

The READOUT

Year 14

Number 1

January, 1992

President



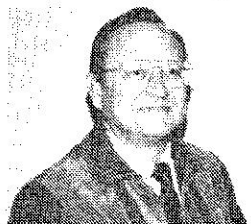
Jim Hertel, N6KMR

Vice President



Sandy Ingram, KC6TDK

Secretary



Ernie Rader, K6UVI

Treasurer



Rita Palacios Rader
KD6BNV

Meet 1992 SARA Officers

Again *SARA* is fortunate to have another set of willing and able officers to guide the club through another year. At the December meeting, members elected Jim Hertel, N6KMR, President; Sandra Ingram, KC6TBK, Vice President; Ernie Rader, K6UVI, Secretary and Ernie's wife Rita, KD6BNV, as the Treasurer. Thanks to these fine members for serving and also a vote of gratitude to our outgoing officers who served with distinction. Now, let's meet the new officers.

President: Jim Hertel, N6KMR

Jim has been licensed since 1980 and holds an Advanced class license. His hobbies are radios and computers. He is a single parent and has a 20 year old daughter and 15 year old son. He earns his living as a General Contractor. Jim says he would like to see the club membership go over 250 in 1992.

He would like to see the Dinner-Dance return; the club sponsor a DX (county) expedition; participate in Field Day and have a picnic at the same time; sponsor a graffiti day at the club station with matching QSL cards with a special events call etc. Jim hopes for good ideas from club members and mass improvement of member activities.

Participation in the Fire Works stands; club entry for a major contest (WPX, CQ Worldwide, November Sweepstakes, ARRL DX, W.A.S. for the

year 1992 with a club certificate issued for confirmed contacts. Jim would also like to bring back the raffles at club meetings, garage sale and a swap flea market.

Vice President: Sandra Ingram, KC6TBK.

Sandy was first licensed in 1991 and holds a Technician class license. Her hobbies, besides Amateur radio, include computers and theater arts in which she has been active since 1985. She is a lifetime member of the International Thespian Society. Sandy is single, but enjoys a great co-habitational relationship with Brad, KC6TDH. She earns her living at a disc jockey at KO93. Things she would like the club to accomplish in 1992 include getting more members active in events and to have the club be more visible at county events with information for the public about ham radio.

Secretary: Ernie Rader, K6UVI

Ernie has been licensed since 1956 and holds an Extra class license. His hobbies are ham radio, camping, fishing, building electronic projects. He is married to Rita, KD6BNV and they have no children. He says he is "too old, fat and cranky to start another family. He earns a living as a Radio Systems Consultant. Things he would like to see the club do in 1992 include starting and maintaining a library of QST, 73, CQ,

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1992 SARA Officers

President

Jim Hertel, N6KMR, 531-1157

Vice President

Sandra Ingram, KC6TBK, 668-0220

Secretary

Ernie Rader, K6UVI, 522-5303

Treasurer

Rita Palacio-Rader, KB6BVN
522-5303

SARA VHF Net

Thursdays @ 8 p.m.

(Except Holidays)

2 meters 145.39 MHz WD6EJF

220 Band 224.14 MHz WD6EJF

10 Meter 28.440 kHz USB

Tuesdays at 730 pm.

Contributions to *The READOUT* are always welcome and may be submitted to the editor by mail or via packet at N6REB-BBS on 145.79 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.

1992 VE Exam Schedule

Stanislaus, Tuolumne & Merced Counties

DATE	LOCATION	TIME	CONTACT	PHONE
Jan 11	Turlock	9:00 am	W6XK	883-2968
Feb 8	Merced	9:00 am	KI6PR	383-2166
Mar 14	Modesto	9:00 am	W6XK	883-2968
Apr 11	Sonora	9:00 am	WA6NSK	586-4917
May 9	Turlock	9:00 am	W6XK	883-2968
Jun 13	Modesto	9:00 am	W6XK	883-2968
Sept 12	Modesto	9:00 am	W6XK	883-2968
Oct. 10	Merced	9:00 am	KI6PR	383-2166
Nov. 14	Sonora	9:00 am	WA6NSK	586-4917
Dec 12	Modesto	9:00 am	W6XK	883-2968

*** The TRI-County VE team is affiliated with the ARRL/VEC ***

SARA Digipeaters Operational WD6EJF-1 & WD6EJF-2

SARA's two and ten meter digi's are back on the air. WD6EJF-1 (2M) and WD6EJF-2 (10M) were put back on the air December 1, 1991. The job was completed by KJ6DL, Dave, and Jim, N6KMR who installed the antennas on the new steel tower recently erected by NASA and the U. S. Bureau of Reclamation on Mt. Oso.

