necessary antennas for HF work, so VHF and UHF were their only options. Nope, no explanation was good enough for Joe.





# Editor's Notes

By Bob Pinheiro, WA6ZLO

Last month we mentioned that Budget Copy Company had gone out of business and we expected the cost of printing our newsletter to go up possibly as much as 50 % a month. We were wrong! It's closer to 60%. We checked with several printers in town and found out quickly that the break we were getting from Budget Copy was far more than we realized. We learned that \$88.00 a month to print 200 copies of **The READOUT** on 11 x 17 paper at Budget Copy was about half the going rate of other printers in town. We found the other printers prices to be anywhere from \$148 and up.

Now for some math.

<b>New printing cost</b>	
per year= \$148 x 12 months= .....	\$1,776
<b>Bulk mailing cost</b>	
per year= \$40.00 x 12 months= ....	\$ 480
<b>Total cost per year= .....</b>	<b>\$2,256</b>
<b>Old printing costs using Budget Copy</b>	
per year= \$88 x 12 months .....	\$1,036
<b>Bulk mailing cost</b>	
per year= .....	\$ 480
<b>Total for year .....</b>	<b>\$1,536</b>
<b>Amount of Increase .....</b>	<b>\$ 720</b>

In last month newsletter, I asked you to write to me with your suggestions on how to respond to this development. I was very disappointed to receive only two letters and two packets. Four responses from nearly 200 members! To those who wrote and took the time to send packets, thank you! Here's what they had to say.

Berry Griffin, KD6TTM, of Modesto wrote:

" I feel that should **The READOUT** vanish, the membership would miss it, and probably the membership numbers would drop. I definitely

would hate to see that. Maybe another raffle to raise money or something. Anything!

Ernie Rader, K6UVI, of Escalon wrote:

"I'm certain your **READ-OUT** request for input will elicit varying views--mostly positive I'm sure. Your publication has been the cornerstone of our organization, and I've heard it said on more than one occasion that without **The READOUT**, there would be no incentive for membership in **SARA**.

I would postulate that everyone would agree that seeing **The READOUT** suffer the same fate as Budget Copy Co. is unacceptable.

My opinion is that **SARA** should make every sacrifice to maintain its newsletter in its present state. Anything less would be compromise. If this means additional fund raisers, so be it! We haven't raised the dues for quite some time. Maybe we should now! I'm certain **SARA** can withstand the increase in **The READOUT** expense for this year, but next year we might want to consider other alternatives."

Chuck Loveland, NW6G, wrote via packet-

"I have always enjoyed **The READOUT** and it keeps me informed of what's happening in the club and other interesting subjects. I know that not everyone can get to the meetings for some reason or another, and also not everyone listens to the nets, so it (**The READOUT**) would be

greatly missed. But with increasing printing, mailing and the limited budget of the club, I can see where spending of club funds has to be cut. An increase in club dues might not be welcome by all, it's about all the members can stand right now. Even a modest \$2.00 a month increase isn't going to help that much. Printing **The READOUT** every other month would help some, it might be the only way to go right now until something else can be thought of."

Chet Jensen, W6XK, wrote via packet-

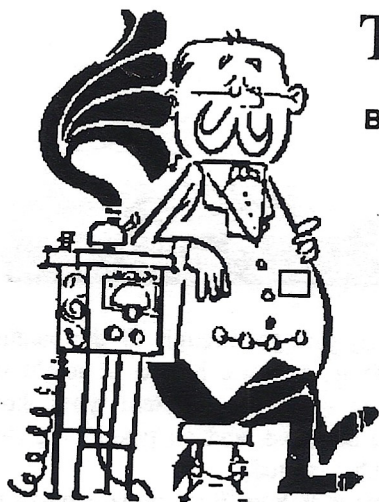
"I hate to see you have to cut back on **The READOUT**. You do a first-rate job and I think the club should do everything in it's power to keep **The READOUT** the same size and quality. Perhaps diverting part of the raffle contributions to **The READ-OUT**, or having a second raffle in the winter and earmarking those contributions to **The READOUT** would be appropriate. For those of us that do not choose to attend club meetings, it is a great way to keep in touch with club activities. I also believe that **The READOUT** is excellent public relations for the club, particularly for non-members."

I greatly appreciate these members who took the time to contact me, I only wish more had.

At the February meeting of **SARA**, I presented the information to those in attendance and a discussion followed. We discussed going bi-monthly, cutting

See "Editor's Notes page 5





## Technical Report

By LeRoy, NV6S

150 KHZ above us is not adequate. I was discussing this problem with K6LPG, Alex, and he agreed that there was a probability of solving this with a different receiver. Alex has located a Motorola Micor base radio that could be donated to the club from Turlock Ambulance. We are in the process of making this unit ready for the mountain top as it will replace our current two meter repeater.

The rest of the club's equipment is functioning quite nicely. I am scouting for better coax to put on the 440 repeater that may help the sensitivity there although the machine really works quite well as is.

