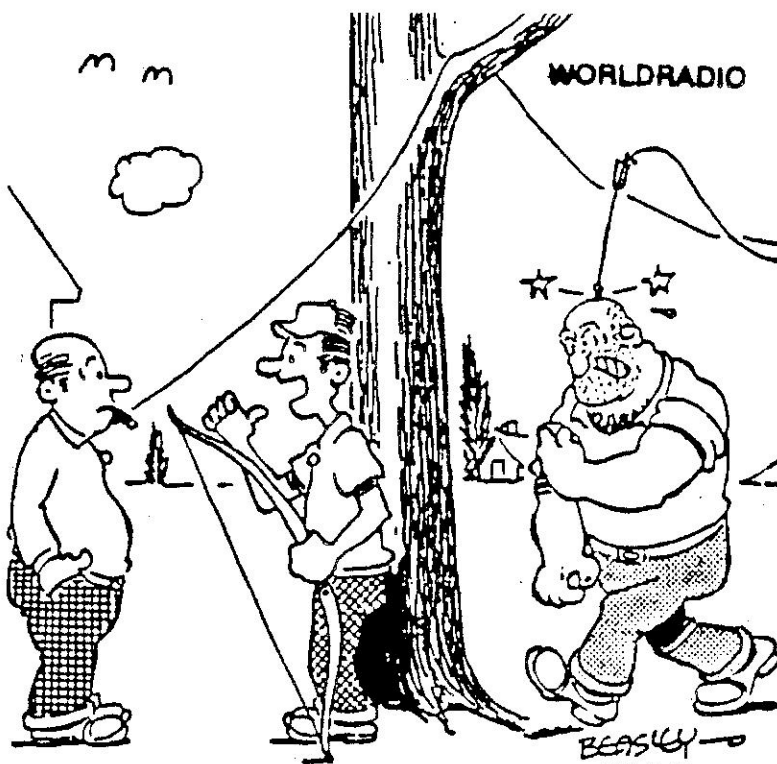


# The READOUT

Year 12

Number 9

September 1990



BOY, THAT'S A SLICK WAY TO PUT AN ANTENNA WIRE  
IN THE TREES--- THIS MAY ALTER MY WHOLE TECHNIQUE!

Stanislaus Amateur Radio Association

P. O. Box 4601 Modesto, Ca. 95352

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#### **SARA VHF Net**

Thursdays @ 8 p.m. (Except Holidays)

2 meters 145.39 MHz WD6EJF

220 Band 223.68 MHz WD6EJF

Contributions to **The READOUT** are always welcome and may be submitted to the editor by mail or via packet at N6REB- BBS on 145.79 MHz. The deadline for articles is the 15th of the preceding month.

#### **Editor**

Bob Pinheiro, WA6ZLO

1221 Mist Flower Ct. Modesto, CA. 95355

209-523-5880

*An ARRL affiliated club*

### **Next SARA Meeting**

**September 18, 1990**

**730 pm**

**Club Station**

**Downey High School**

**Room 51**

**1000 Coffee Rd.**

**Modesto, CA.**

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# Why Did I Become A Ham?

*By Frank Massa, N6YHY*



Frank Massa,  
N6YHY

**"I must  
apply for a  
Conditional  
Use Permit  
and the  
fee was  
\$640.00."**

*This is Part 3 in a series of stories involving the author's RFI problems which eventually led to open hostilities with his neighbor who turned him into the City and the FCC. We left you last month with the City of Ceres Inspector writing Frank a citation for violating antenna restrictions.*

The next morning after being issued the citation by the City of Ceres my wife Lori and I went down to the Ceres City Hall and were directed to a City Planner who was handling my case.

I asked him to look at the three violations that I was cited for. The first was 18.38.060 which was titled "Noise". It read:

*"No noise shall be radiated from any use of a facility that*

*(a) exceeds the standards of the State of California.*

*(b) Vibration.*

*(c) Odors*

*(d) Glare*

*(e) Fire or explosion "*

I could not see where any of these sections applied to my antennas. The second

ordinance was 18.12120 (g) -Building Height. It read:

*"No building shall exceed a height of 25 feet, no building accessory or structure shall exceed 15 feet.*

The third ordinance was section 15.16.060 (f)-Exempt Conditions. It read:

*"Antennas, associated equipment and supporting structures used by a utility for furnishing communication services."*

The planner explained that I must apply for a "Conditional Use Permit" if I wanted to use my ham antennas and the fee was \$640.00 (non-refundable) for the application and does not guarantee that the City Council would grant the permit.

**See 'Why' Next Page**

## **'Why'**

### **From Page 3**

The application required a 300 ft radius map of all property owners in my area and a signed statement from each property owner stating that they had no objections to the antennas.

I asked the Planner if he was aware that the F.C.C. supercedes all local government ordinances regarding radio transmissions and antennas? (Note, the FCC authority in this does not apply to local private property agreements such as CC&R's (covenants, conditons & restrictions) which include trailer parks, apartments, condominiums and home associations.)

He said, "The FCC has no jurisdiction in this matter!" I told him that my local CC&R did not have any information regards radios and antennas. He said, "These ordinances override local CC&R's."