According to KMR, two new aluminum brackets for the antennas made of four and six inch aluminum channel stock. The six inch stock was used for the ten meter digi antenna. The Ringo Ranger was reinstalled as the two meter digi antenna. The antennas are not very high up on the tower, but are sufficiently high enough for working the valley.

Jim reported it was cold and windy up there and Dave braved the wind and climbed the tower to install the antennas. The site

was cleaned up and the coax runs redirected into the building. Our Chief Engineer LeRoy, NV6S, helped us orientate the controls antennas to look at Modesto better than before.

As a reminder, the 2M digi is on 145.790 MHz while the 10M digi is on 28.103 MHz. Both are workable throughout the valley.

All in all, the crew was very happy to see the packet digi's back in service and to be able to perform for all. Before leaving the mountain tests revealed packet signals from the bay area were being received on two meters and the crew was able to work the Bay Area contacting a station in Fremont. They were also able to easily work into N6QMY's BBS in Monterey as well as a node in San Mateo.

If you would like more information on how to work the 10 meter digi, contact Jim, N6KMR, who would be pleased to help any new (or old) packeteers.

-Thanks N6KMR

President's Corner

Improvements and hopes for '92

By, Jim Hertel, N6KMR

Many of you have heard a number of us on .39 talking about seeing a play in February. It's called "Lost Highways" and is based on the life of Hank Williams. There will be live music presented, and in the past the performances have been excellent.

Last year, it was held over it was received so well. **SARA** is on their mailing list and in the future we will be able to qualify for group rates. We can't take advantage of that this time, but the cost for an entire evening of entertainment in this case is only \$25.00 for two. Based on last year's performance, it's well worth the price. I urge you to take advantage of this and call The Columbia Repertory Theater at 1-532-4644.

The performance is scheduled for February 8th, 1992. Don't forget to mention that you're with The Stanislaus Amateur Radio Association. They should seat us all in the same general area if you do.

Well, it's another new year, and as we pack up the Christmas lights, let's encourage all the members of the club to renew their memberships if

they haven't already. The new club administration is eager to tackle the challenges just over the horizon, and with the anticipated cooperation of the membership, we'll do just fine.

Did you know that there's a CW award available? Dave, KJ6DL has an on going award program in place, and no one has attempted to claim this one. As an ARRL affiliate, we might want to participate in something like this as a group. We're also open to suggestions relating to club meeting agenda. We'd like to have a program presented at as many meetings as possible, and follow that with a short discussion of club business.

How would we like to have a class on CPR? Here we are supposedly ready to respond to emergencies, and most of us probably don't even know how to administer CPR. Maybe next meeting we can have more suggestions for programs along this same line. Next meeting is to be held on January 21st, 1992. I hope to see you all there. Best of 73's for now. Jim, N6KMR.



NEWSLINE

AUSSIE PIRATES

Two pirates, modifiers and users of out of band CB equipment were fined last month nearly \$10,000 for doing so in Australia. One in Perth was fined \$3,500 and another on the Gold Coast \$6,000 plus court costs.

All their equipment, including all radio and test equipment was confiscated as well. This is all part off the D.O.T.C (Australia FCC) toughening up campaign on modifiers, users of out of band illegal equipment and unlicensed use of various frequencies and equipment in Australia. More arrests and confiscations are expected shortly.

AM RADIO STATIC REDUCTION CHIP

A new integrated circuit which greatly reduces static on AM broadcasts has been introduced. "AMAX" radio is a noise blanker chip installed in a receiver which cuts static and other noise bursts to a minimum. The cost of the chip is about \$2.00 and is expected to be on the market with two years.

SACRAMENTO ATV REPEATER ON LINE

The Sacramento Amateur Television Society (SMTS) has installed a Amateur Television repeater (N6LIG) in Sacramento. The repeater is on a 200 foot tower located at the old studios of Channel 6 on the Garden Hwy in Sacramento. The repeater operates on 2421.25 Mhz with 15 watts of power into 225 feet of 7/8' air dielectric transmission line. The input frequency is 434.25 MHz.

VACUUM TUBE FIX

The glass envelopes of older vacuum tubes such as the 807, 811A, 5U4, etc. are prone, with age, to separate from their bakelite bases. Electrically, these tubes are perfectly functional, but here is the risk of breaking the interconnecting wires because of the undue pressure the weight of the "floating" glass assembly can exert upon the wires.

I have found that a liberal application of slow-cure epoxy, applied along the entire outer perimeter of the tube, forms a secure, permanent bond between the glass and the base. Depending upon the "mix" used of resin to hardener, the glue may turn brownish-black in color due to the heat generated by the tube, but the strength of the repair does not appear to be adversely affected by this.