There is one added note, I originally stated that the links and patch would be down for a period of about two months. That time must be extended a bit since the acquisition of a new two meter repeater required extensive redesign and created delays.

I thank all who have helped in any way toward the maintenance of the repeater. Jim, KC6VBW, has donated time to accompany me as has Steve, KC6YCB. Steve also picked up much of the material for the new control in Sacramento at a very favorable price for the club. I thank the membership for being patient while the changes are made. 73 to all.

I have been very busy with technical chores this month. As most of you know, the two meter repeater developed problems during the earthquake communications after the recent L.A. quake. The problems were in a circuit that has been the source of most of the problems that have occurred in the system recently. That circuitry has been removed from the repeater and is at my house being redesigned and built. The auto patch and linking as well as the PL and courtesy tone are out of service until I can get this circuitry designed, built and installed.

We have also been experiencing many interference problems with the two meter machines. Not all, but a significant amount of the interference can be traced to our own as well as other packet digipeaters and nodes operating in the lower end of the packet frequencies on Mt. Oso. It appears that our rejection of those signals at 100 to

## Special Program

SARA Meeting

April 19, 1994

730 PM

FCC Inspector Tom Hora  
from the Livermore FCC  
Monitoring Station

&

Mike Siegal, KI6PR,  
ARRL Section Communication  
Manager.

## Final Notice

Please check the mailing label on the back page of this newsletter. If it says "1993" you have not paid your 1994 dues and your name will be dropped from the roster.

## Editor's Notes

From page 5

back the number of pages or going to a five page, 8 1/2 x 11 inch size, newsletter printed on both sides and then stapled together. The cost for the latter would be around \$50 cheaper per month. One member said he would be willing to donate \$100 to the cost if it was match by other members. One member said he had a home copy machine and would be willing to run it off on his machine.

Most of the members felt that we should do what it takes to keep the present size and form of the newsletter, but no one had any concrete solutions to the added financial burden. We ended the discussion by agreeing to paying the increased costs for a couple of more months. After that, we would discuss the problem again and decide what we are going to do.

This doesn't solve the problem, but it does give those of you who did not write the first time a chance to do so now. I hope you will take the time to do so. Even if you don't have a solution for the problem, I would like to hear your comments, good or bad, about the newsletter.

Again, thanks to those who wrote before, you comments are very much appreciated.

## FCC call signs issued as of January 1994

GROUP A	GROUP B	GROUP C	GROUP D
EXTRA	ADVANCED	TECH/GEN	NOVICE
AA0P	KG0XT	N0ZVT	KB0NLT
AA1IF	KD1TF	N1RBP	KB1BEY
AA2QX	KF2TH	N2XPB	KB2QVK
AA3GT	KE3LP	N3RFS	KB3BAB
AD4OO	KR4KT	++	KE4IUQ
AB5SB	KJ5UA	++	KC5EUX
AB6ZM	KN6XD	++	KE6EJD
AB7AT	KI7UQ	++	KC7AEN
AA8NR	KG8GG	++	KB8RAN
AA9JX	KF9TH	N9VWX	KB9IWO

++ALL CALL SIGNS IN THIS GROUP HAVE BEEN ISSUED



# FROM THE DESK OF

**Tim Low, N6ZUC**

Prior to mobile operation, there comes mobile installation. In order to get satisfactory results, it must be installed in a way that will optimize that operation. A few months ago we discussed noise problems associated with mobile operation, how to find and cure those problems. It's a whole lot easier to prevent some of those problems, rather than to find a cure for them later. Pre-planning is the key to any successful job. Deciding on mounting locations, and what supplies are needed. Take notes as you look the job over, so you can get everything together.

I'm called on quite often to install or help install mobile gear. With today's vehicles, that's not always easy. Just finding a place to mount the rig can be very difficult. Cars are smaller and cramped. You can't always find a spot on the dash, or under it, to mount your rig. That's also a good thing to keep in mind when you purchase your rig in the first place. You don't want to buy a rig that is physically too large for whatever mounting space you have available. You may have to expect a tradeoff between the rig with the features you want, with a radio that will fit the space you have available to mount it. Fortunately, rigs with an abundance of desirable features, and small size, are becoming more readily available. Depending on the location of the mount, you may not be able to read the front panel on some of these rigs from your normal operating position. You can surmise from all this that there is much to consider in just picking out your rig, and its mounting position.

Many vehicles have center consoles, and the rig will mount on the side of this console. It's a pretty good spot as you can easily reach all the controls, and the microphone and its cable are in a good location. The only drawback as I see it, is that you must turn your head and look down, diverting your vision from the

road, which of course can be hazardous.

In some cars the only place to mount a rig is on the passenger side beneath the dash. If you can angle the mount so you can see the face plate, this can be very satisfactory. Be aware of the length of your mic cable however, making sure it's long enough to reach your operating position without being unduly stretched.

