

The READOUT

Year 14 Number 8 August 1992

The Newsletter of the Stanislaus Amateur Radio Association

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SARA Field Day Successful Event

By Ernie Rader, K6UVI

The national event we call Field Day, is supposed to be the time when Amateur radio tests its communication capabilities under emergency situations.

As a fraternity, we've added the game of seeing how many contacts we can make during this specific period of time. **SARA** was no exception in its participation. We took over the Jones', N6UGH & N6YBE,

See 'Field Day' page 3

FCC Proposes Relaxing 'Prohibited Transmissions' Rule §97.113

On June 18, the FCC adopted its long-awaited Notice of Proposed Rulemaking (NPRM) to change the "Prohibited Transmissions" rule in the Amateur Radio Service (Rule 97.113). Developed over many years, the current rule is designed to preserve the service's non-commercial nature while permitting it to be used for certain public-service applications.

The rule has long given some Amateurs grief, particularly those involved in mass public-service events such as races and parades. Organizers of these activities may prefer the help of amateur volunteers and their radios instead of having to obtain communications through other services such as Business Radio or cellular phones.

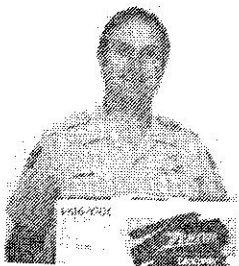
The limitation appears closer to

home when Amateurs cannot legally use their radios to conduct hamfest communications. Amateurs may currently transmit only certain kinds of public-service event communications - mostly related to safety -- and may not use their frequencies for the ordinary transportation and administrative operations of an event or agency.

In response to request from the **ARRL** and others, "the FCC has proposed amending its rules for the Amateur service by lessening restrictions on the scope of the permissible communications that Amateur stations may transmit," the Commission said in a news release. "Specifically, the proposal includes greater flexibility to transmit communications from public-service projects and personal matters."

See 'FCC' page 6

SARA Raffle Winner



Ed Viohl, a Deputy Sheriff with the Stanislaus County Sheriff's Department, is the proud owner of a new Zenith Camcorder after his ticket was drawn during Field Day activities. The event culminated another successful **SARA** fund raiser

See 'Raffle' page 7

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Contributions to *The READOUT* are always welcome and may be submitted to the editor by mail or via packet at WB6MFV-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

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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.

Quoting Prices On The Air

Is it permissible to quote prices of Amateur equipment when listed for sale over Amateur frequencies? The answer is yes! However, one should be familiar with the proper procedure as outlined in this direct quote from FCC PR Docket 88-139, page 5. This is a policy statement direct from the Federal Communications Commission and should be used as a guideline.

"Current policy permits amateur stations to transmit information about the availability of amateur radio equipment, notwithstanding Section 97.110, 47 C.F.R. Section 97.110, prohibiting business communications. In this context, amateur radio equipment is equipment normally used in an amateur station by an amateur operator.

An asking price may be mentioned, but no subsequent negotiations or bartering may take place. If interest is expressed, the amateur operators should exchange mailing addresses or telephone numbers and finish negotiations using means of communication other than amateur service frequencies. Dealers may not take advantage of this exception.

Amateur operators who derive a profit by buying and selling amateur radio equipment on a regular basis are considered dealers and violate the business prohibition if they use amateur service frequencies for this purpose. Proposed Section 97.219 (c) codifies these policies.

Chief Engineer's Report

Another very busy month as usual, and I have not had time to make a trip up to the repeater site. The K-Node packet TNC is back from Kantronics and has been installed on the hill. N6KMR went up and installed it after programming it.

There were difficulties right away and a second trip was required. The tuned cavity was found to have a problem and that is down here for work now. Jim, N6KMR, and Dave, KJ6DL, made the trips up the hill.

We also feel there maybe a problem in the receiver because of slow FRACK (frame acknowledge time). I plan to retune the cavity on the receiver and take it up the hill. I plan to put the ten meter digi back into service during that trip. I think it will be a couple weeks before I have a free weekend to do it.

I really thank N6KMR and KJ6DL for the recent trips and time in getting things back on the air. Hopefully we can get the bugs out of things and have it all back in operation soon. 73, LeRoy, NV6S



'Field Day'

from front page

ranch for the weekend, and probably took advantage of the good nature and generosity of Jim and Sandy. Even their children circulated and became involved with our craziness, and for that we were all grateful.

Some of us arrived on Friday evening while the bulk of us got there the following morning. Rita and I brought our camper and yellow LTD (for the extra battery). Bill, KC6VWO, had his truck and operated from the tailgate. Others operated from the makeshift table next to Ernie's camper while Bob, N6OCS, came with his truck and camp trailer.

Some of those who were there enjoyed just chatting about ham radio over a cold drink, others were more technically inclined and were busy building antennas. Most everyone took their turn at operating. After all was said and done, we made 333 contacts--the bulk of them by Liz, KD6GIW.

However, I wish to lodge a protest. Liz CHEATED! Instead of manually calling "CQ Field Day" and identifying her station, all she did was push a button. You see, she was using her Dad's Kenwood TS-850. This state of the art in technology has three memories that will digitally save repetitive conversation.

So, all she had to do was push the right button to digitally record

"CQ Field Day, CQ Field Day. This is WD6EJF; Whiskey Delta Six, Echo, Juliet, Foxtrot." This two sentence message was saved in memory number one.

Memory number two contained the identifying message as to our location, number of people using the club station call, we were on emer-



I'm home from Field Day Honey!

gency power, and "how copy." I'm sure if memory number three was used, it would have said something like "Thank you for the contact, 73's, and good luck in the contest."

Think about this for a minute; she didn't make any contacts, she just pushed buttons! Sure they worked very well, and the digitally saved message was broadcast by the radio in a manner that sounded even a little sexy.

Still, all Liz did was push buttons,

and rarely said anything in person. Those that responded to her "CQ Field Day" message, didn't talk with her, they talked with a BUTTON. How sad that all her contacts were fooled into thinking they'd talked with this pretty young lady instead of a BUTTON.

If she didn't get enough razzin' from those present that day, I hope those that read this will give it to her good. Just don't mention the fact that I'd do almost anything to have a radio just like her dad's with those same buttons. Seriously, those that didn't attend, you missed a goodie.

We got to hoist our new club banner for the first time and it looked great. We also got to show off our new club T-Shirts with our logo on them. We got several nice comments about them.

Our club generator failed to perform. It needs some serious attention and thanks to Bob Kimball, KC6TVE, it's going to get it. Bob agreed to tow it to his home at the other end of Sycamore where he will work on it.