I then asked him about all the private T.V. antennas throughout the City of Ceres in light of the ordinance requirements stated above. He said "The City closes it's eyes to these structures!" "You can file a complaint on any structure(s) and we will follow it up!"

I asked to speak to a higher official be he refused saying that the issue stopped with him. I then stormed out of the office. When I

got home I called Phil, WD0FFX, and advised me to remain calm and that SARA and it's members would do what ever they could to help. Phil also recommended that I contact the FCC in Livermore and the ARRL.

The FCC in Livermore was very, very helpful. They immediately sent a copy of PRB-1 (Amateur Radio preemption) to the City. Bob, WA6ZLO, advised me to contact Paul Caruso, WD6EYX, a past President of SARA and a member of the Ceres City Council. Paul was familiar with PRB-1 and said he would urge the City Planning Department and Council to review PRB-1 and its effect on my case. The ARRL sent me a package which included a copy of PRB-1, a list of local area volunteer ham lawyers and several articles on the subject in other areas of the country.

The following week, the Ceres City Council met in emergency session to address the issue. The City Attorney recommended the issue be dropped and that the City Planning Dept. should review and possibly rewrite the City Ordinance (s) that apply in these situations.

So, thanks to all the help that I received, I won the battle with the City but the war with my neighbor continued. More about that next month.

---

## **For Sale**

Yaesu model 2100B linear. 80-10M 1,000 watts. \$300 firm. Excellent condition one owner. Call Bob Jordan, 209-881-3374 in Knights Ferry.

## Better Grounding

Scientists working on an Army Grounding Analysis report have shown that grounding with the standard 6' metal rod, or even several rods in parallel, is often unsafe and more often inadequate for good low-noise communications.

The have found that a better ground can be established by stapling a 100' length of standard 1/8" stranded steel wire to the earth every 4' with 6" pegs. A 3 lb. hammer (in lieu of the usually 10 lb sledgehammer used with the ground rod) would be sufficient to drive in the pegs.

Tests at all sites in the country show that surface wire to be from 32% to 95% more efficient than the 6' grounding rod.

## Change Calls?

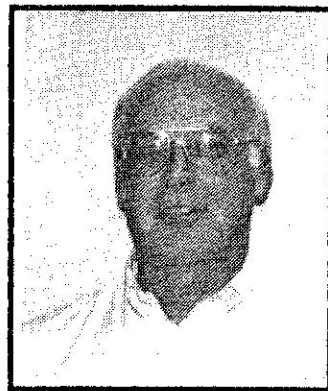
The FCC routinely denies requests for specific call signs. The closest thing you can do to change your call is to "swap" if for another one issued in the regular sequence.

In a Public Notice Issued April 19, 1990, the FCC said requests to change a call sign must be made by filing a Form 610 completing section 2E.

The applicant will be issued a new call sign appropriate for his/her class of license from the standard rotation of new calls being issued at that time.

This does not mean that you can apply for a specific call. You only change calls and you have to take potluck as far as what the call will be.

**Open House**  
**September 18, 1990**  
**SARA Club Station**  
**7 pm - 930 pm**  
**Downey High School**  
**Room 51**  
**1000 Coffee Rd.**  
**Modesto, Ca.**



Dave Hartwick N6LHL

# SARA Minutes

By Linda Franklin, N6REB

Club Secretary

Aug. 21, 1990

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The August 21, 1990 meeting was called to order at 730 pm by President Phil, WD0FFX. Introductions were made by 26 members and guests. A motion was made by Charlie, KJ6GE to accept the minutes as printed in The READOUT, the motion was seconded by Dave, KJ6DL and carried.

Treasurer Al, N6SAE reported the balance of the General Account as of 7/17/90 was \$1,037.02. Two deposits totaling \$53.08 brought the balance to \$1,090.10. Three checks were written totaling \$79.46 and a Bank adjustment for checks ordered totaling \$5.26 brought the General Account balance to \$1,005.86 as of 8/21/90.

The Fund Raiser Account balance as of 7/17/90 was \$1,849.23. Three deposits totaling \$1,636.64 brought the Fund Raiser Account balance to \$3,484.87 as of 8/21/90. A motion to accept the Treasurer's report was made by KJ6GE, it was seconded by Randy, KI6AG and carried.

Vice President Oliver, KJ6YZ noted that SARA was only shy 27 people of the goal of a membership of 200 for this year, and encouraged everyone in attendance to work toward bringing in at least one new member or renewal to reach that goal.

Steve, N6EKV, reported the autopatch is critically ill and ready for burial, but that the repeater was still working. He said that he and LeRoy, NV6S feel that due to so much RF on the hill that it is contributing to the 220 problem.

Charlie, KJ6GE, commented that the person or persons are still interfering and harassing on the repeater and was using foul language during one of the Thursday night nets. It was suggested by Tim, WB6UJD, that nothing should be said to them so as to not give them the satisfaction of any attention to encourage their juvenile ego.

WD0FFX read a letter from Linda Holle, a member of the 1990 staff of the Modesto Ala Carte event in which Steve, N6EKV and his wife N6JTD, donated 11 hrs of their time. SARA was the recipient of a donation of \$33 from the Modesto Chamber of Commerce and an expression of thanks for the great job SARA is doing in helping to make the Modesto area a better place to live. Phil thanked Steve and Lori for being the representatives of SARA at this event and for being a great asset to SARA.