There are radios now available that will allow you to mount the body of the radio in the trunk or under the seat, leaving only a small control head to mount in the passenger compartment. You can put it on any convenient location on the dash. This gives you much greater visibility and security against theft.

You must also match the type of antenna you intend to use to the vehicle. What type of mount? For most VHF/UHF antennas there are many choices available. Many people simply use magnet mount antennas. You can put them on or pull them off as needed. They do tend to leave small scratches when you pull them on and off, so you may not consider this an option.

Trunk mounts are also another favorite, and they simply clamp to the lip on the back side of the trunk. They offer the advantage of rigidity, and a pretty fair connection to ground via their set screws. On most sedans, I usually opt for this type of mount.

There are many other types of mounts, and all have their own advantage/disadvantage tradeoffs, depending on the style of vehicle you drive. If you are uncertain, ask others with the same type of transportation what they use. Your dealer would likely be able to give a recommendation based on past sales experience. Sometimes there is a compromise between performance, utility, and looks.

I may just go through all the mounts available in a future article. It might be helpful to study the different types, how they are mounted, and on type of vehicles they are best suited.

Next month we'll get into the nuts and bolts of mobile radio installation. It's not hard with the proper tools, supplies and a touch of knowledge.

Ideas? Comments? Suggestions? Write to me in care of the READOUT, or drop me a note via packet at N6ZUC @ KJ6VC.#SOCA.CA.USA.NA. 73, Tim.

## VE tests in Central California

Tri-County VE Team Amateur Examination Schedule for 1994

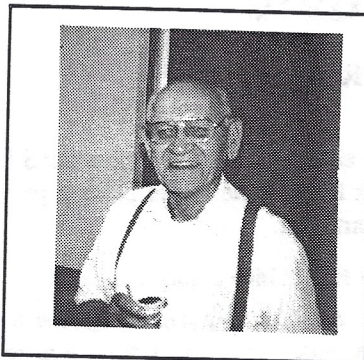
Date \ Time	Location	Contact
3/12/94 9:00 am	Modesto	W6XX Phone (209) 883-2968
5/14/94 9:00 am	Turlock	W6XX Phone (209) 883-2968
6/11/94 9:00 am	Merced	KI6PR Phone (209) 383-2166
9/10/94 9:00 am	Modesto	W6XX Phone (209) 883-2968
10/8/94 9:00 am	Merced	KI6PR Phone (209) 383-2166
12/10/94 9:00 am	Modesto	W6XX Phone (209) 883-2968

All sessions accept walk-ins (pre-registration is not required) and will offer examinations for all classes of license. The test fee for 1994 is \$5.75 (except Novice) and all test materials are returned to the ARRL/VEC by Air Express. Phone the "contact person" for specific details regarding location or changes. All classes of license - Novice to Extra - will be administered. Test fee is \$5.60 (except Novice). Bring the original and a photocopy of your ham ticket and any CSEs in your possession. 610s provided by the team. Two test rooms to minimize waiting. All materials returned to the ARRL/VEC via Air Express to ensure prompt issuance of licenses. Take 99 to Standiford. East on Standiford to Conant. South on Conant to Rumble. East on Rumble one block to the school. For more information contact W6XX.



## Daniel Tonini, WA6KDC, Silent Key at 76

Daniel Tonini, WA6KDC, passed away on February 22, 1994 after a massive heart attack. He was 76 years old. Dan had been a member of *SARA* for over 15 years and made his home in Ceres. He was born in 1917 in Chicago, IL and moved to California when he was a teenager and made his home in Stanislaus County for over 40 years. He, and his brother, owned and operated Tonini Brothers Tile Co. for many years. Dan had undergone open heart surgery two years ago from which he never completely recovered. His wife



Doris died in 1989. He leaves three daughters, four grandchildren and four great grandchildren. Burial was at the Ceres Cemetery.

Our condolences to his family.

### *SARA* Silent Keys

W6YIN.....	Charles Barnes.....	November	5,	1978	
NV6Z.....	Henry Deeter.....	July	7,	1979	
K6JFS.....	Charlie Mendoza.....	November	13,	1979	69
WB6VUS.....	Richard Jensen.....	January	21,	1981	
W6GCL.....	Will McAlpine.....	February		1982	73
KA6GVR.....	Norman Goodwin.....	October	2,	1982	61
W6FIQ.....	Bill Dalton.....	December	20,	1982	76
N6BGA.....	Quentin Goodrich.....	March	18,	1983	64
K6AYL.....	Leo Nepote.....	July	12,	1983	60
W6ERE.....	Cliff Price.....	October	2,	1983	69
W6QH.....	Tony White.....	November	28,	1983	78
KB6DVQ.....	Stephen Pereira.....	April	2,	1984	66
WB6TUV.....	Bill Ponkow.....	July	19,	1984	69
N6HFU.....	Edgar Martin.....	May	14,	1985	69
WB6LSC.....	Glen Andrews.....	May	29,	1985	43
N6DXB.....	Joe Parker, Sr.....	January	14,	1986	61
K6PDE.....	Chuck Strobel.....	May	29,	1986	65
K6KQE.....	Bob Le Cler.....	July	19,	1986	71
KB6UAW.....	Luverne Donker.....	August	29,	1987	67
WA6APF.....	Larry Merritt.....	May	27,	1988	80
W6OIN.....	Jack Scanlon.....	July	19,	1988	58
WA6OQF.....	Ray Olive.....	December	20,	1988	74
N7EDZ.....	Thomas Walker.....	September	30,	1991	
KI6OO.....	John McLaughlin.....	April	20,	1992	79
N6SAH.....	Jo Anne Shaffer.....	September	19,	1992	50
WA6KDC.....	Daniel Tonini.....	February	22,	1994	76