We received some terrific press coverage with stories appearing in the Patterson Irrigator, PI Plus and the Modesto Bee. We have reprinted them on pages 8-9 and 10 of this **READOUT**. All in all, it was a good time and here's hoping we'll see you next year. It was the best effort our club has put forth in many years. A special thanks to Jim and Sandy for hosting the event.

Trivia

What was the most destructive historical earthquake?

The most destructive earthquake, and the most destructive natural disaster, occurred in 1556 when a major earthquake collapsed thousands of loess cave dwellings in China's Shen-shu Province. Well-documented deaths exceeded 820,000.

FROM THE DESK OF

N6ZUC

Tim Low, Escondido, CA.

Spreading the Spectrum

Here we are in the month of August. Field day is over for another year. Hope you got out and joined in the fun. The festivities of the 4th of July are also past. We've settled into the hot days of summer, and it's a good time to talk about one of the hottest topics in the field of communications. Digital spread spectrum. If you've never heard the term, or have, and don't know what it's all about, I'll see if I can enlighten you.

I recently had the opportunity to hear a talk given on this very subject by Dr. Ed Tiedemann, of Qualcomm, Inc.. Qualcomm is a high tech company located in San Diego. They are deeply involved in the race for a new cellular phone system.

Their system, called CDMA, for Code Division Multiple Access, is one of the front runners in that race. Other companies around the world are also in the bidding to develop this system. Huge corporations like Hughes and Motorola, as well as a European consortium, and Japan Digital Cellular, are all offering systems they hope will become the world standard. At this time, of the six systems, it looks like Qualcomm just may have the edge.

In the U.S., the system now in use is FM modulated, and operates

on 832 channels from 824 to 894 Mhz. The system has multiple receive sites, called cells, scattered around any local area. As you travel along, you will "hand off", from one cell to the next, changing frequency for every cell. A couple of cells away, that frequency you started on will be reused by a new cell. This is a very efficient system, but has its limitations. One being there is only a certain number of calls that can be handled by the system at any time.

Indeed in areas like Los Angeles, where the car and the cell phone seem to be a necessity of life, the system during rush hours is completely overloaded. It's also prone to those same problems we face on the Ham bands, like multipath and signal shadowing, often called picket fencing.

CDMA overcomes much of this problem using a very interesting approach. The idea is to spread the phone conversation over a large frequency spectrum. The incoming audio is coded into a digital signal, divided, and bits and pieces are broadcast in any available frequency within the total bandwidth in use by the system. This is called stacking.

On the receive end, the audio is reassembled and decoded. Since multipath is at any given moment frequency specific, only a small portion of the total signal can be lost. With the error correcting ability of digital techniques, this nearly eliminates any problem from multipath.

The bandwidth that any individual call occupies is determined by the baud rate assigned to the conversation in progress. As the relative loudness of the audio falls and rises, so does the baud rate. Baud rates vary from 1200 to 9600 baud. Band width rises at the

higher baud rates, and lowers as the rate is reduced. This of course is a more efficient use of spectrum, and helps to minimize interference between individual conversations.

The system also dynamically controls power in both directions. As the receive signal rises, the power output is reduced. Also the reverse is true, as the signal falls, the transmit power increases. This of course has several advantages. One is the reduced drain on batteries in the mobile or portable unit. The other is that the SNR (signal to noise ratio), remains constant.

In the demonstration I saw, at one point the receive signal power from the cell, was actually greater than the output power of the mobile unit. Powers as low as 5 milliwatts were used in the testing, and reception by the cell was still full quieting. A typical mobile power might be under 50 milliwatts, and cell power in the area of 20 watts. This considering that the cell is handling multiple calls, therefore more power is needed.

Diversity reception will also be employed. Diversity reception is also known as poling. The cell will look at multiple antenna/receiver combinations, choosing the one with the best overall receive signal. This tends to keep the signal as strong as possible. This type reception is also being used at many repeater sites, both commercial and Amateur.

There you have it. I know it was a quick run through of the system, but I'm sure we'll be seeing much more about it in the next couple of years. Does this advanced technology being developed for the cellular system, hold any promise for ham radio? I think it does. Though this time Amateur radio will lag behind

See From N6ZUC page 5

Using Your H.T. In Disneyland

If you're planning a trip to Disneyland in the near future, take along your two meter talkie and have some additional fun working the Disneyland repeater, WB6BIZ, on 146.94 MHz. The machine is operated by the Disneyland Amateur Radio Club and is a split site system. The receiver is located on top of the Matterhorn and the transmitter is located behind "It's A Small World".

The repeater is an open 24 hours a day and is usually carrier operated. However, due to occasional co-channel interference, a P.L. tone of 1-Z (100 hz) may be required for access. While in the park please adhere to these general rules.

DO's:

1. Use only rubber duck antennas in the park. Rubber Duck antennas are less cumbersome and safer around people. Keep the volume low and use an earphone if possible.
2. Use the repeater to establish contact and then move to simplex while in the park.

3. If you need to report a lost child or have some type of an emergency don't relay it by way of the repeater. The park prefers you contact one of the park hosts or hostesses for assistance.

DONT's:

1. Do not talk about any of the rides or attractions.
2. Do not talk about the time it takes to wait in line.
3. Do not talk about the prices of admission or the the attractions.
4. Do not off-hand comments about Disneyland or it contents on the repeater.
5. Do not distract other people in the park with your operations by calling undue attention to yourself and your radio.

These restrictions help to avoid conflict of interest between Disneyland as a commercial entity, and the Disneyland ARC which consist of 40 members all of whom work for the park.

If you would like more information you can write to the Disneyland Amateur Radio Club, c/o Cast Activities Center, P.O. Box 3232, Anaheim, Ca. 92803.

From The Desk of N6ZUC

this new communications technology. Perhaps it initially will benefit the digital modes. Packet type communications could be greatly enhanced by this technology. Time will tell.

Have any questions, answers, comments? Direct them to me via packet at: N6ZUC @ KB6GVT. #SOCA. CA. USA. NA, or write me in care of *The READOUT*.

73, Tim.

Self-healing Chips.. On Board Repair Service

Satellite users groan silently to themselves whenever another favorite "bird" falls victim to hardware failure, because little can be done to repair the problem from the here on earth.

