

The READOUT

Year 14

Number 2

February, 1992

Parachutist Escapes Death In Fall from 2000 Ft. Sacramento TV Tower at Walnut Grove

There is a group of people who get their kicks parachute jumping off of things instead of out of airplanes. Unfortunately for Sacramento-Stockton broadcasters, the original 1500 foot and three new 2000 foot television transmitting towers at Walnut Grove in Southern Sacramento County, are famous throughout the Western states because it is relatively easy to escape arrest due to the lack of population and the great number of sloughs in the area on which to escape by boat.

On the day after Thanksgiving it was very windy. This was the same day the huge dust-storm caused the multi-vehicle pile-up on I-5 south of Coalinga. It was the day Lee Brown and at least six others climbed the 2000 foot tower behind the Walnut Grove Elementary School, which is jointly owned by KOVR Channel 13 and KXTV Channel 10, and jumped off at sunrise. This is the ideal tower to jump from because it has an 800 square foot equipment room platform built around the tower at the 1700 foot level.

Brown leaped from the platform and was immediately blown by the high winds into the southeast gully where his chute became entangled. He slid 500 feet diagonally down the cable and smashed into a harmonic vibration damper. His chute disentangled at this point and he fell the final 300 feet landing in a four foot wide ditch with three to four feet of water which cushioned his fall.

Two of his friends who did not jump came to his aid while another called for help. Brown was taken by a medical helicopter to a Stockton hospital where he was listed in serious condition after surgery. He suffered fractured ribs, a collapsed lung, and a ruptured kidney and spleen.

According to Rod Robinson, Chief Engineer of KXTV, the wind that day was out of the north. If it had been out of the south, the jumpers would have landed in a nearby sewage treatment plant. Robinson said the jumpers maybe charged with trespassing.

Thanks Society of Broadcast Engineers Sacramento Chapter newsletter via The Sacramento Bee and Rod Robinson, KXTV, Sacramento, Chief Engineer.

Transvestite Pirate & Con Man Arrested By Federal Agents

Michael Doyel, 31, of Cedar Rapids, Iowa, was sentenced to nearly four years in prison for mail fraud and making illegal radio transmissions. Doyel ran ads in the Ham Trader Yellow Sheets and accepted checks for radio equipment orders which he never delivered. He was arrested in Colorado dressed as a woman and accused of driving a stolen car.

Doyel had been a federal fugitive for nearly two years after having failed to appear at an April 1990 court arraignment. He was also convicted of broadcasting obscene language and airing false "officer injured" reports through the Iowa State Patrol radio system.

He was also charged with rigging up a radio to the frequency of a local McDonald's restaurant and transmitting obscene messages to the drive up window and airing indecent language over Amateur 2-meter repeaters. Doyel was also ordered to pay a \$10,385 fine as restitution to those he defrauded by mail.

Inside

SARA Badge Ordering Form.....	2
Editor's Notes.....	3
SARA Minutes.....	4
Visiting Ghost Town of Bodie.....	5
Tech Tips From N6ZUC.....	6
VE Exams Dates & Places.....	8
PACSAT New.....	9

The *READOUT* is published monthly by the Stanislaus Amateur Radio Association. COPYRIGHT 1992 by the Stanislaus Amateur Radio Association, (SARA), Modesto, CA. All Rights reserved. Permission is granted for reproduction in whole or in part provided that credit is given to *The READOUT* and to the authors of the reproduced material.

1992 SARA Officers

President

Jim Hertel, N6KMR, 531-1157

Vice President

Sandra Ingram, KC6TBK, 526-6277

Secretary

Ernie Rader, K6UVI, 522-5303

Treasurer

Rita Palacios-Rader, KD6BVN
522-5303

SARA VHF Net

Thursdays @ 8 p.m.

(Except Holidays)

2 meters 145.39 MHz WD6EJF

220 Band 224.14 MHz WD6EJF

10 Meter 28,440 kHz USB

Tuesdays at 800 pm.

Contributions to *The READOUT* are always welcome and may be submitted to the editor by mail or via packet at N6REB-BBS on 145.79 MHz. The deadline for articles is the 15th of the preceding month. Articles regarding religion or politics are not accepted.

Editor

Bob Pinheiro, WA6ZLO

1221 Mist Flower Ct.

Modesto, CA. 95355

209-523-5880

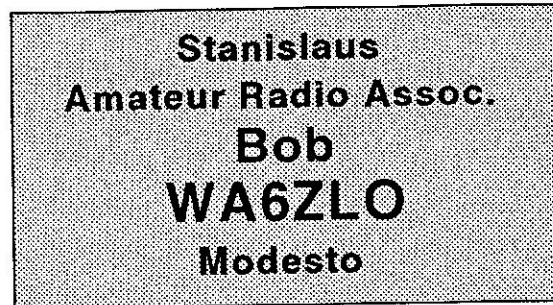
An ARRL affiliated club!

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

Order Your SARA Club Badge

SARA Club badges are available for \$6.00. If you are a new member of the club, or an older member that never ordered a badge, you can do so by completing the order form below and mailing it and your check or money order to the club's Post Office box. Or, you may place your order directly with the Treasurer at the next meeting. You will be notified with the badge is ready. Please make your checks payable to SARA. The badges are made of high quality plastic in the club's color's (black letters on a yellow back ground. Allow 30 days for delivery.

