



The READOUT

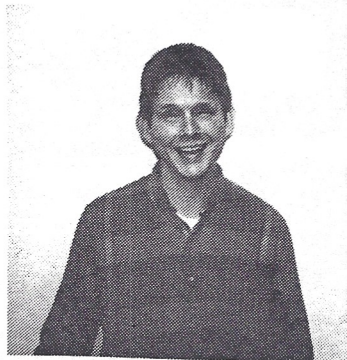
Year 16 Number 2 February 1994

The Official Newsletter of the Stanislaus Amateur Radio Association

Meet your 1994 SARA officers



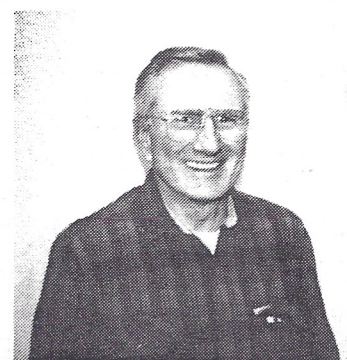
President
Elizabeth Eyre, KD6GIW



Vice President
Mark Lemmons, WB6BJN



Secretary
Debbie Hansen, KC6YTE



Treasurer
Bob Kimball, KC6TVE

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FCC plans to issue vanity call-signs

The text of the FCC's proposal to implement vanity licensee selected amateur radio station call signs was released at the end of December, 1993.

Essentially the rule making provides for:

- 1. Individual ham operators to apply for a specific available call sign which is appropriate for their license class.
- 2. Licensees would use a new FCC Form 610-V to select up to ten call signs in order of preference. (If all are unavailable, the current call sign would be assigned.)
- 3. Club stations will also be able to choose a specific available call sign. RACES and military recreation stations are not eligible for vanity call signs.
- 4. The cost of a special call sign will be \$70 for a ten year term. All Form 610-V applications with fees will go to a special address.
- 5. Amateurs holding vanity call signs who upgrade or otherwise modify their license will not be granted a new full ten year term. Their new license will bear the original expiration date.
- 6. All licensees will only have one station call sign. Their current call sign will be vacated (and immediately available for reassignment) once a vanity call sign is assigned.
- 7. The FCC will issue public announcements describing the vanity call sign system.
- 8. The current (no cost) sequential call sign system will remain in place for those who do not wish a specific call

See "Vanity Calls" page 11

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1994 SARA Officers

President

Elizabeth Eyre, KD6GIW
667-5299

Vice President

Mark Lemmons, WB6BJN
523-5140

Secretary

Debbie Hansen, KC6YTE
545-5491

Treasurer

Bob Kimball, KC6TVE
892-8664

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-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 !

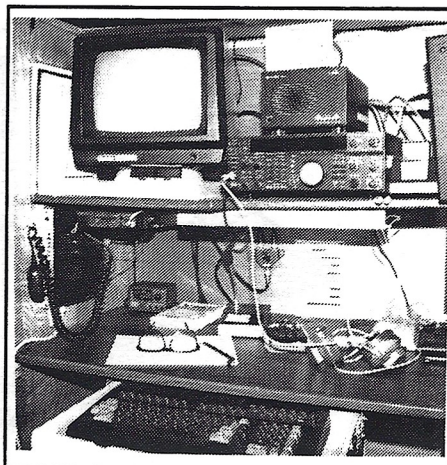
ARRL membership may be paid through SARA with the club retaining a \$2.00 commission. Please send your ARRL membership form along with your check made payable to SARA. We will deduct the \$2.00 and send a check to the ARRL.

Thank you for your support!

The shack is in the closet

Limited space, plus a desire to have a ham shack calls for some ingenuity, and that's exactly what Bob, N6OCS, applied when he made a shack of his bedroom closet.

Bob, who is single, does not need much room and his single wide mobile home suits him just fine. However, it did present a challenge when he was looking for a spot to locate his ham shack. As you can see from the photos, he found a good spot.



The "shack" in a closet. The station of Bob, N6OCS, Modesto

AMATEUR RADIO CALL SIGNS

...issued as of the first of December 1993:

Radio District	Gp. "A" Extra	Gp. "B" Advan	Gp. "C" Tech/Gen	Gp. "D" Novice
0	AA0PO	KG0KD	N0ZLM	KB0LMX
1	AA1IB	KD1SQ	N1QWR	KB1BEQ
2	AA2QQ	KF2SX	N2XFU	KB2QQJ
3	AA3GP	KE3LH	N3QZL	KB3AZK
4	AD4NS	KR4IY	(**)	KE4BYT
5	AB5RK	KJ5TG	(**)	KC5EIK
6	AB6VW	KN6VX	(**)	KE6DOF
7	AB7AI	KI7TW	(**)	KB7ZRB
8	AA8NJ	KG8FM	(**)	KB8QOW
9	AA9JM	KF9SP	N9VPC	KB9IWA
N. Mariana Is.	AH0W	AH0AO	KH0CG	WH0AAY
Guam	NH2Z	AH2CU	KH2IL	WH2ANI
Johnston Is.	AH3D	AH3AD	KH3AG	WH3AAG
Midway Is.		AH4AA	KH4AG	WH4AAH
Hawaii	(**)	AH6NE	WH6QL	WH6CRB
Kure Is.			KH7AA	
Amer. Samoa	AH8H	AH8AF	KH8BA	WH8ABB
Wake W. Peale	AH9C	AH9AD	KH9AE	WH9AAI
Alaska	(*)	AL7PL	WL70W	WL7CHJ
Virgin Is.	WP2D	KP2CC	NP2GU	WP2AHU
Puerto Rico	(**)	KP4VZ	(***)	WP4MLZ

*=All 2-by-1 "W" prefixed call signs have been assigned in all radio districts. Group "A" Z-by-2 format call signs from the AA-AK block are next assigned to Extra Class amateurs. **=All Group A (2-by-1) format call signs have been assigned in Hawaii, Alaska and Puerto Rico. Group "B" (2-by-2) format call signs are assigned to Extra Class when Group "A" are depleted. ***=Group "C" (1-by-3) call signs have now run out in the 4th, 5th, 6th, 7th, 8th and Puerto Rico call districts. [Source: FCC, Gettysburg, Pennsylvania] via the W5YI Report

FROM THE DESK OF

Tim Low, N6ZUC

I went to bed just before midnight on Tuesday October 26, 1993. Seemed just another night, but within the hour, that changed. As I was beginning to doze off, I heard the wind pick up. For those of you who don't know, it rarely blows here (Escondido), at night. Usually it dies off about dinner time, and doesn't pick up again until the next day. That's why my sleep was disturbed. I looked out my window and could see the trees bending. Dirt, leaves and debris suspended in air. I knew the Santa Anas we had been promised for days had arrived.