Cosmic rays may inundate RAM, for example. But researchers at General Electric Research and Development are working on producing chips that can examine themselves and correct any errors that appear. Interior circuits consistently examine the outputs and "fill in" any data holes. *W5YI Report*

Cancer Cluster Near British TV Tower

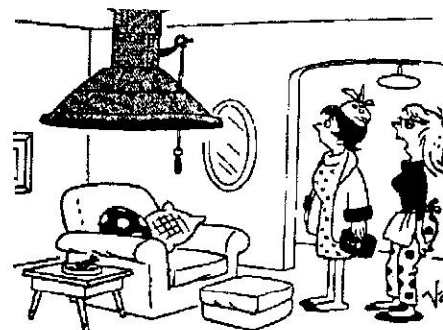
Also-called "cancer cluster" near a British Television tower has led to a call for an inquiry into a possible link between cancer and non-ionizing radiation.

The move follows reports of several cases of leukemia, lymphomas and mental illness near the Sutton Coldfield tower in north Birmingham, England. Sutton Coldfield is listed as the most powerful civilian TV/FM transmitter in Britain.

By studying data from the records of a local doctor in the area, researchers were able to pinpoint seven existing cases of cancer among people living within 400 to 1,500 meters of the tower.

Researchers also found a cluster of mental illnesses in the vicinity. According to the Guardian newspaper, research shows that mental illness can be linked to fluctuations in magnetic fields. Leukemia and lymphomas have been linked to ionizing radiation such as X-rays and atomic radiation.

The Polish government has decided to begin a study of people living near the collapsed tower of a high-powered longwave station at Konstantynow, near Gabin. "The point," say official reports, "is to establish the ultimate effect on ionizing electromagnetic radiation on the health of the people before rebuilding the tower." *Tnx Monitoring Times*



FCC NPRM

From front page

"While eliminating some of the existing restrictions would provide the flexibility to expand public service activities and satisfy the personal communications interests, the potential for commercial exploitation and abuse of the Amateur service's allocated frequencies could increase," the FCC noted.

In adopting the ARRL's proposed revision, the FCC said that the general prohibition against Amateur stations transmitting messages for hire or for material compensation, direct or indirect, would remain.

The revision "would allow Amateur stations to transmit, occasionally, certain types of communications that are now prohibited," the FCC said. The matter was presented to the FCC for a vote at its meeting on Thursday, June 18, 1992.

Again, the actual details of the FCC proposal are not yet known since it takes time to publish and circulate the complete text of the NPRM. The Notice will thoroughly discuss the FCC thinking and put forth specific proposed regulations. As with all new proposed rulemaking, the public will have a chance to comment on the proceeding before final adoption.

The NPRM certainly did not come as a surprise. The concept was first

presented to the Amateur community by FCC Private Radio Bureau Chief, Ralph Haller in his prepared remarks at the ARRL National Convention held in Saginaw, Michigan, last August.

Actually, the ARRL and the FCC's Private Radio Bureau have been discussing the matter of more liberal Amateur communications for more than a year. The ARRL only addressed greater flexibility for Amateur radio operators to transmit communications for public service projects in their proposal. Other requests asked for permission to transact personal and logistical business. These were proposed as rule amendments in the NPRM.

It is common knowledge that the FCC has been the object of considerable lobbying, letter writing, phone calls, petitions...even Congressional inquiries on the subject of prohibited and permissible Amateur communications. The Commission asked for the ARRL's views on the matter earlier last year.

In Saginaw, Haller reported "The existing absolutely-no-business rule, unfortunately, often stands in the way of your helping out. Its well-meaning purpose is to help preserve the character of the Amateur Service... a device to prevent exploitation.

Quite frankly, we have always been more that a little uncomfortable with it. As frequency managers, we feel overly bureaucratic when we have to tell you that you must not use your frequencies for non-amateur purposes.

After all, the real anti-exploitation rules are rooted in your respect for the principles for which your frequencies are made available to you, and by your good judgement."

Haller then gave a viewgraph slide presentation of "Secondary

Usage" of Amateur spectrum. This concept would provide for such non-Amateur communications as logistic support for public events, communications supporting government and public safety agencies, classroom instruction, news gathering involving the media, retransmitting non-amateur service information (such as NOAA weather, Voice of America and WWV time signals) ...even ham club and personal business.

"Non-amateur communications would have to be limited to only those areas where the FCC regulates communications because of the prohibitions in the International Regulations," he said.

Regular Amateur and emergency communications would continue to take precedence and non-Amateur communications would only be permitted when ham band loading permitted.

Haller defined emergency work as operation during a disaster, safety of life, protection of property, station in distress and **RACES** (Radio Amateur Civil Emergency Service) communications. He said primary usage relates to the Amateur service; specifically regulations, operating procedures and practices, electronics, station equip-

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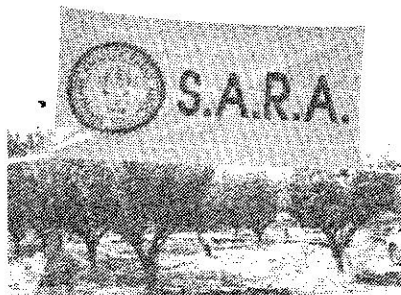
I distinctly remember telling you I wanted a rubber DUCK antenna prototype!

**Next SARA Meeting
August 18, 1992**

Speaker

**Mike Carlson
Hospital Disaster
Coordinator
Stanislaus County
730 p.m.**

SARA Field Day 1992



SARA's new banner marks the entrance to Field Day Site. The the logo and letters appear in black on a bright yellow back-ground.



Bob, N6OCS, ready to copy



N6OCS's operating station



SARA club secretary, Ernie, K6UVI.

**More
More
More
SARA
Field
Day
Photo's
on
Page 10**



L-R, Bob, N6OCS and Bill, KC6VWO ready beam antenna.

Raffle Winner

From front page

raffle. Ed opted for the camcorder which was purchased through Jack Lee T.V. in Modesto. The camcorder was picked up by Ernie, K6UVI, and delivered to Ed by Bob, WA6ZLO, on July 8th. Ed purchased two tickets from fellow Deputy, Dan Cron, W6SBE, one of which proved to be the winner. Here are the final figures from the Treasurer on this raffle.

Number of tickets printed....	2160
Number of bonus ticket (*)	10
Number of tickets available for sale	2150
Number of tickets sold	1174
Number of unsold tickets	976
Number of unsold ticket not returned to the club	550
Total income	\$1,174.00

Cost of Camcorder	632.77
Net Profit.....	541.23

(*) The 10 bonus tickets were given free of charge to Ed Lacy, KA6CXR, as the prize for the person selling the most tickets. Ed sold 150 tickets. Thanks Ed for a super effort. Also, a special thanks to Jim Shea, KB5FB, who printed all the raffle tickets at cost saving the club the additional expense of having them printed commercially.

