



# The READOUT

Year 17 Number 2 April / May 1995

The official newsletter of the Stanislaus Amateur Radio Association

## Vanity calls coming

The FCC has released its Report and Order for the vanity call sign program, however, the exact starting date is yet to be determined. The best guess is sometime this summer. Once the announcement is made, the program will be implemented in sections (the FCC calls them gates). A public notice will announce the opening of each gate beginning with Gate 1.

Gate 1 will allow any amateur to apply for a previously held primary station call or the call of a deceased family member.

Gate 2 will allow Extras to apply for a specific call for his/her primary station or for the club station for which he/she is currently the license trustee.

Gate 3 will allow Advanced class opp's the same choices.

Gate 4 allows any class of operator to apply for the same choices as Gate 1.

You may request a vanity call sign only if you hold an unexpired amateur operator/primary station license or where applicable, a club station license. A yet to be released for 610-V will be used to request a vanity call sign.

Applicants can apply for available call signs from any call area, not just their own. No call signs will be available until after 2 years from the time they were vacated.

The new rules regarding vanity call signs took effect on March 24, 1995, but will not be available until such time as the new form 610-V is approved by the FCC's office of Management and Budget.

## Newsletter goes bi-monthly

By Bob Pinheiro, WA6ZLO

Increasing publication and mailing costs has forced the club to reduce the club newsletter, The READOUT, to a bi-monthly publication. As reported in the December, 1994, issue, the costs of the newsletter were consuming more than 60% of our yearly budget and the straw that broke the proverbial camel's back was the increase in postage the first of the year.

Additionally, it was generally agreed that the repeaters and their maintenance should be our first priority. Cutting the newsletter to bi-monthly would free up more money which could be used by engineering to maintain the repeaters and related equipment in the best possible operational state. It was also decided not to sacrifice either the size or quality of the newsletter.

We thank all of you who responded with your comments and dues for 1995. They were very helpful in

gauging the value of the newsletter and helped to confirm the belief that the repeaters should have top priority.

We would like to thank the editors of all the newsletters that will exchange with who continued to send up their newsletters to the last several months. We have established the following bi-monthly publishing schedule.

December/January  
February/March  
April/May  
June/July  
August/September  
October/November

For those of you who contribute articles to the newsletter, please keep the above schedule in mind when submitting articles. As usual, you can reach me on packet directly at my PBBS, WA6ZLO-1, on 144.91 MHz. If you can not reach me direct, you can use the *SARA* node on 144.91 MHz.

If you are not on packet, the next best method is by floppy disk. Please save your article in ASCII format on either size floppy and mail it directly to my home address.

If you must, you can submit your type article on paper, but this is the least desirable because it means that I have to retype in order to get it in the newsletter. As always, contributions are always welcome. Please remember our policy that articles on religion and politics are not accepted.

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Thursdays @ 8 p.m.

(Except Holidays)

2 meters 145.39 MHz WD6EJF

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Contributions to *The READOUT* are always welcome and may be submitted to the editor by mail or via packet at KD6JZZ on 144.97 MHz. Or you can reach the editor's PBBS, WA6ZLO-1 via packet on 144.91 MHz. If you can not reach ZLO-1 direct on .91, you can go through the *SARA* KA-Node of Mt. Oso. Type C *SARA* then C-WA6ZLO-1. The deadline for articles is the 15th of the preceding month. Articles regarding religion or politics are not accepted.

#### Editor

Bob Pinheiro, WA6ZLO

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#### *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.

*SARA* is not responsible for the origin or accuracy of the items published in *The READOUT*. No material published is intended to malign, defame, or cause harm to any individual, organization or location. Any interpretation to the contrary is solely the responsibility of the reader.

# AMATEUR RADIO CALL SIGNS

As of the first of February 1995

Radio District	Group A Extra	Group B Advanced	Group C Tech/General	Group D Novice
0	AA0VS	KG0TJ	(***)	KB0QVG
1	AAIMB	KDIZH	N1UFI	KB1BNN
2	AA2VU	KG2AP	(***)	KB2TLZ
3	AA3KC	KE3RA	N3UIZ	KB3BGK
4	AE4CX	KS4MX	(***)	KE4VDD
5	AC5AH	KK5JD	(***)	KC5MKA
6	AC6AH	K06PF	(***)	KE6QOX
7	AB7HT	KJ7JB	(***)	KC71QZ
8	AA8SA	KG800	(***)	KB8WQX
9	AA9NS	KG9AJ	(***)	KB9JCR
N.Mariana's.	KH8Q	AH8AN	KH8DQ	WH8AAx
Guam	WH2J	AH2CZ	KH2NB	WH2ANG
Johnston Is.	AH3D	AH3AD	KH3AG	WH3AAG
Midway Is.		AH4AA	KH4AG	WH4AAH
Hawaii	(**)	AH6NU	WH6ZY	WH6CSL
Kure Is.			KH7AA	
Amer.Samoa	AH8M	AH8AH	KH8CF	WH8ABB
Wake W.Peale	AH9C	AH9AD	KH9AE	WH9AAI
Alaska	(**)	AL7PW	WL7ZY	WL7CKG
Virgin Is.	WP2Q	KP2CD	NP2HV	WP2AHV
Puerto Rico	(**)	KP4YM	(***)	WP4MWC

\* =All 2-by-1 "W" prefixed call signs assigned.

\*\* =All Group A (2-by-1) format call signs have been assigned in Hawaii, Alaska and Puerto Rico.

\*\*\* = Group "C" (N-by-3) call signs have now run out in all areas except the 1st and 3rd radio districts.

Source FCC, Gettysburg, Pennsylvania

## At the beep— it's time to eat

Don't you just hate it when your pager goes off at dinner time! Well, in Texas you'll find a rancher who uses beepers attached to cattle to call them in for dinner. The pagers are attached to several select cows in the herd. Once beeped, this group rounds up the rest of the 100-head herd to grab some grub, says Nelson

Roberts, vice president and general manager of Arlington, Texas based Telephone Warehouse, which handled the pager installation.

The Dallas rancher simply dials a group dispatch number that sets off the multi-toned Motorola Express pagers, Roberts explains.

There are three different tones on the pager, and some cattle have one tone and some have another, he continues. "The minute you can get one

or two [cows] to start heading back towards the barn then they all follow." Training the cattle to associate the pager tones with feeding didn't take long, says Roberts.

The pagers are weatherized, with batteries that typically last about a month. A dial tone cowboy's life style is a definite departure from free-wheeling cattle drives of old. "He can sit in the living room of his home, watching his herd of cattle, which is probably half a mile to a mile away," says Roberts. He can dial a number from the desk in his office and then watch that herd start to walk back towards the barn.

-Betsy Simnacher, America's *NETWORK Magazine*. 12/94 Via the *SBE Chapter 43 Newsletter* in Sacramento, CA.