The Santa Anas are hot, dry winds that have their beginnings in Colorado. As they move west, picking up speed in the mountain passes, they lose all moisture. By the time they arrive here in southern California, they are very strong, and very dry.

Just after 1 am according to fire officials, power lines came down igniting the dry brush. A very wet winter and spring, caused an explosion in the growth of vegetation, combined with a very dry summer, it was right for fire.

My call came just before 7 am Wednesday morning. It was my RACES Assistant Section Manager alerting me that my group had been called out to provide communications for the Escondido Police and Fire Departments. I had been monitoring our RACES repeaters, and had heard the call out of Strike Teams for animal rescue. The fire was big and out of control, being fanned by gusts of wind to 50 mph and more. Standing on my patio watching the smoke rise over the hills, I knew it would be a long and nasty one.

After hitting the phone to call up additional forces, I arrived at our RACES station in the Escondido Police station just before 8 am. I checked in to County, informing them that Escondido EOC was in operation. Initial reports were that the fire had started in the Guejito (Wa-hee-to) road/Lake Wolford area, (just above my house), and was spreading rapidly toward

Wild Animal Park. Animal Rescue was busy transporting domestic animals and pets from the fire path, and had their base of operations set in the parking lot of the Park. County EOC, located in the San Diego Sheriff's Department, was acting as a communications center, coordinating efforts by all RACES Personnel, Animal Rescue, ARES/Red Cross, and ARES/Salvation Army.

Shortly after 9 am, I received word via 2 meter, that the fire was now moving rapidly into the city, and that structures were in danger. I informed our Escondido Fire and Police Information officers, who immediately dispatched personnel to the area, and began fire fighting and evacuation efforts. Through the quick response to an Amateurs call, property as well as perhaps lives were saved. The fire was stopped, with only relatively minor damage done in the city.

It was determined that all danger to the Escondido area had passed by mid afternoon, and we were ordered to stand down. This was not the end to fire fighting efforts however, and Amateurs remained involved as the fire was still moving, and still out of control.

Day two brought another call out as a new fire had started on the Cities south west side, and was moving into the City of Poway as well. From our base of operations in the Escondido Police station, we had observers stationed along the fire, feeding reports to us on its movement, and we in turn reported this to county, to help the fire fighting teams coordinate their manpower. Luckily this fire was controlled in short order, and we again were ordered to stand down.

Although the main fire was still out of control on day three, there was no threat to the local area, and I was not called in. On day four however, I was called to see if I could find personnel to relieve the tired Amateur volunteers providing communications for the Salvation Army at the fire camp at Wild Animal

Park, and the Army's headquarters in Escondido. I took off my RACES badge, and put on my ARES badge and went to work finding licensed Amateurs to fill the need. Through this whole ordeal, I was very gratified to find so many unselfish people willing to provide support.

We were able to find a large motor home, along with its associated group of Radio Amateurs, to pull out to fire camp and provide a base of operations, as well as a place for weary volunteers to rest. Pacific Bell provided us with the use of four cellular phones which we let the fire fighters use to call home to concerned loved ones.

By Sunday, day five, the fire had been contained, and fire units were beginning to be sent home. At this time all RACES, ARES and Animal Rescue volunteers were ordered to stand down. For the many Amateurs involved in the effort, it had been a long battle, but once again we proved the invaluable service that we as a group of trained volunteers can provide in times of emergency. Comments made to us from county fire and police officers proved this out. There were times that we were the only reliable means of getting information to these groups as all their communications were overloaded. At one point, we were the only way available to the local fire department to find out where the fire lines were.

I hope you'll get involved in your local RACES and ARES programs. It's not enough to respond in an emergency. Without the proper training provided by ARES and RACES, You can be of little help. A trained pool of volunteer communicators can be invaluable in the saving of lives and property. There is no way that the public sector can provide the manpower and equipment to handle these emergencies. Your assistance is needed.

Questions? Answers? Comments? Direct them to me via packet at N6ZUC @ KJ6VC.SOCA.CA.USA.NA, or write me in care of The READOUT. 73 -Tim



ARRL Pacific Division Director's Report

By, Brad Wyatt, K6WR

FCC actions:-

The Report and Order in PR Docket 92-289, concerning, among other things, the creation of a subband at 222 - 222.15 MHz for non repeater operation and Novice usage from 222 - 225 Mhz except as repeater control operators, will take effect on Feb. 1, 1994. Complete details are on page 83 in the January 1994 QST. The "bio-effects" proceeding (ET Docket 93-62) filing deadline has been extended to January 25, 1994. The "Instant Licensing" PR Docket 93-267 comment filing date was Jan. 10, 1994, with the reply comment date one month later.

Thanks to those who wrote to the FCC about the plan and sent copies to me. It appears very unclear at the moment what will happen to this proposal in light of the new Docket 93-305 concerning Vanity Call Signs and electronic filing of 610s. See page 9, January 1994, QST, for an Editorial and page 92, December 1993, QST, for more information.

There are many other Amateur Radio Service proceedings pending at the FCC; however, there appears not to be any firm schedule available on specific dockets as the main FCC focus seems to be on cable TV and related matters. Watch for further information.

Scholarships and Awards:-

There are many scholarships covering a wide range of situations available to licensed Amateurs. The ARRL Foundation, The Dayton Amateur Radio Associa-

tion, 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 gives 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.