Dave, KJ6DL, reported the Club Station needs tower work and one set of guys needs to have an anchor set. Also, that LeRoy, NV6S, wants to cut the guy wires and install insulators on them. Members are needed to help get the Club Station set up before the next meeting to be held there September 18, 1990. It will be operational at that time.

See 'Minutes' Page 15

# Lazer Quality License

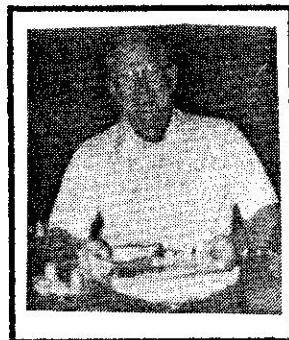
It looks as if the FCC will be issuing a new high quality type Amateur radio license shortly. According to Private Radio Bureau Chief, Ralph Haller, N4RH, the Gettysburg licensing facility is in the process of purchasing a new laser printer to print ham tickets which will be inserted in an envelope.

The ham license will be an original, not a smudged carbon copy printed in self-mailers as is presently the case. Haller said the actual format of the license document has not yet been designed, but it will be a very high quality license document that you can actually put on the wall and be proud of.

## WA6KHX Dies In Arizona

It is with regret we record the passing of former SARA member, Ray L. Curling, WA6KHX, who died of complications of heart problems. He died in Arizona on August 24, 1990 where he made his home with his wife Dorothy, WD6DKX. Ray was retired from the Navy and had recently attended a reunion of his shipmates which he thoroughly enjoyed. Some of you may remember Ray by his old CB handle, "Salty Dog". Ray moved to Cottonwood, Arizona several years ago from Modesto. Ray was 57.

*-Thanks Jim, KB6DJ.*



Mel McCoy WA6OYP



Lavonne Scanlon  
WB6PJY



Lloyd Chambers  
KC6HLM

# On Vacation With WB6SHE

*By Bill Mathies, WB6SHE*

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**W**e planned our vacation this year to visit relatives in Oklahoma. Nothing unusual about that. What was unusual was we also decided to travel there by way of my Gold Wing Motorcycle.

Chuck, W6ASO, and his wife Anne decided to join us on his Gold Wing for a portion of the trip. Loretta and I left home after work on Friday afternoon July 13th and joined Chuck and Anne from Oakdale.

We rode over the Sierra on Hwy 4 stopping in Carson City the first night. We were up bright and early the next morning leaving at 5:00 am so we could beat the heat across the Nevada desert.

We rode 475 miles across the desert ending up in Delta, Utah that night... but not before we ran into some pretty heavy rain and the two meter rig on my bike went QRT.

The next morning, Sunday, Chuck and Anne turned north on their trip to Yellowstone National Park and that's the last we saw them. Loretta and I rode 600 miles which got us to Fowler, Colorado where we spent the night. We had beautiful weather all the way.

Monday dawned clear and beautiful as we hit the road again. Our beautiful weather disappeared though about 70 miles East of Fowler where we ran into a storm front which we could see coming. We were just 10 miles or so out of Lamar, Colorado on U.S. Hwy 50

and we were hoping that we could make Lamar before the storm engulfed us. We didn't! It was a big ugly storm right out the Oklahoma panhandle with high winds and lots of rain. We stopped the bike to put on our rain gear but the wind blew so hard that we thought it was going to blow us away and turn the bike over which weighs about 800 pounds. The wind was so strong that it actually prevented us from getting our rain gear on and we got drenched.

Finally a nice lady pulled up beside us and offered to let us get in her car to get out of the storm till it passed. I told her that if we could use her car as a shield we could get our rain gear on which we did. Although we were soaking wet, we made it into Lamar where we waited out the storm and dried out.

While we were there we heard on the TV that the weather bureau thought that the storm might produce a tornado or two. We're glad it didn't! After the storm passed we hit the road again and traveled a total of 500 miles which took us into Wantonga, Oklahoma where we spent the night.

The next day (Tuesday) we got another early start and cruised across the state of Oklahoma to Sallisaw just west of the Arkansas border. We got to my sister and brother-in-law's home around 9 am. While there I

*See 'Vacation' Page 11*

# V.E. News

By Chet Jensen, W6XK

The Tri-County VE Team will be sponsoring amateur radio examinations for all classes of license on Thursday evening, September 6, 1990. The location will be Chrysler Elementary School, 2818 Conant Avenue, Modesto. From Highway 99, take the Standiford exit east three blocks to Conant, turn right on Conant, travel one block to Chrysler School.

The session will begin at 6:30 pm with the code tests given in descending order. All written elements will be administered at 7:30 pm. The test fee is \$4.95 and all applicants must bring two types of identification and the original and a photocopy of the most current ham license and any CSCEs. All forms, such as the 810, will be provided by the team.

A number of questions have arisen regarding accommodation for handicapped applicants in terms of the code test. If you have special needs or are requesting a possible waiver of the 13 and/or 20 wpm code tests, you must notify the team as early as possible so arrangements can be made.