# Oakdale ham embroiled in RFI struggle

*The following article appeared in the Modesto Bee on January 2, 1995 written by staff reporter Garth Stapley. We thank the Bee for permission to reprint the article in its entirety. We also thank the Amateur Radio operator involved, Ray Antasek, WA6TKV, for responding to our request for his side of the story.*

(From the Modesto Bee)

## Ham interference spurs grumbles

Some residents on River Bluff Drive in Oakdale, are used to hearing things go clunk in the night. And in the morning, and the afternoon, and the next day.

It's really between a click and a grind, emanating from the heating unit and vibrating throughout the house.

Then, for no apparent reason, the TV goes on. Next it's the ceiling fan or the answering machine. You try to talk on the phone and an infernal clicking interrupts. Ugly, unintelligible voices like something from a science fiction movie come over the stereo and the TV.

River Bluff Drive isn't haunted. It's called interference, from a ham radio. And it might be perfectly legal.

The Federal Communications Commission doesn't expect to finish a review of complaints about Ray Antasek's, WA6TKV, ham radio for two weeks.

Antasek's neighbors aren't holding their breath. Some have been putting up with major irritation since Antasek put up a 62-foot antenna tower about 18 months ago, they said.

Barry and Lynda Baxter helped Antasek unload the tower from his truck. Then the clunking started.

"It's just like someone with a balpeen hammer banging on the unit," said Al Capriotti. He called the manufacturer of his heating and air conditioning unit, who said the interference will definitely ruin the unit. So Capriotti and his wife, Mary, wrap up in afghans.

"When it clicks all over the house, it scares the hell out of you," said Dan Deffee, a heart patient who worries the stress could trigger a heart attack.

Many neighbors said they got nowhere complaining to Antasek. So they called a meeting and signed petitions to the FCC, asking that Antasek limit his hours of operation, and another to the City Council, asking that it enforce an ordinance limiting structures to 35 feet.

City officials wrote a letter to Antasek, asking him to comply with the height limit. Planning Commissioners will hear Antasek's appeal on Jan. 18.

Lowering his tower won't solve the problem, Antasek said. In fact, if the tip of his tower were even higher and farther from his neighbors they would have less interference.

"It is a matter of technical fact that the higher an amateur antenna, the less likely it is that radio frequency interference will appear in home electronic equipment," Ralph Haller, chief of the FCC's Private Radio Bureau, testified recently in a New York case.

Antasek has been into amateur radio for 18 years and has helped with communications in floods, fires and earthquakes, he said. His wife, Hope, and 9-year-old daughter, Jenny, are also amateur radio operators.

He could scale his operation down, but he likes talking to folks in Africa and China. And Federal law says he can, and he's not responsible for his neighbors' problems.

"It's not a question of doing right or wrong," said FCC supervisor Tom Van Stavern. "It's a question of equipment. 'Most telephones, home entertainment stuff and heaters are made with inferior parts that allow them to become short-wave receivers, Van Stavern said. An FCC brochure says most equipment is made with the same disease, but symptoms only come out when you live near a ham radio.

In other words, Antasek's tower isn't to blame - manufacturers are because they allegedly skimp on equipment to save a few cents per unit. And the FCC isn't going to push for higher standards because the mood these days is for less government, less regulation.

The FCC arranged to have an independent committee of ham radio operators come to River Bluff Drive and make suggestions. Some worked, the neighbors said, but most didn't.

"I've been constantly harassed by my neighbors," Antasek said. "What they're trying to do is run me out of town. I'm not going to get up and leave because

they want me to."

Neighbor Barry Baxter said he would gladly move. But he couldn't get a fair price on a home that clunks whenever his neighbor fires up a call to Peru.

"We're not against ham radio," Lynda Baxter said. "All we want is to be able to live in our home, turn on our TV and heater and talk on our phone. It's frustrating that his rights override ours."

*Bee staff writer Garth Stapley works in the South San Joaquin bureau. Reach him by calling 578-2078 or 239-2043*

## Response from WA6TKV January 8, 1995

"To Whom it may concern-

After much talk about, "that situation in Oakdale", and now a recent lead article in the Modesto Bee, it's time to set the record straight. My struggle to continue HF operation from my home continues, and I hope to give you a little background about it.

Everything began many months ago with a couple complaints from my adjacent neighbors about my radio transmissions. It seems the transmissions were causing problems with several appliances around their homes.

In the spirit of ham radio, I worked with them making every effort to correct the problems. Unfortunately, they felt the problems were from my station and they shouldn't be inconvenienced or repair their "defective" electronics.

From that point on, my relationships with my neighbors grew steadily worse.

At this point, the entire matter has become a very personal one. It's no longer a clear cut of RFI, and solving it. This was evidenced by five complaints the neighbors filed with the FCC.

The FCC gave me a number of items to follow through on to help them with their investigation and to help resolve the problem. One of these was to have an RFI Committee review the situation and try to come up with alternatives.

An RFI Committee is not easy to find, at least not in this area. The FCC recommended two local clubs that have RFI committees. One was only able to per-

*See "Oakdale RFI Struggle" page 4*



# Oakdale RFI struggle

From page 3

form the function on a weekday, and it would be my responsibility to find enough people to assist the one individual from the club. The other just never returned my phone calls. I understand my neighbors even tried calling with no response.

Eventually, I contacted Marc Willis - KN6SO, a highly respected DXer in the area. Marc formed a committee, and they spent most of a Saturday running tests.

Of the five complainants, only two complied with the FCC in letting the RFI Committee take a look. The committee corrected all but two problems. Marc, subsequent to the committee work, provided shielded speaker wire for free to resolve one of these two remaining problems. The last issue, an elderly VCR, would require additional work.

Unfortunately, when the Modesto Bee reporter went out to interview the neighbors last week, ALL OF THE PROBLEMS REAPPEARED! It seems as though my neighbors undid the work of the RFI Committee to put on a show of the media.

What's next? As a result of the neighbors complaints, the city of Oakdale is ordering me to reduce my tower height from 62' to 35', permanently. This is in spite of the fact that the city originally approved the 62' installation. On top of it all, we all know the lower an antenna, the greater the RFI. I am in the midst of appealing the city's decision.

On January 18, 1995, I made a presentation to the Oakdale Planning Commission. Here is a copy of my presentation...

"I would like to ask that any questions be held until I finish. The reason being, more than likely I will have answered your question during my presentation.

What is Amateur Radio?

I will start out by explaining there are many facets of Amateur Radio. Amateur radio operators are perhaps more commonly referred to as hams. We are licensed by the Federal government (FCC). Hams can communicate with other hams by a variety of methods. Some of which are, morse code, voice, television, and many other digital modes. Each has a certain value to carry out a certain task. There is no other service that has access to such a wide variety of modes.

As a measure of how valuable the amateur service is deemed to be by the

Federal government, more of the frequency spectrum is allocated to the amateur service than any other service, except for the military. No other hobby is federally regulated and licensed.