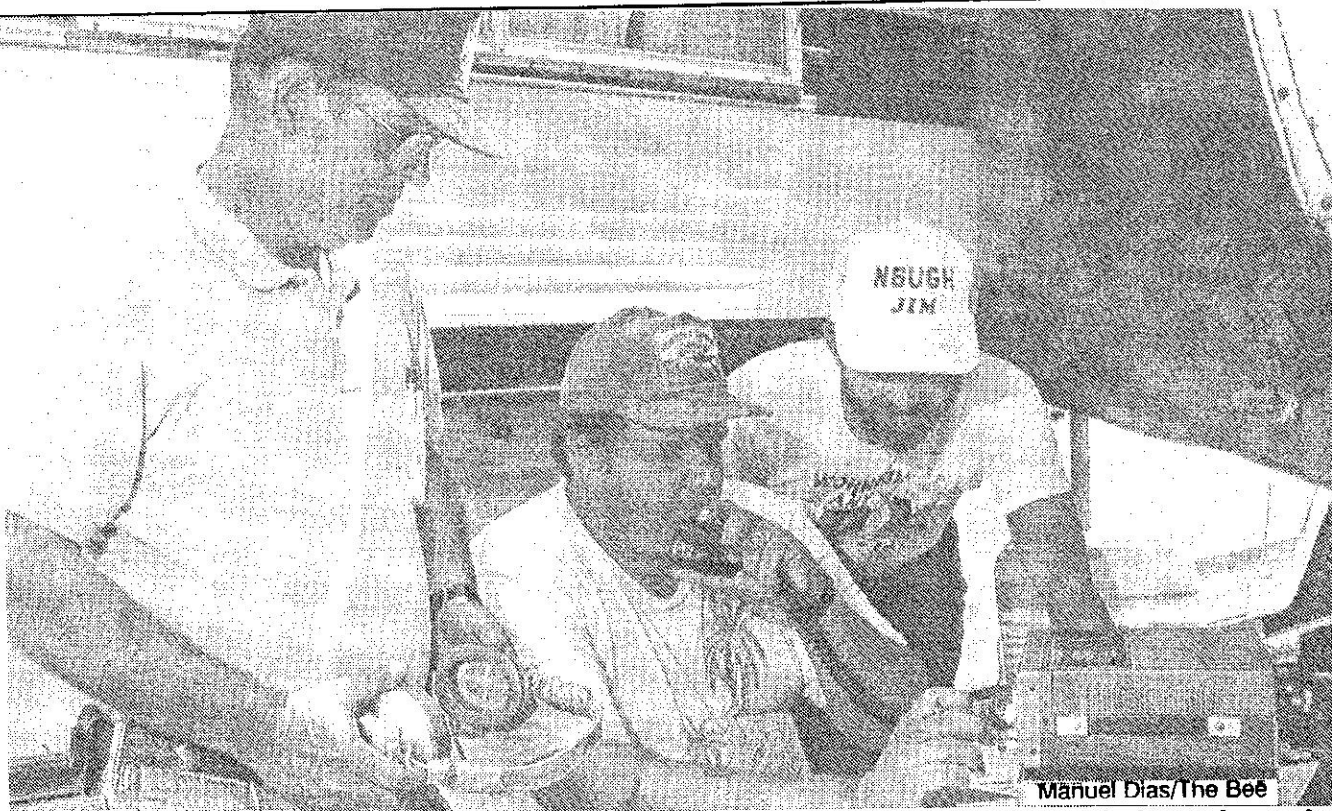
One can only speculate on the high number of unsold tickets that were not returned to the club. Some may have been simply forgotten, others lost or discarded. This is something we will have to address in any future raffles.

In any event, it was a successful raffle and thank you to all members who participated for your efforts. Also, a special thank you to Jack Lee T.V. for selling the recording to us at their cost.

Local Press Covers SARA Field Day Activities

The Modesto Bee, Patterson Irrigator and PI Plus, a weekly printed by the Patterson Irrigator, extended excellent coverage of **SARA's** Field Day efforts in Patterson. The Bee's story (see next page) appeared on the front page of the Metro section with a large full color photo of (from L-R) of LeRoy, NV6S, Chuck, KC6YCH, and Jim, N6UGH. In the smaller photo, Bob, N6OCS, positions a beam secured to an apricot tree while Rita, KD6BNV, looks on.

The Patterson Irrigator story written by Lance Materson appears on page 9 and a pre-event story written by **SARA** member Laura Kimball, KC6TVD, for the PI Plus newspaper, appears on page 10.



Manuel Dias/The Bee

Amateur radio operators Leroy Campbell, Chuck Brashear and Jim Jones test their equipment.

'Ham' operators help in an instant

By KARYN HOUSTON
Bee staff writer

PATTERSON — Most of the time, amateur radio operators like Jim Jones are sitting comfortably in their homes, chatting via the airwaves with people next door or half a world away.

But if disaster were to strike — an earthquake, flood or fire — Jones and thousands of other "hams" would be ready to help with instant communication systems hastily established under almost any conditions.

"Most of the time, this is just for fun," Jones said. "But when the chips are down, we can and do help."

On Saturday, Jones and other operators with the 200-member Stanislaus Amateur Radio Association participated in a field-day exercise — a test of emergency preparedness and equipment readiness.

Thousands of other "hams" participated across the United States and Canada. The purpose: to simulate a real-life disaster, using low-power equipment operated independently of commercial power mains.

Operators established outposts in an orchard next to Jones' country home outside Patterson. One "ham" perched an antenna in a tree and communicated from a motor home. Another set up a command post on the tail end of a pick-up truck.

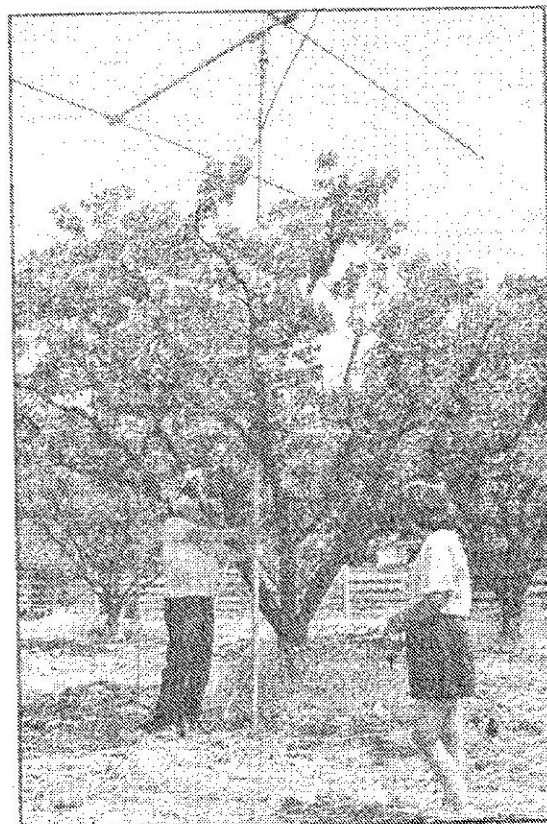
Together they contacted thousands of other operators throughout the United States and Canada in a special competition. The idea was to make as many contacts as possible and earn points.