HAM RADIO NEWS NEEDS HELP

Once again News Line is broke. Personnel running the ham radio news service say they owe almost 500 dollars to MCI electronic mail, another 650 dollars to the telephone company. Those running the service say they will be forced to suspend operations if they are unable to raise the money to pay the bills.

If you enjoy this service and would like to see it stay on the air, send your donations to News Line, in care of Dr. Norm Chalfin, K6PGX, Box 463, Pasadena, CA. 91202. This is the same report you hear Thursday nights during the SARA Net at 8 pm as run by Ed N6XMA in Stockton.

FCC EMPLOYEE SHOT AND KILLED

A New York City woman that claimed radio waves were ruining her life shot and killed a 51 year old female employee of the FCC in New York City last month. Jeannette Demarest had gone to the FCC office on Varick Street in New York City to complain about the radio waves. While she was inside the building she talked to FCC clerk Catherine Foster. Later when Foster left the building, Demarest confronted her in front of the building and pulled out a .22 caliber handgun and shot her to death. The deranged woman was still standing there when the police arrived and she had the gun in her purse. She was arrested and charged with murder.

CB ARGUMENT ENDS IN DEATH

Two Porterville, CA. men got into an argument on their CB radios which led to a face to face confrontation involving gunfire. The gunfight left one CB'er dead and the other seriously wounded. Tulare County sheriff's deputies reported they found 26 year old Kenneth Allen McGee dead in the front yard of his home shortly after 3 am. He had been shot in the head. Claude Horner, 23, was shot in the chest and was rushed to a Porterville Hospital where he is recovering.

Credits ...Thanks to the following who provided information for Newsline this month. W5Y1 Report - Modesto Bee - KC6TDH, Brad Johnson and the Sacramento Microwave Television Society Newsletter- N6REB-BBS and VK4BBS Queensland, Australia via the packet network.

Computer Books For Sale Cleaning the Computer Room

<i>Part 2</i>	List	My Price
• R:Base System V Techniques & Applications	19.95	... \$10.00
• Understanding R:Base System V - Simpson	19.95	... \$10.00
• R:Base System V - Baran	21.95	... \$11.00
• Inside the IBM-PC - Norton	20.00*	... \$ 8.00
• dBase II Guide for Small Businesses	24.95	... \$ 5.00
• Advanced dBase II Users Guide - Green	14.00*	... \$ 5.00
• Desktop Publishing Using Ventura w/disk	25.00*	... \$10.00
• Inside Xerox Ventura Publisher - Cavuoto/Berst	19.95	... \$ 5.00
• Instant Ventura Publisher w/disk 22 style sheets	30.00*	\$15.00
• Ventura Tips & Tricks - Nace	15.95	... \$ 8.00
• Mastering DOS through Ver 3.3 & 4	24.95	... \$10.00
• PC-WORLD Hand On	16.95	... \$ 7.00
• IBM-PC Advanced Troubleshooting & Repair	24.95	... \$12.00
• Using Netware	24.95	... \$10.00
• Wordperfect Ver 5.0 Expert Techniques for Power Users	19.95	... \$ 9.00
• Buyer's Guide to Modems & Com Software	12.95	... \$ 4.00
• DOS 4.0, Customizing the Shell	22.95	... \$ 5.00
• The Epson Connection: IBM-PC	13.00*	... \$ 4.00
• Epson Printers: Tips & Secrets	13.00*	... \$ 4.00
• dBase III Plus Programming - Wray	25.00*	... \$10.00
• Data Management for Professionals	15.95	... \$ 8.00
• Computer Viruses - Abacus	20.00	... \$ 7.00
• The PC Configuration Handbook	22.95	... \$10.00
• 1-2-3 Macro Library 2nd Edition	9.95	... \$ 8.00
• 1-2-3 Tips, Tricks & Traps	20.00*	... \$ 8.00
• Communications for IBM PC's	16.95	... \$ 6.00
• Using Harvard Graphics w/tearout chart	24.95	... \$12.00
• The Fully Powered PC w/2 disks	30.00*	... \$2.00
• PC DOS Powertools from PC Mag. w/disk	44.95	... \$15.00

* = Approximate price

All items are available at my store - Mail Boxes Etc, 729 N. Golden State Blvd, Turlock, CA, 95380.

I will take phone calls about the items and answer any questions if time permits. All items for sale are items I don't use any more and why not sell them. Most prices are negotiable or possibly trade for ham gear. Items are available, "First Come, (with money) First Own. I can take Visa, MC, Discover and AMX if needed. Just ask-Remember even a fish wouldn't get caught if it kept it's mouth shut. My phone number is (209) 632-9787 M-F 9-6, Sat 9-4, Sun 12-4.