(Example)



SARA Badge Order Form

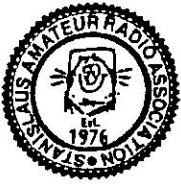
First Name _____

Call Sign _____

City _____

You may place your order at any meeting, or by mail. Clip the order form above, fill it in and attach your check for \$6.00 and mail them to **SARA PO Box 4601, Modesto, CA. 95352**. Please allow 30 days for delivery. Make your check or money order payable to **SARA**.

This is your last reminder. If you have not paid your 1992 dues, we will be forced to drop your name from the roster and this will be the last issue of *The READOUT* you will receive. Your support is vital! Please continue to support SARA by sending in your dues today. Please use the handy renewal form on the inside back page and mail it and your check or money order today. Thank You!



Editor's Notes

By Bob Pinheiro, WA6ZLO

SARA's 1992 membership continues to grow thanks to people like you. Please remember, this is the time of the year the club needs your support. If you have not already done, so fill out the renewal form on inside of the back page of this newsletter and mail it and your check or money order to SARA as soon as you can. Welcome new member Doc Shankle, N7QBK, of Eugene, Oregon as a new member of SARA. I had the pleasure of meeting Doc in Eugene during a visit to Ernie, K6UVI. Doc was for many years a professional radio broadcaster. He now works for the Oregon State Department of Employment in Eugene. Doc holds a General class license and is the second Amateur in Eugene to become a member of SARA. Bill, KD7KF, was the first. Welcome to John Calvacca, WB2RDT. John lives in Victorville. I don't have anymore information on John. Hopefully he will drop me a line and give us some personal history.

I'm pleased to report Lynn, KB6DXX's wife Patricia, is recovering from liver transplant surgery at the University of California Medical Center in San Francisco. Pat's liver was failing fast and without the transplant would not have survived. Lynn says several pints of blood will be needed to replace the blood used during the operation on January 23rd. If you can help by donating blood, contact Ed, WB6V, at 538-2866 for more information.

The transition of power from the old officers to the new went smoothly and the new officers are off to a good start. They have met to discuss the future of the club and ways of achieving our goals. It's been extremely helpful to me as editor of this newsletter to have all the new officers on Packet. I have already received much information from them for the newsletter which is great.

Speaking of information, I received a letter from Mike Wheeler, W6VY, of Massachusetts. For those of you who may not know Mike, he is a microwave technician with AT&T who lived in Modesto for many years before the company moved him to Haverhill, Ma. I have been after Mike to write a story about his travels and what it feels like to work DX from the East Coast. His story will appear next month. Speaking of stories, I hope you take the time to express to those people who write stories and articles for the newsletter your appreciation. People like Ernie, K6UVI, Tim, N6ZUC, Chet, W6XK and Tim AB6FL, give a lot of their time and the only reward they get is a nice compliment, or two, from you the readers. Take time to thank them, it's the least you can do.

Best wishes to Ray Erickson, KC6TVC, of Modesto who recuperating from a severe heart attack. Ray

had gone to the hospital emergency room not feeling well. Shortly after arrival he had a bad attack. If he would have been somewhere else, Ray said probably would not have made it. Take care Ray!

I received a packet from Chet, W6XK, with the results of the January 11th, 1992 test session had at Turlock. 32 applicants took tests. New licenses earned- 11. New licenses earned by class, Novice - 0 Technician (no code)- 6; Technician Plus - 2; General - 2; Advanced - 1 and Extra - 0. 46 individual element tests were given with a pass rate for 54.3%. Pass rate by element: Element 1A (5 w.p.m.) - 66% Element 1B (13 w.p.m.) - 100% Element 1C (20 w.p.m.) - 0% Element 2 (Novice written) - 61% Element 3A (Technician written) - 46% Element 3B (General written)- 0% Element 4A (Advanced written) - 50% Element 4B (Extra written) - 50% New Novice: none; New Technician Plus: Chris Coffin (KD6BNW), Judy Mahan. New Technician: Charles Hughes, Eric Proell, Elizabeth Eyre, Brandon Beauchamp, Allen White and Demian Gough. New Generals: Richard Nole (KD6EBO), Marcel Van Den Bussche (KC6TDI). New Advanced: Jeff Carlson (N6QJP) New Extra: none. Participating VE's for this ARRL/VEC sponsored session included W6XK, NR6N, N6SAE, KA6FTA, AA5TX, K6RAU, KJ6QD, KI6YQ, N6QIY and N6ULZ.

Ham radio operation aboard the Soviet Mir space station has been accelerated. Both Aleksand/U4MIR and Sergei/U5MIR are operating from the space station-sometimes at the same time! Stateside contacts with both stations have occurred on 145.50 and 145.55 Mhz FM. The new ICOM rig brought up recently for packet operation is apparently doing double duty.

Japan has a new novel way of dealing with unlicensed radio stations (pirates). The Japanese Ministry of Posts of Telecommunications has installed 40 watt broadcasting stations in their Tokyo and Osaka monitoring stations. A button is pushed when the P&T spots an illegal station. A recorded message is transmitted notifying the pirates that the government is monitoring their transmissions and they are illegal. Further, offenders will be punished with a stiff fine if the transmissions are not stopped immediately. They say the idea has been very effective.