Other News:-

Do you want to take an amateur exam? Call the ARRL VEC hot line, (408) 984-8353 for exam information. Do you know someone who wants to become a Ham? Call 1-800-32NEWHAM (1-800-326-3942). He / she will get "how to" information, a list of local clubs, a list of local instructors and a list of local volunteer examiners.

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. Contact Noel Anklam, KC6QZK, (510) 447-3857 eves.-

ARRL International DX Contest - CW, Feb. 19-20, 1994.-

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. Contact: Don Bostrom, N6IC, 4447 Atoll Ave., Sherman Oaks, CA 91423, (H) (818) 784-2590-

West Coast VHF/UHF Conference, Cerritos, CA, April 29 - May 1, 1994. Contact Bob Hastings, K6PHE, 854 Bernard Dr., Fullerton CA 90701 (714) 990-9203-

Dayton HamVention, Dayton, OH, April 29 - May 1, 1994. Contact P. O. Box 964, Dayton OH 45401-0964 (513) 276-6930-

Fresno Hamfest, May 7-8, 1994, Riverland Park at Kingsburg, CA. Contact James Wakefield, AH6CO, 1333 N. Palm Ave., Fresno CA 93728-

ARRL Field Day, June 25-26, 1994.-

Pacificon '94, Hilton Hotel at Concord CA, Oct. 21 - 23, 1994, Contact Richard Brown, KT6X, 4125 Sacramento St., Concord CA 94521(510) 676-9048.

March 15, 1994

SARA

Program

Courage HANDI-HAM System

How it started and how it

help the handicapped

Speaker will be Bruce

Johnson, NK6C

730 PM

Give your floppy diskettes a bath

If you spill some liquid (like water or coffee) onto your floppy diskette don't despair- you can give your floppy a bath!

Wash your hands to rid them of as much body oil as possible. Then insert your finger into the spindle hole and move the diskette in the sleeve away from the edge so you don't cut it. Carefully cut the edge off of the sleeve as you might cut open an envelope with scissors. Do the same thing with another edge.

Take out the diskette, being very careful not to crease it by bending it too much. Wash the diskette in luke warm water and mild soap (dish soap is good).

Rinse and clean. Don't use paper towels, but use a soft cloth to pat (not rub) it dry. Let it air-dry until it is perfectly dry.

Cut open a new diskette, but this time only cut one edge off. Throw away the diskette, you'll only use the new sleeve. Carefully insert the washed diskette into the new sleeve and put a write protect tab on it.

Insert the diskette into the drive and copy the contents to your hard disk or onto a fresh floppy. You have just saved the data. Then discard the old floppy that you just gave a bath.



SARA Minutes

By Debbie Hansen, KC6YTE, Secretary

The January 18, 1994 meeting of SARA was called to order at 730 PM by President, Liz, KD6GIW. Minutes of the December meeting were approved as printed in The READOUT. The final Treasurers report for 1993 was approved as presented by Bob, KC6TVE. His report is a follows:

Treasurers Year End Report 1993
Beginning year check book balance
\$1932.57

Expenses:

Phone- Pacific Bell \$159.84
Long Distance calls \$21.39
Postal- \$906.49
The READOUT- \$1214.80
Equipment purchase, repeater maintenance and insurance-\$2,207.01
Club functions -\$14.56
ARRL & NARCC-\$162.00
Communications Trailer \$268.31
Misc (mainly raffle expenses) -\$943.02
Total expenses-\$5,897.42

Income:

Dues: \$3,798.71
Misc (mainly raffle) \$2,028.06

Total income \$5,826.77

Difference of expenses vs. income for year 1993 \$70.65 more than what we took in.

In new business, Bob, WA6ZLO, announced the 1995 Police Olympics will be held in Modesto in July of 1995. He said events will be spread out over three counties, Stanislaus, Merced and San Joaquin and that SARA would be asked to help provide communications. More on this later.

Under old business, Ernie, K6UVI, thank the club for the use of the repeaters following the earthquake in Los Angeles in January. The local ARES group handled over 325 health and welfare messages and set up a station at the local Red Cross office. A brief video tape of an Channel 13 interview with Ernie was shown to the group.

The technical report was given by the President in the absence of LeRoy, NV6S. The main two meter repeater is down off the hill for updating. The standby repeater is up and running. The old relays in the system will be totally replaced with solid state devices. It will

take time for the project to be completed. In the interim, the autopatch will be out of the circuit.

President Liz suggested we hold another fund raiser this year and offer another gun as the prize. She said that with a gun as the prize tickets were very easy to sell. It was moved and seconded and approved.

The program for the evening was presented by Brad, KC6TDH, on hiding transmitters for fox hunts and the equipment used. Tony, KD6YAZ, suggested that members be given the option to withhold their address and telephone number from the roster printed in the newsletter. The editor, Bob, WA6ZLO, said he would honor any such requests and would include a check off box on future membership applications for members to indicate their preference.

President Liz announced that she had brought donuts and coffee and suggested we adjourn and partake. Meeting was promptly adjourned. Respectfully submitted by Debbie, KC6YTE, club Secretary.

Membership Application:

1994

Renewal ☐ New Member ☐

Name _____

Address _____

City _____ State _____ Zip Code _____

Business Address _____

Occupation _____

Year first licensed _____

OK to publish my address and phone number in
The READOUT? (YES) (NO)

Rates-

Full Membership \$23.00
Associate (unlicensed) \$12.00
Student (to sophomore in college) \$12.00
Out of Area (more than 150 miles from
Modesto) \$11.00

Date _____

Call _____

Member of ARRL? _____

Home Phone _____

Bus Phone _____

Class of License _____

**Thank you for
your support!**



Technical Report

By LeRoy Campbell, NV6S

New 610 form coming early next year

Hello to all, Problems were encountered with the two meter repeater recently. A packet interference was heard among other sources of interference. During the emergency trafficking in the aftermath of the earthquake in the Los Angeles area, a severe hum was apparent on the output of the two meter machine. I was forced to turn the main machine off and bring up the backup repeater. The unexpected benefit of that change located a

Notice:
The SARA
autopatch will be
out of service until
further notice!

problem that I've been unable to locate.