-- Jim Shea, KB5FB

(More next month)

Letter of Appreciation

December 7, 1991

Dear SARA Members;

On November 23rd, I decided that we needed some excitement in our dull lives! I took a spill on my motorcycle and broke my right knee. It was a rather serious break that landed me in the Doctor's Medical Center hotel. This was not my idea of an acceptable way to spend Thanksgiving week. However, my stay was made more pleasant by the many visitors, cards, phone calls, flowers and candy that I received. Most of those that called, visited, and/or sent cards or flowers I had never met face to face. I want to express my sincere appreciation for this show of concern and support. It has made an otherwise miserable experience much more bearable. Thanks again,

/s/ Jim Jones, N6UGH

KINKED COAX STARTS FIRE

By Don McKay, WB7BPI

We had some very anxious minutes last month when a fire broke out at one of our mountain top transmitting sites. An FM station coax arced and caught fire catching the rest of the coaxes on fire and burning up the tower and back into the building. It started the building on fire but luckily two engineers went up to check on why there transmitter was not on the air. When they opened the door they were greeted with smoke and fire. They called the fire department and led them up to the site and got the fire out. It will cost us about \$10,000 to repair our equipment alone. We lost our microwave coax and our translator coaxes, one 7/8" and 2 1/2" lines. The cause was the FM stations poor instillation of their coax. They kinked the 3 1/8" coax. It should have a 3' bend radius and it had only a 19".

Of course, we don't run as much power through a coax as an FM broadcast station, but it's still a good thing to keep in mind.

Editor's Note: This story received by packet radio from Don McKay, WB7BPI, the Chief Engineer of the PBS television station in Medford, Oregon.

PACSAT News

By Tim Bosma, AB6FL

Many of you who send packets to hams overseas may have noticed that some of the packets are now routed through packet satellites called *Pacsats*. You may also have heard other hams talk about leaving a message for a friend on *Pacsat* and getting a reply from the other side of the world several hours later!

What I'd like to do in these articles is give you a sample of the differences between VHF packet systems that almost all of us know, and using the *Pacsat* satellites, specifically *Pacsat* AO-16 and *Lusat* LO-19. The *Pacsat* is sup-

'Utilities such as PKZIP and PKARC are necessary'

ported by US amateurs and *LUSAT* is the result of efforts by space minded Amateurs in Argentina, but both operate pretty much the same from the users point of view.

There are several common misconceptions about the *Pacsats*. The first is that you can use a standard TNC like an MFJ-1278 or an AEA PK-232 with a regular terminal emulation program. While this will work for contacts with the Russian spacecraft *MIR*, it is not true for the *Pacsats*.

The first thing you need is an IBM or IBM clone computer, the faster the better. Macintosh, Atari and other computers will not work at this time. Then you will need to install the *Pacsat* suite of software programs called PG, PB, PHS and PFHADD. I'll explain more about these programs later.

File compression utilities such as PKZIP and PKARC are also useful and necessary to save space in the satellite's limited memory systems. A satellite tracking program is also helpful in determining when you can access the *Pacsats*. The *Pacsat* software is available from AMSAT, CompuServe, and yours truly if you send me a blank disk (any format). Satellite tracking software is available from AMSAT.

So, now that you have the computer and the software, the next step is the rf side - radios and antennas. I'll deal with that in next months column.

Chief Engineer's Report

By LeRoy, NV6S

There hasn't been a lot going on in the engineering department for the past month. There is still much to be done and plans are being made to make several trips after the first of the year.

Thanks to N6KMR and KJ6DL the club's digi system is up and running. They made two recent trips to do antenna work and have the antennas installed on the new tower.

I am planning a trip to look into the interference problems on the hill. The two meter is taking a hit from some source causing it to cycle. One repeater call sign was copied over the output and that will be looked at as a possible source.

The 440 repeater is working fine except when it gets hit by

unknown signals and at that time it is desensed and is unusable. We will attempt to locate that source and hopefully will be able to solve the problem.

Frank, N6YHY, is working on the duplexers for the six meter repeater. Once he has those operating properly we should be able to get the six meter repeater up and running. I truly thank those who have helped with the engineering chores as the time required to do all of the work up there is more than I have available. I still have many hours of work planned and as I can find the time the system will all come together and we should have a great system. 73, LeRoy.



Feedback Editorial Comments

By Jimmy Wakefield, AH6CO, Fresno.

I read an article in *The READOUT* advocating the reduction of the maximum power limit to 100 watts. A good suggestion, but slightly impractical until it could be made worldwide. Then that would not really be the answer to our problems.