Don't forget to pay your dues. This is the last issue of *The READOUT* you will receive if you don't pay your dues. Please send them in today. Your support is vital. Please use the renewal form on page 11. 73, Bob



SARA Minutes

By Ernie Rader, K6UVI, Secretary

The January 21, 1992 meeting of SARA was called to order at 7:30 pm by President Jim, N6KMR. Jim announced the Treasurer and Secretary were not able to make the meeting because of a family emergency. 35 members and guests present introduced themselves.

Under old business further discussion was held concerning the request received by the club to put a packet node digipeater in our Mt. Oso vault. Following discussion the club voted to turn down the offer. Minutes were accepted as printed in *The READOUT*.

The treasurers report was not available because of the absence of the treasurer. However, the treasurer later forwarded the report via packet to *The READOUT*. Her report is as follows. The General account had a beginning balance of \$2,017.44, there were two deposits from membership dues of \$405.00 and three expenditures to cover *The READOUT* and miscellaneous bills totaling \$120.94. Ending balance of \$2,301.50. No report was received by the treasurer from the Education Account administered by WDØFFX.

The technical report was given by Leroy, NV6S. He reported he had been to the mountain twice in the past couple of weeks. He said it appears the problem with the two meter repeater cycling is apparently a signal coming in on the input which can be heard on the hill. He could not tell if it was deliberate interference or possibly a spur from another transmitter on the hill. He said it would take some investigating with a spectrum analyzer on the hill to try to find the source. Leroy mentioned other possibilities would be to PL the machine or implement the touch tone access mode which is already built into the ACC controller. He said the autopatch died, and has been fixed. The 440 machine is still racked with intermod problems. He apologized for not having the time to work on it.

It was mentioned there appears to be one or more persons (Lids) who may be deliberately jamming the two meter repeater from time to time. It is believed they may be the source of audio from the 145.13 machine being fed into our two meter machine. Leroy cautioned all resent not to acknowledge lids and to totally ignore them.

Under new business the club ok'd the renting of a

safe deposit box to keep important club papers in. The treasurer was authorized to rent the box at Modesto Banking where our checking account is located.

It was decided to hold another fund raiser. The prize would be a VCR or \$500 in cash. The effort to begin as soon as tickets are printed. Jim, KB5FB, will be asked to print the tickets again. The drawing to be held the second day of Field Day, June 28, 1992.

Jim, N6UGH, agreed to headup the Field Day effort. He will secure a site. Some wanted it to be at the club station, but this idea was rejected. The club opted to participate in the fireworks booths again this year if asked.

John, KC6VIV, inquired about the possibility of putting together a hamfest. After a short discussion, John volunteered to check it out. Steve, KC6VBV and Phil, WDØFFX will assist on the committee. The President announced if any member of the club wanted a copy of the bylaws, just send a legal size SASE to the club PO Box and it will be mailed to them.

Chuck, NW6G, introduced two proposed amendments to the bylaws. One pertaining to allowing absentee voting for club officers, the other to require a majority vote of both members attending the meetings as well as absentee votes for expenditures over \$250.00. The necessary 10 signatures of **SARA** members had been obtained. The proposed changes will be printed in *The READOUT* and voted on at the February meeting. Tim, AB6FL, said the club needed to prepare a good financial statement detailing all expenditures and also to prepare a yearly budget so members would know exactly where the club funds are expended.

Jim, UGH, inquired about control operators for the repeaters in view of the interference problems. A discussion followed but no decisions were made.

Discussion again centered on the apparent lack of accessibility to the club station and the desire to have it more accessible to the members. No decisions made on this subject.

The meeting was adjourned at 9:30 pm. Respectfully submitted for the Secretary by Bob, WA6ZLO.

Next SARA Meeting is February 18, 1992 at 7:30 pm. You're Invited!

Visiting Bodie! California's High Sierra Ghost Town

By Ernie Rader, K6UVI
Contributing Editor

Recently, Rita and I went on a 3 day weekend and our trip included the camper and HF rig. I don't know why, but the DX always seems nicer when using emergency power and my neat little camper antenna system,,,,,well, that's another story.