Please direct all questions regarding the test session to Chet, W6XK, via packet (W6XK @ N6REB) or phone (209) 883-2968.

The VE team works very hard to make the testing as painless as possible. It is our hope that you are successful as possible at our examination session.

If you are looking for other test sessions in this area, you may want to consider the following during the month of September:

## SACRAMENTO -

9-8-90 @ 9 AM - call (916) 483-3293

## OAKHURST -

9-9-90 @ 8 AM - call (209) 683-8245

## FRESNO -

9-15-90 @ 10 AM - call (408) 255-9000

## MERCED

9-22-90 @ 9 AM - call (209) 383-2166

## STOCKTON -

9-29-90 @ 11:30 AM - call (408) 255-9000

Finally, if you are a VE and would like to help on September 6 or would like to become a VE, please contact Chet, W6XK, as soon as possible. GOOD LUCK!

**Attention VEs:** Our next test session is September 6 (Thursday evening) at Chrysler School. Examiners should be present no later than 6:15 pm. We will discuss the ramifications of the recent FCC ruling regarding disabled applicant waivers. Procedures have been implemented by the VEC and all examiners need to be aware of the changes. Please let me know if you will be able to participate on 9/6 via packet @ N6REB or at 209-883-2968.

# Blue Hawaii Vacation

*By Gordon Olsson , AA6TQ*

The XYL and I had saved all our money and decided to take the whole family to Hawaii. Yeah!! Kathy and I had gone a few years ago and had a great time, so this time we thought we would take our 18 month old daughter, Kelly and our 11 year old daughter, Lindy.

I thought that it would be great fun to take my 2 meter handi-talkie. I wondered if there would be any problems taking the transceiver on board the aircraft or what the people would say who x-rayed the luggage. I also wondered what repeater pairs were available on the Island of Oahu.

I decided to ask my fellow "Packet" Amateur Radio friends. I sent a packet across the U.S. asking for information. Linda, N6REB, came to my rescue right away with repeater call letters and frequencies for all the islands of Hawaii. WA6YYM said that there were 15 to 20 repeaters on Oahu and to consider buying a Repeater Directory.

KK1A had some interesting information for me. He said that some radio's super-hetrodyne down stepping, will radiate at a high enough level to interfere with the aircraft's radio navigation/guidance systems, hence the FEDERAL prohibition to 'Turned ON Radios/ Tape Players on U.S. COMMERCIAL aircraft.

As for taking it on the plane, he said the bomb-detectors won't do any harm to MOST

HT's (No, x-rays will not erase Drums) so take it with you. He also suggested that I buy a repeater directory. KH6JUZ said that he had just come back from Hawaii and said that I could call him for any info that I needed. KC9C reassured me that I would have no problems taking the HT on the aircraft but warned me not to turn on the radio on the plane. He also wanted to know if I had an extra ticket. Hi Hill! WA6E also gave me additional information. He had lived on the island from 1984 to 1988. I appreciated all the info these guys had provided.

We stayed in Honolulu at the Waikiki Banyon Hotel. Our room was on the 24th floor which had a balcony. From the balcony, up 24 floors, I could hit 5 repeaters with my 2 meter HT. The view from the room was fantastic. I could see Diamond Head from the balcony and relax and listen to conversations on the 2 meter radio.

From the balcony I talked to Hart, KH6BIO, on 146.98. He gave me the frequencies of all the repeaters on the island. I told him that I was interested in packet. He said the local BBS's were KH6GPI and W0WRI on 145.01 and 145.05. He said that if a message was sent to him, he would send one back. Here are the list of repeaters on Oahu for those of you interested. Hart provided me

*See 'Hawaii' Page 11*

## 'Vacation'

*From Page 8*

called KA5OUN, who lives in Sallisaw, with whom I kept a schedule with for many years before moving to Copperopolis. He came over and took me down to have coffee with several hams there. One of the hams I met was WA5HLR, who operates the packet BBS in Sallisaw. I will be able to keep in touch with the relatives there through packet.

The highlight of the trip was when I was able to talk to the doctor that delivered me when I was born 54 years ago. He is 94 yrs. old now and still has a limited practice in the same building in Poteau, Oklahoma where I was born. He also happens to be my dad's second cousin. We took some pictures with him and had a nice visit.

We continued our visit in Sallisaw till the following Saturday morning and then started for home. Except for the disappointment of

the two meter rig quitting, we had a good trip and ended up putting 4000 miles on bike.

The intercom in our helmets connecting Loretta and me worked flawlessly during the trip. The best part of the intercom was that I had the control knob and I could turn Loretta off when I wanted to. HI HI. By the way I had the 2M rig wired into our helmets (when it was working) so we could both hear it before it went south.

We saw a lot of bikes (motorcycles) on U.S. Hwy 50, in fact I think there were more bikes than cars. Seeing the country on a two wheeler was fun not to mention the economical aspect. We got an average of 41 miles to gallon. So, if you want a good way to spend a vacation ... ride a two wheeler. 73...Bill, WB6SHE.