Our rules now state that we must use only enough power to do the job but we don't in lots of cases and you can tell who they are by just listening. However, the "Big Guns" must be CLEAN and a lot of them are not. 15 kHz below and 5

kHz above seems to be the order of the day. Unfortunately in most cases there is little we or the FCC can do about it, because a lot of them are across our borders. Not all, I'll grant you, but the FCC is now on a program of randomly checking comparative signal strength of a station. They just knock, identify and ask to check. You'd better let them!

The real problem children, and most act about that age, are the stations running without reading their ALC meter, driv-

See 'Feedback' page 10



SARA Minutes

By Ernie Rader, K6UVI, Secretary

The regular monthly meeting of The Stanislaus Amateur Radio Association was called to order by President Oliver Borns, KJ6YZ on December 17, 1991 at 7:35 pm. Forty-five members and visitors present. The Treasurer's report was given as follows: The General account had a beginning balance of \$1,044.37, there were 6 debits totalling \$607.49 and 5 credits for \$1,258.70 leaving a new balance of \$1,695.58. In the Educational Training account there was a beginning balance of \$630.30, and one credit of \$107.38 for a balance of \$737.68. It was moved and seconded to accept the Treasurer's report and the minutes of the last meeting as printed in The READOUT.

A question was raised from the floor regarding the offer of a packet node at our repeater facility. Phil, WDØFFX refreshed our memory as to the offer and what it entailed. LeRoy, NV6S, said there was only a 20 Khz difference between the proposed node frequency and a high power digipeater (K6LPG-5) already in place and in close proximity. Bob, WA6ZLO, expressed reservations about accepting this equipment since the giver is not a member of our club. He felt it would violate our contract with Mt. Oso Communications for use of the vault on Mt. Oso. FFX was asked to have the donor put his offer in writing and ZLO requested the proposal be checked by our attorney, N6TIV, to see if it violates the terms of our agreement.

NV6S gave the equipment report. He said the .39 machine was getting some packet interference. He said he still has not found the cause of the repeater cycling so much. The 440 repeater is relatively useless. We need to get a spectrum analyzer on the hill to look for the problem. An offer was made from the floor for the use of one. If this doesn't work, another frequency may be needed. Break was taken at this point.

After returning the Secretary read a letter from the American Diabetes Association requesting communications help for their Ride or Stride to be held next April. The secretary was instructed to write to them and commit the club subject to availability of personnel.

Chuck, NW6G, asked if the voice ID'er on the repeater was the result of a membership vote. He suggested a CW ID'er only. It was voted to keep the voice ID. He then asked if there were provisions for those who

wished to vote for club officers by absentee ballot. He was informed that the ByLaws do not provide for absentee voting. Chuck also asked to have a copy of the ByLaws sent to him. A short description as to the procedure involved in changing the ByLaws was offered.

Chuck asked where the club station was located and was told. He asked who can use it and how can we get to use it. Phil, FFX, told Chuck that he has the key, and it's available to any member at anytime, as long as it doesn't interfere with Downey High School activities. Chuck wanted the club to publish a list of those who use the club station. The request was rejected by the members present.

Chuck then suggested selling the club station equipment and using the money for other things. FFX explained the station is not only used for club activities, but is used as a teaching aid for the club's license classes held there throughout the year. This suggestion was also rejected.

Nominations for next year's club officers were opened from the floor. It was immediately moved and seconded to close those nominations after the slate of members who agreed to run was listed on the blackboard. Each candidate introduced him/herself as the ballots were passed out. Oliver thanked the club membership for the opportunity to serve as President in 1991. He and the other out going officers were given a round of applause for serving the club. Elected as 1992 officers: President: Jim, N6KMR. Vice President: Sandra, KC6TBK. Secretary: Ernie, K6UVI. Treasurer: Rita, KD6BNV. Meeting was adjourned at 9:05 PM. Respectfully submitted, Ernie, K6UVI, Club Secretary.

Next SARA Meeting
January 21, 1992 730 pm
Stanislaus Co. Administration
Building
12 th & H Streets
Downtown Modesto, Ca.
Low Level Conference Room

Radio Spectrum is a Commodity

Just like Pork Bellies and Soy Beans

By Tim Low, N6ZUC

Another year is over, and there has been a few changes in the amateur world. I'm going to stray away from the normal technical chat this month to concentrate on some of those happenings, and some of those things I intend to write about in the coming year.

I've been writing an article for *The READOUT* every month since last May. Not all together sure my articles have added much to the hobby, but I've sure had fun doing it. It's just another dimension to my interest in, and enjoyment of, what I think of as the best hobby a person can have.