The source of the packet interference was identified as "SARA". That is our two meter digi and Ka-node. I have since installed cavity on the digi transmitter and at this point I have not heard it getting into the repeater. Apparently the 120 Khz separation is a bit too little and the cavity hopefully has attenuated some of the high level sidebands enough to

avoid the interference.

I made a trip up the hill on Friday after the quake and took the source of the interference away which was a mechanical relay board that switches all the linking and patch audio. I am currently designing a circuit to eliminate the mechanical relays as they have been a great source of problems. Almost without exception all of the repeater problems in the past couple years have been caused by the relays. Bear with me while I design this circuit and put it together.

I expect it will take a couple months before I can get it back to normal. At that time I plan to have links available on the 440 repeater as well as the 220 repeater. The phone patch will also be down during this time as it is involved in the relay circuitry as well. Hopefully, I will be able to make the system more dependable and clean up some ugly wiring that has accumulated over time.

I still want to do some checking on the other sources of interference to the two meter machine but will have to have some help from someone with proper equipment. I suspect Alex, K6LPG, will give us a hand on that one. I also want to schedule a work party to install grounds and guy anchors. Better grounding could help with some of our interference problems. I thank all who have helped with recent chores. Several have dropped what they were doing to accompany me on quick unscheduled trips. 73, LeRoy

A radically different and streamlined FCC Form 610, application for Amateur Operator Primary Station License, will debut early next year. The word "Primary" is a new addition to the form name since Congress has now authorized the issuance of special "vanity" call signs. The form will replace the March 1992 version which, although it carries a Feb. 28, 1995 expiration date, may not be used.

The reason is that the new form has been designed to integrate with the new computer system coming on line at Gettysburg, PA. next year, and an "over-the-phone lines" electronic filing system to be initiated by the VECs to an FCC "bulletin board."

Provision has been made for the FCC to begin issuing Tech Plus licenses once the new computer system is in place. Also eliminated is the current station location, Novice VE certification section, reinstate license expired less than 2 years (now handled as simple renewal,) and change Station Location. The accompanying instructions have been reduced to two instead of four pages.

One thing that has not been reduced, however, is the Physician's Certification of Disability. It now will take up the entire back of the Form 610 and contain detailed information to the physician on which to base a decision on whether the applicant is indeed severely handicapped and unable to pass an accommodated 13 or 20 words-per-minute telegraphy examination. The previous Form 610 had this information in the tear-off instructions section which usually was not seen by the doctor. *W5YI Report*

Tri-County VE test schedule

Tri-County VE Team Amateur Examination Schedule for 1994.

Date	Time	Location	Contact	Phone
2/19/94	9:00 am	Merced	KI6PR (209) 383-2166	
3/12/94	9:00 am	Modesto	W6XK (209) 883-2968	
5/14/94	9:00 am	Turlock	W6XK (209) 883-2968	
6/11/94	9:00 am	Merced	KI6PR (209) 383-2166	
9/10/94	9:00 am	Modesto	W6XK (209) 883-2968	
10/8/94	9:00 am	Merced	KI6PR (209) 383-2166	
12/10/94	9:00 am	Modesto	W6XK (209) 883-2968	

All sessions accept walk-ins (pre-

registration is not required) and 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. Bring the original and a photocopy of your ham ticket and any CSCEs in your possession. 610s provided by the team. Two test

rooms are used to minimize waiting.

To reach the Modesto test site, take highway 99 to Standiford Ave. East on Standiford to Conant. South on Conant to Rumble. East on Rumble one block to the school.

For additional information, contact via packet, Chet W6XK @ KD6JZZ or by phone at (209) 883-2968 in Hughson.

What to do if you have an electronic interference problem

Editor's note: The following information comes from a self-help pamphlet designed for the consumer and published by the American Radio Relay League. (ARRL) It is an excellent publication designed to inform the consumer, and remind the radio operator, of their mutual responsibilities in the matter of electronic interference. Copies of this pamphlet are available from the ARRL. Please include an SASE.

As our lives become filled with more technology, the likelihood of unwanted electronic interference increases. Every lamp dimmer, hair dryer, garage-door opener, radio transmitter, microprocessor-controlled appliance or remote controlled new technical "toy" contributes to the electrical noise around us. Many of these devices also "listen" to that growing noise and may react unpredictably to their electronic neighbors.

Interference: What Is It?

Complex electronic circuitry is found in many devices used in the home. This creates a vast interference potential that didn't exist in earlier simpler decades. Your own consumer electronic equipment can be a source of interference, or can be susceptible to interference from a nearby noise source or radio transmitter. The term "interference" should be defined without emotion. To some people, it implies action and intent. The statement, "You are interfering with my television" sounds like an outright accusation. It is better to define interference as *any unwanted interaction between electronic systems- period!* No fault. No blame. Its just a condition.

Personalities

You can't over estimate the importance of personal diplomacy when you're trying to solve a problem that involves two or more people! The way you and your neighbor behave when you first discuss the problem can set the tone for everything that follows. Everyone who is in-

involved in an interference problem should remember that the best solutions are built on cooperation and trust. This is a view shared by electronic-equipment manufacturers, the FCC and the ARRL.

Responsibilities:

No amount of wishful thinking (or demands for the "other guy" to solve the problem) will result in a cure for interference. Each individual has a unique perspective on the situation - and a different degree of understanding of the technical and personal issues involved. On the other hand, each person may have certain responsibilities toward the other, and should be prepared to address those responsibilities fairly.

The radio operator is responsible for the proper operation of the radio station. The station should be properly designed and installed. It should have a good ground and use a low-pass filter, if needed. If Consumer electronic equipment at the station is not suffering the effects of interference, you can be almost certain that the problem does not involve the radio station or its operation. However, if the interference is caused by a problem at the station, the operator will eliminate the problem there.