## Bill introduced in Georgia to eliminate property covenants

A bill introduced in the Georgia Legislature that would eliminate the effect of restrictive property covenants on Amateurs is believed to be the first of its type in the nation, according to Georgia Section Manager Jim Altman, N4UCK.

The bill, H.B. 1134, would prevent all new and renewed covenants from regulating, controlling, or restricting antennas owned and operated by licensed Amateurs in the state. Altman said that, in Georgia, all restrictive covenants have a life of 20 years, but can be renewed. This law, in banning new and renewed covenants, would leave the existing covenants in place until their natural expiration, and prevent new ones.

Over the next 20 years, all existing covenants would disappear. The bill was initially referred to the state bar committee on real property law, which gave the measure a "do pass" recommendation.

For more information, contact Altman or the Regulatory Information Branch at ARRL Headquarters.

ARRL Bulletin via packet.

## VOA site for sale in South America

Want to buy a first class DX location? The Voice of America has announced that it will solicit offers for the purchase of its broadcasting facility in Belize, Central America! The station will go QRT no later than March 31, 1994.

The station is equipped with two 100 kW AM transmitters, two directional antenna arrays, an on-site diesel power plant, satellite links and control/monitoring equipment. Interested? Call the VOA at 202/619-2538.

## No Minutes

The minutes of the February meeting of *SARA* were not received from the Secretary by press time. They will appear next month.

## Last reminder

One more reminder to check the mailing label on the back page of this newsletter. If it says "1993" above your name, you have overlooked paying your 1994 dues. If you forgot, use the renewal form on the back page and send your check in today. Thank you!





# ARRL San Joaquin Valley Section Update

By Mike Siegel, KI6PR

*ARRL San Joaquin Valley Section Update, January 1994 from Mike Siegel, KI6PR, SJV Section Manager: 1145 Julie Drive, Merced CA 95348 (209) 383-2166. Packet: KI6PR @ K6RAU.#CENCA.*

**Do you someone who wants to be a ham?**

Have them call 1-800-32-NEW-HAM (800-326-3942). They will receive "how-to" information, lists of local clubs, classes and instructors, and VE test sessions in their local zip code area.

**Do you want to take an Amateur exam?**

Call the ARRL VEC Hotline at (408) 984-8353 for VE sessions in your area. You can also call me for VE sessions in the SJV Section.

## More Legislative Comments:

Brad Wyatt incorrectly showed Representative Vic Fazio, newest co-sponsor of H.R. 199, as being from the 4th Congressional District; he is, in fact, from the 3rd District, outside of SJV. Current co-sponsors from SJV are: Rep. John Dolittle (R-4), Rep. Bill Baker (R-10), Rep. Richard Lehman (D-19), and Rep. Jerry Lewis (R-40). To date, we have NO SJV co-sponsors for H.R. 2623, and NEITHER California senator has to

date signed on as co-sponsors for S.J. 90. Look for a Section-wide petition program to start soon.

## New Ham video promos:

ARRL HQ has just released a new set of video PSA's that feature astronaut Linda Godwin and Nobel-Prize winning physicist Joe Taylor. I have several VHS copies of the PSA's available for your club's perusal, and there is currently an effort to format the tapes for distribution to local SJV TV stations.

## Toss those old 610's!

Effective March 1st, the FCC will no longer accept ANY of the older 610 License Application Forms; the only form that will be accepted is dated November 1993. The new forms are available from some local VE Teams, myself, ARRL HQ, and of course, the FCC.

## License renewal reminders:

At the ARRL Board of Directors meeting, held January 21-22, the Board directed HQ Member Services to start mailing out reminders to members of an impending license expiration; the reminder will include a 610 form for license renewal. At the same Board meeting the Finance and Administration Committee was directed to look into the feasi-

bility of providing legal-defense insurance for members, for use in tower and TVI/RFI legal battles. The Board also decided to offer, on a trial basis, free copies of The ARRL Letter, to newsletter editors of ARRL-affiliated clubs.

## The NoCode Debate Goes International:

According to a recent issue of The ARRL Letter, the argument over codeless HF privileges has reached the U.K.. Late last year, GCHQ (Britain's equivalent to our FCC) asked the Radio Society of Great Britain to conduct a survey of it's members, to see what the average British ham thought about codeless HF privileges. Of the almost 1500 replies, the response was a whopping 2-to-1 response against such privileges. U.K. Ham privileges currently include codeless operation above 50 MHz.