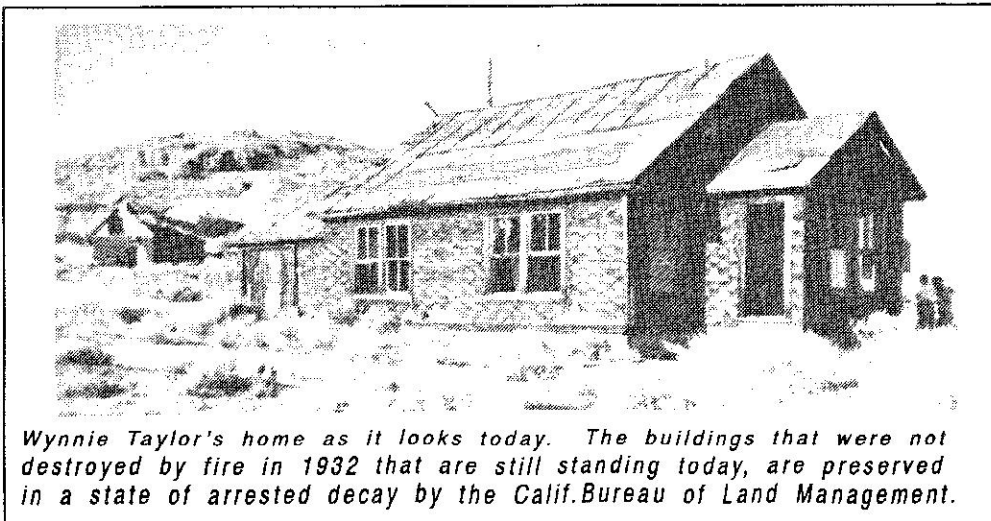
We lumbered over Tioga pass into Lee Vining and looked for an overnight place with lots of trees for the antenna. Incidentally, Mono Lake from a camper window, is a real sight to see. While there, we took a side trip to Bodie. For those of you who don't know about Bodie, it's a ghost town preserved as a State Historic Park. It's not being renovated, but instead maintained in a state of "arrested decay." Today, it stands just as time, fire, and the elements have left it—a genuine Califor-

nia gold-mining ghost town.

We arrived in Bodie at the exact time that The California Bureau of Land Management began a structured tour of the town, so Rita and I tagged along. One of the participants in the tour was a lovely lady named Winifred Taylor.

Wynnie, as her friends know her, used to live in Bodie when she was very young. Her father was a mining engineer, who consulted on the mining operations of Bodie for a short period of time. His "tour of duty" spanned portions of 1931 and 1932, and it was during this time that a fire destroyed a large portion of the town.

On June 23rd, 1932, the greater portion of the township was at the school house celebrating Wynnie's fourth birthday. When the fire alarm sounded, the towns people initially ignored it because they thought it was the result of a prank. It seems that there was a group of boys from Pasadena in town who were always causing mischief. However, upon looking out the windows, they could see the flames rising from the back of Sawdust Corner. The people rushed to the town's aid. When they arrived at the fire hose one of the camp's "booze-hounds" had reached it first and would not give up his position.



Wynnie Taylor's home as it looks today. The buildings that were not destroyed by fire in 1932 that are still standing today, are preserved in a state of arrested decay by the Calif. Bureau of Land Management.

See 'Visiting Bodie' page 10

Building Your Own Power Supply

By Tim Low, N6ZUC

Likely, the single most indispensable piece of gear in your shack, is the one you pay the least attention to. It just sits there hummin' away, collecting dust, and doing its job. Yes, it's your power supply. Without it, you'd be off the air and your golden voice and melodious tones lost to us all.

Generally the power supply doesn't require any special attention. Keeping it clear of clutter and lowering the dust out once in a while, so air can circulate, is all that's needed. Plugging it into a good surge suppressed outlet is also an extremely good idea. Most people prefer to purchase their supplies. However, for those so disposed, they're really very easy to construct.

The power supply consists of four (4) basic areas. Let's take each in turn and see what their all about. Transformation is the first step in turning the 117v 60 Hertz AC house current into the 13.8 volt DC required for most of our equipment. All that's required for this step is a transformer.

A transformer is simply two (2) coils of wire in close proximity. The high end, or primary as it's commonly known, (117v side), has the greater amount of turns, and the low side, commonly known at the secondary, has fewer turns. The amount of turns on each side is determined by the ratio of the input voltage, (nominal line voltage), to the desired secondary voltage. In the case of the common 13.8 volt DC supply, we would want an output of about 18 volts AC. I'll explain why 18 volts later. This works out to roughly a 6.5 to 1 turns ratio. When you plug in the transformer and pass current through it, this alternating current sets up a fluctuating magnetic field around the primary coil. This magnetic field intersects, or cuts the coils

of the secondary.

Anytime a magnetic line of force cuts a conductor, (the wire of our secondary coil for instance), it induces a voltage in that conductor. That's how transformation works. The secondary voltage is now proportional to the turns ratio of the transformer windings.

Now it's not really practical for the average Ham to wind his or her own transformer. You can buy them from many sources. Selecting the proper transformer is the key here. What you need to look for is the proper ratings for primary and secondary voltages, and the current rating. You have to make sure you get a transformer that will handle the load you intend to put on it. Here is where the real cost of your power supply is.

The higher the current rating, the higher the costs. Transformers that will pass on the order of 20 to 30 amps can be very expensive. Remember too, when selecting a transformer, get one that is over rated. Never run anything at it's limit.

Always plan on some headroom. Some of the best sources for good transformers is old equipment. Old used, abused, and otherwise out of commission tube type equipment are good sources for some great transformers. Look at swap meets and junk shops. Check with your local Goodwill or Salvation Army shops. Some times people will donate old electrical and electronic devices that are beyond repair. You can pick these up for parts at minimal cost. Military surplus is good too. Ask around and you'll be surprised with what you can come up with.

The next section of the basic power supply is rectification. This is the step that takes the reduced AC voltage from the power trans-

former, and turns it into the DC power we use. AC, or alternating current, so named because current flow changes direction at a constant rate. Half the time the voltage is positive, and half the time it is negative. I've always thought we should call AC, female current (FC), because it can never make up its mind which way to go. At the same time, DC should be called male current (MC). Let's face it guys, when we make up our minds its all one direction, even though half the time we have no idea where we're goin'.