Manufacturers of consumer electronics equipment are competing in a difficult marketplace. To stay competitive, most of them place a high priority on service and customer satisfaction. For example, many manufacturers have additional filters available for customers who live near sources of strong radio signals. Others have service information that can be sent to a qualified repair dealer. Most manufacturers are willing to resolve any interference problems that involve their products. Over recent years, manufacturers have built up a good track record designing equipment that functions well in most electrically noisy environments.

The FCC will do what it can to help consumers and radio operators resolve their interference problems. They expect everyone involved to cooperate fully. Experience has taught them that solutions imposed from the outside are not usually the best solutions to local problems. Instead, they provide regulatory supervision of radio operators and manufacturers. They also publish some self-help

materials. These materials explain the several laws and FCC policies that relate to interference problems.

Finally, the consumer has responsibilities, too. You must cooperate with the manufacturers, the radio operator, and, if necessary, the FCC as they try to determine the cause of the problem. They need your help to find a solution.

What Causes Interference?

Interference occurs when radio signals or electromagnetic "noise" sources are picked up by consumer electronic products - most often telephones, audio equipment, VCRs or TV's. It usually results in noise, unwanted voices or distorted TV pictures. In most cases, the source is nearby. There are three common types of interference:

1) **Noise**—Interference can be caused by an electro-magnetic noise source. Defective neon signs, bug zappers, thermostats, electrical appliances, switches or computer systems are just a few of the possible sources of this type of interference. Both you and your neighbors may be suffering from its effects. In some cases, the noise may be the result of a dangerous arc in electrical wiring or equipment and may provide warning of an unsafe condition that should be immediately located and corrected.

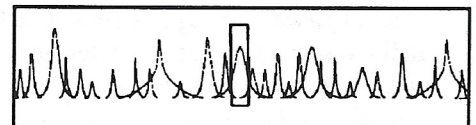


Figure 1- Every electronic appliance must select only the desired signal while rejecting all others.

2) **Overload**— Even if a nearby radio signal is being transmitted on its assigned frequency, if it is strong your equipment may be unable to reject it. Your telephone, radio, stereo or TV should be able to separate the desired signal or sound from a large number of radio signals and electrical noise. This is shown in Figure 1. Consumer equipment manufacturers have worked in cooperation with government regulators to set and meet voluntary standards of interference immunity. Modern equipment usually includes enough filtering and shielding to ensure proper performance under average conditions. Older equipment may not meet these standards, however, even modern equipment can be

See 'Interference' page 8

Interference

from page 6

affected if the interfering signal is particularly strong. In these cases, your equipment is working as designed, but it may need some additional filtering or shielding to function properly.

3) Spurious emissions— A nearby radio transmitter could be inadvertently transmitting weak signals on a frequency not assigned to that transmitter. These signals are called spurious emissions. FCC regulations concerning spurious emissions are very clear. If interference is caused by spurious emissions, the operator of the transmitter must take whatever steps are necessary to reduce the interference. Fortunately, modern transmitting equipment is manufactured to meet stringent regulations, and many radio operators are examined and licensed by the government. These federally licensed operators often have the technical skill to resolve interference problems that originate from their radio stations.

With all of the possibilities, it is difficult to guess which type of problem is causing your interference. Usually, only a technical investigation can pinpoint the cause and suggest a solution. This is where a spirit of cooperation and trust will pay off! If you believe your equipment is picking up signals from a nearby radio transmitter, the operator may be able to help you both find a solution to a mutual problem

How to Find Help

Most consumers do not have the technical knowledge to resolve an interference problem. Even so, it's a comfort to know that help is available.

Gather information about interference. The Electronic Industries Association (EIA), FCC and ARRL all have self-help information packages or books.

If the problem involves an electrical-power, telephone or cable television system, contact the appropriate utility company. They usually have trained personnel who can help you and your neighbor pinpoint the cause of the problem.

Consumer equipment manufacturers will also be able to help you. Your owner's manual or a label on your equipment, may give you information about interference immunity or tell you who to call about interference problems. If not,

the EIA will be able to give you the address of your equipment manufacturer's interference-resolution personnel. The manufacturers know their equipment better than anyone else and will usually be able to help you.

Operators of licensed amateur or commercial transmitters usually have some technical ability. These operators are the nearest source of help. Remember, the station operator may also be a neighbor! Use a polite approach to ensure that the relationship stays "neighborly." Licensed Amateur Radio operators have access to volunteers (Technical Coordinators and local interference committees) who are skilled at finding solutions to most interference problems.

Testing one, two, three . . .

If you think a neighbor's radio transmitter might be involved, you and your neighbor should arrange a test. It's important to determine whether the interference is (or is not) present when the radio station is "on the air." Your neighbor may want to ask another operator friend to participate in the test at your home. By the same token, you may want to invite a friend to attend the test at the radio operators station. Having impartial witnesses will make you and your neighbor more comfortable with the outcome -whatever it may be. Be sure to choose your witness carefully. Select someone, who is diplomatic and tactful.

The tests must be thorough. The transmitter operator must try all normally used frequencies, antenna directions and power levels. All results must be carefully written down. More than one set of tests may be needed. Once you and your neighbor have determined which frequencies and power levels cause the problem, you'll be one step closer to finding a solution.

Self-help Cures

In some cases, when all else fails, you may need to resolve the problem yourself, or with the help of your electronic service person. It's impossible to use the remaining space to outline all of the possible cures for interference problems (the subject is quite complex.) However, a few simple cures using commonly available parts can eliminate most problems. The self-help package supplied by the EIA, the ARRL and the FCC explain these

cures in more detail.

Try the Easy Things First

Sometimes, the easiest solutions are the best. Many cases of interference can be resolved without the need for technical investigations or knowledge.

If you suspect the problem is caused by electrical noise, check for overloaded circuits, frayed wires, loose sockets, etc. These types of problems should be fixed no matter what! Have your electrician shutoff one breaker at a time, noting if this has any effect on the interference. If so, determine which devices are connected to that particular line, then remove the suspect devices one at a time. When the interference goes away, you've found the "culprit." Your electric utility company service department will offer assistance if the interference is coming from defective equipment on the power lines or distribution equipment.