---

## 'Hawaii'

*From Page 10*

with this information. 146.98, 146.88, 146.76, 146.64, 146.94, 146.80, 147.28, 147.08 and 147.12. I found the local hams very friendly and willing to ragchew. I didn't spend a lot of time on the air because our family was always on the go seeing different things.

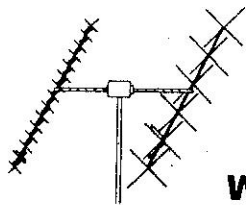
We saw a fantastic show at the Polynesian Cultural Center. We saw a free

porpoise show at the Hilton in Honolulu. Plus, Lindy and I spent a lot of time in the ocean at Waikiki Beach. We also went on a tour of Pearl Harbor and a tour of Honolulu. Our trip was a complete success.

If you plan on visiting Hawaii, take along your 2 meter rig. I think you will be glad you did.

73, Gordon, AA6TQ

# Amateur Satellites



**WB5ZDP**  
**Keith Berglund**

I hope that I'm not beating a dead horse, but I want to summarize Mode A operation in this article, before we graduate to Mode B topics. There are still some of you who are interested in getting on the birds, but you've not made the first Mode A QSO.

## Back to basics

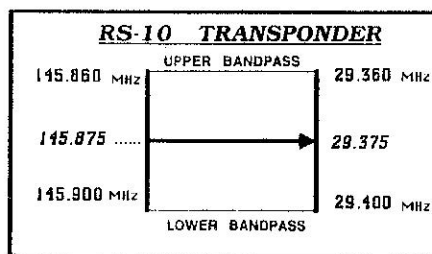
An Amateur communications satellite is just like a repeater in the sky. It has many similarities to your typical 2M repeater. There are input frequencies (known as uplinks) and output frequencies (known as downlinks). And, like the 2M repeater, the higher it is, the better the area of coverage. Imagine the area of coverage of a repeater 600 miles up!

There are, however, just a few things that make our satellite repeater a little different from 2M repeater analog. First, the inputs and outputs are

not channelized. The satellite will listen over a whole segment of one band and repeat it to a similar sized segment of another band. So, for example, on RS-10, the satellite listens to all frequencies from 145.860 to 146.900 MHz and "translates" this segment of the band to 29.360 to 29.400 MHz.

This "translating repeater," or as we call them, "transponder," has the advantage of being completely linear. That is, whatever modulation technique that you send to it will be faithfully repeated. So, if you uplink USB the downlink from the satellite will be USB. CW will be CW and RTTY will be RTTY, etc.

The bad news is that even FM will be repeated by the satellite. As you know, a typical FM signal is about 15 kHz wide and, as can be seen by the RS-10 frequencies in Figure 1, only two or at the most three, simultaneous QSOs can occur. FM is very wasteful in terms of bandwidth and power required for the amount of information that is conveyed. The bottom line is that FM voice is not allowed on any present Amateur satellite. Only narrow band, low duty cycle modulation formats should be used.



**Figure 1. Block diagram of satellite RS-10 transponder**

*See 'Satellites' Page 13*

## Amateur Satellites

From Page 12

### Modes

In satellite lingo a "mode" is a shorthand method of describing the uplink and downlink bands (see Figure 2). For example, the Mode "A" transponder of satellite RS-10/11 has it's uplink on 2M and its downlink on 10M. I suppose that they initially called it the Mode "A" transponder because it was the first widely used Amateur satellite transponder. Also it is a good first transponder for the beginner in Amateur satellites.

### Satellite tracking

Another difference between your local 2M repeater and a satellite transponder is that the satellite moves! Since the satellite is in an orbit that is non-geosynchronous, its position moves around in the sky. When the satellite is in view, you need to know where to point your antennas, and if the satellite is not in view, it's nice to know when it will be.

Finding RS-10/11 or any of the other satellites can sometimes be a bit tricky unless you have the right equipment. The vast majority track the satellites using a computer. AMSAT has software for almost every computer you can imagine, from the Sinclair/Timex to the IBM PC. I have personally used tracking programs written for the Apple, Commodore 64, Macintosh and IBM PC and found that all are menu driven, user friendly and very accurate.

### A new OSCAR planned

For the last three months, the world of Amateur satellites has not stood still. The Russians have announced that RS-14 is to be launched soon. This bird will contain two Mode B analog (voice) transponders and a third digital transponder called RUDAK II. RUDAK is the replacement for the digital transponder that is not feeling too well right

MODE	UPLINK	DOWNLINK
A	145.9 MHz	29.4 MHz
B	435.5 MHz	145.9 MHz
J	144.3 MHz	435.9 MHz
L	1.269 GHz	435.8 MHz
S	435.5 MHz	2.400 GHz
K	21.2 MHz	29.4 MHz
T	21.1 MHz	145.9 MHz

Figure 2. Amateur satellite modes

now on OSCAR-13. The transponder format is AX.25 1200 Baud QPSK and is, unfortunately, not compatible with standard terrestrial AFSK packet radio.

### Dove update

AMSAT's Bob McGuire, N4HY, is still working to get DOVE-OSCAR-17 back on 2M. As you probably know, DO-17 experienced major problems with its 2M transmitter severely desensing its 2M receiver. At the moment, it is only transmitting on 2400 MHz. New software is being uploaded to DO-17, and it's hoped that will have DOVE's digitized voice transmitter on 145.825 MHz FM back in operation. Listen to AMSAT nets and bulletins for further details.