Straightening out this current and making it go all one direction is the job of the rectifier. A rectifier is made up of devices called diodes. A diode is no more than an electrical one way valve. When AC is introduced to the rectifier, it allows the positive going part to pass, and turns the negative part around, sending it in the same direction as the positive half. The current is all going in the same direction now, so we have DC.

There are several possibilities when it comes to choosing a rectifier. If the transformer used is center tapped, in other words, the secondary is made of two coils connected in series, then the common center tap is grounded and diodes are inserted in the two remaining leads. This is known as a full wave rectifier, and is very common in supplies.

If the supply has only one coil on the secondary, then a full-wave bridge rectifier is used. A bridge rectifier is made up of four (4) diodes arranged to allow the current to flow in one direction only. To make

See 'Power Supply' page 7

Computer Software For Sale

	List	My Price
Microsoft DOS 3.3 w/GWBasic-Unopened New	60-70	\$20.00
Turbo C Ver 2.0 books & all master disks	60-90	\$35.00
MS-DOS Ver 3.3, w/GWBasic in Spiral book	40-50	\$10.00
2 original sets of books & disks.		
DoubleDos from SoftLogic Solutions	30-50	\$ 7.00
FastTrax Disk Optimizer	30-40	\$ 9.00
DOS Tutor	12.70	\$ 5.00
MR.DOS	7.99	\$4.00
Alf game by Box Office Software	10.00	\$ 3.00
MoneyCounts Ver 6.0 by Parsons Tech	32-49	\$15.00
PC-TOOLS Ver 6.0	79.95	\$20.00
PC-TOOLS Deluxe (Ver 5.0 I think)	49.95	\$10.00
Xerox Ventura Publisher Ver 2.0 w/Professional Extension & Font disks - All manuals & disks - installed twice, intact 100%	1200.00	\$125.00
Xerox Ventura Publisher Ver 3.0 Gold Series DOS/GEM Edition, All disks and manuals, still seale manuals, as above but opened and installed twice, intact 100%	900.00	\$275.00
PageMaker Ver 3.0, all disks & manuals installed twice, intact 100%	795.00	\$150.00
dBase III Plu, all disks & manuals	250-300	\$80.00
R:Base Version 3.0 all disks & manuals	160.00	\$60.00
Wordstar Release 4.0, all disks, manuals	150.00	\$25.00
Microsoft Windows/386	90.00	\$10.00
Microsoft Macro assembler 5.1 still sealed	125.00	\$60.00
Peachtree Double Bonus Bundle - Peachtree III & Data Query III	129.95**	\$50.00
Grammatix IV proofreader	50-80	\$25.00

* = Approximate price ** = Wholesale price 30-50 = range of available prices. All items are available at my store - Mail Boxes Etc, 729 N. Golden State Blvd, Turlock, CA, 95380. I will take phone calls about the items and answer any questions if time permits. All items for sale are items I don't use any more and why not sell them. Most prices are negotiable or possibly trade for ham gear. Items are available, "First Come, (with money) First Own. I can take Visa, MC, Discover and AMX if needed. Just ask--Remember even a fish wouldn't get caught if it kept it's mouth shut. My phone number is (209) 632-9787 M-F 9-6, Sat 9-4, Sun 12-4 -- Jim Shea, KB5FB

Building Your Own Power Supply

Continued from page 6

things easier, there are encapsulated bridge rectifiers. These have four leads. One is marked [+] and the other [-]. The others are for the AC and of course there is no polarity to observe. Encapsulated bridge rectifiers with high current ratings are easy to find. I prefer to use them as they are easier to

mount making a neater project. We now have direct current [DC], but the work isn't over. Next month we'll look at the last two parts of your station supply...the filter and the regulator. Both very important to a good supply.

If you have any comments about what you've read here, or have questions regarding any technical topics, drop me a packet. The address is N6ZUC @ KB6GVT.# SOCAL. CA.USA.NA. You can also reach me in care of **The READOUT**. 73, Tim

Petitions to Change Bylaws

Two petitions have been received by the Club Secretary to amend the **SARA** Bylaws. The required number of signatures have been obtained on the petitions to qualify them for a vote at the February 1992 meeting. Both petitions were drafted by NW6G.

(Proposed change)

Absentee ballot for officers election

A. An absentee voter ballot form for the club officers election shall be included in the November issue of The READOUT. The form shall contain:

- a. complete list of nominated members.
- b. a place for write-in candidates.
- c. brief biographical and campaign statement.

B. Club officers shall collect and count ballots in such a manner as to assure a fair and honest election. Care shall be taken to eliminate the possibility of duplicate votes by a single member.

C. The opening and counting of ballots shall be done in the presence of two club officers and a third observer, all of whom shall certify the election results to the general membership of the club. The results of the absentee ballot shall not be made known until the vote at the club meeting is complete. The secretary shall then combine the absentee vote results with the club meeting vote results and announce the winners.

(Proposed Change)

Absent voter ballot for expenditures

A. Any expenditure for less than \$250.00 may be approved by a majority vote of the members present at a regular club meeting, provided a quorum of members are present at the meeting. A quorum is either 20 members or a minimum of 10 percent of the overall membership, whichever is greater.