The purposes of the Amateur Radio service involve:

- Emergency communications
- Advancement of telecommunications
- Improvement of technical & operating skills
- Trained operators, technicians and electronics experts
- Enhancement of international good will, sonally taken an active part in each of the above mentioned items. Now that you have an overview of what Amateur Radio is, I will now go on to the legalities and technicalities regarding my tower.

Getting down to business. There are two basic issues to address.

1. The city ordinance.
2. My tower installation.

## 1. The city ordinance.

The Oakdale City Zoning Code, Section 36-7.6 H. states, "Building Height. No building erected shall have a height greater than two (2) stories and not to exceed thirty-five (35) feet, and twenty-five (25) feet for accessory buildings. Permitted projections above these heights include: ventilating fans or similar equipment required to operate and maintain the building, flag poles, chimneys, or similar structures.

I would like to compliment wever wrote this paragraph. It's simple and concise, that even I can understand it.

The Webster's New World Dictionary defines "building" as anything that is built with walls and a roof, as a house, factory, etc. My tower is not a building, but qualifies as the "...flagpoles, chimneys, or similar structures."

In summary; this does not constitute a limit for tower height in Oakdale, but instead specifically excludes this type of structure from limits. The huge number of TV, CB, ham and other antennas that exceed 35 feet in the city comply with this ordinance. If my tower was to be found non-conforming with this ordinance, then the city has failed for years upon years to enforce this 35 foot ordinance throughout the city.

The city can't "selectively enforce" an ordinance. This is an accepted legal principle. Consider; the huge number of TV, CB, Ham and even the city's own police and fire antennas.

## 2. My tower installation

I applied for and received a permit based on the plans I submitted. My plans did not indicate a maximum height of 35' as mentioned in the letter Dave Levis was instructed to send me. As a matter of fact the plans called out a 55 foot plus tall tower. The calculations provided were for the same tower.

The city engineer, that I paid for, went over the same calculations for that tower. It was inspected and signed off before and after the concrete was poured and the tower was in place. Nothing was hidden, it was all there, and it was signed off and approved by the city at that time, per the plans. A possible explanation to the confusion could be found on the plot plan.

Look in the lower left hand corner, the area labeled "Notes", in parenthesis "Unless otherwise specified". This means that specifications elsewhere in the plans may and indeed do show otherwise. The engineer understood this. It is stated in three places and implied in others.

The city has ordered me to lower the tower permanently to 35 feet. This doesn't coincide with the approved plans. This order is illegal because it contradicts the approved plans. If I did this, I wouldn't have an approved tower installation.

Without even going any further, it should be clear to everyone involved, my tower installation is legal as is.

In an extra effort on my part, here's what I'm willing to do.

1. Voluntary prime time, as defined by the FCC (in Part 97), non-operation of the HF bands for 30 days. This allows my neighbors time to repair their defective equipment
2. Continue to cooperate with my neighbors in testing their repaired equipment at times that are mutually convenient.
3. Volunteer to serve on a community advisory panel to assist the city in drafting a more suitable ordinance.
4. I would like to invite the planning commission to come see my station.

## In closing

I believe at this time, all aspects regarding the issuance of the permit for my tower have been covered. The responsibilities of what is required of me, my neighbors and the city of Oakdale are all clear. THERE IS NO REASON FOR THE CITY TO BE LEAPING INTO THESE TROUBLED WATERS.

See "Oakdale RFI Struggle" page 5



# Oakdale RFI struggle

From page 4

The city should be utilizing the resource known as Amateur Radio instead of trying to hinder and harass it. Amateur Radio would prove to be a valuable asset to the city in the event of a disaster.

Typically after an earthquake, the city's radio communications and telephones, including cellular phones, do not work, sometimes for days. The only means of communications into or out of the affected area is Amateur Radio. Good examples of this are the Loma Prieta earthquake and the Northridge earthquake. Thank you."

## Where things stood as of January 21, 1995.

The Oakdale Planning Commission has backed up staff's decision to have me apply for a variance. One Planning Commission member asked the city attorney about the difference between a building and a structure. The city attorney side-stepped the question and answered, "He applied for and received a building permit."

/s/ Ray Antasek, WA6TKV

*Ray reported that in the February 8, 1995 issue of the local newspaper, The Oakdale Leader, he learned that the City had decided not to pursue the matter. Here is the final chapter as printed in The Leader.*

## Now it's over

### Council won't sue radio buff over tower

No legal action will be pursued against a local ham-radio operator, Oakdale City Council members agreed in a closed meeting Monday. Ray Antasek will not be sued after failing to apply for a variance to the city's zoning code to keep the 55-foot radio tower in his backyard on River Bluff Drive.

In January, the Oakdale Planning Commission required that Antasek apply for the variance to get around part of the code limiting building height to 35 feet.

Commissioners gave Antasek until Feb. 1 to apply for the variance.

Prior to the January meeting, Antasek said he wouldn't get a variance because he believed the zoning code

didn't apply to radio towers, and because a federal law protects his antenna.

City Attorney Tom Hallinan explained council members may have seen Antasek's point.

"After hearing from their legal advisor they (city council members) decided it wouldn't be advantageous to start a suit." Hallinan, the city's legal advisor, added, "There's pros and cons, and looking at the legal ramifications, it's not in the best interests of the city." Hallinan said he couldn't explain the ramifications discussed Monday.

He added, "the state of our code and the state of federal laws preempts local agencies to make reasonable accommodations." Federal Communications Commission rules require cities to "accommodate" amateur radio operators.

Hallinan said he would inform the commissioners of the council's decision at the next planning commis-

sion meeting.

He added the issue of lowering Antasek's tower was over unless council members reverse their decision. Antasek himself spoke to the council Monday during its public comment session, warning members not to "try to enforce a fantasy ordinance." "I haven't done anything wrong," Antasek continued. "I'm not out to bother anyone. I just want to be left alone."

The tower came to the city's attention after two years of neighbor complaints. Antasek's neighbors maintain that the powerful radio interferes with their televisions, radios, telephones, and other appliances.

Antasek has said lowering the tower wouldn't improve his neighbor's predicament. City Administrator Bruce Bannerman said the city may try to act as a facilitator to ease tensions between neighbors over the antenna.

-The Oakdale Leader

## Florida court orders ham tower removed

A three-judge panel from Florida's 4th District Court of Appeals has signed an order that declares the ham radio tower belonging to David Bower, WA4NST, and his wife Sharon, N4XLF, to be "...a nuisance and annoyance" and must be removed. The signatures on the order come one year and 307 days after it was put in place in February, 1993.

Back on 15 January 1993, 19th Judicial Circuit Court Judge Charles E. Smith ruled that '...Amateur Radio transmissions are noxious and offensive' and that the Bowers' antenna system is "an eyesore constituting a nuisance and annoyance to the neighborhood" and therefore in violation of deed restrictions.

Judge Smith ordered that the Bowers' remove the tower and antenna and enjoined them from making any Amateur Radio transmission from their property.