The local group was on the air starting at 11 a.m. Saturday and expected to continue through noon today.

"During a disaster, regular lines of communication — the telephone, radio or television — often bog down or aren't available," Leroy Campbell said. "We're the only alternative."

"We know there will be a disaster," Campbell said. "It's a question of how severe and when."

Ham radio operators have a long tradition of public service, assisting governments and ordi-



Members set up an antenna in a tree.

See Page B-2, HAMS

CONTINUED from B-1

nary folks during times of war and other disasters.

"After the (1989) Loma Prieta earthquake in San Francisco, the first communication was by ham radio," said club member Bill Young. "Everything else was out of commission."

When the East Bay fire hit the Oakland-Berkeley hills in 1991, more than 600 ham radio operators helped the Red Cross set up emergency services and a command post.

At the Coalinga quake a few years back, the first word out was via ham radio.

Club members said Saturday that a ham radio operator can get started with a \$75 investment and a basic license after only a week of study.

But watch out. For many, it becomes an intense hobby.

Jones, for example, spends an average of five hours a day on the radio. He is always in touch and can be contacted anytime, anywhere — in the car, at home or at work.

He has at least \$5,000 worth of equipment in a specially designed room of his country home that contains seven radios and two computers. He also has a communications system in his car.

There's a 60-foot antenna atop the roof of his home, and he lives out in the country to accommodate his hobby.

The "hams" can even patch through a telephone call on their radios — without paying a hefty cellular phone bill.

It's a great way to make new friends, said Jones, who regularly talks to people all over the world. Most speak English — the preferred language for ham operators. And if there's ever a disaster ... they'll be on the air.

Thanks Modesto BEE

Field Day prepares for real-life emergencies

by LANCE MASTERSON
Patterson Irrigator Staff

Chances are the first people in Patterson to hear about Sunday's 7.4 earthquake near Joshua Tree were gathered at Jim and Sandra Jones' place on Sycamore Avenue.

For it was here that the Stanislaus Amateur Radio Association (SARA) was participating in its annual Field Day exercises, an activity that draws 10,000 participants nationwide. Billed as a "fun" contest, the

25-hour event is sponsored by the American Radio Relay League and its purpose is to test emergency preparedness.

And while their assistance was not needed Sunday morning they have been asked to respond before in times of crisis. Jim Jones, for example, spent five days serving as the communication link between San Jose and Santa Cruz following the Loma Prieta quake of 1989. While there, he also "shadowed" the Red Cross director to ensure that those who needed to communicate with him could do so. For his efforts, Jones received a letter of appreciation from M. Earl Thompson, manager of the Santa Clara County Office of Emergency Services.

"The main purpose, worldwide communication, evolved into a contest to see how many

contacts you can make in 25 hours," Jones said. "But you never know when you'll be called upon in an emergency."

During Field Day, ham operators are not allowed to use a standard antenna or AC power sources. Instead they must be able to make contact with other operators by using common household items (wire, for example) and a portable power source.

These limitations, however, didn't stop SARA members from contacting at least one person in all 50 states, Australia, Canada, and South America. Europe was unreachable, Jones said, because atmospheric conditions weren't right.

Public relation points were also earned as it gave curious on-lookers a chance to see local "hammers" in action. At its zenith, 50 visitors and 10 operators were on Jones' property at one time. It also gave operators a chance to clear up misconceptions others may have about the hobby.

"We're trying to recruit as many young people as we can," Bob Vrengdenhil of Modesto said. "If you go to any amateur radio meetings, it's almost all older people."

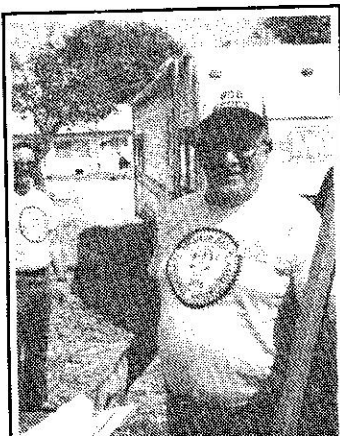
Vrengdenhil, who first became licensed in 1956, said many young people turn to other interests because of the cost involved, but said there's an outfit to fit any budget.

"Some guys spend as much money as they can. Other guys try to get by with as little as possible," he said. "There's a special delight that comes from being able to talk to Europe using only a quarter-watt of power. But the conditions have to be perfect. It doesn't happen every day."

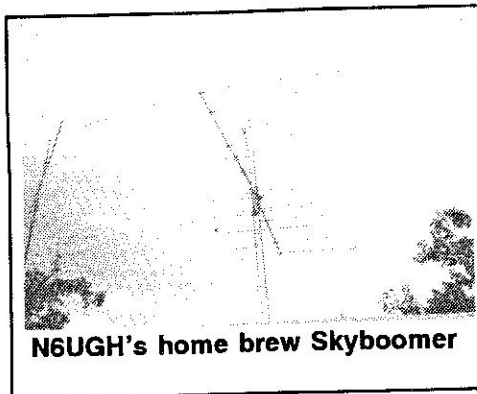
There's also a special delight that comes from making unseen friends. Jones, who was first licensed in 1963, let it expire several years later. But when he moved to Patterson four years ago he felt his life was lacking something.

"I didn't know anybody out here so I just got into it again and started making friends," Jones said. "After my motorcycle accident in November, I spent five days at Doctors Hotel (Hospital). People who I've never met eye-to-eye sent me flowers. They knew me from talking with me on the radio. It's a real tight-knit community."

Thanks Patterson
Irrigator and PI Plus
Newspapers



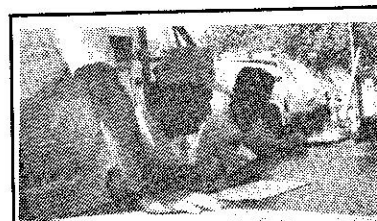
Bob, N6OCS, showing off new SARA T-Shirts.