## No wonder the mailman hates us!:

In 1993, ARRL members sent about 7.25 TONS of QSL cards through the ARRL Outgoing QSL Bureau! This equates to 2,182,000 cards to DX stations! The U.S. Incoming QSL Bureaus reported just over two MILLION cards sorted for delivery in 1993.

## Dallas McJammer sentenced in Federal Court

Terry Van Sickle, WB5WXI, of Dallas, TX was sentenced on January 14th in U.S. District Court for the Northern District of Texas, for jamming a local McDonald's Restaurant communications frequency (154.60 MHz).

As a result of his arrest by the FBI, Van Sickle was fired from his job as a video reporter for a local TV station.

In court he was sentenced to 90 days home confinement and he must wear an electronic monitoring device and follow electronic monitoring procedures.

He must also pay the cost of the monitoring service as determined by the U.S. Probation Office. Van Sickle was also ordered to pay a \$1,000 fine plus a \$25 special assessment. He could have received 8 months in prison, a year's probation plus a \$5,000 fine.

Van Sickle jammed the frequency from his TV reporter vehicle which was fully equipped with receivers and transmitters. W5YI Report

## Foothill swap meet

The Foothill College radio flea market resumes it's summer schedule on March 12, 1994. The college is located just off Hwy 280 on El Monte Rd. (west). The gates open at 6:00 AM the second Saturday of each month March through September 10th. Entry is free, but there is a parking lot fee of \$2.00 per vehicle. For more information call 408-734-4453.

Here is the schedule for this year. March 12- April 9-May 14-June 11-July 9-August 13 and September 10, 1994.





# ARRL Pacific Division Director's Report

By, Brad Wyatt, K6WR

## ARRL Board meeting:-

Jim Maxwell, W6CF, and I attended our first ARRL Board meeting, as your new elected representatives, in the ice and snow of Rocky Hill, CT, on Jan. 21-22. All the current officers were reelected and other Board items were attended to. A summary of the actions taken are contained in the Jan. 26th ARRL Letter. The details of the meeting will be in March QST. A couple of items passed at the meeting: The ARRL Letter will be offered to affiliated club newsletter editors free of charge, on a trial basis, and ARRL HQ will begin to notify members of license expirations, and will include a Form 610 to effect license renewals.

## 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 as they are announced. Hiram Percy Maxim Memorial Award. Do you know a licensed amateur under the age of 21? He or she might qualify for this award. Write to ARRL HQ for information. The nominations are to be sent to your Section Manager. See page 8 of any QST for your SM's address. There are many young amateurs who might qualify for nomination, but few are actually nominated. 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.

## New Pacific Division DXAC

### Representative:-

Jack Troster, W6ISQ, a very well respect-

ed and long time DXer and contesteer, has agreed to serve as the new Pacific Division DXAC representative. Jack will succeed Jim Maxwell, W6CF, who has served with great distinction for many years not only as the representative but also as secretary of the committee, a very demanding position. Jim will be able to devote all his time to being Vice Director. Thanks for a job very well done, Jim, and welcome to you, Jack!

## Vanity Call Signs; Electronic Filing of 610s; Related Matters:-

The FCC has issued PR Docket 93-305 concerning the issuance of vanity callsigns. The deadline for comment is March 7, 1994. The text of this docket is on page 84 in February QST. Please also read the related editorial on page 9 in the same issue. The text is also available on packet, or on Internet from the ARRL information server. Send a message to [info@arrl.log](mailto:info@arrl.log) with a single line message as its text: SEND FCC-93-305. In summary, the docket states that any ham may pay the "appropriate fee" and submit a list of up to ten callsigns. The applicant would receive the first callsign on the list that's available. If none of the callsigns asked for are available, the applicant keeps the old call. A new form 610-V is being proposed to be used for the request of a specific call. Clubs and Military Recreation stations would be issued a call in sequence but would then be eligible to request a specific call once they had obtained their first callsign. It is also expected that the new computer equipment and software will enable electronic filing of 610s. New vanity callsigns will bear the original license expiration date. Significantly, FCC asks for input on how to make callsign availability information online, and whether there should be a phase-in or priority procedure and how it should be designed and implemented. Please let me have your comments verbally, electronically or in hard copy ASAP so I can help the ARRL Board of Directors consolidate a position. I am also a member of the Ad-Hoc Committee of the Board to develop the ARRL position. Comments

are already arriving, but I would like a lot more! No date is specified for implementation, but it could be late 1994.

## Wake up call on the 13 cm. band:-

NTIA (a part of the executive branch of the Clinton Administration) has just issued a preliminary plan (the content apparently ignores specific Congressional action) which would decimate half of the 2,400 Mhz. band! The plan is to reallocate 2,390 - 2,400 and 2,402 - 2,417 Mhz by Aug. 1994 and 2,300 - 2,310 Mhz. in 1996. ARRL is developing an aggressive plan to turn this proposal around. We need your help! See QST, the ARRL Letter, W1AW bulletins, and other sources for more information. Keep tuned!