Interference filters for your consumer equipment can be purchased locally or by mail order. These filters usually eliminate unwanted interference if they are used properly on the equipment that is in need of additional filtering.

According to the FCC Interference Handbook, telephones and other audio devices that pick up radio signals are improperly acting as radio receivers. The interference can usually be cured, but the necessary filtering must be applied to the affected device.

Several companies sell modular telephone interference filters that are very effective. Your telephone company service department may be able to help.

A high-pass filter may reduce interference to an antenna connected television receiver or VCR. A common-mode filter should be tried first on TVs or VCRs connected to a cable system. An ac-line interference filter may help with electrical or radio interference. These items may be available from the consumer equipment manufacturer. They also can be purchased locally or by mail order.

Some interference cures must be applied to the internal circuitry of the affected equipment. This should always be done by authorized service personnel.

The ARRL has a free information package called RFI Tips. They also sell a book, *Radio Frequency Interference*. How

See 'Interference' page 9



February 15,
1994
**SARA Meeting
Program**

**Rich Harrington, KN6SW,
T-Hunt Coordinator for the
Livermore and Fremont
Radio clubs. Topics T-
Hunting techniques and
equipment. This program
will be comparable to the
demonstration Rich gave at
PACIFICON 93.**

Florida dealers nabbed selling CB amplifiers

The FCC's Tampa office has issued Notices of Apparent Liability (NAL's are administrative fines) to two Florida firms for selling unauthorized radio frequency amplifiers which boosted the power of Citizen Band Radio Stations from the legal power limit of four watts to more than 250 watts.

The use of such illegal equipment causes interference to television, radio and telephones, the FCC said. The fines included...U.S. Electronics, Inc., Tampa, FL for \$20,000 and All American Radio, Ocala, FL for \$11,200.

In addition, fines of \$6,400 to \$16,000 were issued to various firms and people for operating without an FCC license or operating on unauthorized frequencies.

Interference

from page 8

to Find It and Fix It, that provides additional guidance and technical information. Although it was written for amateur radio operators, the book may be helpful to you too. Contact ARRL for information about their products and membership services.

Interference Can Be Cured!

Remember, most cases of interference can be cured! It takes cooperation between the consumer, the manufacturer and the radio operator. With a little bit of work you and your neighbor can both, enjoy your favorite activities in peace.

Phase 3-D Amateur satellites moving forward

Following a series of meetings both in the United States and Germany involving key members of the International Phase 3-D Project Team, work on construction of the new Amateur satellite is moving forward at an accelerated pace.

On December 11 and 12th, Hanspeter Kulen, DK1YQ along with Dr. Karl Meinzer, DJ4ZC, AMSAT-DL President and Phase 3-D Team leader, hosted a key meeting of the project's international participants near Munich, Germany.

AMSAT-NA's Vice President for Engineering, Dick Jansson, WD4FAB, and Dr. Tom Clark, W3IWI, AMSAT-NA's President Emeritus and a key member of the Phase 3D Project are "on track" for the expected launch of Phase 3-D in 1996.

"Each country's team is performing their assigned tasks very well," said Jansson on Dec. 13th, soon after his return from Germany. Clark observed that, "we are really pulling together as an international group." He said "thanks to the work of our European, South African and Japanese friends, it now looks like we'll have some superb cameras, some really 'hot' receivers and some very powerful transmitters on Phase 3-D when it is launched in 1996."

Specifically, Dick mentioned that Mike Dorsett's (G6GEJ) efforts on the spacecraft's 2 Meter transmitter are right on schedule and that Mike's proposed construction approach had already met all of the key design parameters.

During the Munich meeting, Jansson was presented with a token of appreciation by Dr. Karl Meinzer for his outstanding contributions to the project. Karl cited Dick's superb design work on the Phase

3-D structure and thermal control system as well as his tireless efforts in support of the overall international project.

Just prior to his meetings in Germany, Jansson met with both students and faculty members from AMSAT-NA's team at Weber State University in Ogden, Utah. Weber students are now in the process of building the flight model structure for Phase 3-D.

Dick reports that this vitally important portion of AMSAT-NA's role in the overall effort was "also on schedule for delivery of flight hardware next June."

Other major contributions by AMSAT-NA to the project in the coming year will include the purchase of the spacecraft's heat pipes, solar panels and flight batteries, as well as final construction of the spacecraft's GPS positioning experiment, antennas and propellant flow hardware.

In addition, yet another group of some 15 dedicated volunteers have now been assembled in the Orlando, Florida area. These people are already in the process of both securing and preparing the spacecraft's final integration facility. This team will also assist other project team members with integration activities beginning in mid 1994.

Jansson concluded by saying, "there is still a lot of work left on our plates between now and 1996." He also had high praise for the many volunteers now working on the project. "The on-going work of our volunteers is of high quality, and is much appreciated. Without their selfless efforts, the Phase 3-D project simply would not happen," Jansson said.

WSYI Report

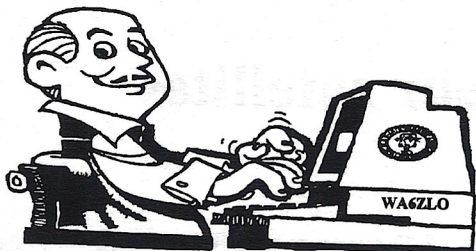
San Diego Amateur still without his talkie

There is nothing new to report on the story of Amateur Chris Boyer, KC6UOG, of San Diego, CA. who summoned help for a badly injured friend using a modified ham radio tuned to a public safety (sheriff's) frequency.

According the FCC in San Diego, who called Boyer on the carpet and confiscated his \$500 talkie, the case is still

open, and there had been very little movement in the case.

Boyer has received the support of the San Diego area Amateurs and some members of the Board of Supervisors who complained to the FCC that he should not have been penalized for helping a friend in a medical emergency. We will keep you advised.