Last May, in my first article, I gave my thoughts on the new codeless Technician License. I'm afraid I wasn't very thrilled with the idea initially. Well listen up folks, you won't hear this one often, I was wrong.

From what I can see the codeless license is doing exactly what the proponents said it would. That is to breath new life into an otherwise stagnant ham population. The F.C.C. is badly backlogged with applications. The last figures I heard were between 5 and 10 thousand applications to process every month. The Amateur ranks are swelling with new members, and with very little of the problems predicted by us doom and gloomers.

Many of the new non-code hams I've met are great people and some of them are already knocking on the Extra Class door. It doesn't take them long to catch the fever when the talk turns to exotic places worked and awards won. They want a piece of it too! So, there it is. No code is working.

In 1991 we saw the demise of the lower portion of the 1.25 meter band. This brought about a push for Congress to enact legislation to require the F.C.C. to replace any allotment taken for other services. The threat of loosing more spectrum is very real, as new uses and RF applications are developed every day. There seems to be an unlimited need for a finite commodity. Don't kid yourself either, the radio spectrum is a commodity. No different than pork bellies and soy beans.

The F.C.C. has stated its willingness to auction off spectrum to the highest bidder. Private interests already buy and sell spectrum though held in the public trust. These sales are routinely rubber stamped by the Commission. Unless we the consuming public make our views known, the big money interests will gobble up more and more of the radio spectrum pie. We need to make sure that our slice isn't shrunk a sliver at a time, until none remains. It's extremely important that you write, call, and generally harass your Senators and Congressman until they see things our way. If they hear from enough of us, they'll see things our way.

Another item of news from the Commission this last year, was the decision not to enforce rules governing obscenities on the airwaves in all cases. Instead, they will rely on "local community standards" to decide when and where to pursue enforcement. One can only assume from this that your government has decided that some cities are only in-

habited by immoral, lowlife perverts. Perhaps you should write to them and ask if they consider your community to be one of them.

This all brings up some interesting questions. 1. What does the F.C.C use as a gauge to determine local community standards? 2. What communities are exempt from enforcement, and do they keep a list? 3. How do they adjust enforcement to compensate for the fact that by its very nature, radio waves don't confine themselves to the boundaries of any one community?

Why can't the F.C.C. just admit they've thrown in the towel. The real reason they don't enforce it is money. No other government agency with the responsibility of the F.C.C. gets by on the budget they have. Uses for radio spectrum, as well as wire-line, have grown exponentially, while the Commissions budget has shrunk. We in the ham community have fought long and hard against user fees for amateurs. It's time we rethought that position.

We must remember that the spectrum we inhabit belongs to all the people. If we are to continue the exclusive use of this national resource, let's think about the benefits to be gained by a well financed Commission. I for one would be more than happy to pay the costs associated with processing the paperwork for my license.

1991 brought advances in technology too. Over the next year I hope to write about some of them. There are exciting inroads being made into digital modulation techniques. It won't be long until we begin seeing

See "Spectrum" Page 10



Editor's Notes

By Bob Pinheiro, WA6ZLO

It was a good year for **SARA** in 1991, and with your help, 1992 will be even better. We ended '91 with a membership of 189 which was a modest gain over 1990. A few of you have already paid your 1992 dues and we appreciate your timely renewal. For those who have not, a reminder....DUES are DUE.

Please use the handy renewal form on the inside back page of this edition of *The READOUT* and mail it and your check or money order to SARA, PO Box 4601, Modesto, CA. 95352. Please remember the new "out of area" rate of only \$11.00 if you live more than 150 miles from Modesto. It is very important the renewal form accompany you check or money order. So, please take time to fill it out. Remember, your dues are what pay the bills, including the bill for this newsletter every month. We need your support if we are going to be able to continue. Thank you!

- Figures released by the FCC continue to show that abolishing the Morse code requirement is causing the number of new hams to increase dramatically. The average number of first time Amateur Radio licensees for the period of April through October 1991 is more than 100% greater than the average of the four prior years. The first Codeless Technician operator license was mailed on March 12, 1991. April was thus the first full month of issuing the (no-code) Technician class license. 29,399 newcomers joined the Amateur Radio ranks between April and October- an average of 4200 a month. This compares with an average of 2065 for the same period

during the last four years. Note during 1991, 65% of all newcomers entered ham radio via the code-free Technician path. Only 33% entered as a Novice operator.