B. Any expenditure which exceeds, or is likely to exceed \$250.00, shall require an absentee ballot for approval.

C. All ballots must be received by the Friday before the next meeting.

D. Club officers shall collect and count ballots in such a manner as to assure a fair and honest election. Care shall be taken to eliminate the possibility of duplicate votes by a single member.

E. The opening and counting of ballots shall be done in the presence of two club officers and a third observer, all of whom shall certify the election results to the general membership of the club. The results of the absentee ballot shall not be known until the vote at the club meeting is complete. The secretary shall then combine the absentee vote results with the club meeting vote results.

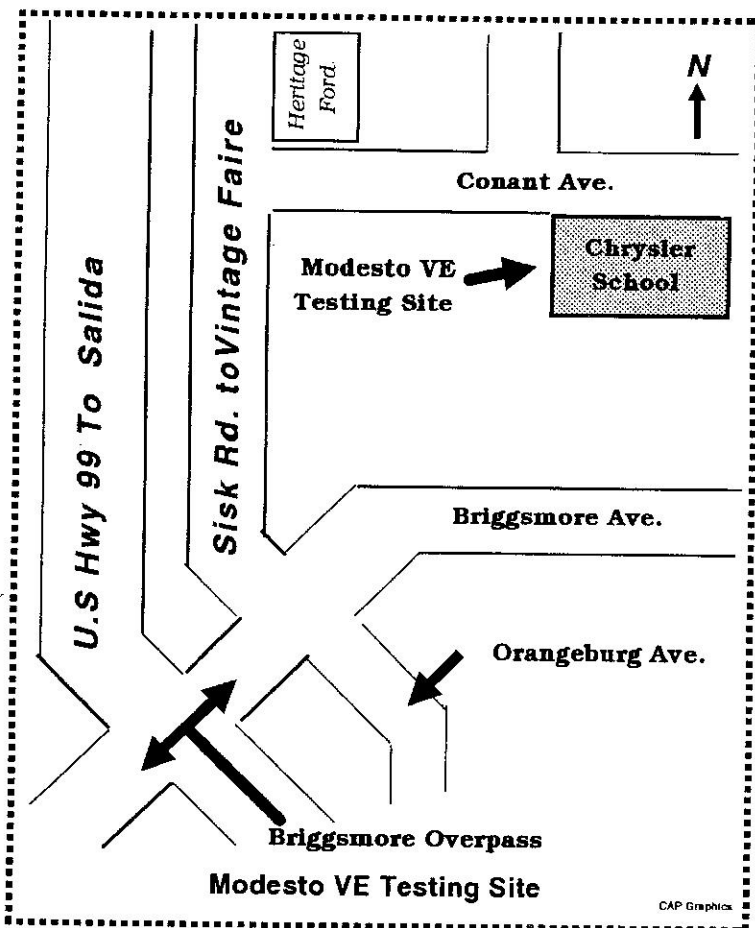
1992 VE Tests Stanislaus-Tuolumne & Merced Counties

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

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

**

If you hold an Advance or Extra class license and would like to be a volunteer examiner, contact Chet Jensen, W6XK, at 883-2968 in Hughson. If you are in Tuolumne County you may contact Jim Clark, at 209-586-4917 in Mi Wuk Village, CA.



CAP Graphics

VE Exams In N. California 1992

This is a listing of the scheduled ARRL Volunteer Examiner test sessions in this portion of Northern California. To take a test you must show two means of identification, have the original of your license and a copy of it, if you are licensed; have the original of any CSCE to prove you passed a test before any VE group. All tests are walk-in. Fee is \$5.40 except for Novices for whom there is no charge. No-coders welcome.

Hercules	...Mar 15, May 17 Jul 19	.. 415-467-2467
Jackson	...Mar 7	..... 209-295-7947
Merced	....Feb 8, Oct 10	..... 209-383-2166
Modesto	...Mar 14, Jun 13, Sept 12	.. 209-883-2968
Monterey	...Jan 4	..... 408-449-2262
Novato	....Mar 7, Jun 6, Sept 12	... 415-897-8950
Oakhurst	...Mar 14, Jun 13, Sept 12	. 209-683-8430
Redding	...Jan 11 Mar 14 May 9	... 916-243-6339
Santa Rosa	.Jan 7	..... 707-823-4544
Stockton	..Jan 18, Feb 15, Mar 21	. 209-952-5996
Sonora	....Mar 11, Nov 14	..... 209-586-4917
Turlock	....Jan 11, May 9	..... 209-883-2968
Vacaville	..Jan 25, Feb 29	..... 707-447-2680

Renewing Your Amateur License

You must use an FCC Form 610 to apply for renewal, new or upgraded license, reinstatement or modification of your present license. Remember to attach a photocopy (or the original) of your license to a FCC form 610 when you mail it. If you have lost your license (or it was destroyed), simply explain the circumstances in a note attached to the form.

If you file for renewal of your license before it expires, (60 to 90 days before expirations is recommended), you may continue to operate until your new license arrives, even it that occurs after the expiration date of your present license term. If you let your present license expire before applying for renewal, you may request that it be reinstated under a grace period. Licenses are normally good for ten years.