## Coming Events:-

- Livermore Swap Meet - 1st Sunday of each month at Las Positas College in Livermore, CA, 7AM to Noon, all year. Talk in 147.045 from west, 145.35 from the east.
- ARRL International DX Contest - Phone, March 5-6, 1994.
- Foothill Swap Meet - 2nd Saturday, March - September. Foothill College, Los Altos, CA.
- International DX Convention, April 15-17, 1994, Holiday Inn at Visalia, CA.
- West Coast VHF/UHF Conference, Cerritos, CA, April 29 - May 1, 1994.
- Valley of the Moon ARC Hamfest, Sonoma, CA, April 30, 1994. Contact Darrel Jones, WD6BOR, 358 Patten St., Sonoma CA 95476 (707) 938-8086.
- Dayton HamVention, Dayton, OH, April 29 - May 1, 1994.
- Fresno Hamfest, May 7-8, 1994, Riverland Park at Kingsburg, CA. Contact James Wakefield, AH6CO, 1333 N. Palm Ave., Fresno CA 93728.
- Northwestern Division Convention, Seaside, OR, June 3 - 5.
- ARRL Field Day, June 25-26, 1994.
- Southwestern Division Convention, Aug. 26 - 28, 1994, San Diego Town & Country Hotel/Convention Center
- 1st National Hamfest, Oct. 7 - 9, 1994, Costerisan Lake, Bakersfield, CA.
- Pacifcon 94, Hilton Hotel at Concord CA, Oct. 21 - 23, 1994.



# RF safety standards

From front page

sure to the general public.

Members of the American Radio Relay League's Board of Directors are understood to have discussed this FCC proposal at their July meeting and again at a later Executive Committee' meeting. Although the ARRL's comments in Docket 93-62 had not yet been formally filed with the FCC at this writing, board members have indicated that ARRL will argue for a continuation of the categorical exemption for radio amateurs, and for use of the more liberal standard for occupational exposure if amateurs are not categorically exempt.

If adopted in its most stringent form, Docket 93-62 proposal could result in enormous costs for amateurs, because accurate meters to measure RF power densities are expensive. Manufacturers such as General Microwave and Narda Microwave sell their least expensive power density meters for prices well into four figures.

Also, the proposal could force the curtailment of certain amateur radio activities. In 1990, the FCC and the Environmental Protection Agency jointly conducted a field survey of the RF fields at the stations of volunteer amateurs in Southern California. The FCC/EPA team concluded that most amateur activities do not create RF fields in excess of either the old or new ANSI standard. A well-matched antenna at least 35 feet above any inhabited area, fed with a well-shielded coaxial cable, produces fields far too weak to create any health concern, according to the FCC/EPA team's measurements.

However, the FCC/EPA measurements showed that near a mobile, indoor or attic-mounted antenna, the RF fields sometimes exceed the ANSI standard. Conceivably, the FCC could now adopt rules regulating the circumstances under which such antennas could be used by amateurs.

Another controversial issue concerns hand-held transceivers. All transmitters with less than seven watts of output power were categorically exempt under the old ANSI standard, but the new standard reduced that exemption by a factor of five (to 1.4 watts) for exposure to persons not aware of the RF fields, re-

flecting the ongoing scientific debate about the safety of handy talkies.

Why is the FCC proposing to adopt the new ANSI standards, and to remove the exemption for amateurs? The FCC is responding to the growing body of medical evidence that under some circumstances, electromagnetic fields, including both RF fields and the low frequency fields created by power lines and home appliances, may pose certain health hazards. There has also been sensational publicity in the mass media about this controversial issue. When the FCC adopted the Notice of Proposed Rule Making in Docket 93-62, FCC Commissioner Ervin Duggan filed a separate statement in which he said that the FCC's action was NOT prompted by the sensational media publicity. However, it seems clear that the FCC cannot ignore this issue in part because of the growing public concern.

While separating fact from fantasy is difficult in any evolving field of scientific inquiry, the problem has been greatly complicated in the case of electromagnetic radiation (EMR) by both the emotional nature of the public debate and the huge financial stakes for industry if EMR levels must be reduced to protect public health.

For example, if it can be shown conclusively that children living near high-tension lines have abnormally high rates of leukemia (as a number of studies conducted in several different countries have already indicated), the cost to electric utilities (and indirectly to all of us as rate-payers) could run into billions of dollars. Many power lines would have to be relocated, and wider buffer zones would have to be created along those that cannot be relocated for one reason or another.

Likewise, FCC licensees might have to undertake costly steps to minimize public exposure to RF energy, and the fact that there are questions about the safety of RF energy sources (including amateur radio stations) could lead to new restrictions on amateur antennas by local governments and homeowners associations, among other rulemaking authorities.