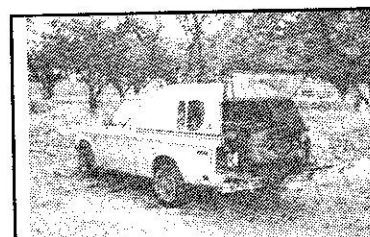
N6UGH's home brew Skyboomer

Photo's taken by Bob, WA6ZLO and Ernie, K6UVI. Production assistance from Gary, KJ6Q.

More SARA Field Day Pictures



Bruce, NK6C and Al, N6SAE at the 40M station



2M station setup in the back of KC6VWO's pickup



Al, N6SAE and Hart, N6TIV make battery hookup



N6OCS's vehicle and camper after setup.

Local 'hammers' to be put to the test

Ham operators from the United States and Canada will be put to the test this weekend during the annual field day emergency drill sponsored by the American Radio Relay League.

The event is held to promote and demonstrate the ability of radio amateurs to handle communications during a disaster using hastily arranged low-power equipment operated independently of commercial sources.

Thousands of amateurs will take part in this weekend of non-stop, high-intensity hamming in order to make as many contacts as possible and earn contests points. While billed as a "fun" contest, it is also a serious test of emergency preparedness and equipment readiness. The activities add that extra bit of experience that helps amateurs uphold ham ra-

dio's tradition of public service.

The Stanislaus Amateur Radio Association (SARA) will be demonstrating its skill at the home of Jim and Sandra Jones, 16519 Sycamore Ave., and expects to be on the air from 11 a.m. Saturday to noon Sunday.

"People come and go. But there are usually around two or three units on the air at any one time," Laura Kimball, SARA member, said. "Last year we were talking to people from all over the U.S. and Canada and there was also a Japanese person talking on the radio."

The field day is open to the public and visitors are welcome to watch SARA in action making this a good time for those interested in hamming to get some of their questions answered.

"It's a perfect time for anyone interested to come and talk to people who know a lot about ham radios," Kimball said.

Thanks PI Plus, (Patterson Irrigator Plus)



SARA Minutes

By Ernie Rader, K6UVI, Secretary

The **SARA** regular monthly meeting was called to order by President Jim, N6KMR, at 7:38 PM. Everyone introduced themselves as the sign-in sheet was passed around. 25 members and guests attended the meeting. Treasurer's report followed.

Beginning balance:\$2,532.05
Deposits:.....294.64
Expenses:860.23
Ending balance:\$1,966.47

Expenses:

Equipment Insurance: ...\$150.50
Rapid Signs:..... 76.96
Raffle Prize632.77
(Lee's T.V.)
Total:\$860.23

Deposits:

Membership:\$38.70
Fund Raiser:.....242.00
Other: 13.94
Total:\$294.64

For those of you following the balances from month to month, you'll notice the "beginning balance" is different than last month's ending

balance previously reported. It's because I transposed numbers in last month's ending balance, and it was reported incorrectly.

In addition to the general ledger report, the treasurer reported on the profits realized during the fund raiser. V.P. Sandy, KC6TBK, reported that Mike Carlson was to be our guest speaker next meeting and he would be talking on disaster preparedness.

The secretary asked that the minutes as printed in last month's **READOUT** be accepted, and asked the membership to consider changing the autopatch access codes yearly as old members decide not to renew. Bob, ZLO told us about the controller we presently have on the hill, and the difficulty involved in changing the access codes, and suggested that a new one be considered for future purchase. Autopatch etiquette was discussed, and Bob, KC6TVE, volunteered to look into repairing the club generator.

Bob, ZLO moved to authorize the secretary to purchase a fireproof safe for the club records, and it was seconded by KC6TVE. Secretary

was instructed to make the purchase.

There was a discussion about the inaccessibility of the club station, and Bob, ZLO suggested that the club might want to consider a long term project involving the purchase of a trailer to be equipped with the club station not only so it would be easier to use, but would be able to provide communication in emergencies. The difficulty of parking it somewhere was discussed also.

Bill, KC6VWO, told those attending the meeting that he's heading up a deep sea fishing expedition, and said to contact him if anyone is interested. It's to take place on August 22nd if enough people will commit. ZLO wanted pictures of the new **SARA** T-Shirts, and subsequently photographed Ernie and Rita with their's on.

Liz, KD6GIW, told of prices for those needing larger sizes, and the meeting was adjourned for the fox hunt at 8:15 PM. Respectfully submitted, Ernie, K6UVI, Club Secretary.

VE Tests in Stanislaus, Merced and Tuolumne Counties for 1992

DATE	LOCATION	TIME	CONTACT	PHONE
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 ***

If you hold an Advance or Extra Amateur License and would like to become a volunteer examiner, contact W6XK for details.



Hardware Paints Tools
Housewares Electrical
Plumbing Heating

53 S. 3rd St.

Patterson

892-9221

Steve & Lori

N6EKV - N6JTD



Editor's Notes

By Bob Pinheiro, WA6ZLO

SARA's membership roster continues to grow with the addition of these new members.

1. Keith Clukey, **KC6SMW/HC1JOL**, General, Modesto
2. Cameron MacKenzie, **KD6HJG** Technician, Turlock
3. Gary Edwards, **KD6KXP**, Technician, Modesto
4. Herman Brown, **KD6LBM**, Technician, Manteca
5. Cindy Manning, **KD6DKQ**, Technician, Turlock
6. Larry Hill, **KD6IRY**, Technician, Modesto
7. Richard Kendrick, **KD6KAK**, Technician, Modesto
8. Richie Kendrick, **KD6KZP**, Technician, Modesto
9. Andy de Groot, Associate Member, Patterson
10. Bob Alderson, **KD6FFY**, Technician, Turlock
11. Paul Tidwell, **KD6KAC**, Technician, Modesto

Keith Clukey is a missionary who has been working at HCJB, the powerful shortwave station in Quito, Ecuador. He obtained his HC1 call in Ecuador. Keith is back home in the states for a year and will be returning to Quito next July.

Cameron MacKenzie is one of our younger members. His dad is Lee, WS6Q. Cindy Manning's husband is Larry, WD6CMI. Richie Kendrick, KD6KZP, is another of our younger members. His father is Richard, KD6KAK. A sincere welcome to all these new members who have swelled our membership to 175 as of this month. I had a

pleasant conversation with Keith Clukey who gave me some insight into the technical operation of HCJB in Quito. I was particularly interested in his story about being allowed to hook some Amateur gear to one of the massive rhombic antenna's used by HCJB. Needless to say the results were outstanding. I've asked Keith to share his story with us via *The READOUT*.