With the appeal now lost, and the decision worded in a way that prevents them from taking the matter into the Florida Supreme Court, WA4SNT and N4XLF must now accede to the will of the State court or bypass it and move the matter into the Federal court system. The Bowers say that such an appeal will be very costly with some estimates being in the area of \$20,000 or more; an amount they say they can-not afford.

So, the Bowers have appealed to the members of the ARRL Executive Board to have the ARRL take on the appeal for them. They are also asking hams nationwide to write to ARRL Executive Vice President David Sumner, K1ZZ, and ask him to use his influence in the ARRL political structure in their behalf.

Worldradio Feb. 1995



# SARA Minutes

Bob Pinheiro, WA6ZLO  
SARA Secretary

## 1-17-95 meeting

1. The meeting of SARA was called to order at 730 PM by President, Jim, N6UGH. All officers were present. 27 members and guest were present and introduced themselves.

2. The minutes of the December meeting were approved as they appeared in The READOUT.

3. The treasures report was given by Bob, KC6TVE, treasurer.

### YEAR END REPORT FOR 1984

Beginning check book balance: ... \$1,861.92

—Income:

Dues: ..... \$3,357.46

Raffle/misc: ..... \$1,574.05

Total income for year: ..... \$4,931.51

Expense for the year:

Phone: ..... \$164.65

Postal: ..... \$470.00

The READOUT: ..... \$1,543.48

Repeater: ..... \$1,108.53

(includes equipment, maintenance, insurance, fuel)

Insurance (Liability) ..... \$761.50

ARRL paid through the club ..... \$298.00

Communication trailer: ..... \$50.00

Misc: ..... \$966.08

(Includes Worldradio \$60.00, Raffle prize

\$627.47, Raffle tickets 135.99, Floral spray

\$50.51, State of California \$15.00, New

checks, \$12.27. Bad checks \$43.00. Badge

\$6.44.)

—Total expenses: ..... \$5,362.24

—Checkbook balance 12/31/94

—1995 dues paid in 1994 ..... \$807.00

—Cash reserve from 1994 ..... \$909.16

—Total ..... \$1,761.16

—Net operating loss for 1994 ..... \$145.76

The report was approved as presented.

4. TVE then unveiled the club's budget for 1995. The budget was estimated on based on a membership of 154 members. It was decided by the officers to figure the budget based on a 20 % reduction in membership based on a loss of members anticipated as a result of the cutback in the newsletter. After extensive discussion the proposed 1995 budget was unanimously approve with one nay vote.

—1995 Budget.

—Income:

142 members @ 23.00 ..... \$3,266.00

8 members @ 8.00 ..... \$96.00

4 members @ 11.00 ..... \$44.00

Total income from dues ..... \$3,406.00

Cash reserve from 1994 ..... \$909.00

Total operating income ..... \$4,315.00

—Expenses:

Phone ..... \$170.00

The READOUT ..... \$1,026.00

(publishing bi-monthly)

Insurance ..... \$762.00

Postal ..... \$100.00

Misc ..... \$90.00

Repeater fund ..... \$75.00

Parts ..... \$525.00

capital improvements ..... \$500.00

Communications trailer ..... \$100.00

Total Expense ..... \$3,348.00

12/31/94 Cash reserve ..... \$967.00

1995 after expenses net

budget reserve ..... \$58.00

5. UGH gave a report on the communications trailer. He said he talked to the young man that has been doing the work and learned that the trailer is nearly completed. It

has a new tile floor, the cabinets have been stained, walls and the outside have been painted. UGH said Ken, WA6CSC, has agreed to keep the trailer and his home and take care of it. The next thing to do is to mount antennas and the generator rack.

UGH also reported the club had been loaned a 440 Phelps Dodge Station Master antenna by Tim Sivils, KE6FSE, to try on our 440 machine. Tim offered to sell the antenna to the club if we liked it. Both UGH and NV6S, recommended that we purchase the antenna for \$200 which was substantially below it retail price. UGH said he had checked the antenna out and it was in good working condition. It was moved, seconded and approved to buy the antenna.

6. Secretary ZLO announced there were a few Worldradio subscriptions available and were being offered at \$10.00 each. This helps the club recoup the cost of our listing in the club section of Worldradio each year.

7. A technical report was received from LeRoy. See his technical report for details.

8. A short discussion followed regarding purchasing DF (direction finding) equipment to track jammers and bootleggers plaguing our repeaters. Berry, KN6ZE, has agreed to head the DF committee when the money was available to buy the equipment.

9. The meeting adjourned at 920 PM and cookies and coffee were served. Cookies provided by Mike Camp, K17FQ.

## 2-21-95 meeting

1. The February 21, 1995 meeting of SARA was called to order at 730 PM by President, Jim, N6UGH. 28 members and guests present.

2. UGH mentioned that a site for Field Day had not been settled on and asked for suggestions. Tabled to a later meeting.

3. No report from the VP.

4. Secretary reported a reminder letter was mailed to those members from 1994 that had not renewed their membership. The reading of the minutes of the previous meeting were postponed until they could be printed in the April / May issue of the newsletter.

5. Treasurer reported \$608.83 in expenses. Income of \$1,757.00 with a checkbook balance of \$2,864.05

6. The technical report was given by LeRoy. See his Tech report in the newsletter for details.

7. UGH said the Communications Trailer was finished and ready to be picked up. It was to be cared for and stored at WA6CSC's home.

8. WA6ZLO reported the majority of the membership preferred the newsletter be printed bi-monthly. Next issue will be the April / May issue. No other comments were received from the floor.

9. UGH announced he had appointed new member Chuck Marble, KE6OAG, as the club's new Public Relations Director. Chuck then presented a video tape of a recent trip to Mt. Oso to work on the tower.

10. After a break at 830 PM, UGH, opened the floor to suggestions on what the membership wanted to see from the club in the future in the way of presentations, activities, fund raisers and improvements. Suggestions included a steak bake, garage sales, auction, flea markets, more Elmers, fox hunts, more press releases on the activities to the club, programs on satellite technology, antenna building, packet, propagation forecasts, antique equipment, emergency communications and others.

—Meeting adjourned at 9 P.M.



# Technical Report

By LeRoy Campbell, NV6S

Although there seems to be more problems with the repeater system than before we started, much progress has been made on the technical front.

We have made several trips to Mt. Oso and have now have new guy anchors in place and the tower has all been properly guyed with new cable. The tower now stands at 75 feet and we still have one more section to install.

The antennas have been mounted on the tower. This includes the new Station Master on the 440 repeater and the new 4-pole on the 220 repeater. Unnecessary coax and fittings have been eliminated where possible.

The system was really starting to shape up when the bad weather set in.

Along with the coming of the heavy storms, came a new noise problem on the two meter machine. At the same time the 440 repeater decided to choose run up about ten kHz in frequency. The 440 continues to operate on frequency at times and up almost ten kHz at others. The 220 repeater is being hit with some sort of mix as well. Plans were made to attack these problems. More grounding and bonding is planned on the tower, repeaters, and guy wires.