At this point, new research about the biological effects of EMR is reported in medical journals almost weekly. While there is a great deal that we still do not know, there is strong evidence that it does in fact have some health effects, even at low levels. This evidence comes from two different kinds of research: epidemiological studies of public health patterns and

laboratory research into the effects of EMR on human and animal tissue.

Much has already been written in amateur radio publications and elsewhere about the question of EMR and health. The ARRL has a Committee on the Biological Effects of RF Energy that regularly monitors new research in this field. Ivan Shulman, WC2S, chairman of the ARRL Bio-Effects Committee, wrote a detailed article about the problem for QST several years ago. The W5YI Report has published numerous articles about this issue, and new sections have been added to both The ARRL Handbook and The ARRL Antenna Book covering RF safety.

To summarize briefly, both RF and low frequency fields are classified as non-ionizing radiation because the frequency is too low for there to be enough photon energy to ionize atoms. Ionizing radiation, on the other hand, has a variety of very serious (and well publicized) adverse health effects. But non-ionizing radiation also has health effects.

It has been known since the early days of radio that at sufficiently high levels RF energy could heat body tissue enough to cause blindness, sterility and other health effects. What we are learning today is that even at a thermal levels (levels too low to cause body heating) there are also demonstrable health effects. We know, for instance, that low frequency magnetic fields, as well as RF fields that are keyed, modulated or pulsed at a low frequency rate, affect the manner in which human cells intercommunicate. Cancer-fighting T-cells in the immune system rely on subtle chemical and electrical messages that pass through the cell membrane to determine that a particular cell has become cancerous. It has been shown in laboratories that low-level EMR can alter this vital communication through the cell membrane. Other laboratory research has shown that low level EMR can disrupt the human body's circadian rhythms (the body's internal "clock"), cause chromosome damage, and alter the body's level of melatonin, a hormone that re-duces the risk of certain cancers if present in appropriate quantities.

Research has shown that EMR at levels even weaker than the Earth's geomagnetic field has biological effects. How

See "RF safety standards " page 11



## RF safety standards

From page 10

can this be? The Earth's magnetic field as a static field? All of life has evolved in this constant field. Natural electromagnetic fields are also created by the sun and thunderstorm activity; life as we know it has adapted to those fields. However, in the last 100 years, man-made fields with very different intensities and spectral distributions, have altered the natural electromagnetic environment in ways that have their own biological effects.

In addition to the laboratory research that has identified biological effects of EMR, there has now been extensive epidemiological research into EMR and health. In fact, Dr. Samuel Milham's much-publicized 1988 medical journal article about amateur radio and cancer was based on an epidemiological study of the mortality rates of Amateurs in California and Washington state. The study noted statistically significant excess mortality among radio amateurs from two kinds of cancer, but did not prove there was a causal link.

There have been many other studies correlating occupational exposure to RF and/or low-frequency fields with higher than normal rates of various cancers, most notably leukemia, non-Hodgkins lymphoma and brain cancer (Milham's study of amateurs found significant excess mortality from the first two, but not from brain cancer). As noted earlier, a number of studies have shown that children living near high-tension lines have higher than normal rates of leukemia. The recent nationwide Swedish studies confirmed earlier findings of both excess leukemia among children living near high-tension lines and abnormal rates of certain cancers among workers exposed to high levels of EMR. Another study found that microwave workers with 20 years of exposure to EMR had 10 times the normal rate of brain cancer if they were also exposed to soldering fumes or electronic solvents. Typically, these chemical factors alone increase the risk about two-fold.

On the other hand, there are some nagging questions that remain unanswered. Several studies of work place EMR exposures and health have yielded contradictory results. Often spot measurements of electromagnetic fields do not correlate with the observed health effects, even within homes near power lines. There is also evidence that there may be window effects: Some studies have shown health effects at certain frequencies but not at others (e.g., 25-30 Hz and 45 Hz, but not 35-40 Hz), at certain field intensities but not in stronger or weaker fields, and in certain relationships to the Earth's static magnetic field but not others. The normal adage about carcinogens, "If some is bad, more is worse," may not apply to EMR. We appear to be dealing with very subtle and complex relationships between EMR and health.

In view of the uncertainties in this field, many public health officials are now urging "prudent avoidance," the common-sense idea that it is wise to avoid unnecessary exposure to EMR until there is a more complete understanding of its health effects. This philosophy has led some countries (notably Sweden) to adopt exposure standards far more stringent than even the new 1992 ANSI standard. And in the United States, the National Council for Radiation Protection and Measurement has adopted a voluntary standard that in some respects is considerably stricter than the new ANSI standard. In fact, the ANSI committee that adopted the new standard was criticized by some public health researchers for being excessively influenced by industry groups with a financial stake in the status quo.

Be that as it may, the new ANSI standard exists, and the FCC now proposes to use it as a processing guideline for licensed services, including amateur radio stations.