- It sounds like an old Japanese "horror" movie from the 1960's, but the Japanese Ministry of Posts and Telecommunication was quite serious when it signed an agreement with the University of Alaska to build a giant shortwave transmitter that could save the planet. The partners will conduct joint experiments using radio waves to protect the ozone layer. The giant transmitter will beam signals from 40 to 100 kilometers above the earth. According to officials connected with the project, experiments have shown that when ozone-damaging chlorofluorocarbons are irradiated with short bursts of high powered shortwave radio frequency energy, their chlorine atoms become chlorine ions, which do not affect the ozone layer.

- Ships plying the waters north of Alaska have been receiving radio messages from the Coast Guard warning them that an ice floe carrying an abandoned Soviet research station and hundreds of drums of potentially hazardous chemicals is lost somewhere in the Arctic Ocean. The island of ice broke loose from the Soviet coast during the summer and was last reported 56 miles north of Barrow, Alaska. The Soviets have promised to remove the chemicals and buildings from the floe but bad weather has been making it difficult to locate by satellite or airplane.

- A 26 year old San Antonio

Texas Amateur Radio operator was killed in October when he lost his grip on his 60 foot tower and fell to the ground. He was **NOT** wearing a safety belt. Bill Carter, KM5R, died two weeks after the fall never regaining consciousness.

- In one of the closest ARRL elections in recent memory, Brad Wyatt, K6WR, has become the new Pacific Division Vice Director. Wyatt is an active operator and holds DXCC from four different countries. He retired from IBM and holds a MBA and BA degrees from Stanford. Brad and his wife live in Los Gatos and "part time in Maui". Congratulations Brad!

- The Naval Postgraduate School ARC in Monterey will hold the annual Winterfest (hamfest) at the Monterey Peninsula College Armory on January 18, 1992. The armory is located on Hwy 1, southbound exit at Fremont Street. Northbound on Hwy 1 exit at Aguajito Rd. and follow the signs. Refreshments, commercial vendors, ham radio demos, ATV, satellite, voice, CW, packet, MARS, ARES. Talkin on 146.97 (-). Best of all admission FREE.

- Next month our new series on packet satellites (PACSAT's) continues and our special feature will involve a visit to the high Sierra ghost town of Bodie, Ca. Contributing Editor Tim Low, N6ZUC, popular series continues and KB5FB will have several software programs for sale cheap! 73, Bob

Credits with thanks: QST; Monitoring Times; W5YI Report all contributed news articles for this edition of Editor's Notes.

Spectrum

Continued from page 8

some of these incorporated into Amateur radio.

Spread spectrum is on the horizon, and with more and more Hams coming on board now through the codeless Technician license, a more efficient use of current spectrum will be required. Spread spectrum could help reduce congestion on crowded bands. I had the opportunity to attend a program held by one of the prime movers in the race for a spread spectrum system to be used initially in cellular telephone. I'll be reporting on that in the coming year.

One of the devices commonly used in Ham radio is the power supply. Our gear just wouldn't operate without power. I intend to delve into the power supply and how it works, and how you can build your own supplies. They're easy to build and fun too.

Other topics, if I can get them arranged, will be tours of Palomar Engineers, Ranger communications and a visit with Mike, KC6KCQ, who is the Chief Technician at the Palomar Observatory. All in all, some things to look forward to in the next 11 months.

This is also a good opportunity for each of us to thank those who have worked hard this last year to make SARA such a great club. Club officers, Oliver, KJ6YZ; Dave, N6YHZ; Al, N6SAE; Ernie, K6UVI and Linda, N6REB who all did a great job. Special thanks and appreciation should also go to LeRoy, NV6S, who works exceptionally hard to keep operating, and strives to improve, the club repeaters. I read many club newsletters each month, and there just is no better club publication than *The READOUT*. *SARA* is very lucky to have Bob, WA6ZLO, as it's newsletter Editor.

In 1992, make a special effort to attend club meetings. It's your club, and it needs your input and support.

As always, if you have a problem of a technical nature, or have suggestions for future articles, drop me a packet at N6ZUC @ KB6GVT .#SOCA.CA.USA.NA, or write me in care of *The READOUT*. I look forward to hearing from you.

73 -Tim, N6ZUC.

SARA Officers

Continued from front page

maintaining a library of QST, 73, CQ, Radio Fun and WorldRadio.

Have more guest speakers at the monthly meetings. Involve the membership in the meetings more. He suggests holding a CW demonstration given by the members. However, instead of sending with your right or left hand, the participant would have to send with his/her left foot! Ernie suggests establishing a direct and continuing path of communications with the local media to publicize SARA's activities and making the club station more accessible to the membership.