See 'Satellites Page 14

### **Did you do it?**

I hope by now that, at the very least, you've listened to a few passes of RS-10/11 on 29.250 to 29.450 MHz USB. If all you own is a 2M HT or FM only rig, at least you can listen to a few passes of UO-11 and DO-17 (when fixed) on 145.825 FM using any ordinary 2M antenna.

I've received a few letters from some of you concerning your first Mode A QSO. Most are really surprised that Amateur satellite work can be done with simple antennas and rigs and without two or three kilobucks of high tech gear. The function of all of the satellite tracking programs is basically the same. They give you a predicted satellite position at a given time and tell you where to point your antennas based on your longitude and latitude. All programs give you this data in numerical or tabular form and many will also show you where the satellite is graphically on a world map.

### **Antennas**

Antennas for Mode A are not as critical as antennas required for some of the other satellite modes. The reason for this is that the present active Mode A satellite (RS-10-11) is in a 100 KM circular polar orbit. In other words, the satellite orbit takes it over the north and south pole at a virtually constant height above the earth. Not only is the satellite not extremely high, the receivers aboard the satellite are extremely sensitive.

The reason for this is that the Russians are only allowed 5W on 2 Meters and in order to access the bird, they must point some sort of directional antenna as the satellite passes over. In this country, however, you and I are allowed to transmit considerably more than 5W. So, instead of using 5W and a steerable, directional antenna, you can use an omnidirectional antenna and 25 to 75W. The effective radiated power towards the satellite will be the same.

In the past I have made many successful satellite QSOs, using mobile whips, J-Poles and Ringo-Rangers. The advantage of using linear, omni-directional antennas is that you don't have to point them and the tracking of the satellite is not nearly as important.

On the receive side, you can use virtually any antenna capable of receiving 10M energy. I have used long wires, mobile whips, dipoles, ground mounted verticals and tri-banders. The antenna that I usually use is my HF Yagi at 50 ft., mainly because it is already in place. This past Field Day, I used a 10M dipole only eight feet above the ground strung between two trees (eight feet because that's how high I could tie the strings).

### **The Receiver**

If you have an HF rig or general coverage receiver capable of receiving 10M, your halfway there. The internationally allocated sub-band for satellites in the 10M band is 29.300 to 29.500 MHz. There should be no transmitting of SSB or FM there, because of interference to weak signal satellite

*See 'Satellites' Page 15*

## **'Satellites'**

### **From Page 14**

downlinks (FM'er take note!). What you'll hear is just normal SSB or CW QSOs, except they'll be calling "CQ satellite" or "CQ RS-10," and there will be a noticeable doppler shift which sounds like the signal is drifting.

### **The transmitter**

The uplink of Mode A (and J) requires some sort of 2M transmitter capable of a few watts of SSB or CW. The vast majority use an all mode 2M rig. The term "all mode" implies that the rig is capable of transmitting and receiving CW, USB, LSB and FM. The advantages of owning an all mode 2M rig is that you can use it on a variety of modes. It

can be used as the uplink for Mode A and Mode J. The receive portion can be used as the downlink for Mode B and Mode T. In addition, the rig can be used as a driver stage for a 1269 MHz Mode L transmitter or a receive IF for a 2400 MHz Mode S receiver.

### **Next Month**

Next time we'll sum up how to tie all of this equipment together and make a QSO or two. As you've seen, the antennas don't have to be directional, you probably have the receiver already and the transmitter is certainly not exotic. After that, I think we will move on to Mode B and J topics.

---

## **'Minutes'**

### **From Page 6**

A break was taken at 8:20 pm and the meeting resumed at 8:40. Under new business Steve, N6EKV, reported SARA will have an opportunity to work a food booth at the upcoming Riverbank Wine and Cheese Festival with the same people who had the fireworks booths. More on this event will be explained at a later date.

Steve also reported that a controller for the autopatch had been donated to SARA to use as long as needed. He suggested a block diagram be drawn up notating the various parts of the repeater system and that each piece of equipment in the diagram be labeled as to the severity and priority of its repair or replacement.

It was mentioned that this diagram be placed in The READOUT so all the membership can be made aware of the repeater equipment situation. No motion was made, but it was agreed upon by the assembly that a committee headed by the Chief Engineer, LeRoy NV6S and including Steve, N6EKV; Tim, WB6UJD; Phil, WD0FFX and Dave, KJ6DL, plan the strategy for beginning repairs on the repeater equipment and present the plans before the membership.

The evenings raffle was then held with Cliff, N6YJR, receiving a silver candelabra centerpiece which he generously donated back to the club for a later raffle. The meeting was adjourned at 9:20 pm. Respectfully submitted by Secretary, Linda, N6REB.

# Editor's Notes

By Bob Pinheiro, WA6ZLO

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**A** special event is coming up this month when SARA holds an open house at the new club station located at Downey High School (Room 51). We will be holding our regular September 18th meeting at the station in addition to the open house. So, make your plans now to be there and help commemorate the station. A lot of hard work and time went into getting the equipment and securing the site. Help us celebrate the results.