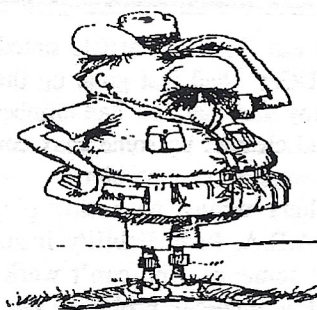
It is beginning to look very much like the two meter station master antenna may have a break inside. I am told that some of the older models, which I think this one, can be repaired. Plans are being made to take the other Station Master that is planned for the low level repeater up to the site and replace the existing antenna. Then we can attempt to repair the defective antenna.

About the time I was planning to go up the hill and begin some of the grounding and bonding work, the storm decided to take control. That weekend I worked 48 hours overtime doing storm related duties.

I was told that one person was trying to get up the hill to work on an ailing paging transmitter and found the creek that we ford 31 times, to be running about 5 feet deep and so far as I know he

See "Tech Report" page 7





# Big Foot to the rescue

By Bob Kimball, KC6TVE

March 17, 1995, talk about the luck of the Irish. Saint Pat's day 1995 will go down in *SARA* history. On that day five *SARA* members NV6S, N6OCS, N6UGH, N6ZAA, and KC6TVE (that's 4 N's and a gopher) headed up the mountain hopefully to located and fix the annoying static interference on our 2M repeater. We did not know if we could reach the top due to recent rains and wash outs on the road to the top.

After fording Ingram Creek 35 times (yes 35) we reached the top and set to the task.

We were all in agreement that the most likely source of the problem was a break in the Station Master antenna. Having a spare which we hauled up the mountain with us, we swapped them.

With the task complete, test time came and to our dismay, when the tower was shook the static was still there. Then as luck would have it old "big foot" (yes

there was one up there), Bob N6OCS, tripped over one of the guy wire anchors supporting the tower and the static was horrendous. We discovered some excess wires at the guy anchors rubbing against each other. These were all quickly corrected at all four anchors and the static was gone.

Repeated tests, shaking and bumping the tower and wires, were made with the appreciated help of Mark, WB6BJN, slowly counting from 1-20 on his talkie. It was finally determined that the problem was solved. Thanks to all who listened patiently while the "1 to 20 shake" was going on. It was an afternoon well spent.

73, Bob

## A little note

Wife reading the mail to her husband: "This little note came with our credit-card bill. It says: "Leave home without it!"

*Edgar Aro in Funny Times via W3OK Corral Newsletter*

## Tri-County and N. California VE Schedule

The VE schedule for the Tri-County VE Team for 1995 is as follows:

Merced .....	June 10, .....	October 14, .....	KI6PR (209) 383-2166
Turlock .....	May 13, .....	W6XK (209) 883-2968	
Modesto .....	Sept. 9, .....	December 9 .....	W6XK (209) 883-2968

If you have any questions regarding the Tri-County VE Team examination schedule, please do not hesitate to contact me. 73, Chet W6XK @ KD6JZZ.

Other tests in Northern California include:

Jackson .....	July 8, .....	Nov 11 .....	209-295-7947
Oakland .....	May 21 .....	415-752-8783	
Sebastopol .....	Sept 16 .....	707-527-8593	
Clear Lake .....	April 15 .....	707-274-3387	
Petaluma .....	May 13, .....	Oct 14 .....	707 762-9414
Sonoma .....	April 29 .....	707-996-6461	
Vacaville .....	May 20 .....	707-446-8376	

## Tech Report

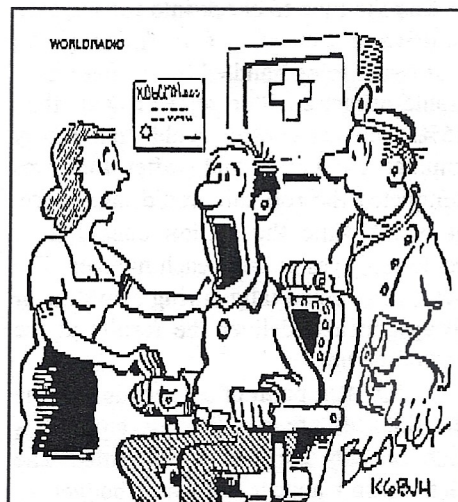
From page 6

still has been unable to get to the top of Mt. Oso. Even if the creek goes down, I doubt the road will be passable even for four wheel drive until some work is done. I'm currently expecting it will be about two weeks before we are able to get to work again. That should make it about the last week of march. Hopefully improvements will be made by the time you read this.

I have many people to thank for chores relating to the tower work, Jim, N6UGH, organized the trip and supervised the work. Tim, KE6FSE, spent a day on the tower with me helping to move antennas and install tower sections. Bob, KC6TVE, was there for every trip and helped one day on the tower climbing and mounting the two meter antenna. Aaron, KE6OUU, and his dad, who isn't even a ham or a club member, furnished a four wheel drive vehicle and much hard labor in installing the guy anchors. Chuck, KE6OAG, took video of one trip and put on a presentation of it at the last meeting. There were others and to all who participated, my thanks.

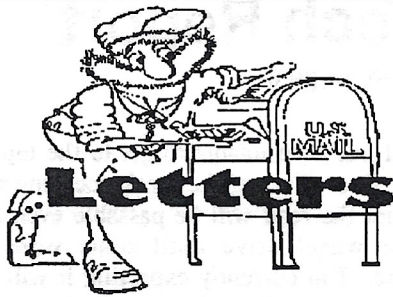
Once again, thanks to the members for being patient as things are not going as quickly as any of us would like. I do believe we will see problems come under control in the very near future.

73, LeRoy.



"He was trying to break a log jam on 20 meter phone and it just stuck that way!"





Dear Editor,

I would like to first congratulate you on developing The READOUT over the last 17 years, you have done a fantastic job! I have been a member of S.A.R.A. off and on since 1980 and I have greatly enjoyed every issue that I have received.

I would now like to make some suggestions and comments on the operation of S.A.R.A.

As I view it, the club has a roster with nearly 200 active members, however this club's decisions are led by a handful of its (clique) members, and then always followed up by a show of hands for a vote which is done at its meetings that attract approximately 15% of the voters.

The January READOUT is expressing that the key issue at hand for funding is the repeater since everyone uses it more than having a need for a newsletter. If that's the case why aren't the voting issues handled on the net. It's a lot easier to find the time to check into the net than to drive to a meeting, and I'm sure with real issues to be handled by the net that it would attract a better voter turnout than 15%. The net control could read off by number the issues and after that was completed the roll call would take place, at which time the station checking in could reply yes or no to each number. The net control could tally during Newline or Swapshop and deliver the results at the end of the net.