Treasurer, KD6BVN

Rita Palacios Rader

Rita was first licensed in 1991 and holds a Technician class license. Rita works for Uncle Sam as an Internal Revenue Agent working out of the Modesto office. Her hobbies are sewing, walking on the beach and hamming. She is married to a person she describes as a blond good looking man, Ernie, K6UVI. She would like to see the club provide projects which would enable member's spouses to participate, ie transmitter hunts for non-licensed personnel only. She would also like to see an increase in the number of female licensees.

Congratulations to all the new officers and best of luck in 1992. Please give them your support.

Feedback

Continued from page 6

ing the hell out of the linear, if they have one, or running a processor wide open. Just listen and you will see what I mean. You may wonder why I'm defending the "Big Guns". Very simple! We are allowed this power and it is legal to use it if necessary. But keep it clean and don't jump all over someone who tells you you are broad. Just try turning the mike gain down. It won't affect your number of contacts one iota. OK, how much power am I capable of with my station? I have a 440 and a

dipole antenna. I just wait and be patient and I eventually get the station I want to work. 73, Jimmy Wakefield, AH6CO, Fresno.

Editor's Note: The views expressed are those of the autor and do not necessary reflect those of *SARA* or the staff of *The READOUT*. If you would like to express your opinion on this or any other Amateur radio related subject, write to the editor at the address on page 2. Or you may send your comments to WA6ZLO via packet radio @ N6REB .#NOCA. CA.USA.NA.



1992 Dues Are Due

It's that time of the year again, time to renew your membership by paying your dues. In an effort to keep up with increasing costs, the club has voted to increase the dues \$1.00 across the board for all classes of membership. Please remember your support is vital. It's what pays the bills. Among the expenses your dues pay for each month is this newsletter which is a substantial expense; dues pay our liability and equipment insurance for the year. Pays the rent for the transmitting vaults on Mt. Oso and the necessary equipment and repairs to keep all the clubs equipment operating. As we have often said, running a club of our size is just like running a small business. We must have the funds to pay our bills. Please be prompt with your renewal by filling out the form below and mailing it and your check or money order to SARA, PO Box 4601, Modesto, Ca. 95352. Thank you!



1992 SARA Membership Renewal

Date _____

Name _____ Call _____
 Address _____ ARRL Member? _____
 City _____ Home Phone _____
 Bus. Address _____ Bus. Phone _____
 Occupation _____ Date of Birth _____
 Class of License (E) (A) (G) (T) (N) Year First Licensed _____

Mail your check or money order made payable to SARA and mail it and this form to P.O. Box 4601, Modesto, CA. 95352

FOR OFFICIAL USE ONLY: Membership Year 1992 Entered Roster ()
 Treasurer () Welcome/Autopatch Letter Sent () cap 12/26/91

1992 Membership Renewal Rates

- Full Membership \$23.00**
- Associate (Unlicensed) \$12.00**
- Students (upto Sophomore in college) \$12.00**
- Family (Head of Household) \$23.00**
- Each additional two members**
- living in the same household \$22.00**
- The fourth or more family members**
- living in the same household are.....Free**
- Out of Area (more than 150 miles from Modesto) . . \$11.00**



Calendar



Jan. 11, 1992	..... VE Test Turlock	.....900 am
Jan. 21, 1992	..... SARA Monthly Meeting	.....730 pm
Feb. 8, 1992	..... VE Test Merced	.....900 am
Feb. 18, 1992	..... SARA Monthly Meeting	.....730 pm
Mar. 14, 1992	..... VE Test Modesto	.....900 am
Mar. 17, 1992	..... SARA Monthly Meeting	.....730 pm
Apr. 11, 1992	..... VE Test Sonora	.....900 am
Apr. 21, 1992	..... SARA Monthly Meeting	.....730 pm
May 19, 1992	..... SARA Monthly Meeting	.....730 pm

SARA meets the third Tuesday of each month (except holidays) at the Stanislaus County Administration Building at 12th and H Streets in downtown Modesto. The meetings are held in the lower-level conference room starting at 730 pm. Visitors and interested parties are most welcome. **SARA** is an **ARRL** Affiliated Club and is affiliated with Stanislaus County and the City of Modesto **RACES**.

The club owns and operates three FM repeaters using the club station call of **WD6EJF**. Frequencies are 145.39 MHz, 224.14 MHz & 440.225 MHz. The club's digipeaters, **WD6EJF-1**, operates on 145.79 MHz and **WD6EJF-2** operates of 28.103 MHz. All repeaters and the digipeater are located on Mt. Oso, 18 miles SW of Modesto at an elevation of 3400 feet in the Coast Range mountains. **SARA** conducts informational nets each Thursday evening at 8 pm on the 2M and 220 repeaters.

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To:

**The First SARA Meeting in 1992 is January 21, 1992
at 730 pm & You're Invited!**