Congratulations to Bob Mays, KM6OK, who upgraded to Extra and a new call. He is now AB6LE.

It was great to see the renewed interest exhibited in the **SARA** Field Day effort on the *Rancho Costem Plenty* (N6UGH ranch) in June. The effort will give us the impetus to improve on the effort at next year's event. The club generator has needed attention for sometime and thanks to **SARA** member Bob Kimball, KC6TVE, it's getting the once over. Hopefully, it will be ready to go at next year's event.

Speaking of KC6TVE, he was the winner of our latest T-Hunt held after the club meeting in July. Bob had never been on a T-Hunt before, so I had the pleasure of imparting to him what little bit I knew. I guess it was enough, as Bob found the rabbit hidden in a trash container about a block from the starting point. We will have pictures of the hunt next month.

It was good to see some of our younger members actively participating in the hunt. Richie, KD6KZP, came prepared with a home-brew cubical quad. Even several of our sightless members had fun letting their ears and instinct guide them in

their efforts. Thanks to Brad, KC6TDH, who did an excellent job of preparing and hiding the transmitter.

Liz, KD6GIW and Rita, KD6BNV, have been busy enhancing the club's image. They have lined up a source for T-shirts with the club's logo emblazoned across the front and have also designed and manufactured a new club banner which was used for the first time at our Field Day exercise in Patterson (see photo's). We will have information on how you can order one, or more, next month.

ICOM America has recalled all P2AT 146MHz and 440-MHz Handi-Talkie transceivers due to a problem with leaking internal lithium batteries. They will replace the battery at no charge and extend the warranty on modified radios an additional year. Call 206/454-7619 for recall instructions.

Talk about a logistical nightmare! NBC is covering the 1992 Olympic Games in Barcelona with some 200 cameras, 1,200 video tape recorders, 2500 video monitors and 700 pieces of audio gear.

The IBC (International Broadcast Center) has 11 edit suites, 9 more at other venues and 14 mobile units. Some 600 technicians, mostly free-lancers, will be on the job.

The equipment is all Matsushita (Panasonic) in the PAL (European) standard rather than NTSC (U.S.) TV format. The PAL uplink is converted to NTSC on the way up to the satellite.

Next month, we'll print the club rooster. If you have made any changes, please contact me ASAP. 73.

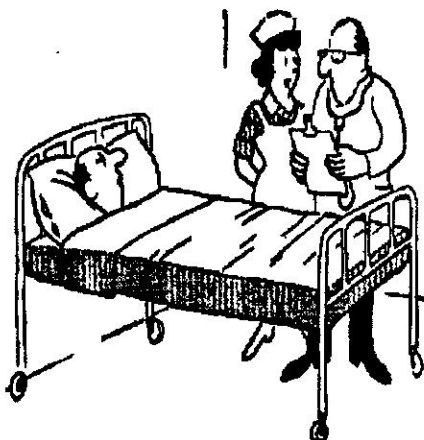
High Intensity White Strobe Lights In Vogue

Broadcasting tower owners are slowly changing traditional red clearance and beacon tower lights to high intensity white strobe lights. There are many reasons for this, including optical power and longer life. The red Fresnel lenses covering incandescent lamps common today, disperse the light during the day so it cannot be seen. Strobe lamps can be seen clearly at all hours. Red lights need to be replaced as often as twice a year and getting a tower rat to do the climbing to replace them can cost as much as a \$1,000 depending on the number of towers in the system.

Curiously, sometimes the Federal Aviation Administration will allow a tower owner to install a white strobe beacon in place of painting the tower orange and white. Towers built today don't like paint and shed it almost as soon as it is applied.

-Tx Monitoring Times.

(Editor's note: The new 2,000 foot "monster" television towers at Walnut Grove south of Sacramento, all use the high intensity white strobe lights and are clearing visible both day and night.)



"This is the steamroller case Doctor!"

Women Out-Fox Men In SARA T-Hunt

It was a beautiful Saturday morning and a wonderful day for a transmitter hunt. Brad, KC6TDH, had planned the event and everything was in place and ready to go at 9 am. The transmitter and related equipment had been assembled, tested and hidden with care.

With the help of my friend Ernie, K6UVI, we started preparing for the event several months ago. That's when I spotted an article in 73 Magazine on a neat looking DF (Direction Finding) unit. I talked

it over with Ernie who agreed to put it together. I sent for the circuit board and schematic from the author in Indianapolis, Indiana.

After it arrived, Ernie picked up the various components needed at the local technology store (Radio Shack). After several hours the gadget was finished and ready to be tested. I built the phased array antenna recommended for the unit and then Ernie and I got together to run some checks.

We quickly learned that the device was very susceptible to multi-path signals which made it almost impossible to determine direction. In close, it was much more useful in finding the rabbit... which is what it was designed to do. We felt the answer to the multi-path problem was to build a directional antenna such as a quad or three element beam. Unfortunately, we did not get the chance to build one in time for the hunt.

On the day of the hunt, only

five hunters (two teams) showed up for the hunt by the 9 am starting time. As it turned out Ernie and I were the only hunters with previous experience. Rita, KD6BVN, (Ernie's wife) and Cameron MacKenzie, KC6HJG, were on their first hunt and had only planned to be observers. Elizabeth Eyre, KD6GIW, was the fifth person and she had never been on a hunt either.

She did receive some fatherly advice from her dad, Bob, N6OCS, who provided

her with a three element beam, a signal strength meter and a talkie, and told her to have fun. The only thing she needed was a partner and a bigger vehicle to accommodate the beam.

When no more hunters showed up, it was decided that this would be a men against the women contest as Rita teamed up with Liz using Ernie's pickup. **SARA** VP, Sandy, KC6TDK, collected a buck from the hunters and passed out the instruction sheet.

We were told the transmitter was a 10 watt unit feeding a J-Pole antenna and was on public property within the city limits of Modesto. We were given the usual warnings not to trespass on private property and to drive carefully. We were told the transmitter would transmit a seven second voice ID every 30 seconds.