Editor's Notes

By Bob Pinheiro, WA6ZLO

Some disturbing news arrived late last month when the fine folks at Budget Copy Co. called to advise they were going out of business. They have been printing our newsletter for over 10 years and they always gave *SARA* a big break on the costs. In addition, they gave us an additional 10% off the bill for running their ad in *The READOUT*. I will certainly miss all the people at Budget who have been so helpful down through the years.

This means we will have to find another printer to do the job. There are many printers in town, but I can assure you, that none of them will come close the price that Budget was charging us. I will be checking, but I know that we are going to be faced with a healthy increase. I expect that we could be looking at an increase of between \$20 and \$40.00 a month. Assuming that I am correct, we are going to have to take a hard look at the situation.

Last year it cost us \$1,214.80 to print *The READOUT*. An increase of just \$20.00 a month would push the total cost of the newsletter close to \$1,500 a year which is almost a third of the our total income from dues. We have managed to keep our heads above water by conducting yearly raffles, but if you notice in the Treasurers year-end report, we ended 1993 spending \$70.65 more than we took in.

So, we must ask ourselves what is the value of the newsletter, and what are the alternatives. Is it worth the expense? Would the money be better spent elsewhere? Should it be reduced to publishing every other month (bi-monthly)? Should the number of pages be reduced? Will the membership drop if we cut it back? How you feel about this matter is important?

I would greatly appreciate you writing to me and giving me your views and suggestions if any. I will publish your comments and present them to the club for consideration before the final

decision is made. My opinions are biased because I'm the editor, so I will refrain from making them at this time. Let's hear what you think. Please write to me at my home address which appears on page 2 of each newsletter. This is an important decision, let's hear from you. Thank you.

— Regardless of how smoothly the reins of power change each year, with the election of new club officers something can go wrong. We are particularly concerned about the data base. So, please examine the mailing label on the back page of the newsletter and note the date. It will read either 1993 or 1994 above your name. If you have paid your dues for 1994 and it still says 1993, please let the treasurer know so we can correct the problem.

— We have received several requests for 610 forms lately for license renewal. You can get the form by sending an SASE to Chet Jensen, W6XX, 3124 Pioneer Rd. Hughson, CA. 95326. Please remember to send an SASE.

— A pat on the back to the Stanislaus ARES group for a job well done during the recent Northridge earthquake. The group had been planning a simulated emergency test drill on January 22, 1994, but the earthquake gave them the real thing and the response was admirably handled. The *SARA* 2M and 220 repeaters were used by the group to accept and pass health and welfare messages to the quake area. Operators were set up at the Modesto Red Cross office who relayed traffic to the Red Cross office in Stockton who had established a UHF link to the Los Angeles area using several linked 440 repeaters. Other traffic was passed to HF operators who relayed the messages via 80 and 40 meters into LA.

All the planning and on the air training was apparent as the net was efficiently managed and structured. Congratulations to local Emergency Coordinator, Ernie, K6UVI; assist EC Loyd, KD6JWE, and all those who have worked hard to bring this group to the respectable position they deserve.

— According to the San Joaquin Valley Section Update newsletter prepared by

Mike Siegel, KI6PR, the man recently arrested in Madera, CA. for bootlegging on ham frequencies, was apparently into child pornography. Apparently the Madera County Sheriff's department was investigating the man in other matters and when they were asked by the FCC in apprehending the man. Sheriff's deputies served the search warrant on his home where they found a large cache of the pornography. We have not been able to come up with the man's name.

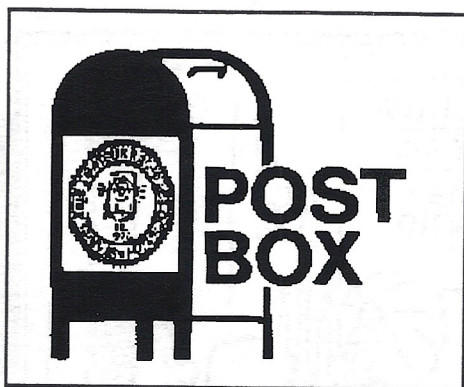
— Bruce, NK6C, will be presenting the program for the March 15, 1994 *SARA* meeting. The topic: Courage and the Handi Hams System, how it started

— Ray Erickson, KC6TVC, is still in Doctor's Hospital recovering from open heart surgery last December. As we reported last month, Ray ran into some life threatening complications following open heart surgery. He is finally out of the ICU unit at Doctor's, but he is still a long ways from full recovery. He is not allowed any visitors at this time. Best wishes Ray.

— I read recently about a convention of preachers in Atlanta. At the same time, in another part of the hotel, a group of tractor salesmen was holding their yearly convention.

The catering department had to work at top speed serving dinners to both groups. The salesmen had ordered "spiked watermelon" for dessert, but the chef discovered that the waiters had made a mistake and served the melon to the preachers. "Quick" screamed the Chef, "if they haven't eaten the melon yet, bring it back to the kitchen!" The waiters checked and reported to the chef that it was too late. "Well, " said the excited Chef, did they like it?" "Don't know said the waiters. But they're putting the seeds in their pockets."

— That's it for this month. Please remember to write to me about the status of this newsletter. Your comments are



Editor, The READOUT:

As some of you may be aware I received a few gifts at the December SARA meeting, besides the Vice Presidency. I was given an Astron RS-35A power supply and a direct frequency entry pad (called a "QSY'er" made by Mike, KJ4LN). These two items make it possible for me to use my Yeasu 757GX MKII.

Those involved couldn't have picked a better gift or a better time, since paying off the new HF rig is difficult enough. The gifts were a complete surprise to me, rendering me nearly speechless which is something that has never happened to me in my 23 years of Amateur Radio. I was both very moved by the generosity of those involved and extremely surprised by the number of people who took the time to become involved.