- Our membership continues to grow and has reached 173 for the year. Welcome back Ned Zoller, N6RDX, of Stockton. Ned is a trucker. When you see him coming give him plenty of room. He drives a gasoline tanker. Welcome to new member Tim Low, N6ZUC, of Ceres. Tim is a newly licensed Amateur having gone from nothing to General in two months. He expects to pass his Extra at the September 6th VE session in Modesto. Tim is a broadcast engineer and is the Chief Engineer of KOOK / KBEE-FM in Modesto.

- Condolences to Frank Ashby, W6AJU, on the passing of his wife last month, and to John DeRoos of Ceres on the death of his mother, Francis. Frank plans to move to Washington to be with his son and his family. Best of luck to you Frank and thank you for your many years of support.

- By the time you read this it is possible

that the STS-35 Shuttle may be in orbit with payload specialist Dr. Ron Parise, WA5SIR, on board. He has permission to operate on the ham bands during certain times. The transmit frequency will be 145.55 MHz and the primary receive frequency will be 144.95 MHz. Listen for more information on dates and times of operation. The shuttle was scheduled to blast off of September 1, 1990. STS-37 is scheduled to go into space later this year.

- Amateur Radio call signs issued in the 6th call district as of July 1, 1990... Extra-AA6WS. Advanced-KK6MJ. General-Technician-N6ZNT. Novice-KC6MHR. The FCC ran out of N6--- calls in August and are now issuing KC6--- calls to Novices, Technicians and Generals.

- The FCC recently adopted an order implementing license fees for most radio services. The Amateur service is not included! No fees are charged for Amateur licenses.

- A word to the wise if your travelling in Canada. It's illegal in Canada to have radar detectors. In fact, the police are equipped with instruments to detect these devices. If one is detected, the driver is stopped and issued a citation. The detector is confiscated and destroyed. So, like firearms, leave your "fuzz buster" home. They are most unwelcome in Canada.

- I leave you this month with the story about a couple at a nudist camp breaking off relations. They felt that they were seeing too much of each other. 73, Bob.

# Area Amateurs Help Fight Yosemite Park Fires

*By Tim Bosma, WB6UJD*

**O**n Saturday afternoon August 11, 1990 I was returning from the Foothill Amateur radio flea market, when I heard a station requesting assistance for communications for Yosemite Park fires. I volunteered and was assigned the Sunday 12 hour day shift at Yosemite Valley Expanded Dispatch beginning at 6:00 A.M.

I got up at 3:30 am, which came all too soon, and I wondered why I was so "inspired" to volunteer for such things on my infrequent days off. I fortified myself with several strong cups of coffee and headed for the Park. One of the reasons for leaving early was to avoid looking into the sunrise as you head into Yosemite...I shouldn't have worried, the sun couldn't make it through the clouds of smoke from the fire.

There were three checkpoints on the way into the Yosemite Valley, the first was at Buck Meadows on Hwy 120, the second at the Tioga entrance to the Park and the third at East end of the Yosemite Valley floor. All the checkpoints were well aware of who and what Amateur radio operators were and I passed all the check points quickly. I know from past experience as an EC that this is not as simple as it sounds and I was very impressed with the organization behind the Amateur radio support.

Descending from Crane Flat into the Yosemite Valley near the first tunnel, the burned area from the A-Rock fire appeared. It was quite a change. I believe somebody described it as changing your television set from color to grey monochrome, except in this case the whole world around you changed into monochrome! Everything was grey and black. The fire had even burned the paint off of the centerline on the road.

As I was passing through this area there were numerous small fires on the side of the road. Driving in the Yosemite Valley was strange...no cars, RVs, nothing on the road until you got to the fire camps near the administration complex.

I relieved Tim Rhinehart, W6PCB, who had been on duty for 12 hours, and parked my car outside of Yosemite Expanded Dispatch. We were located in a central area, easily accessible by both Yosemite Fire Dispatch and Yosemite Expanded Dispatch. Tim reviewed the operations format with me and left. Allen, WA6OYF, called and said he was on Turtle Dome waiting for his relief after fighting the fire up there.

To illustrate how quickly things changed, Tim was planing to leave via highway 120, the same way I had come in a half hour earlier, however when he got to the 120 inter-

*See 'Fires' Next Page*

## **'Fires '**

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section he was told to leave by highway 140, because 120 had become unsafe again. The rest of the day was a blur of messages regarding everything from portable toilets to the status of air strike resources to ordering 23 tons of fire retardant.

I have to especially thank the hams at Camp Mather, Rick, KB6UUI and Sterling, N6RPD, for all their patience with our traffic. They were extremely busy handling traffic from Stanislaus Net Control, NACO West and Yosemite. NACO West is on Highway 120 just outside the Park and was ably staffed by John, KG6NS and Carl, NI6Z.

Many different Forest Service and National Parks Service people come up to me and thank the hams for the critical assistance we were providing. The A-Rock incident commander was especially complimentary. Through Amateur radio he was able to talk to his deputy commander and discuss fire strategy.