At exactly 9 a.m. the transmitter was on the air. The first reading Ernie and I got was to the northeast

See 'T-Hunt' page 15

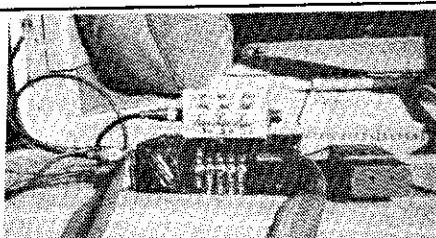


SARA Transmitter Hunt

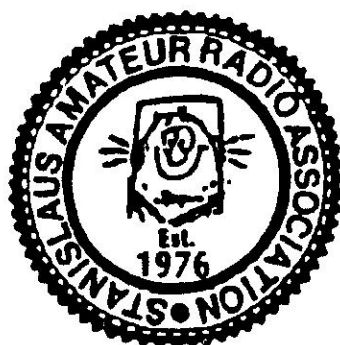
May 23, 1992



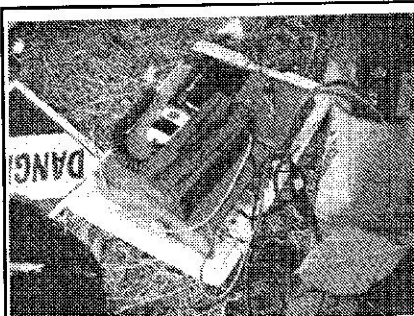
Bob, WA6ZLO, checks his DF equipment at the starting point.



WA6ZLO's homebrew DF unit with signal attenuator.



L-R Ernie, K6UVI; Rita, KD6BNV and Liz, KD6GIW at the starting point getting ready for the hunt.



Hidden transmitter and related equipment hidden under the tree.

Brad, KCTDH, with the transmitter he hid at the base of a tree. The J-Pole antenna was hidden in the tree's foliage with the transmitter hidden in a styrofoam ice chest at the base of the antenna.



A winner, Liz, KD6GIW



The way the men felt after the women beat them to the transmitter

'T-Hunt'

From Page 13

of the starting point at 12th and H. With Rita driving and Liz holding the beam from the bed of the pick-up the ladies were off and running. Once they rounded the first corner we never saw them again until the end of the hunt.

Ernie, Cameron and I started off eastbound on G street. We wound around several streets holding the phased array out the window. Passing motorists would give us the eagle eye as they went by and no doubt wondered what kind of nuts were loose on the city streets.

We attempted to get a fix on the rabbit but multi-path was driving us nuts and we quickly found ourselves going in circles trying to get a true heading. Our earlier tests with the phased array were proving true. After a hour and a half we were hopelessly searching while the women had long since arrived in the area of the transmitter.

We later learned the three element beam had and signal strength meter had guided them with ease to

a city park in the Northeast section of the city around 5 miles from the starting point.

The ladies arrived at the site within 20 minutes and were out on foot looking for the rabbit. They subsequently found it hidden in the foliage of a walnut tree at the east end of the park. Brad had hidden the transmitter and antenna so well you could not see it until you were almost on top of it. (See photo's on page 14).

What the women needed was our DF unit when they got in close, and we needed their 3 element beam to get a bearing. The ladies were gracious in their victory by backing away from the transmitter after they found it and waited patiently while the men were guided to the park by Brad and then allowed to find the transmitter.

Congratulations to the women and to Brad for a job well done on hiding the transmitter. It was a lot of fun, and more importantly, it was a good exercise in the art of direction finding. Hopefully, the next hunt will bring out more participants.

Diversity...The Spice of Life!

Aravishingly lovely 21 year old young lady married a 70 year old millionaire financier/broker. Their marriage lasted nine years until the husband died. The lady inherited her husband's business and wealth and after a one year mourning period married a well-known Hollywood motion picture producer. This marriage lasted ten years.

When her producer husband died, she married a charismatic minister who was about her own age and was thoroughly happy during their twenty-five year marriage. When he was unexpectedly struck down by a heart attack, she mourned for two years.

Finally, at the age of 70, she made headlines by marrying a man who was fifteen years her junior. He owned a chain of mortuaries.

A reporter asked her why she had selected husbands with such a wide diversity of occupations and she answered, "One for the money, two for the show, three to get ready and four to go."

Predicting Earthquakes With Propagation Forecasts?

Editor's Note: The following story appeared in the June 1992 issue of Monitoring Times Magazine. Given the publication's lead time, the article was probably written sometime in April or May of 1992.

A massive 7.4 earthquake with a 6.5 aftershock struck the Yucca Valley area of San Bernadino County near Palm Springs on June 28, 1992. Draw your own conclusions.

James Gray, W1XU, propagation forecaster for 73 Magazine, reportedly uses a system pioneered by John Nelson and others, which takes into account planetary positions and conjunctions in addition to solar data.

James was quoted in the newsletter Geo-Monitor as saying, "Compelling evidence to me is that quakes... and other major geo-physical events... either occur simultaneously

with or within two days of major alignments between the planets."

"I just finished the June 1992 forecast and I am horrified at what I see." Gray notes particularly conjunctions on or about June 6th, 10th, and 16th and 17th. "The worst is likely to be the 16-17th, which will be shortly after the half-moon.

-Tnx Monitoring Times



Calander



Aug 8Foothill Swap MeetAll Day
 Los Altos College
 Aug 18SARA Monthly Meeting 730 pm
 Aug 20-23.ARRL Nat. Convention 3 days
 Los Angeles
 Sept. 12VE Testing In Modesto 930 am
 Sept. 15SARA Monthly Meeting 730 am
 Oct. 3Hams & Hackers Swap Meet
 Hanford, CA.....All Day
 Oct 10VE Testing in Merced..... 930 am
 Oct. 16-18.Pacificon Hamfest 3 days
 Concord Hilton Hotel

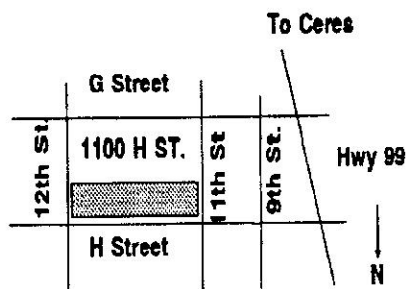
SARA meets the third Tuesday of each month (except holidays) at the Stanislaus County Administration Building at 12th and H Street in downtown Modesto. The meetings are held in the lower level conference room at 730 pm. Visitors and interested parties are most welcome. SARA is an ARRL affiliated club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



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

Bulk Rate
 U.S. Postage
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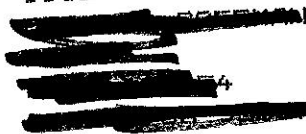
Address Correction Requested



SARA Meeting Location
1100 H Street, Downtown Modesto
Third Tuesday of Each Month

To:

1992



Next SARA Meeting is August 18, 1992
at 730 pm & You're Invited!