My next point of concern is the way the finances are run for this club. This club runs by the seat of its pants! The club doesn't appear to have a budget, or have any intention of having one. How many of you at home don't budget things? How many companies do you know of that don't operate on budgets? S.A.R.A. has a budget but it apparently runs after the fact! I have seen Leroy

(NV6S) purchase duplexers at the Turlock Club Auction then go to the S.A.R.A. club meeting and ask to be funded for them. Do you think that real businesses operate this way? This club needs to plan for the future! The READOUT stated that the total of \$947.00 was spent on new equipment, parts and fuel for 1994. I would like to see that figure for each of the last five years! I think that with all of the hardware on Mt. Oso the number would be significantly higher. S.A.R.A. needs to budget!

It needs to first look at its expected income, then its fixed expenses, then a savings amount, then look at what is left and determine what can be achieved realistically with the funds that are left. Do not go out and purchase, upgrade, modify, and spend without a base to work from and then have to whine about not being able to fund a newsletter, after learning that more has been spent than was available.

Perhaps it was the "1980's" when spending was the craze that induced S.A.R.A. to have repeaters on three bands along with a digipeater. And now S.A.R.A.'s new President says "He would like to see our equipment and systems be brought up to "first class" condition and maintained that way. Identify and get rid of equipment that was no longer needed and put together a program with people and equipment to go after jammers". Well this may be a great "I want to be elected statement" but as usual it doesn't represent any plan to fund this type of "First Class Condition".

I can see the same old thing happening in 1995, somebody will say at a meeting we need to buy this to maintain first class condition, the motion will be seconded, passed and the money spent. Then at the end of 1995 S.A.R.A. will be over spent? under budgeted? and the hind-sight plan will be now to have a newsletter say maybe every six months.

Next I would like to comment on two articles that were published in the December issue of The READOUT. By the way both of these articles were on the same page. The first stated that Jim, N6UGH, was currently living on disability after having dizzy spells which required the D.M.V. to revoke his truck driving license. The article also stated that Jim was using the club station for his

personal use. The next article stated that Jim, N6UGH, had just gone up the hill with Leroy and that Jim had climbed the tower and cleaned up some coax connectors that were causing problems.

Whats wrong with this picture? Does S.A.R.A. have liability insurance to cover someone who can't work because of a medical problem, but who can climb towers. Safety belts don't do much good if you are unconscious. Perhaps as part of the membership form a disclaimer should be added, stating that no member of the club is liable if another member were to get hurt and sue for more than the insurance coverage carried by the club!

The last item I will bring up is the club trailer. This is a joke! This project has gone on for more than a year and I don't think its gone far! With the closing of the station at the Red Cross this is a perfect opportunity to put this asset into action. The club station could be fitted, the trailer could be towed to all activities, it would be ready at a minute's notice for any emergency plus it could be used for Field Day. This is a great advertising vehicle for Amateur Radio but as usual it's shut down by the handful of (clique) members that make the decisions behind the scene.

I offered last year to provide a storage place for it when it was requested but was told that it was being worked on and it wasn't necessary. I guess as long as the trailer isn't an issue then N6UGH doesn't have to give up the club station.

I am willing to donate my time and labor to achieve a club trailer station that would equal the quality that ZLO has done on The READOUT. However, considering the powers that be of this club, I probably won't be contacted. The club loses!

In summary, this club needs to be pro-active. Budget in advance, possibly remove some of the equipment since the membership isn't large enough to support it. I certainly would rather have a READOUT than a 220mhz. repeater. Determine purchases by needs and not wants, and be run like a business! TNX!

**KEN FISHER, WA6CSC,**

Hickman, CA. 1-5-95

*Ed. Note: Read response to this letter from N6UGH on page 9.*



# How to handle jerks on the air

By Mickey McInnis KB5YAC

We've had problems with unidentified operators, people using false call-signs, jammers, obscenities, etc. on the air. I'll refer to these people as "jerks" in this article rather than worry about the distinction between "jerk, lid, bootlegger, '??#+!' or whatever other terms might apply.

I'd like to summarize some of the advice of the experts, repeater trustees, my personal experience, etc. The people who do this are often just looking for attention. Arguing with them only en-

courages them. Don't get in protracted arguments with them. Don't threaten them with FCC fines, etc. Don't talk to them. Don't get in discussions with other legitimate hams about the jerk when he might be listening. Especially, don't say on the air that the FCC doesn't do anything to catch bootleggers. I've actually heard people say this on the air minutes after a bootlegger has been heard on a repeater.

Don't threaten them with violence. Remember, they are the nut case, you are the "good guy". I've heard people make threats over the air to jerks. It reflects badly on the "legitimate" hams and doesn't discourage the jerk.

Don't talk about doing a transmitter hunt. Especially, don't talk about a hunt if you are hunting them. You could frighten them off the air. If someone is doing a hunt you could ruin the hunt. You could also make the jerk start using techniques to avoid detection. Don't assume that moving to a different frequency will keep the jerk from hearing your conversation. Some of these people are actually licensed hams or others with considerable equipment and knowledge of radio.

Do contact the repeater trustee if a problem occurs that requires immediate attention such as shutting down the phone patch or the repeater. The repeater trustee or club officials can also be helpful to coordinate efforts to catch jerks. Keeping notes can be helpful if you have a repeat

offender or a serious offender. Tape recordings can also be helpful. Signal strengths, directional bearings, partial results from transmitter hunts, etc. can be very helpful to later efforts.

As much as practical, refuse to give the jerk any indication at all that you notice his existence. In the incidents I've heard, they've gone away much faster if ignored. When people have argued with the person or threatened him, the disturbance has continued for longer periods of time. If the jerk doesn't get the satisfaction of knowing he's annoying someone, he usually loses interest quickly.

If you do go transmitter hunting and find a jerk, be very careful what you do when you find him. The person involved has already shown himself to be a kook. He could be a violent kook, too. I would also suggest that you all be careful about accusing someone of being a bootlegger or correcting bad practices.

One of my first experiences as a ham was when I was trying to check out an antenna on a repeater's signal strength meter. I keyed up and identified myself and then dialed the access code. Some pompous listener keyed up and told me in a gruff tone to ID before using the repeater. I apparently had dropped out of the repeater while ID'ing.

Needless to say, this did not make a favorable impression on a new ham.

*From AARC/Over, newsletter of the Austin, Tx ARC.*

## Letters

### Response to letter from WA6CSC

Dear Editor;

This is an open letter to Ken, WA6CSC. Thank you for your concern about my health. I have been on medication for about 5 months (as of the time I went up the tower) for my black-out spells. The spells I have been having have been very mild and not total black-outs but more of "brown-outs" as the doctor calls them.

The other reason I am not working concerns my right knee. If I do a lot of walking or working around the house here; then for a day or two afterwards I must do nothing but sit and do very little. This gives the knee time for the swelling to go down as well as the pain to subside. So you see, one little climb up the tower to the 20ft. level was not endangering my health in any way.