None of the traffic would have been possible without the 147.000 link to 147.030. The Turlock club should be very proud of that link and the important role it played in supporting fire communications. The post I was assigned to supported Yosemite Expanded Dispatch.

They were responsible for all the procurement and logistics support for the fire camps. We assisted medical personnel in locating supplies, and also relayed the status of different fire engine teams. We also had

the check-in "desk" next to us under a yellow tarp. They handled the time cards and messages for the fire fighters as they came off line. The Yosemite Valley floor was a haze of smoke and ash the whole day.

When I was relieved by Bud, N6OCV, at about 7:00 P.M. I was tired, my car was lightly covered with ash, and I was ready to go home. On the way home I stopped for a few minutes at NACO West where Jim, WA6NSK and his XYL Jan, N6XKF, were setting up an antenna so they could reach Stanislaus Control on 147.945. I was home about 10:30 P.M. It had been a very long but satisfying day.

A Few observations! Packet Radio would have been ideal for about 60% of the traffic handled. I think the future of Amateur emergency communications will have to include briefcase sized packet stations with perhaps even a portable battery powered digi-peater. We Amateurs were very fortunate the 147.000 link in the Park worked as well as it did.

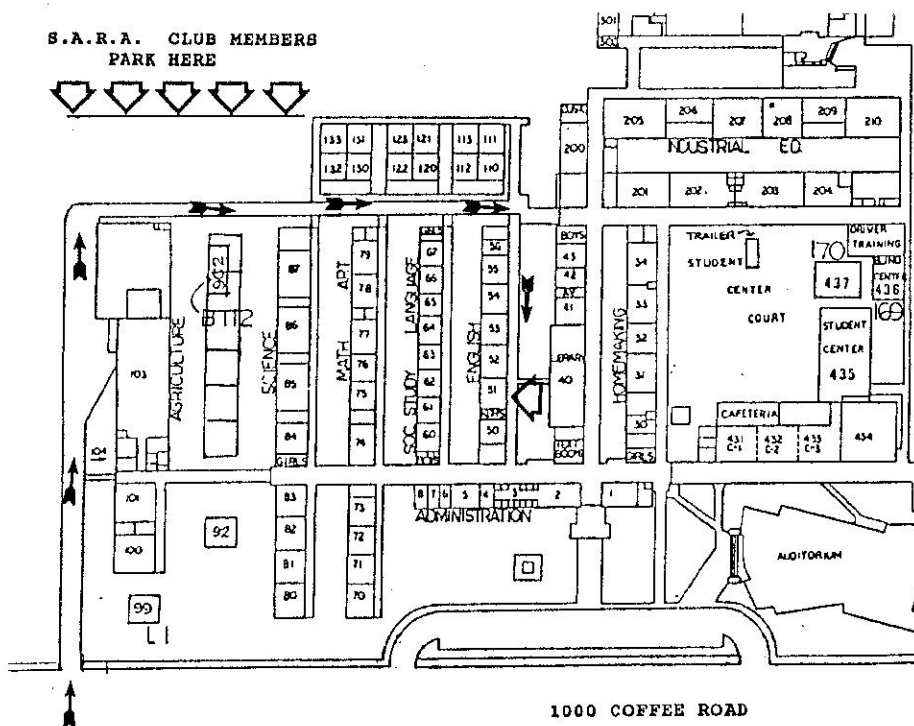
Another great idea was K6IXA's portable link. It proved very useful. While I was very pleased with the attention Amateur radio received from the article in the Modesto Bee, it should really be stressed that our success was the result of excellent teamwork with many many hams. I would have preferred a photo of the hams who were at Stanislaus Net Control for many days. I was also interviewed by Charles Wright, N6LD, who works for the Fresno Bee. Does anyone know if ham radio received any publicity in the Fresno area? The bottom line is as one ham said: "We done good."

# Club Station Open House

## September 18, 1990

Our next meeting will be held at our new club station, room 51, at Downey High School, 1000 Coffee Rd. Modesto. You will have the opportunity to view the station and possibly operate the station. The meeting will start at the usually time of 730 pm but the doors will be open by 7 pm to give you the chance to look it over and do some operating. Parking will be in the rear lot on the

eastside of the school. (See Map). It took us a long time to put a club station together and find such a excellent site for it. Come and see for yourself. For those of you coming from out of town , to get to Downey High School take the Briggsmore offramp from Hwy 99 and go east to Coffee Rd. Right on Coffee to the second signal light and. It's on the corner of Coffee and Fairmont.



# -- Calendar --

Sept. 18, 1990 .....SARA Monthly Meeting .....730 pm  
Room 51 Downey High School  
Oct. 12-14, 1990 .....Pacific Division Convention ...3 days  
LeBaron Hotel , San Jose  
Nov. 20, 1990 .....SARA Monthly Meeting .....730 pm  
Dec. 18, 1990 .....SARA Monthly Meeting .....730 pm  
Jan. 15, 1991 .....SARA Monthly Meeting .....730 pm

SARA meets the third Tuesday of each month (except holidays) at the Stanislaus County Administration Building at 12th and H streets in downtown Modesto. The meetings are held in the lower-level conference room starting at 730 pm. Visitors and interested parties are welcome.

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

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