I'd like to personally thank the

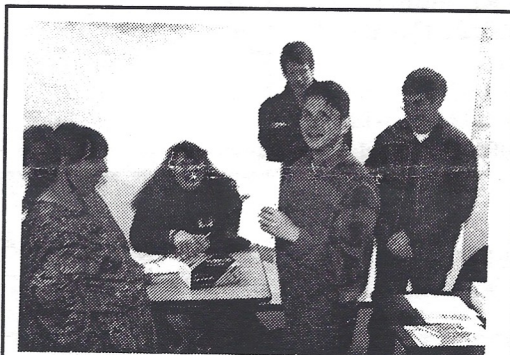
following people for making my Holiday a truly special occasion:

AB6AE Don; NQ6H, Marilyn
KD6UEE, Shari; KC6YTE, Debbie;
KE6AIS, Jim; KD6MGV, Armand;
N6UGH, Jim; WA6ZLO, Bob; NK6C,
Bruce. N6OCS, Bob; K6UVI, Ernie; Steve
Gokey; KD6DFN, Jeff; NU6O, Dennis;
KC6VWO, Bill; Dolores Garcia;
KD6GIW, Liz; KD6REW, Dennis;
KD6VZE, Lindsey; Jonny Garcia;
KA6GJN, Dave; NV6S, LeRoy; KD6YAZ,
Tony; Liz Johnson; WB6GJT, Larry;
KC6YCH, Chuck; Russ Johnson;
WA6GUO, Dave; N6SCN, Larry;
KD6TZI, Peter and KC6YSH, Chris.

I have found many friends over the years, some, like me, prefer the HF bands.

You have made it possible for me to once again enjoy HF, not to mention 10 meter FM. Thanks to all.

s/s Mark Lemmons, WB6BJN.



L-R- Debbie, KC6YTE; Sandy, KC6TDK, (seated); Mark, WB6BJN; Armand, KD6MGV (behind Mark) and Jeff, KD6DFN.

VE results from Turlock session

By Chet Jensen, W6XX

The results of the ARRL/VEC sessions held in Turlock on 1/8/94:

Number of applicants: 30 Number of new licenses: 16

New Novice: 1

New Technician: 10

New Technician-Plus: 2

New General: 1

New Advanced: 1

New Extra: 1

Pass rate (total elements administered): 66%

New Novice: Anthony Mendonca (grandson of Tony, WA6KOI.)

New Technician: John Ritchie, Peggy O'Hara, Jason McCurry, Mary Ann Riley, Bryan Mason, Billy Reyes, DeLynn Bettencourt, Jason Panos, Bryan Emmerson, and Michael Ferreter

New Technician-Plus: Michael Heenan and Carl Wheeler

New General: Judy Mahan (KD6GJF)

New Advanced: Berry Griffin (KD6TTM)

New Extra: Larry Rose (N6SCN)

Participating VEs: W6XX, N6SAE, AA5TX, KA6FTA, KC6WXX, K6RAU K6UVI, N6QIY, KJ6QD, KK6IU

Next test sessions: February 19, 1994 - Merced (DATE CHANGE) contact: KI6PR @ K6RAU or (209) 383-2166 March 12, 1994 - Modesto contact: W6XX @ KD6JZZ or (209) 883-2968

This session was conducted by the Tri-County VE Team.

Vanity Calls

From front page

sign. Here are some of the comments from the complete FCC Docket discussion.

Applications for a vanity call sign would use a new application form. The applicant would list on the form a maximum of ten call signs, in order of preference, the form would then be filed with the Commission. The automated process would compare the applicant's list with the assigned call signs in the groups designated in the sequential call sign system for the applicant's class of operator license. The first available call sign from the applicant's list would then be assigned. If none of the call signs listed are available, the automated process would reassign the call sign that the applicant had vacated.

The vanity call sign listed by the applicant must be within the frame work of the sequential call sign assignment system wherein certain groups of call signs are designated for each class of operator license. Applicants, therefore, could choose call signs from the groups corresponding to their license classes or lower license classes.

FCC Form 610 which is currently used by applicants would also advise licensees holding vanity call signs to submit FCC Form 610-V with the proper fee if they want to renew their license.

A fee of \$7.00 per year for amateur service vanity call signs or \$70.00 for the 10 year term of the license.

In the case of a club station, the license trustee's class of operator license would apply.

Licensees requesting vanity call

signs would find it helpful to know which call signs are assigned at the time that they file their applications so that they can make prudent selections of call signs with a real possibility that their requests can be granted. Even with our enhanced licensing system, the FCC does not currently envision on-line access by the public to check for call sign availability.

Pursuant to applicable procedures interested parties may file comments on or before March 7, 1994, and reply comments on or before April 7, 1994. To file formally in this proceeding, you must file an original and four copies of all comments and reply comments. You should send comments and reply comments to Office of the Secretary, Federal Communications Commission, Washington, DC 20554.



Calendar

Feb 15 *SARA* Monthly Meeting 730 PM
 Program: T-Hunting equipment and techniques with
 Rich Harrington, KN6SW, from Livermore
 Feb 19 VE Testing in Merced 9:00 A.M.
 Mar. 12 VE Testing in Modesto 9:00 AM
 Mar. 15 *SARA* Monthly Meeting 730 PM
 Program: Courage Handi Ham Program
 Apr 19 *SARA* Monthly Meeting 730 PM
 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 730 PM
 June 25-26 ... ARRL Field Day 24 hours

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.

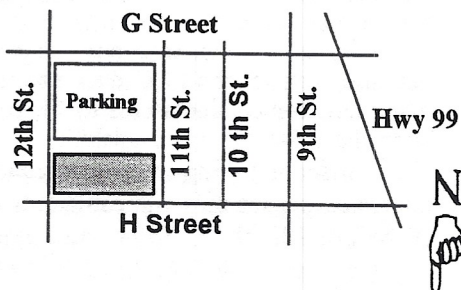


SARA repeaters on Mt. Oso at 3,300 feet- 145.39(-) MHz PL 136.5 Hz or * 5 to override the PL. 224.14 (-) MHz, 440.225 (+) MHz PL 136.5 Hz . KA-Node Digipeater 144.91 MHz. Ten Meter Digipetar 28,440 kHz

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

[Redacted address information]

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