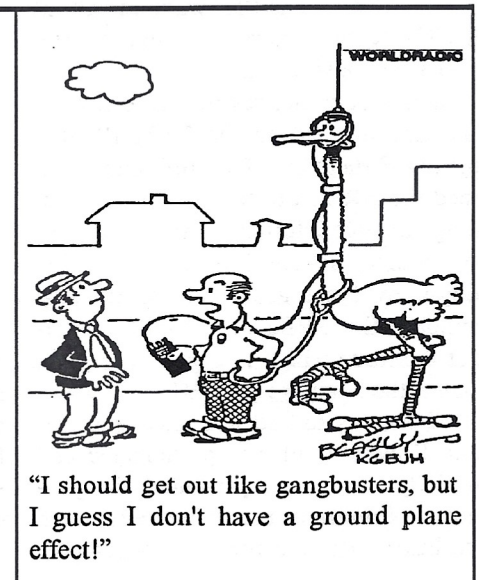
Also, what was not printed was that after coming down off the mountain I spent two days checking out my "Lazy-Boy" chair in the living room. This also gave me time to burn up the buttons on the remote for the TV.

**JIM JONES, N6UGH**  
Patterson

## Too pooped to strike

Overheard: "The driest town I ever saw was in Kansas. They couldn't sell liquor there at all, except to snakebite victims. They only had one snake in town and by the time I got to the head of the line, the snake was too pooped to strike."

*From the September '93 Omar H. Mung Society "Ohm 's Law newsletter via the ARNS Bulletin.*







# Editor's Notes

By Bob Pinheiro, WA6ZLO

The March meeting of *SARA* was believed to have been the biggest in the history of the club, with 74 members and guests present for the special program on ham radio towers.

The regular business meeting was suspended and the floor was turned over to Dave, WA6GUO, who put the program together. He introduced the speakers for the evening which included Ken Fisher, WA6CSC; Darrel Willey, City of Modesto Chief Building official and Mike Siegal, KI6PR, the ARRL San Joaquin Valley Section Communication Manager.

GUO then introduced our new Public Relations Director, Chuck, KE6OAG, who showed a color video tape he produced of CSC's shack and tower. After the video CSC talked about the mechanics of installing towers, hardware, antennas, guy wires, safety equipment and engineering specifications.

Mr. Willey then spoke about the City of Modesto's zoning regulations as they relate to towers. The present regulations limit towers to a height of 65 feet and a building permit is required which cost between \$60-80. Mr. Willey said the most important aspect of obtaining a permit is to be certain to have a signed copy of the engineering specifications on the tower by the engineer who designed it.

Mike, KI6PR warned about CC&R's (codes, covenants and restrictions) when buying a new home. CC&R's can, and usually do, restrict radio towers. Mike also touched on the PRB1 (Station Antenna Structures 97.15 (e)) and mentioned the ARRL can be of help in providing valuable information should an amateur become involved in civil litigation brought by local governments. He also mentioned that PRB2 was being formulated at this time which is expected to greatly enhance the language of PRB1.

This was indeed an excellent program. Kudo's to all who participated and especially those who presented the program. Numerous favorable comments were heard after the program. More pro-

grams are being planned for the future. Next month (April), the program will be on building cheap and easy VHF and UHF antennas.

—Tandy Corp. closed 233 Video Concepts and McDuff stores last January as a part of a restructuring plan. The closing affected the Modesto, Stockton and Sacramento stores, which were among the 28 Video Concept stores closed in California.

The closings eliminated the 173-store Video Concepts chain, which sold consumer electronics from mall locations.

Also shut down were 40 of the corporation's 46 McDuff mall stores and 20 of 67 McDuff super-centers.

The closings were part of a two-year restructuring program focusing on the more profitable Tandy store chains, which include Radio Shack, Computer City and Incredible Universe stores. Prior to the closings, Tandy has over 500 stores in California, including; Video Concepts, Incredible Universe and Computer City.

—Now for the story of two hams as told by Jim, W6DYF, Sonora, CA

*Two fool hams who had cars with  
antennas of perfection,  
Met one day at an intersection.  
They tooted their horns and  
made a connection!  
A police car came and made  
an inspection,  
An ambulance came and made  
a collection;  
The remains hauled away resist  
detection.  
All that is left is a recollection.  
And two less voters in the next  
election!*

—The Foothill College radio flea market resumed its summer schedule on March 11, 1995. The college is located just off Hwy 280 on El Monte Rd. (west). Take Hwy 280 to El Monte Rd. (West). The gates open at 6:00 AM the second Saturday of each month March through September

10th. Entry is free, but there is a parking lot fee of \$2.00 per vehicle. For more information call 408-734-4453. Here is the schedule for this year. April 8- May 13- June 10- July 8-August 12 and September 11, 1994.

—Ordinarily we publish the club roster twice a year in April and September in *The READOUT*. We just didn't have enough space this month, so the spring edition of the roster will appear in our next issue (June/July) which should reach you just before Field Day (June 24 & 25).

—Speaking of Field Day, we still have not selected a site for this year's event. If you have any suggestions, contact Jim, N6UGH. Do it as soon as possible.

—Some of you who received this issue of the newsletter have not paid your 1995 club dues. We hope this complimentary copy will both remind and encourage you to renew your membership. The dues are the same as last year. \$23.00 for full membership; \$12.00 for students and \$11.00 for out of area (more than 150 miles from Modesto) members. If you're not sure if you paid, examine the mailing label on the back page. If the year "1994" appears about your name and call, you haven't. Your support is always vital and appreciated. Please send in your dues today! Please don't forget to let us know of any changes in your call, class of license, address or phone number. This is the only way we can keep the roster up to date.

Speaking of members, we would like to welcome new members Bill Harsh and Scott Whitney both of Modesto. Both are new technicians. Bill is waiting for his call. Scott's call is KE6FNV. With these new members our roster now stands at 153 and climbing.

—That's it for this issue. Thanks to all of you who made nice comments about the newsletter. Your comments are always appreciated. 73, Bob



# From the desk of N6ZUC

**J. T. "Tim" Low**

Skipper and Echo, my two man eating, killer, attack cockatiels are sitting here on the mic arm as I type up this month's bit-o-drive. Supposedly, the species being fine imitators of speech and the whistling arts, I've tried to teach them to whistle "CQ" in Morse code. Wouldn't this be novel for use as a contest keyer for Field Day? Tone modulated, err, bird modulated, single sideband CW? So far they have shown no inclination towards said activity. If I can ever get them to talk, perhaps they will at least be able to say "CQ Field Day". At this time, the outcome doesn't look too promising.

After several years of trying to find a packet NODE path from my home here in San Diego County, to the Modesto area, one has finally opened up. It seems to be reliable and quick. If you would like to give it a shot sometime, my packet station is always on the air. If I'm not available, you'll be put in my maildrop. From your end, either connect to "VALLEY" on 144.91, then "OSO1", "BKFLD", "BGBEAR", "#RIM96", "ELS07", "ESCN", and to me at "N6ZUC". You can also skip "VALLEY", and pick up "OSO 1" direct on 145.01. When conditions are good, it only takes a couple minutes to make the connection. Of course some times of day are better than others, early evening being the worst. I'd be glad to hear from you. New packet friends are always welcome.