If you have a license good for the old five year term, a grace period of five years is allowed should you forget to renew. After two years of the grace period has passed, you will lose your call sign and will be assigned a new one. If you have a 10 year license the grace period is 2 years.

If you apply for reinstatement of your license under the grace period, you may not operate until your reinstated license arrives. Mail the form to the FCC, Box 1020, Gettysburg, PA 17326.

PACSAT News



By **Tim Bosma, AB6FL**

In last month's column I discussed some of the computer hardware and software needs for operating the **PACSAT** satellites. At this point we'll assume you have a fairly fast IBM clone computer and the **PACSAT** suite of software. The next step is the acquiring the radios and the PSK modem equipment you'll need.

While the ideal would be to have a new all-mode 2m/70cm rig like the Icom IC-970, or the Yaesu FT-736, many hams already have some of the equipment required for **PACSAT** operation. However, if you're strapped for cash like most hams are, you'll want to do this at a much lower cost. There are many extremely good used all-mode rigs available, for example, I recently saw a packet message for an FT-726 on sale for \$500.

The key here is an "all-mode" rig or rigs that can transmit FM on 145.9 MHz and receive single-side band (SSB) on 437 MHz. The SSB is not a misprint! The transmit or uplink mode is FM and the receive or downlink mode is SSB. **xxlt** is also FULL DUPLEX, so you must be able to receive and transmit at the same

time. **xxSo**, what's a cheap way to go? Well, first of all you CAN use your two meter FM rig for the uplink to **PACSATs**. The uplink frequencies are 145.820, .840, .860, & .900 for Lusat, LO-19 and 145.900, .920, .940, .960 for **OSCAR-16**. According to the Command team for **OSCAR-16** only 20 watts EIRP are required to uplink to the extremely sensitive receivers on the satellite. Basically, any 25 watt rig, with a gain vertical and good quality feed line should be able to be heard by the satellite. So, many of the regular VHF packet users already have half of the equipment required. **xx**

Now, what about the 70cm SSB receiving? If you already own an HF rig with 10 meter capability then a readily available solution is a receiver down-converter which will convert the 70cm signal down to 28 Mhz. For example, if you were looking for AO-16 which downlinks on 437.025 you might typically tune your 10 meter rig to 29.025. You do not need a complete transverter, just the receive part. Converters are available from Hamtronics, Advanced Receiver Research, RadioKit, or at local swap meets.

Well, now that you've got the converter in place and your two meter rig with the TNC tuned to 145.960, you're all set, right? No. You still need one additional piece of equipment, a PSK modem. Phase Shift Keying (PSK) issued because of it's superior performance over AFSK which is used by most earthbound

packet stations. A pacsats' downlink is PSK in USB and the FM uplink when modulated by the PSK modem is called Manchester APSK. Confused? Well, the main thing to remember is the PSK modem fits between your packet TNC and your radios. PSK modems are available from several sources. PacComm offers a complete unit for about \$250.

TAPR offers a kit for about \$125. RadioKit in New Hampshire offers the G3RUH modem kit and used units are available at swap-meets. The **TAPR** unit is excellent, but difficult to build and definitely not for the novice builder. In summary:

RECEIVING: You have a 70cm down-converter to your 10 meter HF rig for receiving the pacsat signals, or a 70cm all mode rig. **TRANSMITTING:**

You're going to use your two meter 25 watt (or more) rig with your packet TNC and a PSK modem, or a 2m all mode rig. **ANTENNAS:** Omni directional gain antennas with a short run of low loss coax and perhaps a 70cm preamplifier for low level signals. If you have standard beams for VHF/UHF FM or SSB they will work for the **PACSATS** with excellent results. I've experimented with a 4 element quad on a camera tripod and get S-7 signals on most passes.

Next month we'll talk about tracking the satellites, Doppler shift and using PB to copy bulletins off the **PACSAT** downlink.

Oakdale Ham Class

SARA member Chuck, KJ6DO, will be conducting a Novice and Technician class in Oakdale starting February 11th, 1992 and continuing for eight weeks. The classes will be held at the Cloverland Elementary School in Oakdale. Class time will be 7 to 830 pm every Tuesday night. The only charge is for the books. For more information call Chuck Bowers, KJ6DO, at 847-5491.

1992 Foothill Flea Market Schedule

The 1992 Foothill College Flea Market schedule has been announced. The events are held on the second Saturday of every month from March through September. March 14, 1992 / April 11, 1992 / May 9, 1992 / June 13, 1992 / July 11, 1992 / Aug. 8, 1992 / Sept. 12, 1992.

Sellers \$10 (for two spaces) Buyers FREE . Coffee, donuts, hot dogs & pop are available. Foothill College is located in Los Altos Hills, CA. Take highway 280 to the El Monte Rd (WEST) exit. The gates open at 6:30 am. If you need help, the talk in frequency is 145.27 (-) or 224.36 repeater. The 220 machine requires a 100 hz PL. tone to access.

Visting Bodie!