*Excerpted from a paper by Wayne Overbeck, N6NB and published in the "The Proceedings of the 27th Annual Conference of the Central States VHF Society. Reprinted from the W5YI Report, February 1, 1994 issue.*

## Attention all SARA members

In next month's issue of **The READOUT** we will be publishing the club roster. Some of you may prefer that your address and/or your telephone number be kept confidential. We will honor any requests to do so. All you have to do

is drop a card to the editor, Bob, WA6ZLO, whose address appears on page two of each newsletter. Please indicate if you want both your address and phone unpublished, or just one or the other. Also, once the list is printed, if you find any errors, please let ZLO know. The most common ones are phone numbers that have been changed without notifying the club, and changes in class of license.

March 15, 1994

SARA

Program

Courage HANDI-HAM  
System

How it started and how  
it helps the handicapped

Speaker will be

Bruce, NK6C

730 PM

## International "signs" of the times

The following are actual signs found when traveling around the world:

- In a Bangkok dry cleaner's: Drop your trousers here for best results.
- In an East African newspaper: A new swimming pool is rapidly taking shape since the contractor's have thrown in the bulk of their workers.
- In a Yugoslavian hotel: The flattening of underwear with pleasure is the job of the chambermaid.
- In a Japanese hotel: You are invited to take advantage of the chambermaid.
- In the lobby of a Moscow hotel across from a Russian Orthodox monastery: You are most welcome to visit the cemetery where famous Russian and Soviet composers, artists and writers are buried daily except Thursday.

*Courtesy of the El Rancho Gazette, WD5BRP via the W3OK Corral Newsletter.*

## Another means of income

Subscribe to, or renew your membership in, the ARRL, American Radio Relay League, through SARA. We receive a commission if you do. Contact the treasurer for more information.





# Calendar

Mar. 12.....VE Testing in Modesto ..... 9:00 AM  
 Mar. 15.....SARA Monthly Meeting..... 7:30 PM  
 Program: Courage Handi Ham Program  
 Apr 19 .....SARA Monthly Meeting..... 730 PM  
 Special program: Tom Hora, Inspector with the FCC  
 in Livermore and Mike Siegal, KI6PR, ARRL San  
 Joaquin Section Communications Manager.  
 May 7-8 .....Fresno Hamfest ..... All Day  
 .....Riverland Park at Kingsburg  
 May 14 .....VE Testing in Turlock ..... 9:00 A.M  
 May 17 .....SARA Monthly Meeting..... 7:30 PM

SARA meets the third Tuesday of each month (except holidays) at the Stanislaus County Administration Building 11th and H Streets in downtown Modesto. The meetings are held in the lower-level conference room at 730 pm. Visitors and interested persons are most welcome to attend. SARA is an ARRL affiliated club and is also affiliated with the Stanislaus County and City of Modesto RACES\ARES programs.

The READOUT is mailed with a bulk mailing permit. Please notify us if you move as the Post Office will not forward bulk mail regardless if you left a forwarding address.



## SARA Membership Application

Call \_\_\_\_\_ Date \_\_\_\_\_

Name \_\_\_\_\_

Address \_\_\_\_\_

City State \_\_\_\_\_

Zip Code \_\_\_\_\_

Are you a member of the ARRL? (Yes) (No)

Home Phone \_\_\_\_\_

Business Phone \_\_\_\_\_

Occupation \_\_\_\_\_

Date of Birth \_\_\_\_\_

Class of license \_\_\_\_\_

Year first licensed \_\_\_\_\_

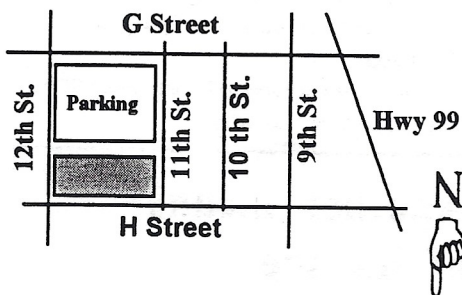
Dues: Renewal \$23.00 per year. Out of area more than 150 miles from Modesto is \$11.00. New first time applicants dues are pro-rated from the month you join the club. Use \$1.91 times the number of months remaining in the year. i.e- You join in July- 6 x \$1.91= \$11.46

SARA repeaters on Mt. Oso at 3,300 feet- 145.39(-) MHz PL 136.5 Hz or \* 5 to override the PL. 224.14 (-) MHz, 440.225 (+) MHz PL 136.5 Hz . KA-Node Digipeater 144.91 MHz. Ten Meter Digipetar 28,440 kHz

Stanislaus Amateur Radio Association, Inc.  
 P. O. Box 4601  
 Modesto, CA. 95352

Bulk Rate  
 U. S. Postage  
 Paid  
 Permit 5  
 Modesto, CA.

Address Correction Requested



SARA Meeting Location  
 1100 H Street, Modesto, CA  
 Lower Level Conference Room.  
 730 pm third Tuesday of each month.

TO:

1994

**Next SARA Meeting is March 15, 1994 at 730 pm & You're Invited!**