Speaking of packet operation, wonder how many of you work the wormholes? Many may not even know they exist, let alone what they are. A wormhole is a packet path either by land line or satellite. There are several good ones out of LA I work. One is through node "BURBNK", and is provided via NBC long haul from Burbank to the east coast hub, and the London hub. Another is from LA to the midwest via St. Louis.

As a matter of fact, in pulling out the node list on "OSO", I noticed that it knows the way to some of the midwest nodes. If you check it, you will see some "zero" calls listed. These are nodes accessed via the wormhole.

Perhaps the best one however is via the Internet from the Jet Propulsion Laboratory in Pasadena. From here you can access the world. Russia, Australia, England, even Antarctica. Make packet friends world wide. Communicate one on one, or join one of the world wide chat nodes. No telling who you'll run into. Most of the conversation seems to be in English.

Work your way into LA via the nodes, and look for "JPLARC", "JPLGW", or any other node on 145.09. The object will be to get to "JPLGW", (JPL GATE WAY). Log on and explore. You should be able to find a path from "BGBEAR", already mentioned earlier.

As far as packet fun goes, try working some of the HF gateways. If you check around, you'll find a few operating in your area. Mostly, these are gates from 2 meters to either 20 or 40 meter bands. I know for a fact there are a couple in the Modesto/Stockton area, although I hesitate to mention call signs and locations because of not knowing their operating schedules. By the time this goes to press, they could be off the air or moved. Check around with other packet operators in your area, and I'll bet you find one of them. For those without HF privileges, assuming the control Op is on duty as required, this is a good way to get your feet wet in the world of HF digital communications.

This month I also wanted to see if I could clear up the confusion some people seem to have about how packet nodes work. I find that even old time, experienced packeters, those who shall remain nameless, (Bob, WA6ZLO), didn't have a clue as to working the

nodes. First off, the confusion between "NODES", and "DIGIPEATERS". A digipeater simply repeats what it hears, much in the way a standard voice repeater works. It hears your packet, then immediately spits it back out. In order for your packet to be acknowledged, the target station must get the packet, then repeat back through the DIGI to your station with its acknowledgment. You don't connect to a DIGI, you only repeat through it.

A node on the other hand, is a smart device. You connect directly to it. The advantages are many. First off, when you connect to a distant station via a NODE, the acknowledgments for each packet are not end to end, rather the NODE itself will acknowledge your packet, then pass it on. Any retries will be from the NODE to the distant station, not between you and the distant station.

NODES also talk to each other. They exchange such things as lists of NODES that each one of them can hear. By doing this, each node can build a NODE list of stations that it can connect to, without being able to hear them. They figure out routes via other NODES, from the lists generated by those other NODES.

For instance one of the NODES I use is BGBEAR. I connect to it via my local NODE which is ESCN. Now, ESCN can't hear BGBEAR directly, but it knows what other NODES to work through in order to get there. Therefore, it appears on the ESCN NODES list.

To find all the NODES that a NODE can directly hear, you would look at its ROUTES list. The ROUTES list will also give you the condition of the link, and the number of circuits presently connected through it. The bigger the number, the better the path. The number 192 you will see a lot. This is generally a high quality path, and anything less means a degraded path. When you see a

*See "N6ZUC" on back page*





# Calendar

April 8 .....	Foothill College Swapmeet .....	All Day
April 18 .....	SARA Monthly meeting .....	730 PM
May 13 .....	Foothill College Swapmeet .....	All Day
May 13 .....	VE Test In Turlock .....	9 AM
May 16 .....	SARA Monthly meeting .....	730 PM
June 10 .....	Foothill College Swapmeet .....	All Day
June 10 .....	VE Test in Merced .....	9 AM
June 24-25 .....	SARA Field Day .....	24 Hrs.
	Site to be determined	
July 8 .....	VE Test in Jackson .....	*Call
Sept. 1-3 .....	HAMCON Convention .....	
	Aboard the Queen Mary in Long Beach, CA harbor	
	* See contact and telephone information on Page 7	

**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.

## From the desk of N6ZUC

From page 10

number such as 245, that means a hardwired connection, or also called a **GATEWAY**, which is a path from one frequency to another.

There are three basic **NODE** systems. **NETROM**, the second is **KA-NODE**, and the last is **TCPIP**. I'm only going to be concerned here with the first two.

**Netrom** is the most common. **NODES** such as **OSO** and **VALLEY** are **NETROM** type nodes. **SARA**, the club **NODE**, is a **KA-NODE**. The latter will not be recognized by the former as a **NODE**, and will never appear on a **NETROM** **NODE**'s **NODE** list. **KA-NODES** are built into **TNC**'s from **Kantronics**, such as the **KPC** series, and the **KAM Plus**. By not appearing in **NETROM** **NODES** lists, it makes it hard to use them to get to the desired distant

location. Not all is lost however. Look in the **NODES HEARD** list. Any call sign having an extension of -7 is most likely a **KA-NODE**, as that is the standard default by **Kantronics**. You can connect these **NODE**'s together, they just don't recognize each other as **NODES**.

I'm wondering if I have you confused yet? It's not as complicated as it seems, and if you busy yourself **NODE** hopping, you'll catch on quickly. Like anything else, to really understand it, you have to be involved in it.

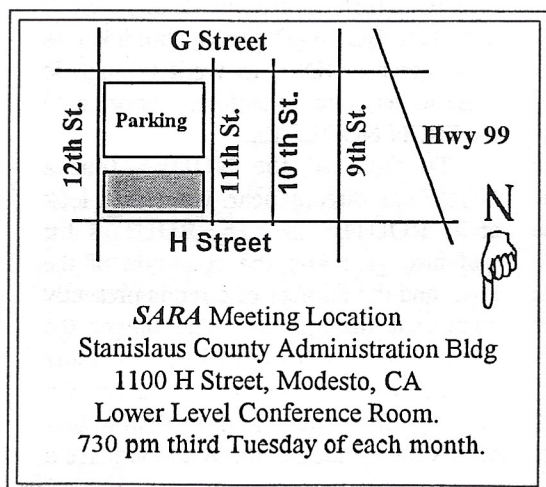
Questions? Answers? Comments? Send 'em to me via Packet at: **N6ZUC@KJ6VC.#SOCA.CA.USA.NOAM**. You may write me in care of The **READOUT**.  
73 -Tim.

**SARA** repeaters on Mt. Oso at 3,300 feet- 145.39(-) MHz PL 136.5 Hz. 224.14 (-) MHz. 440.225 (+) MHz PL 136.5 Hz . Modesto Low Level machine 145.43 MHz (-) PL 67 Hz. **KA-Node** Digipeater (**SARA**) 144.91 MHz. 10 meter digipeater 28.103 kHz.

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

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**Next SARA Meeting is April 18, 1995 at 730PM & You're Invited!**