Continued from page 5

According to a letter Wynnie's mother wrote to the owner of the Standard mine, this man "couldn't stand up much less play fireman." What made things even worse was that the rest of the fire hoses were located, but the brass nozzle fittings for the hoses were locked up and the key couldn't be immediately located. It seems that the tourists were forever stealing those fittings, and in an effort to stop that activity, the townspeople locked them up. The fire was finally extinguished but only after it had burned down 21 buildings and "cleaned" a large portion of the town. "Though the town was nearly lost, all the booze was saved, and before the fire was out everybody was full of 'stimulants', women and all."

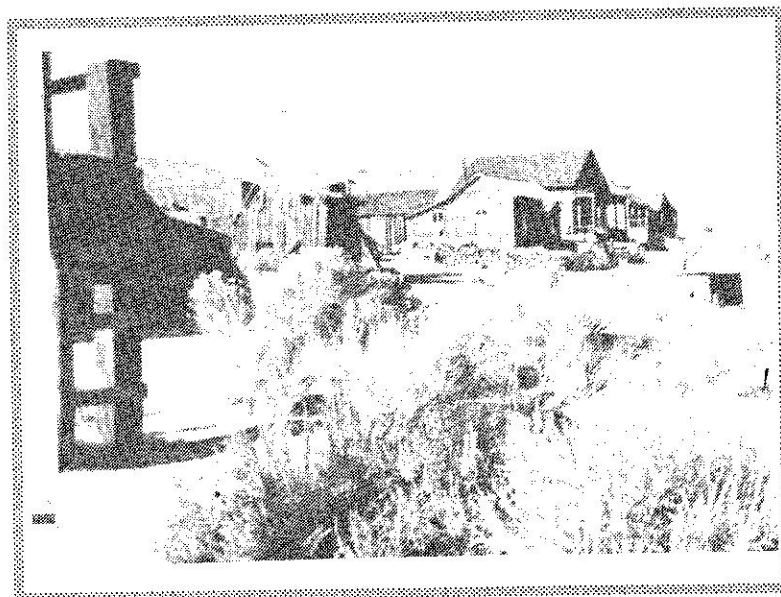
A stone standing in the street had an inscription on it reading: "Bodie, Born 1878, Died, 1931." One of the camp "wits" soon added: "Cremated, 1932."

Wynnie had been back to Bodie once or twice after her father was transferred to another mine, but she'd never had the chance to hike up the hill to see her old home. We were with her when she made that journey, and took this picture of her former home. Being very young when she and her family lived in Bodie, very few buildings in town were familiar to her except this house. The house had been provided by the mining company as part of her father's position. We found it interesting to see that furniture, shelves with old canned goods, drinking glasses, and even an old boot had been left inside. It was obvious that the house had served its purpose, and the occupants had moved on.

The town of Bodie carries its own unique charm, but our short association with Wynnie and her recollections made our trip a very memorable occasion. It is with deep gratitude that I say "thank you" for the time she spent with us, and for a copy of the letter her mother, Margaret Bennett wrote to Mr. Blackburn, of the Standard mine. Wynnie's presence and direct association with the history of Bodie made our visit one we'll never forget.



Bodie State Historic Park, 578 acres embracing the ghost town of Bodie, is 20 miles S.E. of Bridgeport via U.S. Hwy 395 and SR 270 (last 3 miles are unpraved). It is often inaccessible in the winter time. The former community of some 10,000 souls reportedly deserved and sustained its reputation as one of the toughest camps in the West. The local diggings yielded almost \$100 million in ore. The 170 buildings that remain are preserved in a state of arrested disintegration; they will not be restored, but are prevented from decaying further. The park is open to the public 9-7 daily from Memorial Day through Labor Day. The rest of the year from 9 am to 4 pm. A small entry fee is required.



1992 Dues Are Due

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



1992 SARA Membership Renewal

Date _____

Name _____ Call _____

Address _____ ARRL Member? _____

City _____ Home Phone _____

Bus. Address _____ Bus. Phone _____

Occupation _____ Date of Birth _____

Class of License (E) (A) (G) (T) (N) Year First Licensed _____

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

FOR OFFICIAL USE ONLY: Membership Year 1992 Entered Roster ()

Treasurer () Welcome/Autopatch Letter Sent ()

cap 12/26/91

1992 Membership Renewal Rates

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



Calendar



Feb. 8, 1992	..... VE Test Merced	.....900 am
Feb. 18, 1992	..... SARA Monthly Meeting	.....730 pm
Mar. 14, 1992	..... VE Test Modesto	.....900 am
Mar. 17, 1992	..... SARA Monthly Meeting	.....730 pm
Apr. 11, 1992	..... VE Test Sonora	.....900 am
Apr. 21, 1992	..... SARA Monthly Meeting	.....730 pm
May 19, 1992	..... SARA Monthly Meeting	.....730 pm
Jun 16, 1992	..... SARA Monthly Meeting	.....730 pm
Jul 21, 1992	..... SARA Monthly Meeting	.....730 pm

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

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

Salli's Budget Copy Center

- High Speed Copying
- Public FAX Machine
- Laminating
- Spiral & Velo Binding
- Business Cards
- Resumes
- Typesetting

Tel- 529-5395

FAX- 529-6366

912 13th Street

Between I & J Streets

**Downtown
Modesto, CA.**

**Salli & Gordon Tullos
Owners**

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

Address Correction Requested

**Bulk Rate
U.S. Postage
Paid
Permit 5
Modesto, CA.**

To:

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